




***LIFE + Environment Policy and Governance***

**TECHNICAL APPLICATION FORMS**

**Part A – Administrative information**

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|  <b>LIFE+ 2007</b> | <p>FOR ADMINISTRATION USE ONLY</p> <p><b>LIFE+ 07ENV/</b></p> |
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## PROJECT

Project title (max. 120 characters):

**Further Development and Implementation of an EU-level Forest Monitoring System**

Project acronym (max. 25 characters): **FutMon**

The project will be implemented in the following:

Country(ies) **Austria, Belgium (Flanders), Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, The Netherlands, Poland, Romania, Slovakia, Slovenia, Spain, Sweden, United Kingdom**

Administrative region(s).....see above.....

Expected start date: **01/01/2009**

Expected end date: **31/12/2010**

## BENEFICIARIES

Name of the coordinating beneficiary :

(1) Johann Heinrich von Thünen-Institute, Federal Research Institute for Rural Areas, Forestry and Fisheries (vTI), Germany (DE)

Name of the associated beneficiary:

(2) Bundesforschungs- und Ausbildungszentrum für Wald, Naturgefahren und Landschaft (BFW), Austria (AT)

Name of the associated beneficiary:

(3) Research Institute for Nature and Forest, Belgium Flanders (INBO), Belgium Flanders (BE, FL)

Name of the associated beneficiary:

(4) Ministère de la Région Wallonne, Div. de la Nature et des Forêts de la Direction Générale des Ressources Naturelles et de l'Environnement, Belgium Wallonia (BE, WA) – participation withdrawn

Name of the associated beneficiary:

(5) Executive environment agency at the Ministry of Environment and Water -Bulgaria, Bulgaria (BU)

Name of the associated beneficiary:

(6) Department of Forests, Cyprus (CY)

Name of the associated beneficiary:

(7) Forestry and Game Management Research Institute (VULHM), Czech Republic (CZ)

Name of the associated beneficiary:

(8) Danish Centre for Forest, Landscape and Planning, University of Copenhagen, Denmark (DK)

Name of the associated beneficiary:

(9) Centre of Forest Protection and Silviculture, Estonia, Mr. Kalle Karoles (EE)

Name of the associated beneficiary:

(10) Finnish Forest Research Institute (METLA), Finland (FI)

## LIFE+ Environment Policy and Governance 2007- A1/2

Name of the associated beneficiary:

(11) Office National des Forêts, Direction Générale (ONF), France (FR)

Name of the associated beneficiary:

(12) Hellenic Ministry of Rural Development and Foods, General Directorate for Development and Protection of Forests and Natural Environment, Greece (GR)

Name of the associated beneficiary:

(13) Central Agricultural Office (CAO), Forestry Directorate Budapest, Hungary (HU)

Name of the associated beneficiary:

(14) Forest Service, Department of Agriculture, Fisheries and Food, Ireland (IE)

Name of the associated beneficiary:

(15) Ministero delle Politiche Agricole, Alimentari e Forestali, Corpo Forestale dello Stato – Ufficio CONECOFOR, Italy (I)

Name of the associated beneficiary:

(16) State Forest Survey Service, Lithuania (LT)

Name of the associated beneficiary:

(17) Ministry of Agriculture, Nature and Food Quality, The Netherlands (NL)

Name of the associated beneficiary:

(18) Forest Research Institute, Poland (PL)

Name of the associated beneficiary:

(19) *Direcção Geral dos Recursos Florestais, Divisão de Protecção e Conservação Florestal, Portugal (PT)- participation withdrawn*

Name of the associated beneficiary:

(20) INSTITUTUL DE CERCETĂRI ȘI AMENAJĂRI SILVICE, Romania (RO)

Name of the associated beneficiary:

(21) National Forest Centre, Slovakia (SK)

Name of the associated beneficiary:

(22) Slovenian Forestry Institute, Slovenia (SI)

Name of the associated beneficiary:

(23) Dirección General para la Biodiversidad, Spain (ES)

Name of the associated beneficiary:

(24) Fundación Centro de Estudios del Mediterráneo (CEAM), Spain (ES)

Name of the associated beneficiary:

(25) Swedish University of Agricultural Sciences (SLU), Department of Forest Resource Management, Sweden (SE)

Name of the associated beneficiary:

(26) Forest Research, Alice Holt Lodge, United Kingdom (UK)

Name of the associated beneficiary:

(27) Landesforstanstalt Eberswalde, Germany (DE, BB)

Name of the associated beneficiary:

(28) Forstliche Versuchs- und Forschungsanstalt Baden-Württemberg, Germany (DE, BW)

Name of the associated beneficiary:

(29) Bayerische Landesanstalt für Wald und Forstwirtschaft (LWF), Germany (DE, BY)

## LIFE+ Environment Policy and Governance 2007- A1/3

Name of the associated beneficiary:

(30) Northwest German Forest Research Station, Germany (DE, NWD)

Name of the associated beneficiary:

(31) Ministerium für Landwirtschaft, Umwelt und Verbraucherschutz , Germany (DE, MV)

Name of the associated beneficiary:

(32) Landesamt für Natur, Umwelt und Verbraucherschutz NRW, Germany (DE, NW)

Name of the associated beneficiary:

(33) Forschungsanstalt für Waldökologie und Forstwirtschaft Rheinland-Pfalz, Germany (DE, RP)

Name of the associated beneficiary:

(34) Ministerium für Landwirtschaft, Umwelt und ländliche Räume, Germany (DE, SH)

Name of the associated beneficiary:

(35) Landesamt für Umwelt- und Arbeitsschutz, Germany (DE, SL)

Name of the associated beneficiary:

(36) Staatsbetrieb Sachsenforst (SBS), Germany (DE, SN)

Name of the associated beneficiary:

(37) Thüringer Landesanstalt f. Wald, Jagd u. Fischerei (TLWJF), Germany (DE, TH)

Name of the associated beneficiary:

(38) Latvian State Forestry research institute "Silava", Latvia (LV)

Name of the associated beneficiary:

(39) Consiglio per la Ricerca e la sperimentazione in Agricoltura (CRA), Italy (I)

Name of the associated beneficiary:

(40) Consiglio Nazionale delle Ricerche (CNR), Istituto per lo Studio degli Ecosistemi, Italy (I)

### PROJECT BUDGET AND REQUESTED EC FUNDING

Total project budget: **34.443.390 €**

Total eligible project budget: **32.278.556 €**

EC financial contribution requested: **16.139.278 €** ( = 50.0 % of total eligible budget)

### PROJECT POLICY AREA

You can only tick one of the following options:

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> Climate Change | <input type="checkbox"/> Urban environment      | <input type="checkbox"/> Waste and natural resources |
| <input type="checkbox"/> Water          | <input type="checkbox"/> Noise                  | <input checked="" type="checkbox"/> Forests          |
| <input type="checkbox"/> Air            | <input type="checkbox"/> Chemicals              | <input type="checkbox"/> Innovation                  |
| <input type="checkbox"/> Soil           | <input type="checkbox"/> Environment and Health | <input type="checkbox"/> Strategic approaches        |





## COORDINATING BENEFICIARY DECLARATION

The undersigned hereby certifies that:

1. The specific actions listed in this proposal do not and will not receive aid from the Structural Funds or other Community financial instruments. In the event that any such funding will be made available after the submission of the proposal or during the implementation of the project, my organisation will immediately inform the European Commission.
2. My organisation has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
3. My organisation (which is legally constituted in the European Union) will contribute 403.856 € to the project. My organisation will implement the following actions M1-1(DE), M2-1(DE), M3-1(DE), M4-1(DE), M5-1(DE), M6-1(DE), A1-1(DE), with an estimated total cost of 1.603.840 €.
4. Should one or more associated beneficiary or co-financier reduce or withdraw its financial contribution, my organisation will ensure that a corresponding additional contribution is made available.
5. My organisation will conclude with the associated beneficiaries and co-financiers any agreements necessary for the completion of the work, provided these do not infringe on their obligations, as stated in the grant agreement with the European Commission. Such agreements will be based on the model proposed by the European Commission. They will describe clearly the tasks to be performed by each associated beneficiary and define the financial arrangements.
6. I am aware that my organisation is solely legally and financially responsible to the Commission for the implementation of the project (Article 4 of the Common Provisions).

I am legally authorised to sign this statement on behalf of my organisation.

I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the *LIFE+* application files).

I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

At ..... Braunschweig.....

on..... 22. Aug. 2008.....

Stamp and Signature of the Coordinating Beneficiary:

Johann Heinrich von Thünen-Institut,  
Bundesforschungsinstitut für  
Ländliche Räume, Wald und Fischerei  
des BMBF

Name(s) and status of signatory: .....

Prof. Dr. Carsten Thoroe, President of vTI

**ASSOCIATED BENEFICIARY DECLARATION**

The undersigned hereby certifies that:

1. My organisation has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
2. My organisation (which is legally constituted in the European Union) will contribute 1.097.597,- € to the project. My organisation will implement the following actions M7-2(A), M8-2(AT), L2-2(AT), D1-2(AT), D2-2(AT), D3-2(AT), IM1-2(AT), C1-Fol2-2(AT), C1-Gro-2(AT), with an estimated total cost of 1.854.795,- €.
3. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.
4. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:
  - a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.
  - b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.
  - c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.
  - d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

I am legally authorised to sign this statement on behalf of my organisation.

I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the LIFE+ application files).

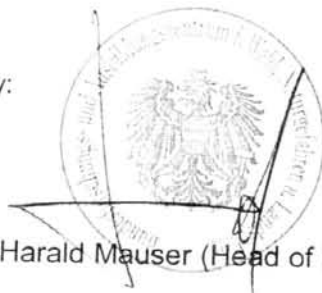
I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

At Wien on 26-08-2008

Stamp and Signature of the Associated Beneficiary:

Name(s) and status of signatory:

Dr. Harald Mauser (Head of BFW)



**ASSOCIATED BENEFICIARY DECLARATION**

The undersigned hereby certifies that:

1. My organisation has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
2. My organisation (which is legally constituted in the European Union) will contribute **377.866 €** to the project. My organisation will implement the following actions **L2-3(FL), IM1-3(FL), D1-3(FL), D2-3(FL), D3-3(FL), M7-3(FL), M8-3(FL), C1-Soil-3(FL), C1-Dam-3(FL)**, with an estimated total cost of **770.961 €**.
3. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.
4. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:
  - a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.
  - b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.
  - c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.
  - d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

I am legally authorised to sign this statement on behalf of my organisation.

I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the LIFE+ application files).

I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

At **Brussel**..... on.....**28/08/08**.....

Stamp and Signature of the Associated Beneficiary:

**Instituut voor Natuur- en Milieusonderzoek**  
 Kliniekstraat 25  
 1070 Brussel  
 Tel: 02/558 18 11  
 Fax: 02/558 18 05

Name(s) and status of signatory: **Dr. Jurgen Tack, General Administrator - Research Institute for Nature & Forest (INBO)**

**ASSOCIATED BENEFICIARY DECLARATION**

The undersigned hereby certifies that:

1. My organisation has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).

My organisation (which is legally constituted in the European Union) will contribute 156 620 € to the project. My organisation will implement the following actions L1- 5(BU), L2- 5(BU, IM1- 5(BU), D2 -5(BU), M8- 5(BU), M7 -5(BU), with an estimated total cost of 289 360 €.

2. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.

3. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:

a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.

b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.

c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.

d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

I am legally authorised to sign this statement on behalf of my organisation.

I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the LIFE+ application files).

I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

At Sofia..... on 26.09.2008.....

Stamp and Signature of the Associated Beneficiary:

Name(s) and status of signatory: Dzhevdet Chakarov,

Minister of the Environment and Water





**ASSOCIATED BENEFICIARY DECLARATION**

The undersigned hereby certifies that:

1. My organisation has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
2. My organisation (which is legally constituted in the European Union) will contribute **€ 84,328** to the project. My organisation will implement the following actions a) Large scale representative monitoring (Action L2-(6)CY, budget € 18.600 ), b) Monitoring on basic plots and selection of core plots (Action IM1-(6)CY, budget € 92.351), and actions M7-(6)CY (budget € 33.960) and M8-(6)CY (budget € 4.520) with an estimated total cost of **€ 159,667** (Overheads of 7% included).
3. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.
4. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:
  - a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.
  - b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.
  - c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.
  - d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

I am legally authorised to sign this statement on behalf of my organisation.

I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the LIFE+ application files).

I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

**At Nicosia on 8 July 2008**

Stamp and Signature of the Associated Beneficiary:

Name(s) and status of signatory: **Aristides Ioannou, Director of the Department of Forests**

**ASSOCIATED BENEFICIARY DECLARATION**

The undersigned hereby certifies that:

1. My organisation has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
2. My organisation (which is legally constituted in the European Union) will contribute **443,621 €** to the project. My organisation will implement the following actions: **IM1-7(CZ), D1-7(CZ), D2-7(CZ), D3-7(CZ), M7-7(CZ), M8-7(CZ), L2-7(CZ)** with an estimated total cost of **785,900 €**.
3. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.
4. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:
  - a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.
  - b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.
  - c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.
  - d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

I am legally authorised to sign this statement on behalf of my organisation.

I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the LIFE+ application files).

I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

**At Prague on 1 September 2008**

Stamp and Signature of the Associated Beneficiary:

Name(s) and status of signatory:

**Petr Zahradnik, director**



**ASSOCIATED BENEFICIARY DECLARATION**

The undersigned hereby certifies that:

1. My organisation has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
2. My organisation (which is legally constituted in the European Union) will contribute 433330 € to the project. My organisation will implement the following actions M7-8(DK), M8-8(DK), L1-8(DK), L2-8(DK), IM1-8(DK), D1-8(DK), D2-8(DK), D3-8(DK), C1-NFI-8(DK), with an estimated total cost of 817280 €.
3. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.
4. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:
  - a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.
  - b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.
  - c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.
  - d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

I am legally authorised to sign this statement on behalf of my organisation.

I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the *LIFE+* application files).

I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

At Hørsholm on 04.09.2008

Stamp and Signature of the Associated Beneficiary:

Name(s) and status of signatory: Niels Elers Koch, Professor, Director



Stamp: **REST** **UNSCAPE**

**ASSOCIATED BENEFICIARY DECLARATION**

The undersigned hereby certifies that:

1. My organisation has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
2. My organisation (which is legally constituted in the European Union) will contribute 221674 € to the project. My organisation will implement the following actions L1-9(EU), L2-9(EU), IM1-9(EU), D2-9(EU), M7-9(EU), M8-9(EU), with an estimated total cost of 427529 €.
3. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.
4. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:
  - a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.
  - b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.
  - c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.
  - d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

I am legally authorised to sign this statement on behalf of my organisation.

I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the LIFE+ application files).

I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

At Tartu on 22 August 2008

Stamp and Signature of the Associated Beneficiary:

Name(s) and status of signatory: **Kalle Karoles, director**





**ASSOCIATED BENEFICIARY DECLARATION**

The undersigned hereby certifies that:

1. My organisation has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
2. My organisation (which is legally constituted in the European Union) will contribute **958,468 €** to the project. My organisation will implement the following actions M7-10(FI), M8-10(FI), L2-10(FI), D1-10(FI), D2-10(FI), D3-10(FI), IM1-10(FI), C1-SS-10(FI), C1-Fol1-10(FI), CI-Phen-10(FI), with an estimated total cost of **1,929,283 €**.
3. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.
4. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:
  - a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.
  - b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.
  - c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.
  - d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

I am legally authorised to sign this statement on behalf of my organisation.

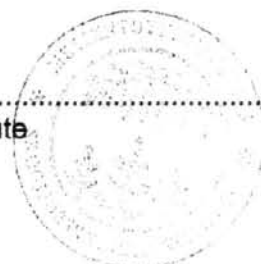
I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the *LIFE+* application files).

I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

At the Finnish Forest Research Institute, on the 26<sup>th</sup> of August, 2008

Stamp and Signature of the Associated Beneficiary:

Name(s) and status of signatory: .....  
Mr. Tero Oksa, Administrative Director, Finnish Forest Research Institute



**ASSOCIATED BENEFICIARY DECLARATION**

The undersigned hereby certifies that:

1. My organisation has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
2. My organisation (which is legally constituted in the European Union) will contribute **1 576 588 €** to the project. My organisation will implement the following actions **L2-11(FR), IM1-11(FR), D2-11(FR), D3-11(FR), M7-11(FR) and M8-11(FR)**, with an estimated **total cost of 3 439 630 € (including 7% overheads)**.
3. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.
4. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:
  - a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.
  - b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.
  - c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.
  - d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

I am legally authorised to sign this statement on behalf of my organisation.

I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the LIFE+ application files).

I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

At Paris (France) on 2 September 2008

Stamp and Signature of the Associated Beneficiary:

Name(s) and status of signatory: **Pierre-Olivier Drège (Directeur Général de l'Office National des Forêt**



**ASSOCIATED BENEFICIARY DECLARATION**

The undersigned hereby certifies that:

1. My organisation has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
2. My organisation (which is legally constituted in the European Union) will contribute 242,480 € to the project. My organisation will implement the following actions L1-12(GR), L2-12(GR), IM1-12(GR), D1-12(GR), D2-12(GR), D3-12(GR), M7-12(GR) and M8-12(GR) with an estimated total cost of 393,699 €.
3. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.
4. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:
  - a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.
  - b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.
  - c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.
  - d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

I am legally authorised to sign this statement on behalf of my organisation.

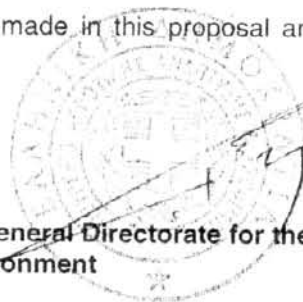
I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the LIFE+ application files).

I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

At Athens, on 26 August 2008

Stamp and Signature of the Associated Beneficiary:

Name(s) and status of signatory: **Stavros Sagris, Head of General Directorate for the Development and Protection of Forests and Natural Environment**



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| <b>ASSOCIATED BENEFICIARY DECLARATION</b> |
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The undersigned hereby certifies that:

1. My organisation has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
2. My organisation (which is legally constituted in the European Union) will contribute **315,158 €** to the project. My organisation will implement the following actions **M7-13(HU), M8-13(HU), L2-13(HU), D1-13(HU), D2-13(HU), IM1-13(HU)**, with an estimated total cost of **594,207 €**.
3. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.
4. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:
  - a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.
  - b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.
  - c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.
  - d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

I am legally authorised to sign this statement on behalf of my organisation.

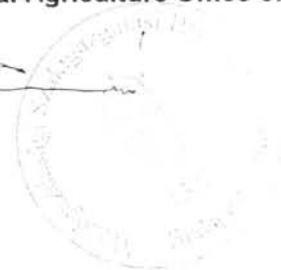
I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the LIFE+ application files).

I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

**At Budapest on 3 September 2008**

Stamp and Signature of the Associated Beneficiary: **Central Agriculture Office of Hungary**

Name(s) and status of signatory: **Ákos Kolozsvári**  
vice president



**ASSOCIATED BENEFICIARY DECLARATION**

The undersigned hereby certifies that:

1. My organisation has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
2. My organisation (which is legally constituted in the European Union) will contribute **333,591 €** to the project. My organisation will implement the following actions **M7-14(IE), M8-14(IE), L1-14(IE), L2-14(IE), D1-14(IE), D2-14(IE), IM1-14(IE)**, with an estimated total cost of **625,176 €**.
3. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.
4. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:
  - a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.
  - b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.
  - c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.
  - d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

I am legally authorised to sign this statement on behalf of my organisation.

I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the LIFE+ application files).

I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

**At Department of Agriculture Fisheries and Food Ireland on 26 August 2008**

Stamp and Signature of the Associated Beneficiary:

*Noel Heffernan*

Name(s) and status of signatory: Noel Heffernan, Futmon Project Leader



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| <b>ASSOCIATED BENEFICIARY DECLARATION</b> |
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The undersigned hereby certifies that:

1. My organisation has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
2. My organisation (which is legally constituted in the European Union) will contribute 677.905 € to the project. My organisation will implement the following actions M7-15(IT), M8-15(IT), L2-15(IT), IM1-15(IT), C1-QAC-15(IT) and C1-GV-15(IT), with an estimated total cost of 1.227.810 €.
3. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.
4. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:
  - a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.
  - b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.
  - c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.
  - d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

I am legally authorised to sign this statement on behalf of my organisation.

I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the LIFE+ application files).

I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

At Roma, Italy on 03 SET. 2008

Stamp and Signature of the Associated Beneficiary:

Name(s) and status of signatory: **Cesare Patrone, Head of Corpo Forestale dello Stato**



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| <b>ASSOCIATED BENEFICIARY DECLARATION</b> |
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The undersigned hereby certifies that:

1. My organisation has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
2. My organisation (which is legally constituted in the European Union) will contribute **138 900 €** to the project. My organisation will implement the following actions: **M7-16(LT), M8-16(LT), L2-16(LT), IM1-16(LT)** with an estimated total cost of **249 900 €**.
3. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.
4. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:
  - a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.
  - b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.
  - c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.
  - d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

I am legally authorised to sign this statement on behalf of my organisation.

I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the LIFE+ application files).

I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

At Kaunas, Lithuania..... on 01 September, 2008.....

Stamp and Signature of the Associated Beneficiary:

Name(s) and status of signatory: Albertas Kasperavičius, deputy director, State Forest Survey Service



**ASSOCIATED BENEFICIARY DECLARATION**

The undersigned hereby certifies that:

1. My organisation has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
2. My organisation (which is legally constituted in the European Union) will contribute **223.608 €** to the project. My organisation will implement the following actions: **L2-17(NL), IM1-17(NL), M7-17(NL), M8-17(NL)** with an estimated total cost of **431.259 €**.
3. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.
4. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:
  - a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.
  - b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.
  - c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.
  - d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

I am legally authorised to sign this statement on behalf of my organisation.

I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the LIFE+ application files).

I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

**At The Hague, the Netherlands on 8 September 2008**

Stamp and Signature of the Associated Beneficiary:

Name(s) and status of signatory:

**G.B. Raaphorst**  
Director Department of Nature





**ASSOCIATED BENEFICIARY DECLARATION**

The undersigned hereby certifies that:

1. My organisation has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
2. My organisation (which is legally constituted in the European Union) will contribute **790,338 €** to the project. My organisation will implement the following actions: **M7-18(PL), M8-18(PL), L2-18(PL), IM1-18(PL)** with an estimated total cost of **1,385,608 €**.
3. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.
4. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:
  - a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.
  - b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.
  - c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.
  - d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

I am legally authorised to sign this statement on behalf of my organisation.

I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the LIFE+ application files).

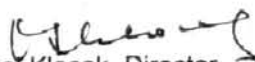
I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

At Sekocin Stary

on 28 August 2008

Stamp and Signature of the Associated Beneficiary:

Name(s) and status of signatory: ...prof. dr. hab. Andrzej Kłoczek, Director



**ASSOCIATED BENEFICIARY DECLARATION**

The undersigned hereby certifies that:

1. My organisation has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
2. My organisation (which is legally constituted in the European Union) will contribute **5,000.00 €** to the project. My organisation will implement the following actions **M7-20(RO) M8-20(RO), L1-20(RO), L2-20(RO), D1-20(RO), D2-20(RO), D3-20(RO), IM1-20(RO)**, with an estimated total cost of **1,054,618.00 €**.
3. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.
4. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:
  - a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.
  - b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.
  - c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.
  - d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

I am legally authorised to sign this statement on behalf of my organisation.

I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the LIFE+ application files).

I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

**At BUCHAREST on 25.08.2008**

Stamp and Signature of the Associated Beneficiary:

Name(s) and status of signatory: **Dr. Ing. Romică TOMESCU, GENERAL DIRECTOR**



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| <b>ASSOCIATED BENEFICIARY DECLARATION</b> |
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The undersigned hereby certifies that:

1. My organisation has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
2. My organisation (which is legally constituted in the European Union) will contribute 450,200 € to the project. My organisation will implement the following actions: M7-21(SK), M8-21(SK), L1-21(SK), L2-21(SK), IM1-21(SK), D1-21(SK), D2-21(SK), D3-21(SK), with an estimated total cost of 783,400 €.
3. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.
4. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:
  - a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.
  - b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.
  - c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.
  - d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

I am legally authorised to sign this statement on behalf of my organisation.

I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the LIFE+ application files).

I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

At Zvolen on 30 June 2008

Stamp and Signature of the Associated Beneficiary:

Name(s) and status of signatory:

  
**Assoc. Prof. Roman Réh, Director General**

**NÁRODNÉ LEVNÍCKE CENTRUM**

T. G. Masaryka 22  
960 02 Zvolen (51)  
IČO: 42 001 315  
DIČ: 2022091027

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| <b>ASSOCIATED BENEFICIARY DECLARATION</b> |
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The undersigned hereby certifies that:

1. My organisation has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
2. My organisation (which is legally constituted in the European Union) will contribute **408,637 €** to the project. My organisation will implement the following actions: **C1-22(SI), D1-22(SI), D2-22(SI), D3-22(SI), IM1-22(SI), IM2-22(SI), L1-22(SI), L2-22(SI), L3-22(SI), M7-22 (SI), M8-22(SI)**, with an estimated total cost of **815,432 €**.
3. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.
4. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:
  - a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.
  - b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.
  - c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.
  - d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

I am legally authorised to sign this statement on behalf of my organisation.

I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the LIFE+ application files).

I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

**At Ljubljana on September 2, 2008**

Stamp and Signature of the Associated Beneficiary:

Name(s) and status of signatory: Director SFI: **Prof. dr.dr. h.c. N. Torelli**

Sl. 145/1



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|---|
| <b>ASSOCIATED BENEFICIARY DECLARATION</b> |
|---|

The undersigned hereby certifies that:

1. My organisation has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
2. My organisation (which is legally constituted in the European Union) will contribute 1.735.449 € to the project. My organisation will implement the following actions: M7-23(ES), M8-23(ES), L2-23(ES), IM1-23(ES), D1-23(ES), D2-23(ES) and D3-23(ES), with an estimated total cost of 3.347.058 €.
3. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.
4. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:
  - a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.
  - b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.
  - c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.
  - d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

I am legally authorised to sign this statement on behalf of my organisation.

I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the LIFE+ application files).

I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

At ..Madrid..... on.....4 July 2008.....

Stamp and Signature of the Associated Beneficiary:

Name(s) and status of signatory: JOSÉ LUIS HERRANZ SAEZ (General Director)

|   |
|---|
| <b>ASSOCIATED BENEFICIARY DECLARATION</b> |
|---|

The undersigned hereby certifies that:

1. My organisation has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
2. My organisation (which is legally constituted in the European Union) will contribute 37.799 € to the project. My organisation will implement the following actions C1-03-24(ES) with an estimated total cost of 72.900 €.
3. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.
4. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:
  - a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.
  - b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.
  - c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.
  - d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

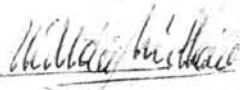
I am legally authorised to sign this statement on behalf of my organisation.

I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the LIFE+ application files).

I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

**At Paterna on 7<sup>th</sup> July, 2008**

Stamp and Signature of the Associated Beneficiary:



Name(s) and status of signatory:

**Millán Millán Muñoz**

**Executive Director**

|   |
|---|
| <b>ASSOCIATED BENEFICIARY DECLARATION</b> |
|---|

The undersigned hereby certifies that:

1. My organisation has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
2. My organisation (which is legally constituted in the European Union) will contribute **409 995 €** to the project. My organisation will implement the following actions **L2-25(SE), IM1-25(SE), D2-25(SE) and C1-NFI-25(SE)**, with an estimated total cost of 1 553 200 €.
3. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.
4. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:
  - a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.
  - b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.
  - c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.
  - d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

I am legally authorised to sign this statement on behalf of my organisation.

I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the LIFE+ application files).

I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

**At Umeå on 26/8 2008**

Stamp and Signature of the Associated Beneficiary:

Name and status of signatory: .....

*Ola Eriksson, professor  
Vice Head of Department*



Department of Forest Resour  
Management  
SE-901 83 UMEÅ, SWEDEN  
www.srh.slu.se

**ASSOCIATED BENEFICIARY DECLARATION**

The undersigned hereby certifies that:

1. My organisation has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
2. My organisation (which is legally constituted in the European Union) will contribute **453,557 €** to the project. My organisation will implement the following actions **L1-26(UK) L2-26(UK) IM1-26(UK) D1-26(UK) D2-26(UK) D3-26(UK) M7-26(UK) M8-26(UK)**, with an estimated total cost of **824,888 €**.
3. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.
4. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:
  - a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.
  - b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.
  - c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.
  - d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

I am legally authorised to sign this statement on behalf of my organisation.

I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the LIFE+ application files).

I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

At Edinburgh..... on 22 July 2008

Stamp and Signature of the Associated Beneficiary:

Name(s) and status of signatory: .....

*A. J. [Signature]*  
Chief Executive

FOREST RESEARCH  
NORTHERN RESEARCH  
STATION  
ROSLIN  
MIDLOTHIAN  
EH25 9SY  
TEL: 0131 445 2176



**ASSOCIATED BENEFICIARY DECLARATION**

The undersigned hereby certifies that:

1. My organisation has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
2. My organisation (which is legally constituted in the European Union) will contribute **303,010 €** to the project. My organisation will implement the following actions **L2-27(BB)**, **IM1-27(BB)**, **D1-27(BB)**, **D2-27(BB)**, **D3-27(BB)**, **M7-27(BB)** and **M8-27(BB)** of the FutMon project, with an estimated total cost of **574,510 €**.
3. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.
4. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:
  - a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.
  - b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.
  - c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.
  - d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

I am legally authorised to sign this statement on behalf of my organisation.

I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the LIFE+ application files).

I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

At Eberswalde on 10.07.2008

Stamp and Signature of the Associated Beneficiary:

Name(s) and status of signatory:

  
Prof. Dr. Klaus Höppner

Head of Landesforstanstalt Eberswalde



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|---|
| <b>ASSOCIATED BENEFICIARY DECLARATION</b> |
|---|

The undersigned hereby certifies that:

1. My organisation has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
2. My organisation (which is legally constituted in the European Union) will contribute 477.763€ to the project. My organisation will implement the following actions L2-28(BW), IM1-28(BW), D1-28(BW), D2-28(BW), D3-28(BW), M7-28(BW), M8-28(BW), with an estimated total cost of 827.563€.
3. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.
4. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:
  - a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.
  - b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.
  - c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.
  - d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

I am legally authorised to sign this statement on behalf of my organisation.

I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the LIFE+ application files).

I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

At Freiburg, Germany..... on 2008-09-08

Stamp and Signature of the Associated Beneficiary:

Name(s) and status of signatory:



v. Teuffel

**ASSOCIATED BENEFICIARY DECLARATION**

The undersigned hereby certifies that:

5. My organisation has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
6. My organisation (which is legally constituted in the European Union) will contribute **749,362 €** to the project. My organisation will implement the following actions **C1-MET 29(BY); L1-29(BY); L2-29(BY); IM1-29(BY); D1-29(BY); D2-29(BY); D3-29(BY); M7-29(BY); M8-29(BY)**; with an estimated total cost of **1,318,212 €**.
7. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.
8. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:
  - a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.
  - b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.
  - c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.
  - d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

I am legally authorised to sign this statement on behalf of my organisation.

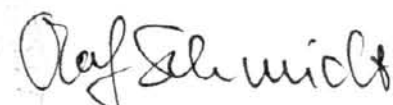
I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the LIFE+ application files).

I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

**At Freising on 27.08.2008**

Stamp and Signature of the Associated Beneficiary:

Name(s) and status of signatory:



Olaf Schmidt (president, head of LWF)

**ASSOCIATED BENEFICIARY DECLARATION**

The undersigned hereby certifies that:

1. My organisation has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
2. My organisation (which is legally constituted in the European Union) will contribute **960,441 €** to the project. My organisation will implement the following actions **M7-30(NWD), M8-30(NWD), L2-30(NWD), D1-30(NWD), D2-30(NWD), D3-30(NWD), IM1-30(NWD), C1-QALAB-30(NWD) and C1-TREE-30(NWD)**, with an estimated total cost of **1,852,345 €**.
3. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.
4. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:
  - a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.
  - b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.
  - c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.
  - d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

I am legally authorised to sign this statement on behalf of my organisation.

I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the LIFE+ application files).

I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

**At Göttingen on 26 August 2008**

Stamp and Signature of the Associated Beneficiary:

Name(s) and status of signatory: **Hermann Spellmann (Director)**





**ASSOCIATED BENEFICIARY DECLARATION**

The undersigned hereby certifies that:

1. My organisation has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
2. My organisation (which is legally constituted in the European Union) will contribute **143,446 €** to the project. My organisation will implement the following actions **M7-31(MV), M8-31(MV), L2-31(MV), D1-31(MV), D2-31(MV), D3-31(MV), IM1-31(MV)**, with an estimated total cost of **248,834 €**.
3. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.
4. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:
  - a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.
  - b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.
  - c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.
  - d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

I am legally authorised to sign this statement on behalf of my organisation.

I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the LIFE+ application files).

I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

**At Schwerin on 11 July 2008**

Stamp and Signature of the Associated Beneficiary

Name(s) and status of signatory: **Dr. Peter Röhe, Head of Region**

Ministerium für  
Landwirtschaft, Umwelt  
und Verbraucherschutz  
Mecklenburg-Vorpommern

|   |
|---|
| <b>ASSOCIATED BENEFICIARY DECLARATION</b> |
|---|

The undersigned hereby certifies that:

1. My organisation has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
2. My organisation (which is legally constituted in the European Union) will contribute **261.564 €** to the project. My organisation will implement the following actions **L2-32(NW), IM1-32(NW), D1-32(NW), D2-32(NW) and D3-32(NW)** with an estimated total cost of **478.674 €**.
3. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.
4. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:
  - a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.
  - b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.
  - c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.
  - d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

I am legally authorised to sign this statement on behalf of my organisation.

I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the *LIFE+* application files).

I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

| At ....Recklinghausen..... on .....21.....08.....2008.....

Stamp and Signature of the Associated Beneficiary:

Name(s) and status of  
Dr. Woike LANUV Vicepresident



Landesamt für Umwelt  
und Verbraucherschutz NRW  
.....Postfach 10.10.52.....  
45610 Recklinghausen

**ASSOCIATED BENEFICIARY DECLARATION**

The undersigned hereby certifies that:

1. My organisation has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
2. My organisation (which is legally constituted in the European Union) will contribute **197,974 €** to the project. My organisation will implement the following actions **M7-33(RP), M8-33(RP), L2-33(RP), D1-33(RP), D2-33(RP), D3-33(RP), IM1-33(RP)**, with an estimated total cost of **367,706 €**.
3. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.
4. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:
  - a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.
  - b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.
  - c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.
  - d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

I am legally authorised to sign this statement on behalf of my organisation.

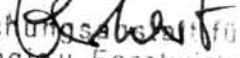
I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the LIFE+ application files).

I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

At Trippstadt on.....26.08.2008.

Stamp and Signature of the Associated Beneficiary:

Name(s) and status of signatory: **Hans-Peter Ehrhart (Director of FAWF)**

  
Forschungsabteilung für  
Waldökologie u. Forstwirtschaft  
Rheinland-Pfalz (FAWF)  
67705 Trippstadt  
Tel. 03303 / 911-0 Fax 03303 / 911-213

|   |
|---|
| <b>ASSOCIATED BENEFICIARY DECLARATION</b> |
|---|

The undersigned hereby certifies that:

1. My organisation has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
2. My organisation (which is legally constituted in the European Union) will contribute 105,714 € to the project. My organisation will implement the following actions L2-34(SH), IM1-34(SH), D2-34(SH), D3-34(SH), an M7-34(SH) with an estimated total cost of 163,214 €.
3. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.
4. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:
  - a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.
  - b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.
  - c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.
  - d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

I am legally authorised to sign this statement on behalf of my organisation.

I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the *LIFE+* application files).

I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

At Kiel on 10.9.2008

Stamp and Signature of the Associated Beneficiary:

Name(s) and status of signatory: K. IQ Deputy (head of Department)  
**Ministerium**

für Landwirtschaft, Umwelt und ländliche Räume  
 des Landes Schleswig-Holstein  
 Mercatorstraße 3 Postfach 50 09  
 24106 Kiel 24062 Kiel



**ASSOCIATED BENEFICIARY DECLARATION**

The undersigned hereby certifies that:

1. My organisation has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
2. My organisation (which is legally constituted in the European Union) will contribute **137,509 €** to the project. My organisation will implement the following actions **L2-35(SL)**, **IM1-35(SL)**, **D2-35(SL)** and **M7-35(SL)** and **M8-35(SL)**, with an estimated total cost of **196,307 €**.
3. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.
4. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:
  - a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.
  - b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.
  - c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.
  - d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

I am legally authorised to sign this statement on behalf of my organisation.

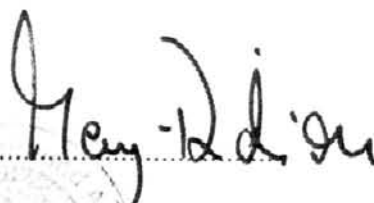
I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the LIFE+ application files).

I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

**At Saarbrücken on 29<sup>th</sup> of August 2008**

Stamp and Signature of the Associated Beneficiary:

Name and status of signatory: **Helga May-Didion; Head of authority**



**ASSOCIATED BENEFICIARY DECLARATION**

The undersigned hereby certifies that:

1. My organisation has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
2. My organisation (which is legally constituted in the European Union) will contribute **122,413 €** to the project. My organisation will implement the following actions **L2-36(SN), IM1-36(SN), D2-36(SN), D3-36(SN), M7-36(SN), M8-36(SN)** with an estimated total cost of **224,946 €**.
3. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.
4. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:
  - a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.
  - b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.
  - c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.
  - d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

I am legally authorised to sign this statement on behalf of my organisation.

I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the LIFE+ application files).

I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

At Pirna on 25 July 2008

Stamp and Signature of the Associated Beneficiary:

Name(s) and status of signatory:

**Prof. Dr. Braun (Management Director)**

**Staatsbetrieb Sachsenforst**  
**Geschäftsleitung**  
**Bonnewitzer Straße 34**  
**01796 Pirna, OT Graupa**

**ASSOCIATED BENEFICIARY DECLARATION**

The undersigned hereby certifies that:

1. My organisation has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
2. My organisation (which is legally constituted in the European Union) will contribute **170,988 €** to the project. My organisation will implement the following actions **L2-37(TH), IM1-37(TH), D2-37(TH), D3-37(TH), M7-37(TH), M8-37(TH)** with an estimated total cost of **327,175 €**.
3. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.
4. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:
  - a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.
  - b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.
  - c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.
  - d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

I am legally authorised to sign this statement on behalf of my organisation.

I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the LIFE+ application files).

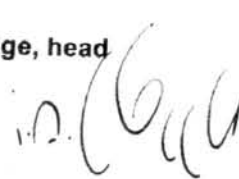
I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

**At Gotha (Germany) on 27 August 2008**

Stamp and Signature of the Associated Beneficiary:

Name(s) and status of signatory:

**Jörg Voßhage, head**



Thür. Landesanstalt für  
Wald, Jagd u. Fischerei  
Postf. 100262 • 99856 Gotha  
Jägerstraße 1 • 99867 Gotha

**ASSOCIATED BENEFICIARY DECLARATION**

The undersigned hereby certifies that:

1. My organisation has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
2. My organisation (which is legally constituted in the European Union) will contribute **105,573.00 €** to the project. My organisation will implement the following actions **M8-38(LV), L2-38(LV), L3-38(LV), IM1-38(LV), L1-38(LV)**, with an estimated total cost of **197,102.00 €**.
3. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.
4. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:
  - a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.
  - b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.
  - c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.
  - d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

I am legally authorised to sign this statement on behalf of my organisation.

I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the LIFE+ application files).

I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

**At Salaspils on 11 July 2008**

Stamp and Signature of the Associated Beneficiary:

Name(s) and status of signatory: **Jurgis Jansons, Director of Latvian State Forestry research institute "Silava"**



**ASSOCIATED BENEFICIARY DECLARATION**

The undersigned hereby certifies that:

1. My organisation has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
2. My organisation (which is legally constituted in the European Union) will contribute **375.710,00 €** to the project. My organisation will implement the following actions **L1-39(IT), L2-39(IT), IM1-39(IT), D1-39(IT) and Water Budgets-39(IT)**, with an estimated total cost of **734,620.00 €**.
3. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.
4. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:
  - a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.
  - b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.
  - c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.
  - d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

I am legally authorised to sign this statement on behalf of my organisation.

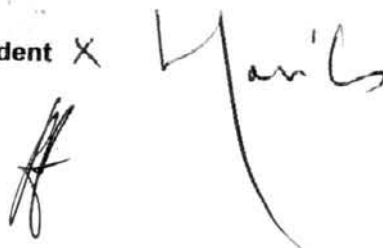
I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the LIFE+ application files).

I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

**At Rome, Italy on 02 September 2008**

Stamp and Signature of the Associated Beneficiary:

Name(s) and status of signatory: **Romualdo Coviello, CRA President** X





**ASSOCIATED BENEFICIARY DECLARATION**

The undersigned hereby certifies that:

1. My organisation has not been served with bankruptcy orders, nor has it received a formal summons from creditors. My organisation is not in any of the situations listed in Articles 93.1 and 94 of Council Regulation 1605/2002 of 25/06/2002 (OJ L248 of 16/09/2002).
2. My organisation (which is legally constituted in the European Union) will contribute **752,591 €** to the project. My organisation will implement the following actions **D2-40(IT), IM1-40(IT), C1-Water-40(IT) and C1-HarmonLS-40(IT)**, with an estimated total cost of **1,494,782 €**.
3. My organisation will conclude with the coordinating beneficiary an agreement necessary for the completion of the work, provided this does not infringe on our obligations, as stated in the grant agreement with the European Commission. This agreement will be based on the model proposed by the European Commission. It will describe clearly the tasks to be performed by my organisation and define the financial arrangements.
4. For the purposes of the implementation of the agreement regarding this project between the European Commission and the coordinating beneficiary:
  - a) My organisation grants power of attorney to the coordinating beneficiary, to act in our name and for our account in signing the above-mentioned agreement and its possible subsequent riders with the European Commission. Accordingly, my organisation hereby mandates the coordinating beneficiary to take full legal responsibility for the implementation of such an agreement.
  - b) My organisation hereby confirms that we have taken careful note of and accept all the provisions of the above agreement with the European Commission, in particular all provisions affecting my organisation and the coordinating beneficiary. In particular, my organisation acknowledges that, by virtue of this mandate, the co-ordinator alone is entitled to receive funds from the Commission and distribute to my organisation the amount corresponding to our participation in the action.
  - c) My organisation hereby agrees to do everything in our power to help the coordinating beneficiary fulfil his obligations under the above agreement. In particular, my organisation hereby agrees to provide him whatever documents or information may be required, as soon as possible after receiving his request.
  - d) The provisions of the above agreement, including this mandate, shall take precedence over any other agreement between my organisation and the coordinating beneficiary which may have an effect on the implementation of the above agreement between the coordinating beneficiary and the Commission.

I am legally authorised to sign this statement on behalf of my organisation.

I have read in full the Common Provisions (attached to the Model Grant Agreement provided with the LIFE+ application files).

I certify to the best of my knowledge that the statements made in this proposal are true and the information provided is correct.

**At Verbania, Italy on 25 August 2008**

Stamp and Signature of the Associated Beneficiary:

*Consiglio Nazionale delle Ricerche*  
**ISTITUTO per lo STUDIO degli ECOSISTEMI**  
**IL DIRETTORE**  
**(Dr. R. Mosello)**

Name(s) and status of signatory: **Rosario Mosello, Director**

*Rosario Mosello*

| Coordinating Beneficiary Profile Information  |  |              |                            |  |        |
|---|--|--------------|----------------------------|--|--------|
| Short Name  | vTI  |              |                            | Beneficiary n°                                       | 1      |
| <b>Legal information on the Coordinating Beneficiary</b>  |  |              |                            |  |        |
| Legal Name  | Johann Heinrich von Thünen Institut                                      |              |                            | Legal Status   |        |
| VAT No  | DE 153 809 887   |              |                            | Public Authority                                     | X      |
| Legal Registration No   | -  |              |                            | Other Public Body                                    |        |
| Registration Date   | -  |              |                            | Private commercial                                   |        |
|   |  |              |                            | Private non- commercial                              |        |
| <b>Legal address of the Coordinating Beneficiary</b>  |  |              |                            |  |        |
| Street Name and No  | Leuschnerstraße 91   |              |                            | PO Box   | 800209 |
| Post Code   | 21031  | Town/City    | HAMBURG                    |  |        |
| Country Code  | D  | Country Name | GERMANY                    |  |        |
| <b>Coordinating Beneficiary contact person information</b>  |  |              |                            |  |        |
| Title   | Dr.  | Function     | Senior Scientist           |  |        |
| Surname   | LORENZ   |              | First Name                 | MARTIN   |        |
| Department / Service  | Institute for World Forestry   |              |                            |  |        |
| Street Name and No  | Leuschnerstr. 91   |              |                            | PO Box   | 800209 |
| Post Code   | 21031  | Town/City    | HAMBURG                    |  |        |
| Country   | GERMANY  |              |                            |  |        |
| Telephone No  | +49 40-739 62 140  |              | Fax No                     | +49 40-739 62 299                                    |        |
| E-mail  | <a href="mailto:martin.lorenz@vti.bund.de">martin.lorenz@vti.bund.de</a> |              | Website                    | <a href="http://www.vti.bund.de">www.vti.bund.de</a> |        |
| <b>Coordinating Beneficiary details</b>   |  |              |                            |  |        |
| Year  | 2008   |              |                            |  |        |
| Annual turnover   | 62.258.000 Euro  |              | Annual Balance Sheet Total | 62.258.000 Euro                                      |        |
| Number of employees   | 577 civil servants   |              |                            |  |        |
| Number of employees in the department carrying out the project  |  |              | 21                         |  |        |
| Is your organisation independent (Yes or No)  |  |              |                            |  |        |
| If No, please indicate legal name(s) of owner(s) who own 25 % or more   |  |              |                            |  |        |
| Is your organisation affiliated to any other participant(s) in the project? (Yes or No)   |  |              |                            |  | no     |
| If Yes, please indicate Participant Short Name(s) and character of affiliations(s)  |  |              |                            |  |        |
| <p>The primary task of the Johann Heinrich von Thünen Institute is to assist the German Federal Government by providing a scientific basis to its political decisions with respect to agriculture, forestry and fisheries. As regards forestry, the scientific results should be of benefit to the forestry and forest products industry as well as to society as a whole. vTI meets the manifold challenges on forestry and forest products research by its research programme. By achieving and helping to realize new results it contributes to the solution of urgent problems.</p> <p>The <b>conservation of natural resources</b> is of growing global concern and it requires a considerable research effort in the area of forestry and forest products in order to support political decisions. The continuing economic development and steep population growth rates in many developing countries overstretch functional efficiency and sustained potential production of ecosystems.</p> |  |              |                            |  |        |

**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information   |                        |                                     |
|--|------------------------|-------------------------------------|
| Short name   | BFW                    | Beneficiary n° 2                    |
| Legal information on the Associated Beneficiary  |                        |                                     |
| Legal Name and full address  | Legal status           |                                     |
| Bundesforschungs- und Ausbildungszentrum für Wald, Naturgefahren und Landschaft (BFW)    | Public Authority       | <input type="checkbox"/>            |
| Austrian Federal Research and Training Centre for Forests, Natural Hazards and Landscape | Other Public Body      | <input checked="" type="checkbox"/> |
| Seckendorff Gudent Weg 8   | Private commercial     | <input type="checkbox"/>            |
| 1131 Wien  | Private non-commercial | <input type="checkbox"/>            |
| Austria  |                        |                                     |
| Brief description of the activities of the Associated Beneficiary                        |                        |                                     |

BFW is an incorporated body based on public law acting as multidisciplinary research and training centre, contributing to the economic, ecological and socially sustainable development of rural areas. Through conducting forest and landscape research, BFW prepares scientific guidelines and disseminates knowledge, focussing on the

- sustainable use, multifunctional management and protection of forest ecosystems,
- conservation and enhancement of biodiversity,
- protection against natural hazards and georisk management and
- use, management and protection of catchment areas in order to safeguard the national water resources on a sustainable basis

**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information                        |                        |                                     |
|---|------------------------|-------------------------------------|
| Short name  | INBO                   | Beneficiary n° 3                    |
| Legal information on the Associated Beneficiary                   |                        |                                     |
| Legal Name and full address                                       | Legal status           |                                     |
| Instituut voor Natuur- en Bosonderzoek                            | Public Authority       | <input checked="" type="checkbox"/> |
| Kliniekstraat 25  | Other Public Body      | <input type="checkbox"/>            |
| 1070 Brussel  | Private commercial     | <input type="checkbox"/>            |
| België  | Private non-commercial | <input type="checkbox"/>            |
| Brief description of the activities of the Associated Beneficiary |                        |                                     |

The Research Institute for Nature and Forest (INBO) is a scientific institute of the Flemish Community. The official tasks attributed to INBO are mainly applied scientific research activities in relation to forestry, game management, freshwater fishery, nature management and conservation policy. INBO is commissioned to report on the state of forests and nature in Flanders. In this respect a large set of indicators, in accordance with European and CBD strategies was developed and intensive monitoring programmes of species and communities are established. Furthermore the institute participates in the forest monitoring under ICP Forests and hosts the Forest Soil Co-ordinating Centre (FSCC). Finally, methods are developed for monitoring of the ecological and biological conditions under the European Water Framework Directive.

Most of the other research and advisory activities are in the field of forestry, pest control, fisheries, applied ecology and conservation biology. For the latter, INBO has specialised in landscape ecology, distribution ecology, bio-indication, nature and sustainable management, eco-hydrology and integrated water management.

INBO maintains close co-operation relations with other institutes, universities and scientific viz conservation associations, at both national and international level. INBO is an active partner in AlterNet, ICP Forests and many national and international scientific networks. The number of persons employed in the institute amounts to 250.

**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information  |                                    |                               |  |
|---|------------------------------------|-------------------------------|--|
| <b>Short name</b>   | DGRNE – Nature and Forest Division | <b>Beneficiary n°</b>         | 4  |
| Legal information on the Associated Beneficiary   |                                    |                               |  |
| Legal Name and full address   |                                    | Legal status                  |  |
| Beneficiary No. 4 does not exist<br>(originally it was a partner from Wallonia who finally cancelled participation) |                                    | <b>Public Authority</b>       | <input checked="checked" type="checkbox"/> |
|   |                                    | <b>Other Public Body</b>      | <input type="checkbox"/>                   |
|   |                                    | <b>Private commercial</b>     | <input type="checkbox"/>                   |
|   |                                    | <b>Private non-commercial</b> | <input type="checkbox"/>                   |
| Brief description of the activities of the Associated Beneficiary   |                                    |                               |  |
|   |                                    |                               |  |



**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information   |   |                  |                                     |                   |                          |                    |                          |                        |                          |
|--|---|------------------|-------------------------------------|-------------------|--------------------------|--------------------|--------------------------|------------------------|--------------------------|
| Short name   | ExEA  |                  |                                     |                   |                          |                    |                          |                        |                          |
| Beneficiary n°   | 5   |                  |                                     |                   |                          |                    |                          |                        |                          |
| Legal information on the Associated Beneficiary  |   |                  |                                     |                   |                          |                    |                          |                        |                          |
| Legal Name and full address  | Legal status  |                  |                                     |                   |                          |                    |                          |                        |                          |
| Executive environment agency at the Ministry of environment and water – Bulgaria,<br>136 Tzar Boris III blvd, P.O.Box 251<br>1618 Sofia,<br>Bulgaria | <table border="1"> <tr> <td>Public Authority</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>Other Public Body</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Private commercial</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Private non-commercial</td> <td><input type="checkbox"/></td> </tr> </table> | Public Authority | <input checked="" type="checkbox"/> | Other Public Body | <input type="checkbox"/> | Private commercial | <input type="checkbox"/> | Private non-commercial | <input type="checkbox"/> |
| Public Authority   | <input checked="" type="checkbox"/>   |                  |                                     |                   |                          |                    |                          |                        |                          |
| Other Public Body  | <input type="checkbox"/>  |                  |                                     |                   |                          |                    |                          |                        |                          |
| Private commercial   | <input type="checkbox"/>  |                  |                                     |                   |                          |                    |                          |                        |                          |
| Private non-commercial   | <input type="checkbox"/>  |                  |                                     |                   |                          |                    |                          |                        |                          |
| Brief description of the activities of the Associated Beneficiary  |   |                  |                                     |                   |                          |                    |                          |                        |                          |

The Executive environment agency at the Ministry of environment and water Bulgaria is a structure under the Minister of environment and water established as the management body of the National System for Environmental Monitoring (NSEM). It is recognised as an information and data analytical unit for supporting the realisation of the state policy in the field of environmental protection and for dissemination of environmental information. The Agency is the National Reference Centre for the European Environment Agency and National Focal Centre for the ICP-Forests..

The Environmental monitoring directorate organises and manages NASEM which is to monitor harmful emissions in air and water, ambient air quality, surface and ground water, soils, forest ecosystems, biodiversity and protected areas, hazardous waste, and the ionization and non-ionization impact of the environment. It is responsible for the development of the NSEM subsystems; creates and maintains data base containing information on the environmental components; carries out analyses and assessments of the state of the environment; issues periodical Bulletins and Annual Bulletin for the State of Environment; develops, implements and maintains modern technological solutions on the base of

Remote Sensing and GIS for Spatial visualization and analysis of environmental information; collects, process and reports information to the European Environment Agency

The NASEM has hierarchic structure of regional and national databases with automated connection for data exchange between regional and national databases. Databases on both levels are structured by environmental components, with possibility to integrate information and monitoring data are provided by the regional to the national /ExEA/ level either via WAN network or via Internet.

**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information                        |                       |                        |                                     |
|---|-----------------------|------------------------|-------------------------------------|
| Short name  | Department of Forests | Beneficiary n°         | 6                                   |
| Legal information on the Associated Beneficiary                   |                       |                        |                                     |
| Legal Name and full address                                       |                       | Legal status           |                                     |
| Department of Forests   |                       | Public Authority       | <input checked="" type="checkbox"/> |
| Louki Akrita 26   |                       | Other Public Body      | <input type="checkbox"/>            |
| 1414 Nicosia  |                       | Private commercial     | <input type="checkbox"/>            |
| Cyprus  |                       | Private non-commercial | <input type="checkbox"/>            |
| Brief description of the activities of the Associated Beneficiary |                       |                        |                                     |

The Department of Forests is the responsible governmental authority for the management, administration and protection of state forests in Cyprus. It belongs to the Ministry of Agriculture, Natural Resources and Environment.

In addition to the above activities, the Department deals with the improvement and expansion of Forests, the protection of Nature, forest recreation, education, training, publicity and forest research.

The Department of Forests participates in various national and international research activities and projects. It represents Cyprus in the various committees and meetings related with forests and nature at European and international level.

**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information  |   |                         |                          |                          |                                     |                           |                          |                               |                          |
|---|---|-------------------------|--------------------------|--------------------------|-------------------------------------|---------------------------|--------------------------|-------------------------------|--------------------------|
| <b>Short name</b>   | VULHM/FGMRI   |                         |                          |                          |                                     |                           |                          |                               |                          |
| <b>Beneficiary n°</b>   | No.7  |                         |                          |                          |                                     |                           |                          |                               |                          |
| Legal information on the Associated Beneficiary   |   |                         |                          |                          |                                     |                           |                          |                               |                          |
| Legal Name and full address   | Legal status  |                         |                          |                          |                                     |                           |                          |                               |                          |
| Výzkumný ústav lesního hospodářství a myslivosti v.v.i./<br>Forestry and Game management Research Institute<br>Strnady 136, 252 02 Jiloviste<br>Tel: +420 257 892 222<br>E-mail: <a href="mailto:info@vulhm.cz">info@vulhm.cz</a> | <table border="1"> <tr> <td><b>Public Authority</b></td> <td><input type="checkbox"/></td> </tr> <tr> <td><b>Other Public Body</b></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td><b>Private commercial</b></td> <td><input type="checkbox"/></td> </tr> <tr> <td><b>Private non-commercial</b></td> <td><input type="checkbox"/></td> </tr> </table> | <b>Public Authority</b> | <input type="checkbox"/> | <b>Other Public Body</b> | <input checked="" type="checkbox"/> | <b>Private commercial</b> | <input type="checkbox"/> | <b>Private non-commercial</b> | <input type="checkbox"/> |
| <b>Public Authority</b>   | <input type="checkbox"/>  |                         |                          |                          |                                     |                           |                          |                               |                          |
| <b>Other Public Body</b>  | <input checked="" type="checkbox"/>   |                         |                          |                          |                                     |                           |                          |                               |                          |
| <b>Private commercial</b>   | <input type="checkbox"/>  |                         |                          |                          |                                     |                           |                          |                               |                          |
| <b>Private non-commercial</b>   | <input type="checkbox"/>  |                         |                          |                          |                                     |                           |                          |                               |                          |
| Brief description of the activities of the Associated Beneficiary   |   |                         |                          |                          |                                     |                           |                          |                               |                          |

Solution of scientific and research projects in forestry, expert consultancy, work on the National Forestry programme-conception of the state forest policy, evaluation of forest and forest damage, work on legislative and preparatory work towards EU, branch centre of technical standards, management and inventory of reproductive sources and their quality control, inventory and production of fast growing clones, genetic monitoring of forest tree species, long-term breeding programmes, bio-technologies and their use in forest practice, complex monitoring of the forest ecosystems, analyses of the impact of air pollution and other stressors on forests, analyses of the soil, plant and water materials, Forest protection Service, testing of pesticides, and other bio-preparations, analyses of the the state of forest game, etc.

**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information  |   |
|---|---|
| <b>Short name</b>   | Forest & Landscape Denmark                            |
| <b>Beneficiary n°</b>   | 8   |
| Legal information on the Associated Beneficiary   |   |
| Legal Name and full address   | Legal status  |
| Danish Centre for Forest, Landscape and Planning  | Public Authority <input type="checkbox"/>             |
| University of Copenhagen  | Other Public Body <input checked="" type="checkbox"/> |
| Hørsholm Kongevej 11  | Private commercial <input type="checkbox"/>           |
| DK-2970 Hørsholm  | Private non-commercial <input type="checkbox"/>       |
| Denmark   |   |
| Brief description of the activities of the Associated Beneficiary   |   |
| Forest and Landscape Denmark is a non-profit entity within University of Copenhagen. It is financed by the state and public and private research funds. Research forms a vital part of our core business, along with education, extension and monitoring. |   |

**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information                        |      |                               |                                  |
|---|------|-------------------------------|----------------------------------|
| <b>Short name</b>   | CFPS | <b>Beneficiary n°</b>         | 9                                |
| Legal information on the Associated Beneficiary                   |      |                               |                                  |
| Legal Name and full address                                       |      | Legal status                  |                                  |
| Centre of Forest Protection and Silviculture                      |      | <b>Public Authority</b>       | <input type="text" value="yes"/> |
| Roomu tee 2   |      | <b>Other Public Body</b>      | <input type="text"/>             |
| 51013 Tartu   |      | <b>Private commercial</b>     | <input type="text"/>             |
| Estonia   |      | <b>Private non-commercial</b> | <input type="text"/>             |
| Brief description of the activities of the Associated Beneficiary |      |                               |                                  |

The Centre of Forest Protection and Silviculture (CFPS) is a government office under the jurisdiction of the Estonian Ministry of Environment.

CFPS participates in the drafting of legislation on the sustainable and multifunctional management of forests, forest protection, forest seed management, forest tree breeding, game management and management of protection forests, analyses and monitors law-abidance.

CFPS also collects and prepares information on the fulfilment of international agreements about the protection and sustainable management of forests; organises applied research, consulting services and PR activities in the field of silviculture and collects and analyses forestry-related information.

Core competencies of CFPS:

- Forest regeneration
- Forest protection
- Forest monitoring
- Statistical forest inventory
- Forest management planning
- Forest GIS
- Game population monitoring



**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information  |       |                               |                                     |
|---|-------|-------------------------------|-------------------------------------|
| <b>Short name</b>   | Metla | <b>Beneficiary n°</b>         | 10                                  |
| Legal information on the Associated Beneficiary   |       |                               |                                     |
| Legal Name and full address   |       | Legal status                  |                                     |
| Finnish Forest Research Institute (Metsäntutkimuslaitos)  |       | <b>Public Authority</b>       | <input checked="" type="checkbox"/> |
| Unioninkatu 40 A  |       | <b>Other Public Body</b>      | <input type="checkbox"/>            |
| FIN-00170 Helsinki  |       | <b>Private commercial</b>     | <input type="checkbox"/>            |
| Finland   |       | <b>Private non-commercial</b> | <input type="checkbox"/>            |
| Brief description of the activities of the Associated Beneficiary   |       |                               |                                     |
| <p>Metla is a governmental research institute, subordinate to the Ministry of Agriculture and Forestry. Metla's duty is to promote, through research, the economically, ecologically, and socially sustainable management and use of forests. The mission of Metla is to build the future of the forest sector of Finland by producing and disseminating information and know-how for the well-being of society. Metla has four research priorities: forest-based enterprise and business activities; societal impacts of forests; structure and functioning of forest ecosystems; and information data bank on forestry and the forest environment. The current network of research units (9) covers the whole country. The number of permanent staff is 730, of which about 300 are researchers. Approximately 150 projects are usually underway annually. In recent years, the overall budget of Metla has been approximately 40 million €, of which 75% has been direct government funding from the Ministry of Agriculture and Forestry.</p> |       |                               |                                     |

**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information   |     |                               |                                     |
|--|-----|-------------------------------|-------------------------------------|
| <b>Short name</b>  | ONF | <b>Beneficiary n°</b>         | 11                                  |
| Legal information on the Associated Beneficiary  |     |                               |                                     |
| <b>Legal Name and full address</b>   |     | <b>Legal status</b>           |                                     |
| Office National des Forêts   |     | <b>Public Authority</b>       | <input checked="" type="checkbox"/> |
| Direction Générale   |     | <b>Other Public Body</b>      | <input type="checkbox"/>            |
| 2, avenue de Saint-Mandé   |     | <b>Private commercial</b>     | <input type="checkbox"/>            |
| 75570 Paris Cedex 12, Tel. : +33.1.40.19.58.00   |     | <b>Private non-commercial</b> | <input type="checkbox"/>            |
| France   |     |                               |                                     |
| Brief description of the activities of the Associated Beneficiary  |     |                               |                                     |
| <p>The French National Forest Board (ONF, 10,500 employees) is a public institution with industrial and commercial character. Its main aim is to assure the sustainable forest management of public forests (state, 1.781 million hectares, and communal forests, 2.808 million hectares). ONF takes over many activities of general interest for the public. Since several years, ONF invests ever more energy in climate change and biodiversity aspects and has created several naturalist networks for protection purposes. It's research and development department manages since 16 years a part of the EU level I and the whole level II (RENECOFOR) forest monitoring networks. Since the beginning ONF co-finances theses activities as an integrated part of its understanding of sustainable forest management. ONF is an active partner of the Natura 2000 sites and the former Habitat directive. It is certified by PEFC, ISO 9001 and ISO 14001 (homepage : <a href="http://www.onf.fr">www.onf.fr</a>)</p> |     |                               |                                     |

**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information  |                        |                                     |
|---|------------------------|-------------------------------------|
| Short name  | GDF                    | Beneficiary n° 12                   |
| Legal information on the Associated Beneficiary   |                        |                                     |
| Legal Name and full address   | Legal status           |                                     |
| Hellenic Ministry of Rural Development and Foods,<br>General Directorate for Development and Protection of<br>Forests and Natural Environment,<br>Halkokondili 31, GR 10164, Athens<br><br>Greece | Public Authority       | <input checked="" type="checkbox"/> |
|   | Other Public Body      | <input type="checkbox"/>            |
|   | Private commercial     | <input type="checkbox"/>            |
|   | Private non-commercial | <input type="checkbox"/>            |
| Brief description of the activities of the Associated Beneficiary   |                        |                                     |

The GDF is the competent authority to formulate the forest policy, draws up long-term programmes of forest development, monitors scientific and technological development in the forests, works out fire protection programmes and promotes the country's co-operation with EU, third countries and International organisations.

In particular, the GDF draws up the national development programmes, usually 5-year duration, and the rural development programmes. Finally, the GDF implements forest measures based on the rural development regulation (2000-2006) and it will continue in the new rural development regulation (2007-2013).

**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information  |     |                               |                                     |
|---|-----|-------------------------------|-------------------------------------|
| <b>Short name</b>   | CAO | <b>Beneficiary n°</b>         | 13                                  |
| Legal information on the Associated Beneficiary   |     |                               |                                     |
| Legal Name and full address   |     | Legal status                  |                                     |
| Central Agricultural Office (CAO), Forestry Directorate<br>Budapest<br>Széchenyi u. 14<br>H-1054 Hungary  |     | <b>Public Authority</b>       | <input checked="" type="checkbox"/> |
|   |     | <b>Other Public Body</b>      | <input type="checkbox"/>            |
|   |     | <b>Private commercial</b>     | <input type="checkbox"/>            |
|   |     | <b>Private non-commercial</b> | <input type="checkbox"/>            |
| <p>Governmental body, responsible in the whole country for:</p> <ul style="list-style-type: none"> <li>▪ Forest management planning</li> <li>▪ Forest inventory</li> <li>▪ Forest monitoring</li> <li>▪ Forest authority</li> </ul> <p>Within the frame of the United Nations/Economic Commission for Europe – Convention on Long Range Trans-boundary Air Pollution (UN/ECE-CLRTAP), the International Cooperative Programme on Assessment and Monitoring of Air Pollution Effects on Forests (ICP-Forests) The CAO (State Forest Service before 2007) established the Level I. monitoring network in 1988. and in cooperation with the Forest Research Institute the Level II. network. The CAO is the National Focal Centre of the ICP-Forests and the was the designated authority to implement regulation (EC) no. 2152/2003 "Forest Focus". CAO is responsible and implement the national forest condition monitoring program in Hungary. Additional information is available on the homepage of the CAO <a href="http://www.aesz.hu">www.aesz.hu</a></p> |     |                               |                                     |

**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information   |                      |                        |                                     |
|--|----------------------|------------------------|-------------------------------------|
| Short name   | Forest Service, DAFF | Beneficiary n°         | 14                                  |
| Legal information on the Associated Beneficiary  |                      |                        |                                     |
| Legal Name and full address  |                      | Legal status           |                                     |
| Forest Service, Dept. of Agriculture Fisheries & Food  |                      | Public Authority       | <input checked="" type="checkbox"/> |
| Johnstown Castle Estate  |                      | Other Public Body      | <input type="checkbox"/>            |
| County Wexford   |                      | Private commercial     | <input type="checkbox"/>            |
| Ireland  |                      | Private non-commercial | <input type="checkbox"/>            |
| Brief description of the activities of the Associated Beneficiary  |                      |                        |                                     |
| <p>To develop forestry to a scale and in a manner which maximises its contribution to national economic and social well being on a sustainable basis and which is compatible with the environment.</p> |                      |                        |                                     |



**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information   |           |                               |                                     |
|--|-----------|-------------------------------|-------------------------------------|
| <b>Short name</b>  | CONECOFOR | <b>Beneficiary n°</b>         | 15                                  |
| Legal information on the Associated Beneficiary  |           |                               |                                     |
| <b>Legal Name and full address</b>   |           | <b>Legal status</b>           |                                     |
| Ministero delle Politiche Agricole, Alimentari e Forestali,<br>Corpo Forestale dello Stato – Ufficio CONECONFOR<br><br>via G. Carducci 5, 00187 Roma (Italia)  |           | <b>Public Authority</b>       | <input checked="" type="checkbox"/> |
|  |           | <b>Other Public Body</b>      | <input type="checkbox"/>            |
|  |           | <b>Private commercial</b>     | <input type="checkbox"/>            |
|  |           | <b>Private non-commercial</b> | <input type="checkbox"/>            |
| Brief description of the activities of the Associated Beneficiary  |           |                               |                                     |
| <p>Corpo Forestale dello Stato (National Forest Service) is a technical police body depending from the Italian Ministry for Agriculture, Food and Forestry, involved in environmental issues and control, research and forest fire preventions. CONECONFOR Board is part of National Forest Service and is involved since 1985 in specific activities regarding monitoring of forest ecosystems. This commitment started under the umbrella of the United Nations/Economic Commission for Europe – Convention on Long Range Trans-boundary Air Pollution (UN/ECE-CLRTAP), within the International Cooperative Programme on Integrated Monitoring of Air Pollution Effects on Ecosystems (ICP-IM) and the International Cooperative Programme on Assessment and Monitoring of Air Pollution Effects on Forests (ICP-Forests). Monitoring activities have been implemented on Level I and Level II forest monitoring Networks, respectively made up in Italy of 250 monitoring points and 31 permanent plots at national scale. From the very beginning, all activities were managed for the implementation of the EC Regulations of forest conditions (no. 3528/86, no. 2157/92, no. 1091/94 and following). From 2003 until 2006 monitoring activities continued under Regulation (EC) no. 2152/2003 “Forest Focus”. Since 2004, CONECONFOR has been involved widely in new international initiatives; in particular, CONECONFOR covered the Italian partnership within the Network of Excellence “ALTER-Net, A Long Term Biodiversity, Ecosystem and Awareness Research Network” (funded by the EC Sixth Framework Programme) and started to enrich long term monitoring features with research activities on European environmental priorities as biodiversity loss and impacts of climate change. In 2005, CONECONFOR started leading the establishment of the Italian Long Term Ecological Research Network (LTER Italy), based on 9 Level II CONECONFOR permanent plots and 27 other research stations managed by 8 excellent National research Institutes. In 2006, LTER-Italy entered the International Long Term Ecological Research Network (ILTER); in 2007, the national Network was admitted as a member of the European LTER Network. Nowadays, LTER-Italy Secretariat is managed under the responsibility of CONECONFOR. CONECONFOR is the Italian partner of the EU Forest Focus Pilot Projects “ForestBIOTA” and “BioSoil” for the assessment of selected biodiversity parameters in the Level II and Level I Networks. CONECONFOR also collaborated in the SEBI2010 Process (Streamlining European Biodiversity Indicators by 2010) for the harmonization of biodiversity indicators at European level: in this framework, CONECONFOR has been contracted by European Environment Agency, for the development of a synthetic indicator of European forests biodiversity status. The final Report was approved and published in October 2007.</p> |           |                               |                                     |

**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information  |   |                  |                                     |                   |                          |                    |                          |                        |                          |
|---|---|------------------|-------------------------------------|-------------------|--------------------------|--------------------|--------------------------|------------------------|--------------------------|
| Short name  | SFSS  |                  |                                     |                   |                          |                    |                          |                        |                          |
| Beneficiary n°  | 16  |                  |                                     |                   |                          |                    |                          |                        |                          |
| Legal information on the Associated Beneficiary   |   |                  |                                     |                   |                          |                    |                          |                        |                          |
| Legal Name and full address   | Legal status  |                  |                                     |                   |                          |                    |                          |                        |                          |
| State Forest Survey Service<br>Pramonės ave. 11 <sup>a</sup> , LT-51327 Kaunas, Lithuania | <table border="1"> <tr> <td>Public Authority</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>Other Public Body</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Private commercial</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Private non-commercial</td> <td><input type="checkbox"/></td> </tr> </table> | Public Authority | <input checked="" type="checkbox"/> | Other Public Body | <input type="checkbox"/> | Private commercial | <input type="checkbox"/> | Private non-commercial | <input type="checkbox"/> |
| Public Authority  | <input checked="" type="checkbox"/>   |                  |                                     |                   |                          |                    |                          |                        |                          |
| Other Public Body   | <input type="checkbox"/>  |                  |                                     |                   |                          |                    |                          |                        |                          |
| Private commercial  | <input type="checkbox"/>  |                  |                                     |                   |                          |                    |                          |                        |                          |
| Private non-commercial  | <input type="checkbox"/>  |                  |                                     |                   |                          |                    |                          |                        |                          |
| Brief description of the activities of the Associated Beneficiary                         |   |                  |                                     |                   |                          |                    |                          |                        |                          |

Lithuanian State Forest Survey Service (SFSS) is a budget institution under the Ministry of Environment of the Lithuanian Republic, founded in 2003. The official tasks attributed to SFSS are managing the State Forest Cadastre and Lithuanian forest information system, executing National Forest Inventory and Forest Condition Monitoring, compiling and processing forestry statistics. SFSS is commissioned to report on the state of Lithuanian forests.

The main functions of SFSS are:

- keeping the links with forest data providers, consumers, other state registers and cadastres;
- registering and checking forest data presented for cadastre;
- managing data base of forest management plans for private forest holdings;
- carrying out simplified (annually) and extended (every 5 years) forest assessment;
- estimating annual rate of final felling for state forest managers;
- providing information on forest land and growing stock volume for forest owners, managers, state institutions, Register of Real Estate;
- providing information on forest resources and their dynamics to all the stake-holders;
- carrying out National Forest Inventory by sampling method;
- carrying out forest health monitoring;
- publishing and disseminating the information on forests and forestry;
- supervising data basis compiled by forest inventory teams for forest management units;
- issuing manuals, recommendations and regulations on forest management planning, assessment of forest resources and forest cadastre management, contributing to the drafts of legal acts;
- approving the classificators of state forest cadastre, manual of standwise forest inventory operations;
- representing related institutions and co-operating with foreign enterprises, institutions and organizations in the field of forest assessment, statistics and monitoring when commissioned by the Ministry of Environment;
- operating the archive of forest management data;
- developing technological systems of data collecting, processing, updating and preserving.

The SFSS is the National Focal Centre of the ICP-Forests and was the designated authority to implement regulation (EC) No. 2152/2003 "Forest Focus". The SFSS has also a subcontractor (Lithuanian Forest Research Institute) responsible for the former Lithuanian Forest Focus Level II monitoring plots.

The number of permanent staff is 41.

**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information  |     |                               |                                     |
|---|-----|-------------------------------|-------------------------------------|
| <b>Short name</b>   | LNV | <b>Beneficiary n°</b>         | 17                                  |
| Legal information on the Associated Beneficiary   |     |                               |                                     |
| Legal Name and full address   |     | Legal status                  |                                     |
| Ministry of Agriculture, Nature and Food Quality,<br>Bezuidenhoutseweg 73,<br>Den Haag<br>The Netherlands   |     | <b>Public Authority</b>       | <input checked="" type="checkbox"/> |
|   |     | <b>Other Public Body</b>      | <input type="checkbox"/>            |
|   |     | <b>Private commercial</b>     | <input type="checkbox"/>            |
|   |     | <b>Private non-commercial</b> | <input type="checkbox"/>            |
| Brief description of the activities of the Associated Beneficiary   |     |                               |                                     |
| <p>Government and policy making on agriculture, nature and food quality</p> <p>The Department of Nature, i.c. the National authority for data concerning Nature, will do the overall coordination of the research. The daily coordination is done by Probos, a on forest research specialized foundation. The research itself is done by two other specialized institutes, one on environmental (abiotic) issues (Energie Centrum Nederland), one on the biotic issues (Alterra).</p> <p>Because of this, the Department of Nature is making hardly any costs itself. The majority of the costs is made by third parties (form F3 in the financial application form).</p> |     |                               |                                     |

**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information   |   |                  |                                     |                   |                          |                    |                          |                        |                          |
|--|---|------------------|-------------------------------------|-------------------|--------------------------|--------------------|--------------------------|------------------------|--------------------------|
| Short name   | IBL   |                  |                                     |                   |                          |                    |                          |                        |                          |
| Beneficiary n°   | 18  |                  |                                     |                   |                          |                    |                          |                        |                          |
| Legal information on the Associated Beneficiary  |   |                  |                                     |                   |                          |                    |                          |                        |                          |
| Legal Name and full address  | Legal status  |                  |                                     |                   |                          |                    |                          |                        |                          |
| Instytut Badawczy Leśnictwa (Forest Research Institute)<br>ul. Braci Leśnej 3<br>05-090 Raszyn, POLAND | <table border="1"> <tr> <td>Public Authority</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>Other Public Body</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Private commercial</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Private non-commercial</td> <td><input type="checkbox"/></td> </tr> </table> | Public Authority | <input checked="" type="checkbox"/> | Other Public Body | <input type="checkbox"/> | Private commercial | <input type="checkbox"/> | Private non-commercial | <input type="checkbox"/> |
| Public Authority   | <input checked="" type="checkbox"/>   |                  |                                     |                   |                          |                    |                          |                        |                          |
| Other Public Body  | <input type="checkbox"/>  |                  |                                     |                   |                          |                    |                          |                        |                          |
| Private commercial   | <input type="checkbox"/>  |                  |                                     |                   |                          |                    |                          |                        |                          |
| Private non-commercial   | <input type="checkbox"/>  |                  |                                     |                   |                          |                    |                          |                        |                          |
| Brief description of the activities of the Associated Beneficiary                                      |   |                  |                                     |                   |                          |                    |                          |                        |                          |

Forest Research Institute carries out scientific and development research on the field of forestry science, including forest ecology, forest resources health and development, hydrology and forest drainage, forest protection, silviculture and afforestation issues, game management, forest fires, forest management and planning, economics, ergonomics, safety and labour protection in forest operations. The Institute is also responsible for providing scientific support for technology transfer, scientific advisory work, preparation of forecasts and expert opinions, organizing training courses for forest professionals. It is also publisher of a scientific quarterly magazine Leśne Prace Badawcze (Forest Research Papers) and other non periodic journals: Folia Forestalia Polonica and Notatnik Naukowy IBL (Scientific Notes of FRI), as well as books and other publications.

**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information   |                        |
|--|------------------------|
| Short name   | Beneficiary n° 19      |
| Legal information on the Associated Beneficiary  |                        |
| Legal Name and full address  | Legal status           |
| Beneficiary No. 19 does not exist<br>(originally it was a partner from Portugal who finally cancelled participation) | Public Authority       |
|  | Other Public Body      |
|  | Private commercial     |
|  | Private non-commercial |
| Brief description of the activities of the Associated Beneficiary  |                        |



**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information  |      |                        |                                     |
|---|------|------------------------|-------------------------------------|
| Short name  | ICAS | Beneficiary n°         | 20                                  |
| Legal information on the Associated Beneficiary   |      |                        |                                     |
| Legal Name and full address   |      | Legal status           |                                     |
| INSTITUTUL DE CERCETĂRI ȘI AMENAJĂRI SILVICE<br>Sos. Stefanesti nr. 128 sector 2<br>RO-72904 Bucharest, Romania   |      | Public Authority       | <input type="checkbox"/>            |
|   |      | Other Public Body      | <input checked="" type="checkbox"/> |
|   |      | Private commercial     | <input type="checkbox"/>            |
|   |      | Private non-commercial | <input type="checkbox"/>            |
| Brief description of the activities of the Associated Beneficiary   |      |                        |                                     |
| <p><b>Forest Research and Management Institute</b> Romania (ICAS) was founded in 1933, as a public institution of national concern, specialized in research and implementation of the new technologies in the public and private forestry sectors, in order to assure sustainable management of Romanian forests. In 1990 the ICAS became a branch of National Forest Administration, but it has own financial autonomy. Currently it makes outstanding progress by restructuring process under current transformation to market economy of Romania and EU integration. The current staff rises to 103 researchers of which 40 have doctoral degree. In the structure of FRMI is functioning the National center of excellence for silvobiology and forests management.</p> <p>ICAS is the main manager for scientific and technical information in the forestry sector in Romania; it masters a national network of research and experimental bases, modern equipments, laboratories and specialized staff. Its activity is supervised by Academy for Agricultural and Forestry Science. ICAS is main holder for information in the forestry sector in Romania (30000 library books, numerical and mapping data base, documentation for projects, studies).</p> <p>Mainly the activity of ICAS is carried out in the framework of the two branches: I) research and II) planning, management and investments. The institute owns some 60 000 ha of forests around the country, which are managed by regional bases belonging to the Institute. The headquarter in Bucharest and 6 research stations around the country cover regional research and assistance needs for the forestry in Romania, both to private and state sector.</p> <p>ICAS is member of IUFRO (International Union of Forest Research Organizations), IPGRI (International Plant Genetic Resources Institute), ISTA (International Seed Testing Association). Also it is a National Focal Center of ICP-Forests since 1990 and participates with projects in different EU frames: COST (E16, E21, E43), Life-Natura, FP5, FP6 or on bilateral basis cooperation (US Forest Service, INRA, IPGRI, Belgium, Germany, Holland, France).</p> <p>The research activity occurs in the fields of forest ecology (botany, dendrology, forest ecophysiology, pedology, forest sites, ecosystems, climate change), biometrics, management and forest economics, GIS, monitoring, forest genetics and tree amelioration (forest genetics, amelioration of trees, biotechnologies, genetics engineering), silvotechnics (natural regeneration, nurseries, afforestation, mechanization of forestry, ecotechnologies for wood exploitation), forest protection (entomology, combating forecast, mycology, phytopathology), mapping, wildlife conservation and management and mountain fisheries (cynegetics, trout breeding, mountain fisheries). ICAS is national level attested for environmental impact assessment of industrial activity and other natural resources valorification.</p> <p>Research dissemination works is of great concern for ICAS. It consists in wide spreading of practical side of research results as technical guidelines for private and state forests, handbooks, articles in reviews.</p> |      |                        |                                     |

**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information  |     |                               |    |
|---|-----|-------------------------------|----|
| <b>Short name</b>   | NFC | <b>Beneficiary n°</b>         | 21 |
| Legal information on the Associated Beneficiary   |     |                               |    |
| Legal Name and full address   |     | Legal status                  |    |
| National Forest Centre  |     | <b>Public Authority</b>       | -  |
| T.G. Masaryka 22  |     | <b>Other Public Body</b>      | X  |
| 962 92 Zvolen   |     | <b>Private commercial</b>     | -  |
| Slovakia  |     | <b>Private non-commercial</b> | -  |
| Brief description of the activities of the Associated Beneficiary   |     |                               |    |
| <p><b>National Forest Centre (NFC)</b> is a scientific-research and professional organization under the Ministry of Agriculture of the Slovak Republic dealing with research, training, information and planning in the field of forestry.</p> <p><b>Main</b> tasks of NFC are: forestry research, education and consulting for the needs of forest management, research and monitoring of forest ecosystems, forest inventory, information for forestry and for forest management planning. Tasks following from legislation and assignment of the Ministry of Agriculture of SR (control of forest reproductive material, forest protection service), complex professional service for the needs of forest practice.</p> <p>NFC is a Slovak representative in international cooperation in forestry (FAO, UNECE, IUFRO, EFI and others).</p> <p><b>National Forest Centre was established</b> in accordance with the decision of the Ministry of Agriculture of SR by merging three contributory organizations namely Forest Research Institute Zvolen, Lesoprojekt Zvolen and the Institute for Training and Education of Forestry and Water Management Staff of the Slovak Republic Zvolen with the effect since 1 January 2006. The integration of these institutions has created a precondition for ensuring the performance of all tasks, in a complex and effective way.</p> <p>NFC at present <b>consists of</b>:</p> <ul style="list-style-type: none"> <li>• Forest Research Institute Zvolen</li> <li>• Institute of Forest Consultancy and Education Zvolen</li> <li>• Institute of Forest Resources and Information Zvolen</li> <li>• Lesoprojekt Zvolen (Forest Management Planning Institute Zvolen)</li> <li>• Forest Management Institute Zvolen</li> </ul> <p><b>NFC - Forest Research Institute Zvolen (NFC – FRI)</b>, though it is not a legal subject at present, is a dominant component of NFC. The history of institutional forest research dates to the end of 19th century (first research station was established in 1897). In last decades research has been targeting the anthropic and anthropogenic effects on forest ecosystems (air pollution, climate change), functions of forests, biodiversity and structure of forests, integrated forest protection and game management, management of forest resources, forest economics and forest policy, genetics, silviculture and forestry technologies.</p> <p>Many experts experienced and skilled in ecosystem research and monitoring of forest ecosystems work mainly in the Department of forest ecology and biodiversity of forest ecosystems (one of four research departments).</p> |     |                               |    |

**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information   |     |                               |                                     |
|--|-----|-------------------------------|-------------------------------------|
| <b>Short name</b>  | SFI | <b>Beneficiary n°</b>         | 22                                  |
| Legal information on the Associated Beneficiary  |     |                               |                                     |
| Legal Name and full address  |     | Legal status                  |                                     |
| Slovenian Forestry Institute<br>Vecna pot 2, 1000 Ljubljana, Slovenia  |     | <b>Public Authority</b>       | <input type="checkbox"/>            |
|  |     | <b>Other Public Body</b>      | <input checked="" type="checkbox"/> |
|  |     | <b>Private commercial</b>     | <input type="checkbox"/>            |
|  |     | <b>Private non-commercial</b> | <input type="checkbox"/>            |
| Brief description of the activities of the Associated Beneficiary  |     |                               |                                     |
| <p>The Slovenian Forestry Institute is a public institution of national importance, competent for research in the fields of forest, forest environment, forestry, wildlife and game management. It was founded by the Government of the Republic of Slovenia and it operates under the auspices of the Ministries of Higher Education, Science and Technology, Agriculture, Forestry and Food and the Ministry of the Environment and Spatial Planning. Having been committed to the Forest Act (1993), National Forest Development Programme (1996) and the main international documents addressing forests such as the Statement of Principles on Forests, Convention on Biological Diversity, Convention on Climate Change, resolutions and decisions within the framework of the Ministerial Conference on the Protection of Forests in Europe (MCPFE: Strasbourg 1990, Helsinki 1993, Lisbon 1998, Vienna 2003), Convention on the Protection of the Alps (Alpine Convention 1991) and EU Forestry Strategy (1998), it strictly follows the concept of the close-to-nature, sustainable and multifunctional forestry.</p> |     |                               |                                     |

**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information                        |          |                               |                                     |
|---|----------|-------------------------------|-------------------------------------|
| <b>Short name</b>   | ES (DGB) | <b>Beneficiary n°</b>         | 23                                  |
| Legal information on the Associated Beneficiary                   |          |                               |                                     |
| <b>Legal Name and full address</b>                                |          | <b>Legal status</b>           |                                     |
| Dirección General de Medio Natural y Política Forestal            |          | <b>Public Authority</b>       | <input checked="" type="checkbox"/> |
| Ríos Rosas, 24  |          | <b>Other Public Body</b>      | <input type="checkbox"/>            |
| ES – 28003 Madrid   |          | <b>Private commercial</b>     | <input type="checkbox"/>            |
| Spain   |          | <b>Private non-commercial</b> | <input type="checkbox"/>            |
| Brief description of the activities of the Associated Beneficiary |          |                               |                                     |

General Directorate for Nature and Forest Policy belongs to Spanish Ministry of the Environment and Rural and Marine Affairs , being its main tasks:

- The formulation of the Spanish strategy for biodiversity and the sustainable use of biodiversity.
- Reports prior to the Environmental Impact Statements submitted for consideration by the General Directorate for Quality and Environmental Assessments.
- The development of common standards for the development, maintenance and financing of Natura 2000, its integration into sectoral policies, particularly rural development policies, and its consideration in the planning and construction of infrastructure.
- Acting as scientific authority of the Convention on International Trade concerning Endangered Species of Wild Flora and Fauna (CITES).
- The formulation of strategies, plans, programs and guidelines for management of natural resources, the basic criteria and preventive measures to encourage the conservation of genetic resources, flora, fauna, habitats, landscapes, ecosystems and natural areas, especially fragile and degraded, contributing to the fulfilment of national and international programs for the conservation of biodiversity.
- The elaboration of the National Action Program to Combat Desertification.
- The coordination of the plans and programs of hydrologic-forestry restoration and reforestation, preservation and improvement of the vegetation cover of intercommunity basins.
- Participation in the preparation of plans for protecting forests and, especially in the defence against forest fires and forest health.
- The roles that Law 3 / 1995 of 23 March, Royal Ways, and 43/2003 of 21 November, Forestry, attributed to the General Administration of the State.
- The development of the National Census on Hunting and Fishing and the holding of the National Register of violators of Game and Fish.
- The development of the Data Bank of Biodiversity, which include, among others: the Spanish Forestry Statistics, the catalogue of Endangered Species, inventories of Wildlife, the National Wetlands Inventory Accounting and Natural Heritage; development the Network EIONET-Naturaleza, and the role of the National Reference Centre of the European Environment Agency in these matters.
- The scheduling of projects financed with European funds, and developing the necessary documentation, as well as monitoring and evaluation of such projects.
- Participation in the Ministry's representation in international bodies and monitoring of international agreements in matters within its competence.

**SPECIAL JUSTIFICATION FOR OUTSOURCING OF SHARES HIGHER THAN 35%**

Due to the limited number of personnel (civil servants) and material means in General Directorate for Nature and Forest Policy, apart from the fact that in this moment this Organism can not provide recruitment of staff specifically seconded to the project, it has no other option than outsourcing all the different works regarding FutMon.

Forest Health Service (belonging to General Directorate for Nature and Forest Policy) is formed by a small group of civil servants dealing with all different tasks regarding forest health issues as well as coordinating the works carried out in Spain regarding forest monitoring. The way this Service has always acted is through the externalization of works, by mean of tendering procedures (when the external assistance is not a public body) or public agreements with other public organisms. It is specifically stated in Spanish rules for Public Administration that any Unit pertaining to public administration can not receive any external funds. Therefore, when there is a request for cofinancing from EC, the reimbursement don't go directly to the Unit but to the Exchequer of Spain (Public Funds of Spain) which is a General Directorate belonging to Ministry of Finances.

The exact quantities paid by Forest Health Service to the external assistants or external bodies each year (for the

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different tasks carried out) are clearly justified by the invoices and reports kept in Forest Health Service.

In addition we can state that this Public Body (General Directorate for Nature and Forest Policy) awards its outsourcing in accordance with the applicable rules of public tendering and in conformity with Community Directives on public tendering procedures.

All these proceedings are ruled by the Spanish Law for Public Contracts: “Real Decreto Ley 2/2000” of 16 June (published in the Spanish Official Journal –BOE- on 21 June 2000), by means of what the adapted text of the Law for Public Contracts (Law 13/1995 of 18 May, into force until 22/6/2000) was adopted. It can be consulted in:

<http://www.boe.es/boe/dias/2000/06/21/pdfs/A21775-21823.pdf>

Forest Health Service is the Unit that has always been coordinating the works of forest monitoring in Spain, acting also as ICP-Forests national focal centre and former Forest Focus Regulation national focal point.

**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information   |                |                               |                                     |
|--|----------------|-------------------------------|-------------------------------------|
| <b>Short name</b>  | Fundación CEAM | <b>Beneficiary n°</b>         | 24                                  |
| Legal information on the Associated Beneficiary  |                |                               |                                     |
| Legal Name and full address  |                | Legal status                  |                                     |
| Fundación Centro de Estudios del Mediterráneo  |                | <b>Public Authority</b>       | <input type="checkbox"/>            |
| Parque Tecnológico   |                | <b>Other Public Body</b>      | <input type="checkbox"/>            |
| C/Charles Darwin 14  |                | <b>Private commercial</b>     | <input type="checkbox"/>            |
| 46980 Paterna (Valencia)   |                | <b>Private non-commercial</b> | <input checked="" type="checkbox"/> |
| Spain  |                |                               |                                     |
| Brief description of the activities of the Associated Beneficiary  |                |                               |                                     |
| <p>The Fundación Centro de Estudios Ambientales del Mediterráneo (CEAM) was created in 1991 under the auspices of the Valencian Autonomous Government and Bancaja, and with the endorsement of the Secretariat of State for Universities and Research and the European Commission (DG XII). It is a Centre of Applied Research, recognized by the CICYT as a Centre for Technological Innovation. CEAM was created as a response to the need for potentiating research and development in environmental technology in the Mediterranean countries. It is configured as a multidiscipline centre and, as such, its research has been concentrated in inter-related thematic areas where it has achieved recognized international expertise. CEAM's operative programme can be summarized in the following topics: 1) Air Chemistry Area: Research into chemical transformation processes in the atmosphere using the EUPHORE photochemical reactors to simulate real conditions. 2) Air Pollution Dynamics Area (R&amp;D): Characterization of the meteorological processes driving air pollution transport and dispersion at regional scale and giving rise to the pollution patterns and episodic situations considered typical of the Mediterranean basin. 3) Air pollution effects on vegetation and carbon cycle. 4) Research and development of new management techniques for Mediterranean conditions, especially in regard to the restoration of forests and shrublands affected by fire and desertification processes. 5) Meteorology and Climatology Programme: Analysis of the mechanisms and meteorological conditions (at synoptic and regional scales) leading to meteorological risk situations on the Spanish east coast, with special emphasis on torrential rains and forest fires. In the mentioned topics, researchers of the CEAM have a wide experience, having participated and led in many national and international projects.</p> |                |                               |                                     |



**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information                        |   |
|---|---|
| Short name  | SLU   |
| Beneficiary n°  | 25  |
| Legal information on the Associated Beneficiary                   |   |
| Legal Name and full address                                       | Legal status  |
| Sveriges lantbruksuniversitet                                     | Public Authority <input checked="checked" type="checkbox"/> |
| Arrheniusplan 2C  | Other Public Body <input type="checkbox"/>                  |
| PO Box 7070   | Private commercial <input type="checkbox"/>                 |
| SE 75007 Uppsala  | Private non-commercial <input type="checkbox"/>             |
| Sweden  |   |
| Brief description of the activities of the Associated Beneficiary |   |

The Swedish University of Agricultural Sciences (SLU) conducts research, education, and environmental monitoring and assessment. The fields of activity span from veterinary sciences to agriculture, forestry, and landscape planning. SLU operates its activities at four main locations: Uppsala, Umeå, Alnarp and Skara. Whereas research and education are normal undertakings for a university, SLU's activities in the field of environmental monitoring and assessment are rather unique. The motivation for the university to be active in this area is that there are large synergies between research and monitoring. As an example, SLU has been responsible for the Swedish National Forest Inventory for a long time. The University has also, as a subcontractor, been responsible for the former Swedish Forest Focus level I monitoring plots.

**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information  |                 |                               |                                     |
|---|-----------------|-------------------------------|-------------------------------------|
| <b>Short name</b>   | Forest Research | <b>Beneficiary n°</b>         | 26                                  |
| Legal information on the Associated Beneficiary   |                 |                               |                                     |
| <b>Legal Name and full address</b>  |                 | <b>Legal status</b>           |                                     |
| Forest Research<br>Alice Holt Lodge<br>Farnham<br>Surrey GU10 4LH<br>UK   |                 | <b>Public Authority</b>       | <input checked="" type="checkbox"/> |
|   |                 | <b>Other Public Body</b>      | <input type="checkbox"/>            |
|   |                 | <b>Private commercial</b>     | <input type="checkbox"/>            |
|   |                 | <b>Private non-commercial</b> | <input type="checkbox"/>            |
| Brief description of the activities of the Associated Beneficiary   |                 |                               |                                     |
| <p>We aim to provide research services relevant to UK and international forestry interests and inform and support forestry's contribution to UK governmental policies. Our core roles are to provide the evidence base for UK forestry practices and to support innovation.</p> <p><b>Our aims</b></p> <ul style="list-style-type: none"> <li>To assist the Forestry Commission in achieving its high level objectives.</li> <li>On behalf of all three (devolved UK) administrations, to take the lead in development and promotion of sustainable forest management and to support its achievement internationally.</li> <li>To support and enhance forestry and its role in sustainable development by providing high-quality research and development in a well-run organisation.</li> </ul> <p><b>Our objectives</b></p> <ul style="list-style-type: none"> <li>To inform and support forestry's contribution to the development and delivery of the policies of the UK government and the devolved administrations.</li> <li>To provide research, development and monitoring services relevant to UK forestry interests.</li> <li>To transfer knowledge actively and appropriately.</li> </ul> <p><b>How do we achieve the above?</b></p> <p>Trees have a profound influence on our lives:</p> <ul style="list-style-type: none"> <li>On our environment and health</li> <li>On our access to green space</li> <li>On our landscapes and their biodiversity</li> <li>As a raw material for construction, fuel and other uses</li> <li>On livelihoods and the rural economy.</li> </ul> <p>Our portfolio of research and development is therefore diverse, as it covers all of the above. We also provide a range of products and services to support the land management and environmental technologies sectors.</p> <p>We work closely with the Forestry Commission, the EU Commission and other international organisations to ensure compliance with international agreements on the sustainable management of forests and related subjects.</p> |                 |                               |                                     |

**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information   |     |                               |                                     |
|--|-----|-------------------------------|-------------------------------------|
| <b>Short name</b>  | LFE | <b>Beneficiary n°</b>         | 27                                  |
| Legal information on the Associated Beneficiary  |     |                               |                                     |
| Legal Name and full address  |     | Legal status                  |                                     |
| Landesforstanstalt Eberswalde  |     | <b>Public Authority</b>       | <input checked="" type="checkbox"/> |
| Alfred-Möller-Strasse 1  |     | <b>Other Public Body</b>      | <input type="checkbox"/>            |
| 16225 Eberswalde   |     | <b>Private commercial</b>     | <input type="checkbox"/>            |
| Germany  |     | <b>Private non-commercial</b> | <input type="checkbox"/>            |
| Brief description of the activities of the Associated Beneficiary  |     |                               |                                     |
| <p>LFE – Eberswalde Forestry Research Institute of the State of Brandenburg:<br/>           On behalf of the Ministry of Agriculture and Environmental Protection LFE consists of working groups in the departments</p> <p>1 Data-Management and Documentation,<br/>           2 Forest-Development and Monitoring and<br/>           3 Economical Planning.</p> <p>The institute offers scientific and technical services in general for public forest agencies.</p>  |     |                               |                                     |
| Data-Management and Documentation  |     |                               |                                     |
| <ul style="list-style-type: none"> <li>• Services in IT-supported costs-benefit-calculation on all levels of the forest administration</li> <li>• Support in real estate administration and information system of state -forest areas</li> <li>• Further development of the Forest-Data-Storage on forest-structure, -condition and development</li> <li>• Runner of the forest GIS</li> <li>• Production of forest maps</li> <li>• Data collection for Administration support</li> </ul>  |     |                               |                                     |
| Forest-Development and Monitoring  |     |                               |                                     |
| <ul style="list-style-type: none"> <li>• Basis, methods and consequences of forest transformation</li> <li>• Ways to achieve natural regeneration, especially in Pinus stands</li> <li>• Monitoring of forest condition on European and national scales</li> <li>• Conservation of Forest Genetic Resources</li> <li>• Survey on causes of oak decline</li> <li>• Development of methods to reconstruct forests after having been heavily defoliated by Insects</li> <li>• Survey of influences of management on structure, diversity and soil condition in comparison to natural non managed woodlands</li> <li>• advice centre of forest practice in silviculture and forest protection</li> </ul> |     |                               |                                     |
| Economical Planning  |     |                               |                                     |
| <ul style="list-style-type: none"> <li>• Service to establish sustainable steering of the state forests of Brandenburg</li> <li>• Economical review of the strategic target forest transformation and examination on the situation of private and community owning forests</li> <li>• Economical monitoring of Forest business in the state of Brandenburg</li> <li>• Mapping of forest functions</li> </ul>   |     |                               |                                     |

**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information  |                       |                               |                                     |
|---|-----------------------|-------------------------------|-------------------------------------|
| <b>Short name</b>   | FVA Freiburg, Germany | <b>Beneficiary n°</b>         | 28                                  |
| Legal information on the Associated Beneficiary   |                       |                               |                                     |
| Legal Name and full address   |                       | Legal status                  |                                     |
| Forstliche Versuchs- und Forschungsanstalt Baden-Württemberg  |                       | <b>Public Authority</b>       | <input type="checkbox"/>            |
| Wonnhalde Str. 4  |                       | <b>Other Public Body</b>      | <input checked="" type="checkbox"/> |
| <u><b>D-79100 Freiburg, Germany</b></u>   |                       | <b>Private commercial</b>     | <input type="checkbox"/>            |
|   |                       | <b>Private non-commercial</b> | <input type="checkbox"/>            |
| Brief description of the activities of the Associated Beneficiary   |                       |                               |                                     |
| <p>The task of Forstliche Versuchs- und Forschungsanstalt Baden-Württemberg (FVA) is to make applied research and to support the forest practice in solving practical problems by scientific expertise and transfer of scientific results into practical guidelines. The expertise of the FVA covers all relevant items of forestry and forest science. The department "soil and environment" will be in charge of the FutMon project. This department runs the environmental monitoring systems like crown condition survey, deposition measuring network, soil survey, intensive forest ecosystem monitoring, intensively equipped ecosystem case studies. In the last years a lot of regionalization methods have been developed at the basis of monitoring data in order to make them fit for serving as decision support in forest planning.</p> |                       |                               |                                     |

**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information   |     |                               |  |
|--|-----|-------------------------------|--|
| <b>Short name</b>  | LWF | <b>Beneficiary n°</b>         | 29   |
| Legal information on the Associated Beneficiary  |     |                               |  |
| Legal Name and full address  |     | Legal status                  |  |
| Bayerische Landesanstalt für Wald und Forstwirtschaft (LWF)<br>Am Hochanger 11<br>D-85354 Freising   |     | <b>Public Authority</b>       | <input checked="checked" type="checkbox"/> |
|  |     | <b>Other Public Body</b>      | <input type="checkbox"/>                   |
|  |     | <b>Private commercial</b>     | <input type="checkbox"/>                   |
|  |     | <b>Private non-commercial</b> | <input type="checkbox"/>                   |
| Brief description of the activities of the Associated Beneficiary  |     |                               |  |
| <p>The Bavarian Forest Institute (LWF) is a special agency of the Bavarian Forest Administration. Our objectives are:</p> <ul style="list-style-type: none"> <li>• Support of Bavarian Forest Administration, the State Ministry of Agriculture and Forestry and its regional offices,</li> <li>• Consulting and</li> <li>• Forest Research</li> </ul> |     |                               |  |

**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information                        |        |                               |                                     |
|---|--------|-------------------------------|-------------------------------------|
| <b>Short name</b>   | NW-FVA | <b>Beneficiary n°</b>         | 30                                  |
| Legal information on the Associated Beneficiary                   |        |                               |                                     |
| Legal Name and full address                                       |        | Legal status                  |                                     |
| Northwest German Forest Research Station                          |        | <b>Public Authority</b>       | <input checked="" type="checkbox"/> |
| Grätzelstr. 2   |        | <b>Other Public Body</b>      | <input type="checkbox"/>            |
| 37079 Göttingen   |        | <b>Private commercial</b>     | <input type="checkbox"/>            |
| Germany   |        | <b>Private non-commercial</b> | <input type="checkbox"/>            |
| Brief description of the activities of the Associated Beneficiary |        |                               |                                     |

NW-FVA is responsible for practically relevant forest research, as well as expert advisory service for private and public forest owners.



**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information   |   |                         |                                     |                          |                          |                           |                          |                               |                          |
|--|---|-------------------------|-------------------------------------|--------------------------|--------------------------|---------------------------|--------------------------|-------------------------------|--------------------------|
| <b>Short name</b> LU M-V   | <b>Beneficiary n°</b> 31  |                         |                                     |                          |                          |                           |                          |                               |                          |
| Legal information on the Associated Beneficiary  |   |                         |                                     |                          |                          |                           |                          |                               |                          |
| Legal Name and full address  | Legal status  |                         |                                     |                          |                          |                           |                          |                               |                          |
| Ministerium für Landwirtschaft, Umwelt und Verbraucherschutz<br>Herr Dr. Peter Röhe<br>Paulshöher Weg 1<br>19048 Schwerin<br>Germany | <table border="1"> <tr> <td><b>Public Authority</b></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td><b>Other Public Body</b></td> <td><input type="checkbox"/></td> </tr> <tr> <td><b>Private commercial</b></td> <td><input type="checkbox"/></td> </tr> <tr> <td><b>Private non-commercial</b></td> <td><input type="checkbox"/></td> </tr> </table> | <b>Public Authority</b> | <input checked="" type="checkbox"/> | <b>Other Public Body</b> | <input type="checkbox"/> | <b>Private commercial</b> | <input type="checkbox"/> | <b>Private non-commercial</b> | <input type="checkbox"/> |
| <b>Public Authority</b>  | <input checked="" type="checkbox"/>   |                         |                                     |                          |                          |                           |                          |                               |                          |
| <b>Other Public Body</b>   | <input type="checkbox"/>  |                         |                                     |                          |                          |                           |                          |                               |                          |
| <b>Private commercial</b>  | <input type="checkbox"/>  |                         |                                     |                          |                          |                           |                          |                               |                          |
| <b>Private non-commercial</b>  | <input type="checkbox"/>  |                         |                                     |                          |                          |                           |                          |                               |                          |
| Brief description of the activities of the Associated Beneficiary  |   |                         |                                     |                          |                          |                           |                          |                               |                          |

The Ministry of Agriculture, Environment and Consumer Protection is the upper forest authority in Mecklenburg-Vorpommern. The forest section is responsible for:

General principles of silviculture, forest ecology, forest planning, forest inventories;  
 Technical supervision on the Forest Institute in the fields of forest site mapping, mapping of forest habitats and landscapes, forest monitoring;  
 Elaboration of guidelines and recommendations for forest management in protected areas;  
 Funding of forest research, coordination of research projects and scientific education in forestry;  
 Technical supervision on the Forest Institute in the field of forest research;  
 Forest Health and Forest Fire prevention;  
 technical supervision on the Forest Institute in the fields of forest protection/forest health, monitoring of forests including the implementation of the Forest Focus-programmes and projects under LIFE+;  
 Forest reproductive material and conservation of forest genetic resources;  
 Control of management concepts (forest management planning, forest development planning) for the state forest in National Parks, the forest of the Forest Institute and corporate forests and private owned forest holdings greater than 100 ha;  
 Forest certification;  
 General principles of hunting, hunting legislation; regulation of hunting in private hunting districts owned by the Federal Republic of Germany, the land Mecklenburg-Vorpommern and the forest institute;  
 hunting research;  
 Regulation of hunting on areas of land owned by the state, coordination of game monitoring, prevention and control of game diseases;  
 Training and education in the field of hunting, co-operation with the advisory board of the upper hunting authority;  
 Environment protection, nature conservation and protection of species in forests, forest protection areas including protected areas under the Habitats and Bird Directive, management plans for Natura2000 sites, forest function mapping.  
 Co-ordination of the comments given by the Ministry in land use planning procedures.

**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information                        |           |                        |                                     |
|---|-----------|------------------------|-------------------------------------|
| Short name  | LANUV NRW | Beneficiary n°         | 32                                  |
| Legal information on the Associated Beneficiary                   |           |                        |                                     |
| Legal Name and full address                                       |           | Legal status           |                                     |
| Landesamt für Natur, Umwelt und Verbraucherschutz NRW             |           | Public Authority       | <input checked="" type="checkbox"/> |
| Leibnizstrasse 10   |           | Other Public Body      | <input type="checkbox"/>            |
| D 45659 Recklinghausen  |           | Private commercial     | <input type="checkbox"/>            |
| Germany   |           | Private non-commercial | <input type="checkbox"/>            |
| Brief description of the activities of the Associated Beneficiary |           |                        |                                     |

The LANUV NRW is the superior state authority for matters related to nature conservation, technical environmental protection for water, soil and air as well as consumer protection and food safety. The LANUV NRW

- advise and support the state government and enforcement agencies
- cooperate with national and international scientific institutions
- keep the public informed
- furnish expertises to support effective legislature for sustained protection of nature variety of landscape
- operate a species conservation center and ornithological centers
- register and evaluate landscape data structured by biosphere and species in compliance with the EU-Flora-Fauna-Habitat directive
- operate monitoring networks for controlling quality of soil, air and water and for measuring environmental radiology
- conceive climatic consequences strategies
- produce concepts for easing the environmental burden in waste-disposal and wastewater-management and for implementing the EU Water Framework Directive
- assess the effects of environmental pollutants upon human beings
- have chemical and technical laboratories capable of performing complex analyses
- cooperate with subordinate agencies for monitoring foods and animal feedstuff as well as cosmetics and other consumer goods put in circulation
- are responsible for enforcement procedures in veterinary issues, e.g. animal diseases and food safety concerns

**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information   |                               |                                     |
|--|-------------------------------|-------------------------------------|
| <b>Short name</b>  | FAWF RP                       | <b>Beneficiary n°</b> 33            |
| Legal information on the Associated Beneficiary  |                               |                                     |
| Legal Name and full address  | Legal status                  |                                     |
| Forschungsanstalt für Waldökologie und Forstwirtschaft<br>Rheinland-Pfalz<br>Hauptstraße 16<br>D67705 Trippstadt | <b>Public Authority</b>       | <input checked="" type="checkbox"/> |
|  | <b>Other Public Body</b>      | <input type="checkbox"/>            |
|  | <b>Private commercial</b>     | <input type="checkbox"/>            |
|  | <b>Private non-commercial</b> | <input type="checkbox"/>            |
| Brief description of the activities of the Associated Beneficiary  |                               |                                     |

The Research Institute for Forest Ecology and Forestry of Rhineland-Palatinate (FAWF) is a department of the Central Commission of Forest Administration (ZdF) subject to the authority of the Ministry for Environment, Forestry and Consumer Protection. The FAWF provides the State Administration as well communal and private forest owners with professional advice concerning forest management, forest ecology and forest protection. It carries out monitoring and research particularly in the fields of forest ecology, game ecology, forest landscape ecology, nature forest dynamics, silviculture, forest protection, forest products, and forest genetics.

The FAWF Department for Forest Protection which is leading the present proposal has gained much experience in the field of site-related forest ecological research over many years. Besides, it supervises the forest environmental monitoring in Rhineland-Palatinate since 1984. Main focus of forest ecological research concerns studies on the bioelement balance of the forest ecosystems, the interactions between the ecosystems and the environmental impact acting upon them as well as studies on the effect of forest management on the water and bioelement budget of the ecosystems.

The cooperating FAWF Department Forest Growth conducts a forest meteorological monitoring network and possesses experience for many years in hydrological research.

The chemical analysis of soil, water, nutrients and element contents of the samples taken on FutMon plots will be carried out by the laboratory of the LUFA Speyer under an existing framework contract. The cooperation with this predominantly public funded institute exists since 1984. This was found to offer the best value for money while complying with the demand for high quality.

**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information   |                        |                                     |
|--|------------------------|-------------------------------------|
| Short name   | MLUR                   | Beneficiary n° 34                   |
| Legal information on the Associated Beneficiary  |                        |                                     |
| Legal Name and full address  | Legal status           |                                     |
| Ministerium für Landwirtschaft, Umwelt und ländliche Räume<br>Mercatorstraße 3<br>24106 Kiel | Public Authority       | <input checked="" type="checkbox"/> |
|  | Other Public Body      | <input type="checkbox"/>            |
|  | Private commercial     | <input type="checkbox"/>            |
|  | Private non-commercial | <input type="checkbox"/>            |
| Brief description of the activities of the Associated Beneficiary                            |                        |                                     |

Connecting economy and ecology is one of the main tasks of the Ministry of Agriculture, Environment and Rural Areas (MLUR). The change in trends towards an environmental policy strongly focuses on precaution shall promote a sound economic development founded on ecological innovations. We want to support the trade and industry prevailing in Schleswig-Holstein in creating integrated techniques capable to minimize resources consumption, and we want to support the agricultural sector investing in environmental protection, and consumer protection.

Moreover, outstanding scope of duties is the protection by nature and landscape conservation. Because three-quarter of Schleswig-Holstein's frontiers are surrounded by the Elbe, the North Sea and the Baltic Sea, it is also high responsible for the prevention of water pollution and the protection of the seas on national and international level. The Ministry of Agriculture, Environment and Rural Areas is in charge for immission control, waste water management, forestry, hunting and to make economy considering ecological needs.

The State Agency for Nature and Environment (Landesamt für Natur und Umwelt, LANU) is competent to advise MLUR technically and scientifically and, moreover, has jurisdiction over the administrative handling of assignments, especially in the field of nature and landscape conservation, while enacting nature conservation areas, for the technical coverage of contaminated wastes sites and the supervision of waste management facilities.

Owing to lowlily research capabilities of the Ministry to carry out the investigations in the frame of ICP Forests Level II, Ecology Centre of Kiel University has been obligated for this task.

The Ecology Centre is an interdisciplinary institution of the Faculty of Agriculture and Nutritional Science and the Faculty of mathematics and Natural Sciences. The main focus is an integrative approach to fundamental ecological sciences and applied environmental research. Currently, Ecology Centre is made up by the Division of Ecosystem Research and five departments. The Institute is experienced in ecosystem research on scientific bases and carries out the investigations on one forest plot continuously since 1989 that have been implemented to the Level II-programme in 1995.

**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information                        |  |
|---|--|
| Short name  | LUA  |
| Beneficiary n°  | 35   |
| Legal information on the Associated Beneficiary                   |  |
| Legal Name and full address                                       | Legal status   |
| Landesamt für Umwelt- und Arbeitsschutz                           | Public Authority <input checked="" type="checkbox"/> |
| Don-Bosco-Straße 1  | Other Public Body <input type="checkbox"/>           |
| D-66119 Saarbrücken   | Private commercial <input type="checkbox"/>          |
|   | Private non-commercial <input type="checkbox"/>      |
| Brief description of the activities of the Associated Beneficiary |  |

General activities are particularly linked to soil conservation and forest ecology subjects. Representing the Soil Service soil mapping and spatial estimation of soil functions are priorities as well. As a component authority for the enforcement of the soil protection act soil assessment and evaluation of soil capability include further activities.

The chemical analysis of soil, water, nutrients and element contents of the samples taken on FutMon plots is carried out by the laboratory of the LWF/the LUA. This was found to be the most cost-efficient way while complying with the need of synergy, scientific soundness and high quality. The laboratory is a separate section of our institution and will charge the costs of its services for the project, excluding profit, VAT, and overheads (these costs are reported on the financial application form F7 under “other costs”. Furthermore, LUA did not charge any overheads to its part of the project budget at all).

**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information                        |  |
|---|--|
| Short name  | SBS  |
| Beneficiary n°  | 36   |
| Legal information on the Associated Beneficiary                   |  |
| Legal Name and full address                                       | Legal status   |
| Staatsbetrieb Sachsenforst (SBS)                                  | Public Authority <input checked="" type="checkbox"/> |
| Bonnewitzer Str. 34, OT Graupa                                    | Other Public Body <input type="checkbox"/>           |
| DE- 01796 Pirna   | Private commercial <input type="checkbox"/>          |
| Germany   | Private non-commercial <input type="checkbox"/>      |
| Brief description of the activities of the Associated Beneficiary |  |

The **Staatsbetrieb Sachsenforst (associated beneficiary No. 36)** is responsible for practically relevant forest research, as well as expert advisory service for private and public forest owners. Associated beneficiary No. 36 for example

- cooperates with national and international scientific institutions
- keeps the public informed
- furnishes expertises to support effective legislature for sustained protection of nature variety of landscape
- registers and evaluates landscape data structured by biosphere and species in compliance with the EU-Flora-Fauna-Habitat directive
- operates monitoring networks for controlling quality of soil, air and water (Level I and Level II – programme)
- conceives climatic consequences strategies
- has a chemical and technical laboratory capable of performing complex analyses
- etc.



**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information  |   |                         |                                     |                          |                          |                           |                          |                               |                          |
|---|---|-------------------------|-------------------------------------|--------------------------|--------------------------|---------------------------|--------------------------|-------------------------------|--------------------------|
| <b>Short name</b>   | TLWJF   |                         |                                     |                          |                          |                           |                          |                               |                          |
| <b>Beneficiary n°</b>   | 37  |                         |                                     |                          |                          |                           |                          |                               |                          |
| Legal information on the Associated Beneficiary   |   |                         |                                     |                          |                          |                           |                          |                               |                          |
| Legal Name and full address   | Legal status  |                         |                                     |                          |                          |                           |                          |                               |                          |
| Thuringian State Institute for Forest, Game and Fishery<br>(TLWJF)<br>Jägerstraße 1<br>99867 Gotha<br>Germany | <table border="1"> <tr> <td><b>Public Authority</b></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td><b>Other Public Body</b></td> <td><input type="checkbox"/></td> </tr> <tr> <td><b>Private commercial</b></td> <td><input type="checkbox"/></td> </tr> <tr> <td><b>Private non-commercial</b></td> <td><input type="checkbox"/></td> </tr> </table> | <b>Public Authority</b> | <input checked="" type="checkbox"/> | <b>Other Public Body</b> | <input type="checkbox"/> | <b>Private commercial</b> | <input type="checkbox"/> | <b>Private non-commercial</b> | <input type="checkbox"/> |
| <b>Public Authority</b>   | <input checked="" type="checkbox"/>   |                         |                                     |                          |                          |                           |                          |                               |                          |
| <b>Other Public Body</b>  | <input type="checkbox"/>  |                         |                                     |                          |                          |                           |                          |                               |                          |
| <b>Private commercial</b>   | <input type="checkbox"/>  |                         |                                     |                          |                          |                           |                          |                               |                          |
| <b>Private non-commercial</b>   | <input type="checkbox"/>  |                         |                                     |                          |                          |                           |                          |                               |                          |
| Brief description of the activities of the Associated Beneficiary   |   |                         |                                     |                          |                          |                           |                          |                               |                          |

On behalf of the Thuringian Ministry of Agriculture, Nature protection, and Environment, the Thuringian State Institute for Forest, Game and Fishery (Thüringer Landesanstalt für Wald, Jagd und Fischerei) was established in 1991 in Gotha. It belongs to the state forest administration. More than 33% of the Free State of Thuringia is covered with forest. Wood and forestry play an important ecological, economical and social role in Thuringia. The institute offers scientific and technical services for state forest service, as well as for private forest owners and non-governmental organisations and also contributes to the education and training of students and foresters.

The institute consists of 4 departments which are divided into subdivisions with about 100 employees.

**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information |  |                       |    |
|--|--|-----------------------|----|
| <b>Short name</b>                          | Latvian State Forest Research Institute "Silava" | <b>Beneficiary n°</b> | 38 |

| Legal information on the Associated Beneficiary  |   |                         |                          |                          |                                     |                           |                          |                               |                          |
|--|---|-------------------------|--------------------------|--------------------------|-------------------------------------|---------------------------|--------------------------|-------------------------------|--------------------------|
| <b>Legal Name and full address</b>   | <b>Legal status</b>   |                         |                          |                          |                                     |                           |                          |                               |                          |
| Latvian State Forest Research Institute "Silava"   | <table border="1"> <tr> <td><b>Public Authority</b></td> <td><input type="checkbox"/></td> </tr> <tr> <td><b>Other Public Body</b></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td><b>Private commercial</b></td> <td><input type="checkbox"/></td> </tr> <tr> <td><b>Private non-commercial</b></td> <td><input type="checkbox"/></td> </tr> </table> | <b>Public Authority</b> | <input type="checkbox"/> | <b>Other Public Body</b> | <input checked="" type="checkbox"/> | <b>Private commercial</b> | <input type="checkbox"/> | <b>Private non-commercial</b> | <input type="checkbox"/> |
| <b>Public Authority</b>  | <input type="checkbox"/>  |                         |                          |                          |                                     |                           |                          |                               |                          |
| <b>Other Public Body</b>   | <input checked="" type="checkbox"/>   |                         |                          |                          |                                     |                           |                          |                               |                          |
| <b>Private commercial</b>  | <input type="checkbox"/>  |                         |                          |                          |                                     |                           |                          |                               |                          |
| <b>Private non-commercial</b>  | <input type="checkbox"/>  |                         |                          |                          |                                     |                           |                          |                               |                          |
| Address: 111, Rigas iela<br>Salaspils, LV 2169, Latvia<br>Phone: +371 6 7942555<br>Fax: +371 6 7901359<br>E-mail: inst@silava.lv |   |                         |                          |                          |                                     |                           |                          |                               |                          |

| Brief description of the activities of the Associated Beneficiary   |
|---|
| Latvian State Forest Research Institute "Silava" is the main centre of forest science in Latvia.<br>The principal tasks to be performed by LSFRI "Silava": <ul style="list-style-type: none"> <li>• research on forest ecosystems and their components;</li> <li>• working out recommendations for sustainable forest management and a rational and effective utilisation of forest resources and forest products.</li> </ul> |

**Research areas**

Institute carries out research in the following subject areas:

- ☐ *Forest ecology and silviculture*
- ☐ *Forest tree breeding and genetics*
- ☐ *Forest regeneration and establishment*
- ☐ *Forest protection*
- ☐ *Forest operations and machinery*
- ☐ *Game management*
- ☐ *Forest economics and forest policy*
- ☐ *Forest biomass processing*
- ☐ *Forest resources monitoring*

Laboratories:

- ☐ *Laboratory of Tissue Culture*
- ☐ *Laboratory of Forest Soils*
- ☐ *Laboratory of Mycology and Forest Phytopathology*
- ☐ *Laboratory of Forest Entomology*
- ☐ *Laboratory of Forest Products Processing*
- ☐ *Woodworking laboratory*


**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information   |                                     |   |    |                         |                          |                          |                                     |                           |                          |                               |                          |
|--|-------------------------------------|---|----|-------------------------|--------------------------|--------------------------|-------------------------------------|---------------------------|--------------------------|-------------------------------|--------------------------|
| <b>Short name</b>  | CRA                                 | <b>Beneficiary n°</b>   | 39 |                         |                          |                          |                                     |                           |                          |                               |                          |
| Legal information on the Associated Beneficiary  |                                     |   |    |                         |                          |                          |                                     |                           |                          |                               |                          |
| <b>Legal Name and full address</b>   |                                     | <b>Legal status</b>   |    |                         |                          |                          |                                     |                           |                          |                               |                          |
| Consiglio per la Ricerca e la sperimentazione in Agricoltura<br>Via Nazionale, 82<br>00184 Roma, Italy   |                                     | <table border="1"> <tr> <td><b>Public Authority</b></td> <td><input type="checkbox"/></td> </tr> <tr> <td><b>Other Public Body</b></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td><b>Private commercial</b></td> <td><input type="checkbox"/></td> </tr> <tr> <td><b>Private non-commercial</b></td> <td><input type="checkbox"/></td> </tr> </table> |    | <b>Public Authority</b> | <input type="checkbox"/> | <b>Other Public Body</b> | <input checked="" type="checkbox"/> | <b>Private commercial</b> | <input type="checkbox"/> | <b>Private non-commercial</b> | <input type="checkbox"/> |
| <b>Public Authority</b>  | <input type="checkbox"/>            |   |    |                         |                          |                          |                                     |                           |                          |                               |                          |
| <b>Other Public Body</b>   | <input checked="" type="checkbox"/> |   |    |                         |                          |                          |                                     |                           |                          |                               |                          |
| <b>Private commercial</b>  | <input type="checkbox"/>            |   |    |                         |                          |                          |                                     |                           |                          |                               |                          |
| <b>Private non-commercial</b>  | <input type="checkbox"/>            |   |    |                         |                          |                          |                                     |                           |                          |                               |                          |
| Brief description of the activities of the Associated Beneficiary  |                                     |   |    |                         |                          |                          |                                     |                           |                          |                               |                          |
| <p>The Agriculture Research Council (CRA) has competence of scientific research in agriculture and forestry. It works linked with Ministry for Agriculture and Forestry Policies. The Council is formed by 47 research Institutes distributed on whole of national territory, with an overall staff about 1800 people. The themes more directly linked with the present project are carried out by the Forest Ecology and Silviculture (CRA-SEL), the Research Centre for Plant-Soil Ecological Interactions (CRA-RPS) and the Forest Monitoring and Planning Research Unit (CRA-MPF).</p> <p>CRA-SEL is a Forestry Research Institution acting at national level in the field of applied research on forests, forest trees, forest environment. CRA-SEL has developed a long-term expertise on the following issues: (i) management of natural forests, of reafforestation areas and secondary forests, (ii) forest ecology, (iii) dynamics of tree and stand growth &amp; structure, (iv) tree farming on set-aside lands, (v) monitoring of forest ecosystems, (vi) restoration, maintenance and improvement of types &amp; scales of biodiversity, (vii) preservation of genetic resources in situ &amp; ex situ. Since its establishment, the CRA-SEL (formerly Experimental Station of Silviculture 1922-1967 in Florence), has been developing a "problem solving oriented" research activity by a number of permanent monitoring plots located throughout the peninsula and major islands.</p> <p>Current guidelines: applied research on the management and dynamics of forests according to stakeholders &amp; societal demands and environmental functions, i.e. from strict conservation (protected areas) to multiple-use options (production and amenity) to prevailing wood production (natural &amp; artificial forests and tree farming plantations). Lab. facilities &amp; equipment c/o CRA-SEL: forest mensuration, forest ecology, forest genetics.</p> <p>The CRA-RPS studies and research concern vegetal physiology, plant nutrition, climate as well as agricultural land in its physical, chemical and biological aspects. From 1996 it has carried out meteorological monitoring and studies in forest climatology to verify the existence of trends or climatic changes in Italian microclimate, through the analysis of regularities in temperature and precipitation fluctuations, the extreme events, thermal and water stress, and its effects on vegetation.</p> <p>The CRA-MPF has developed a long-term expertise in the field of forest inventory and volume and biomass modelling. As regards forest inventory, the Unit is responsible for the scientific and technical aspects of the Italian National Forest Inventory related to sampling design, measurement protocol, data quality control and database management. Besides the experience in national and regional forest inventories (Tuscany and Abruzzo), it is worth mentioning the study on secondary woods (Trentino Province), and the national inventory of Trees Outside Forest. Concerning the modelling issue, the Unit developed prediction models for tree volume, above-ground biomass and tree growth for most Italian tree species. These models are used in the processing of national forest inventory data and of forest management data throughout the country. A further research activity of CRA-MPF concerns the use of remote sensing in monitoring forest resources and the application of spatialisation techniques for integrating satellite with inventory data.</p> |                                     |   |    |                         |                          |                          |                                     |                           |                          |                               |                          |

**ASSOCIATED BENEFICIARY PROFILE (Complete for each Associated Beneficiary)**

| Associated Beneficiary profile information   |     |                               |                                     |
|--|-----|-------------------------------|-------------------------------------|
| <b>Short name</b>  | CNR | <b>Beneficiary n°</b>         | 40                                  |
| Legal information on the Associated Beneficiary  |     |                               |                                     |
| Legal Name and full address  |     | Legal status                  |                                     |
| Consiglio Nazionale delle Ricerche   |     | <b>Public Authority</b>       | <input type="checkbox"/>            |
| Istituto per lo Studio degli Ecosistemi  |     | <b>Other Public Body</b>      | <input checked="" type="checkbox"/> |
| Largo Tonolli 50   |     | <b>Private commercial</b>     | <input type="checkbox"/>            |
| 28922 Verbania Pallanza, Italy   |     | <b>Private non-commercial</b> | <input type="checkbox"/>            |
| Brief description of the activities of the Associated Beneficiary  |     |                               |                                     |
| <p>The Consiglio Nazionale delle Ricerche is the major Italian public research institution, including more than 100 research institutes, two of which are involved in FutMon: the Istituto per lo Studio degli Ecosistemi (ISE, Institute of Ecosystem Study) and the Istituto di Biologia Agro-ambientale e Forestale (IBAF, Institute of Agro-environmental and Forest Biology). The former carries out studies on ecosystem structure and dynamics and on their response to anthropogenic pressures, and develops methods for environmental monitoring and restoration. The latter carries out studies on plant physiology, genetics and conservation, and on biogeochemical cycling. Both are involved in monitoring activities in forest ecosystems in Italy.</p> |     |                               |                                     |

## CO-FINANCIER PROFILE AND COMMITMENT FORM (Complete for each co-financier)

| Legal Name and full address on the co-financier  |   |
|--|---|
| Agence de l'Environnement et de la Maîtrise de l'Energie<br>27 rue Louis Vicat<br>75737 PARIS Cedex 15 |   |
| Financial commitment   |   |
| We will contribute the following amount to the project:  | 100 000 Euro  |
| Status of the financial commitment   |   |
| Confirmed  |   |
| Stamp and signature of the authorised person   |   |
| Name and status of the authorised person (obligatory):   | Monsieur Alain MORCHEOINE<br>Agence de l'Environnement et de la Maîtrise de l'Énergie<br>27 rue Louis Vicat<br>75737 PARIS Cedex 15   |
| Date of the signature (obligatory):  | 2 September 2008  |
| Authorised stamp and signature (obligatory):   | <br><b>Alain MORCHEOINE</b><br><i>Directeur de l'Air,<br/>du Bruit et de l'Efficacité Énergétique</i> |

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## CO-FINANCIER PROFILE AND COMMITMENT FORM (Complete for each co-financier)

| Legal Name and full address on the co-financier  |  |
|--|--|
| Ministère de l'Ecologie, de l'Energie, du Développement Durable et de l'Aménagement du Territoire<br>20, Avenue de Ségur<br>75 302 PARIS 07 SP |  |
| Financial commitment   |  |
| We will contribute the following amount to the project:  | 150 000 Euro   |
| Status of the financial commitment   |  |
| Confirmed  |  |
| Stamp and signature of the authorised person   |  |
| Name and status of the authorised person (obligatory):   | Monsieur Christian BARTHOD<br>Sous-directeur des espaces naturels<br>(MEEDDAT/DGALN/DEB)                                       |
| Date of the signature (obligatory):  | 8/9/08   |
| Authorised stamp and signature (obligatory):   | <br>Le Sous-Directeur des Espaces Naturels |

YOU MAY DUPLICATE THIS PAGE

Christian BARTHOD



CO-FINANCIER PROFILE AND COMMITMENT FORM (Complete for each co-financier)

| Legal Name and full address on the co-financier  |  |
|--|--|
| Ministère de l'agriculture et de la pêche<br>78 rue de Varenne<br>75349 Paris 07 SP France |  |
| Financial commitment   |  |
| We will contribute the following amount to the project:                                    | 150 000 Euro   |
| Status of the financial commitment   |  |
| Confirmed  |  |
| Stamp and signature of the authorised person   |  |
| Name and status of the authorised person (obligatory):                                     | M Eric ALLAIN<br>Chef du service de la forêt de la ruralité et du cheval   |
| Date of the signature (obligatory):  | 2 September 2008   |
| Authorised stamp and signature (obligatory):   | <br> |

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## CO-FINANCIER PROFILE AND COMMITMENT FORM (Complete for each co-financier)

| Legal Name and full address on the co-financier         |   |
|---|---|
| MINISTERUL AGRICULTURII ŞI DEZVOLTĂRII RURALE           |   |
| Financial commitment                                    |   |
| We will contribute the following amount to the project: | 628 489 Euro  |
| Status of the financial commitment                      |   |
| Formally and informally confirmed                       |   |
| Stamp and signature of the authorised person            |   |
| Name and status of the authorised person (obligatory):  | DACIAN CIOLOS<br>MINISTER OF AGRICULTURE AND RURAL DEVELOPMENT                      |
| Date of the signature (obligatory):                     |  |
| Authorised stamp and signature (obligatory):            |  |

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## CO-FINANCIER PROFILE AND COMMITMENT FORM (Complete for each co-financier)

| Legal Name and full address on the co-financier  |  |
|--|--|
| Naturvårdsverket<br>(Swedish Environmental Protection Agency)<br>SE-106 48 Stockholm, Sweden |  |
| Financial commitment   |  |
| We will contribute the following amount to the project:                                      | 435 000 Euro   |
| Status of the financial commitment   |  |
| Secure   |  |
| Stamp and signature of the authorised person   |  |
| Name and status of the authorised person (obligatory):                                       | Martin Eriksson, Director Environmental Assessment Department                        |
| Date of the signature (obligatory):  | July 4 2008  |
| Authorised stamp and signature (obligatory):   |  |

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**NATURVÅRDSVERKET**  
 Swedish Environmental Protection Agency  
 106 48 Stockholm  
 Tel 08-698 10 00  
 Phone +46 8 698 10 00

OTHER PROPOSALS SUBMITTED FOR COMMUNITY FUNDING

Please answer each of the following questions :

- Have you or any of your associated beneficiaries already benefited from previous LIFE co-financing? (please cite LIFE project reference number, title, year, amount of the co-financing, duration, name(s) of coordinating beneficiary and/or partners involved):

Related answer of beneficiary number:

**(1) Johann Heinrich von Thünen Institute (vTI), Germany (DE)**

No

Related answer of beneficiary number:

**(2) Bundesforschungs- und Ausbildungszentrum für Wald, Naturgefahren und Landschaft (BFW), Austria (AT)**

No

Related answer of beneficiary number:

**(3) Research Institute for Nature and Forest, Belgium Flanders (INBO), Belgium Flanders (BE, FL)**

**1/ LIFE97 ENV/B/000419**

Title : Indice Biotique d'Intégrité Piscicole (IBIP) pour l'évaluation de la qualité écologique des systèmes lotiques-application au réseau hydrographique de la Meuse".

contractor : Faculté Universitaire Notre-Dame de la Paix (FUNDP), rue de Bruxelles 61, 5000 Namur

associated contractors : Instituut voor Bosbouw en Wildbeheer (IBW) – Institute for Forestry and

Game Management

Netherlands Institute for Fisheries Research (RIVO-DLO)

Conseil Supérieur de la Pêche (CSP)

period : 01/12/1997 - 01/12/2000

co-financing : 426955 euro for the project, 74987 euro for IBW

**2/ LIFE97 ENV/B/000401**

Title: The assessment of mulch sheets versus other techniques to inhibit competitive vegetation in tree plantations carried out in urban and natural environment

Contractor: AMINAL – Afdeling Bos en Groen, Graaf de Ferrarisgebouw, Koning Albert II laan 20, bus 8, 1000 Brussel

Associated contractors:

1. Instituut voor Bosbouw en Wildbeheer (IBW) -Institute for Forestry and Game Management (actual name: Research Institute for Nature and Forest - INBO)
2. Wetenschappelijk en Technisch Centrum voor het Bouwbedrijf (WTCB)
3. Limburgs Instituut voor Ecologie en Bosbouw (LISEC)

Period: 1/11/1997-01/05/2003

Total financing: 868 243 euro (506167 euro for IBW as associated beneficiary)

(the Institute for Forestry and Game and Management merged with the Institute for Nature Conservation into the Research Institute for Nature and Forest)

Related answer of beneficiary number:

**(4) Ministère de la Région Wallonne, Direction Générale des Ressources Naturelles et de l'Environnement, Div. de la Nature et des Forêts, Belgium Wallonia (BE, WA)**

**Participation withdrawn**

Related answer of beneficiary number:

**(5) Ministry of Environment and Water, Environmental Executive Agency, Monitoring of Land, Biodiversity and Protected Areas Dep., Bulgaria (BU)**

No

Related answer of beneficiary number:

**(6) Ministry of Agriculture, Natural Resources and Environment, Department of Forests, Cyprus (CY)**

LIFE project reference number: LIFE 04 NAT/CY/000013

Title: Protection and management of Natura Sites in Cyprus

Year: 2004

Amount of the co-financing by EU: 1 531 000 Euro

Duration: 42 months

Name(s) of coordinating beneficiary: Environment Service

Partners involved: Department of Forests and others

Related answer of beneficiary number:

**(7) Forestry and Game Management Research Institute (VULHM), Czech Republic (CZ)**

No

Related answer of beneficiary number:

**(8) Forest & Landscape Denmark, University of Copenhagen, Denmark (DK)**

No

Related answer of beneficiary number:

**(9) Estonian Centre of Forest Protection and Silviculture, Estonia, Mr. Kalle Karoles (EE)**

No

Related answer of beneficiary number:

**(10) Finnish Forest Research Institute (METLA), Finland (FI)**

**EU LIFE Projects 1998-2007:**

**LIFE03 NAT/FIN/000035**

**LIFE to Koli – Restoration of the Forests and Meadows in the Nature Park**

Duration: 01/11/2002–30/10/2006

Beneficiary: Finnish Forest Research Institute / Metsäntutkimuslaitos

Partners: University of Joensuu, Finland; North Karelia Regional Environment Centre  
Co-financing: 332 064,00 €

**LIFE04 NAT/FI/000078**

**Natural Forests and mires in the "Green Belt" of Koillismaa and Kainuu (GreenBelt)**

Duration: 2004-2008

Beneficiary: Metsähallitus Natural Heritage Services Ostrobothnia-Kainuu

Partners: Finnish Forest Research Institute, Joint Authority of the Kainuu Region, Metsähallitus Forestry Western Lapland

Co-financing: 587 174 €

**LIFE98 NAT/S/005371**

**Preservation of the Arctic Fox, *Alopex lagopus*, in Sweden and Finland**

Duration: 1998-2002

Beneficiary: Stockholm University

Partners: Finnish Ministry of Environment, Finnish Forest Research Institute, Metsähallitus, Länsstyrelsen i Jämtlands län, Länsstyrelsen i Norrbottens län, Länsstyrelsen i Västerbottens län, WWF-Sweden, Naturvårdsverket, Svenska Jägareförbundet, National Sami Court Sametinget, Swedish Society for Nature Conservation

Co-financing: 250 040 €

**LIFE03 NAT/00073**

**Saving the endangered Fennoscandian *Alopex lagopus* (SEFALO+)**

Duration: 2003-2008

Beneficiary: Stockholm University

Partners: Swedish Environmental Protection Agency, Finnish Ministry of the Environment, Direktoratet for Naturforvaltning, Norwegian Institute for Nature Research, WWF-Sweden, Sametinget-Sámediggi, Prosjekt Fjellreven (NJFF, WWF Norge, NNV, DNT), Metsähallitus/Finnish Park and Forest Service, Finnish Forest Research Institute, Länsstyrelsen i Norrbottens län, Länsstyrelsen i Västerbottens län, Länsstyrelsen i Jämtlands län, Swedish University of Agricultural Sciences, Swedish National Veterinary Institute, University of Iceland, Fjällräven AB, Lapplandsafari AB, Fjällhästen, Ramundberget Alpina AB, Dogman AB

Co-financing: 1 252 997 €

**LIFE99 ENV/FIN/000213**

**Integration of environmental priorities with agricultural policies in order to minimise the nutrient load on inland waters and the Baltic Sea (LIFE FOR LAKES)**

Duration: 1999-2002

Beneficiary: MTT Agrifood Research Finland

Partners: Häme Regional Environment Centre, Pirkanmaa Regional Environment Centre, Regional Council of Häme, Regional Council of Pirkanmaa, Finnish Forest Research Institute, Häme Polytechnic, Pirkanmaa Polytechnic, Agropolis Ltd, Municipality of Tammela, Municipality of Lempäälä, Municipality of Vesilähti, Municipality of Viiala, Municipality of Mouhijärvi, Town of Vammala, Water Protection Association of the River Kokemäenjoki, Town of Forssa

Co-financing: 518 118,62 €

**LIFE00 ENV/FIN/000668**

**Integrated river basin management - a network for optimized water management, rehabilitation and protection of aquatic ecosystems in Karjaanjoki area**

Duration: 2001-2005

Beneficiary: Lohja

Partners: Municipality of Karkkila, Municipality of Karjaa, Municipality of Karjalohja, Municipality of Loppi, Municipality of Nummi-Pusula, Municipality of Pohja, Municipality of Sammatti, Municipality of Somero, Municipality of Tammisaari, Municipality of Vihti, The Forestry Development Center Tapio, The Finnish Forest Research Institute, The Pro Agria Group of Rural Advisory Centres, The Finnish Game and Fisheries Research Institute, SYKE The Finnish Environmental Institute with 2 separate units, The Uusimaa Group for Nature Conservation, The Society for Uusimaa Recreational Areas, The Creek and River Management Association, WWF-Finland, Helsinki Water, The Häme-Uusimaa Forestry Centre, The Coastal Area Forestry Centre, The Pohja Fishing District, The Häme Region, The Employment and Economic Development Centre for Uusimaa, The Uusimaa Regional Environment Centre

Co-financing: 896 900 €

**LIFE02 ENV/FIN/000324****Ecologically sound tourism in Rokua area**

Duration: 2002-2005

Beneficiary: Utajärven kunta (The Municipality of Utajärvi)

Partners: University of Oulu/Dept. of Architecture, Rokuan kuntokeskus, Utajärven yrityspuisto Oy, Oulu polytechnic school of renewable natural resources, Forest and Park Service, Eko Center ry, Finnish Forest Research Institute, Osuuskunta Utajärven metsientekijät, Showhow Oy Ltd, Ekopine Oy, Vaalan kunta, University of Oulu/Dept. of Geography, Muhoksen kunta

Co-financing: 698 498 €

**LIFE04 ENV/FI/000308****Tourist Destinations as Landscape Laboratories - Tools for Sustainable Tourism**

Duration: 2004-2007

Beneficiary: University of Lapland

Partners: 9 partners

Co-financing: 896 900 €

Related answer of beneficiary number:

**(11) Office National des Forêts, Direction technique et commerciale bois, Département Recherche (RENECOFOR) France (FR)**

As Office National des Forêts (ONF, France) is concerned and for the most recent years :

LIFE06 NAT/F/000142 "Protection of the forests of Basse lautere and Vosges Moyennes" as beneficiary ;

LIFE06 NAT/F/000143 "Conservation of French populations of Orsini's viper" as partner ;

LIFE04 NAT/F/000082 "Headwater streams and faunistic Heritage associated" as partner ;

LIFE04 NAT/F/000079 "Nature and territories in the Rhône-Alpes region" as beneficiary ;

LIFE03 ENV/S/00601 "Demonstration opportunities on forest land to support the implementation of the Water Framework Directive" as partner ;

LIFE03 NAT/F/000099 "Preservation and spread of the corsican mouflon populations within Corsica" as partner ;

LIFE02 NAT/F/008482 "Conservation of the habitats created by the fluvial dynamics of the lower Ain river" as partner ;

LIFE00 NAT/F/007277 "Preservation and restoration of the Rhine's valley habitats" as partner ;

LIFE00 ENV/S/000868 "Demonstration of ways to increase peoples recreational benefits from urban woodlands" as partner

Related answer of beneficiary number:

**(12) General Directorate of the Development and the protection of Forests and Natural Environment, Greece (GR)**

| Project number          | Project title  | Total budget | Life Contribution | Duration                | Beneficiary  | Involved partners     |
|-------------------------|--|--------------|-------------------|-------------------------|--|-----------------------|
| LIFE95<br>NAT/GR/001111 | Conservation action for the slender billed curlew                        | 428.000,00   | 214.000,00        | 01-10-1995<br>30-6-1999 | Ministry of Agriculture - General Secretariat for forests & Natural Environment      |                       |
| LIFE97<br>NAT/GR/004243 | Conservation and management actions in special protected areas in Greece | 1.069.433,40 | 944.838,49        | 01-1-1998<br>31-3 -2002 | National Agricultural Research Foundation, Agricultural Research Station of Ioannina | Local Forest Services |



# LIFE+ Environment Policy and Governance 2007 – A7/5

|                         |   |              |              |                          |   |   |
|-------------------------|---|--------------|--------------|--------------------------|---|---|
| LIFE98<br>NAT/GR/005264 | Conservation measures for the Palm Forest of Vai, Greece  | 1.067.674,58 | 768.725,69   | 01-1-1999<br>31-12 -2002 | The Goulandris Natural History Museum/<br>EKBY                                  | Local Forest Services   |
| LIFE97<br>NAT/GR/004249 | Conservation of Canis lupus and its habitats in Central Greece  | 325.583,40   | 325.583,40   | 01-1-1998<br>31-12-2001  | ARCTUROS  | Local Forest Services   |
| LIFE00<br>NAT/GR/007198 | Restoration and conservation management of Drana lagoon in Evros Delta                                  | 2.086.533,00 | 1.251.920,00 | 01-6-2001<br>30-6 -2005  | ANEE-Evros Development Agency   | Ministry of Agriculture - General Secretariat for forests & Natural Environment |
| LIFE98<br>NAT/GR/005276 | Conservation of Gypaetus barbatus in Greece   | 968.670,00   | 869.405,83   | 01-10-1998<br>28-2 -2002 | Natural History Museum of Crete   | Local Forest Services   |
| LIFE96<br>NAT/GR/003222 | Conservation of Ursus arctos and its habitats in Greece (2nd phase)                                     | 1.401.036,00 | 1.401.036,00 | 01-1-1997<br>31-12-1999  | ARCTUROS  | Local Forest Services   |
| LIFE92<br>NAT/GR/013700 | First phase of the improvement of conservation and of the management conditions of Greek National Parks | 1.600.000,00 | 1.200.000,00 | 01-1-1993<br>31-12 -1993 | Ministry of Agriculture - General Secretariat for forests & Natural Environment | Local Forest Services   |
| LIFE99<br>NAT/GR/006498 | Implementation of Management Plans in Gramos and Rodopi Areas, Greece                                   | 1.147.336,00 | 1.147.336,00 | 01-1-2000<br>28-2-2003   | ARCTUROS  | Local Forest Services   |

Related answer of beneficiary number:

**(13) Ministry of Agriculture and Rural Development, Natural Resources, Hungary (HU)**

No

Related answer of beneficiary number:

**(14) Forest Service, Department of Agriculture, Fisheries and Food, Ireland (IE)**

No

Related answer of beneficiary number:

**(15) CONECOFOR OFFICE, National Forest Service (DIV. VI), Italy (I)**

LIFE92NAT/IT/013000

Azioni urgenti per la conservazione dei mammiferi delle Alpi e degli Appennini

- period 9/1992-8/1997 – EU co-financing 451.000 ECU

LIFE93NAT/IT/010500

Progetto di conservazione per l'area del Delta Po – Prima fase

- period 1/1994-1/1997 – EU co-financing 750.000 ECU

LIFE99NAT/IT/006244

**Conservazione dell'orso bruno nell'Appennino centrale**

- period 8/1999-12/2003 – EU co-financing 527.000 €

LIFE99NAT/IT/006245.

**Bosco Fontana: azioni urgenti di conservazione habitat relitto**

- period 10/1999-5/2003 – EU co-financing 341.000 €

LIFE00NAT/IT/007147

**Conservazione degli habitat e delle specie del SIC Bosco della Mesola**

- period 9/2001-8/2005 – EU co-financing 205.000 €

**Partner: Agenzia Regionale Ambiente Emilia-Romagna and Consorzio di Gestione del Parco regionale del Delta del Po**

**LIFE04NAT/IT/000190**

Tutela di siti Natura2000 gestiti dal Corpo forestale dello Stato

- period 10/2004-6/2009 – EU co-financing 1.252.648,5 €

Related answer of beneficiary number:

**(16) State Forest Survey Service, Lithuania (LT)**

No

Related answer of beneficiary number:

**(17) Ministry of Agriculture, Nature and Food Quality, Expertisecentrum LNV, The Netherlands (NL)**

No

Related answer of beneficiary number:

**(18) Forest Research Institute, Poland (PL)**

No

Related answer of beneficiary number:

**(19)** there is no beneficiary number 19

Related answer of beneficiary number:

**(20) Forest Research and Management Institute, Romania (RO)**

No

Related answer of beneficiary number:

**(21) National Forest Centre - FRI, Slovakia (SK)**

LIFE04NAT/SK/000244 – Ochrana diverzity biotopov v Národnom parku Slovenský raj (Biotop diversity protection in National Park Slovensky raj

18000 Euro (own), 44000 Euro (contribution)

2005-2008

State nature protection service (Štátna ochrana prírody) – coordinator

National forest centre – one of partners

Related answer of beneficiary number:

**(22) Slovenian Forestry Institute, Slovenia (SI)**

No

Related answer of beneficiary number:

**(23) General Directorate for Biodiversity, Servicio de Protección contra Agentes Nocivos, Spain (ES)**

– Project:

Reference number: LIFE02/NAT/8609

Title: Conservación y reintroducción del lince ibérico en Andalucía

Year: 2002

Amount of EC co-financing: 11.415.269 € (38,8% of the total costs)

Duration: 2002 – 2006

Names of the coordinating beneficiary and partners:

Spanish Ministry of Environment (MIMAM) through its DGB (General Directorate for Biodiversity) participated as co-financier (with 2 million euros). Coordinating beneficiary was “Junta de Andalucía” (autonomous regional government of Andalucía), and the partners were: APROCA, ATECA, FAC, ECO, FUN, SECEM, BITIS, CAyP, COPyT, EXTR and WWF/Adena.

– Project (continuation of the previous one about conservation of Iberian lynx in Andalucía)

Reference number: LIFE 06/NAT/E/000209

Title: Conservación y reintroducción del lince ibérico en Andalucía

Year: 2006

Amount of EC co-financing: still ongoing

Duration: 2006 – 2011

Names of the coordinating beneficiary and partners:

Spanish Ministry of Environment (MIMAM) through its DGB (General Directorate for Biodiversity) participated as co-financier. Coordinating beneficiary is “Junta de Andalucía” (autonomous regional government of Andalucía), and the partners are: APROCA, ATECA, FAC, ECO, FUN, SECEM, BITIS, CAyP, COPyT, EXTR and WWF/Adena.

Project:

Reference number: LIFE02/NAT/E/8610

Title: Conservation of cetaceous and sea turtles in Murcia and Andalucía

Year: 2002

Amount of EC co-financing: 1.448.758 € (50% of the total costs)

Duration: 2002 – 2006 (48 months)

Names of the coordinating beneficiary and partners:

Spanish Ministry of Environment (MIMAM) through its DGB (General Directorate for Biodiversity) participated as co-financier. Others co-financiers were: Spanish Ministry of Agriculture, University of Cadiz, Autonomous government of Murcia region (Department of Industry and Environment) and autonomous regional government of Andalucía region (Department of Environment). Coordinating beneficiary is “Sociedad Española de Cetáceos (SEC)”. Associated beneficiaries were: Spanish Ministry of Environment (MIMAM) through its General Directorate for Coasts, National Oceanographic Institute, Autonomous government of Murcia region (Department of Agriculture and Water) and autonomous regional government of Andalucía region (Department of Fish and Agriculture).

Related answer of beneficiary number:

**(24) Fundación Centro de Estudios Ambientales del Mediterráneo (CEAM), Spain (ES)**

- EC/LIFE99/ENV/D/000435, the CEAM Foundation participated as a subcontractor Ayuntamiento de Valencia. Coordinator Universitat Hohenheim. (6.000€)
- Atmospheric Fate and Impact of Pesticides (AFIP) CPI\_ Agreement 3W2913\_1\_10. Subproject Leader Centre National de la Recherche Scientifique. Amount Cofinancing 22.500 ). Duration 18 month. CEAM is Subproject participant.
- Convention 2005-05-4.3-I-125. Project H2O. Cofinancing 21.000€. Coordinator Provincia di Crotone. Duration 26 month. CEAM is Project Participant.

Related answer of beneficiary number:

**(25) Swedish University of Agricultural Sciences (SLU), Department of Forest Resource Management, Sweden (SE)**

Life Ammonia

Ref no.: LIFE 99ENV/S/000625

Title: LIFE Ammonia. Towards a sustainable milk production – reducing on-farm ammonia losses

Year: 2000

Co-financing by SLU: 3 172 300 SEK (31%)

Duration: Oct 1999 – Sept 2003

Coordinator: SLU, Dept. of animal environment and health

Partners:

ODAL AB

Arla AB

JTI, Swedish institute of agricultural engineering

IVL, Swedish environmental research institute

SLU, Dept. Agricultural biosystems and technology

SLU, Dept. Agricultural research

Svensk Mjölk AB

Alfa Laval Agri AB

Svenska Foder AB

Lantmännen Foderutveckling AB

#### **SEFALO+**

Ref No.: LIFE Nature 2003

Title: Saving the endangered Fennoscandian Alopex lagopus

Year: 2003

Cofinancing by SLU: 162 963 Euro (6.5%)

Duration: June 2003 – June 2008

Coordinator: Stockholm University

Partners:

Swedish Environmental Protection Agency (SEPA)

County Administrative Board of Jämtland

County Administrative Board of Västerbotten

County Administrative Board of Norrbotten

Metla – Finnish Forest Research Institute

Metsähallitus – Finnish Park and Forest Service (PFS)

Norwegian Institute of Agricultural Sciences (NINA)

Swedish University of Agricultural Sciences (SLU)

National Veterinary Institute of Sweden (NVI)

Fjällräven AB

Laplandsafari AB-Saami Ec lodge

Fjällhästen

Ramundberget

University of Iceland

Related answer of beneficiary number:

**(26) Forest Research Station, Alice Holt Lodge, United Kingdom (UK)**

LIFE2000 NAT/UK/8451; 2002-2007; 307,000 EUROS

LIFE03/ENV/S/000601; 2003-2007; 14,000 EUROS

Related answer of beneficiary number:

**(27) Landesforstanstalt Eberswalde, Germany (DE, BB)**

**No**

Related answer of beneficiary number:

**(28) Forstliche Versuchs- und Forschungsanstalt Baden-Württemberg, Germany (DE, BW)**

1) LIFE 02 NAT / CP / D / 000004 Grouse and Tourism in NATURA 2000 areas, 2002 – 2004, 100% Finanzierung durch EU: 60.000€, co-ordination: FVA, partners: Metsähallitus Syöte National Park / Finnland, LIFE-Projekt Gridnenschwarzwald, Caledonian Partnership / Scotland.

2) LIFE 98 NAT / D / 5087 Integraler Habitatschutz für Raufußhühner im Schwarzwald, 1998 – 2002, EU-cofinancing 121965€, co-ordination: FVA, partners: BNL Freiburg.

3) LIFE05NAT/D/000056 Oberer Hotzenwald (2005. 11, 01th - 20011, 02, 28th) EU-cofinancing 845.926€, Co-ordinator Regierungspräsidium Freiburg, Partner: Forstdirektion FR, FVA Freiburg, Landratsamt Waldshut, Gemeinde Dachsberg, Gemeinde Ibach, Stiftung Naturschutzfonds MLR.

4) LIFE 06 NAT / D / 000003 Rohrhardsberg LIFE-Nature 2006 (2006, 11, 01th - 2011, 10, 31th) EU-cofinancing 958.567€, Co-ordinator Regierungspräsidium Freiburg, Partner: Forstdirektion FR, FVA Freiburg, Naturschutzfonds MLR., LRA Schwarzwald-Baar, Emmendingen, Ortenau, Landsch-Erhaltungsverband EM, Univ. Freiburg Inst. Forstbenutzung, Schwarzwaldverein, Gemeineden Simonswald, Gutach, Elzach, Global Fire Monitoring Centre, Planet Film und Fernsehproduktions GmbH.

Related answer of beneficiary number:

**(29) Bayerische Landesanstalt für Wald und Forstwirtschaft (LWF), Germany (DE, BY)**

No

Related answer of beneficiary number:

**(30) Nordwestdeutsche Forstliche Versuchsanstalt (NW-FVA), Germany (DE, NWD)**

Reference number (project): LIFE98ENV/S/478

“Demonstration of Methods to Monitor Sustainable Forestry“;

Subproject: “Solling and Lüneburger Heide – Cultural Landscapes in Lower Saxony – An Example for Biodiversity and Sustainable Use in German Forests”

Year of application: 1997

amount of the co-financing: 8 441 611 SEK (913 791,61 €)

subproject: 1 522 350 SEK (164 820,96 €)

duration: 01.07.1998 – 28.02.2002

Coordinating beneficiary: Skogstyrelsen (National Board of Forestry), S-55183 Jönköping, Sweden

Partner:

- Danish Forest and Landscape Research Institute, Denmark
- Forestry Development Centre TAPIO, Finland
- Institut pour le Développement Forestier, France
- CEMAGREF, France
- Niedersächsische Forstliche Versuchsanstalt, Germany
- Swedish Environmental Protection Agency, Sweden

Related answer of beneficiary number:

**(31) Ministerium für Landwirtschaft, Umwelt und Verbraucherschutz , Germany (DE, MV)**

LIFE95 NAT/D/000029

Preservation and securing of the reproduction of endangered species by protecting and managing biospheres of common interest in the nature park Nossentiner/Schwinzer Heide;

Erarbeitung von Planungsgrundlagen für ein künftiges naturschutzgerechtes Management von 7 Naturschutzgebieten

1995, 381.400,00 Euro co-financing, Duration: 01.01.1996 - 31.03.1999

Coordinating beneficiary: Ministerium für Landwirtschaft und Naturschutz des Landes Mecklenburg-Vorpommern Bodenstein;

Partner(s):

Naturpark Nossentiner/Schwinzer Heide (LNPA/LFG)

LIFE98 NAT/D/005081

Protection of Priority Bog Habitats and of the Bittern (*Botaurus stellaris*) in the Area of Upper Havel;

Schutz prioritärer Moore und Bestandssicherung der Großen Rohrdommel

1998, 531.158,00 Euro co-financing, Duration 01.09.1998 -31.12.2003

Coordinating beneficiary: Nationalparkamt Müritz MEßNER;

Partner(s):

Ministerium für Landwirtschaft, Forsten und Fischerei des Landes Mecklenburg-Vorpommern;

Umweltministerium des Landes Mecklenburg-Vorpommern

LIFE94 NAT/D/000016

Restoration and conservation of riverine fens in Mecklenburg-Vorpommern

Erhalt und Wiederherstellung des Trebeltalmoores in M-V einschließlich vorbereitender Untersuchungen für das Recknitztal

1994, 3.953.500,00 co-financing, Duration: 01.06.1994-30.09.1998

Coordinating beneficiary: Landesamt für Umwelt und Natur Mecklenburg-Vorpommern GANS;

Partner(s):

Umweltministerium des Landes Mecklenburg-Vorpommern

LIFE95 NAT/D/004797

(Complementary to project LIFE94 NAT/D/000016)

Restoration and conservation of riverine fens in Mecklenburg-Vorpommern

Erhalt und Wiederherstellung des Trebeltalmoores in M-V einschließlich vorbereitender Untersuchungen für das Recknitztal

1995

1.146.500,00 Euro co-financing

01.06.1994 -30.06.1998

Coordinating beneficiary: Landesamt für Umwelt und Natur Mecklenburg-Vorpommern BAIER;

Partner(s):

Umweltministerium des Landes Mecklenburg-Vorpommern

LIFE98 NAT/D/005061

Restoration of the Recknitz valley fen (Special Protection Area);

Renaturierung des Recknitztalmoores

1998

1.479.050.00 Euro co-financing

01.07.1998-31.03.2001

Coordinating beneficiary: Landesamt für Umwelt und Natur Mecklenburg-Vorpommern GANS;

Partner(s):

Ministerium für Bau, Landesentwicklung und Umwelt des Landes Mecklenburg-Vorpommern,

Ministerium für Landwirtschaft und Naturschutz des Landes Mecklenburg-Vorpommern,

Staatliches Amt für Umwelt und Natur Stralsund

LIFE00 NAT/D/007038

Restoration project 'Galenbecker See' for priority species,

Naturraumsanierung Galenbecker See; Deutsch/Polnisches Projekt zum Schutz des Seggenrohrsängers,

2000

4.046.635,00 Euro co-financing

01.05.2001-31.12.2007

Staatliches Amt für Umwelt und Natur Ueckermünde, WROBELWSKI (K)

LIFE92 ENV/D/000011

Small plant for activating sludge in rural areas - village of Selpin

Privater Träger  
1992  
55.711,97 Euro co-financing  
01.12.1992-31.01.1994  
Ministerium für Umwelt des Landes Mecklenburg-Vorpommern; PIPPO (K)

Related answer of beneficiary number:

**(32) Landesamt für Natur, Umwelt und Verbraucherschutz NRW, Germany (DE, NW)**

No

Related answer of beneficiary number:

**(33) Forschungsanstalt für Waldökologie und Forstwirtschaft Rheinland-Pfalz, Germany (DE, RP)**

No

Related answer of beneficiary number:

**(34) Ministerium für Landwirtschaft, Umwelt und ländliche Räume, Germany (DE, SH)**

Life02 NAT D8457  
Regeneration des limnischen Elbeästuars u.a. für *Oenanthe conioides*  
2001  
3.051.923  
1.7.2002 -31.12.2006 Euro co-financing  
Umweltbehörde Hamburg  
Partner: Ministerium für Landwirtschaft, Umwelt und ländliche Räume Schleswig-Holstein

Related answer of beneficiary number:

**(35) Landesamt für Umwelt- und Arbeitsschutz, Germany (DE, SL)**

No

Related answer of beneficiary number:

**(36) Staatsbetrieb Sachsenforst, Ref. 45 Standortserkundung, Bodenmonitoring, Germany (DE, SN)**

No

Related answer of beneficiary number:

**(37) Thüringer Landesanstalt f. Wald, Jagd u. Fischerei (TLWJF), Germany (DE, TH)**

No

Related answer of beneficiary number:

**(38) Latvian State Forestry research institute "Silava", Latvia (LV)**

Related answer of beneficiary number:

**(39) Agriculture Research Council (CRA), Italy (I)**

No

Related answer of beneficiary number:

**(40) Consiglio Nazionale delle Ricerche – National Research Council (CNR),**



**Italy (I)**

LIFE 02 ENV/IT/000079 – “TRE LAGHI” “Interventi per la riduzione dell'eutrofizzazione nelle acque di tre piccoli laghi italiani”

Life Ambiente 2002

Amount of the cofinancing: 548.410 euro

Year 2002 duration 3 years

Coordinating beneficiary: Comunità Montana Val Cavallina

Partners: Valcavallina servizi srl, CCS Aosta srl, Fitotecnologia sas, CNR Istituto Italiano di Idrobiologia, Università di Milano, Politecnico di Torino, Politecnico di Milano

- Have you or any of the associated beneficiaries submitted any actions related directly or indirectly to this project to other Community financial instruments? To whom? When and with what results?

**No**

- For those actions which fall within the eligibility criteria for financing through other Community financial instruments, please explain in detail why you consider that those actions nevertheless do not fall within the main scope of the instrument(s) in question and are therefore included in the current project.

Not applicable, because nearly all of the actions are related to forest monitoring and hence not suitable for financing through the 7<sup>th</sup> Framework Programme and other Community financial instruments. Even those actions aimed at the analysis of data will depend on the availability of monitoring data at a given time.



***LIFE + Environment Policy and Governance***

**TECHNICAL APPLICATION FORMS**

**Part B – Objectives and expected results**

- No financial information should be included in these forms.
- All forms in this section may be lengthened, so as to include all essential information.

**SUMMARY DESCRIPTION OF THE PROJECT** (Max. 3 pages; to be completed in English)**Project title:****Further Development and Implementation of an EU-level Forest Monitoring System (FutMon)****Objectives:**

The project aims at the creation of a pan-European forest monitoring system which can serve as a basis for the provision of policy relevant information on forests in the European Union as required under international obligations and key action 8 of the Forest Action Plan (COM 2006 final). More specifically, the objectives of the project are

- the building of capacities for the coordination of harmonised forest monitoring, using synergies by linking existing and new monitoring mechanisms at the national, regional and Community level;
- the collection of quantitative and qualitative forest data related to climate change, air pollution, biodiversity, and forest condition as a possible contribution to the European Forest Data Centre (EFDAC) of the European Commission (EC) as well as for dissemination to other authorised stakeholders.
- the contribution of information needed for sustainable forest management in the form of data related to the improved pan-European Indicators for Sustainable Forest Management as adopted by the Ministerial Conference on the Protection of Forests in Europe (MCPFE);
- the provision of the network to other projects also aiming at meeting information needs of EC;
- the scientific analysis of data and the provision of respective reports focusing on forest conditions and forest soil conditions in relation to air pollution, climate change, carbon sequestration, and biodiversity.

The new monitoring system will serve as the basis for other forest monitoring programmes and for scientific analyses of the monitoring data aimed at biodiversity, climate change and air pollution. In particular, the beneficiaries of FutMon will prepare the application of a follow-up project for the years 2011-2013. This follow-up project will both demonstrate the functioning of the new monitoring system and focus on scientific analyses of the monitoring data. Examples for other projects relying on the monitoring system and monitoring data are FutDiv and CEFES (proposals submitted or planned to be submitted under LIFE+).

**Actions and means involved:**

The objectives of the project will be pursued by means of a comprehensive networking approach. This approach will make use of the fact that in Europe several forest monitoring mechanisms are established. A large-scale (Level I) and an intensive (Level II) forest monitoring system as well as the essential harmonised monitoring methods and standards are existent as developed by the International Cooperative Programme on Assessment and Monitoring of Air Pollution Effects on Forests (ICP Forests) under the United Nations Economic Commission for Europe (UNECE). In close cooperation of ICP Forests and EC, the assessment of qualitative forest information at Level I and Level II has been well established – in the EU-Member States under several Regulations. Under the expired Regulation “Forest Focus” additional information was assessed at Level I and partly Level II within the project BioSoil. At the national level also quantitative forest information is regularly assessed by means of National Forest Inventories (NFIs), their harmonisation being pursued by the European Forest Inventory Network (ENFIN). Each of the systems mentioned meets specific information needs of national and international environment and forest policies. In order to meet the more comprehensive future information needs of EC and other stakeholders, the proposed project FutMon will revise the individual systems and integrate them in the years 2009 and 2010.

The project will succeed in creating the planned forest monitoring system because it will be carried out by 38 beneficiaries in nearly all EU-Member States. The large number of beneficiaries and the complexity of the tasks involved in the project yield 246 individual actions to be supervised and steered by the coordinating beneficiary. The resulting challenge in managing the project under LIFE+ will be met because all beneficiaries have been involved in managing forest monitoring – largely under

previous EU Regulations - over many years. Nearly all associated beneficiaries are responsible for forest monitoring and partly for National Forest Inventories in their countries. Many of the associated beneficiaries are actively involved in the harmonisation of NFIs in Europe.

The coordinating beneficiary has been coordinating ICP Forests since its establishment in 1985 and has been acting as the responsible counterpart of EC during the cooperation between EC and ICP Forests from 1991 to 2007. Besides the actions on forest monitoring also actions on the further development of the monitoring, on data quality assurance, and on data analyses will have to be coordinated. As an additional networking aspect, the necessary expertise will be made available to the project by means of cooperation between the responsible beneficiaries and Chairpersons of the Quality Assurance Committee, the Expert Panels and their Working Groups of ICP Forests. Similar monitoring actions conducted by several beneficiaries are aggregated in action groups. Each action is characterised by an action code, identifying the type of the action by a key, the responsible beneficiary by its beneficiary number and the country of the beneficiary by its letter code. These action codes are usually referred to by the beneficiaries on their signed Forms A2 and A3. They are also used in the detailed descriptions of the actions in Form C1 as well as in the Financial Forms. Actions and action groups are often related to each other. An overview is given in the following:

Actions M1-M8 (2009-2010):

- Project management and the monitoring of its quality by the coordinating beneficiary.
- Management of the actions in the particular EU-Member State or German Land by the responsible associated beneficiary.
- Validation and storage of the monitoring data by the coordinating beneficiary.
- International dissemination of information by the coordinating beneficiary, involving technical and scientific reports, layman's reports and a website.
- National dissemination of information by the associated beneficiaries, involving notice boards on their monitoring plots.

Action group L1 (2009-2010):

- Revision of large-scale monitoring systems aiming at maximising synergies between Level I and NFIs: Resulting "FutMon large-scale plots" will ideally be a subset of the NFI plots.
- Creation of the basis for future provision of data on core forest variables from coordinated national monitoring systems.

Action group L2 (2009-2010):

- Field assessments on FutMon large-scale plots, aimed at continuation of time series on forest condition.
- Tests of reference methods and development of bridging functions to be applied in NFIs leading to harmonised results on core variables throughout the EU.

Action Group IM1 (2009-2010):

- Intensive monitoring on about 300 basic monitoring plots, including crown condition, mortality, removals, forest growth, foliar chemistry and litterfall, ground vegetation, soil condition and soil solution chemistry, deposition and meteorology.
- Selection of plots and monitoring attributes for future intensive monitoring, together with results from demonstration actions (D1-D3, see below) including the development of selection criteria.

Action Group D1 (2009-2010):

- Demonstration actions focusing on the collection of more comprehensive data on tree vitality, including assessments of leaf area index, monitoring of phenological events using webcams, continuous measurements of stem circumference, assessments of damage causes, assessments of litterfall.
- Conclusions regarding the selection of and the monitoring on intensive monitoring core plots.

Action Group D2 (2009-2010):

- Demonstration actions focusing on the monitoring of element fluxes and nutrient cycling with a view to critical loads assessments.
- Conclusions regarding the selection of and the monitoring on intensive monitoring core plots.

Action Group D3 (2009-2010):

- Demonstration actions focusing on the development and application of water budget models with a view to the response of drought stress of trees e.g. as a consequence of climate change, as well as to nutrient uptake and growth.
- Conclusions regarding the selection of and the monitoring on intensive monitoring core plots.
- • •

**Actions C1 (2009-2010):**

- Coordination, development and implementation of quality assurance and control (QA/QC) procedures
- in the areas of ground vegetation, water analysis, laboratory QA/QC, tree health and damage assessments, soil condition and soil solution chemistry, foliage chemistry, nutrient cycling, deposition, ambient air quality, and tree health (crown condition, growth, phenology, visible ozone injury).
- by means of expert meetings, questionnaires, ringtests, laboratory inter-comparison exercises, field intercomparison courses, training courses, and the development of standards and references to be laid down in manuals.
- Evaluation of monitoring data in connection with action A1 (see below).

**Action A1 (2009-2010):**

- Scientific analyses of monitoring data by the coordinating beneficiary with respect to forest condition and forest biodiversity in relation to multiple stress, in particular due to air pollution and climate change. Priority items are
- assessments of critical loads of air pollutants and their exceedances.
- predictions of future air pollution effects on forests under different emission scenarios permitting conclusions on the effectiveness of clean air policies under EU legislation and UNECE protocols.
- Supervision and synthesis of the results of scientific analyses by associated beneficiaries on forest soil condition, carbon sequestration in forest soils, tree growth, stem volume and above ground biomass, carbon allocation in forest trees, critical levels of concentrations of air pollutants, in particular ozone, their exceedances and related forest ecosystem response, as well as water availability and drought stress in relation to possible consequences of climate change.

**Expected results (quantified as far as possible):**

The actions described above will lead to the following results:

- A new forest monitoring system with increased harmonisation and effectiveness
- making use of synergies by combining improved assessments of forest condition with NFIs into one single large-scale forest monitoring system;
- comprising a new set of intensive monitoring core plots, characterised by an extended list of core attributes assessed;
- constituting a platform for other projects also aimed at meeting the future information needs of EC and other stakeholders, in particular with regard to climate change, biodiversity and air pollution.
- Updated descriptions of stringent procedures on data quality assurance and control for field assessments, laboratory analyses and data validation;
- Harmonised and validated policy relevant data related to forest condition, biodiversity, climate change, and air pollution, comprising in particular
- more comprehensive, more reliable and better interpretable forest data at the large scale;
- reference definitions on EU level and bridging functions between NFI data at country level;
- more comprehensive, more reliable and better interpretable data at the forest ecosystem scale;
- transfer functions for up-scaling processes from the forest ecosystem scale to the large scale.
- Availability of the harmonised and validated data
- in formats permitting effortless integration into the European Forest Data Centre (EFDAC);
- for use by authorised third parties.
- Information needed for sustainable forest management in the form of data related to the improved Pan-European Indicators for Sustainable Forest Management as adopted by the Ministerial Conference on the Protection of Forests in Europe (MCPFE);

- Results of scientific analyses of monitoring data of relevance to the reporting obligations of EC, e.g. with respect to forest condition and forest biodiversity in relation to multiple stress, in particular due to air pollution and climate change;
- Risk assessments and predictions of air pollution effects on forests under various emission scenarios, as well as assessments of the effectiveness of clean air policies under EU legislation and UNECE protocols.

The results will be provided to EC by means of the obligatory activity and additional scientific reports. Beyond that, they will be disseminated to different target groups by means of action M8 as described on Form C1.

**Environmental problem TARGETED**

Forests cover about 30% of Europe. Among all terrestrial ecosystems forests are the ones with the highest biodiversity, providing habitats for a wide range of animal and plant species. With their considerable potential for carbon sequestration they constitute one of the most important elements of the global carbon cycle. Besides their utmost importance for the earth's climate and biodiversity, forests are a major component of rural development, providing protective functions for soil, water and infrastructure and contributing goods and services to the economic sector.

Forests will continue to provide their indispensable ecological and economical benefits only under the condition that they remain healthy, stable and sustainable managed. However, climate change, air pollution and changes in land use are believed to cause a loss of the compositional, structural and functional biodiversity of forest ecosystems. These mainly anthropogenic stressors are progressing faster than the natural adaptation processes of forests, because trees as long-living organisms can only slowly adapt to changes in environmental conditions by means of regeneration. This implies also a threat to the existence of a variety of species and an impoverishment of genetic resources. In the course of these anthropogenic influences also natural biotic and abiotic stressors like drought, storm, snow, insects, fungi, and fire influence the structure, composition and functioning of forests. Forest growth is closely related to the carbon sequestration potential of forests and thus to the possible mitigation of climate change. On the one hand, global warming, increasing availability of carbon, and nitrogen depositions may stimulate forest growth on those sites on which these factors are the limiting ones. On the other hand, the multitude of stressors mentioned above cause decreasing forest growth and yield. Even if air pollution including the exhaust of greenhouse gases would stop today, their effects on forests would endure for several decades. This is due to the historical built-up of gases in the atmosphere, due to time lags in response of climate and oceanic systems, and due to retarded reactions of forest ecosystems because of the accumulation of depositions in forest soils.

The above mentioned interrelationships between forests and their environment reveal that anthropogenic stressors may prevent forests not only from providing their ecological and economical benefits to the society but also from contributing to the mitigation of one of the main stressors itself, namely climate change. The key role which forests obviously play in the context of climate change, air pollution, and losses of biodiversity shows the importance of environmental politics aiming at their protection and sustainable management. The complexity of the cause-effect relationships involved shows the need for sound scientific information as a basis for political decisions.

An excellent example for well-balanced political decisions based on sound scientific information are the successful air pollution abatement policies under the Convention on Long-range Transboundary Air Pollution (CLRTAP) and under the related EU clean air policies. Part of the scientific information needed has been provided for more than 20 years by the International Co-operative Programme on Assessment and Monitoring of Air Pollution Effects on Forests (ICP Forests) of CLRTAP in close cooperation with the European Commission under the respective Regulations, the last of them being "Forest Focus". Forest monitoring in Europe and its results are described for each country in the brochure "Europe's Forests in a Changing Environment – Twenty years of Monitoring Forest Condition by ICP Forests". The brochure can be downloaded from [www.icp-forests.org](http://www.icp-forests.org). Moreover, Annex I to this proposal describes the existing forest monitoring system for comparison with the system aimed at by means of the proposed project.

The expiration of the Regulation "Forest Focus", could lead to an interruption of forest monitoring at the EU-level and to uncoordinated activities. This would result in poor quality, non-harmonised data, which would not be able to meet the new information needs for EU-policy development. This holds for instance for the 6th Environmental Action Plan of the EU (6th EAP, Decision No.1600/2002/EC) with its main focus on reduction of greenhouse gas emissions, as well as for the Thematic Strategy on Air Pollution (Com (2005, 446 final) aimed at avoiding exceedances of critical loads and levels of air pollutants. In particular in line with Key Action 18 of the Forest Action Plan (FAP) the Commission will work in the context of the European Forest Monitoring System Initiative on the development of a European Forest Information and Communication Platform (EFICP) to achieve the best use and dissemination of available information on the forest sector. Five major thematic reports will be published by 2012, for which information on climate change and forests, on air pollution and forests, on biological diversity on forests and on other topics will have to be contributed. As a consequence, under the Principal Objective "Forests" of the LIFE+ component "Environment Policy and Governance", comprehensive information needs will have to be met. For this purpose a network of existing and newly developed forest monitoring programmes is needed in order to provide policy relevant qualitative and quantitative information on forests in relation to climate change (impact on



forest ecosystems, mitigation, and substitution effects), biodiversity (baseline information and protected areas), forest conditions and the protective functions of forests (water, soil and infrastructure), as well as forest fires. Besides forest monitoring at the pan-European scale, also intensive monitoring of functions and processes at the forest ecosystem scale is necessary to gain an understanding of cause-effect relationships.

The combination of the information at the ecosystem scale and at the large-scale is needed for the development of models permitting scenario analyses of the response of forests to environmental policies in Europe.

### Objectives of the project

In view of the environmental problem described above, the overall aim of the project is the provision of a forest monitoring system constituting a concise and comprehensive basis for policy relevant information on forests in the European Union as required under international obligations. The network shall in particular

- promote the collection, analysis and dissemination of forest information in relation to climate change, biodiversity, air pollution, and forest conditions;
- increase the harmonisation and effectiveness of forest monitoring, making use of synergies by linking monitoring mechanisms established at regional, national, Community and global level;
- contribute information needed for sustainable forest management in the form of data related to the improved Pan-European Indicators for Sustainable Forest Management as adopted by the Ministerial Conference on the Protection of Forests in Europe (MCPFE);
- build capacities at national and Community level to permit coordination and guidance of forest monitoring in Europe.

As a precondition for the establishment of such a network, the following more specific objectives will be pursued:

- Combination of existing large-scale forest monitoring systems (Level I and BioSoil) with National Forest Inventories (NFIs) into a coordinated large-scale monitoring system providing qualitative and quantitative forest information for the European Union;
- Screening of the current set of intensive monitoring plots (Level II), selection of a list of core attributes and definition of a new set of core intensive monitoring plots in order to better meet current and future information needs on processes at the forest ecosystem scale.

Based on the new monitoring system, the project pursues the following additional objectives

- Continuous assessment of harmonised policy relevant data needed by the European Commission and other stakeholders (see below), including
  - o large-scale data on forest condition;
  - o reference definitions at EU level and bridging functions between NFI data at country level for EU harmonized information;
  - o intensive monitoring data at the forest ecosystem scale.
- Preservation and extension of the time series started under the existing monitoring systems;
- Application of stringent procedures on data quality assurance and control in the field, in the laboratories and in the database;
- Regular availability of harmonised and validated data to the European Commission as a contribution to its European Forest Data Centre (EFDAC), as well as to authorised third parties;
- Scientific analyses of data with respect to
  - o tree condition in the forests of Europe, based on partly newly developed health indicators including carbon allocation in trees;

- o functions for estimating stem volume and above ground biomass;
- o soil condition in the forests of Europe;
- o critical loads of air pollutants and their exceedances;
- o dynamic modelling of future effects of air pollution on forests;
- o water availability and drought stress;

- Results of scientific analyses laid down in reports to be submitted to the Commission and other stakeholders (see below).

The new monitoring system will constitute the backbone of forest monitoring in Europe. It can well serve as the plot basis for other monitoring programmes aimed specifically at biodiversity and climate change.

**State of the art and Innovative aspects of the project**

Note: for forests monitoring projects this box should not be filled in

Not applicable.

**DEMONSTRATION CHARACTER**

Note: for forests monitoring projects this form should be not filled in

Not applicable.

**EU added value of the PROject and its actions**

The results of the project will yield the following EU-added value:

- Capacity building for the coordination and implementation of a single harmonised forest monitoring system providing policy relevant qualitative and quantitative forest information with special regard to forest conditions, biodiversity, climate change and sustainable forest management;
- Cognitive, economical and ecological benefits to a multitude of stakeholders (see below) from synergies resulting from the integration of exiting forest monitoring systems;
- Contribution of data for the development of the European Forest Data Centre (EFDAC);
- Contribution of information fostering the European-wide harmonisation of National Forest Inventories (NFIs);
- Contribution of information facilitating forest sector policies and supporting the reporting to processes of international environment policies such as the Ministerial Conference for the Protection of Forests in Europe (MCPFE), the Convention on Biological Diversity (CBD), the Kyoto Protocol under the Framework Convention on Climate Change (FCCC), the Convention on Long-range Transboundary Air Pollution (CLRTAP) and the Forest Resources Assessment (FRA);
- Contribution of information supporting the above mentioned reporting obligations.

**Efforts for reducing the project's "carbon footprint"**

Forest monitoring and its coordination requires considerable travelling of the responsible personnel both to monitoring plots and to expert and coordinating meetings. The results are frequently disseminated using print media. Reducing travelling, printing and the distribution of printed paper provides an opportunity to reduce the project's "carbon footprint".

As shown by the list of project meetings (description of action M1 in Form C1), meetings will be held "back-to-back" whenever possible. This will foster the communication between experts, will reduce costs and will reduce the "carbon footprint".

Printed reports are indispensable for many purposes, but print runs will be kept modest in the project. The most important platform for the dissemination of results will be the project's web site and the web sites of the associated beneficiaries specifically targeted to their respective national and regional audience.

**Stakeholders involved and main target audience of the project**

The project has a broad range of stakeholders and target audiences, both at the international and at the national level. At the international level, the most important stakeholder will be the several bodies of the European Commission, namely DG Environment, DG Agriculture, the Joint Research Centre (DG JRC), the European Forest Data Center (EFDAC), as well as EUROSTAT. In this context also ENFIN must be mentioned because of its strive for the harmonisation of National Forest Inventories in Europe. For this reason, ENFIN is represented in the project by two associated beneficiaries. Special mention must be made of the information needs of the Ministerial Conference for Protection of Forests in Europe (MCPFE). The desired information has been laid down in the MCPFE's criteria and indicators (C&I) for sustainable forest management, which were adopted by the Ministerial Conference in Vienna in 2003. For more than a dozen of these indicators the project will provide a wealth of information. Information will be contributed to bodies and processes not only at the EU level but also within the system of the United Nations. This applies to the Convention on Biological Diversity (CBD), for the Framework Convention on Climate Change (UNFCCC), as well as for the Forest Resources Assessment (FRA) of the Food and Agriculture Organisation (FAO) and of the United Nations Economic Commission for Europe (UNECE). As regards UNECE as a stakeholder, special mention must be made of the Convention on Long-range Transboundary Air Pollution (CLRTAP) and of the International Co-operative Programme on Assessment and Monitoring of Air Pollution Effects on Forests (ICP Forests) working under it. The EU-Member States and additional countries in Europe will continue to pursue forest monitoring on the large-scale and intensive monitoring plots in order to meet the information needs of CLRTAP. Within FutMon the coordinating beneficiary as well as several associated beneficiaries will cooperate with experts of ICP Forests in order to reach maximum harmonisation of methods and standards in forest monitoring for mutual benefit.

At the national level the main stakeholders are the Ministries which are responsible for forests and the environment, as well as related governmental institutions such as state or regional forest services and environmental agencies. They provide funding and labour in order to gain information needed for political decision making. Forest research institutes are largely involved in the monitoring and the analyses of the monitoring data. Forest faculties of Universities may be entrusted with special scientific analyses and teach methods and results of forest monitoring to their students. Private forest owners, timber industries and the respective associations may use the results of forest monitoring for the definition of boundary conditions for sustainable forest management, wood production and timber utilisation. In this respect, the indicators for sustainable forest management and the respective information can be used for certification purposes. Another important target group in each EU-Member State is the general public. The public is known to be greatly interested in the development of forests under anthropogenic stress and wants to be kept informed by means of television, radio, print media, and the internet

At the regional and at the national level, non-governmental institutions (NGOs) will use the results of forest monitoring for supervising the development of forest condition and the effectiveness of environmental politics.

**Expected constrains and risks related to the project implementation**

With its combination of Level I and NFI plots into one single large-scale monitoring system and with its concentration of capacities on intensive forest monitoring core plots the project foresees a number of innovations. These innovations, however, rely upon systems having been proven successful over decades. The coordinating beneficiary has more than twenty years of experience in the managing of a similar project, and all associated beneficiaries are familiar with most of their tasks already now. In this respect, the risk of a failure of the project due to poor management is low.

However, there are many interdependencies between the individual actions of the project. For instance, the full range of harmonised data can only be delivered if all beneficiaries participate in the procedures on data quality assurance and conduct the respective assessments in their countries. Whilst the falling out of an organiser of QA procedures may be compensated by the empowerment of a new one, the withdrawal of a beneficiary from its participation in the monitoring could not be compensated. A reason for such a withdrawal by a beneficiary could theoretically be changing national priorities and respective budgetary cuts prior to the launch of the project. However, given the current engagement of all beneficiaries, and given the benefits to be expected from the project not only at the international but also at the national level, it is unlikely that beneficiaries will cancel their participation in the monitoring. Should this occur in exceptional cases, the resulting loss of data could hardly jeopardise the success of the project as a whole.

Several risks are posed by natural hazards. For instance, fire, storm, hail, snow and ice can destroy the forest stands or the monitoring equipment on the plots. Such extreme events, however, are unlikely to occur at many sites at the same time. Consequently, whilst severe damage to trees and equipment must be taken into account, the success of the project as a whole will not be endangered.

**Continuation and valorisation of the project  
results after the end of the project**

- Which actions will have to be carried out or continued after the end of the project?

The data assessed in the year 2010 can only partly be submitted and can only partly be validated and analysed before the end of the project. However, the DG Joint Research Centre, the coordinating beneficiary, all associated beneficiaries as well as many of the above mentioned stakeholders (such as research institutes and universities) will be interested in a completely data set. Thus, data validation, storage and analysis after 2010 will be indispensable. Moreover, forest monitoring will have to be continued under ICP Forests of UNECE. However, the extent of forest monitoring in Europe would have to be reduced without any further cofinancing and consequently less information could be provided.

- How will this be achieved, what resources will be necessary to carry out these actions?

The associated beneficiaries are invited to continue to submit monitoring data to the coordinating beneficiary after the end of the project. The coordinating beneficiary will continue data validation after the end of the project using its own resources to the largest extent possible (see Action M3). Beyond that, it will be tried to make external resources available for validations which can possibly not be covered by the coordinating beneficiary alone. Such resources could stem from the voluntary contributions which the countries of ICP Forests (including EU-Member States) remit to the coordinating beneficiary every year.

- Potential for using other EU funds after the end of the project

As mentioned on Form B1, it will be tried to apply for a follow-up project under LIFE+ for the years 2011-2013. The extent to which forest monitoring would have to be reduced can not be currently estimated. It will have to be considered if and to which extent the European Commission will be interested in supporting data validation after the end of the project, given the fact that an additional contribution to its European Forest Data Center (EFDAC) could be made.

- To what extent will the results and lessons of the project be actively disseminated after the end of the project to those persons and/or organisations that could best make use of them (please identify these persons/organisations)?

The results of the project and of the phase after the project will consist in validated monitoring data as well as in scientific and technical reports. Organisations remaining interested in the results of the project will be all stakeholders and target groups mentioned above. This applies in particular to the bodies of EC (DG Env, DG Agri, DG JRC, and EUROSTAT) and of UNECE, but also to research institutes and universities. The most effective means of disseminating these results will be the project web site which will be maintained for at least five years after the end of the project. All technical and scientific reports edited during the project as well as respective documents possibly edited thereafter will be made available for downloading on this web site. An effective way of disseminating validated data to authorised third parties should have been agreed upon with EC during the project anyhow, and will be maintained also thereafter.

- Any other issues (none)



***LIFE + Environment Policy and Governance***

## **TECHNICAL APPLICATION FORMS**

### **Part C – detailed technical description of the proposed actions**

**Important note:**

- All calculations and detailed cost breakdowns necessary to justify the cost of each action should be included in the financial forms F. In order to avoid repeating the financial information (with the risk of introducing incoherencies), Part C should only contain financial information not contained in the financial forms.
- All forms in this section may be multiplied, so as to include all essential information.
- Any action that is sub-contracted should be just as clearly described as an action that will be directly carried out by the beneficiaries.





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**ACTION M1-1(DE): Project management by the Coordinating Beneficiary (2009-2010)**

***Description (what, how, where and when):***

The project management by the coordinating beneficiary will ensure that the 246 actions conducted by 38 beneficiaries will lead to meeting the objectives described in the Technical Application Forms Part B. For this purpose the coordinating beneficiary will have to organise and monitor

- the work flow in the sense of an effective implementation of the actions and of their successful cooperation;
- the submission, validation, storage and dissemination of data;
- the scientific analyses of the data;
- the dissemination of information;

In most of these main tasks the role of the coordinating beneficiary goes beyond that of an organiser and supervisor. This applies in particular to the data validation, storage and dissemination, which is totally within the responsibility of the coordinating beneficiary. It holds also for the scientific analyses, which will be partly conducted by the coordinating beneficiary himself and partly by several associated beneficiaries under his supervision. Also the dissemination of information at the international level is conducted by the coordinating beneficiary, whilst similar actions in the individual EU-Member States are conducted by the associated beneficiaries under his supervision. The coordinating beneficiary organises also part of the work of those 11 associated beneficiaries in Germany representing the respective 11 German Länder.

Another active part of the management of the coordinating beneficiary is his role as the sole responsible for the European Commission with respect to all administrative and technical issues. In this position he will meet his reporting obligations towards EC, will submit payment requests when adequate, and will distribute the respective funds among the associated beneficiaries as soon as they become available.

Due to the high number of beneficiaries and actions the project management is rather complex. In order to maintain an overview, the multitude of management task is bundled in a full set of well defined management Actions M1 to M8. The following paragraphs explain the methods, constraints, responsibilities, results, and progress indicators of Action M1 as the main management action in general. More specific explanations regarding individual management actions are given in the respective Actions M2 to M8.

***Methods employed:***

A large share of the financial and labour resources foreseen for Action M1 is related to the organisation and monitoring of the implementation of and cooperation between the individual actions. Provisions will be made that all those monitoring results and criteria become available which are necessary to select the large-scale monitoring plots and intensive monitoring core plots needed in the future. The development of the indispensable quality assurance procedures will be initiated and supervised. As a result of the largest part of all actions, the submission of the monitoring data to the coordinating beneficiary will have to be ensured in order to guarantee their availability for validation, storage, scientific analyses and dissemination. For these management tasks classical methods of operations research will be applied, supported by state-of-the-art data processing routines. These applications are the basis for the monitoring of the effectiveness of the actions. Therefore, they are the key activities of Action M2 and are described there.

An essential management measure is the coordination of the information flow. This refers to the internal exchange of information among the beneficiaries within the project as well as to the exchange of information between the project, the European Commission and external institutions. The following three types of information will be distinguished:

- Raw data submitted by the associated beneficiaries to the coordinating beneficiary (for validation and storage), as well as validated data to be analysed and to be made available by the coordinating beneficiary to the European Commission and to authorised third parties;
- Technical knowledge and scientific results produced by the associated beneficiaries and by the coordinating beneficiary (for dissemination among the beneficiaries, to the European Commission and to the other stakeholders and target groups involved);
- Messages (e.g. notifications, instructions, reminders, questions and answers to them) communicated among the coordinating beneficiary, the associated beneficiaries, the European Commission and external institutions.

Of the management of these three types of information, the data submission, validation, storage, and provision will be the most comprehensive tasks. They constitute Action M3 and are described there.

Technical knowledge and scientific results will be laid down in the technical and scientific reports listed on Technical Application Form C2 in the table on page C2/1 as deliverable products. These reports will be made available also on the project website. Knowledge transfer to EC will be ensured by means of annexing these reports to the obligatory activity reports listed in the table on page C2/6. Other methods of disseminating information will be articles in scientific journals, layman's reports, press releases and interviews. Basic information on the monitoring system will also be provided on notice boards erected on the monitoring plots. The dissemination of information at the international level is a typical management task of the coordinating beneficiary and part of Action M4, M5, and M6. The dissemination of information at the national level is part of Action M8.

The exchange of messages both within the premises of the coordinating beneficiary and with the associated beneficiaries, EC and other institutions will normally occur via e-mail. Any communication between the project and EC will be in the responsibility of the coordinating beneficiary. Certain messages, e.g. announcements of meetings, will be made available on the project website. Meetings are another means of communication and will be described in detail under Action M2.

### ***Constraints and assumptions:***

There are many interdependencies between the individual actions of the project. For instance, the coordinating beneficiary will obtain the full range of harmonised data can only if all beneficiaries participate in the procedures on data quality assurance and conduct the respective assessments in their countries. Whilst the falling out of an organiser of e.g. a certain QA procedure may be compensated by the empowerment of a new one, the withdrawal of a beneficiary from its participation in the monitoring could not be compensated. A reason for such a withdrawal by a beneficiary could theoretically be changing national priorities and respective budgetary cuts prior to the launch of the project. However, given the current engagement of all beneficiaries, and given the benefits to be expected from the project not only at the international but also at the national level, it is unlikely that beneficiaries will cancel their participation in the monitoring. Should this occur in exceptional cases, the resulting loss of data could hardly jeopardise the success of the project as a whole.

The risk of a failure of the project due to poor management is low, because the coordinating beneficiary has more than twenty years of experience in the managing of a similar project, and all associated beneficiaries are familiar with most of their tasks already now.

***Beneficiary responsible for implementation:***

The beneficiary responsible for the implementation will be the Johann Heinrich von Thünen Institute (vTI) in its capacity of the coordinating beneficiary. vTI has the largest experience possible in managing the proposed project for the following reasons:

In 1985 Germany took over the role of the Lead Country of the International Co-operative Programme on Assessment and Monitoring of Air Pollution Effects on Forests (ICP Forests) which had been established in that year by the Convention on Long-range Transboundary Air Pollution (CLRTAP) under the United Nations Economic Commission for Europe (UNECE). The German Federal Ministry of Food, Agriculture and Forestry (BML) which is now the German Federal Ministry of Food, Agriculture and Consumer Protection (BMELV) commissioned vTI with substantial parts of the programme management. Since then the Institute for World Forestry of vTI has been hosting the Programme Coordinating Centre (PCC) of ICP Forests. In order to create synergies and to avoid duplications PCC has been coordinating the pan-European forest monitoring and has been publishing its results largely in close cooperation with EC since 1991. Having managed ICP Forests for 21 years, vTI is familiar with all aspects of the management, methods, databases, data analyses, and reporting procedures of the joint forest monitoring of UNECE and EU. Being responsible also for the ICP Forests Manual, vTI was involved in the development of the forest soil monitoring methods by the Expert Panel on Soil of ICP Forests. The respective part of the ICP Forests Manual constitutes the basis of the soil manual of the BioSoil project of EC. Moreover, vTI is a subcontractor to the consortium of I-MAGE Consult (I-MAGE) of Namur, Belgium, and Nouvelles Solutions Informatiques (NSI) of Gembloux, Belgium, which is entrusted with the construction of the Forest Focus Databank of JRC. Although FutMon will be a project independent on ICP Forests, it will benefit from synergies resulting from the fact that both will be managed by the same institution.

The project management by vTI will be supervised by Prof. Michael Köhl. Michael Köhl is the Head of the Institute for World Forestry of vTI which hosts PCC of ICP Forests. He has also been Chairman of ICP Forests since May 2005 and is in charge of several projects related to forest monitoring and inventories with special relevance to processes of international environmental politics.

The project manager will be Dr. Martin Lorenz. Martin Lorenz is in charge of the section "Forest Development and Monitoring" of the Institute for World Forestry. Having been Head of PCC of ICP Forests since 1992 he has 15 years of experience in coordinating forest monitoring in Europe in close cooperation with EC. He is familiar with the political and scientific background, the assessment methods, the database, the evaluation, and the reporting system.

For the management of the database Oliver Granke will be recruited. Oliver Granke was coordinator of the Level II monitoring of ICP Forests in Schleswig-Holstein, Germany, from 2000 to 2002 and developed the database of the NFI of Bavaria, Germany, from 2003 to 2004. Since 2005 he has been employed at vTI in the above mentioned section "Forest Development and Monitoring". This comprised the development of the data submission module and the management of the data base of the ForestBIOTA project as well as the Level II database management of ICP Forests and the development of data validation systems for the above mentioned consortium of I-MAGE, NSI and vTI.

The database management will be supported by Dr. Georg Becher. Georg Becher has been with the section "Forest Development and Monitoring" since 1992. He has been entrusted with the Level I database management of ICP Forests as well as with several analyses of statistical relationships between e.g. crown condition and explanatory variables.

Two junior scientists will be recruited partly for support of the project management and of the data validation whenever necessary, but mainly for the analysis of the data, for the synthesis of

their own results with those obtain by other beneficiaries, and for the editing of the scientific reports.

Given the large number of beneficiaries, the large number of actions carried out, and the size of the project budget, the management needs the respective support by administrative personnel. For this purpose vTI provides an administration officer (Ilona Hall) and an office assistant (Doris Wöbb) on a part-time basis. An additional full time administration officer with foreign language capabilities and an additional part-time administration officer with book-keeping capabilities will have to be recruited.

For the employees mentioned above the tables on the following pages provide brief Curricula vitae. The tables are followed by a management chart showing each member of the management staff of the Coordinating Beneficiary as well as his or her relationship to the other staff members and to the associated beneficiaries, if applicable. The associated beneficiaries are represented by the responsible coordinators in the respective EU-Member States. These persons are also listed, along with their institution an beneficiary number.

Dr. Martin Lorenz

|   |  |
|---|--|
| <i>Date of birth</i>                      | 27 July, 1955  |
| <i>Place of birth</i>                     | Mönchengladbach, Germany   |
| <i>Nationality</i>                        | German   |
| <i>Education</i>                          | 1977-1983 Study of Wood Science and Technology,<br>University of Hamburg   |
|   | 1993 Dissertation in Wood Science and Technology<br>at the University of Hamburg; Title:<br>Integration of increment studies into<br>the European forest condition assessment  |
| <i>Occupations</i>                        | 1983 Scientist at the Institute for Forest Genetics<br>and Forest Tree Breeding of the former Federal Research Centre for<br>Forestry and Forest Products, Hamburg, Germany.   |
|   | Since 1984 Scientist at the Institute for World Forestry<br>of the Johann Heinrich von Thünen Institute (vTI),<br>Hamburg, Germany.  |
| <i>Qualifications<br/>for the project</i> | Head of the Programme Coordinating Centre (PCC) of ICP Forests since 1992.<br>Fourteen years of experience in coordinating forest monitoring in Europe in close<br>co-operation with the European Commission. Familiarity with the political and<br>scientific background, the assessment methods, the database, the evaluation and<br>the reporting system of UNECE and EU forest monitoring, including the BioSoil<br>project. |
| <i>Tasks in the<br/>project</i>           | Project management   |

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Oliver Granke

*Date of birth* 22 September, 1972

*Place of birth* Kellinghusen, Germany

*Nationality* German

*Education* 1993-2000 Study of Biology, University of Kiel

*Occupations* 2000-2002 Scientist at the Ecology Center of the University of Kiel, Germany

2003-2004 Bavarian Forest Institute (LWF), Germany:

Since 2005 Scientist at the Institute for World Forestry of the Johann Heinrich von Thünen Institute (vTI), Hamburg, Germany.

*Qualifications for the project*

- Coordinator for ICP Forests Level II plots in the German state "Schleswig-Holstein" (2000-2002),
- Development of an evaluation database for the Bavarian NFI (2003-2004),
- Project leader of the ForestBIOTA Project responsible e.g. for the Development of Data Submission module and the Database management (2005-2006),
- Data management ICP Forests Level II (since 2005).
- Consortiums Partner (sub-contractor) for to the Development of the Forest Monitoring Database System at the JRC, e.g. data validation systems and data submission modules.
- Experience in the use of assessment methods of the forest monitoring including the BioSoil project. Familiarity with the political and scientific background, the evaluation and the reporting system of UNECE and EU forest monitoring.

*Tasks in the project* Coordination of data submission and validation

Dr. Georg Becher

|   |  |
|---|--|
| <i>Date of birth</i>                      | 17 March, 1954   |
| <i>Place of birth</i>                     | Neudeck, Poland  |
| <i>Nationality</i>                        | German   |
| <i>Education</i>                          | 1973-1978 Study of Forest Science,<br>University for Forestry and Wood Technology in Zvolen<br>(Czechoslovakia)  |
|   | 1999 Dissertation in Biology at the University of Hamburg, Title:<br>Analysis of Forest Condition with Multivariate Statistical Methods.<br>Theory and Application.  |
| <i>Occupations</i>                        | 1979-1980 Senior scientist at the Institute for Forest Management in<br>Industrialised Areas, Kattowitz, Poland.<br>1981-1982 Trainee as higher forest officer, Hannover, Germany.<br>1982-1984 Manager in Forest Inventory Company Ltd., Feldkirchen, Germany   |
|   | Since 1984 Scientist at the Institute for World Forestry of the Johann Heinrich von<br>Thünen Institute (vTI), Hamburg, Germany.   |
| <i>Qualifications<br/>for the project</i> | Head of the Data Unit of the Programme Coordinating Centre of ICP Forests since<br>1994 and co-author of the annual Forest Condition Report for Europe. Thirteen<br>years of experience in management, examination and statistical evaluation of<br>forest monitoring data. Experienced in statistical data evaluations including<br>multivariate methods. |
| <i>Tasks in the<br/>project</i>           | Data validation, database management, statistical evaluations.   |

Ilona HALL

|   |   |
|---|---|
| <i>Date of birth</i>                      | 8 <sup>th</sup> August, 1957  |
| <i>Place of birth</i>                     | Hamburg, Germany  |
| <i>Nationality</i>                        | German  |
| <i>Occupations</i>                        | 1988-1996 Administrative clerk at the former Federal Research Centre for<br>Forestry and Forest Products, Hamburg, Germany  |
| <i>Qualifications<br/>for the project</i> | Since 1997 accountant at the Johann Heinrich von Thünen Institute (vTI), Hamburg,<br>Germany. Involved and responsible for all tasks concerning accountancy within<br>regular and additional budget of the Institute. |
| <i>Tasks in the<br/>project</i>           | Inspection, keeping and accountancy of the budget allotted to the project and<br>administered by vTI  |

## LIFE+ Environment Policy and Governance 2007- C1/8

Doris Wöbb

*Date of birth* 05 March, 1956

*Place of birth* Hamburg, Germany

*Nationality* German

*Education* 1972-74 Trade apprentice with  
Rating & Co. in Hamburg

*Occupations* 1974-81 Assistant clerk with Rating & Co. and Terramar GmbH, Hamburg

1981-88 Due to maternity work at home for Terramar GmbH, Hamburg

1989-91 Assistant clerk with Terramar GmbH in Hamburg

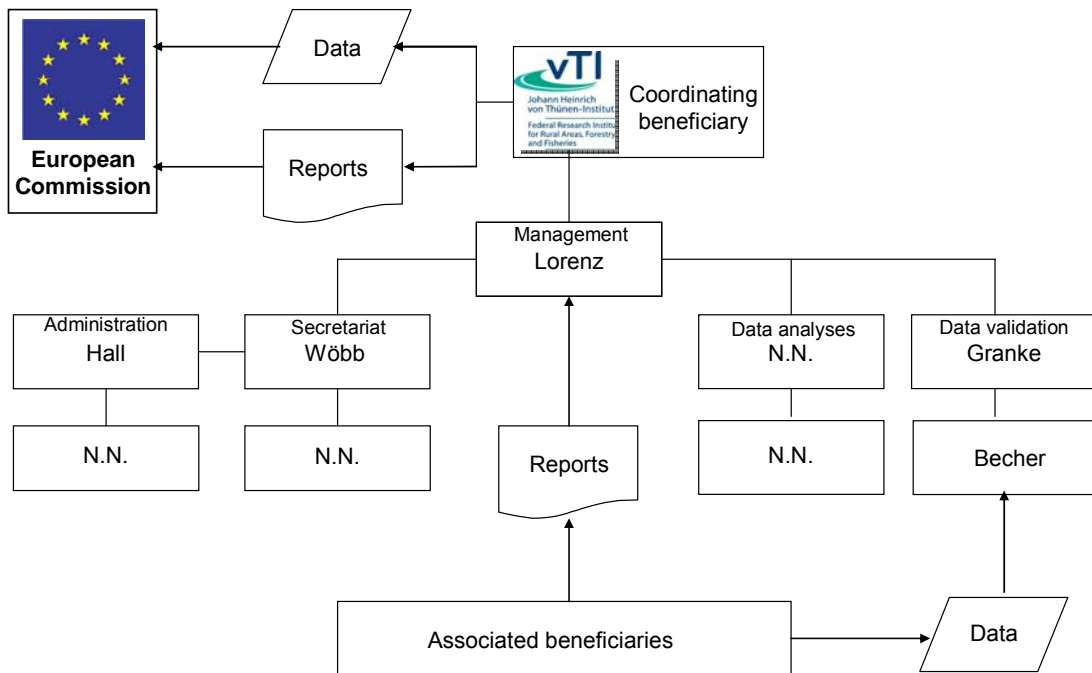
1991-2000 Maternity leave

Since 2000 Secretary at the Institute for World Forestry of the Johann Heinrich von  
Thünen Institute (vTI), Hamburg, Germany

*Qualifications for the project* Secretary at the Institute for World Forestry. Since May 2007 directly involved in organisational work of the Programme Coordinating Centre (PCC) of ICP Forests. Experience in conducting common office tasks: organisation, planning and supervision of the time schedule. Familiar with office programmes (Winword, Power Point, Excel), good command of English, ability to work both in team and independently.

*Tasks in the project* Commercial correspondence, organisation of meetings, timetable, planning, deadline supervision, administration of files, addresses and reports, preparation of project correspondence, reports and brochures for mailing.





**Responsible coordinators representing the associated beneficiaries**

| Beneficiary Number | Name of institution   | Responsible coordinator(s)             |
|--------------------|---|--|
| 2                  | Bundesforschungs- und Ausbildungszentrum für Wald, Naturgefahren und Landschaft (BFW)   | Markus Neumann                         |
| 3                  | Research Institute for Nature and Forest  | Peter Roskams                          |
| 4                  | participation withdrawn   |  |
| 5                  | Ministry of Environment and Water, Environmental Executive Agency, Monitoring of Land, Biodiversity and Protected Areas Dep.      | Penka Stoichkova, Genoveva Popova      |
| 6                  | Ministry of Agriculture, Natural Resources and Environment, Department of Forests   | Andreas K. Christou                    |
| 7                  | Forestry and Game Management Research Institute   | Bohumír Lomský                         |
| 8                  | Forest and Landscape Denmark, University of Copenhagen  | Lars Vesterdal, Annemarie Bastrup-Birk |
| 9                  | Estonian Centre of Forest Protection and Silviculture   | Kalle Karoles                          |
| 10                 | Finnish Forest Research Institute, (METLA)  | John Derome                            |
| 11                 | Office National des Forêts, Direction Generale (ONF)  | Erwin Ulrich                           |
| 12                 | Ministry of Rural Development and Food, General Directorate for the Development and Protection of Forests and Natural Environment | Maria Chatzioannou, Eirini Nikolaou    |
| 13                 | Central Agricultural Office (CAO), Forestry Directorate   | András Szepesi, Laszlo Kolozs          |
| 14                 | Forest Service, Department of Agriculture, Fisheries and Food   | Paul Dunne                             |
| 15                 | CONECOFOR OFFICE, National Forest Service (DIV. VI)   | Bruno Petriccione                      |
| 16                 | State Forest Survey Service   | Andrius Kuliesis                       |
| 17                 | Ministerie van LNV, directie Kennis, Ministry of Agriculture, Nature and Food Quality   | Gerard Grimberg                        |
| 18                 | Forest Research Institute   | Pawel Lech                             |
| 19                 | - participation withdrawn -   |  |
| 20                 | Forest Research and Management Institute  | Romica Tomescu, Ovidiu Badea           |
| 21                 | National Forest Centre - FRI, D. of Ecology and Biodiversity of Forest Ecosystems   | Pavel Pavlenda                         |
| 22                 | Slovenian Forestry Institute  | Marco Kovac, Primosz Simoncic          |
| 23                 | General Directorate for Biodiversity, Servicio de Protección contra Agentes Nocivos   | Gerardo Sánchez                        |
| 24                 | CEAM, Fundación, Centro de Estudios Ambientales del Mediterráneo  | Maria Sanz, Vicent Calatayud           |
| 25                 | Swedish University of Agricultural Sciences (SLU), Forest Resource Management   | Göran Ståhl                            |

| Beneficiary number | Name of institution   | Responsible coordinator(s)         |
|--------------------|---|------------------------------------|
| 26                 | Forest Research Station, Alice Holt Lodge   | Andrew Moffat                      |
| 27                 | Landesforstanstalt Eberswalde   | Reinhard Kallweit                  |
| 28                 | Forstliche Versuchs- und Forschungsanstalt Baden-Württemberg  | Klaus von Wilpert                  |
| 29                 | Bayerische Landesanstalt für Wald und Forstwirtschaft (LWF)   | Hans-Peter Dietrich, Stephan Raspe |
| 30                 | Nordwestdeutsche Forstliche Versuchsanstalt   | Johannes Eichhorn, Nils König      |
| 31                 | Ministerium für Landwirtschaft, Umwelt und Verbraucherschutz  | Jan Martin                         |
| 32                 | Landesamt für Natur, Umwelt und Verbraucherschutz NRW, Fachbereich Monitoring, Effizienzkontrollen, Dezernat Forstliches Umweltmonitoring | Joachim Gehrman                    |
| 33                 | Forschungsanstalt für Waldökologie und Forstwirtschaft Rheinland-Pfalz  | Joachim Block, Hans-Werner Schröck |
| 34                 | Ministerium für Landwirtschaft, Umwelt und ländliche Räume  | Claus-G. Schimming                 |
| 35                 | Landesamt für Umwelt- und Arbeitsschutz, Fachbereich 5.2, Bodenschutz und Waldökologie  | Karl Dieter Fetzer                 |
| 36                 | Staatsbetrieb Sachsenforst, Ref. 45 Standortserkundung, Bodenmonitoring, Labor, Abteilung IV Ressourcenmanagement                         | Gerhard Raben                      |
| 37                 | Thüringer Landesanstalt f. Wald, Jagd u. Fischerei (TLWJF)  | Ines Chmara                        |
| 38                 | Latvian State Forest Research Institute "Silava"  | Ansis Actiņš                       |
| 39                 | Agriculture Research Council (CRA)  | Patrizia Gasparini                 |
| 40                 | National Research Council (CNR)   | Rosario Mosello                    |

The Associated Beneficiaries representing 11 German Länder have in principle the same legal relationship to the coordinating beneficiary as all other associated beneficiaries. This will hold also for the data submission by each associated beneficiary directly to the coordinating beneficiary via a data submission module. However, the coordinating beneficiary represented by the Institute for Forest Ecology and Forest Inventory of vTI will take over a number of coordinating activities for the German Länder. These activities will include assistance in quality control measures such as workshops on the further harmonisation of data acquisition. The institute will also develop and maintain a platform for information exchange between the Länder and the Federal Ministry for Food, Agriculture and Consumer Protection (BMELV). Additionally, contributions to the national reports will be provided. This will include the modelling of element fluxes as well as the calculation of critical loads and levels of air pollutants.

***Expected results (quantitative information when possible):***

The result of the project management by the coordinating beneficiary will consist in the successful implementation of the 246 actions by the 38 beneficiaries and hence to meeting the project objectives described in the Technical Application Forms Part B. Specific results of the project management will be

## **LIFE+ Environment Policy and Governance 2007- C1/12**

- a flawless work flow;
- regular submission, validation, storage and dissemination of data;
- politically relevant results of scientific analyses of the data;
- the dissemination of information within the project as well as to a broad range of target groups.

### ***Indicators of progress:***

The indicators of the progress of the project management are part of the monitoring of the effectiveness of the actions and are hence described under Action M2-1(DE).

## **ACTION M2-1(DE): Monitoring the effectiveness of the actions (2009-2010)**

### ***Description (what, how, where and when):***

The monitoring of the effectiveness of the actions will be based on the experience gained by the coordinating beneficiary in managing forest monitoring in Europe for EC and UNECE for 22 years. It will follow a specific Quality Management Plan to be developed in the first month of the project and to be presented at the Kick-off Workshop end January 2009. The Quality Management Plan will comprise a detailed project plan in the form of a set of flow charts. Permanent comparisons between the actual progress of the actions and the project plan will signal either a verification of or a deviation from the plan. Any deviation from the plan must launch action aimed at correcting the deviation.

The Quality Management Plan aims at the supervision and effective implementation of the 246 actions. A specific set of progress indicators and verifiers is foreseen for each of the following actions or well defined action groups:

#### **Monitoring actions**

- Action Group L1: Creation of a large-scale representative monitoring grid
- Action Group L2: Large-scale representative monitoring
- Action Group IM1: Selection of core plots for intensive monitoring

#### **Demonstration actions**

- Action Group D1: Tree vitality and adaptation
- Action Group D2: Nutrient cycling and critical loads
- Action Group D3: Water budgets

#### **Scientific Action**

- Action A1-1(DE): Analysis of data, evaluation of the monitoring system

#### **Quality assurance actions**

- Actions C1

#### **Management actions**

- Action M3-1(DE): Data validation
- Action M4-1(DE): Website
- Action M5-1(DE): Layman's Report
- Action M6-1(DE): International dissemination of results
- Action Group M7: Project management by associated beneficiaries
- Action Group M8: National dissemination of information

The specific methods of the quality management plan and the monitoring of the project progress are described below.

***Methods employed:***

Most classical tools for planning complex projects are based on the approach that the project is subdivided into a number of tasks. In a next step the interdependencies between these tasks are analysed and the duration of each task is determined. The result of this process is a flow chart in which all tasks are symbolised by graphical elements. Each graphical element contains text and figures describing the task as well as its starting and end date. Logical orders and interdependencies between graphical elements are visualised by arrows. This approach became common in the first half of the last century as an element of operations research. Operations research was started to be applied by labour science and the military in order to plan and monitor industrial processes and military missions, respectively.

The approach of operations research is applied for both planning the project and for monitoring its progress. First of all, the production of flow charts forces the project managers to identify tasks, to plan their start and end dates and to recognise interdependencies. Secondly, the flow chart will be used to provide to the associated beneficiaries and overview of the tasks, their timing and their deliverables.

In preparation for the project FutMon the approach of operations research was already started when the numerous main tasks were identified and their start and end dates were fixed. The first result of this planning process is the project timetable provided in the Technical Application Form C3. For the most complex task of data validation, a much more complex timetable was developed and annexed as a separate pdf-File to the forms.

A flow chart will be established for each of the Actions and Action Groups and will be used as "sources of verification". They will visualise milestones (e.g. start and end dates of individual actions as well as the provision of the respective deliverables) which serve as "progress indicators" for the success of an action. Such progress indicators are specified below along with their verifiers. For each action either the verification of or the deviation from the plan as derived from the indicator will be laid down in an electronic "progress monitoring protocol". In case of a deviation from the plan, the measures taken to correct the deviation will also be noted. This will permit the project management and upon request also EC to reliably verify the progress and the status of the project at any time.

The quality management by means of flow charts will be optimised by applying a classical tool of operations research on a state-of-the-art electronic platform. The latter will be created using the standard software "VISIO" by Microsoft. This software is already in use at the premises of the coordinating beneficiary. Individual progress indicators and verifiers for the Actions and Action Groups are described below:

**Monitoring actions**

Action Group L1:      Creation of a large-scale representative monitoring grid

Based on Level I and NFI plots a new large scale representative monitoring grid will be established, consisting of about 6000 monitoring plots. Indicators for the installation of these plots are the general plot data laid down in the ICP Forests Manual ([www.icp-forests.org](http://www.icp-forests.org)), such as geographic coordinates and altitude. The verifier is the submission of general plot data by the associated beneficiaries to the coordinating beneficiary.

### **Action Group L2: Large-scale representative monitoring**

The indicators for the successful implementation of the large-scale representative monitoring are the monitoring data laid down in the ICP Forests Manual, such as tree crown defoliation, discolouration and damage types. The verifier is the submission of the data by the associated beneficiaries to the coordinating beneficiary.

### **Action Group IM1: Selection of core plots for intensive monitoring**

The indicators for the successful selection of core plots for intensive monitoring are the general plot data and the monitoring data laid down in the ICP Forests Manual. The monitoring data reflect numerous parameters on crown condition, tree growth, soil condition and soil solution chemistry, needle/leaf chemistry, biodiversity, meteorology, ambient air quality, and atmospheric deposition. The verifier is the submission of the data by the associated beneficiaries to the coordinating beneficiary.

## **Demonstration actions**

### **Action Group D1: Tree vitality and adaptation**

The collection of more comprehensive tree vitality data is demonstrated on selected plots of the above mentioned monitoring systems. Indicators for the successful implementation of the action are special equipment (such as webcams), special training and intercalibration courses as well as the more comprehensive data (such as leaf area index and photographic data). Verifiers are the reporting of the installation of the equipment, the reports on the courses, the submission of the data and a project report.

### **Action Group D2: Nutrient cycling and critical loads**

The action demonstrates the assessment of element fluxes within the forest ecosystem and of critical loads of depositions of air pollutants. Indicators are monitoring data laid down in the ICP Forests Manual (such as precipitation, air pollution concentrations, soil and soil solution parameters, forest growth parameters) and maps of critical loads and their exceedances for several air pollutants. Verifiers are the submission of data, maps on critical loads and their exceedances and a project report.

### **Action Group D3: Water budgets**

The development and implementation of water budget models is demonstrated on selected monitoring plots. Indicators are specific monitoring equipment, monitoring data (on e.g. soil moisture and water fluxes) and respective models. Verifiers are the installation of the equipment, the submission of monitoring data, the submission of water budgets and a project report.

## **Scientific Action**

### **Action A1-1(DE): Analysis of data, evaluation of the monitoring system**

Monitoring data are analysed with respect to forest condition and forest biodiversity in relation to multiple stress, in particular air pollution. Indicators for the successful implementation of the action are two technical and one scientific report. Verifiers are the finalisation of the reports.

## **Quality assurance actions**

### **Actions C1**

The various Actions C1 focus on the coordination, development and implementation of quality assurance and control procedures. Indicators will refer to expert meetings on the development of quality indicators and new parts of the ICP Forests Manual, intercalibration and training courses, ringtests, and special equipment on plots. Verifiers are the submission of meeting minutes and Manual parts, written reports on courses, written reports on ringtest results, the installation of special equipment and project reports on each action.

## **Management actions**

### **Action M3-1(DE): Data validation**

Many of the above mentioned actions mention data as indicators and their submission as verifiers. Due to multitude and complexity of the data, database management with data validation as its most important component constitutes an action by itself. A comprehensive timeline has been developed and is provided in the Annex.

### **Action M4-1(DE): Website**

Indicators for the successful implementation of the website will be its different thematic components (e.g. information on the background, progress and status of the project, the monitoring design, results and publications, meetings and a data submission and dissemination modules. Verifiers will be the finalisation of the respective components.

### **Action M5-1(DE): Layman's Report**

At the end of each project year an annual summary report will be produced aimed at providing information on forest condition in Europe for policy makers and the wider public. Indicators are draft, final versions and printed versions of the reports. Verifiers are the circulation of drafts among the beneficiaries, comments by the beneficiaries on the drafts, the editing of the final versions as well as the printing and the dissemination of the reports.

### **Action M6-1(DE): International dissemination of results**

For the dissemination of results and its impact on different target groups a system of indicators and verifiers was developed. It is described in detail under Action M6-1(DE).

### **Action Group M7: Project management by associated beneficiaries**

Project management by the associated beneficiaries will cover all aspects of management at the national level. As the management by the coordinating beneficiary, the management by the associated beneficiaries will be based on the experience gained so far with forest monitoring under EC and UNECE. In the bilateral agreements between the associated and the coordinating beneficiaries the associated beneficiaries will have to state that their civil servants budgeted under FutMon will have to be exclusively seconded to the project. For each civil servant, a timesheet will have to be filled on a daily basis giving evidence of his or her work for the project. The coordinating beneficiary will distribute timesheets developed and applied in an earlier EU project. Indicators for the successful implementation are the data and reports produced under the above mentioned Action Groups. Verifiers are the submission of data and reports during the projects as well as the submission of a financial report at the end of the project to the coordinating beneficiary.

Action Group M8: National dissemination of information

Indicators for the national dissemination of information are national reports, press releases, scientific publications, websites, and notice boards. Verifiers are the submission of copies of publications and reports as well as of website links to the coordinating beneficiary.

With respect to communication and to the information flow, meetings are among the major tools of quality management. The table on the following pages lists all meetings which will take place as part of the project. Many of these meetings are relevant for experts of certain disciplines only and focus on data quality control (e.g. training, intercalibration and harmonisation). However, combined expert meetings as well as project status workshops are interdisciplinary meetings and have therefore an important function for communication and the exchange of information. The coordinating beneficiary will supervise the writing and distribution of minutes of all meetings and will use the minutes to keep track of the work of individual expert groups and of the progress of their actions.

Other tools of information management such as reports, publications in journals, the project website, as well as press releases and interviews were mentioned above.

### Meeting schedule

| <b>Name of the meeting</b>   | <b>Date</b><br>(I – 1 <sup>st</sup> quarter<br>II – 2 <sup>nd</sup> quarter ...) | <b>Action (Beneficiary) responsible</b>  |
|--|--|--|
| Kick-off Workshop "Selection Criteria for Large Scale Plots"                               | January 2009   | M1-1(DE),<br>C1-HarmonLS-40(IT)  |
| 1 <sup>st</sup> Expert Meeting on Harmonisation of NFIs                                    | March 2009   | C1-NFI-8(DK)<br>C1-NFI-25(SE)  |
| Combined Expert Meeting "Tree Vitality" <sup>1</sup>                                       | I / 2009   | C1-Tree-30(NWD)<br>C1-Phen-10(FI)<br>C1-Gro-2(AT)<br>C1-Met-30(BY)                   |
| Combined Expert Meeting "Nutrient Cycling and Water Budget" <sup>2</sup> ,                 | I / 2009   | C1-Dep-22(SI)<br>C1-SS-10(FI)<br>C1-Soil-3(FL)<br>C1-Fol1-10(FI)<br>C1-QALab-30(NWD) |
| Ground Vegetation Field Intercomparison back to back with Expert Meeting Ground Vegetation | II / 2009  | C1-GV-15(IT)   |
| Training Course on New Methods <sup>3</sup> back to back with Phenological Intercomparison | II / 2009  | C1-Phen-10(FI)<br>C1-Met-30(BY)  |
| 1st FutMon Status Workshop <sup>4</sup>  | May 2009   | M1-1(DE)<br>C1-QAC-15(IT)  |
| 1 <sup>st</sup> Data Submission Workshop   | September 2009   | M3-1(DE)   |
| International Cross Calibration Course on Forest Condition (North Europe)                  | III / 2009   | L2-10(FI)  |

<sup>1</sup> Combined Expert Meeting "Tree Vitality": Experts for Crown Condition, Forest Growth, Phenology and Meteorology

<sup>2</sup> Combined Expert Meeting "Nutrient Cycling and Water Budgets": Experts for Deposition, Soil and Soil Solution, Foliage and Litterfall, Quality in Laboratories

<sup>3</sup> Phenocams and LAI

<sup>4</sup> Status workshops will give an overview of the ongoing activities in the project, including the work of the Quality Assurance Committee, and will present main results.



|   |               |  |
|---|---------------|--|
| International Cross Calibration Course on Forest Condition (Central Europe)       | III / 2009    | L2-7(CZ)   |
| International Cross Calibration Course on Forest Condition (Mediterranean Europe) | III / 2009    | L2-15(IT)  |
| Ozone Visible Injury Field Training and Intercomparison Course                    | III / 2009    | C1-O3-24(ES)   |
| Meeting for Heads of Laboratories   | IV / 2009     | C1-QALab-30(NWD)   |
| Combined Expert Meeting "Tree Vitality"   | 2010          | C1-Tree-30(NWD)<br>C1-Phen-10(FI)<br>C1-Gro-2(AT)<br>C1-Met-30(BY)                   |
| Combined Expert Meeting "Nutrient Cycling and Water Budget"                       | 2010          | C1-Dep-22(SI)<br>C1-SS-10(FI)<br>C1-Soil-3(FL)<br>C1-Fol1-10(FI)<br>C1-QALab-30(NWD) |
| 2nd FutMon Status Workshop  | May 2010      | M1-1(DE)<br>C1-QAC-15(IT)  |
| 2nd Expert Meeting on Harmonisation of NFIs                                       | November 2010 | C1-NFI-8(DK)<br>C1-NFI-25(SE)  |
| Ozone Visible Injury Field Training and Intercomparison Course                    | III / 2010    | C1-O3-24(ES)   |
| Damage Type Course  | III / 2010    | C1-Dam-3(FL)   |
| Expert Meeting Ground Vegetation  | 2010          | C1-GV-15(IT)   |

***Expected results (quantitative information when possible):***

The result of the action will be the possibility to verify the progress and the status of the project at any time. Deviations from the project plan will be discerned by means of the monitoring so that corrections can be made.

***Constraints and assumptions:***

None.

***Beneficiary responsible for implementation:***

Coordinating Beneficiary

***Indicators of progress:***

The main indicators of the progress of the project are the milestones. The most important of these milestones are listed in the Technical Application Forms C2.

**ACTION M3-1(DE): Data validation (2009-2010)*****Description:***

The aim of the action is to develop a database system for storage, processing and distribution of data collected in the different monitoring schemes and demonstration actions under the

FutMon project. The computer system will allow a web-based data submission using standardized data forms. A verification methodology will be developed for the specific surveys that will ensure a reproducible and transparent data validation by automatic routines as well as a final validation by experts. The database system will include validated data of previous monitoring schemes like the Forest Focus regulation. This will allow time consistency checks and the development of range tests for single parameters as well as time series analyses.

All automatic checks will be performed on-line. Real-time reporting of the results allows the partner to verify adherence to the submission specifications and to correct the data if necessary.

After the finalization of the field assessment and data preparation, data will be submitted by the partners annually. After the validation the data will be distributed to the evaluation experts.

The Data Validation Centre will be responsible for communication with all related project partners and will organize the data dissemination during the FutMon project. After the development of indicators of data quality in the preparatory phase, these indicators will also be part of the data submission, validation and storage in the implementation phase.

### ***Methods employed:***

- Web-based data submission and validation module
- Data validation based on:
  - a) Compliance tests (testing of formal aspects)
  - b) Conformity tests (testing of the value)
  - c) Uniformity checks (expert analysis of data comparability)
- Data submission workshops

### ***Constraints and assumptions:***

Time consistency checks during data validation necessitate validated legacy data from the previous monitoring years. Data for the Level I and Level II plots up to and including 2006 should be available from the EC DG Joint Research Centre (JRC). Validated data from the BioSoil project should also be available from the JRC from 2009 onwards. Data availability for the monitoring years 2007 and 2008 is unclear due to a missing EEC Regulation. Even if the data will be validated, the finalization of this process will be at the earliest in March 2009 for Level I data and in March 2010 for Level II data, following the time constraints for data submission formulated in the ICP Forests Manual.

Most of the monitoring data of the years 2010 can not be submitted and validated in 2010. This will be done by the associated beneficiaries and by the coordinating beneficiary in 2011 on their own expenses to the largest extent possible.

### ***Beneficiary responsible for implementation:***

Coordinating Beneficiary (Germany, vTI)

### ***Expected results (quantitative information when possible):***

- Validated data for all surveys which will be finalized in 2009 and 2010 for the FutMon large scale plots,
- Validated data for all surveys which will be finalized in 2009 and 2010 for the demonstration actions and for core and basic plot monitoring,
- .

***Indicators of progress:***

- Annually submitted data,
- Annually validated data.

***Reports***

DS-2010

**ACTION M4-1(DE): Website (2009-2010)**

***Description and Methods***

An internet platform will be created to provide important public information. It will contain all information on project set-up, design and implementation of the monitoring system, main results and publications, links to partners and cooperating institutions, upcoming meetings and events as well as contact details in a user-friendly way. The website will be regularly updated and will display the LIFE logo. The website will have a public area which is open to internet users without using a password. A password protected zone will give access to online data submission modules and will offer the possibility for internal project communication.

***Constraints and assumptions:***

None

***Beneficiary responsible for implementation:***

Coordinating Beneficiary (Germany, vTI)

***Expected results (quantitative information when possible):***

Website implemented

***Indicators of progress***

Implementation of the website

Regular updates in at least monthly intervals

**ACTION M5-1(DE): Layman's Report (2009-2010)**

***Description***

An annual printed summary report will be produced aimed at providing information on forest condition in Europe for policy makers and the wider public. The report will contain the main findings in an easily understandable language. It will provide a holistic view, referring also to important findings resulting from previous forest monitoring. Moreover, the results of new scientific analyses will be based on all available data including those of previous monitoring schemes such as Forest Focus. It will also be made available as a digital pdf-file for easy electronic dissemination and will be written in the English language with a length of 5 – 10 pages. Translations as well as prints of translated summaries will be the responsibility of the partners, but will be technically supported by the coordinator as far as possible. The report will contain the main findings in an easily understandable language. The LIFE logo will appear on the summary report.

***Methods:***

The Coordinating Beneficiary will produce draft reports which will be circulated among the Associated Beneficiaries for amendment and comment. The Coordinating Beneficiary will then produce the final version which will be linguistically improved by a professional writer.

Print run will be 8,000 copies. The reports will be distributed among the Beneficiaries for national dissemination and will be distributed internationally by the Coordinating Beneficiary to international governmental and non-governmental organisations active in the field of environmental policy and sustainable forest management. The report is an important tool for international dissemination of results (see Action M6-1(DE)).

***Expected results***

Annual reports

***Beneficiary responsible for implementation***

Coordinating Beneficiary (Germany, vTI)

***Constraints and assumptions***

None

***Indicators of progress***

Draft reports circulated among beneficiaries

Final versions produced

Print completed

Reports distributed

***Reports***

L1-09

L1-10

**ACTION M6-1(DE): International dissemination of results (2009-2010)**

***Description and Methods***

The main stakeholders at international policy level are already identified in the FutMon project proposal. They are:

- Commission services, such as DG ENV, DG JRC including the European Forest Data Centre (EFDAC), DG AGRI, EUROSTAT
- Ministerial Conference for the protection of Forests in Europe (MCPFE)
- Food and Agriculture Organisation of the United Nations (FAO) including its Forest Resource assessments (FRA)
- UNECE Convention on Long-range Transboundary Air Pollution (CLRTAP)
- UNFCCC
- CBD – SEBI 2010

As concerns additional target audiences, the following groups can be identified:

a.) Scientific community: Additional contacts will be established mainly through IUFRO (International Union of Forest Research Organisations). This can happen through joint conferences (i.e. the invitation of external scientists and IUFRO coordinators to relevant FutMon meetings as well as the participation of experts active in FutMon at IUFRO conferences). FutMon results will be reported in IUFRO newsletters. Scientific publications will be produced in order to transfer information to the scientific community.

Contact to existing research networks will be reinforced such as the CarboEurope, NitroEurope, ALTER-Net and possible successor groups, Ilter, and others. Contacts can be easily established through FutMon experts that are already participating in these groups. Specifically the intensive monitoring sites are already today a basis for scientific experiments and additional monitoring activities carried out by other institutions such as universities. Through the above describes activities such “add-on” activities will be further stimulated to create a maximum of synergies that go beyond the project activities.

b.) NGOs. Non Governmental Organisations (NGOs) are important stakeholders at international and national levels, they have an important multiplier function. Relevant organisations will be identified within the project and will be specifically included in the mailing lists that will be compiled for press releases and reports.

c.) Forest Managers. Broad based and comprehensive forest information is a very relevant basis for sustainable forest management. Contacts to responsible forest managers will be established through the partners in different countries. In most cases the associated beneficiaries already maintain close contacts to forest managers. In some cases associated beneficiaries are even research institutes responsible for the development of sustainable forest management procedures. This facilitates a direct implementation of monitoring results into nature near forest management practices (e.g. taking into account updated knowledge on nutrient cycles, carbon storage, biodiversity and forest health and vitality)

d.) Grand Public. Press releases, layman’s reports and website information are specific tools to spread monitoring results to interested people across Europe. This will be done and coordinated by the coordinating beneficiary. In addition, associated beneficiaries will be responsible to disseminate results in their countries. Respective measures are described within action group M8.

International dissemination of results is based on a number of modules:

a.) Press releases

Press releases are necessary to attract the media. Many partners maintain contacts with different national and international press agencies. Press releases will be written by the coordinator in collaboration with the partners. They will be issued at least annually in a coordinated action by the Coordinating Beneficiary and by Associated Beneficiaries that maintain relevant contacts and mailing lists. The number of press releases including the lists of recipients will be documented. Press releases will mention the project homepage. The impact of the press releases will be evaluated by the number of subsequent hits on the programme internet page which is automatically registered by the internet provider. Also the URLs of the internet users will be documented in order to give an overview on the nationality of the “internet visitors”.

b.) International reporting obligations

FutMon aims at reducing the burden of reporting to different international policy processes, including the UNECE/FAO Forest Resources Assessment (FRA), the Convention on Biological Diversity (CBD), the Framework Convention on Climate Change (UNFCCC), the Kyoto Protocol, the United Nations Forum on Forests (UNFF), the Convention on Long-range Transboundary Air Pollution (CLRTAP), Eurostat, and the Ministerial Conference for Protection of Forests in Europe (MCPFE). Reducing reporting burdens is made possible mainly by the creation of a harmonized monitoring system which is multifunctional and which can provide information to different users. Compilation of results from different sources is time consuming and inefficient and will be reduced by FutMon. It will be investigated to what extent national reporting obligations can be substituted by central reporting. In addition, FutMon will utilize existing contacts and will seek new contacts to international bodies, thus stimulating the orientation of future reporting obligations towards the possibilities of the improved FutMon monitoring system. Wherever appropriate and required, results and reports will not only be based on data collected under FutMon, but will refer to results of previous forest monitoring

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and will include time series analyses based on data of previous monitoring activities like e.g. the Forest Focus monitoring scheme. Reports and data delivered to international organisations either directly or through national authorities will be documented. International policy indicators that rely on the project data and related publications will be listed (e.g. MCPFE reports and indicators, SEBI2010 indicators, EUROSTAT publications...)

### c.) Peer-reviewed articles in scientific journals

FutMon will be based on the expertise of over 200 scientists in the participating countries. Future developments will rely on scientific discussion and innovation. Participation in the scientific dialogue is thus an essential part of information policy. Articles in scientific journals are the most important communication media in this respect. Peer-reviews and discussions with the scientific community will help to improve the scientific quality of the results and hence increase their acceptance and political relevance. Articles will be within the responsibility of the authors, but the project coordination will ensure dissemination among the project partners. Publications in scientific journals will acknowledge the Community financial support. Experts participating in the FutMon project which are authors of peer-reviewed articles will inform the coordinating beneficiary on published articles based on the project results so that literature lists can be compiled. Wherever appropriate and required, results and reports will not only be based on data collected under FutMon, but will as well include time series analyses based on data of previous monitoring activities like e.g. the Forest Focus monitoring scheme.

### d.) Technical Reports (see “Delivery Products of the Project” – Form C2)

Technical Reports include quality assurance and control reports, data reports, action reports and scientific reports. They make possible the availability of scientific results to the participating experts and countries within a short period of time. They are addressed to scientists and experts and are a basis for internal discussion and improvement of the results. In addition, they are a basis for the publication of articles in scientific journals. As the review and publication process in scientific journals takes rather a long time, technical reports are the first platform to inform of the main findings and outcomes. Technical reports are produced by the coordinating and by associated beneficiaries. Implementation of the project with respect to technical reports can be measured by a comparison of the list of foreseen reports and the list of actually finalised reports.

### e.) Data dissemination

Validated raw data need to be made available to the scientific community. Upon receipt of specific requests, the Coordinating Beneficiary will disseminate data based on rules to be agreed upon with the European Commission. Data dissemination to third parties will be organized by the coordinating beneficiary based on rules to be agreed upon with the European Commission. The number of external parties requiring the data and the type of data required will be continuously listed allowing to evaluate the interest and needs of the scientific community related to the project data.

The maintenance of a website and the production of a Layman's Report are also important modules for international dissemination of the results. These are described in Actions M4-1(DE) and M3-1(DE).

In addition to the indicators on dissemination results mentioned above under items a-e, and specifically with respect to stakeholders not participating in the project, the following indicators are of relevance:

Number of layman's reports distributed to existing mailing lists and number of reports disseminated upon specific requests of interested persons or organisations.

Number of excursions, school class/university visits to monitoring plots organized by associated beneficiaries.

Number of international conferences and workshops were the project and its results have been presented by the coordinating beneficiary or any assigned associated beneficiary.

***Constraints and assumptions***

None

***Beneficiary responsible for implementation***

Coordinating Beneficiary (Germany, vTI)

***Expected results***

Press releases

Reviewed publications

Technical reports

***Indicators of progress***

Press releases published

Reviewed publications circulated among beneficiaries

Technical reports circulated among beneficiaries

**ACTION GROUP M7: Project management by associated beneficiaries (2009-2010)**

***Description (what, how, where and when):***

Management at the national level will cover the management of all aspects of the individual actions to be carried out in the project: financial matters, personnel (researchers, office staff, laboratory staff, field staff), the monitoring network, laboratory analyses, the quality control and assurance programme, data handling and storage, and dissemination of the results. It will continue throughout the course of the project.

***Methods employed:***

Financial management will be carried out in accordance with the rules and regulations laid down in the relevant EU legislation (e.g. Life+ regulation) as well as, where applicable, in accordance with national legislation. Regular external financial audits will be carried out.

Management of the individual assessments, monitoring network, laboratory analyses, QA/QC programme, and data handling and storage, will be carried out in accordance with the ICP Forests Manual. Where applicable, the Forest Focus Manual will be taken into account.

All actions related to work safety will be in accordance with the relevant national legislation.

Dissemination of the results of the individual actions will take place through stakeholder meetings, scientific seminars and publications in the mass media.

Participation in project meetings is an important tool to ensure national implementation of project decisions and methods.

***Expected results (quantitative information when possible):***

Annual contributions to the Activity Reports which are compiled by the Coordinating Beneficiary.

Participation in the Combined Expert Meetings, Status Workshops and meetings of heads of laboratories.

Stakeholder meetings, scientific seminars and publications in the mass media.

***Indicators of progress:***

Annual financial and progress reports

**ACTION M7-2(AT): Project management by Austria (2009-2010)**

***Description (what, how, where and when):***

Management at the national level will cover the management of all actions to be carried out in the project: financial matters, personnel (researchers, office staff, laboratory staff, field staff), the maintaining of monitoring network, laboratory analyses, quality control and assurance, data handling and storage, and dissemination of data and results. It will be continued throughout the course of the project by the Federal Research and Training Centre for Forest, Natural hazards and Landscape (BFW).

***Methods employed:***

Time records, purchase of durable goods and consumables, as well as accounting will be done according to national legislation and rules. To guarantee the availability of needed resources the allocation of personnel, funds and equipment will be laid down in the annual working programme of BFW.

***Expected results (quantitative information when possible):***

See above under "Action Group M7"

***Constraints and assumptions:***

None

***Beneficiary responsible for implementation:***

Associated beneficiary No. 2 (Austria)

***Indicators of progress:***

Compliance with project scheduling

**ACTION M7-3(FL): Project management by Belgium-Flanders (2009-2010)**

***Description (what, how, where and when):***

See above under "Action Group M7"

***Methods employed:***

See above under "Action Group M7"

***Expected results (quantitative information when possible):***

See above under "Action Group M7"

***Constraints and assumptions:***

None

***Beneficiary responsible for implementation:***

Associated beneficiary No. 3 (Belgium-Flanders)

***Indicators of progress:***

Annual financial and progress reports

**ACTION M7-5(BU): Project management by Bulgaria (2009-2010)**

***Description (what, how, where and when):***

See above under "Action Group M7"

***Methods employed:***

See above under "Action Group M7"

***Expected results (quantitative information when possible):***

See above under "Action Group M7"

***Constraints and assumptions:***

None

***Beneficiary responsible for implementation:***

Associated beneficiary No. 5 (Bulgaria)

***Indicators of progress:***

Annual financial and progress reports



**ACTION M7-6(CY): Project management by Cyprus(2009-2010)**

***Description (what, how, where and when):***

See above under "Action Group M7"

***Methods employed:***

See above under "Action Group M7"

***Expected results (quantitative information when possible):***

See above under "Action Group M7"

***Constraints and assumptions:***

None

***Beneficiary responsible for implementation:***

Associated beneficiary No. 6 (Cyprus)

***Indicators of progress:***

Annual financial and progress reports

**ACTION M7-7(CZ): Project management by Czech Republic(2009-2010)**

***Description (what, how, where and when):***

See above under "Action Group M7"

***Methods employed:***

See above under "Action Group M7"

***Expected results (quantitative information when possible):***

See above under "Action Group M7"

***Constraints and assumptions:***

None

***Beneficiary responsible for implementation:***

Associated beneficiary No. 7 (Czech Republic)

***Indicators of progress:***

Annual financial and progress reports

**ACTION M7-8(DK): Project management by Denmark(2009-2010)**

***Description (what, how, where and when):***

See above under "Action Group M7"

***Methods employed:***

See above under "Action Group M7"

***Expected results (quantitative information when possible):***

See above under "Action Group M7"

***Constraints and assumptions:***

None

***Beneficiary responsible for implementation:***

Associated beneficiary No. 8 (Denmark)

***Indicators of progress:***

Annual financial and progress reports

**ACTION M7-9(EE): Project management by Estonia(2009-2010)**

***Description (what, how, where and when):***

See above under "Action Group M7"

***Methods employed:***

See above under "Action Group M7"

***Expected results (quantitative information when possible):***

See above under "Action Group M7"

***Constraints and assumptions:***

None

***Beneficiary responsible for implementation:***

Associated beneficiary No. 9 (Estonia)

***Indicators of progress:***

Annual financial and progress reports

**ACTION M7-10(FI): Project management by Finland (2009-2010)**

***Description (what, how, where and when):***

See above under "Action Group M7"

***Methods employed:***

See above under "Action Group M7"

***Expected results (quantitative information when possible):***

See above under "Action Group M7"

***Constraints and assumptions:***

None

***Beneficiary responsible for implementation:***

Associated beneficiary No. 10 (Finland)

***Indicators of progress:***

Annual financial and progress reports

**ACTION M7-11(FR): Project management by France (2009-2010)**

***Description (what, how, where and when):***

See above under "Action Group M7"

***Methods employed:***

See above under "Action Group M7"

***Expected results (quantitative information when possible):***

See above under "Action Group M7"

***Constraints and assumptions:***

None

***Beneficiary responsible for implementation:***

Associated beneficiary No. 11 (France)

***Indicators of progress:***

Annual financial and progress reports

**ACTION M7-12(GR): Project management by Greece (2009-2010)**

***Description (what, how, where and when):***

See above under "Action Group M7"

***Methods employed:***

See above under "Action Group M7"

***Expected results (quantitative information when possible):***

See above under "Action Group M7"

***Constraints and assumptions:***

None

***Beneficiary responsible for implementation:***

Associated beneficiary No. 12 (Greece)

***Indicators of progress:***

Annual financial and progress reports

**ACTION M7-13(HU): Project management by Hungaria (2009-2010)**

***Description (what, how, where and when):***

See above under "Action Group M7"

***Methods employed:***

See above under "Action Group M7"

***Expected results (quantitative information when possible):***

See above under "Action Group M7"

***Constraints and assumptions:***

None

***Beneficiary responsible for implementation:***

Associated beneficiary No. 13 (Hungaria)

***Indicators of progress:***

Annual financial and progress reports

**ACTION M7-14(IE): Project management by Ireland (2009-2010)**

***Description (what, how, where and when):***

See above under "Action Group M7"

***Methods employed:***

See above under "Action Group M7"

***Expected results (quantitative information when possible):***

See above under "Action Group M7"

***Constraints and assumptions:***

None

***Beneficiary responsible for implementation:***

Associated beneficiary No. 14 (Ireland)

***Indicators of progress:***

Annual financial and progress reports

**ACTION M7-15(IT): Project management by Italy (2009-2010)**

***Description (what, how, where and when):***

See above under "Action Group M7". Project management will as well include the coordination between the three Italian associated beneficiaries (beneficiary numbers 15, 39, 40)

***Methods employed:***

See above under "Action Group M7"

***Expected results (quantitative information when possible):***

See above under "Action Group M7"

***Constraints and assumptions:***

None

***Beneficiary responsible for implementation:***

Associated beneficiary No. 15 (Italy)

***Indicators of progress:***

Annual financial and progress reports

**ACTION M7-16(LT): Project management by Lithuania (2009-2010)**

***Description (what, how, where and when):***

See above under "Action Group M7"

M7-16(LT) will be carried out on national budget. No co-financing will be required.

***Methods employed:***

See above under "Action Group M7"

***Expected results (quantitative information when possible):***

See above under "Action Group M7"

***Constraints and assumptions:***

None

***Beneficiary responsible for implementation:***

Associated beneficiary No. 16 (Lithuania)

***Indicators of progress:***

Annual financial and progress reports

**ACTION M7-17(NL): Project management by Netherlands (2009-2010)**

***Description (what, how, where and when):***

See above under "Action Group M7"

***Methods employed:***

See above under "Action Group M7"

***Expected results (quantitative information when possible):***

See above under "Action Group M7"

***Constraints and assumptions:***

None

***Beneficiary responsible for implementation:***

Associated beneficiary No. 17 (Netherlands)

***Indicators of progress:***

Annual financial and progress reports

**ACTION M7-18(PL): Project management by Poland (2009-2010)**

***Description (what, how, where and when):***

See above under "Action Group M7"

***Methods employed:***

See above under "Action Group M7"

***Expected results (quantitative information when possible):***

See above under "Action Group M7"

***Constraints and assumptions:***

None

***Beneficiary responsible for implementation:***

Associated beneficiary No. 18 (Poland)

***Indicators of progress:***

Annual financial and progress reports

**ACTION M7-20(RO): Project management by Romania (2009-2010)**

***Description (what, how, where and when):***

See above under "Action Group M7"

***Methods employed:***

See above under "Action Group M7"

***Expected results (quantitative information when possible):***

See above under "Action Group M7"

***Constraints and assumptions:***

None

***Beneficiary responsible for implementation:***

Associated beneficiary No. 20 (Romania)

***Indicators of progress:***

Annual financial and progress reports

**ACTION M7-21(SK): Project management by Slovakia (2009-2010)**

**Description (what, how, where and when):**

See above under "Action Group M7"

**Methods employed:**

See above under "Action Group M7"

**Expected results (quantitative information when possible):**

See above under "Action Group M7"

**Constraints and assumptions:**

None

**Beneficiary responsible for implementation:**

Associated beneficiary No. 21 (Slovakia)

**Indicators of progress:**

Annual financial and progress reports

**ACTION M7-22(SI): Project management by Slovenia (2009-2010)**

**Description (what, how, where and when):**

See above under "Action Group M7"

**Methods employed:**

See above under "Action Group M7"

**Expected results (quantitative information when possible):**

See above under "Action Group M7"

**Constraints and assumptions:**

None

**Beneficiary responsible for implementation:**

Associated beneficiary No. 22 (Slovenia)

**Indicators of progress:**

Annual financial and progress reports

**ACTION M7-23(ES): Project management by Spain (2009-2010)**

**Description (what, how, where and when):**

See above under "Action Group M7"

**Methods employed:**

See above under "Action Group M7"

**Expected results (quantitative information when possible):**

See above under "Action Group M7"

**Constraints and assumptions:**

None

**Beneficiary responsible for implementation:**

Associated beneficiary No. 23 (Spain)

**Indicators of progress:**

Annual financial and progress reports

**ACTION M7-24(ES): Project management by Spain (2009-2010)**

**Description (what, how, where and when):**

See above under "Action Group M7"

**Methods employed:**

See above under "Action Group M7"

**Expected results (quantitative information when possible):**

See above under "Action Group M7"

**Constraints and assumptions:**

None

***Beneficiary responsible for implementation:***

Associated beneficiary No. 24 (CEAM, Spain)

***Indicators of progress:***

Annual financial and progress reports

**ACTION M7-25(SE): Project management by Sweden (2009-2010)**

***Description (what, how, where and when):***

See above under "Action Group M7"

M7-25(SE) will be carried out on national budget. No co-financing will be required.

***Methods employed:***

See above under "Action Group M7"

***Expected results (quantitative information when possible):***

See above under "Action Group M7"

***Constraints and assumptions:***

None

***Beneficiary responsible for implementation:***

Associated beneficiary No. 25 (Sweden)

***Indicators of progress:***

Annual financial and progress reports

**ACTION M7-26(UK): Project management by United Kingdom (2009-2010)**

***Description (what, how, where and when):***

See above under "Action Group M7"

***Methods employed:***

See above under "Action Group M7"

***Expected results (quantitative information when possible):***

See above under "Action Group M7"

***Constraints and assumptions:***

None

***Beneficiary responsible for implementation:***

Associated beneficiary No. 26 (United Kingdom)

***Indicators of progress:***

Annual financial and progress reports

**ACTION M7-27(BB): Project management by Germany, Brandenburg (2009-2010)**

***Description (what, how, where and when):***

See above under "Action Group M7"

***Methods employed:***

See above under "Action Group M7"

***Expected results (quantitative information when possible):***

See above under "Action Group M7"

***Constraints and assumptions:***

None

***Beneficiary responsible for implementation:***

Associated beneficiary No. 27 (Germany. Brandenburg)

***Indicators of progress:***

Annual financial and progress reports

**ACTION M7-28(BW): Project management by Germany, Baden Württemberg (2009-2010)**

***Description (what, how, where and when):***

See above under "Action Group M7"

***Methods employed:***

See above under "Action Group M7"

***Expected results (quantitative information when possible):***

See above under "Action Group M7"

***Constraints and assumptions:***

None

***Beneficiary responsible for implementation:***

Associated beneficiary No. 28 (Germany, Baden Württemberg)

***Indicators of progress:***

Annual financial and progress reports

**ACTION M7-29(BY): Project management by Germany, Bayern (2009-2010)**

***Description (what, how, where and when):***

See above under "Action Group M7"

***Methods employed:***

See above under "Action Group M7"

***Expected results (quantitative information when possible):***

See above under "Action Group M7"

***Constraints and assumptions:***

None

***Beneficiary responsible for implementation:***

Associated beneficiary No. 29 (Germany, Bayern)

***Indicators of progress:***

Annual financial and progress reports

**ACTION M7-30(NWD): Project management by Germany, Northwest (2009-2010)**

***Description (what, how, where and when):***

See above under "Action Group M7"

***Methods employed:***

See above under "Action Group M7"

***Expected results (quantitative information when possible):***

See above under "Action Group M7"

***Constraints and assumptions:***

None

***Beneficiary responsible for implementation:***

Associated beneficiary No. 30 (Germany, Northwest)

***Indicators of progress:***

Annual financial and progress reports

**ACTION M7-31(MV): Project management by Germany, Mecklenburg-Vorpommern (2009-2010)**

***Description (what, how, where and when):***

See above under "Action Group M7"

***Methods employed:***

See above under "Action Group M7"

***Expected results (quantitative information when possible):***

See above under "Action Group M7"

***Constraints and assumptions:***

None

***Beneficiary responsible for implementation:***

Associated beneficiary No. 31 (Germany, Mecklenburg-Vorpommern)

***Indicators of progress:***

Annual financial and progress reports

**ACTION M7-32(NW): Project management by Germany, Nordrhein-Westfalen (2009-2010)**

***Description (what, how, where and when):***

See above under "Action Group M7"

***Methods employed:***

See above under "Action Group M7"

***Expected results (quantitative information when possible):***

See above under "Action Group M7"

***Constraints and assumptions:***

None

***Beneficiary responsible for implementation:***

Associated beneficiary No. 32 (Germany, Nordrhein-Westfalen)

***Indicators of progress:***

Annual financial and progress reports

**ACTION M7-33(RP): Project management by Germany, Rheinland-Pfalz (2009-2010)**

***Description (what, how, where and when):***

See above under "Action Group M7"

***Methods employed:***

See above under "Action Group M7"

***Expected results (quantitative information when possible):***

See above under "Action Group M7"

***Constraints and assumptions:***

None

***Beneficiary responsible for implementation:***

Associated beneficiary No. 33 (Germany, Rheinland-Pfalz)

***Indicators of progress:***

Annual financial and progress reports

**ACTION M7-34(SH): Project management by Germany, Schleswig-Holstein (2009-2010)**

***Description (what, how, where and when):***

See above under "Action Group M7"

***Methods employed:***

See above under "Action Group M7"

***Expected results (quantitative information when possible):***

See above under "Action Group M7"

***Constraints and assumptions:***

None

***Beneficiary responsible for implementation:***

Associated beneficiary No. 34 (Germany, Schleswig Holstein)

***Indicators of progress:***

Annual financial and progress reports



**ACTION M7-35(SL): Project management by Germany, Saarland(2009-2010)**

***Description (what, how, where and when):***

See above under "Action Group M7"

***Methods employed:***

See above under "Action Group M7"

***Expected results (quantitative information when possible):***

See above under "Action Group M7"

***Constraints and assumptions:***

None

***Beneficiary responsible for implementation:***

Associated beneficiary No. 35 (Germany, Saarland)

***Indicators of progress:***

Annual financial and progress reports

**ACTION M7-36(SN): Project management by Germany, Sachsen (2009-2010)**

***Description (what, how, where and when):***

See above under "Action Group M7"

***Methods employed:***

See above under "Action Group M7"

***Expected results (quantitative information when possible):***

See above under "Action Group M7"

***Constraints and assumptions:***

None

***Beneficiary responsible for implementation:***

Associated beneficiary No. 36 (Germany, Sachsen)

***Indicators of progress:***

Annual financial and progress reports

**ACTION M7-37(TH): Project management by Germany, Thüringen (2009-2010)**

***Description (what, how, where and when):***

See above under "Action Group M7"

***Methods employed:***

See above under "Action Group M7"

***Expected results (quantitative information when possible):***

See above under "Action Group M7"

***Constraints and assumptions:***

None

***Beneficiary responsible for implementation:***

Associated beneficiary No. 37 (Germany, Thüringen)

***Indicators of progress:***

Annual financial and progress reports

**ACTION M7-38(LV): Project management by Latvia (2009-2010)**

***Description (what, how, where and when):***

See above under "Action Group M7"

M7-38(LV) will be carried out on national budget. No co-financing will be required.

***Methods employed:***

See above under "Action Group M7"

***Expected results (quantitative information when possible):***

See above under "Action Group M7"

***Constraints and assumptions:***

None

***Beneficiary responsible for implementation:***

Associated beneficiary No. 38 (Latvia)

***Indicators of progress:***

Annual financial and progress reports

**ACTION GROUP M8: National dissemination of information (2009-2010)**

***Description and Methods***

The main stakeholders at international policy level are:

- Commission services, such as DG ENV, DG JRC including the European Forest Data Centre (EFDAC), DG AGRI, EUROSTAT
- Ministerial Conference for the protection of Forests in Europe (MCPFE)
- Food and Agriculture Organisation of the United Nations (FAO) including its Forest Resource assessments (FRA)
- UNECE Convention on Long-range Transboundary Air Pollution (CLRTAP)
- UNFCCC
- CBD – SEBI 2010

As concerns additional target audiences, the following groups can be identified:

a.) Scientific community: Additional contacts will be established mainly through IUFRO (International Union of Forest Research Organisations). This can happen through joint conferences (i.e. the invitation of external scientists and IUFRO coordinators to relevant FutMon meetings as well as the participation of experts active in FutMon at IUFRO conferences). FutMon results will be reported in IUFRO newsletters. Scientific publications will be produced in order to transfer information to the scientific community.

Contact to existing research networks will be reinforced such as the CarboEurope, NitroEurope, ALTER-Net and possible successor groups, Ilter, and others. Contacts can be easily established through FutMon experts that are already participating in these groups. Specifically the intensive monitoring sites are already today a basis for scientific experiments and additional monitoring activities carried out by other institutions such as universities. Through the above describes activities such “add-on” activities will be further stimulated to create a maximum of synergies that go beyond the project activities.

b.) NGOs. Non Governmental Organisations (NGOs) are important stakeholders at international and national levels, they have an important multiplier function. Relevant organisations will be identified within the project and will be specifically included in the mailing lists that will be compiled for press releases and reports.

c.) Forest Managers. Broad based and comprehensive forest information is a very relevant basis for sustainable forest management. Contacts to responsible forest managers will be established through the partners in different countries. In most cases the associated beneficiaries already maintain close contacts to forest managers. In some cases associated beneficiaries are even research institutes responsible for the development of sustainable forest management procedures. This facilitates a direct implementation of monitoring results into nature near forest management practices (e.g. taking into account updated knowledge on nutrient cycles, carbon storage, biodiversity and forest health and vitality)

d.) Grand Public. Press releases, layman's reports and website information are specific tools to spread monitoring results to interested people across Europe. This will be done and coordinated by the coordinating beneficiary. In addition, associated beneficiaries will be

responsible to disseminate results in their countries. Respective measures are described within action group M8.

A centrally coordinated information policy based on Actions M4-1(DE), M5-1(DE), M6-1(DE) is a main pillar of the public relations activities. It will, however, not substitute related activities in the participating countries. National reporting and provision of information will focus on items of specific national interest and make use of the existing links and contacts to policy makers, scientists, forest managers and the public in the specific countries. National information and reporting activities will make use of the European reports and publications but will utilize them in a specific national context and thus ensure increased impact and wider dissemination.

***Notice boards***

Forest Monitoring activities will cover large parts of forests in Europe. Whereas large scale plots, either based on existing Level I or National forest inventory plots are intentionally invisible to the public, intensive monitoring plots are easily recognized by visitors because of their equipment. Intensive monitoring plots within FutMon will be indicated by notice boards in the forest. These boards will carry the LIFE logo and will shortly explain the relevance of forest monitoring and the surveys ongoing on the plots.

***Expected results (quantitative information when possible):***

National reports, press releases, scientific publications, websites, notice boards

***Constraints and assumptions:***

National dissemination of results has to take into account different national peculiarities and responsibilities and will thus vary considerably between the participating countries. Translation of project material such as reports or web site texts may become necessary

***Indicators of progress:***

National reports, press releases, scientific publications, websites, notice boards published and implemented.

For indicators related to dissemination results see action M6.

In addition to these indicators and specifically related to stakeholders not participating in the project the following indicators are of specific relevance:

Number of layman's reports distributed to existing mailing lists and number of reports disseminated upon specific requests of interested persons or organisations.

Number of excursions, school class/university visits to monitoring plots organized by associated beneficiaries.

Number of international conferences and workshops where the project and its results have been presented by the coordinating beneficiary or any assigned associated beneficiary.

**ACTION M8-2(AT): National dissemination of information by Austria (2009-2010)**

***Description and Methods:***

See above under "Action Group M8"

***Expected results (quantitative information when possible):***

National reports, press releases, scientific publications, websites, notice boards.

During the run time of the project two extensive scientific reports (BFW-Berichte, ISSN 1013-0713) will be published and additionally periodical information for local forest authorities and stakeholders especially on results of passive sampling and deposition measurements will be provided. Once results of public interest are available they will be published in national media.

Planned activities are besides annual reports, the preparation of two more in-depth analysis, several folders for the information of general public, the preparation, installation and continuous up-dating of information boards on each intensive monitoring plot. Installation and continuous up-dating of a project homepage

***Constraints and assumptions:***

See above under "Action Group M8"

***Beneficiary responsible for implementation:***

Associated beneficiary No. 2 (Austria)

***Indicators of progress:***

National reports, press releases, scientific publications, websites, notice boards published and implemented

**ACTION M8-3(FL): National dissemination of information by Belgium-Flanders (2009-2010)**

***Description and Methods:***

See above under "Action Group M8"

***Expected results (quantitative information when possible):***

National reports, press releases, scientific publications, websites, notice boards.  
2 notice boards with information about the Life+ FutMon project will be installed in 2 basic plots (cost: 3000 €). A folder (300 copies) with information about set up and results of the FutMon project for the broad public will be produced and disseminated. 5 yearly progress reports (100 copies) of the project will be printed and disseminated (costs folder + progress reports: 2000 €)

***Constraints and assumptions:***

See above under "Action Group M8"

***Beneficiary responsible for implementation:***

Associated beneficiary No. 3 (Belgium-Flanders)

***Indicators of progress:***

National reports, press releases, scientific publications, websites, notice boards published and implemented

**ACTION M8-5(BU): National dissemination of information by Bulgaria (2009-2010)**

***Description and Methods:***

See above under "Action Group M8"

***Expected results (quantitative information when possible):***

National reports, press releases, scientific publications, websites, notice boards

***Constraints and assumptions:***

See above under "Action Group M8"

***Beneficiary responsible for implementation:***

Associated beneficiary No. 5 (Bulgaria)

***Indicators of progress:***

National reports, press releases, scientific publications, websites, notice boards published and implemented

**ACTION M8-6(CY): National dissemination of information by Cyprus (2009-2010)*****Description and Methods:***

See above under "Action Group M8"

***Expected results (quantitative information when possible):***

National reports, press releases, scientific publications, websites, notice boards.

The results will be disseminated to the Cyprus Forestry College and Environment Service through meetings and discussions. Notice boards will be established in the area of plots and a national report will be disseminated by the end of the project.

***Constraints and assumptions:***

See above under "Action Group M8"

***Beneficiary responsible for implementation:***

Associated beneficiary No. 6 (Cyprus)

***Indicators of progress:***

National reports, press releases, scientific publications, websites, notice boards published and implemented

**ACTION M8-7(CZ): National dissemination of information by Czech Republic (2009-2010)*****Description and Methods:***

See above under "Action Group M8"

***Expected results (quantitative information when possible):***

National reports, press releases, scientific publications, websites, notice boards.

Professional circles, decision makers and also general public in the Czech Republic are highly interested in the state of forests. Preparation of the project and selection of the plots were closely bind on the National Forestry Programme and the results of the Ministerial Conferences on the Protection of Forests. **Results** of the monitoring activities should be, together with the data for the national database, presented also in the "national annual report", in printed and digital version. The report will be summarised in each year of the project (2009-2010, i.e. 5 yearly reports), in the Czech and English version. Detailed results of monitoring within the LIFE+ programm will be presented. It is not aimed to dissemination of already existing activities. Furthermore, the aggregated data will be accessible on web pages and published in national journals.

***Constraints and assumptions:***

See above under "Action Group M8"

***Beneficiary responsible for implementation:***

Associated beneficiary No. 7 (Czech Republic)

***Indicators of progress:***

National reports, press releases, scientific publications, websites, notice boards published and implemented

**ACTION M8-8(DK): National dissemination of information by Denmark (2009-2010)*****Description and Methods:***

Results and lessons of the project will be disseminated to relevant stake holders, public target groups and the scientific community by meetings, oral presentations, and by publication of results in popular and scientific journals. The project will be an integrated part of the Danish National Forest Monitoring (NFI) programme and as such be communicated along with other results of the NFI.

***Expected results (quantitative information when possible):***

National reports, press releases, scientific publications, websites, notice boards.

New results and lessons of the FutMon project will be disseminated to relevant stake holders, public target groups and the scientific community by meetings, oral presentations, and by

publication of results in popular and scientific journals. The project will be an integrated part of the Danish National Forest Monitoring (NFI) programme and as such be communicated along with other results of the NFI. These publications are not already paid for, nor will the reporting substitute reporting already taking place.

Number of national reports: 3

***Constraints and assumptions:***

See above under "Action Group M8"

***Beneficiary responsible for implementation:***

Associated beneficiary No. 8 (Denmark)

***Indicators of progress:***

National reports, press releases, scientific publications, websites, notice boards published and implemented

**ACTION M8-9(EE): National dissemination of information by Estonia (2009-2010)**

***Description and Methods:***

See above under "Action Group M8"

***Expected results (quantitative information when possible):***

National reports, press releases, scientific publications, websites, notice boards.

In Estonia the action group M8 include dissemination of information about the activities, results and data in an attractive and user friendly way via internet site and information boards in the forest. No funds are planned for activities in place.

***Constraints and assumptions:***

See above under "Action Group M8"

***Beneficiary responsible for implementation:***

Associated beneficiary No. 9 (Estonia)

***Indicators of progress:***

National reports, press releases, scientific publications, websites, notice boards published and implemented

**ACTION M8-10(FI): National dissemination of information by Finland (2009-2010)**

***Description and Methods:***

See above under "Action Group M8"

***Expected results (quantitative information when possible):***

National reports, press releases, scientific publications, websites, notice boards.

National dissemination of the FutMon results aims at fulfilling both national and international information requirements. National needs include e.g. information about forest resources (forest area and annual increment and fellings), while international needs include information about carbon fluxes and biodiversity status. To target the right audience, Finland will use the channels already established during the Forest Focus programme, as well as new channels, e.g. both higher education institutions (science and applied science universities) and schools. The results will be reported annually as technical national reports published in electronic format on the homepage of the Finnish Forest Research Institute (Metla). Mid-term and final reports will be published as hard copies. The results will also be published via layman-style fliers distributed to national and local policy makers, forestry institutions, relevant departments in universities, teachers' unions and the media (including the national news agency). In order to fulfil the international information needs the results will be delivered in the appropriate format to the bodies responsible for the reporting (e.g. Kyoto, CBD, Habitats directive etc.).

***Constraints and assumptions:***

See above under "Action Group M8"

***Beneficiary responsible for implementation:***

Associated beneficiary No. 10 (Finland)

***Indicators of progress:***

National reports, press releases, scientific publications, websites, notice boards published and implemented

**ACTION M8-11(FR): National dissemination of information by France (2009-2010)**

***Description and Methods:***

See above under "Action Group M8": The French intensive forest monitoring network uses to publish the results of the projects in his own series called "RENECOFOR", with a minimum of 800-1000 copies for each report. These reports are sent to all French stakeholders, i.e. representatives of the ministries of environment and agriculture, private and public forest managers, representatives of the European Union within DG Environment, JRC and the representatives of forest or environmental monitoring in the different EU countries. All together a minimum of 800 persons get these reports. The pdf versions will also be available on the web site of the network and of the coordinating beneficiary. Thus the results reach a high number of persons working at different levels in administrations, management and research. Of course, the French data transmitted to the co-ordinating beneficiary will be used for European wide data analysis and will thus be part of the project reports. The results of the large scale monitoring will be published and disseminated by the French National Forest Inventory to all its stakeholders, which are private and public forest managers, forest administration, NGOs etc. and will equally be part of the European data analysis and reporting within this project.

***Expected results (quantitative information when possible):***

National reports, press releases, scientific publications, websites, notice boards

***Constraints and assumptions:***

See above under "Action Group M8"

***Beneficiary responsible for implementation:***

Associated beneficiary No. 11 (France)

***Indicators of progress:***

National reports, press releases, scientific publications, websites, notice boards published and implemented

**ACTION M8-12(GR): National dissemination of information by Greece (2009-2010)**

***Description and Methods:***

See above under "Action Group M8". Also there will be publications to international and national journals, presentations to conferences and workshops and some concluded results will be available on the internet.

***Expected results (quantitative information when possible):***

National reports, press releases, scientific publications, websites, notice boards.

The dissemination expenses include the production of annual reports as well as the production of an illustrated book and CD containing the final results and conclusions of the project. Reports, Cds and books will be handed out to Universities and Forest Services. Also, workshops will take place in order to explain and clarify the results to services, laypeople and press.

***Constraints and assumptions:***

See above under "Action Group M8"

***Beneficiary responsible for implementation:***

Associated beneficiary No. 12 (Greece)

***Indicators of progress:***

National reports, press releases, scientific publications, websites, notice boards published and implemented

**ACTION M8-13(HU): National dissemination of information by Hungaria (2009-2010)**

***Description and Methods:***

See above under "Action Group M8"

***Expected results (quantitative information when possible):***

National reports, press releases, scientific publications, websites, notice boards

***Constraints and assumptions:***

See above under "Action Group M8"

***Beneficiary responsible for implementation:***

Associated beneficiary No. 13 (Hungaria)

***Indicators of progress:***

National reports, press releases, scientific publications, websites, notice boards published and implemented

**ACTION M8-14(IE): National dissemination of information by Ireland (2009-2010)**

***Description and Methods:***

See above under "Action Group M8"

***Expected results (quantitative information when possible):***

National reports, press releases, scientific publications, websites, notice boards.

The Irish Forest Service uses the National Council for Forestry Research and Development (COFORD) to publish the results of all projects that they participate in through their publishing series called 'COFORD Connects'. These are available free of charge electronically through their website [www.COFORD.ie] to all Irish Stakeholders, i.e. representatives of Ministries of Environment and Agriculture, private and public forest managers, universities, research institutes and professional organisations, such as, the Society of Irish Foresters. The use of electronic means for the dissemination of research findings, facilitates the reduction of costs. It is expected that there will be at least two COFORD Connect publications through the life time of the project and an annual summary report of monitoring activities and initial findings every year. COFORD is an agency funded solely by the Irish National Development Fund.

***Constraints and assumptions:***

See above under "Action Group M8"

***Beneficiary responsible for implementation:***

Associated beneficiary No. 14 (Ireland)

***Indicators of progress:***

National reports, press releases, scientific publications, websites, notice boards published and implemented

**ACTION M8-15(IT): National dissemination of information by Italy (2009-2010)**

***Description and Methods:***

See above under "Action Group M8"

***Expected results (quantitative information when possible):***

National reports, press releases, scientific publications, websites, notice boards.

An internet platform will be created to provide important public information. It will contain all information on project set up, design and implementation, main results and publications, links to partners and cooperating institutions, upcoming meetings and events as well as contact details in a user friendly way. The website will be regularly updated and will display the LIFE+ logo. The website will have a public area which is open to internet users without using a password. A password protected zone will give access to online data submission modules and will offer the possibility for internal project communication.



Two small brochures (1-4 pages) will be produced, in English and Italian languages, the first at the project start and the second at his end, aiming at providing information on the main structure, aims (1<sup>st</sup> brochure) and results (2<sup>nd</sup> brochure) of the project. The LIFE+ logo will appear on the brochures.

A dedicated short film will be produced, in English and Italian languages, including a fiction part and a technical part, aiming at raising awareness of the general public on the relevance and main themes of the project. The film (duration of ca. 20 minutes) will be distributed on DVD (ca. 5.000 copies). The LIFE+ logo will appear on the DVD covers.

A final public Conference will be organised, at both technical and layman's level, aiming at presenting main results of the project. The Conference will be attended by National and International stakeholders and the public. The LIFE+ logo will appear on all Conference documents.

Press releases are necessary to attract the media. Press releases will be issued at least annually in a coordinated action by the Coordinating Beneficiary.

Articles in scientific journals are the most important communication media in the research word. Peer-reviews and discussions with the scientific community will help to improve the scientific quality of the results and hence increase its acceptance and political relevance. Articles will be within the responsibility of the authors, but the project coordination will ensure the dissemination within the project partners. Publications in scientific journals will acknowledge the Community financial support.

National reporting and provision of information will focus on items of specific National interest and make use of the existing links and contacts to policy makers, scientists, forest managers and the public in the specific countries. National information and reporting activities will make use of the project reports and publications but will utilize them in a specific national context and thus ensure increased impact and wider dissemination.

Monitoring activities will cover large parts of forests in Italy. Whereas large scale plots, either based on existing Level I or National forest inventory plots, are intentionally invisible to the public, intensive monitoring Level II, IM and LTER sites are easily recognized by visitors because of their equipment. Intensive monitoring sites within FutMon will be indicated by notice boards in the forest. These boards will carry the LIFE+ logo and will shortly explain the relevance of forest monitoring and the surveys ongoing on the plots.

*Reasons why this action is necessary*

Raising the public awareness on the importance to monitor and to protect forest biodiversity is a pre-requisite to increase the possibilities for building effective policies for biodiversity conservation at EU level.

*Expected results*

National reports, press releases, scientific publications, websites, notice boards.

***Constraints and assumptions:***

See above under "Action Group M8"

***Beneficiary responsible for implementation:***

Associated beneficiary No. 15 (Italy)

***Indicators of progress:***

National reports, press releases, scientific publications, websites, notice boards published and implemented

**ACTION M8-16(LT): National dissemination of information by Lithuania (2009-2010)**

***Description and Methods:***

See above under "Action Group M8"

M8-16(LT) will be carried out on national budget. No co-financing will be required.

***Expected results (quantitative information when possible):***

## **LIFE+ Environment Policy and Governance 2007- C1/42**

National reports, press releases, scientific publications, websites, notice boards

### ***Constraints and assumptions:***

See above under "Action Group M8"

### ***Beneficiary responsible for implementation:***

Associated beneficiary No. 16 (Lithuania)

### ***Indicators of progress:***

National reports, press releases, scientific publications, websites, notice boards published and implemented

## **ACTION M8-17(NL): National dissemination of information by Netherlands (2009-2010)**

### ***Description and Methods:***

See above under "Action Group M8"

### ***Expected results (quantitative information when possible):***

National reports, press releases, scientific publications, websites, notice boards.

National dissemination activities consist of publication of a report and presentation of results for specialists and government. Data are made available through the database.

The results of the FutMon project will result in a separate report, which will be made available for all European users. Data will be added to the existing database.

### ***Constraints and assumptions:***

See above under "Action Group M8"

### ***Beneficiary responsible for implementation:***

Associated beneficiary No. 17 (Netherlands)

### ***Indicators of progress:***

National reports, press releases, scientific publications, websites, notice boards published and implemented

## **ACTION M8-18(PL): National dissemination of information by Poland (2009-2010)**

### ***Description and Methods:***

See above under "Action Group M8"

### ***Expected results (quantitative information when possible):***

National reports, press releases, scientific publications, websites, notice boards.

National reports are expected to have ca. 250 pages and 200 copies each year. Reports will be disseminated across forest service institutions, both central and regional, environmental protection agencies – also of regional and central level, the Ministry of Environment, scientific institutions – universities and research institutes and general public through NGO and press.

### ***Constraints and assumptions:***

See above under "Action Group M8"

### ***Beneficiary responsible for implementation:***

Associated beneficiary No. 18 (Poland)

### ***Indicators of progress:***

National reports, press releases, scientific publications, websites, notice boards published and implemented

## **ACTION M8-20(RO): National dissemination of information by Romania (2009-2010)**

### ***Description and Methods:***

See above under "Action Group M8"

### ***Expected results (quantitative information when possible):***

National reports, press releases, scientific publications, websites, notice boards.

National dissemination of the monitoring activities is mainly assured by reports sent to the Ministry of Agriculture and Rural Development, Ministry of Environment, Romanian Statistics Institute, Forest Administrations; results are included, in accordance with Forestry and Environmental Laws, Forest Monitoring Special Law, in annual reports "Forest Condition in Romania", "Environmental Condition in Romania", "Annual Statistic Reports" etc. These reports are submitted for informing, analyzing and approving by the Romanian Government. In addition, the dissemination of these activities is made available on internet, during scientific workshops, training courses, mass-media, special issues in Revue of Forests and Annals of Forest Research Institute.

***Constraints and assumptions:***

See above under "Action Group M8"

***Beneficiary responsible for implementation:***

Associated beneficiary No. 20 (Romania)

***Indicators of progress:***

National reports, press releases, scientific publications, websites, notice boards published and implemented

**ACTION M8-21(SK): National dissemination of information by Slovakia (2009-2010)**

***Description and Methods:***

See above under "Action Group M8"

***Expected results (quantitative information when possible):***

National reports, press releases, scientific publications, websites, notice boards.

Annual national reports will be published every year during the run time of the project. The reports will be distributed to all relevant stakeholders and institutions related to forestry and environment (Forests of Slovak republic, Ministry of agriculture of SR, Ministry of environment of SR, National Park's and Protected Landscape Area's Services, Technical University Zvolen, Slovak Agricultural University, Association of the private forest owners etc.

Booklets with description of goals and main results of the project will be available to public e.g. at "Forestry Days", in the "Forestry open air museum".

Adequate information including the full text reports will be on the web page of the associated beneficiary.

***Constraints and assumptions:***

See above under "Action Group M8"

***Beneficiary responsible for implementation:***

Associated beneficiary No. 21 (Slovakia)

***Indicators of progress:***

National reports, press releases, scientific publications, websites, notice boards published and implemented

**ACTION M8-22(SI): National dissemination of information by Slovenia (2009-2010)**

***Description and Methods:***

See above under "Action Group M8"

***Expected results (quantitative information when possible):***

National reports, press releases, scientific publications, websites, notice boards.

The project is not intended to cover any costs regarding national reporting already in place. The expenses cover only the costs of reporting of the FutMon.

***Constraints and assumptions:***

See above under "Action Group M8"

***Beneficiary responsible for implementation:***

Associated beneficiary No. 22 (Slovenia)

***Indicators of progress:***

National reports, press releases, scientific publications, websites, notice boards published and implemented

**ACTION M8-23(ES): National dissemination of information by Spain (2009-2010)**

***Description and Methods:***

The target audience for project results are persons and/or organisations interested in the information generated at national level:

- Spanish Ministry of Environment and the different Organisms depending from it (as General Directorate for biodiversity)
- Forestry Schools in National Universities in all regions in Spain
- Research institutes: public (as national Institute for Agrarian Research – INIA) and private Autonomous region governments in Spain (through their Forest and Environment related departments)
- Educational public and private institutions
- Private researchers
- Public interested in general

The results of the project will be disseminated afterwards and the reports sent on a regular basis to Autonomous region governments in Spain (through their Forest and Environment related departments), Forestry Schools in National Universities in all regions in Spain and Research Institutes. Results and reports would also be made available, under request, to any person or organism that could be interested and could make use of the generated information. The activities currently carried out in Spain have their own information requirements and procedures. The dissemination of the information regarding all these activities (all forest health related activities) at a national level is automatically carried out on a regular basis (annual report) to: Public Administration Organisms (State and Regional governments), Forestry Schools, Research Institutes, and under request, to private researchers and public interested in general. Additionally, the information is also made available and regularly updated in the web page of the Ministry.

After the approval of FutMon, as the activities foreseen under Futmon are independent and different in structure to the ones currently carried out in Spain, we can assure you that we do not plan to stop this annual dissemination of information procedures about general activities at national level and we do not plan to substitute them for the FutMon reports. On the contrary, another FutMon specific annual report would be developed and disseminated to the same organisms than the general national report and also on an annual basis. In addition, a specific text concerning Futmon would be also included (and regularly updated) in the Ministry web page.

***Expected results (quantitative information when possible):***

National reports, press releases, scientific publications, websites, notice boards

***Constraints and assumptions:***

See above under “Action Group M8”

***Beneficiary responsible for implementation:***

Associated beneficiary No. 23 (Spain)

***Indicators of progress:***

National reports, press releases, scientific publications, websites, notice boards published and implemented

**ACTION M8-24(ES): National dissemination of information by Spain, CEAM (2009-2010)*****Description and Methods:***

See above under "Action Group M8". The Action M8-24(ES) will assist to Action M8-23(ES) in disseminating results in Spain, i.e. use the existing contacts and links of CEAM for public relations.

***Expected results (quantitative information when possible):***

National reports, press releases, scientific publications, websites, notice boards.

The labour of CEAM regarding the dissemination of information about FutMon would be the assistance to Action M8-23 (ES) in disseminating results in Spain, i.e. use the existing contacts and links of CEAM for public relations.

***Constraints and assumptions:***

See above under "Action Group M8"

***Beneficiary responsible for implementation:***

Associated beneficiary No. 24 (Spain, CEAM)

***Indicators of progress:***

National reports, press releases, scientific publications, websites, notice boards published and implemented

**ACTION M8-25(SE): National dissemination of information by Sweden (2009-2010)*****Description and Methods:***

See above under "Action Group M8"

M8-25(SE) will be carried out on national budget. No co-financing will be required.

***Expected results (quantitative information when possible):***

National reports, press releases, scientific publications, websites, notice boards. Meetings will also be arranged with main stakeholders, mainly the Swedish Forest Agency and the Swedish Environmental Protection Agency.

New results and lessons of the FutMon project will be disseminated to relevant stake holders, public target groups and the scientific community by meetings, workshops, oral presentations, and by publication of results in popular and scientific journals. The project will be an integrated part of the Swedish University of Agricultural sciences (SLU) and the Swedish National Forest Monitoring (NFI) programme and as such be communicated along with other results of SLU and NFI. These publications are not already paid for, nor will the reporting substitute reporting already taking place.

Number of national reports: 3

***Constraints and assumptions:***

See above under "Action Group M8"

***Beneficiary responsible for implementation:***

Associated beneficiary No. 25 (Sweden)

***Indicators of progress:***

National reports, press releases, scientific publications, websites, notice boards published and implemented

**ACTION M8-26(UK): National dissemination of information by United Kingdom (2009-2010)*****Description and Methods:***

See above under "Action Group M8"

***Expected results (quantitative information when possible):***

National reports, press releases, scientific publications, websites, notice boards

***Constraints and assumptions:***

See above under "Action Group M8"

***Beneficiary responsible for implementation:***

Associated beneficiary No. 26 (United Kingdom)

***Indicators of progress:***

National reports, press releases, scientific publications, websites, notice boards published and implemented

**ACTION M8-27(BB): National dissemination of information by Germany, Brandenburg (2009-2010)**

***Description and Methods:***

See above under "Action Group M8"

***Expected results (quantitative information when possible):***

National reports, press releases, scientific publications, websites, notice boards

***Constraints and assumptions:***

See above under "Action Group M8"

***Beneficiary responsible for implementation:***

Associated beneficiary No. 27 (Germany, Brandenburg)

***Indicators of progress:***

National reports, press releases, scientific publications, websites, notice boards published and implemented

**ACTION M8-28(BW): National dissemination of information by Germany, Baden Württemberg (2009-2010)**

***Description and Methods:***

See above under "Action Group M8"

***Expected results (quantitative information when possible):***

National reports, press releases, scientific publications, websites, notice boards.

Editing and layout as well as printing of designed flyers and presentation boards for the local use at 10 plot areas (The media are specifically edited to the LIFE+ project presentation see Form F7, financial forms).

***Constraints and assumptions:***

See above under "Action Group M8"

***Beneficiary responsible for implementation:***

Associated beneficiary No. 28 (Germany, Baden Württemberg)

***Indicators of progress:***

National reports, press releases, scientific publications, websites, notice boards published and implemented

**ACTION M8-29(BY): National dissemination of information by Germany, Bayern (2009-2010)**

***Description and Methods:***

See above under "Action Group M8"

***Expected results (quantitative information when possible):***

National reports, press releases, scientific publications, websites, notice boards

***Constraints and assumptions:***

See above under "Action Group M8"

***Beneficiary responsible for implementation:***

Associated beneficiary No. 29 (Germany, Bayern)

***Indicators of progress:***

National reports, press releases, scientific publications, websites, notice boards published and implemented

**ACTION M8-30(NWD): National dissemination of information by Germany, Northwest (2009-2010)**

**Description and Methods:**

See above under "Action Group M8"

Following target groups will be informed of the project results:

Hessisches Ministerium für Umwelt ländlichen Raum und Verbraucherschutz, Niedersächsisches Ministerium für Ernährung, Landwirtschaft, Verbraucherschutz und Landesentwicklung, Ministerium für Landwirtschaft und Umwelt Sachsen-Anhalt. (Forests administrations, Hessen Forst, Niedersächsische Landesforsten und Landesforstbetrieb Sachsen-Anhalt (Forest holdings) and NGOs, the interested public, special branches of sciences.

**Expected results (quantitative information when possible):**

National report: FutMon Northwest-Germany (scientific publications, website for demonstration project D1, notice boards

**Constraints and assumptions:**

See above under "Action Group M8"

**Beneficiary responsible for implementation:**

Associated beneficiary No. 30 (Germany, Northwest)

**Indicators of progress:**

2 National reports, scientific publications, website, notice boards published and implemented

**ACTION M8-31(MV): National dissemination of information by Germany, Mecklenburg-Vorpommern (2009-2010)**

***Description and Methods:***

See above under "Action Group M8"

***Expected results (quantitative information when possible):***

National reports, press releases, scientific publications, websites, notice boards.

A specific brochure will be created in order to inform the public and interested experts. All years 2009 – 2010 will be covered.

***Constraints and assumptions:***

See above under "Action Group M8"

***Beneficiary responsible for implementation:***

Associated beneficiary No. 31 (Germany, Mecklenburg-Vorpommern)

***Indicators of progress:***

National reports, press releases, scientific publications, websites, notice boards published and implemented

**ACTION M8-32(NW): National dissemination of information by Germany, Nordrhein-Westfalen (2009-2010)**

***Description and Methods:***

See above under "Action Group M8"

The detailed scientific results of FutMon actions will be processed to more general understandable reports, press releases, website inputs. In addition scientific report will be written in order to

- advise and support the state government, forest administration and nature conservation agencies of Northrhine-Westfalia
- keep the public informed
- furnish expertises to support effective legislature for sustained forest production and protection of nature variety of landscape
- conceive climatic consequences strategies.

The reporting activities aim at specifically highlighting forest condition and environmental burden in Northrhine-Westfalia in the context of European and national findings.

***Expected results (quantitative information when possible):***

National reports, press releases, scientific publications, websites, notice boards

To keep the public in Northrhine-Westfalia informed it is intended to publish the programme, the benefits and the expected results of FutMon. For this purpose illustrated brochures will be printed, excursions e.g. school classes, journalists, foresters, politicians will be organized several times and specific internet presentation shall be designed. These dissemination activities will be carried out by LANUV NRW in addition to the standard activities planned without FutMon.

***Constraints and assumptions:***

See above under "Action Group M8"

***Beneficiary responsible for implementation:***

Associated beneficiary No. 32 (Germany, Nordrhein-Westfalen)

***Indicators of progress:***

National reports, press releases, scientific publications, websites, notice boards published and implemented

**ACTION M8-33(RP): National dissemination of information by Germany, Rheinland-Pfalz (2009-2010)**

***Description and Methods:***

See above under "Action Group M8"

***Expected results (quantitative information when possible):***

National reports, press releases, scientific publications, websites, notice boards.

The findings of the project will be a basis for policy consulting and for the development of strategies of forest management via reports and annual informative meetings in the State Ministry for the Environment. Besides, the level II plots are used intensively for excursions in order to vividly inform amateurs, experts, local foresters and media representatives about the themes concerning forest ecology, atmospheric pollution, climate change, and biodiversity.

***Constraints and assumptions:***

See above under "Action Group M8"

***Beneficiary responsible for implementation:***

Associated beneficiary No. 33 (Germany, Rheinland-Pfalz)

***Indicators of progress:***

National reports, press releases, scientific publications, websites, notice boards published and implemented



**ACTION M8-34(SH): National dissemination of information by Germany, Schleswig Holstein (2009-2010)**

***Description and Methods:***

See above under "Action Group M8"

M8-34(SH) will be carried out on national budget. No co-financing will be required.

***Expected results (quantitative information when possible):***

National reports, press releases, scientific publications, websites, notice boards

***Constraints and assumptions:***

See above under "Action Group M8"

***Beneficiary responsible for implementation:***

Associated beneficiary No. 34 (Germany, Schleswig Holstein)

***Indicators of progress:***

National reports, press releases, scientific publications, websites, notice boards published and implemented

**ACTION M8-35(SL): National dissemination of information by Germany, Saarland (2009-2010)**

***Description and Methods:***

See above under "Action Group M8".

Notice boards will be displayed on selected plots to provide information to the public on the activities carried out. The conducted studies will be presented on the official web site of the authority. Results of the activities will be lectured and reported.

***Expected results (quantitative information when possible):***

National reports, press releases, scientific publications, websites, notice boards.

Notice boards will be displayed on selected plots to provide information to the public on the activities carried out. The studies will be presented on the official web site of the authority. Results will be lectured and reported. Reports are sent to stakeholders and representatives of environmental authorities, forest administrations, forest owners and managers. Results will be published in the annual report on forest condition. )

***Constraints and assumptions:***

See above under "Action Group M8"

***Beneficiary responsible for implementation:***

Associated beneficiary No. 35 (Germany, Saarland)

***Indicators of progress:***

National reports, press releases, scientific publications, websites, notice boards published and implemented

**ACTION M8-36(SN): National dissemination of information by Germany, Sachsen (2009-2010)**

***Description and Methods:***

The reporting and provision of information will focus on items of specific regional interest and make use of the existing links and contacts to policy makers, scientists, forest managers and the public of Saxony (Germany). Information and reporting activities in Saxony (Germany) will make use of the European reports and publications and will utilize them in a specific regional context and thus ensure increased impact and wider dissemination.

***Expected results (quantitative information when possible):***

National reports, press releases, scientific publications, websites, notice boards

***Constraints and assumptions:***

See above under "Action Group M8"

***Beneficiary responsible for implementation:***

Associated beneficiary No. 36 (Germany, Sachsen)

***Indicators of progress:***

National reports, press releases, scientific publications, websites, notice boards published and implemented

**ACTION M8-37(TH): National dissemination of information by Germany, Thüringen (2009-2010)**

***Description and Methods:***

The results of the project will be presented to the following persons and institutions:

- Forest authorities
- Environmental protection authorities of Thuringia (district administration offices, Ministries...)
- Politicians / political parties
- Federations
- Universities, professional schools
- grand public

Results will be presented in the form of presentations, reports and meetings.

***Expected results (quantitative information when possible):***

National reports, press releases, scientific publications, websites, notice boards.

description notice board for each plot

guided tour for schools or publicity

special website content with detailed information and reporting for each plot

press releases

national reports as part of an national Germany report

scientific publications

***Constraints and assumptions:***

See above under "Action Group M8"

***Beneficiary responsible for implementation:***

Associated beneficiary No. 37 (Germany, Thüringen)

***Indicators of progress:***

National reports, press releases, scientific publications, websites, notice boards published and implemented

**ACTION M8-38(LV): National dissemination of information by Latvia (2009-2010)**

***Description and Methods:***

See above under "Action Group M8"

***Expected results (quantitative information when possible):***

National reports, press releases, scientific publications, websites, notice boards.

20 days are planned in this position for report writing involving one person during all project time

***Constraints and assumptions:***

See above under "Action Group M8"

***Beneficiary responsible for implementation:***

Associated beneficiary No. 38 (Latvia)

***Indicators of progress:***

National reports, press releases, scientific publications, websites, notice boards published and implemented

**ACTION A1-1(DE): Analysis of data , evaluation of preparatory project phase (2009-2010)*****Description (what, how, where and when):***

Under this action the large-scale data assessed in Action Group L2 and the intensive monitoring data assessed in Action Groups D1, D2, D3 as well as in IM1 will be analysed. These analyses pursue both methodological and scientific aims. Under methodological aspects the results of the analyses will be the basis for the selection of the intensive monitoring core plots. These will include parameter lists and descriptions of assessment and evaluation techniques, also for the calculation of water budgets and for up-scaling of the results from the ecosystem scale to the large scale.

The focus of the scientific analyses will be on forest health and forest biodiversity in relation to environmental factors, in particular air pollution and climate change. The results of the analyses conducted by 2011 will aim at providing information of relevance for the thematic reports on the priority topics "Climate change and forests", "Air pollution and forests", and "Biodiversity and forests" to be published by EC by 2012.

***Methods employed:***

Forest health will be analysed as reflected by tree condition at the large scale as well as at the ecosystem scale. The monitoring attributes analysed will besides tree crown condition involve partly also growth and volume as well as newly developed health indicators including carbon allocation in trees. Forest health, forest growth, carbon allocation and biodiversity will be analysed in relation to a multitude of biotic and abiotic factors including climatic influences, insects and fungi, forest soil condition, ambient air quality and depositions of air pollutants. More specifically, the main analyses will be:

- Analyses of spatial and temporal trends in the deposition of acidity and nitrogen;
- Comparisons of measured deposition data with respective data calculated by models;
- Assessments of cause-effect relationships between depositions and damage symptoms;
- Analyses of forest growth under the influence of deposition and climate;
- Comparison of the status of forest soils and vegetation with site specific critical limits;
- Calculation of critical loads for acidity and nitrogen;
- Calculation of exceedances of critical loads as a basis for risk assessments;
- Studies of relationships between critical load exceedances and forest ecosystem response;
- Prediction of the response of forest ecosystems to clean air politics.

These analyses will be conducted applying standard statistical procedures, mass-balance models, dynamic models as well as the usual visualisation techniques like graphs and maps. Not necessarily all analyses will be conducted solely by the coordinating beneficiary. The coordinating beneficiary will strive for syntheses of his own results with those obtained by associated beneficiaries.

Reports will take into account findings from earlier forest monitoring activities. The final reports will provide a holistic view of forest health, forest biodiversity, and the impact of climate change and air pollution because they are supposed to provide scientific information politically relevant to EC. The holistic view requires an interpretation of the new results in relation to those results already obtained in the course of previous forest monitoring.

***Expected results (quantitative information when possible):***

The results to be expected from the data analyses will be policy relevant information on forest health, forest growth, carbon sequestration and forest biodiversity under a multitude of biotic and abiotic influences, such as weather, insects, fungi, forest soil condition, ambient air quality and depositions. More specifically, these results will refer to

- Tree condition at the European-wide and at the forest ecosystem scale;
- Forest soil condition at the European-wide scale and at the forest ecosystem scale;
- Spatial and temporal trends in depositions of acidity and nitrogen;
- Critical loads and their exceedances for acidity and nitrogen;
- Cause-effect relationships between forest health, forest growth and biodiversity as response variables, and air pollution, weather conditions, biotic stressors, soil condition, water availability and drought stress as explanatory variables;
- Predictions of forest ecosystem response to clean air politics.

The results of scientific analyses will be laid down in technical and scientific reports to be submitted to the Commission and other stakeholders (see below).

### ***Constraints and assumptions:***

The full range of data analyses can only be conducted if the harmonised data needed for this purpose will be delivered by all beneficiaries, and if all beneficiaries participate in the procedures on data quality assurance and conduct the respective assessments in their countries. Whilst the falling out of an organiser of QA procedures may be compensated by the empowerment of a new one, the withdrawal of a beneficiary from its participation in the monitoring could not be compensated. A reason for such a withdrawal by a beneficiary could theoretically be changing national priorities and respective budgetary cuts prior to the launch of the project. However, given the current engagement of all beneficiaries, and given the benefits to be expected from the project not only at the international but also at the national level, it is unlikely that beneficiaries will cancel their participation in the monitoring. Should this occur in exceptional cases, the resulting loss of data could hardly jeopardise the success of the project as a whole. Several risks are posed by natural hazards. For instance, fire, storm, hail, snow and ice can destroy the forest stands or the monitoring equipment on the plots. Such extreme events, however, are unlikely to occur at many sites at the same time. Consequently, whilst severe damage to trees and equipment must be taken into account, the success of the project as a whole will not be endangered.

### ***Beneficiary responsible for implementation:***

The beneficiary responsible for the data analyses and the evaluation of the preparatory project phase will be the Coordinating Beneficiary.

### ***Indicators of progress:***

The indicators of progress will be the availability of the following reports:

Technical Report A-D3-10

Evaluation of demonstration action "Water budgets" until end 2010, assistance by C1-Met-29(BY), Includes description of evaluation techniques to be performed and parameter lists to be assessed on future core plots (2011-13). Includes parameter lists to be assessed on FutMon large scale plots in 2011-13 in order to upscale results

Technical Report A-IM1-11

Includes selection guidelines for core plots until April 2011 and description of a limited number of additional and easily assessable parameters necessary for upscaling of key processes

evaluated on Intensive Monitoring Plots. These parameters will be defined based on the evaluation of the demonstration actions on Level II.

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Scientific Report S-final-10

Final report including main aspects of forest health, impacts of air pollution on forest ecosystems and their biodiversity, relationships forests and climate.

**ACTION GROUP L1: Creation of large scale representative monitoring grid (2009-2010)**

***Description:***

Up until the end of 2010, all partners will revise their current national monitoring systems aiming at maximising synergies between Level I and existing National Forest Inventories (NFIs). This revision is likely to be different in the individual countries. The Action Group aims at creating a basis for the future EU level provision of harmonised information on core forest variables from coordinated national monitoring systems.

A certain number of plots – most probably a subset of plots from the national monitoring systems – will be selected for the purposes of the FutMon project. These plots will be called “FutMon large-scale plots”. The number of these plots will correspond to the forest area of each country in km<sup>2</sup> divided by 256. Plot selection will be based on a random selection procedure. Priority will be given firstly to maximum co-incidence with plots of NFIs, secondly to the continuation of BioSoil/existing Level I plots. Ideally, the FutMon large scale plots will be a subset of NFI plots. Plot selection in each country is under national responsibility.

***Methods employed:***

In a number of countries the existing national monitoring systems have already been revised. These countries will only have an advisory role in Action Group L1, and will submit the coordinates of their FutMon large-scale plots in the course of the respective L2 Actions. Countries that still need to revise their national monitoring grids will carry out the L1 Action. National activities in this respect include a decision making process and development work based on current plot information from different grids. Countries will participate in an Expert Meeting where transnationally relevant guidelines will be elaborated. The Action C1-HarmonLS-40(IT) will support this process. At the end of the L1 Actions, FutMon large-scale plots will be selected in each country and their coordinates be submitted to the Coordinating Beneficiary.

***Constraints and assumptions***

In this work, countries will start from different positions depending on their history of conducting NFIs and the Level I inventory under Forest Focus. Those countries that already revised their national monitoring grids – with regard to Level I and NFIs – will not need to participate, although their solutions will serve as examples to the countries undertaking the L1 Action. For forest condition data, the revised national systems are likely to build upon the principles of the former Level I inventory, whereas for the other core forest variables the procedures of the NFIs (e.g. as documented in the work of COST Action E43) is likely to form the basis.

***Expected results (quantitative information when possible):***

Descriptions of country level solutions to the set-up of national monitoring systems.  
Coordinates of plots constituting the FutMon large-scale grid.

***Indicators of progress***

Submission of plot coordinates to the Coordinating Beneficiary

**Action L1-5(BU)**

***Description:***

The action includes the implementation of Action Group L1 (see above) in Bulgaria. The action will be based on 159 sample plots.

***Methods employed***

See above under “Action Group L1”.

***Constraints and assumptions***

See above under “Action Group L1”

***Beneficiary responsible for implementation:***

Beneficiary No. 5 (Bulgaria)

***Expected results***

See above under "Action Group L1"

***Indicators of progress***

See above under "Action Group L1"

**Action L1-8(DK)**

***Description:***

The action includes the implementation of Action Group L1 (see above) in Denmark

***Methods employed***

See above under "Action Group L1".

***Constraints and assumptions***

See above under "Action Group L1"

***Beneficiary responsible for implementation:***

Beneficiary No. 8

***Expected results***

See above under "Action Group L1"

***Indicators of progress***

See above under "Action Group L1"

**Action L1-9(EE)**

***Description:***

The action includes the implementation of Action Group L1 (see above) in Estonia.

***Methods employed***

See above under "Action Group L1".

***Constraints and assumptions***

See above under "Action Group L1"

***Beneficiary responsible for implementation:***

Beneficiary No. 9

***Expected results***

See above under "Action Group L1"

***Indicators of progress***

See above under "Action Group L1"

**Action L1-12(GR)**

***Description:***

The action includes the implementation of Action Group L1 (see above) in Greece

***Methods employed***

See above under "Action Group L1".

***Constraints and assumptions***

See above under "Action Group L1"

***Beneficiary responsible for implementation:***

Beneficiary No. 12

***Expected results***

See above under "Action Group L1"

***Indicators of progress***

See above under "Action Group L1"

**Action L1-20(RO)**

***Description:***

The action includes the implementation of Action Group L1 (see above) in Romania

***Methods employed***

See above under "Action Group L1".

In Romania the FutMon large scale grid will be based on the existing Level I network (16x16 Km), which will be developed with additional plots to 261, which corresponds to forest area of the country divided by 256 km<sup>2</sup>, in accordance with the latest information about Romanian forest area.

***Constraints and assumptions***

See above under "Action Group L1"

NFI plots will be placed in the proximity of Level I grid in order to maximise synergies between Level I and National Forest Inventory (NFI).

***Beneficiary responsible for implementation:***

Beneficiary No. 20

***Expected results***

See above under "Action Group L1"

***Indicators of progress***

See above under "Action Group L1"

**Action L1-22(SI)**

***Description:***

The action includes the implementation of Action Group L1 (see above) in Slovenia

***Methods employed***

See above under "Action Group L1".

***Constraints and assumptions***

See above under "Action Group L1"

***Beneficiary responsible for implementation:***

Beneficiary No. 22

***Expected results***

See above under "Action Group L1"

***Indicators of progress***

See above under "Action Group L1"

**Action L1-39(IT)**

***Description:***

The action includes the implementation of Action Group L1 (see above) in Italy

***Methods employed***

See above under "Action Group L1".

***Constraints and assumptions***

See above under "Action Group L1"

***Beneficiary responsible for implementation:***

Beneficiary No. 39

***Expected results***

See above under "Action Group L1"

***Indicators of progress***

See above under "Action Group L1"

**ACTION GROUP L2: Large scale representative monitoring (2009-2010)**

***Description:***

This action includes field assessments on FutMon large-scale plots aiming at the continuation of existing time series for forest condition. In addition, this action will provide data to support the further harmonisation of NFIs, through developing reference methods and bridging functions.



**Methods employed:**

L2a.) Large-scale assessments will be carried out, either on old Level I or on new FutMon plots in 2009 and 2010. Monitoring will include annual assessments of mandatory parameters foreseen for large scale monitoring in the ICP Forests manual. The total number of plots will be corresponding to the forest area of the country divided by 256 km<sup>2</sup>.

L2b.) NFI field studies will be conducted in order to (i) test reference assessment methods and (ii) develop, test and enhance bridging functions for a set of core variables. The selection of core variables will be finalised at the first Expert Meeting on Harmonisation of NFIs in the beginning of 2009. The field studies will be designed so that they meet the needs in each country; typically they will include assessment of NFI data following national standards, assessments following reference procedures, as well as specific data needed for developing the bridging functions. A minimum of 150 plots per country will be required. For large countries the number of plots will correspond to the forest area divided by 256 km<sup>2</sup>.

As a result of the NFI field studies, bridging function to be applied on NFI data will be obtained. Further, sensitivity analyses to study the deviation between national standards and references will be conducted by each partner. Results from the field studies and the sensitivity analysis will be presented at the 2<sup>nd</sup> Expert Meeting on NFI Harmonisation (2010)

The Actions C1-NFI-8(DK) and C1-NFI-25(SE) will support the NFI-based analyses through elaboration of methods in collaboration with the partners and compilation of summary results.

Data collected on the FutMon large-scale plots will be submitted by the countries to the Coordinating Beneficiary where they will undergo intensive validation. NFI test data related to the core set of variables from the 2009/2010 field study will be validated by the associated beneficiaries and will then be submitted to the Coordinating Beneficiary in data base formats that include a documentation. All the above data will then be submitted to the European Commission by the Coordinating Beneficiary. Formats will be compatible to the Forest Focus data base as far as possible.

An overview on related plotnumbers and assessments to be carried out is provided in Annex 2.

**Quality control and assurance measures to be carried out by the associated beneficiaries responsible for collecting monitoring data**

- Participation in at least one field exercise (International cross calibration course forest condition including damage types) in 2009
- Participation in one specific damage type course in 2010
- Participation in one photo intercalibration exercise for forest condition in 2010
- Participation in two Expert Meetings on Harmonisation of National Forest Inventories for planning and evaluating the field study (2009 and 2010)

**Constraints and assumptions:**

The L2 Actions build on the existing infrastructures for forest condition monitoring and NFIs in the countries. This is a promising basis. A questionnaire has shown that in two thirds of the countries there is already an institutional link between the NFIs and the forest condition monitoring. In the remaining countries these links still need to be developed as according to Action Group L1.

**Expected results (quantitative information when possible):**

Harmonised large-scale data on forest condition and test data on core variables.  
Documentation of the national bridging functions between NFI data and the references.

**Indicators of progress:**

- Progress of data assessment in the field;
- Submission of data to Coordinating Beneficiary;

- Progress in data validation and data submission to European Commission;
- Organisation and arrangement of meetings;
- Presentation of results of NFI field studies and sensitivity analyses at Expert Meetings.

#### **Action L2-2(AT)**

***Description:***

The action includes the implementation of Action Group L2 (see above) in Austria

***Methods employed***

See above under "Action Group L2".

Deviating from the general description of the Action group, the annual assessments of mandatory parameters foreseen for large scale monitoring in the ICP Forests manual (L2a, see above) will be carried out only once (2010) in Austria

The Action will be based on 151 (L2a), respectively 450 (L2b) plots

***Constraints and assumptions***

See above under "Action Group L2"

***Beneficiary responsible for implementation:***

Beneficiary No. 2

***Expected results***

See above under "Action Group L2"

***Indicators of progress***

See above under "Action Group L2"

#### **Action L2-3(FL)**

***Description:***

The action includes the implementation of Action Group L2 (see above) in Belgium, Flanders

***Methods employed***

See above under "Action Group L2".

The Action will be based on 10 (L2a), respectively 150 (L2b) plots.

***Constraints and assumptions***

See above under "Action Group L2".

***Beneficiary responsible for implementation***

Beneficiary No. 3

***Expected results***

See above under "Action Group L2".

***Indicators of progress***

See above under "Action Group L2".

#### **Action L2-5(BG)**

***Description***

The action includes the implementation of Action Group L2 (see above) in Bulgaria.

In Bulgaria only annual assessments of mandatory parameters foreseen for large scale monitoring in the ICP Forests manual (L2a, see above) will be carried out

***Methods employed:***

See above under "Action Group L2".

The Action will be based on 159 (L2a) plots.

***Constraints and assumptions***

See above under "Action Group L2".

***Beneficiary responsible for implementation:***

Beneficiary No. 5

***Expected results***

See above under "Action Group L2".

***Indicators of progress***

See above under "Action Group L2".

**Action L2-6(CY)****Description**

The action includes the implementation of Action Group L2 (see above) in Cyprus.  
In Cyprus only annual assessments of mandatory parameters foreseen for large scale monitoring in the ICP Forests manual (L2a, see above) will be carried out

**Methods employed:**

See above under "Action Group L2".  
The Action will be based on 15 (L2a) plots.

**Constraints and assumptions**

See above under "Action Group L2".

**Beneficiary responsible for implementation:**

Beneficiary No. 6

**Expected results**

See above under "Action Group L2".

**Indicators of progress**

See above under "Action Group L2".

**Action L2-7(CZ)****Description**

The action includes the implementation of Action Group L2 (see above) in Czech Republic.  
In Czech Republic only annual assessments of mandatory parameters foreseen for large scale monitoring in the ICP Forests manual (L2a, see above) will be carried out

**Methods employed:**

See above under "Action Group L2".  
The Action will be based on 136 (L2a) plots.

**Constraints and assumptions**

See above under "Action Group L2".

**Beneficiary responsible for implementation:**

Beneficiary No. 7

**Expected results**

See above under "Action Group L2".

**Indicators of progress**

See above under "Action Group L2".

**Action L2-8(DK)****Description:**

The action includes the implementation of Action Group L2 (see above) in Denmark

**Methods employed**

See above under "Action Group L2".  
The Action will be based on 25 (L2a), respectively 150 (L2b) plots.

**Constraints and assumptions**

See above under "Action Group L2".

**Beneficiary responsible for implementation**

Beneficiary No. 8

**Expected results**

See above under "Action Group L2".

**Indicators of progress**

See above under "Action Group L2".

#### **Action L2-9(EE)**

***Description:***

The action includes the implementation of Action Group L2 (see above) in Estonia

***Methods employed***

See above under "Action Group L2".

The Action will be based on 92 (L2a), respectively 92 (L2b) plots.

***Constraints and assumptions***

See above under "Action Group L2".

***Beneficiary responsible for implementation***

Beneficiary No. 9

***Expected results***

See above under "Action Group L2".

***Indicators of progress***

See above under "Action Group L2".

#### **Action L2-10(FI)**

***Description***

The action includes the implementation of Action Group L2 (see above) in Finland.

In Finland only annual assessments of mandatory parameters foreseen for large scale monitoring in the ICP Forests manual (L2a, see above) will be carried out

***Methods employed:***

See above under "Action Group L2".

The Action will be based on 794 (L2a) plots.

***Constraints and assumptions***

See above under "Action Group L2".

***Beneficiary responsible for implementation:***

Beneficiary No. 10

***Expected results***

See above under "Action Group L2".

***Indicators of progress***

See above under "Action Group L2".

#### **Action L2-11(FR)**

***Description***

The action includes the implementation of Action Group L2 (see above) in France.

***Methods employed***

See above under "Action Group L2"

The Action will be based on 1500 (L2b) plots.

***Constraints and assumptions***

See above under "Action Group L2"

***Beneficiary responsible for implementation:***

Beneficiary No. 11

***Expected results***

See above under "Action Group L2"

***Indicators of progress***

See above under "Action Group L2"

### **Action L2-12(GR)**

#### ***Description***

The action includes the implementation of Action Group L2 (see above) in Greece.

#### ***Methods employed***

See above under "Action Group L2"

The Action will be based on 98 (L2a), respectively 150 (L2b) plots

#### ***Constraints and assumptions***

See above under "Action Group L2"

#### ***Beneficiary responsible for implementation:***

Beneficiary No. 12

#### ***Expected results***

See above under "Action Group L2"

#### ***Indicators of progress***

See above under "Action Group L2"

### **Action L2-13(HU)**

#### ***Description***

The action includes the implementation of Action Group L2 (see above) in Hungary.

#### ***Methods employed***

See above under "Action Group L2"

The Action will be based on 73 (L2a), respectively 150 (L2b) plots

#### ***Constraints and assumptions***

See above under "Action Group L2"

#### ***Beneficiary responsible for implementation:***

Beneficiary No. 13

#### ***Expected results***

See above under "Action Group L2"

#### ***Indicators of progress***

See above under "Action Group L2"

### **Action L2-14(IE)**

#### ***Description***

The action includes the implementation of Action Group L2 (see above) in Ireland.

In Brandenburg only annual assessments of mandatory parameters foreseen for large scale monitoring in the ICP Forests manual (L2a, see above) will be carried out

#### ***Methods employed:***

See above under "Action Group L2".

The Action will be based on 27 (L2a) plots.

#### ***Constraints and assumptions***

See above under "Action Group L2".

#### ***Beneficiary responsible for implementation:***

Beneficiary No. 14

#### ***Expected results***

See above under "Action Group L2".

#### ***Indicators of progress***

See above under "Action Group L2".

#### **Action L2-15(IT)**

##### ***Description***

The action includes the implementation of Action Group L2 (see above) in Italy.

##### ***Methods employed***

See above under "Action Group L2"

The Action will be based on 260 (L2a), respectively 340(L2b) plots.

The action mainly includes the field work in Italy. The scientific coordination of the Italian work is included in Action L2-39(IT)

##### ***Constraints and assumptions***

See above under "Action Group L2"

##### ***Beneficiary responsible for implementation:***

Beneficiary No. 15

##### ***Expected results***

See above under "Action Group L2"

##### ***Indicators of progress***

See above under "Action Group L2"

#### **Action L2-16(LT)**

##### ***Description***

The action includes the implementation of Action Group L2 (see above) in Lithuania.

##### ***Methods employed***

See above under "Action Group L2"

The Action will be based on 83 (L2a), respectively 150 (L2b) plots

##### ***Constraints and assumptions***

See above under "Action Group L2"

##### ***Beneficiary responsible for implementation:***

Beneficiary No. 16

##### ***Expected results***

See above under "Action Group L2"

##### ***Indicators of progress***

See above under "Action Group L2"

#### **Action L2-17(NL)**

##### ***Description***

The action includes the implementation of Action Group L2 (see above) in Netherlands.

##### ***Methods employed***

See above under "Action Group L2"

The Action will be based on 13 (L2a), respectively 150 (L2b) plots

##### ***Constraints and assumptions***

See above under "Action Group L2"

##### ***Beneficiary responsible for implementation:***

Beneficiary No. 17

##### ***Expected results***

See above under "Action Group L2"

##### ***Indicators of progress***

See above under "Action Group L2"

**Action L2-18(PL)****Description**

The action includes the implementation of Action Group L2 (see above) in Poland.  
In Brandenburg only annual assessments of mandatory parameters foreseen for large scale monitoring in the ICP Forests manual (L2a, see above) will be carried out

**Methods employed:**

See above under "Action Group L2".  
The Action will be based on 376 (L2a) plots.

**Constraints and assumptions**

See above under "Action Group L2".

**Beneficiary responsible for implementation:**

Beneficiary No. 18

**Expected results**

See above under "Action Group L2".

**Indicators of progress**

See above under "Action Group L2".

**Action L2-20(RO)****Description**

The action includes the implementation of Action Group L2 (see above) in Romania.

**Methods employed**

See above under "Action Group L2"  
The Action will be based on 261 (L2a), respectively 261 (L2b) plots

**Constraints and assumptions**

See above under "Action Group L2"

**Beneficiary responsible for implementation:**

Beneficiary No. 20

**Expected results**

See above under "Action Group L2"

**Indicators of progress**

See above under "Action Group L2"

**Action L2-21(SK)****Description**

The action includes the implementation of Action Group L2 (see above) in Slovakia.

**Methods employed**

See above under "Action Group L2"  
The Action will be based on 107 (L2a), respectively 100 (L2b) plots

**Constraints and assumptions**

See above under "Action Group L2"

**Beneficiary responsible for implementation:**

Beneficiary No. 21

**Expected results**

See above under "Action Group L2"

**Indicators of progress**

See above under "Action Group L2"

#### **Action L2-22(SI)**

##### ***Description***

The action includes the implementation of Action Group L2 (see above) in Slovenia.

##### ***Methods employed***

See above under "Action Group L2"

The Action will be based on 43 (L2a), respectively 150 (L2b) plots

##### ***Constraints and assumptions***

See above under "Action Group L2"

##### ***Beneficiary responsible for implementation:***

Beneficiary No. 22

##### ***Expected results***

See above under "Action Group L2"

##### ***Indicators of progress***

See above under "Action Group L2"

#### **Action L2-23(ES)**

##### ***Description***

The action includes the implementation of Action Group L2 (see above) in Spain.

In Spain only annual assessments of mandatory parameters foreseen for large scale monitoring in the ICP Forests manual (L2a, see above) will be carried out

##### ***Methods employed:***

See above under "Action Group L2".

The Action will be based on 620 (L2a) plots.

##### ***Constraints and assumptions***

See above under "Action Group L2".

##### ***Beneficiary responsible for implementation:***

Beneficiary No. 23

##### ***Expected results***

See above under "Action Group L2".

##### ***Indicators of progress***

See above under "Action Group L2".

#### **Action L2-25(SE)**

##### ***Description***

The action includes the implementation of Action Group L2 (see above) in Sweden.

##### ***Methods employed***

See above under "Action Group L2"

The Action will be based on 900 (L2a), respectively 900 (L2b) plots

##### ***Constraints and assumptions***

See above under "Action Group L2"

##### ***Beneficiary responsible for implementation:***

Beneficiary No. 25

##### ***Expected results***

See above under "Action Group L2"

##### ***Indicators of progress***

See above under "Action Group L2"



**Action L2-26(UK)****Description**

The action includes the implementation of Action Group L2 (see above) in United Kingdom.

**Methods employed**

See above under "Action Group L2"

The Action will be based on 105 (L2a), respectively 150 (L2b) plots

**Constraints and assumptions**

See above under "Action Group L2"

**Beneficiary responsible for implementation:**

Beneficiary No. 26

**Expected results**

See above under "Action Group L2"

**Indicators of progress**

See above under "Action Group L2"

**Action L2-27(BB)****Description**

The action includes the implementation of Action Group L2 (see above) in Germany, Brandenburg.

In Brandenburg only annual assessments of mandatory parameters foreseen for large scale monitoring in the ICP Forests manual (L2a, see above) will be carried out

**Methods employed:**

See above under "Action Group L2".

The Action will be based on 42 (L2a) plots.

**Constraints and assumptions**

See above under "Action Group L2".

**Beneficiary responsible for implementation:**

Beneficiary No. 27

**Expected results**

See above under "Action Group L2".

**Indicators of progress**

See above under "Action Group L2".

**Action L2-28(BW)****Description**

The action includes the implementation of Action Group L2 (see above) in Germany, Baden Württemberg.

**Methods employed**

See above under "Action Group L2"

The Action will be based on 50 (L2a), respectively 50 (L2b) plots

**Constraints and assumptions**

See above under "Action Group L2"

**Beneficiary responsible for implementation:**

Beneficiary No. 28

**Expected results**

See above under "Action Group L2"

**Indicators of progress**

See above under "Action Group L2"

#### **Action L2-29(BY)**

##### ***Description***

The action includes the implementation of Action Group L2 (see above) in Germany, Bayern. In Brandenburg only annual assessments of mandatory parameters foreseen for large scale monitoring in the ICP Forests manual (L2a, see above) will be carried out

##### ***Methods employed:***

See above under "Action Group L2".  
The Action will be based on 96 (L2a) plots.

##### ***Constraints and assumptions***

See above under "Action Group L2".

##### ***Beneficiary responsible for implementation:***

Beneficiary No. 29

##### ***Expected results***

See above under "Action Group L2".

##### ***Indicators of progress***

See above under "Action Group L2".

#### **Action L2-30(NWD)**

##### ***Description***

The action includes the implementation of Action Group L2 (see above) in Germany, Northwest. In Northwestern Germany only annual assessments of mandatory parameters foreseen for large scale monitoring in the ICP Forests manual (L2a, see above) will be carried out.

##### ***Methods employed:***

See above under "Action Group L2".  
The Action will be based on 90 (L2a) plots.

##### ***Constraints and assumptions***

See above under "Action Group L2".

##### ***Beneficiary responsible for implementation:***

Beneficiary No. 30

##### ***Expected results***

See above under "Action Group L2".

##### ***Indicators of progress***

See above under "Action Group L2".

#### **Action L2-31(MV)**

##### ***Description***

The action includes the implementation of Action Group L2 (see above) in Germany, Mecklenburg Vorpommern.

##### ***Methods employed***

See above under "Action Group L2"  
The Action will be based on 17 (L2a), respectively 3 (L2b) plots

##### ***Constraints and assumptions***

See above under "Action Group L2"

##### ***Beneficiary responsible for implementation:***

Beneficiary No. 31

##### ***Expected results***

See above under "Action Group L2"

##### ***Indicators of progress***

See above under "Action Group L2"

**Action L2-32(NW)****Description**

The action includes the implementation of Action Group L2 (see above) in Germany, Nordrhein-Westfalen.

**Methods employed**

See above under "Action Group L2"

The Action will be based on 39 (L2a), respectively 39 (L2b) plots

**Constraints and assumptions**

See above under "Action Group L2"

**Beneficiary responsible for implementation:**

Beneficiary No. 32

**Expected results**

See above under "Action Group L2"

**Indicators of progress**

See above under "Action Group L2"

**Action L2-33(RP)****Description**

The action includes the implementation of Action Group L2 (see above) in Germany, Rheinland-Pfalz.

In Nordwestdeutsche Forstliche Versuchsanstalt only annual assessments of mandatory parameters foreseen for large scale monitoring in the ICP Forests manual (L2a, see above) will be carried out

**Methods employed:**

See above under "Action Group L2".

The Action will be based on 26 (L2a) plots.

**Constraints and assumptions**

See above under "Action Group L2".

**Beneficiary responsible for implementation:**

Beneficiary No. 33

**Expected results**

See above under "Action Group L2".

**Indicators of progress**

See above under "Action Group L2".

**Action L2-34(RP)****Description**

The action includes the implementation of Action Group L2 (see above) in Germany, Schleswig Holstein.

In Nordwestdeutsche Forstliche Versuchsanstalt only annual assessments of mandatory parameters foreseen for large scale monitoring in the ICP Forests manual (L2a, see above) will be carried out

**Methods employed:**

See above under "Action Group L2".

The Action will be based on 5 (L2a) plots.

**Constraints and assumptions**

See above under "Action Group L2".

**Beneficiary responsible for implementation:**

Beneficiary No. 34

**Expected results**

See above under "Action Group L2".

**Indicators of progress**

See above under "Action Group L2".

#### **Action L2-35(RP)**

##### ***Description***

The action includes the implementation of Action Group L2 (see above) in Germany, Saarland. In Nordwestdeutsche Forstliche Versuchsanstalt only annual assessments of mandatory parameters foreseen for large scale monitoring in the ICP Forests manual (L2a, see above) will be carried out

##### ***Methods employed:***

See above under "Action Group L2".  
The Action will be based on 3 (L2a) plots.

##### ***Constraints and assumptions***

See above under "Action Group L2".

##### ***Beneficiary responsible for implementation:***

Beneficiary No. 35

##### ***Expected results***

See above under "Action Group L2".

##### ***Indicators of progress***

See above under "Action Group L2".

#### **Action L2-36(SN)**

##### ***Description***

The action includes the implementation of Action Group L2 (see above) in Germany, Sachsen.

##### ***Methods employed***

See above under "Action Group L2"  
The Action will be based on 19 (L2a), respectively 19 (L2b) plots

##### ***Constraints and assumptions***

See above under "Action Group L2"

##### ***Beneficiary responsible for implementation:***

Beneficiary No. 36

##### ***Expected results***

See above under "Action Group L2"

##### ***Indicators of progress***

See above under "Action Group L2"

#### **Action L2-37(TH)**

##### ***Description***

The action includes the implementation of Action Group L2 (see above) in Germany, Thüringen.

In Thüringen only annual assessments of mandatory parameters foreseen for large scale monitoring in the ICP Forests manual (L2a, see above) will be carried out

##### ***Methods employed:***

See above under "Action Group L2".  
The Action will be based on 26 (L2a) plots.

##### ***Constraints and assumptions***

See above under "Action Group L2".

##### ***Beneficiary responsible for implementation:***

Beneficiary No. 37

##### ***Expected results***

See above under "Action Group L2".

##### ***Indicators of progress***

See above under "Action Group L2".

**Action L2-38(LV)****Description**

The action includes the implementation of Action Group L2 (see above) in Latvia.

**Methods employed**

See above under "Action Group L2"

The Action will be based on 115 (L2a), respectively 150 (L2b) plots

**Constraints and assumptions**

See above under "Action Group L2"

**Beneficiary responsible for implementation:**

Beneficiary No. 38

**Expected results**

See above under "Action Group L2"

**Indicators of progress**

See above under "Action Group L2"

**Action L2-39(IT)****Description**

The action includes large parts of the scientific coordination of the Action L2-15(IT).

**Methods employed**

See above under "Action Group L2"

**Constraints and assumptions**

See above under "Action Group L2"

**Beneficiary responsible for implementation:**

Beneficiary No. 39

**Expected results**

See above under "Action Group L2"

**Indicators of progress**

See above under "Action Group L2"

**ACTION GROUP IM1: Selection of core plots for intensive monitoring****Description:**

The Action Group aims at the selection of plots, surveys, and monitoring attributes for intensive forest monitoring. For this purpose intensive monitoring will be conducted on "basic" intensive monitoring plots in the years 2009 and 2010. In all there will be 303 intensive monitoring plots in this Action Group corresponding to approximately half of the previous number of intensive monitoring plots under the Forest Focus regulation. In each country, the maximum number will be 10% of the number of FutMon large-scale plots and by no means larger than in previous years. Exceptions are possible for countries with small numbers of large-scale plots. Each country can have a minimum number of 10 plots.

Results from additional Action Groups (see below) will be used to select "core" intensive monitoring plots as well as to define existing or new monitoring attributes to be assessed on them in the future. Evaluation of IM1 data is included in Actions C1-tree-30(NWD), C1-Fol1-10(FI), C1-Met-29(BY), and A1-1(DE).

**Methods employed:**

It is recommended to conduct the following surveys in accordance with the mandatory parts of the ICP Forests Manual on the basic plots:

- Tree condition
  - Annual assessments of crown condition following Chapter 2 of the Manual; including removals and annual mortality.

- One forest growth assessment in either 2009 or 2010 following Chapter 5 of the Manual;
  - One foliar chemistry assessment in either 2009 or 2010 following Chapter 4 of the Manual;
- Ground vegetation following Chapter 8 of the Manual;
- Deposition (throughfall, bulk, stemflow for beech) following Chapter 6 of the Manual;
- Ambient air quality (passive sampling for O<sub>3</sub>, NH<sub>3</sub>, NO<sub>2</sub>, and SO<sub>2</sub>) following Chapter 10A of the ICP Forests Manual; annual visible ozone injury assessments (exception: no passive samplers in Northern Europe);
- Soil (unless already assessed on the same plot under BioSoil) following the mandatory parts of Chapter 3 of the Manual;
- Meteorology (daily assessments) following Chapter 7 of the Manual for
  - precipitation
  - air temperature
  - air humidity
  - global radiation
  - wind speed
  - wind direction

Monitoring data will be submitted by the countries to the Coordinating Beneficiary where they will undergo intensive validation. Data will then be submitted to the European Commission by the Coordinating Beneficiary. For surveys covered by the present Forest Focus database, data formats will be compatible.

An overview on related plotnumbers and assessments to be carried out is provided in Annex 2.

**Quality control and assurance measures to be carried out by the associated beneficiaries responsible for collecting monitoring data**

- Participation in one soil laboratory ring test 2009. If plots are included in the D3 Action Group labs may on an optional basis also participate in the determination of water retention functions (pF curves), matrix potential and soil moisture.
- Participation in annual foliar and water laboratory ring tests
- Participation in meetings of the heads of the laboratories
- On all plots deposition measurements will be carried out using national samplers. In addition, standardized throughfall samplers will be installed on one plot in each country and run in parallel with the national throughfall samplers for a period of one year. Data from the standardized samplers will be submitted separately.
- Ground vegetation questionnaire and information compilation about national methods, inter-comparison exercises and control surveys by independent surveyors at the country level, participation in one ground vegetation field intercomparison
- Participation in one passive sampler laboratory intercomparison per year (reference material analysed in the national laboratory) as well as in two controlled co-location exercises per year (national samplers will be sent to Beneficiary No. 24 (CEAM) where they will be centrally exposed on one site near an active monitor).
- Participation in annual visible ozone injury field intercomparison courses.
- Quality measures related to forest health assessments are included in Action Group L2a

***Constraints and assumptions:***

The intensive monitoring activities are based on many years experience in all countries. Nevertheless, the consolidation process will require a re-structuring of the national organisation in many of these.

Quality assurance and control measures will be extended compared to the existing monitoring scheme. This will need the involvement and training of more personnel in the countries. In the current monitoring scheme the data submission and validation process takes more than one year. Even though this time will be shortened within FutMon it is obvious that not all data

from Action Group IM1 can be utilized for the elaboration of the core plot selection criteria which are relevant for potential follow-up projects. However, existing data are available so there will be more than one year's data for this central task. Within this Action Group monitoring and data collection in the field needs to be carried out continuously in order to ensure consistent time series.

***Expected results (quantitative information when possible):***

- System of basic plots with reduced plotnumbers but more complete sets of surveys
- Intensive monitoring data
- Improved data quality

***Indicators of progress:***

- Submission of general basic and plot data as well as intensive monitoring data to Coordinating Beneficiary;
- Status of data validation by the Coordinating Beneficiary;
- Submission of validated data to the European Commission;
- Organisation and arrangement of intercomparison exercises and laboratory ring tests.

### **Action IM1-2(AT)**

***Description:***

The action includes the implementation of Action Group IM1 (see above) in Austria

***Methods employed***

See above under "Action Group IM1".

The Action will be based on 15 plots

***Constraints and assumptions***

See above under "Action Group IM1"

***Beneficiary responsible for implementation:***

Beneficiary No. 2

***Expected results***

See above under "Action Group IM1"

***Indicators of progress***

See above under "Action Group IM1"

### **Action IM1-3(FL)**

***Description:***

The action includes the implementation of Action Group IM1 (see above) in Belgium-Flanders

***Methods employed***

See above under "Action Group IM1".

The Action will be based on 5 plots

***Constraints and assumptions***

See above under "Action Group IM1"

***Beneficiary responsible for implementation:***

Beneficiary No. 3

***Expected results***

See above under "Action Group IM1"

***Indicators of progress***

See above under "Action Group IM1"

#### **Action IM1-5(BU)**

***Description:***

The action includes the implementation of Action Group IM1 (see above) in Bulgaria

***Methods employed***

See above under "Action Group IM1".

The Action will be based on 3 plots

***Constraints and assumptions***

See above under "Action Group IM1"

***Beneficiary responsible for implementation:***

Beneficiary No. 5

***Expected results***

See above under "Action Group IM1"

***Indicators of progress***

See above under "Action Group IM1"

#### **Action IM1-6(CY)**

***Description:***

The action includes the implementation of Action Group IM1 (see above) in Cyprus

***Methods employed***

See above under "Action Group IM1".

The Action will be based on 2 plots

***Constraints and assumptions***

See above under "Action Group IM1"

***Beneficiary responsible for implementation:***

Beneficiary No. 6

***Expected results***

See above under "Action Group IM1"

***Indicators of progress***

See above under "Action Group IM1"

#### **Action IM1-7(CZ)**

***Description:***

The action includes the implementation of Action Group IM1 (see above) in Czech Republic

***Methods employed***

See above under "Action Group IM1".

The Action will be based on 14 plots

***Constraints and assumptions***

See above under "Action Group IM1"

***Beneficiary responsible for implementation:***

Beneficiary No. 7

***Expected results***

See above under "Action Group IM1"

***Indicators of progress***

See above under "Action Group IM1"

#### **Action IM1-8(DK)**

***Description:***

The action includes the implementation of Action Group IM1 (see above) in Denmark

***Methods employed***



See above under "Action Group IM1".

The Action will be based on 6 plots

***Constraints and assumptions***

See above under "Action Group IM1"

***Beneficiary responsible for implementation:***

Beneficiary No. 8

***Expected results***

See above under "Action Group IM1"

***Indicators of progress***

See above under "Action Group IM1"

**Action IM1-9(E)**

***Description:***

The action includes the implementation of Action Group IM1 (see above) in Estonia

***Methods employed***

See above under "Action Group IM1".

The Action will be based on 7 plots

***Constraints and assumptions***

See above under "Action Group IM1"

***Beneficiary responsible for implementation:***

Beneficiary No. 9

***Expected results***

See above under "Action Group IM1"

***Indicators of progress***

See above under "Action Group IM1"

**Action IM1-10(FI)**

***Description:***

The action includes the implementation of Action Group IM1 (see above) in Finland

***Methods employed***

See above under "Action Group IM1".

The Action will be based on 18 plots

***Constraints and assumptions***

See above under "Action Group IM1"

***Beneficiary responsible for implementation:***

Beneficiary No. 10

***Expected results***

See above under "Action Group IM1"

***Indicators of progress***

See above under "Action Group IM1"

**Action IM1-11(FR)**

***Description:***

The action includes the implementation of Action Group IM1 (see above) in France

***Methods employed***

See above under "Action Group IM1".

The Action will be based on 42 plots

***Constraints and assumptions***

See above under "Action Group IM1"

***Beneficiary responsible for implementation:***

Beneficiary No. 11

***Expected results***

See above under "Action Group IM1"

***Indicators of progress***

See above under "Action Group IM1"

**Action IM1-12(GR)**

***Description:***

The action includes the implementation of Action Group IM1 (see above) in Greece

***Methods employed***

See above under "Action Group IM1".

The Action will be based on 4 plots

***Constraints and assumptions***

See above under "Action Group IM1"

***Beneficiary responsible for implementation:***

Beneficiary No. 12

***Expected results***

See above under "Action Group IM1"

***Indicators of progress***

See above under "Action Group IM1"

**Action IM1-13(HU)**

***Description:***

The action includes the implementation of Action Group IM1 (see above) in Hungary

***Methods employed***

See above under "Action Group IM1".

The Action will be based on 8 plots

***Constraints and assumptions***

See above under "Action Group IM1"

***Beneficiary responsible for implementation:***

Beneficiary No. 13

***Expected results***

See above under "Action Group IM1"

***Indicators of progress***

See above under "Action Group IM1"

**Action IM1-14(IE)**

***Description:***

The action includes the implementation of Action Group IM1 (see above) in Ireland

***Methods employed***

See above under "Action Group IM1".

The Action will be based on 3 plots

***Constraints and assumptions***

See above under "Action Group IM1"

***Beneficiary responsible for implementation:***

Beneficiary No. 14

***Expected results***

See above under "Action Group IM1"

***Indicators of progress***

See above under "Action Group IM1"

#### **Action IM1-15(IT)**

***Description:***

The action includes the field work and small parts of the scientific coordination of Action Group IM1 (see above) in Italy

***Methods employed***

See above under "Action Group IM1".

The Action will be based on 31 plots

***Constraints and assumptions***

See above under "Action Group IM1"

***Beneficiary responsible for implementation:***

Beneficiary No. 15

***Expected results***

See above under "Action Group IM1"

***Indicators of progress***

See above under "Action Group IM1"

#### **Action IM1-16(LT)**

***Description:***

The action includes the implementation of Action Group IM1 (see above) in Lithuania

***Methods employed***

See above under "Action Group IM1".

The Action will be based on 9 plots

***Constraints and assumptions***

See above under "Action Group IM1"

***Beneficiary responsible for implementation:***

Beneficiary No. 16

***Expected results***

See above under "Action Group IM1"

***Indicators of progress***

See above under "Action Group IM1"

#### **Action IM1-17(NL)**

***Description:***

The action includes the implementation of Action Group IM1 (see above) in Netherlands

***Methods employed***

See above under "Action Group IM1".

The Action will be based on 5 plots

***Constraints and assumptions***

See above under "Action Group IM1"

***Beneficiary responsible for implementation:***

Beneficiary No. 17

***Expected results***

See above under "Action Group IM1"

***Indicators of progress***

See above under "Action Group IM1"

#### **Action IM1-18(PL)**

***Description:***

The action includes the implementation of Action Group IM1 (see above) in Poland

***Methods employed***

See above under "Action Group IM1".

The Action will be based on 12 plots

***Constraints and assumptions***

See above under "Action Group IM1"

***Beneficiary responsible for implementation:***

Beneficiary No. 18

***Expected results***

See above under "Action Group IM1"

***Indicators of progress***

See above under "Action Group IM1"

#### **Action IM1-20(RO)**

***Description:***

The action includes the implementation of Action Group IM1 (see above) in Romania

***Methods employed***

See above under "Action Group IM1".

The Action will be based on 4 plots

***Constraints and assumptions***

See above under "Action Group IM1"

***Beneficiary responsible for implementation:***

Beneficiary No. 20

***Expected results***

See above under "Action Group IM1"

***Indicators of progress***

See above under "Action Group IM1"

#### **Action IM1-21(SK)**

***Description:***

The action includes the implementation of Action Group IM1 (see above) in Slovakia

***Methods employed***

See above under "Action Group IM1".

The Action will be based on 8 plots

***Constraints and assumptions***

See above under "Action Group IM1"

***Beneficiary responsible for implementation:***

Beneficiary No. 21

***Expected results***

See above under "Action Group IM1"

***Indicators of progress***

See above under "Action Group IM1"

#### **Action IM1-22(SI)**

***Description:***

The action includes the implementation of Action Group IM1 (see above) in Slovenia

***Methods employed***

See above under "Action Group IM1".

The Action will be based on 10 plots

***Constraints and assumptions***

See above under "Action Group IM1"

***Beneficiary responsible for implementation:***

Beneficiary No. 22

***Expected results***

See above under "Action Group IM1"

***Indicators of progress***

See above under "Action Group IM1"

#### **Action IM1-23(ES)**

***Description:***

The action includes the implementation of Action Group IM1 (see above) in Spain

***Methods employed***

See above under "Action Group IM1".

The Action will be based on 30 plots

***Constraints and assumptions***

See above under "Action Group IM1"

***Beneficiary responsible for implementation:***

Beneficiary No. 23

***Expected results***

See above under "Action Group IM1"

***Indicators of progress***

See above under "Action Group IM1"

#### **Action IM1-25(SE)**

***Description:***

The action includes the implementation of Action Group IM1 (see above) in Sweden

***Methods employed***

See above under "Action Group IM1".

The Action will be based on 12 plots

***Constraints and assumptions***

See above under "Action Group IM1"

***Beneficiary responsible for implementation:***

Beneficiary No. 25

***Expected results***

See above under "Action Group IM1"

***Indicators of progress***

See above under "Action Group IM1"

#### **Action IM1-26(UK)**

***Description:***

The action includes the implementation of Action Group IM1 (see above) in United Kingdom

***Methods employed***

See above under "Action Group IM1".

The Action will be based on 10 plots

***Constraints and assumptions***

See above under "Action Group IM1"

***Beneficiary responsible for implementation:***

Beneficiary No. 26

***Expected results***

See above under "Action Group IM1"

***Indicators of progress***

See above under "Action Group IM1"

**Action IM1-27(BB)**

***Description:***

The action includes the implementation of Action Group IM1 (see above) in Germany, Brandenburg

***Methods employed***

See above under "Action Group IM1".

The Action will be based on 4 plots

***Constraints and assumptions***

See above under "Action Group IM1"

***Beneficiary responsible for implementation:***

Beneficiary No. 27

***Expected results***

See above under "Action Group IM1"

***Indicators of progress***

See above under "Action Group IM1"

**Action IM1-28(BW)**

***Description:***

The action includes the implementation of Action Group IM1 (see above) in Germany, Baden Württemberg

***Methods employed***

See above under "Action Group IM1".

The Action will be based on 5 plots

***Constraints and assumptions***

See above under "Action Group IM1"

***Beneficiary responsible for implementation:***

Beneficiary No. 28

***Expected results***

See above under "Action Group IM1"

***Indicators of progress***

See above under "Action Group IM1"

**Action IM1-29(BY)**

***Description:***

The action includes the implementation of Action Group IM1 (see above) in Germany, Bayern

***Methods employed***

See above under "Action Group IM1".

The Action will be based on 10 plots

***Constraints and assumptions***

See above under "Action Group IM1"

***Beneficiary responsible for implementation:***

Beneficiary No. 29

***Expected results***

See above under "Action Group IM1"

***Indicators of progress***

See above under "Action Group IM1"

**Action IM1-30(NWD)**

***Description:***

The action includes the implementation of Action Group IM1 (see above) in Germany, Northwest.

***Methods employed***

See above under "Action Group IM1".

The Action will be based on 9 plots

***Constraints and assumptions***

See above under "Action Group IM1"

***Beneficiary responsible for implementation:***

Beneficiary No. 30

***Expected results***

See above under "Action Group IM1"

***Indicators of progress***

See above under "Action Group IM1"

**Action IM1-31(MV)**

***Description:***

The action includes the implementation of Action Group IM1 (see above) in Germany, Mecklenburg-Vorpommern

***Methods employed***

See above under "Action Group IM1".

The Action will be based on 2 plots

***Constraints and assumptions***

See above under "Action Group IM1"

***Beneficiary responsible for implementation:***

Beneficiary No. 31

***Expected results***

See above under "Action Group IM1"

***Indicators of progress***

See above under "Action Group IM1"

**Action IM1-32(NW)**

***Description:***

The action includes the implementation of Action Group IM1 (see above) in Germany, Nordrhein-Westfalen

***Methods employed***

See above under "Action Group IM1".

The Action will be based on 4 plots

***Constraints and assumptions***

See above under "Action Group IM1"

***Beneficiary responsible for implementation:***

Beneficiary No. 32

***Expected results***

See above under "Action Group IM1"

***Indicators of progress***

See above under "Action Group IM1"

#### **Action IM1-33(RP)**

***Description:***

The action includes the implementation of Action Group IM1 (see above) in Germany, Rheinland-Pfalz

***Methods employed***

See above under "Action Group IM1".

The Action will be based on 3 plots

***Constraints and assumptions***

See above under "Action Group IM1"

***Beneficiary responsible for implementation:***

Beneficiary No. 33

***Expected results***

See above under "Action Group IM1"

***Indicators of progress***

See above under "Action Group IM1"

#### **Action IM1-34(SH)**

***Description:***

The action includes the implementation of Action Group IM1 (see above) in Germany, Schleswig Holstein

***Methods employed***

See above under "Action Group IM1".

The Action will be based on 1 plot

***Constraints and assumptions***

See above under "Action Group IM1"

***Beneficiary responsible for implementation:***

Beneficiary No. 34

***Expected results***

See above under "Action Group IM1"

***Indicators of progress***

See above under "Action Group IM1"

#### **Action IM1-35(SL)**

***Description:***

The action includes the implementation of Action Group IM1 (see above) in Germany, Saarland

***Methods employed***

See above under "Action Group IM1".

The Action will be based on 1 plot.

***Constraints and assumptions***

See above under "Action Group IM1"

***Beneficiary responsible for implementation:***

Beneficiary No. 35

***Expected results***

See above under "Action Group IM1"

***Indicators of progress***

See above under "Action Group IM1"



#### **Action IM1-36(SN)**

***Description:***

The action includes the implementation of Action Group IM1 (see above) in Germany, Sachsen

***Methods employed***

See above under "Action Group IM1".

The Action will be based on 2 plots

***Constraints and assumptions***

See above under "Action Group IM1"

***Beneficiary responsible for implementation:***

Beneficiary No. 36

***Expected results***

See above under "Action Group IM1"

***Indicators of progress***

See above under "Action Group IM1"

#### **Action IM1-37(TH)**

***Description:***

The action includes the implementation of Action Group IM1 (see above) in Germany, Thüringen

***Methods employed***

See above under "Action Group IM1".

The Action will be based on 3 plots

***Constraints and assumptions***

See above under "Action Group IM1"

***Beneficiary responsible for implementation:***

Beneficiary No. 37

***Expected results***

See above under "Action Group IM1"

***Indicators of progress***

See above under "Action Group IM1"

#### **Action IM1-38(LV)**

***Description:***

The action includes the implementation of Action Group IM1 (see above) in Latvia

***Methods employed***

See above under "Action Group IM1".

The Action will be based on 1 plot

***Constraints and assumptions***

See above under "Action Group IM1"

***Beneficiary responsible for implementation:***

Beneficiary No. 38

***Expected results***

See above under "Action Group IM1"

***Indicators of progress***

See above under "Action Group IM1"

#### **Action IM1-39(IT)**

**Description:**

The action includes parts of the scientific coordination of Action Group IM1 (see above) in Italy. Related field work is carried out under Action IM1-15(IT).

**Methods employed**

See above under "Action Group IM1".

**Constraints and assumptions**

See above under "Action Group IM1"

**Beneficiary responsible for implementation:**

Beneficiary No. 39

**Expected results**

See above under "Action Group IM1"

**Indicators of progress**

See above under "Action Group IM1"

#### **Action IM1-40(IT)**

**Description:**

The action includes parts of the scientific coordination and the laboratory analysis of Action Group IM1 (see above) in Italy. Related field work is carried out under Action IM1-15(IT).

**Methods employed**

See above under "Action Group IM1".

**Constraints and assumptions**

See above under "Action Group IM1"

**Beneficiary responsible for implementation:**

Beneficiary No. 40

**Expected results**

See above under "Action Group IM1"

**Indicators of progress**

See above under "Action Group IM1"

#### **ACTION GROUP D1: Tree vitality and adaptation**

**Description:**

This Action Group is a demonstration action to be carried out on a limited number of IM1 monitoring plots (140 plots). Action Group D1 only includes data collection, the related coordination and evaluation being included in Action C1-tree-30(NWD).

The main objectives of this Action Group are to develop new integrated key indicators for tree vitality and to provide scientifically sound tools for operational monitoring of tree vitality under field conditions in European forests. This will result in sound and effective integrated tree vitality monitoring at the intensive level, and will be the basis for the development of indicators to be assessed on the large scale network, including a defined set of quality measures and training needs.

Different meteorological and chemical environmental trends will be identified and documented in FutMon. Tree responses are significant tools to evaluate the effects of environmental changes on sustainable forest development, to validate cause/effect models, to set up critical loads and exceedances, and to develop future scenarios.

Under the MCPFE indicator list and Forest Focus programme, defoliation is used as a major indicator of forest health and vitality. However, practical experiences in many countries as well

as in many studies show a number of methodological limitations of this indicator (e.g. non homogeneous definitions, unclear influence of regeneration processes and of other biotic factors such as biotic agents) and therefore a clear need to develop an improved methodology for forest health assessments.

Within FutMon a more integrated vitality concept is proposed, including indicators for longevity (to live and survive, absence of mortality), functioning (e.g. carbon allocation, growth and regeneration) and stress tolerance (e.g. adaptability, ability to compete with neighbouring trees and vulnerability, e.g. Gehrig, 2005).

In addition to other surveys for which more know-how is already available, airborne laser scanning and webcams for phenological recordings will be tested (for laser scanning see Action C1-tree-30(NWD)).

An overview on related plotnumbers and assessments to be carried out is provided in Annex 2.

***Methods employed:***

This Action Group will only be conducted on plots on which the full set of surveys from Action Group IM1 is carried out (exception: no passive samplers in countries of Northern Europe). Action Group D1 will specifically focus on

1. Methods defined in ICP Forests Manual Chapter 2 "Visual Assessment of Crown Condition", such as stand structure indices, removals and annual mortality, defoliation, discolouration, flowering and fruiting, crown form/morphology, with special emphasis on the assessment of damage causes
2. Methods defined in ICP Forests Manual Chapter 5 "Forest Growth", e.g. continuous stem circumference measurements (EP Growth)
3. Methods defined in ICP Forests Manual Chapter 11 "Litterfall", in particular foliage and fruiting compartments)
4. Methods defined in ICP Forests Manual Chapter 9 "Phenology"

New surveys to be implemented are

5. Webcams for phenological recordings: The cameras for phenological recordings will be installed. These are able to turn 360°. The cameras can be attached to a tower (e.g. the ones used for meteo) taking pictures from above, or installed closer to the ground, taking pictures from below. Taking pictures from below may be more difficult owing to the light conditions and require more than one camera per plot in order to be able to assess a sufficient number of trees. The camera is connected to a steering unit that is programmed in such way that the camera follows a specific cycle a number of times a day. During each cycle the camera zooms in and focuses on the crowns of a number of selected trees. The pictures from each cycle are stored on a hard disk in a recorder. The data are collected from the recorder via an USB port or via an on-line system, in order to facilitate control and adjustment of the assessments on remote sites. Depending on the location of the plot, the system works on the mains power supply or with solar panels. The detailed methods will be described within C1-Phen-10(FI) at the beginning of 2009, and will be implemented starting from the second half of 2009.
6. Leaf area index measurements (e.g. LI-COR 2000). A monitoring manual for the new method will be developed within Action C1-tree-30(NWD) at the beginning of 2009, and will be implemented starting from the second half of 2009.

Monitoring data will be submitted by the countries to the Coordinating Beneficiary where they will undergo intensive validation. Data will then be submitted to the European Commission by the Coordinating Beneficiary. For surveys covered by the present Forest Focus data base, data formats will be compatible.

***Quality control and assurance measures to be carried out by the associated beneficiaries responsible for collecting monitoring data***

- Participation in one phenological intercomparison (2009)
- Participation in a training course for new methods (2009)

***Constraints and assumptions:***

Even though the data will be collected in accordance with harmonized methods, the fact that tree reactions differ between individual tree species and depend on varying, European-wide ecological conditions ("Ecozones") must be taken into account.

The time schedule for the development of new monitoring manuals and implementation on the monitoring plots is comparatively tight, taking into account the participation of experts from a large number of countries. However, the Action Group builds on existing infrastructure of Expert Panels under ICP Forests.

Due to the fact that data submission and validation takes over 12 months, the data of the monitoring year 2010 are not in time available for evaluation as a basis for recommendations for future core plot selection in 2011 (follow-up project). Recommendations for core plot selection will be built on monitoring data from 2009 instead. Data collection in 2010 is nevertheless essential in order to ensure the continuation of time series.

***Expected results (quantitative information when possible):***

- Plots equipped with related monitoring devices
- Data on tree health and vitality
- Tree vitality assessments, in particular field assessments of new and existing parameters at different scales of monitoring, including quality control and quality assurance measures.
- Tests of tree health parameters by associated beneficiaries

***Indicators of progress:***

- Webcams installed and related data submitted
- Submission of data and metadata
- Status of data validation by Coordinating Beneficiary.
- Submission of validated data to the European Commission
- Organisation and arrangement of intercomparison exercise and training course

**Action D1-2(AT)**

***Description:***

The action includes the implementation of Action Group D1 (see above) in Austria

***Methods employed***

See above under "Action Group D1".

The Action will be based on 6 plots

***Constraints and assumptions***

See above under "Action Group D1"

***Beneficiary responsible for implementation:***

Beneficiary No. 2

***Expected results***

See above under "Action Group D1"

***Indicators of progress***

See above under "Action Group D1"

**Action D1-3(FL)**

***Description:***

The action includes the implementation of Action Group D1 (see above) in Belgium-Flanders

***Methods employed***

See above under "Action Group D1".

The Action will be based on 5 plots

***Constraints and assumptions***

See above under "Action Group D1"

***Beneficiary responsible for implementation:***

Beneficiary No. 3

***Expected results***

See above under "Action Group D1"

***Indicators of progress***

See above under "Action Group D1"

**Action D1-7(CZ)**

***Description:***

The action includes the implementation of Action Group D1 (see above) in Czech Republic

***Methods employed***

See above under "Action Group D1".

The Action will be based on 4 plots

***Constraints and assumptions***

See above under "Action Group D1"

***Beneficiary responsible for implementation:***

Beneficiary No. 7

***Expected results***

See above under "Action Group D1"

***Indicators of progress***

See above under "Action Group D1"

**Action D1-8(DK)**

***Description:***

The action includes the implementation of Action Group D1 (see above) in Denmark

***Methods employed***

See above under "Action Group D1".

The Action will be based on 3 plots

***Constraints and assumptions***

See above under "Action Group D1"

***Beneficiary responsible for implementation:***

Beneficiary No. 8

***Expected results***

See above under "Action Group D1"

***Indicators of progress***

See above under "Action Group D1"

**Action D1-10(FI)**

***Description:***

The action includes the implementation of Action Group D1 (see above) in Finland

***Methods employed***

See above under "Action Group D1".

The Action will be based on 18 plots

***Constraints and assumptions***

See above under "Action Group D1"

***Beneficiary responsible for implementation:***

Beneficiary No. 10

***Expected results***

See above under "Action Group D1"

***Indicators of progress***

See above under "Action Group D1"

**Action D1-12(GR)**

***Description:***

The action includes the implementation of Action Group D1 (see above) in Greece

***Methods employed***

See above under "Action Group D1".

The Action will be based on 3 plots

***Constraints and assumptions***

See above under "Action Group D1"

***Beneficiary responsible for implementation:***

Beneficiary No. 12

***Expected results***

See above under "Action Group D1"

***Indicators of progress***

See above under "Action Group D1"

**Action D1-13(HU)**

***Description:***

The action includes the implementation of Action Group D1 (see above) in Hungaria

***Methods employed***

See above under "Action Group D1".

The Action will be based on 8 plots

***Constraints and assumptions***

See above under "Action Group D1"

***Beneficiary responsible for implementation:***

Beneficiary No. 13

***Expected results***

See above under "Action Group D1"

***Indicators of progress***

See above under "Action Group D1"

**Action D1-14(IE)**

***Description:***

The action includes the implementation of Action Group D1 (see above) in Ireland

***Methods employed***

See above under "Action Group D1".

The Action will be based on 3 plots

***Constraints and assumptions***

See above under "Action Group D1"

***Beneficiary responsible for implementation:***

Beneficiary No. 14

***Expected results***

See above under "Action Group D1"

***Indicators of progress***

See above under "Action Group D1"

#### **Action D1-20(RO)**

***Description:***

The action includes the implementation of Action Group D1 (see above) in Romania

***Methods employed***

See above under "Action Group D1".

The Action will be based on 4 plots

***Constraints and assumptions***

See above under "Action Group D1"

***Beneficiary responsible for implementation:***

Beneficiary No. 20

***Expected results***

See above under "Action Group D1"

***Indicators of progress***

See above under "Action Group D1"

#### **Action D1-21(SK)**

***Description:***

The action includes the implementation of Action Group D1 (see above) in Slovakia

***Methods employed***

See above under "Action Group D1".

The Action will be based on 4 plots

***Constraints and assumptions***

See above under "Action Group D1"

***Beneficiary responsible for implementation:***

Beneficiary No. 21

***Expected results***

See above under "Action Group D1"

***Indicators of progress***

See above under "Action Group D1"

#### **Action D1-22(SI)**

***Description:***

The action includes the implementation of Action Group D1 (see above) in Slovenia

***Methods employed***

See above under "Action Group D1".

The Action will be based on 6 plots

***Constraints and assumptions***

See above under "Action Group D1"

***Beneficiary responsible for implementation:***

Beneficiary No. 22

***Expected results***

See above under "Action Group D1"

***Indicators of progress***

See above under "Action Group D1"

#### **Action D1-23(ES)**

***Description:***

The action includes the implementation of Action Group D1 (see above) in Spain

***Methods employed***

See above under "Action Group D1".

The Action will be based on 30 plots

***Constraints and assumptions***

See above under "Action Group D1"

***Beneficiary responsible for implementation:***

Beneficiary No. 23

***Expected results***

See above under "Action Group D1"

***Indicators of progress***

See above under "Action Group D1"

**Action D1-26(UK)**

***Description:***

The action includes the implementation of Action Group D1 (see above) in United Kingdom

***Methods employed***

See above under "Action Group D1".

The Action will be based on 4 plots

***Constraints and assumptions***

See above under "Action Group D1"

***Beneficiary responsible for implementation:***

Beneficiary No. 26

***Expected results***

See above under "Action Group D1"

***Indicators of progress***

See above under "Action Group D1"

**Action D1-27(BB)**

***Description:***

The action includes the implementation of Action Group D1 (see above) in Germany, Brandenburg

***Methods employed***

See above under "Action Group D1".

The Action will be based on 4 plots

***Constraints and assumptions***

See above under "Action Group D1"

***Beneficiary responsible for implementation:***

Beneficiary No. 27

***Expected results***

See above under "Action Group D1"

***Indicators of progress***

See above under "Action Group D1"

**Action D1-28(BW)**

***Description:***

The action includes the implementation of Action Group D1 (see above) in Germany, Baden Württemberg

***Methods employed***

See above under "Action Group D1".

The Action will be based on 5 plots

***Constraints and assumptions***

See above under "Action Group D1"



***Beneficiary responsible for implementation:***

Beneficiary No. 28

***Expected results***

See above under "Action Group D1"

***Indicators of progress***

See above under "Action Group D1"

**Action D1-29(BY)**

***Description:***

The action includes the implementation of Action Group D1 (see above) in Germany, Bayern

***Methods employed***

See above under "Action Group D1".

The Action will be based on 10 plots

***Constraints and assumptions***

See above under "Action Group D1"

***Beneficiary responsible for implementation:***

Beneficiary No. 29

***Expected results***

See above under "Action Group D1"

***Indicators of progress***

See above under "Action Group D1"

**Action D1-30(NWD)**

***Description:***

The action includes the implementation of Action Group D1 (see above) in Germany, Northwest

***Methods employed***

See above under "Action Group D1".

The Action will be based on 9 plots

***Constraints and assumptions***

See above under "Action Group D1"

***Beneficiary responsible for implementation:***

Beneficiary No. 30

***Expected results***

See above under "Action Group D1"

***Indicators of progress***

See above under "Action Group D1"

**Action D1-31(MV)**

***Description:***

The action includes the implementation of Action Group D1 (see above) in Germany, Mecklenburg-Vorpommern

***Methods employed***

See above under "Action Group D1".

The Action will be based on 2 plots

***Constraints and assumptions***

See above under "Action Group D1"

***Beneficiary responsible for implementation:***

Beneficiary No. 31

***Expected results***

See above under "Action Group D1"

***Indicators of progress***

See above under "Action Group D1"

#### **Action D1-32(NW)**

***Description:***

The action includes the implementation of Action Group D1 (see above) in Germany, Nordrhein-Westfalen

***Methods employed***

See above under "Action Group D1".

The Action will be based on 4 plots

***Constraints and assumptions***

See above under "Action Group D1"

***Beneficiary responsible for implementation:***

Beneficiary No. 32

***Expected results***

See above under "Action Group D1"

***Indicators of progress***

See above under "Action Group D1"

#### **Action D1-33(RP)**

***Description:***

The action includes the implementation of Action Group D1 (see above) in Germany, Rheinland-Pfalz

***Methods employed***

See above under "Action Group D1".

The Action will be based on 3 plots

***Constraints and assumptions***

See above under "Action Group D1"

***Beneficiary responsible for implementation:***

Beneficiary No. 33

***Expected results***

See above under "Action Group D1"

***Indicators of progress***

See above under "Action Group D1"

#### **Action D1-39(IT)**

***Description:***

The action includes the implementation of Action Group D1 (see above) in Italy

***Methods employed***

See above under "Action Group D1".

The Action will be based on 5 plots

***Constraints and assumptions***

See above under "Action Group D1"

***Beneficiary responsible for implementation:***

Beneficiary No. 39

***Expected results***

See above under "Action Group D1"

***Indicators of progress***

See above under "Action Group D1"

**ACTION GROUP D2: Nutrient cycling and critical loads*****Description:***

This Action Group is a demonstration action to be carried out on a limited number of IM1 monitoring plots (195 plots). It aims at the refinement and development of monitoring methods in the field of nutrient cycling and critical loads. Data collection is included under Action Group D2, and the related coordination and evaluation is included in Action C1-Fol1-10(FI).

Nutrient cycling in forests, including nutrient input from deposition, direct and indirect uptake by trees and other plants, output from the vegetation in form of leaching and litterfall and all soil-related processes (e.g. leaching, ion exchange and weathering), is one of the key factors in ecosystem functioning. In large parts of Europe forest ecosystems are severely eutrophicated due to an excess nitrogen input and have hence lost the capability to utilize the excess nitrogen input. In the most severe cases this has led to biodiversity loss, as well as to nitrogen (primarily nitrate) leaching through the forest ecosystem into groundwater and further to the water courses. The capacity of forest ecosystems to utilize and withstand nutrient and acidic deposition is affected not only by the amount and quality of deposition but also by, for example, soil type, forest type, species composition and forest vitality. In the future many of these parameters will be affected by the changing climate and hence the capacity of forests to use nutrients and to neutralize acidic deposition in many places will change.

The critical loads concept is a scientifically sound and politically accepted approach for risk assessment. It offers a method to estimate the effects of acidification and eutrophication on a specific site and stand. This can be done by studying the above-mentioned components of nutrient cycling in different sites subjected to different deposition loads. When combined with scenarios of future climate and vegetation changes, critical loads can be used to identify those areas where eutrophication and acidification will potentially cause problems in ecosystem functioning, including e.g. deterioration of water quality and biodiversity loss.

The main aim of this Action Group is to gather the relevant information from different parts of Europe that is needed to apply the critical loads concept to large areas. This information, combined with scenario analyses of the future impacts of expected air pollution loads based on dynamic modelling and with climate change scenarios, will allow the formulation of predictions and pinpoint potential future problem areas.

An overview on related plotnumbers and assessments to be carried out is provided in Annex 2.

***Methods employed:***

This action will only be conducted on plots on which the full set of surveys from Action Group IM1 is carried out (exception: no passive samplers in countries of Northern Europe)

In addition, surveys specifically conducted within this action:

- Methods defined in ICP Forests Manual Chapter 11 "Litterfall" (mass and element concentrations)
- Methods defined in ICP Forests Manual Chapter 3 "Soil solution" (chemical composition)
- More intensive foliar surveys (all leaf age classes, estimation of foliage mass, leaf mass per area and leaf area index). Monitoring manuals for the new methods will be developed within Action C1-Fol1-10(FI) at the beginning of 2009 and will be implemented starting from the second half of 2009.
- Nutrient budget of ground vegetation. Monitoring manuals for the new methods will be developed within Action C1-Fol1-10(FI) and will be implemented starting from the second half of 2009.

Monitoring data will be submitted by the countries to the Coordinating Beneficiary where they will undergo intensive validation. Data will then be submitted to the European Commission by

the Coordinating Beneficiary. For surveys covered by the present Forest Focus data base, data formats will be compatible.

***Quality control and assurance measures to be carried out by the associated beneficiaries responsible for collecting monitoring data***

There are no specific quality measures foreseen under this action group because the relevant measures are already included under Action Group IM1

***Constraints and assumptions:***

The time schedule for the development of new monitoring manuals and implementation on the monitoring plots is comparatively tight, taking into account the participation of experts from a large number of countries. However, the Action Group builds on existing infrastructure of Expert Panels under ICP Forests.

Due to the fact that data submission and validation takes over 12 months, the data of the monitoring year 2010 are not in time available for evaluation as a basis for recommendations for future core plot selection in 2011 (follow-up project). Recommendations for core plot selection will be built on monitoring data from 2009 instead. Data collection in 2010 is nevertheless essential in order to ensure the continuation of time series.

***Expected results (quantitative information when possible):***

- Plots equipped with related monitoring devices
- Data on nutrient fluxes and deposition as a basis for the calculation of critical loads and as a basis for deriving information on nutrient fluxes through the soil:
  - loss of base cations
  - loss of nitrogen / nitrate flux to ground water
  - input/output balance of individual nutrients
- Estimations of nutrient budgets in vegetation (content and output)
- Estimations of critical loads on the plots
- Estimation of critical load exceedances on the plots
- Predictions on whether the critical loads will change if the vegetation on the plots changes

***Indicators of progress:***

- Submission of data and metadata
- Status of data validation by Coordinating Beneficiary.
- Submission of validated data to European Commission

**Action D2-2(AT)**

***Description:***

The action includes the implementation of Action Group D2 (see above) in Austria

***Methods employed***

See above under "Action Group D2".

The Action will be based on 6 plots

***Constraints and assumptions***

See above under "Action Group D2"

***Beneficiary responsible for implementation:***

Beneficiary No. 2

***Expected results***

See above under "Action Group D2"

***Indicators of progress***

See above under "Action Group D2"

### **Action D2-3(FL)**

***Description:***

The action includes the implementation of Action Group D2 (see above) in Belgium-Flanders

***Methods employed***

See above under "Action Group D2".

The Action will be based on 5 plots

***Constraints and assumptions***

See above under "Action Group D2"

***Beneficiary responsible for implementation:***

Beneficiary No. 3

***Expected results***

See above under "Action Group D2"

***Indicators of progress***

See above under "Action Group D2"

### **Action D2-5(BU)**

***Description:***

The action includes the implementation of Action Group D2 (see above) in Bulgaria

***Methods employed***

See above under "Action Group D2".

The Action will be based on 3 plots

***Constraints and assumptions***

See above under "Action Group D2"

***Beneficiary responsible for implementation:***

Beneficiary No. 5

***Expected results***

See above under "Action Group D2"

***Indicators of progress***

See above under "Action Group D2"

### **Action D2-7(CZ)**

***Description:***

The action includes the implementation of Action Group D2 (see above) in Czech Republic

***Methods employed***

See above under "Action Group D2".

The Action will be based on 10 plots

***Constraints and assumptions***

See above under "Action Group D2"

***Beneficiary responsible for implementation:***

Beneficiary No. 7

***Expected results***

See above under "Action Group D2"

***Indicators of progress***

See above under "Action Group D2"

### **Action D2-8(DK)**

***Description:***

The action includes the implementation of Action Group D2 (see above) in Denmark

***Methods employed***

See above under "Action Group D2".

The Action will be based on 6 plots

***Constraints and assumptions***

See above under "Action Group D2"

***Beneficiary responsible for implementation:***

Beneficiary No. 8

***Expected results***

See above under "Action Group D2"

***Indicators of progress***

See above under "Action Group D2"

**Action D2-9(Ee)**

***Description:***

The action includes the implementation of Action Group D2 (see above) in Estonia

***Methods employed***

See above under "Action Group D2".

The Action will be based on 5 plots

***Constraints and assumptions***

See above under "Action Group D2"

***Beneficiary responsible for implementation:***

Beneficiary No. 9

***Expected results***

See above under "Action Group D2"

***Indicators of progress***

See above under "Action Group D2"

**Action D2-10(FI)**

***Description:***

The action includes the implementation of Action Group D2 (see above) in Finland

***Methods employed***

See above under "Action Group D2".

The Action will be based on 18 plots

***Constraints and assumptions***

See above under "Action Group D2"

***Beneficiary responsible for implementation:***

Beneficiary No. 10

***Expected results***

See above under "Action Group D2"

***Indicators of progress***

See above under "Action Group D2"

**Action D2-11(FR)**

***Description:***

The action includes the implementation of Action Group D2 (see above) in France

***Methods employed***

See above under "Action Group D2".

The Action will be based on 10 plots

***Constraints and assumptions***

See above under "Action Group D2"

***Beneficiary responsible for implementation:***

Beneficiary No. 11

***Expected results***

See above under "Action Group D2"

***Indicators of progress***

See above under "Action Group D2"

**Action D2-12(GR)**

***Description:***

The action includes the implementation of Action Group D2 (see above) in Greece

***Methods employed***

See above under "Action Group D2".

The Action will be based on 3 plots

***Constraints and assumptions***

See above under "Action Group D2"

***Beneficiary responsible for implementation:***

Beneficiary No. 12

***Expected results***

See above under "Action Group D2"

***Indicators of progress***

See above under "Action Group D2"

**Action D2-13(HU)**

***Description:***

The action includes the implementation of Action Group D2 (see above) in Hungary

***Methods employed***

See above under "Action Group D2".

The Action will be based on 2 plots

***Constraints and assumptions***

See above under "Action Group D2"

***Beneficiary responsible for implementation:***

Beneficiary No. 13

***Expected results***

See above under "Action Group D2"

***Indicators of progress***

See above under "Action Group D2"

**Action D2-14(IE)**

***Description:***

The action includes the implementation of Action Group D2 (see above) in Ireland

***Methods employed***

See above under "Action Group D2".

The Action will be based on 3 plots

***Constraints and assumptions***

See above under "Action Group D2"

***Beneficiary responsible for implementation:***

Beneficiary No. 14

***Expected results***

See above under "Action Group D2"

***Indicators of progress***

See above under "Action Group D2"

#### **Action D2-20(RO)**

***Description:***

The action includes the implementation of Action Group D2 (see above) in Romania

***Methods employed***

See above under "Action Group D2".

The Action will be based on 4 plots

***Constraints and assumptions***

See above under "Action Group D2"

***Beneficiary responsible for implementation:***

Beneficiary No. 20

***Expected results***

See above under "Action Group D2"

***Indicators of progress***

See above under "Action Group D2"

#### **Action D2-21(SK)**

***Description:***

The action includes the implementation of Action Group D2 (see above) in Slovakia

***Methods employed***

See above under "Action Group D2".

The Action will be based on 4 plots

***Constraints and assumptions***

See above under "Action Group D2"

***Beneficiary responsible for implementation:***

Beneficiary No. 21

***Expected results***

See above under "Action Group D2"

***Indicators of progress***

See above under "Action Group D2"

#### **Action D2-22(SI)**

***Description:***

The action includes the implementation of Action Group D2 (see above) in Slovenia

***Methods employed***

See above under "Action Group D2".

The Action will be based on 2 plots

***Constraints and assumptions***

See above under "Action Group D2"

***Beneficiary responsible for implementation:***

Beneficiary No. 22

***Expected results***

See above under "Action Group D2"

***Indicators of progress***

See above under "Action Group D2"

#### **Action D2-23(ES)**

***Description:***

The action includes the implementation of Action Group D2 (see above) in Spain



***Methods employed***

See above under "Action Group D2".

The Action will be based on 30 plots

***Constraints and assumptions***

See above under "Action Group D2"

***Beneficiary responsible for implementation:***

Beneficiary No. 23

***Expected results***

See above under "Action Group D2"

***Indicators of progress***

See above under "Action Group D2"

**Action D2-25(SE)**

***Description:***

The action includes the implementation of Action Group D2 (see above) in Sweden

***Methods employed***

See above under "Action Group D2".

The Action will be based on 12 plots

***Constraints and assumptions***

See above under "Action Group D2"

***Beneficiary responsible for implementation:***

Beneficiary No. 25

***Expected results***

See above under "Action Group D2"

***Indicators of progress***

See above under "Action Group D2"

**Action D2-26(UK)**

***Description:***

The action includes the implementation of Action Group D2 (see above) in United Kingdom

***Methods employed***

See above under "Action Group D2".

The Action will be based on 6 plots

***Constraints and assumptions***

See above under "Action Group D2"

***Beneficiary responsible for implementation:***

Beneficiary No. 26

***Expected results***

See above under "Action Group D2"

***Indicators of progress***

See above under "Action Group D2"

**Action D2-27(BB)**

***Description:***

The action includes the implementation of Action Group D2 (see above) in Germany, Brandenburg

***Methods employed***

See above under "Action Group D2".

The Action will be based on 4 plots

***Constraints and assumptions***

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See above under “Action Group D2”

### ***Beneficiary responsible for implementation:***

Beneficiary No. 27

### ***Expected results***

See above under “Action Group D2”

### ***Indicators of progress***

See above under “Action Group D2”

## **Action D2-28(BW)**

### ***Description:***

The action includes the implementation of Action Group D2 (see above) in Germany; Baden Württemberg

### ***Methods employed***

See above under “Action Group D2”.

The Action will be based on 5 plots

### ***Constraints and assumptions***

See above under “Action Group D2”

### ***Beneficiary responsible for implementation:***

Beneficiary No. 28

### ***Expected results***

See above under “Action Group D2”

### ***Indicators of progress***

See above under “Action Group D2”

## **Action D2-29 (BY)**

### ***Description:***

The action includes the implementation of Action Group D2 (see above) in Germany, Bayern

### ***Methods employed***

See above under “Action Group D2”.

The Action will be based on 10 plots

### ***Constraints and assumptions***

See above under “Action Group D2”

### ***Beneficiary responsible for implementation:***

Beneficiary No. 29

### ***Expected results***

See above under “Action Group D2”

### ***Indicators of progress***

See above under “Action Group D2”

## **Action D2-30(NWD)**

### ***Description:***

The action includes the implementation of Action Group D1 (see above) in Germany, Northwest

### ***Methods employed***

See above under “Action Group D2”.

The Action will be based on 9 plots

### ***Constraints and assumptions***

See above under “Action Group D2”

### ***Beneficiary responsible for implementation:***

Beneficiary No. 30

***Expected results***

See above under "Action Group D2"

***Indicators of progress***

See above under "Action Group D2"

**Action D2-31(MV)**

***Description:***

The action includes the implementation of Action Group D2 (see above) in Germany, Mecklenburg-Vorpommern

***Methods employed***

See above under "Action Group D2".  
The Action will be based on 2 plots

***Constraints and assumptions***

See above under "Action Group D2"

***Beneficiary responsible for implementation:***

Beneficiary No. 31

***Expected results***

See above under "Action Group D2"

***Indicators of progress***

See above under "Action Group D2"

**Action D2-32(NW)**

***Description:***

The action includes the implementation of Action Group D2 (see above) in Germany, Nordrhein-Westfalen

***Methods employed***

See above under "Action Group D2".  
The Action will be based on 4 plots

***Constraints and assumptions***

See above under "Action Group D2"

***Beneficiary responsible for implementation:***

Beneficiary No. 32

***Expected results***

See above under "Action Group D2"

***Indicators of progress***

See above under "Action Group D2"

**Action D2-33(RP)**

***Description:***

The action includes the implementation of Action Group D2 (see above) in Germany, Rheinland-Pfalz

***Methods employed***

See above under "Action Group D2".  
The Action will be based on 3 plots

***Constraints and assumptions***

See above under "Action Group D2"

***Beneficiary responsible for implementation:***

Beneficiary No. 33

***Expected results***

See above under "Action Group D2"

***Indicators of progress***

See above under "Action Group D2"

**Action D2-34(SH)**

***Description:***

The action includes the implementation of Action Group D2 (see above) in Germany, Schleswig Holstein

***Methods employed***

See above under "Action Group D2".

The Action will be based on 1 plot

***Constraints and assumptions***

See above under "Action Group D2"

***Beneficiary responsible for implementation:***

Beneficiary No. 34

***Expected results***

See above under "Action Group D2"

***Indicators of progress***

See above under "Action Group D2"

**Action D2-35(SL)**

***Description:***

The action includes the implementation of Action Group D2 (see above) in Germany, Saarland

***Methods employed***

See above under "Action Group D2".

The Action will be based on 1 plot

***Constraints and assumptions***

See above under "Action Group D2"

***Beneficiary responsible for implementation:***

Beneficiary No. 35

***Expected results***

See above under "Action Group D2"

***Indicators of progress***

See above under "Action Group D2"

**Action D2-36(SN)**

***Description:***

The action includes the implementation of Action Group D2 (see above) in Germany, Sachsen

***Methods employed***

See above under "Action Group D2".

The Action will be based on 2 plots

***Constraints and assumptions***

See above under "Action Group D2"

***Beneficiary responsible for implementation:***

Beneficiary No. 36

***Expected results***

See above under "Action Group D2"

***Indicators of progress***

See above under "Action Group D2"

**Action D2-37(TH)****Description:**

The action includes the implementation of Action Group D2 (see above) in Germany, Thüringen

**Methods employed**

See above under "Action Group D2".

The Action will be based on 3 plots

**Constraints and assumptions**

See above under "Action Group D2"

**Beneficiary responsible for implementation:**

Beneficiary No. 37

**Expected results**

See above under "Action Group D2"

**Indicators of progress**

See above under "Action Group D2"

**Action D2-40(IT)****Description:**

The action includes the implementation of Action Group D2 (see above) in Italy

**Methods employed**

See above under "Action Group D2".

The Action will be based on 22 plots

**Constraints and assumptions**

See above under "Action Group D2"

**Beneficiary responsible for implementation:**

Beneficiary No. 40

**Expected results**

See above under "Action Group D2"

**Indicators of progress**

See above under "Action Group D2"

**ACTION GROUP D3: Water budgets****Description:**

This Action Group is a demonstration action to be carried out on a limited number of IM1 monitoring plots (124 plots) and is primarily aimed at the development and implementation of water budget modelling on intensive monitoring plots. Action Group D3 only includes data collection because the related coordination and evaluation is already included in Action C1-Met-29(BY).

The water supply in the soil is one of the key factors affecting tree vitality and forest condition. Moreover, determination of the water budget has been shown to be of central importance in understanding a number of physiological processes like nutrient uptake, growth and response to biotic stress factors. The existing Level II programme covers the most important impact factors, as well as the reaction parameters of the forests at the same sites. However, because the main focus in monitoring has earlier been on air pollution effects, meteorological and hydrological measurements have so far only been conducted at a limited number of Level II plots. Therefore, it is suggested to consolidate and amend the existing monitoring activities within the Level II network and to aim at the implementation of complete sets of surveys including meteorology, soil moisture, phenological observations, forest growth assessment, biotic damage, soil solution and crown condition on the same plots. In this respect, the demonstration action "Water budget" will test and demonstrate the feasibility of more intensive

soil moisture measurements. Based on the measurements, water budget models will be further developed and validated at the plots included in the action and will be applied to the other Level II and all Level I plots. The water budget models will yield water fluxes through the soil required for the calculation of nutrient fluxes. Water availability for forest trees and drought stress indicators are also explanatory variables for the varying responses (growth, crown condition, pests and diseases) of forests to drought, physiological water shortage and elevated ozone concentrations. The results will also be an essential input for additional projects building on FutMon and aiming at detection of the effects of climate change on forest ecosystems.

An overview on related plotnumbers and assessments to be carried out is provided in Annex 2.

### ***Methods employed:***

This action will only be conducted on plots on which the full set of surveys from action IM1 is carried out (exception: no passive samplers in countries of Northern Europe)

Additional measurements of soil moisture will be implemented at different depths on selected plots. This should preferably be performed using technology that measures the volumetric water content (TDR). The matrix potential will also be measured using tensiometers. The implementation of both methods offers the possibility to determine water retention functions (field pF curves). pF curves will also be measured in the laboratory on samples from all those plots, covered by the Action, for which water retention functions curves are not available. Water retention functions are needed for the parameterisation of water budget models and for the improvement of existing pedo-transfer-functions.

Water budget modelling will be carried out on the basis of soil moisture measurements. These models need the input data from many other surveys, like meteorology, soil analysis (physical parameters and mainly C content), stand characteristics, increment, leaf area index (LAI). Water budget models will be calibrated and the results will be validated with data like soil volumetric water content, soil matrix, soil temperature, stand precipitation and sap flow (if available).

Monitoring data will be submitted by the countries to the Coordinating Beneficiary where they will undergo intensive validation. Data will then be submitted to the European Commission by the Coordinating Beneficiary. For surveys covered by the present Forest Focus data base, data formats will be compatible.

Surveys specifically necessary for this action:

- soil volumetric water content (TDR measurements)
- matrix potential
- determination of water retention functions in the lab
- stand precipitation
- soil temperature
- leaf area index (e.g. LI-COR 2000)

Monitoring manuals for the new methods will be developed within Action C1-Met-29(BY) in the first half of 2009 and will be implemented starting from the second half of 2009. The manual for leaf area index assessments will be developed within Action C1-tree-30(NWD).

### ***Quality control and assurance measures to be carried out by the associated beneficiaries responsible for collecting monitoring data***

- Intercomparison of water retention function determination: a soil physical ring test with standardised soil material is included in the soil ring test (Coordination under C1-Soil-3(FI), laboratory analyses under Action group IM1).
- Intercomparison of soil moisture and matrix potential measurement: a soil moisture ring test with standardised soil material is included in the soil ring test (Coordination under C1-Soil-3(FI), laboratory analyses under Action group IM1).

- A meeting for training in new methods like leaf area index measurements is foreseen in 2009
- Comparison of different water budget models at the European scale: the parametrisation and verification of different water budget models with data from sites included under Action Group D3 will be carried out centrally within Action C1-Met-29(BY).

***Constraints and assumptions:***

Soil moisture measurements and water budget modelling are already carried out in a number of countries based on national monitoring manuals. The implementation of European-wide standardized methods will require changes in national methodologies. In order to preserve time series and to compare the results obtained with different methods, a parallel assessment on a limited number of sites will be necessary.

The time schedule for the development of new monitoring manuals and implementation on the monitoring plots is comparatively tight, taking into account the participation of experts from a large number of countries. However, the Action Group builds on existing infrastructure of Expert Panels under the ICP Forests.

Due to the fact that data submission and validation takes over 12 months, the data of the monitoring year 2010 are not in time available for evaluation as a basis for recommendations for future core plot selection in 2011 (follow-up project). Recommendations for core plot selection will be built on monitoring data from 2009 instead. Data collection in 2010 is nevertheless essential in order to ensure the continuation of time series.

***Expected results (quantitative information when possible):***

- Plots equipped with related monitoring devices
- Data on soil moisture and water fluxes as a basis for deriving information on
  - water availability at selected plots in Europe
  - drought stress indices for selected plots in Europe
- Data for the calculation of improved water budget models for the application on all Level II and Level I plots in Europe
- Data for the derivation of drought stress indicators for forests
  - $T_a/T_p$  (actual transpiration vs. Potential transpiration)
  - $T_{diff}$  (potential transpiration minus actual transpiration)

***Indicators of progress:***

- Submission of data and metadata
- Status of data validation by Coordinating Beneficiary.
- Submission of validated data to European Commission

### **Action D3-2(AT)**

***Description:***

The action includes the implementation of Action Group D3 (see above) in Austria

***Methods employed***

See above under "Action Group D3".

The Action will be based on 6 plots

***Constraints and assumptions***

See above under "Action Group D3"

***Beneficiary responsible for implementation:***

Beneficiary No. 2

***Expected results***

See above under "Action Group D3"

***Indicators of progress***

See above under "Action Group D3"

#### **Action D3-3(FL)**

***Description:***

The action includes the implementation of Action Group D3 (see above) in Belgium, Flanders

***Methods employed***

See above under "Action Group D3".

The Action will be based on 5 plots

***Constraints and assumptions***

See above under "Action Group D3"

***Beneficiary responsible for implementation:***

Beneficiary No. 3

***Expected results***

See above under "Action Group D3"

***Indicators of progress***

See above under "Action Group D3"

#### **Action D3-7(CZ)**

***Description:***

The action includes the implementation of Action Group D3 (see above) in Czech Republic

***Methods employed***

See above under "Action Group D3".

The Action will be based on 10 plots

***Constraints and assumptions***

See above under "Action Group D3"

***Beneficiary responsible for implementation:***

Beneficiary No. 7

***Expected results***

See above under "Action Group D3"

***Indicators of progress***

See above under "Action Group D3"

#### **Action D3-8(DK)**

***Description:***

The action includes the implementation of Action Group D3 (see above) in Denmark

***Methods employed***

See above under "Action Group D3".

The Action will be based on 6 plots

***Constraints and assumptions***

See above under "Action Group D3"

***Beneficiary responsible for implementation:***

Beneficiary No. 8

***Expected results***

See above under "Action Group D3"

***Indicators of progress***

See above under "Action Group D3"

#### **Action D3-10(FI)**

***Description:***

The action includes the implementation of Action Group D3 (see above) in Finland



***Methods employed***

See above under "Action Group D3".

The Action will be based on 18 plots

***Constraints and assumptions***

See above under "Action Group D3"

***Beneficiary responsible for implementation:***

Beneficiary No. 10

***Expected results***

See above under "Action Group D3"

***Indicators of progress***

See above under "Action Group D3"

**Action D3-11(FR)**

***Description:***

The action includes the implementation of Action Group D3 (see above) in France

***Methods employed***

See above under "Action Group D3".

The Action will be based on 10 plots

***Constraints and assumptions***

See above under "Action Group D3"

***Beneficiary responsible for implementation:***

Beneficiary No. 11

***Expected results***

See above under "Action Group D3"

***Indicators of progress***

See above under "Action Group D3"

**Action D3-12(GR)**

***Description:***

The action includes the implementation of Action Group D3 (see above) in Greece

***Methods employed***

See above under "Action Group D3".

The Action will be based on 3 plots

***Constraints and assumptions***

See above under "Action Group D3"

***Beneficiary responsible for implementation:***

Beneficiary No. 12

***Expected results***

See above under "Action Group D3"

***Indicators of progress***

See above under "Action Group D3"

**Action D3-20(RO)**

***Description:***

The action includes the implementation of Action Group D3 (see above) in Romania

***Methods employed***

See above under "Action Group D3".

The Action will be based on 4 plots

***Constraints and assumptions***

See above under "Action Group D3"

***Beneficiary responsible for implementation:***

Beneficiary No. 20

***Expected results***

See above under "Action Group D3"

***Indicators of progress***

See above under "Action Group D3"

**Action D3-21(SK)**

***Description:***

The action includes the implementation of Action Group D3 (see above) in Slovakia

***Methods employed***

See above under "Action Group D3".

The Action will be based on 4 plots

***Constraints and assumptions***

See above under "Action Group D3"

***Beneficiary responsible for implementation:***

Beneficiary No. 21

***Expected results***

See above under "Action Group D3"

***Indicators of progress***

See above under "Action Group D3"

**Action D3-22(SI)**

***Description:***

The action includes the implementation of Action Group D3 (see above) in Slovenia

***Methods employed***

See above under "Action Group D3".

The Action will be based on 6 plots

***Constraints and assumptions***

See above under "Action Group D3"

***Beneficiary responsible for implementation:***

Beneficiary No. 22

***Expected results***

See above under "Action Group D3"

***Indicators of progress***

See above under "Action Group D3"

**Action D3-23(ES)**

***Description:***

The action includes the implementation of Action Group D3 (see above) in Spain

***Methods employed***

See above under "Action Group D3".

The Action will be based on 7 plots

***Constraints and assumptions***

See above under "Action Group D3"

***Beneficiary responsible for implementation:***

Beneficiary No. 23

***Expected results***

See above under "Action Group D3"

***Indicators of progress***

See above under "Action Group D3"

**Action D3-26(UK)*****Description:***

The action includes the implementation of Action Group D3 (see above) in United Kingdom

***Methods employed***

See above under "Action Group D3".

The Action will be based on 4 plots

***Constraints and assumptions***

See above under "Action Group D3"

***Beneficiary responsible for implementation:***

Beneficiary No. 26

***Expected results***

See above under "Action Group D3"

***Indicators of progress***

See above under "Action Group D3"

**Action D3-27(BB)*****Description:***

The action includes the implementation of Action Group D3 (see above) in Germany, Brandenburg

***Methods employed***

See above under "Action Group D3".

The Action will be based on 4 plots

***Constraints and assumptions***

See above under "Action Group D3"

***Beneficiary responsible for implementation:***

Beneficiary No. 27

***Expected results***

See above under "Action Group D3"

***Indicators of progress***

See above under "Action Group D3"

**Action D3-28(BW)*****Description:***

The action includes the implementation of Action Group D3 (see above) in Germany, Baden Württemberg

***Methods employed***

See above under "Action Group D3".

The Action will be based on 5 plots

***Constraints and assumptions***

See above under "Action Group D3"

***Beneficiary responsible for implementation:***

Beneficiary No. 28

***Expected results***

See above under "Action Group D3"

***Indicators of progress***

See above under "Action Group D3"

#### **Action D3-29(BY)**

***Description:***

The action includes the implementation of Action Group D3 (see above) in Germany, Bayern

***Methods employed***

See above under "Action Group D3".

The Action will be based on 6 plots

***Constraints and assumptions***

See above under "Action Group D3"

***Beneficiary responsible for implementation:***

Beneficiary No. 29

***Expected results***

See above under "Action Group D3"

***Indicators of progress***

See above under "Action Group D3"

#### **Action D3-30(NWD)**

***Description:***

The action includes the implementation of Action Group D3 (see above) in Germany, Northwest.

***Methods employed***

See above under "Action Group D3".

The Action will be based on 9 plots

***Constraints and assumptions***

See above under "Action Group D3"

***Beneficiary responsible for implementation:***

Beneficiary No. 30

***Expected results***

See above under "Action Group D3"

***Indicators of progress***

See above under "Action Group D3"

#### **Action D3-31(MV)**

***Description:***

The action includes the implementation of Action Group D3 (see above) in Germany, Mecklenburg-Vorpommern

***Methods employed***

See above under "Action Group D3".

The Action will be based on 1 plot

***Constraints and assumptions***

See above under "Action Group D3"

***Beneficiary responsible for implementation:***

Beneficiary No. 31

***Expected results***

See above under "Action Group D3"

***Indicators of progress***

See above under "Action Group D3"

**Action D3-32(NW)****Description:**

The action includes the implementation of Action Group D3 (see above) in Germany, Nordrhein-Westfalen

**Methods employed**

See above under "Action Group D3".

The Action will be based on 3 plots

**Constraints and assumptions**

See above under "Action Group D3"

**Beneficiary responsible for implementation:**

Beneficiary No. 32

**Expected results**

See above under "Action Group D3"

**Indicators of progress**

See above under "Action Group D3"

**Action D3-33(RP)****Description:**

The action includes the implementation of Action Group D3 (see above) in Germany, Rheinland-Pfalz

**Methods employed**

See above under "Action Group D3".

The Action will be based on 2 plots

**Constraints and assumptions**

See above under "Action Group D3"

**Beneficiary responsible for implementation:**

Beneficiary No. 33

**Expected results**

See above under "Action Group D3"

**Indicators of progress**

See above under "Action Group D3"

**Action D3-34 (SH)****Description:**

The action includes the implementation of Action Group D3 (see above) in Germany, Schleswig Holstein

**Methods employed**

See above under "Action Group D3".

The Action will be based on 1 plot

**Constraints and assumptions**

See above under "Action Group D3"

**Beneficiary responsible for implementation:**

Beneficiary No. 34

**Expected results**

See above under "Action Group D3"

**Indicators of progress**

See above under "Action Group D3"

#### **Action D3-36(SN)**

***Description:***

The action includes the implementation of Action Group D3 (see above) in Germany, Sachsen

***Methods employed***

See above under "Action Group D3".

The Action will be based on 2 plots

***Constraints and assumptions***

See above under "Action Group D3"

***Beneficiary responsible for implementation:***

Beneficiary No. 36

***Expected results***

See above under "Action Group D3"

***Indicators of progress***

See above under "Action Group D3"

#### **Action D3-27(TH)**

***Description:***

The action includes the implementation of Action Group D3 (see above) in Germany, Thüringen

***Methods employed***

See above under "Action Group D3".

The Action will be based on 3 plots

***Constraints and assumptions***

See above under "Action Group D3"

***Beneficiary responsible for implementation:***

Beneficiary No. 37

***Expected results***

See above under "Action Group D3"

***Indicators of progress***

See above under "Action Group D3"

#### **Action D3-39(IT)**

***Description:***

The action includes the implementation of Action Group D3 (see above) in Italy

***Methods employed***

See above under "Action Group D3".

The Action will be based on 5 plots

***Constraints and assumptions***

See above under "Action Group D3"

***Beneficiary responsible for implementation:***

Beneficiary No. 39

***Expected results***

See above under "Action Group D3"

***Indicators of progress***

See above under "Action Group D3"

**ACTION GROUP C1: Experts, quality control, coordination of demonstration actions, and sectoral evaluations**

“C1” actions include scientific support to the ongoing monitoring actions, mainly through expert meetings and update of monitoring methods. They also provide coordination, development and implementation of quality assurance and control (QA/QC) procedures by means of ring tests, laboratory inter-comparison exercises, field intercomparison courses, training courses, and the development of standards and references to be laid down in manuals. In addition, the evaluation of monitoring data in connection with action “A1” will be carried out and scientific steering of the demonstration actions “D1-D3” will be provided. An overview on main activities covered by “C1” actions is given in Table 1.

| Name of action     | Thematic field                               | Provision of expert knowledge, update of monitoring methods | Coordination of demonstration actions | Specific evaluations | Organisation of intercalibration courses and ringtests | Laboratory assistance programme |
|--------------------|--|---|---------------------------------------|----------------------|--|---------------------------------|
| C1-QAC-15(IT)      | overall quality control                      | X   |                                       | X                    |  |                                 |
| C1-QALAB-30(NWD)   | quality assurance in laboratories            | X   |                                       |                      |  | X                               |
| C1-Water-40(IT)    | quality assurance in laboratories            |   |                                       |                      | X  | X                               |
| C1-GV-15(IT)       | ground-vegetation                            | X   |                                       | X                    | X  |                                 |
| C1-TREE-30(NWD)    | tree health                                  | X   | D1                                    | X                    | X  |                                 |
| C1-Phen-10(FI)     | phenology                                    | X   |                                       |                      | X  |                                 |
| C1Dam-3(BE)        | tree damages                                 |   |                                       | X                    | X  |                                 |
| C1Soil-3(BE)       | soil   | X   |                                       | X                    | X  | X                               |
| CI-SS-10(FI)       | soil solution                                | X   |                                       |                      | X  | X                               |
| C1-Fol1-10(FI)     | foliar analysis                              | X   | D2                                    | X                    |  |                                 |
| C1-Fol2-2(AT)      | foliar analysis                              |   |                                       |                      | X  | X                               |
| C1-Gro-2(AT)       | forest growth                                | X   |                                       | X                    | X  |                                 |
| C1-Dep-22(SI)      | deposition                                   | X   |                                       | X                    | X  |                                 |
| C1-O3-24(ES)       | ambient air quality                          | X   |                                       |                      | X  |                                 |
| C1-MET-29(BY)      | meteorology                                  | X   | D3                                    | X                    |  | X                               |
| C1-MET-1(DE)       | meteorology                                  |   |                                       | X                    |  |                                 |
| C1-HarmonLS-40(IT) | harmonisation of national forest inventories |   |                                       | X                    |  |                                 |
| C-NFI-8(DK)        | harmonisation of national forest inventories | X   |                                       | X                    |  |                                 |
| C-NFI-25(SE)       | harmonisation of national forest inventories | X   |                                       |                      |  |                                 |

**Table 1:** Main activities within “C1” actions

**Action C1-QAC-15(IT): Coordination of quality assurance and quality control (QA/QC)**

***Description (what, how, where and when):***

The action provides a central coordination of quality assurance and control measures included in a number of more specific expert actions. The action includes the development of quality indicators to be submitted together with monitoring data sets.

C1-QAC-15(IT) will ensure that all proper means are adopted to promote, control and report the quality of the data gathered by the project. It includes: (i) continuous harmonization of methods, from definitions of monitoring procedures to data processing, storage and access; (ii) setting data quality requirements in terms of data completeness, data quality limits and measurement quality objectives; and (iii) monitoring, summarizing and reporting data quality status in the various actions of the project.

***Methods employed:***

A large part of the action will be based on electronic exchange of information between the leader of action C1-QAC-15(IT), the coordinating beneficiary, and the associated beneficiaries. Annual meetings will be organized back-to-back with the FutMon Status Workshops.

The action carries out continuous review and control based on routine consultations between scientists, experts, data users and stakeholders.

***Constraints and assumptions:***

The diversity of forest ecosystems in Europe, the diverse levels of expertise involved and related implications for developing agreed monitoring methods are constraints to this action. However, quite a lot of experience has been gained in the subject over the past years and the need of improved data quality has been widely acknowledged. Thus, the motivation of the partners to improve data quality will contribute to the success of the action.

***Beneficiary responsible for implementation:***

*Associated Beneficiary No. 15 (Italy, CONECOFOR)*

***Expected results (quantitative information when possible):***

- Information on the current quality status of monitoring methods
- Related proposals for improvement
- Appraisal of results obtained in terms of quality assurance and control within the new European monitoring system,
- Information on the impact of data quality on the results obtained by the project.

***Indicators of progress:***

- Meetings and reports
- Development of quality indicators

***Reports***

QA-C09

QA-C10

**Action C1-QALab-30(NWD): Quality assurance in laboratories**

***Description:***

This action is closely linked to action C1-QAC-15(IT) and tackles specifically quality assurance and control in laboratories. The action leader will be responsible for the overall coordination and control of the quality assurance and control measures among laboratories within the FutMon project. This includes the overall coordination of the quality aspects in the following actions: C1-Water-40(IT), C1-SS-10(FI), C1-Fol2-(AT), C1-Soil-3(BE) in order to enhance the quality and comparability of the analytical data from the laboratories of all beneficiaries within FutMon. It includes the continuous harmonisation and standardisation of the analytical



methods and the update of the monitoring methodology, the discussion and validation of the different laboratory ring tests and the elimination of unqualified methods.

The action will take place throughout the entire duration of the project.

Annual meetings will be organized back-to-back with the combined expert meetings “nutrient cycling and water budget”, which assemble experts on deposition, soil and soil solution, foliage and litterfall.

***Methods employed:***

Implementation and evaluation of ring tests

Development of a quality check program for laboratories

Application of data quality checks within the laboratories

Training of employees within the assistance program for laboratories with analytical problems

Meetings of the heads of the laboratories of the beneficiaries

The action includes support to the coordinating beneficiary in the development of compliance, conformity and uniformity checks for data validation

***Laboratory assistance programme***

The action includes the overall organisation of an assistance programme for laboratories with analytical problems. These laboratories will be identified on the basis of the outcome of the laboratory soil, foliar and water ring tests. The assistance includes 10 visits of qualified experts in laboratories with unsatisfactory results. In order to share the burden of travelling, visits will be carried out as well by leaders of the following actions: C1-Water-40(IT), C1-Soil-3(FL), C1-SS-10(FI), C1-Fol2-2(AT), C1-Met-29(BY). 2 visits to laboratories requiring assistance during 2009/10 will be prepared and conducted within action C1-QALab-30(NWD).

***Constraints and assumptions:***

The level of experience with the reference methods of the presently existing ICP Forests Manual differs between the laboratories of the beneficiaries. The analytical instrumentation in the laboratories of the beneficiaries is in some cases outdated. This can lead to incomparable or low quality analytical results. Ring tests help to identify these problems and the assistance program can improve the quality.

***Beneficiary responsible for implementation:***

Associated Beneficiary No. 30 (Germany, North West)

***Expected results (quantitative information when possible):***

- Harmonization and standardisation of analytical methods, update of existing analytical method descriptions and monitoring manuals
- Implementation of new analytical methods and elimination of unqualified methods
- List of methods for quality control and data checks in the laboratories
- Improvement of the ring test results of the participating laboratories

***Indicators of progress:***

- Action status meetings of the Working Group (2009, 2010)
- Meetings of the heads of the laboratories (2009)
- Ring test reports

**Action C1-Water-40(IT): Analysis and reporting of water ring tests**

***Description (what, how, where and when):***

The action aims at the analysis and reporting of water ring tests. Under this action, the Italian laboratory will collect water ring test data from laboratories and carry out an analysis of the results, as well as the elaboration of the final report of the exercise and the organisation of a meeting to discuss the results with the participating laboratories. It closely collaborates with Action C1-SS-10(FI), which involves ring test sample preparation and distribution of the water ring test samples to the participating laboratories.

Laboratory intercomparison exercises are organised with the aim of testing and improving the analytical quality of water analyses (atmospheric deposition and soil water) performed in different laboratories, with the final goal to improve the comparability of results obtained in the individual countries. The general scope of each intercomparison, the range of concentrations and the specific aspects to be focused in each single exercise, will be discussed by an organising group of experts on the basis of the major problems highlighted from previous exercises and from specific requests coming from laboratories.

One intercomparison exercise per year will be performed in 2009 and 2010.

***Methods employed:***

In order to simplify and rationalise data collection, a spreadsheet will be prepared and distributed to all laboratories. It will contain a questionnaire on the analytical methods used, the data input sheet and all the formulae and graphs needed to perform the quality tests of the results.

After data collection and a preliminary data screening, the Italian laboratory will collate all the analytical results in a central database and it will inform the participants about their performance in terms of z-scores and outliers, related to the complete data set including results from all participants.

A further analysis will follow, including the comparison of different analytical methods, the global evaluation of each laboratory, the quality trends, and the analysis and discussion of possible improvements in data quality.

A draft report will be elaborated and sent to all participants, and it will be discussed in a meeting allowing each participant to compare her/his laboratory practice with that of colleagues and to discuss the problems identified during the exercise. A final report will then be prepared, detailing the results and proposing actions to improve the analytical quality and to maintain high qualitative standards.

***Laboratory assistance programme***

Assistance will be provided to laboratories needing help in improving the quality of their analyses. These laboratories will be identified on the basis of the outcomes of the ring tests.

One laboratory visit is planned within this action. In order to share the burden of travelling, additional visits are carried out under other actions (e.g. C1-QALab-30).

***Constraints and assumptions:***

All the laboratories involved in atmospheric deposition and soil water studies must participate in the intercomparisons, analyse all the mandatory variables and attend the discussion meeting of the results. In case of negative results, the head of the laboratory must explain the possible causes of the error/s and the actions taken to solve the problems. In the case of a high number of errors, indicating a generally poor level of the laboratory in terms of quality assurance, direct help needs to be organised in collaboration with experts from well performing laboratories.

***Beneficiary responsible for implementation:***

Associated Beneficiary No. 40 (Italy, CNR)

***Expected results (quantitative information when possible):***

The expected results include a general improvement of the analytical quality of laboratories, the adoption of common analytical control criteria, both during the analyses (e.g. standardised

calibration techniques, control charts) and in the evaluation of the results (ion balance, comparison between measured and calculated conductivity).

***Indicators of progress:***

- Ring tests conducted and evaluated

***Reports***

QA-Rwater09

QA-Rwater10

**Action C1-GV-15(IT): Quality and expertise within ground vegetation assessments**

***Description:***

The leader of action C1-GV-15(IT) takes the responsibility for quality assurance and control activities within FutMon ground vegetation assessments and will continuously provide expertise and consulting in the field of ground vegetation assessments.

The quality assurance and control activities are organized into two phases.

The 1<sup>st</sup> preparatory phase is implemented at the national level but under the coordination of action C1-GV-15(IT). It is a pre-requisite for participation in the 2<sup>nd</sup> phase, which is to be implemented at the international level. Within the 1<sup>st</sup> phase a ground vegetation questionnaire will be circulated and will be the basis for a compilation of information on national methods. It includes the preparation of national field manuals, inter-comparison exercises at the national level, field control (QC) on, at least, a subset of intensive monitoring plots, by independent surveyors, recommendations on measurement practices and definitions to be applied, and operative guidelines to interpret the existing definitions. The information on national implementation will be compiled within this action.

The 2<sup>nd</sup> phase includes the evaluation of national results, the organisation of one trans-national training and field inter-comparison course in 2009, final evaluation of results, and reporting and drafting of an updated methodology for ground vegetation assessments.

***Methods employed:***

Questionnaires and compilation of information on national methods

Evaluation of the questionnaire results

Compilation of information on field inter-comparison exercises at the country level

Recommendations on measurement practices and definitions to be applied

Update of monitoring methods

The action includes support to the coordinating beneficiary in the development of compliance, conformity and uniformity checks for data validation

***Constraints and assumptions:***

None

***Beneficiary responsible for implementation:***

Associated Beneficiary No. 15 (Italy, CONECOFOR)

***Expected results***

- Increased harmonisation of definitions, methods and assessments
- Quality information on national and transnational level
- Minimizing differences between countries
- Defining a range of comparability
- Achievement of a minimum standard of accuracy
- Updated monitoring method manual

***Indicators of progress:***

- Submission of information on national methods
- Intercalibration courses conducted and evaluated
- Updated version of manual for monitoring methods

***Reports***

Report QA-GV10

**Action C1-tree-30(NWD): Quality, expertise and evaluations within tree health assessments**

***Description***

This action includes the coordination of the demonstration action “D1 –Tree vitality and adaptation”. The action will take benefit from assistance by actions C1-Phen-10(FI) in the field of phenological questions, by C1-Met-29(BY) for leaf area index measurements and by C1-Gro-2(AT) in the field of tree growth. The action will in addition provide continuous expertise and consulting for the ongoing crown condition assessments.

The following activities are included in action C1-tree-30(NWD):

- Elaboration of a core set of (old and new) tree health parameters to be assessed on the integrated network and development of harmonized methods at EU level, parameter lists to be assessed on FutMon large-scale plots in the future in order to upscale the results.
- Description of exemplary evaluation techniques to be performed, and parameter lists to be assessed on future core plots.
- Realisation of airborne laser scanning (LIDAR) concept and assessment in 2009, including related ground assessments. The scanning will be repeated in 2010.
- Update of existing monitoring methodologies (texts, graphs and forms) where necessary, amended by recommendations for the harmonized assessment of tree vitality indicators on FutMon large-scale plots and the use of terrestrial leaf area (LAI) measurements (support from Action C1-Met-29(BY)).
- Organisation of an International Cross Calibration field course in 2009, including the evaluation of its results. In 2010 an International Cross Calibration course for forest condition assessments based on photographs will be organised and evaluated.
- Preparation and organisation of Expert Meetings

The action includes support to the coordinating beneficiary in the development of compliance, conformity and uniformity checks for data validation as well as two man months support to the elaboration of report S-final-10, specifically in the field of the forest health situation in Europe and influencing factors

***Methods employed***

- Review of existing and development of new monitoring methods and standards in the field of tree health and vitality assessments; in particular:
  - defoliation, discoloration
  - annual mortality rates
  - reproductive structures
  - stand structure indices
  - shoot length and morphology evaluation and development of respective methods
  - leaf area index (LAI) measured on the basis of litterfall (calibration of LI-COR 2000)

Airborne laser scanning (LIDAR) will be used for detecting stand structures and monitoring Leaf Area Index (LAI). The objectively obtained LAI data will be a valuable supplement to the subjectively assessed defoliation data. As a demonstration action, grid lines of the FutMon

large-scale plots will be selected that contain a range of tree species and growing conditions. This line will be covered with a LIDAR scan with a swath width of about 100 m. The plots will be visited and point measurements of LAI will be carried out on the ground using hemispherical photography or LI-COR LAI-2000 for ground truthing and calibration of LIDAR. In order to achieve exact matching between ground and LIDAR data, precise measurements of the location of the plots using DGPS will be performed. Both the LIDAR scans and the ground measurements will be repeated once after one year. This will provide the first data on annual variations in LAI for each plot, as well as for the surrounding forest area within the scanned area. The project will provide some additional and valuable data sets, including tree position, tree height and crown size. Temporal variations in these variables will be used for monitoring windthrow, top breakage, mortality and tree removals (e.g. thinning), and eventually standing volume.

***Constraints and assumptions***

Even though the data will be collected in accordance with harmonized methods, the fact that tree reactions differ between individual tree species and depend on varying European-wide ecological conditions must be taken into account, in particular regarding quality measures. The time schedule for the development of new monitoring concepts and their implementation in the future monitoring scheme is comparatively tight. However, the experience of the Expert Panel on Crown Condition Assessments under ICP Forests will support the action.

***Beneficiary responsible for implementation:***

Associated Beneficiary No. 30, Germany, Northwest German Forest Research Station

***Indicators of progress:***

- Elaboration of a core set of (old and new) tree health parameters for the major tree species;
- Update of the ICP Forests Manual (texts, graphs and forms) where necessary, including LAI measurements;
- State of airborne laser scanning (LIDAR) including one repetition and evaluation of results
- Report on testing new tree vitality concepts by cause-effect statistical analysis and exemplified in models on the sample data set;
- Contribution to the elaboration of report S-final-10;

***Expected results:***

- Evaluation of core set (old and new) tree health parameters available, including the integrated tree health concept for some major tree species and European areas;
- Concepts for the integration of quantifiable tree response variables in order to understand (i) carbon allocation of trees as a stress indicator (ii) flowering and fruiting as tree response indicators (iii) the role of biotic agents in reducing the vitality of trees, and (vi) annual mortality as a tree response indicator;
- Test results for the new tree vitality concepts based on cause-effect statistical analysis with sample data sets;
- Recommendations for future intensive monitoring in the field of tree health and vitality based on the outcome of the action group "D1".

***Reports***

A-D1-10  
QA-ICC09  
QA-ICC10

**Action C1-Phen-10(FI): Quality, expertise and evaluations within phenological assessments**

***Description:***

Action C1-Phen-10(FI) will support action C1-tree-30(NWD) in the coordination of the demonstration action "D1". In this respect, it will specifically supervise the installation of web-cams for phenological recordings at intensive monitoring plots. The aims of the action are, in addition, to achieve improvements in the quality of phenology data, to facilitate the exchange and exploitation of expertise on phenology assessments in the participating countries, and to carry out evaluations on the quality of the phenology data. The action will provide continuous expertise and consulting for the ongoing phenological assessments.

Action C1-Phen-10(FI) will include the organisation of one field training and intercalibration course in 2009 and up-dates of the ICP Forests sub-manual "Phenology", and the organisation of meetings for the exchange and exploitation of expertise within and between the participating organizations. The action leader will participate in Combined Expert Meetings "Tree Vitality".

***Methods employed:***

One field training and intercalibration course will be implemented and evaluated. The course will be held in Central Europe and include training in "traditional" phenology assessments following the present ICP Forest Manual, as well as in the establishment and installation of (web-) cameras for phenology assessments. It will also include training in the evaluation of pictures taken by such cameras.

Expert meetings on meteorology and phenology will be organized in combination with other expert meetings. Other beneficiaries will be supported in the installation of (web-) cameras at intensive monitoring plots. The sub-manual "Phenology" in the ICP Forests Manual will be updated, through meetings and the distribution of documents between the experts.

The action includes support of coordinating beneficiary in the development of compliance, conformity and uniformity checks for data validation

***Constraints and assumptions:***

None

***Beneficiary responsible for implementation:***

Associated Beneficiary No. 10 (Finland)

***Expected results:***

- Improved compatibility of the results on phenology assessments reported by the organizations participating in the FutMon project.
- Increased exploitation of the phenology data generated during the continuous, annual assessments.
- Support of the installation of cameras on core plots (see action group "D1").

***Indicators of progress:***

- Updated version of the sub-manual "Phenology" in the ICP Forests Manual
- Number of plots equipped with cameras.

***Reports***

QA-Phen09

**Action C1-Dam-3(FL): Quality, expertise and evaluations within tree damage assessments*****Description***

Action C1-Dam-3(FL) will support action C1-tree-30(NWD) in the coordination of the demonstration action "D1". It will specifically focus on the evaluation, harmonisation and updating of the methods for assessing damage caused to trees by insects, fungi and other biotic and abiotic factors in order to improve data quality. A core set of parameters on damage causes, to be assessed on the integrated network will be developed. Data of both, large scale plots and intensive monitoring plots, will be utilized for the evaluation, resulting from the action groups "L2", "D1", "D3", "IM1" of the FutMon project. The action includes the organisation of a training course on damage assessment for field observer teams. Exchange of expertise within the participating partners will be arranged through the organisation of expert meetings in co-operation with action C1-tree-30(NWD).

***Methods employed******Expert coordination activities***

A review will be carried out on existing monitoring methods and standards in the field of assessment of damage to trees by biotic and abiotic factors (damage causes).

An update of the ICP Forests Manual (texts, graphs and forms) will be elaborated

In the field of data validation support will be given to vTI in the development of compliance, conformity and uniformity checks.

The action will contribute to the preparation and organisation of expert meetings in 2009 and 2010.

***Evaluations***

Annual data on damage causes to trees will be assessed on large scale and intensive monitoring plots in the frame of tree health and vitality assessment under the monitoring actions of FutMon. Within C1-Dam-3(FL) data will be evaluated in relation to other parameters describing tree condition and site parameters. The sub-manual on damage causes in the ICP Forests manual will be improved through meetings with and the distribution of documents between experts for crown condition assessment and other experts such as forest pathologists. The action includes support of coordinating beneficiary in the development of compliance, conformity and uniformity checks for data validation.

***Quality assurance and control activities***

A damage cause intercalibration courses will be organized in 2010 and the results will be evaluated. During these field exercises, the focus will be on harmonisation and improvement of the methods for the assessment of damage causes and the development of a core set of parameters to be assessed.

***Expected results***

- Improved data quality on damage causes to trees in the integrated network at EU level;
- Elaboration of a core set of parameters on damage causes to trees to be assessed in the integrated network and development of harmonized methods at EU level;
- Updated ICP Forests sub-manual on assessment of damage causes;
- Concepts to understand the role of biotic and abiotic factors in the changing vitality of trees and annual mortality;
- Report on damage cause intercalibration course

***Constraints and assumptions:***

None

***Beneficiary responsible for implementation:***

Associated beneficiary 3 (BE-Flanders)

***Indicators of progress***

- Elaboration of a core set of parameters on damage causes;
- Update of submanual on damage causes;

***Reports***

QA-Damtype10

**Action C1-Soil-3(FL): Quality, expertise and evaluations within soil surveys**

***Description and Methods employed***

Action C1-Soil-3(FL) includes four main tasks. It will (i) ensure continuous coordination of soil expert activities, including the update of monitoring manuals, (ii) provide a number of evaluations, the most voluminous of which will be a European soil report, (iii) carry out quality assurance and control activities for soil analysis in close cooperation with action C1-QALab-30(NWD), and (vi) participate in the laboratory assistance programme under the lead of action C1-QALab-30(NWD).

***Soil expert coordination activities:***

Existing monitoring methods will be reviewed and new monitoring methods and standards will be developed in the field of forest soil surveys, including physical soil analysis methods (soil water retention). The ICP Forests Manual (texts, graphs and forms) will be updated where necessary. Support will be given to the Coordinating Beneficiary in the field of data validation, specifically in the development of compliance, conformity and uniformity checks. The action includes the preparation and organisation of two expert meetings.

***Evaluation of BioSoil-Soil data***

Submission and validation of all BioSoil-Soil data by Member States to JRC (EU) is expected until the end of 2009. Based on these data, a second "Forest Soil Condition in Europe" report will be elaborated within this action. Such a report will offer an overall pan-European evaluation of the current status of forest soils and a powerful tool for future monitoring and improvements of existing quality procedures. The BioSoil data are important because

- the data cover approx. 4000 Forest Focus large scale and intensive monitoring plots in most EU member states
- They are collected according to harmonised international guidelines for field and laboratory data reporting;
- They constitute a second pan-European soil dataset, which facilitates a large-scale comparison over time;
- The data are provided by national laboratories, all of which have been participating in one or more of the previous inter-laboratory comparison tests;

A report based on these datasets will include suggestions for further improvements to the existing quality strategy for European forest soil condition surveys. The actual evaluation concepts, in specific more advanced statistical analysis procedures including estimation of uncertainties, will be an integrated part of the report.

Spatial and methodological variances, which determine the detectability of temporal changes in forest soils, will be evaluated.

***Quality assurance and control activities***

A soil ringtest will be carried out in 2009 under the lead of action C1-Soil-3(FL). For the soil ring test 4 mineral samples and 1 organic sample will be collected. These samples will be representative for major European forest soils with respect to physical and chemical parameters, as well as geography. In addition, a set of undisturbed soil samples will be taken for an intercomparison ring test on water retention (pF) and soil moisture analysis (Action Group "D3"). The further preparation of the ring test samples, including oven-drying, sieving, homogenisation and riffing, will be carried out prior to homogenisation tests that will be conducted and validated statistically. The samples will be carefully packed and posted to the



participating laboratories. Under this action a web interface (same as for foliar, see Action C1-Fol2-2(AT)) for data submission will be offered. The data will be evaluated according to ISO methodology and quality qualification standards agreed within FutMon. A general evaluation report with all data on a CD-rom will be produced. Laboratories with specific problems will receive individual feedback in order to ensure improvements in the next soil ring test.

***Laboratory assistance programme***

Assistance will be provided to laboratories needing help in improving the quality of their analyses. These laboratories will be identified on the basis of the outcome of the ring tests. 2 laboratory visits are planned within this action. In order to share the burden of travelling, additional visits will be carried out under other actions (e.g. C1-QALab-30).

***Constraints and assumptions:***

For the elaboration of the soil condition report, validated Biosoil-soil data from all Member States that participated in Biosoil, should be made available from DG JRC (Ispra) at the end of 2009.

***Beneficiary responsible for implementation:***

Associated Beneficiary No. 3 (Belgium, Flanders)

***Expected results:***

- Updated ICP Forests Soil Manual;
- Minutes of soil expert panel meetings,
- A forest soil condition report (S-soil-10) published end of 2010;
- Soil ring test report for 2009;
- Reports of 2 assistance visits to laboratories.

***Indicators of progress:***

- Soil manual updates
- Interim reports of activities

***Reports***

S-Soil-10Soil  
QA-Rsoil09

**Action C1-SS-10(FI): Quality, expertise and evaluations within soil solution surveys**

***Description:***

The action aims to achieve improvements in the quality of soil solution data, to facilitate the exchange and exploitation of expertise on soil solution assessments in the participating countries, and to carry out evaluations on the quality of the soil solution data and utilization of the data from action groups "D2" and "D3" of the FutMon project.

The action includes annual water ring tests. Meetings for the exchange and exploitation of expertise within and between the participating organizations will be arranged.

The Finnish laboratory will be responsible for the collection, preparation and dispatch of the samples for the water ring tests, and provide support (through visits) to laboratories achieving only poor results in the ring tests. The associated beneficiary responsible for the action will participate in combined expert meetings "Nutrient Cycling and Water budget" in 2009 and 2010.

***Methods employed:***

*Implementation of annual water ring tests:*

Within the framework of the annual water ring tests, the Finnish laboratory will be responsible for collecting natural samples of rainwater (inside and outside the forest stand) and soil solution with a suitable range of, for example, nitrogen and sulphur compounds and dissolved organic carbon (DOC). The total volume of each sample will be approx. 100 litres. The laboratory will also prepare a number of synthetic samples (approx. 50 litres each). After pre-treatment (filtration through a 0.45 µm membrane filter) of the natural samples, the samples will be dispensed into acid-washed plastic bottles ready for dispatch by express courier to the participating laboratories. Sampling and dispatch of the samples will be carried out at the cool time of the year in order to minimise possible spoilage problems caused by microbial growth during transportation. The samples will be analysed at two Finnish laboratories (Rovaniemi and Metla's central laboratory in Vantaa) in order to determine the ranges of the chemical parameters in the samples, which will be provided to the participating laboratories in connection with the ring tests. The Rovaniemi laboratory will perform homogeneity tests on the samples before dispatch, and stability tests of the different types of samples over time (at least covering the duration of the inter-comparison exercise).

The ICP Forests sub-manual "Soil Solution Collection and Analysis" will be updated, together with the members of the Working Group on Soil Solution and other soil solution experts, through meetings and the distribution of documents between the experts.

The action includes support of Coordinating Beneficiary in the development of compliance, conformity and uniformity checks for data validation

***Laboratory assistance programme***

Assistance will be provided to laboratories needing help in improving the quality of analysis. These laboratories will be identified on the basis of the outcomes of the laboratory deposition and soil solution ring tests. Two visits to laboratories requiring aid assistance during 2009-2010 will be prepared and conducted.

***Constraints and assumptions:***

None

***Beneficiary responsible for implementation:***

Associated Beneficiary No. 10 (Finland)

***Expected results:***

- Improved compatibility of the results on soil solution assessments reported by the organizations participating in the FutMon project.
- Increased exploitation of the soil solution data generated during the continuous, annual assessments.
- Improved results for the analysis of soil solution samples made by the laboratories participating in the FutMon project.
- Reports on the annual deposition and soil solution ring tests

***Indicators of progress:***

- Updated version of the sub-manual "Soil Solution Collection and Analysis" in the ICP Forests Manual
- Water ring tests performed and evaluated

**Action C1-Fol1-10(FI): Quality, expertise and evaluations related to tree foliage assessments and nutrient cycles****Description:**

The action provides coordination of the demonstration action “D2” including the development of new manuals/methods for the action group “D2”. It ensures continuous coordination of foliar expert activities, including the update of existing ICP Forests’ sub-manuals “Sampling and analysis of needles and leaves” and “Sampling and analysis of litterfall”. It presents a forum to discuss results of annual foliage (and litterfall) ring tests (Action C1-Fol2-2(AT)) and will arrange meetings for the exchange and exploitation of expertise within and between the participating organizations.

The associated beneficiary responsible for the implementation of the action will annually participate in combined expert meetings “Nutrient Cycling and Water budget” and “FutMon Status Workshops”.

**Methods employed:**

Methods include the organisation of expert meetings on foliar analysis and litterfall, the improvement of the sub-manuals “Sampling and analysis of needles and leaves” and “Sampling and analysis of litterfall” in the ICP Forests Manual, together with the members of the ICP Forests Expert Panel on Foliar Analysis and Litterfall and other experts, and the distribution of documents between the experts.

The action includes the lead in the evaluation of the demonstration action “Nutrient cycling and Critical Loads” (action group “D2”) until end 2010 (assistance through action C1-Dep-22(SI) in the field of deposition and critical loads).

The action includes support of the coordinating beneficiary in the development of compliance, conformity and uniformity checks for data validation.

**Constraints and assumptions:**

None

**Beneficiary responsible for implementation:**

Associated Beneficiary No. 10 (Finland)

**Expected results:**

- Recommendations for future intensive monitoring in the field of nutrient cycling and critical loads based on the outcome of the action group “D2”.
- Improved compatibility of the results on foliar analysis and litterfall assessments reported by the organizations participating in the FutMon project.
- Increased exploitation of the foliar and litterfall data generated during the assessments.
- Improved analysis results for foliar and litterfall samples by the laboratories participating in the FutMon project.

**Indicators of progress:**

- Compilation of new monitoring manuals for the action group “D2”
- Updated version of the sub-manuals “Sampling and analysis of needles and leaves” and “Sampling and analysis of litterfall” in the ICP Forests Manual.
- Improvement in the quality of the results of foliar and litterfall analyses performed by the laboratories participating in the FutMon project.

**Report**

A-D2-10

**Action C1-Fol2-2(AT): Organisation of foliar ring tests**

***Description:***

The action provides the organisation of an annual ring test programme in order to improve the data quality of the foliage and litterfall laboratories. The action is linked to activities for overall quality assurance (C1-QAC-15(IT)) and to action C1-QALab-30, which is taking care for quality in laboratories. Four foliage samples will be prepared for each ring test. The sample material will be collected from the countries participating in the FutMon project. Grinding and homogenizing of four test samples per ring test will be done by the responsible associated beneficiary. The samples will be packed in small plastic bags and will be sent to the participating laboratories. Analysis results will be submitted by the laboratories using a web-interface which will be created under action C1-Fol2-2(AT). Data evaluation and reporting will be carried out for each ringtest.

The results of the ring test will be discussed at related meetings. A detailed discussion of the ring test results with the heads of the laboratories will be carried out in the meetings for heads of laboratories.

The ring test evaluation will identify analytical methods to be improved and give an input for further amendments of the ICP Forests sub-manuals "Sampling and analysis of needle and leaves" and "Sampling and analysis of litterfall" (together with C1-Fol1-10(FI)).

***Methods employed:***

The results of the interlaboratory comparison test will be evaluated according to DIN 38402/42 by the Austrian laboratory.

The action includes support of Coordinating Beneficiary in the development of compliance, conformity and uniformity checks for data validation.

***Laboratory assistance programme***

Assistance will be provided to laboratories needing help in improving the quality of analysis: These laboratories will be identified based on the outcomes of the ring tests. Two laboratory visits are planned within this action. In order to share the burden of travelling, additional visits are carried out under other actions (e.g. C1-QALab-30).

***Constraints and assumptions:***

None

***Beneficiary responsible for implementation:***

Associated Beneficiary No. 2 (Austria)

***Expected results (quantitative information when possible):***

- Improved data quality of foliage and litterfall samples by those laboratories participating in the FutMon project.
- Identification of problematic methods providing not reliable results in order to exclude these methods from further evaluations by pinpointing them in the ICP Forests Manual ("Sampling and analysis of needle and leaves" and "sampling and analysis of litterfall").

***Indicators of progress:***

- Foliar ring tests conducted and evaluated

***Reports***

QA-Rfoliar09

QA-Rfoliar10

**Action C1-Gro-2(AT): Quality, expertise and evaluations within forest growth assessments*****Description (what, how, where and when):***

Action C1-Gro-2(AT) includes the evaluation of forest growth data. In this context, national procedures for data evaluation and substitution will be developed as well. In addition continuous expertise will be provided for forest growth assessments, including the update of existing monitoring manuals in the field of forest growth. Action C1-Gro-2(T) will assist action C1-tree-30(NWD) in the development of tree vitality indicators.

Forest growth has been measured on EU/ICP Forests Level II plots since the beginning of pan European intensive monitoring (1994 or whenever the II plots were installed) in 5-year intervals with the three measurements conducted until 2007. Under C1-Gro-2(AT), the volume estimates of the first three periods and the increment of the first two growth periods will be calculated, compiled and compared.

Harmonized methods will be developed and will be used to substitute missing data. To test for measurements and methodological errors during the field assessment, independent control assessments in each country are necessary and accuracies need to be compared. To compute individual tree volume and to derive plot timber volume, taper functions are needed, as well as functions to estimate above-ground biomass. Available information at national level on stem volume and biomass compartments measured on felled trees will be gathered to test or to develop respective functions. On the basis of these figures periodical increment can be calculated for different compartments.

To perform a ring test like comparison between countries, real stand growth data for 3 assessments (including all peculiarities like decreasing dimensions, missing data, resurging trees etc.) will be compiled and the countries will be asked to compute volume and volume increment using their specific local methods. The country wise output will be analysed and the degree of conformity will be evaluated.

Spatial structure in forests is a good indicator for diversity (so called structural diversity).

Ideally all trees need to be geo-referenced to compute spatial structure. Very often this information is, however, not available. Before recommending the recording of individual tree positions, pilot studies using intensive monitoring plots with known tree positions will be performed.

Within the action support to vTI in the development of compliance, conformity and uniformity checks will be provided.

***Methods employed:***

The responsible beneficiary will collect data of field control measurements for stem diameter, tree height and height-to-crown-base from countries, where control assessments are carried out, and compute mean differences and differences distributions. A comparison between countries and instruments will be made and results compiled.

A compilation and evaluation of taper functions available at national level will be carried out. Taper functions will be tested with respect to plausibility using information from locally derived volume estimates from felled trees.

Based on available data from intensive monitoring plots, the responsible beneficiary will compute various spatial and structural indices as well as tree-individual competition indices (serve as indicator of past and current spatial structure) both based on tree-individual positions and not based on geo-referenced positions. The responsible beneficiary will test the differences between the indices and relate them to vegetation diversity and, if available, other information of diversity.

Support will be given to vTI in the development of compliance, conformity and uniformity checks for data validation

***Constraints and assumptions:***

Cooperation of countries providing data and information is essential.

***Beneficiary responsible for implementation:***

Associated Beneficiary No. 2 (Austria)

***Expected results:***

- Evaluations of forest growth on intensive monitoring plots in Europe
- Harmonized and complete results compiled in a unique data base containing all control assessment and pseudo ring test results.
- Amendments to the ICP Forests manual where necessary providing more detailed information on assessment and evaluation methods including recommended functions for estimating stem volume and total above ground biomass.

***Indicators of progress:***

- Number of countries participating
- Number of compared control assessments
- Number of tested taper functions

**Action C1-Dep-22(SI). Quality, expertise and evaluations within deposition surveys**

***Description:***

Action C1-Dep-22(SI) aims at the refinement, harmonization and development of deposition monitoring methods. It includes the further development of the ICP Forests Manual Chapter 6 "Deposition" and the coordination of a comparison of all types of deposition samplers (by the end of 2010). Deposition data will be evaluated and support will be given to the coordination of action group "D2" (action C1-Fol1-10(FI)).

The action plays an important role in the process of understanding nutrient cycling and calculation of critical loads. It will present a forum to discuss results of deposition measurements, to improve existing monitoring methods and the quality of deposition sampling and analysis carried out under FutMon and to arrange meetings for the exchange and exploitation of expertise within and between the participating organizations.

The associated beneficiary responsible for the implementation of the action will annually participate in the combined expert meetings "Nutrient Cycling and Water budget" and "FutMon Status Workshops".

***Methods employed:***

This action is related to the monitoring plots on which the action group "IM1" will be carried out.

Under action group "IM1", standardized throughfall samplers will be installed on one plot in each country and run in parallel with the national throughfall samplers for a period of one year. Data from the standardized samplers will be submitted separately to the Coordinating Beneficiary. Within action C1-Dep-22(SI), the data from the parallel measurements using the standardized samplers will be evaluated. In addition, recommendations will be made for standardized bulk precipitation and stemflow samplers.

The action includes contributions to the evaluation of the demonstration action "Nutrient cycling and Critical Loads" (action group "D2") in the field of deposition and critical loads by the end of 2010 (led through action C1-Fol1-10(FI)).

The action includes support of the coordinating beneficiary in the development of compliance, conformity and uniformity checks for data validation.

**Constraints and assumptions:**

The time schedule for the harmonization of the existing manual and its implementation on the monitoring plots is comparatively tight, taking into account the participation of experts from a large number of countries, which have different physical/meteorological/weather conditions. However, the expert group builds on the existing infrastructure of Expert Panels under ICP Forests.

**Beneficiary responsible for implementation:**

Associated Beneficiary No. 22 (Slovenia)

**Expected results:**

- Support to the installation of harmonized monitoring devices;
- Results on nutrient, carbon and other fluxes in deposition;
- Estimations of critical loads on the plots;
- Estimation of critical load exceedances on the plots.

**Indicators of progress:**

- Installation of harmonized throughfall samplers;
- Recommendations on harmonized bulk precipitation and stemflow samplers;
- Related update of the ICP Forests Manual on Sampling and Analysis of Deposition available.

**Report**

QA-Depo10

**Action C1-O3-24(ES): Quality, expertise and evaluations within air quality surveys****Description:**

Action C1-O3-24(ES) includes the organization and evaluation of ring tests for passive samplers for different pollutants and the organization of visible ozone injury field intercomparison exercises.

At present, several gases (SO<sub>2</sub>, NO<sub>2</sub>, O<sub>3</sub> and NH<sub>3</sub>) are measured within the European forest monitoring programme, and several types of samplers for each gas are being used by different countries. Up until now, intercomparison of such samplers or laboratory ring test have not been carried out. This action is proposed in order to compare samplers and laboratories to assure good data quality on air pollutant measurements.

In contrast, visible ozone injury field intercomparisons have already contributed to the improvement data quality. To further improve data quality, an annual intercalibration course with different participating countries will also be held within action C1-O3-24(ES). Furthermore, the part of ICP Forests Manual (texts, graphs and forms) dealing with air pollution will be updated if necessary and support to the coordinating beneficiary will be given for the development of compliance, conformity and uniformity checks.

**Methods employed:**

Calibration of passive samplers will be done by co-locating them with homologated continuous monitors (SO<sub>2</sub>, NO<sub>2</sub>, O<sub>3</sub>, NH<sub>3</sub>). This enables to check the overall performance of samplers. A site with an already existing continuous monitor will be used for this purpose at least twice a year during time periods with moderate and high ozone concentrations. Laboratory performance ring tests will be carried out for non commercial samplers (nitrite-nitrate conversion reaction). Exposed samplers and test extracts with known concentration will be distributed to laboratories to test their performance once a year. Existing monitoring methods

and standards in the field of ozone surveys using passive samplers will be reviewed and, if needed, new methods and standards will be developed.

Yearly, a visible injury intercalibration course will be carried out in order to train national field staff and to obtain quality information on the ongoing field assessments.

***Constraints and assumptions:***

None

***Beneficiary responsible for implementation:***

Associated Beneficiary No. 24 (Spain, CEAM)

***Expected results:***

- Improved data quality on passive samplers and visible injury assessment.
- Updated Manual of Air Quality and Visible Injury (texts, graphs and forms).
- Minutes of 2 visible injury intercalibration meetings and reports of one ring test

***Indicators of progress:***

- -Ring tests performed and evaluated
- -Intercalibration courses on visible injury carried out

***Reports***

QA-Passam09

QA-VisInj09

QA-VisInj10

**Action C1-Met-29(BY): Quality, expertise and evaluations within meteorological surveys**

***Description:***

This action provides coordination of the demonstration action on water budgets (action group "D3"), as well as expertise and support in the field of meteorological surveys. In detail it comprises:

1. Review of existing and development of new monitoring methods and standards in the field of meteorological surveys.
  - Update of the ICP Forests Sub-manual on meteorology (texts, graphs and forms) where necessary.
  - Data validation: support to coordinating beneficiary in the development of compliance, conformity and uniformity checks
  - Preparation and organisation of expert meetings
2. Coordination of action group "D3"

The action leader will assist other associated beneficiaries with expertise and give instructions when necessary for implementing "D3" actions. Action group "D3" will be evaluated by the coordinating beneficiary (action C1-MET-1(DE)). Action C1-Met-29(BY) will provide support to these evaluations.
3. Intercomparison of leaf area index measurements

Leaf area index (LAI) data are required by many water budget models. Therefore action group "D3" provides LAI measurements at selected plots for water budget calculations. Action C1-Met-29(BY) provides support to action C1-tree-30(NWD) in the development of a new monitoring manual on LAI measurements. C1-Met-29(BY) will organise a training course for the measurement of LAI. This will be done back-to-back with phenological intercalibration courses in 2009 (see C1-Phen-10(Fi)) at some selected sites.



4. Study for the improvement of the comparability of precipitation measurement in the European Forest Monitoring

Precipitation on open-field sites is systematically underestimated due to errors like deformation of the wind field above the gauge, evaporation from the collecting vessel and interception losses at the sampling funnel. The underestimation is strongly depending on the height of the collecting funnel opening, the form of the rain gauge and its measuring principle used (balance, tipping bucket, drop counting etc.). To ensure comparability of different national measurements of open-field precipitation a literature study will be carried out during the first three month of 2009. It will describe the different types of rain gauges used in the European Forest Monitoring system and the national weather services for open-field precipitation. It will report on correction factors towards the international reference rain gauge (DFIR) and on correction algorithms for correcting precipitation in order to use precipitation for water budget studies. The result will be an important basis for water budget modelling. Results of this study will be published in QA-Met 09.

5. Calculation of water budgets for forest monitoring plots using different models including comparison of the different models

Data from action group "D3" will be used for parameterisation and verification of different water budget models like "LWF-Brook902", "Watball", "Simple" and others. Based on the measurements, water budget models will be further developed and validated at the plots being part of action group "D3" and will be applied to remaining intensive monitoring and FutMon large scale plots. Results will be compared and models with best fit to soil water budget measurement at "D3" plots will be selected. Proper models will be applied to the other intensive monitoring plots in order to derive information on water availability, drought stress and water flux through the soil.

The water budget models will yield water fluxes through the soil for the calculation of nutrient fluxes. Water availability for forest trees and drought stress indicators are additional explanatory variables for different responses (growth, crown condition, pests and diseases) of forests to drought, physiological water shortage and elevated ozone concentrations. The results will also be an essential input for additional projects building on FutMon and aiming at detection of climate change effects on forest ecosystems.

***Methods employed:***

- office work
- organisation of an intercalibration course for different methods for measuring LAI
- literature study of different types of rain gauges and their correction factors
- Modelling of water budgets at intensive monitoring and large scale plots

***Laboratory assistance programme***

Assistance will be provided to laboratories needing help in improving the quality of analysis: These laboratories will be identified based on the outcomes of the ring tests, one laboratory visit is planned within this action. In order to share the burden of travelling, additional visits are carried out under other actions (e.g. C1-QALab-30).

***Constraints and assumptions:***

None

***Beneficiary responsible for implementation:***

Associated Beneficiary No. 29 (Germany, Bavaria)

***Expected results:***

1. monitoring methods
  - update of manual for meteorological measurements
2. intercalibration course LAI
  - comparison of different measurements of LAI
  - recommendation of a standardised method for LAI measurements
3. literature study

- overview about different correction factors for precipitation measurements
  - recommendation for a common approach of calculating real precipitation amount
4. Modelling of water budgets
- Modelled data of water availability and drought stress for Level I and Level II plots
  - Data for the derivation of drought stress indicators for forests
    - $T_a/T_p$  (actual transpiration vs. Potential transpiration)
    - $T_{diff}$  (potential transpiration minus actual transpiration)

### **Reports**

QA-Met 09 report

QA-Met 10 report

Contribution to A-D3-10

## **Action C1-Met-1(DE): Comparison of different methods for the evaluation of drought risk of selected forest sites ...**

### *Description (what, how, where and when):*

This action builds on results of water budget modelling as carried out in action C1-MET-29(BY). It utilizes plotwise water budget information in order to derive information on related drought stress for forest sites.

Water is of central significance for the vital functions of forest ecosystems. Thus, the amount of the available water frequently controls the intensity of physiological processes. Accordingly, water balance is of special importance in the fields of forest ecological research.

Key point of the investigation is: Which parameters are substantial for the evaluation of drought risk?

The identification of drought risks of forest sites will be carried out in the following steps.

1. Regional differentiation of the meteorological drought. Regional differentiation of the soil water storage capacity and its dynamics as an indicator of the potential drought risk of the soil. Evaluation of cause and effect relationships between meteorological drought, soil water availability and water stress of plants.

### **Step 1:**

#### **Identification of meteorological drought**

Calculation of the climatic water balance as a parameter for the evaluation of the meteorological drought of sites in daily resolution. The climatic water balance is the difference between the corrected sum of precipitation and the potential evaporation. Data from the water budget modelling with LWF-Brook90 (C1-Met-30(BY)) will be used for this calculation.

The Climatic Water Balance (CWB) is one of the parameters most frequently used to describe moisture conditions of an area. This parameter is suitable to characterize the potential drought risk of a certain land area through long time averages as well as by actual risk due to precipitation deficiency in short periods. It is used in the framework of an assessment of regional differentiated drought.

### **Step 2: Identification of available soil water capacity**

Calculation of the available soil water capacity in the root zone. This calculation is basis for the differentiation of the resource availability of soil water to indicate the drought risk of the soil.

### **Step 3: Evaluation of cause and effect relationships between meteorological drought, soil water availability and the actual transpiration of plants**

Calculation of the ratio of actual to potential transpiration. Basis of the calculation of drought risk of selected forest sites is the calculation of water budget for forest ecosystem monitoring plots using the water budget models LWF-Brook90 (Action C1-Met-30(BY)) and the modelled results of the water budget elements.

A potential “stress” due to drought depends on the actual soil water availability. There are close interactions between vegetation structures and the transpiration processes. The consumption of water ( $T_a$ ) by a forest stand is determined by the evaporation requirements of the atmosphere ( $T_p$ ) together with structural conditions of the vegetation. The ratio of actual to potential transpiration is a parameter suitable for assessing the water supply of a stand. This ratio ( $T_a/T_p$ ) which is also called as transpiration index represents the interactions between weather, soil and vegetation. This parameter ( $aT/pT$ -ratio) is understood as water stress-risk of forest sites. The classification of potential drought risk will be enabled by combination of the information (interactions) of the weather conditions, the soil water capacity and the transpirations index.

The results will also be an essential input for additional projects built on FutMon and aim at detection of climate change effects on forest ecosystems.

The project will be conducted during the life-span of D3 in cooperation with the Bavarian Forest Institute (LWF).

*Methods employed:*

1. office work
2. literature study of different types of indicators of water stress risk of forest sites
3. Evaluation of the potential drought risk of selected forest sites

*Expected results (quantitative information when possible):*

Evaluation of the potential drought risk of selected forest sites

- Modelled data of metrological drought (CWB) of selected forest plots of and drought stress for Level I and Level II plots
- Data on soil water resources (field capacity) and soil water availability
- Data for the evaluation of drought stress indicators for forests
  - $T_a/T_p$  (actual transpiration vs. Potential transpiration)
  - $T_{diff}$  (potential transpiration minus actual transpiration)

### **Action C1-HarmonLS-40(IT): Development of selection criteria for large-scale plots**

**Description**

The aim of this activity is the development of selection criteria for the location of the FutMon large-scale plots (point locations) that will be the basis of the FutMon large-scale system. Plot selection will be under national responsibility, and C1-HarmonLS-40(IT) will support the process. It will be implemented in the following phases.

Phase 1: acquisition of information on the designs of the currently existing sampling grids in the countries (mainly national forest inventories and ICP Forests large scale monitoring programme) and acquisition of information on on-going activities in the countries for network re-design.

Phase 2: simulation of the possible alternatives for the selection of the plots of the different existing networks that will be designated as “FutMon large-scale plots”. These alternatives will be formulated as recommendations for the countries responsible for implementation.

Phase 3: statistical estimators (with variance estimation) will be developed for the selected “FutMon large-scale plots” in order to ensure the reporting of different selected forest variables at the EU level in a standardised way.

Phase 4: implementation of the sampling design will be carried out by the associated beneficiaries. The location of the “FutMon large-scale plots” will be reported within the standardized data submission within FutMon. For each plot, additional information will be submitted, including location, forest type (following the classification of the European Environment Agency), biogeographical region, relationship with other existing monitoring schemes (ICP Forests/BIOSOIL, national forest inventories).

Phase 5: After implementation of the new large-scale grids in the countries, a description of the new grid from the point of view of representativity at the national and European level will be produced related to forest variables that are already available from past assessments on the plots.

***Methods employed:***

Questionnaires

Geo-statistical evaluations

Meetings and direct consulting with the associated beneficiaries

***Constraints and assumptions:***

For countries with a small forest area and for forest types that occur less frequently, national results might not be representative. This problem needs to be solved on national level by condensing the sampling grids.

***Beneficiary responsible for implementation:***

*Associated Beneficiary No. 40 (Italy, CNR)*

***Expected results***

- EU geographical database with location of the "FutMon large-scale plots";
- EU statistical estimators
- Data base for FutMon large-scale plots with harmonised forest variables acquired in the past
- Presentation of results at workshops and meetings

***Indicators of progress:***

- Submission of national information to the responsible beneficiary
- Computation of a new set of plots
- Recommendations for large-scale plots

***Reports***

A-HarmonLS-09

A-HarmonLS-10

**ACTION C1-NFI-8(DK): NFI Harmonisation and links to FutMon large scale plots**

***Description:***

The action includes coordination of experts from National Forest Inventories (NFIs) aiming at the harmonisation of NFIs. Large-scale forest information from NFIs has been the base for forest decisions at national levels for decades. There is an increasing need for forest information of this kind also at the level of the EU. A major task is thus to make broad-scale forest information available, up-to-date, and harmonised across Europe. The Expert Group on Harmonisation of NFIs will coordinate the harmonisation of the output of core variable assessments from the national programmes towards agreed-upon reference definitions.

***Methods employed:***

Existing bridging functions for core variables will be reviewed. The further development of the bridging functions will be made in close collaboration with the Action C1-NFI-25(SE). The action will define which core variables to select for the elaboration of bridging functions. Such a set of core variables will include e.g. forest area, growing stock, increment, biomass, deadwood and structure (tree layering, small tree distribution). The involved experts will evaluate the necessity for field studies based on the results of evaluations by the action C1-NFI-25(SE). The action will contribute to the coordination of the field study under action group "L2(b)" and will provide a forum for discussion and for continuous evaluation of the progress in the field studies.

**Constraints and assumptions:**

The action will provide a forum for experts on national forest inventories from all participating countries plus some invited experts to further discuss and develop bridging functions. Based on this it will define which core variables to select for the elaboration of bridging functions and will propose field studies in order to parameterise the bridging functions on the country level. The demonstration field study will be conducted under action group “L2”. Selection of plots will be under national responsibility.

**Beneficiary responsible for implementation:**

Associated Beneficiary No. 8 (Denmark)

**Expected results (quantitative information when possible):**

- Guidelines on the use and application of bridging functions.

**Indicators of progress:**

- Organisation and arrangement of meetings
- Preparation of NFI field studies
- Preparation and description of field procedures for field study
- Progress in description of guidelines for application of bridging functions

**Reports**

A-NFI-10

**ACTION C1-NFI-25(SE): NFI Harmonisation and links to FutMon large scale plots****Description (what, how, where and when):**

This action C1-NFI-25(SE) aims to refine and further develop the existing bridging functions based on the collaboration with national experts for the harmonisation of NFIs. The action supports C1-NFI-8(DK). This action will also contribute to the on-going evaluation of data from the field demonstration study comparing national and reference methods in close collaboration with the participating countries.

**Methods employed:**

This action includes evaluations aiming at the harmonisations of NFIs. This action includes a further analysis of reference definitions and methodologies for the assessment of core forest parameters. The action will evaluate the necessity of conducting field studies for such core variables. The results of the field studies are used to parameterise the bridging functions at the country level. A synthesis activity will be conducted based on the country level experiences gained under the above described actions.

**Constraints and assumptions:**

The work is done in close collaboration with the C1-NFI-8(DK). The corresponding field data assessments are included in action group “L2(b)”.

**Beneficiary responsible for implementation:**

Associated Beneficiary No. 25 (Sweden)

**Expected results:**

- Evaluation of the bridging functions based on the field studies of action group “L2(b)”, refinement and improvement of the functions based on the national evaluations;

***Indicators of progress:***

- Comprehensive evaluation of country data relevant for reference method development (e.g. data on tree species, stand structure and deadwood);
- Submission of national evaluation results of the action L2b;
- Evaluation of the appropriateness of the proposed reference definitions and bridging functions;

## DELIVERABLE PRODUCTS OF THE PROJECT

| Name of the Deliverable  |  | Code of the associated action | Deadline |
|--|--|-------------------------------|----------|
| A-HarmonLS-09  | Selection criteria for large scale plots   | C1-HarmonLS-40(IT)            | 3/2009   |
| QA-Rwater09  | Water ringtest report  | C1-Water-40(IT)               | 12/2009  |
| QA-ICC09   | Report on results of International Cross calibration course  | C1-tree-30(NWD)               | 12/2009  |
| QA-Met-09  | Report on comparability of precipitation measurement (precipitation correction)                      | C1-Met-29(BY)                 | 12/2009  |
| QA-Passam09  | Report of results of passive sampler intercomparison   | C1-O3-24(ES)                  | 12/2009  |
| QA-VisInj09  | Report of results of visible ozone injury intercomparison  | C1-O3-24(ES)                  | 12/2009  |
| QA-C09   | FutMon QA Status report 1: Status of forest monitoring method harmonization in Europe                | C1-QAC-15(IT)                 | 12/2009  |
| QA-Phen09  | Report on results of calibration and training of assessments of phenology                            | C1-Phen-10(FI)                | 12/2009  |
| QA-Rsoil09   | Soil ringtest report   | C1-Soil-3(FL)                 | 12/2009  |
| QA-Rfoliar09   | Foliar ringtest report   | C1-Fol2-2(AT)                 | 12/2009  |
| L1-09  | Layman's Report 2009   | M5-1(DE)                      | 12/2009  |
| 2009 large-scale forest monitoring data                              |  | L2                            | 6/2010   |
| DS-2010  | Data submission report on 2009 data  | M3-1(DE)                      | 11/2010  |
| L1-10  | Layman's Report 2010   | M5-1(DE)                      | 12/2010  |
| A-NFI-10   | Manual for assessment of core variables  | C1-NFI-8(DK)                  | 12/2010  |
| QA-Damtype10   | Report on results of calibration and training of assessments of damage types                         | C1-Dam-3(FL)                  | 12/2010  |
| QA-Rfoliar10   | Foliar ringtest report   | C1-Fol2-2(AT)                 | 12/2010  |
| QA-Depo10  | Report on the testwise installation of standardized throughfall samplers                             | C1-Dep-22(SI)                 | 12/2010  |
| QA-C10   | FutMon QA Status report 2: Proposal for improved data quality in the new Forest Monitoring in Europe | C1-QAC-15(IT)                 | 12/2010  |
| QA-GV10  | Report on results of calibration and training of assessments of ground vegetation                    | C1-GV-15(IT)                  | 12/2010  |
| QA-Met-10  | Report on intercomparison of leaf area index measurements  | C1-Met-29(BY)                 | 12/2010  |
| QA-VisInj10  | Report of results of visible ozone injury intercomparison  | C1-O3-24(ES)                  | 12/2010  |
| QA-Rwater10  | Water ringtest report  | C1-Water-40(IT)               | 12/2010  |
| QA-ICC10   | Report on results of International Cross calibration course (photo exercise)                         | C1-tree-30(NWD)               | 12/2010  |
| QA-Gro10   | Results of evaluations of forest growth on intensive monitoring plots in Europe                      | C1-Gro-2(AT)                  | 12/2010  |
| A-HarmonLS-10  | Description of the newly created set of large scale plots  | C1-HarmonLS-40(IT)            | 12/2010  |
| 2009 intensive forest monitoring data validated and submitted to JRC |  | IM1, D1, D2, D3               | 12/2010  |
| A-D1-10  | Final Report D1  | C1-tree-30(NWD)               | 4/2011   |

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|   |  |                  |         |
|---|--|------------------|---------|
| A-D2-10   | Final Report D2  | C1-Fol1-10(FI)   | 4/2011  |
| A-D3-10   | Final Report D3  | A1-1(DE)         | 4/2011  |
| A-IM1-11  | Final Report IM1 including technical aspects of basic monitoring implementation, selection guidelines for core plots and taking into account results from the demonstration projects | A1-1(DE)         | 4/2011  |
| Incomplete and unvalidated 2010 large-scale forest monitoring data submitted to JRC |  | L2b              | 12/2010 |
| S final 10  | Scientific final report  | A-1(DE)          | 12/2010 |
| 2010 large-scale forest monitoring data validated and submitted to JRC              |  | L2a              | 6/2011  |
| Incomplete and unvalidated 2010 intensive forest monitoring data submitted to JRC   |  | IM1, D1, D2, D3, | 12/2010 |
| S-soil-10   | Large scale soil condition   | C1-Soil-3(FL)    | 12/2011 |
| S-final-10  | Final report   | A1-1(DE)         | 12/2010 |

Table partly lists Action Groups only.

**MILESTONES OF THE PROJECT**

| Name of the Milestone   | Code of the associated action | Deadline      |
|---|-------------------------------|---------------|
| System design of the data submission module and validation module   | M3                            | 31. Mar. 2009 |
| Validation checks   | M3                            | 31. Mar. 2009 |
| Data submission specifications  | M3                            | 31. Mar. 2009 |
| Database design   | M3                            | 31. Mar. 2009 |
| Recommendation for harmonized QA approach   | C1-QAC-15(IT)                 | 30. Apr. 2009 |
| Selection criteria for large scale plots elaborated   | C1- HarmonLS-40(IT)           | 30. Apr. 2009 |
| ICP Forests sub-manual "Sampling and analysis of Soil" updated, including methodology for pF analysis in the laboratory | C1-Soil-3(FL)                 | 30. Apr. 2009 |
| Design of NFI field studies ready   | C1-NFI-(8)DK                  | 30. June 2009 |
| Realization of the submission and validation system   | M3                            | 15. Sep. 2009 |
| Transfer of legacy data   | M3                            | 15. Sep. 2009 |
| Field assessment large scale-monitoring 2009  | L2                            | 30. Sep. 2009 |
| Data submission large scale-monitoring;<br>Field assessment 2009  | L2                            | 15. Nov. 2009 |
| Field assessment basic plot monitoring 2009   | IM1                           | 31. Dec. 2009 |
| Field assessment 2009 Demonstration project D1 (Tree vitality and adaptation)   | D1                            | 31. Dec. 2009 |
| Field assessment 2009 Demonstration project D2 (Nutrient cycling and Critical Loads)                                    | D2                            | 31. Dec. 2009 |
| Field assessment 2009 Demonstration project D3 (Water budgets)  | D3                            | 31. Dec. 2009 |
| Data Quality Requirements identified  | C1-QAC-15(IT)                 | 30. Apr. 2010 |
| Data validation and reporting large scale-monitoring;<br>Monitoring year 2009   | M3                            | 30. Jun. 2010 |
| Data submission basic plot monitoring;<br>Field assessment 2009   | IM1                           | 15. Sep. 2010 |
| Data submission demonstration project D1 (Tree vitality and adaptation);<br>Monitoring year 2009                        | D1                            | 15. Sep. 2010 |



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|   |                                  |                |
|---|----------------------------------|----------------|
| Data submission demonstration project D2 (Nutrient cycling and Critical Loads);<br>Monitoring year 2009                                       | D2                               | 15. Sep. 2010  |
| Data submission demonstration project D3 (Water budgets); Monitoring year 2009  | D3                               | 15. Sep. 2010  |
| Field assessment large scale-monitoring 2010  | L2                               | 30. Sep. 2010  |
| Data submission large scale-monitoring;<br>Field assessment 2010  | L2                               | 15. Nov. 2010  |
| Field assessment basic plot monitoring 2010   | IM1                              | 31. Dec. 2010  |
| Field assessment 2010 Demonstration project D1  | D1                               | 31. Dec. 2010  |
| Field assessment 2010 Demonstration project D2 (Nutrient cycling and Critical Loads)  | D2                               | 31. Dec. 2010  |
| Field assessment 2010 Demonstration project D3 (Water budgets)  | D3                               | 31. Dec. 2010  |
| Airborne laser scanning (LIDAR) performed and evaluated   | C1-tree-30(NWD)                  | 31 Dec. 2010   |
| ICP Forests sub-manual "Phenology" updated, including methodology for webcam installations  | C1-Phen-10(FI)                   | 31 Dec. 2010   |
| ICP Forests sub-manual "Sampling and analysis of needles and leaves" updated, including methodology for nutrient budgets of ground vegetation | C1-Fol1-10(FI)                   | 31 Dec. 2010   |
| Test for standardized deposition samplers finalized and evaluated   | C1-Dep-22(SI)                    | 31 Dec. 2010   |
| Manual for assessment of core variables available for implementation  | C1-NFI-(8)DK                     | 31 Dec. 2010   |
| Data validation demonstration project D1 (Tree vitality and adaptation);<br>Monitoring year 2009  | M3                               | 31 Dec. 2010   |
| Data validation demonstration project D2 (Nutrient cycling and Critical Loads);<br>Monitoring year 2009                                       | M3                               | 31 Dec. 2010   |
| Data validation demonstration project D3 (Water budgets); Monitoring year 2009  | M3                               | 31 Dec. 2010   |
| Data validation basic plot monitoring<br>Monitoring year 2009   | M3                               | 15. Feb. 2011  |
| Evaluation of the demonstration field studies (L2b) results, guidelines for bridging functions  | C1-NFI25 SE                      | 31.Mar.2011    |
| Evaluation of demonstration project D1 finalized  | C1-tree-30(NWD)                  | 30. April 2011 |
| Evaluation of demonstration project D2 finalized  | C1-Fol1-10(FI)                   | 30. April 2011 |
| Evaluation of demonstration project D3 finalized  | C1-Met-29(BY)                    | 30. April 2011 |
| Guidelines for core plot selection elaborated   | M1-1(DE)                         | 30. April 2011 |
| Synthesis and reviews of Data Quality Requirements 2009-2010 ready  | C1-QAC-15(IT)                    | 30. Apr. 2011  |
| Integrated tree vitality indicator developed  | C1-tree-30(NWD)                  | 30. Apr. 2011  |
| ICP Forests sub-manual on forest health assessments (Chapter 2) including damage causes updated   | C1-tree-30(NWD)<br>C1- Dam-3(FL) | 30. Apr. 2011  |
| Data validation and reporting large scale-monitoring;<br>Monitoring year 2010   | M3                               | 30. Jun. 2011  |
| Data submission basic plot monitoring;<br>Monitoring year 2010  | IM1                              | 15. Sep. 2011  |
| Data submission demonstration project D1 (Tree vitality and adaptation);<br>Monitoring year 2010  | D1                               | 15. Sep. 2011  |
| Data submission demonstration project D2 (Nutrient cycling and Critical Loads);   | D2                               | 15. Sep. 2011  |

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|  |    |               |
|--|----|---------------|
| Monitoring year 2010   |    |               |
| Data submission demonstration project D3 (Water budgets); Monitoring year 2010                       | D3 | 15. Sep. 2011 |
| Data validation demonstration project D1 (Tree vitality and adaptation); Monitoring year 2010        | M3 | 31 Dec. 2010  |
| Data validation demonstration project D2 (Nutrient cycling and Critical Loads); Monitoring year 2010 | M3 | 31 Dec. 2010  |
| Data validation demonstration project D3 (Water budgets); Monitoring year 2010                       | M3 | 31 Dec. 2010  |
| Data validation basic plot monitoring Monitoring year 2010   | M3 | 31 Dec. 2010  |

Table partly lists Action Groups only.

**ACTIVITY REPORTS FORESEEN**

Please indicate the deadlines for the following reports:

- Inception Report (to be delivered within 9 months after the project start);
- Progress Reports n°1, n°2 etc. (if any; to ensure that the delay between consecutive reports does not exceed 18 months);
- Mid-term Report with payment request (only for project longer than 24 months)
- Final Report with payment request

| Type of report   | Deadline   |
|------------------|------------|
| Inception Report | 30/09/2009 |
| Final Report     | 31/03/2011 |

## TIMETABLE

List of all actions ordered by number and using their numbers or names. Tick as appropriate (Remember that projects cannot start prior to the date of the signature of the grant agreement)

| Action<br>Number/name<br>of action | 2009 |    |     |    | 2010 |    |     |    |
|------------------------------------|------|----|-----|----|------|----|-----|----|
|                                    | I    | II | III | IV | I    | II | III | IV |
| M1                                 | x    | x  | x   | x  | x    | x  | x   | x  |
| M2                                 | x    | x  | x   | x  | x    | x  | x   | x  |
| M3                                 | x    | x  | x   | x  | x    | x  | x   | x  |
| M4                                 | x    | x  | x   | x  | x    | x  | x   | x  |
| M5                                 |      |    | x   | x  | x    | x  | x   | x  |
| M6                                 |      |    | x   | x  | x    | x  | x   | x  |
| M7                                 | x    | x  | x   | x  | x    | x  | x   | x  |
| M8                                 |      |    | x   | x  | x    | x  | x   | x  |
| A1                                 |      |    |     |    | x    | x  | x   | x  |
| L1                                 | x    | x  | x   | x  | x    | x  | x   | x  |
| L2                                 | x    | x  | x   | x  | x    | x  | x   | x  |
| D1                                 | x    | x  | x   | x  | x    | x  | x   | x  |
| D2                                 | x    | x  | x   | x  | x    | x  | x   | x  |
| D3                                 | x    | x  | x   | x  | x    | x  | x   | x  |
| IM1                                | x    | x  | x   | x  | x    | x  | x   | x  |
| C1-QAC-15(IT)                      | x    | x  | x   | x  | x    | x  | x   | x  |
| C1-GV-15(IT)                       | x    | x  | x   | x  | x    | x  | x   | x  |
| C1-Water                           | x    | x  | x   | x  | x    | x  | x   | x  |
| C1-HarmonLS<br>15(IT)              | x    | x  | x   | x  | x    | x  | x   | x  |
| C1-QLab-<br>30(NWD)                | x    | x  | x   | x  | x    | x  | x   | x  |
| C1-Tree-<br>30(NWD)                | x    | x  | x   | x  | x    | x  | x   | x  |
| C1-Soil-3(FL)                      | x    | x  | x   | x  | x    | x  | x   | x  |
| C1-Dam-3(FL)                       | x    | x  | x   | x  | x    | x  | x   | x  |
| C1-SS-10(FI)                       | x    | x  | x   | x  | x    | x  | x   | x  |
| C1-Fol1-10(FI)                     | x    | x  | x   | x  | x    | x  | x   | x  |
| C1-Phen                            | x    | x  | x   | x  | x    | x  | x   | x  |
| C1-Fol2-10(FI)                     | x    | x  | x   | x  | x    | x  | x   | x  |
| C1-Gro-2(AT)                       | x    | x  | x   | x  | x    | x  | x   | x  |
| C1-Dep-22(SI)                      | x    | x  | x   | x  | x    | x  | x   | x  |
| C1-O3-24(ES)                       | x    | x  | x   | x  | x    | x  | x   | x  |
| C1- Met-<br>29(BY)                 | x    | x  | x   | x  | x    | x  | x   | x  |
| C1-MET-1(DE)                       |      |    |     | X  | X    | X  | X   | X  |
| C1-NFI-8(DK)                       | x    | x  | x   | x  | x    | x  | x   | x  |
| C1-NFI-25(SE)                      | x    | x  | x   | x  | x    | x  | x   | x  |

Table lists partly only Action Groups.

## Annex 1: Current and future plotnumbers

Related to large scale monitoring there are currently two major schemes ongoing in the countries participating in FutMon: Level I monitoring is carried out on a harmonized 16x16 km grid in order to assess forest condition. In most countries national forest inventories are carried out in addition, mostly on denser national grids, that are either linked to the level I or separated from it. Level I plotnumbers are listed in Table 1. Due to the lack of co-financing in 2007 Level I was stopped in a number of countries. There is a strong interest and urgent need to continue the Level I activity and to join/merge/harmonize it with the national forest inventories. This is the only realistic option to continue and partly create a basis for the collection of transnationally harmonized terrestrial forest monitoring data in Europe, which is one main objective of FutMon. For NFIs there is currently no detailed and updated transnational information available on plotnumbers and monitoring parameters.

|   | Forest area<br>(x1000ha) | Level I: number<br>of plots |      | Level II: Number of plots with data submission in 2006 |                    |       |               |          |         |            |             |                       |           |             |                    |            |
|---|--------------------------|-----------------------------|------|--|--------------------|-------|---------------|----------|---------|------------|-------------|-----------------------|-----------|-------------|--------------------|------------|
|   |                          | 2006                        | 2007 | all Level II   | Crown<br>Condition | Soil* | Soil Solution | Foliage* | Growth* | Deposition | Meteorology | Ground<br>Vegetation* | Phenology | Air quality | Ozone<br>potential | Litterfall |
| Austria   | 3878                     | 135                         |      | 20   | 19                 |       | 2             | 20       |         | 20         | 2           | 20                    |           |             |                    |            |
| BE : Flanders   | 691                      | 27                          | 27   | 12   | 7                  |       | 5             |          |         | 5          | 1           |                       | 1         |             | 1                  | 5          |
| Bulgaria  | 4064                     | 97                          | 104  | 3  | 3                  |       |               |          | 3       | 3          | 3           | 3                     |           | 3           |                    | 3          |
| Cyprus  | 298                      | 15                          | 15   | 4  | 4                  |       | 2             |          |         | 2          | 2           |                       |           | 2           |                    |            |
| Czech Republic  | 2647                     | 136                         | 132  | 21   | 16                 |       | 11            |          |         | 12         | 10          | 4                     |           |             |                    |            |
| Denmark   | 486                      | 22                          | 19   | 22   | 8                  |       | 8             |          |         | 8          | 1           |                       |           |             |                    | 7          |
| Estonia   | 2252                     | 92                          | 93   | 8  | 8                  |       | 5             |          |         | 7          | 1           | 7                     |           |             |                    |            |
| Finland   | 20149                    | 606                         | 593  | 33   | 31                 |       | 17            |          |         | 17         | 10          |                       |           |             |                    |            |
| France  | 15840                    | 498                         | 504  | 100  | 94                 |       | 14            |          |         | 25         | 25          |                       | 83        | 25          |                    | 90         |
| Germany   | 11076                    | 423                         | 419  | 95   | 87                 |       | 76            | 37       | 8       | 88         | 83          | 40                    |           | 37          |                    | 19         |
| Greece  | 2512                     |                             |      | 4  | 4                  |       | 1             |          |         | 4          | 4           |                       |           |             |                    | 2          |
| Hungary   | 1869                     | 73                          | 72   | 15   | 15                 |       | 1             |          |         | 15         | 12          |                       | 15        |             | 9                  |            |
| Ireland   | 680                      | 21                          | 30   | 16   |                    |       | 3             |          |         | 3          | 3           |                       |           |             |                    |            |
| Italy   | 8675                     | 251                         | 238  | 31   | 30                 |       | 8             |          |         | 30         | 22          | 24                    | 25        | 30          | 4                  |            |
| Latvia  | 2958                     | 93                          | 93   | 3  | 1                  |       | 1             |          |         | 1          |             |                       |           |             |                    |            |
| Lithuania   | 2136                     | 62                          | 62   | 9  | 9                  |       | 2             |          |         | 2          |             | 9                     |           | 2           | 8                  | 2          |
| Netherlands   | 334                      | 11                          |      | 14   | 5                  |       | 3             |          |         | 5          |             |                       |           |             |                    |            |
| Poland  | 9200                     | 376                         | 458  | 150  | 86                 |       | 1             |          |         | 86         |             |                       |           |             |                    |            |
| Romania   | 6233                     | 228                         |      | 13   | 12                 |       | 4             |          | 12      | 4          |             | 12                    | 2         |             |                    | 2          |
| Slovak Republic   | 1961                     | 107                         | 107  | 9  |                    |       | 3             |          |         | 7          |             |                       |           |             |                    |            |
| Slovenia  | 1099                     | 45                          | 44   | 11   | 11                 |       | 2             |          |         | 5          | 11          |                       | 11        |             |                    |            |
| Spain   | 11588                    | 607                         | 607  | 61   | 54                 |       | 3             |          | 54      | 13         | 13          |                       | 13        | 13          | 13                 | 13         |
| Sweden  | 23400                    | 790                         |      | 100  | 95                 |       | 43            | 93       |         | 43         | 10          |                       |           |             |                    |            |
| United Kingdom  | 2837                     | 82                          | 32   | 20   | 20                 |       | 9             |          |         | 10         |             |                       |           |             |                    |            |
| Total   | 136863                   | 4797                        | 3649 | 774  | 619                | 0     | 224           | 150      | 77      | 415        | 213         | 119                   | 150       | 112         | 35                 | 143        |
| Total number of Level II plots in data base   |                          |                             |      | 774  | 775                | 682   | 232           | 736      | 723     | 511        | 213         | 706                   | 150       | 112         | 56                 | 143        |
| * assessment is not foreseen annually, thus in 2006 data were submitted only from selected countries  |                          |                             |      |  |                    |       |               |          |         |            |             |                       |           |             |                    |            |
| ** according to UNECE and EC 2007. Forest Condition in Europe, Executive Report. Hamburg and Brussels |                          |                             |      |  |                    |       |               |          |         |            |             |                       |           |             |                    |            |

Table 1: Forest area, number of Level I and Level II plots in countries of the FutMon project prior to project kick-off.

There are currently nearly 800 intensive monitoring plots in the countries participating in FutMon. Table 1 presents plot numbers with data submission in 2006. Data from 2007 will only be submitted in late 2008. Intensive monitoring currently comprises a number of different surveys that are carried out on differing numbers of intensive monitoring plots. Thus, the plots are operated with differing monitoring intensities which hampers integrated evaluations in a number of cases.

Within FutMon the number of plots will be reduced by over 50%. Action Group IM 1 will be carried out on only 303 plots. In turn it will comprise a basic set of surveys that will be carried out on all IM1 plots. This is a major step forward as concerns streamlining, concentration and harmonisation of monitoring activities. National interests that were driving forces for the current situation might be pursued nevertheless, but on national costs. On a selection of IM 1 plots demonstration projects will be carried out in addition in the years 2009/10. These

demonstration projects will aim at developing new monitoring modules specifically relevant in the context of climate change, nutrient supply and vitality of forest ecosystems. The three demonstration projects will partly include new surveys. Based on the experience and the results of the demonstration projects, parts or all of the assessments will be transferred to the future core plots in the years.

|   | 2009/10 |      |     |      |  |
|---|---------|------|-----|------|--|
|   | IM1*    | D1** | D2* | D3** |  |
| Austria   | 15      | 6    | 6   | 6    |  |
| BE-Flanders   | 5       | 5    | 5   | 5    |  |
| Bulgaria  | 3       |      | 3   |      |  |
| Cyprus  | 2       |      |     |      |  |
| Czech Republic  | 14      | 4    | 10  | 10   |  |
| Denmark   | 6       | 3    | 6   | 6    |  |
| Estonia   | 7       |      | 5   |      |  |
| Finland   | 18      | 18   | 18  | 18   |  |
| France  | 42      |      | 10  | 10   |  |
| Germany   | 44      | 37   | 44  | 36   |  |
| Greece  | 4       | 3    | 3   | 3    |  |
| Hungary   | 8       | 8    | 2   |      |  |
| Ireland   | 3       | 3    | 3   |      |  |
| Italy   | 31      | 5    | 22  | 5    |  |
| Latvia  | 1       |      |     |      |  |
| Lithuania   | 9       |      |     |      |  |
| Netherlands   | 5       |      |     |      |  |
| Poland  | 12      |      |     |      |  |
| Romania   | 4       | 4    | 4   | 4    |  |
| Slovakia  | 8       | 4    | 4   | 4    |  |
| Slovenia  | 10      | 6    | 2   | 6    |  |
| Spain   | 30      | 30   | 30  | 7    |  |
| Sweden  | 12      |      | 12  |      |  |
| United Kingdom  | 10      | 4    | 6   | 4    |  |
| Total   | 303     | 140  | 195 | 124  |  |
| * Assessments within IM 1 (Intensive Monitoring 1) include:<br>Crown condition<br>Forest growth (once)<br>Foliar chemistry (once)<br>Ground vegetation (once)<br>Deposition<br>Ambient air quality<br>Visible ozone injury;<br>Soil (unless already assessed on the same plot under BioSoil)<br>Meteorology |         |      |     |      |  |
| ** Assessments within D1 (demonstration project 1) include:<br>Intensified crown condition assessments<br>Forest growth (continuous)<br>Litterfall (foliage and fruiting compartments)<br>Phenology<br>Leaf area index (new)  |         |      |     |      |  |
| * Assessments within D2 (demonstration project 2) include:<br>Litterfall (mass and element concentrations)<br>Soil solution<br>Intensified foliar surveys (new)<br>Nutrient budgets of ground vegetation (new)  |         |      |     |      |  |
| ** Assessments within D3 (demonstration project 3) include:<br>soil volumetric water content (new)<br>matrix potential (new)<br>determination of water retention functions in the lab (new)<br>stand precipitation (new)<br>soil temperature (new)<br>leaf area index (new)                                 |         |      |     |      |  |

**Table 2:** Number of Intensive monitoring plots as planned in the FutMon project

## Annex 2: Quantification of field activities

Detailed information and quantification of field activities is provided in the table below. Progress indicators are in all cases the status of validated data submission which is the appropriate tool to assess progress in project implementation. In addition, all surveys are supervised by expert actions (action group C1). Expert meetings are scheduled to provide platforms for exchange and for status reports by the national experts.

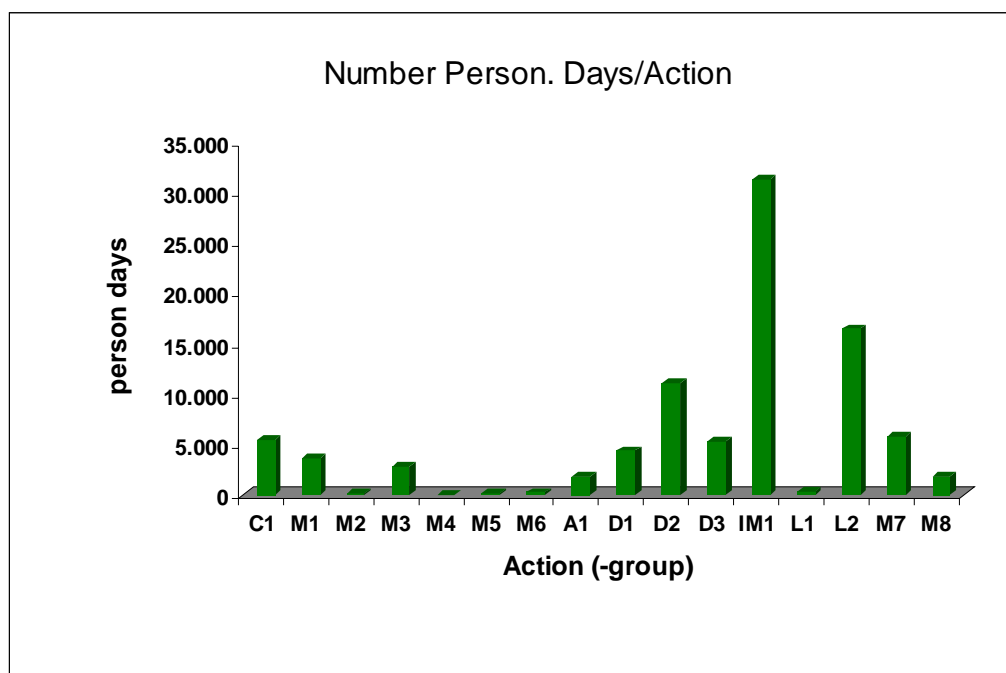
| surveys conducted within different action groups (incl. frequency) | links to parameter definitions and assessment format specifications <sup>+</sup> | Number of plots with assessments in year |           |  |  |  |
|--|--|--|-----------|--|--|--|
|  |  | 2009                                     | 2010      |  |  |  |
| <b>L2a</b>   |  |  |           |  |  |  |
| Crown condition (1)  | XX2007.TRE, XX2007.TRF   | 4876                                     | 4876      |  |  |  |
| <b>L2b</b>   |  |  |           |  |  |  |
| National forest inv. methods (1)                                   | national standards   |  | 5087      |  |  |  |
| Reference methods(1)   | (new)  |  | 5087      |  |  |  |
| <b>IM 1</b>  |  |  |           |  |  |  |
| Crown condition (1)  | XX2007.TRC, XX2007.TRD   | 303                                      | 303       |  |  |  |
| Forest growth (1)  | XX2004.IPM   |  | 303       |  |  |  |
| Foliar chemistry (1)   | XX2005.FOM, XX2005.FOO   |  | 303       |  |  |  |
| Ground vegetation (1)  | XX2007.VEM   |  | 303       |  |  |  |
| Deposition (c)   | XX2006.DEM, XX2006.DEO   | 303                                      | 303       |  |  |  |
| Ambient air quality (c)  | xx2000.pps, xx2000.aqm   | up to 303                                | up to 303 |  |  |  |
| Visible ozone injury (1)   | Form XX2004.LTF, Form XX2004.LSS, Form XX2004.OTS                                | 303                                      | 303       |  |  |  |
| Soil (1)   | XX2006.SOM, XX2006.SOO   |  | 200       |  |  |  |
| Meteorology (c)  | XX1996.MEM, XX1996.MEO   | 303                                      | 303       |  |  |  |
| <b>D1</b>  |  |  |           |  |  |  |
| Intensified crown condition (1)                                    | (partly new), XX2007.TRC, XX2007.TRD   | 140                                      | 140       |  |  |  |
| Forest growth (c)  | (new)  | 140                                      | 140       |  |  |  |
| Litterfall - foliage+fruiting (c)                                  | xx2002.LFM, xx2002.LFO   | 140                                      | 140       |  |  |  |
| Phenology (c)  | (partly new), XX2004.PHE, XX2004.PLP, XX2004.PHI                                 | 140                                      | 140       |  |  |  |
| Leaf area index (1)  | (new)  | 140                                      | 140       |  |  |  |

| surveys conducted within different action groups  | links to parameter definitions and assessment format specifications <sup>+</sup> | Number of plots with assessments in year |      |  |  |
|---|--|--|------|--|--|
|   |  | 2009                                     | 2010 |  |  |
| <b>D2</b>   |  |  |      |  |  |
| Litterfall - mass+chemistry(c)  | xx2002.LFM, xx2002.LFO   | 195                                      | 195  |  |  |
| Soil solution(c)  | XX2006.SSM, XX2006.SSO   | 195                                      | 195  |  |  |
| Intensified foliar surveys (c)  | (new)  |  | 195  |  |  |
| Nutrients ground vegetation (1)   | (new)  |  | 195  |  |  |
| <b>D3</b>   |  |  |      |  |  |
| soil volum. water content(c)  | (new)  | 124                                      | 124  |  |  |
| matrix potential (c)  | (new)  | 124                                      | 124  |  |  |
| water retention functions ( 1)  | (new)  | 124                                      |      |  |  |
| stand precipitation (c)   | (new)  | 124                                      | 124  |  |  |
| soil temperature (c)  | (new)  | 124                                      | 124  |  |  |
| leaf area index (1)   | (new)  | 124                                      |      |  |  |
| <p>+ parameters and formats are specified in files <a href="http://www.icp-forests.org/pdf/ICPForestsforms2007.pdf">http://www.icp-forests.org/pdf/ICPForestsforms2007.pdf</a> and <a href="http://www.icp-forests.org/pdf/EXPL_ITEMS2007.pdf">http://www.icp-forests.org/pdf/EXPL_ITEMS2007.pdf</a></p> <p>(1) assessments once per year</p> <p>(c) assessments are carried out continuously</p> <p>(new) assessment methodology and parameter definitions to be developed within FutMon</p> |  |  |      |  |  |

### Annex 3: Person days per Action (-group)

Annex 3 provides an overview on the person days calculated for each action group. Calculation is based on the financial budget per action group as specified on Form FB of the proposal. The financial budget is linked to person days by the project average of 169,94 Euro per person day.

| Action       | Costs             | Percentage of Total Costs | € per person. day | Number Person. Days/Action |
|--------------|-------------------|---------------------------|-------------------|----------------------------|
| C1           | 877.702           | 6,15%                     | 160,94            | 5.454                      |
| M1           | 589.015           | 4,12%                     | 160,94            | 3.660                      |
| M2           | 20.000            | 0,14%                     | 160,94            | 124                        |
| M3           | 451.750           | 3,16%                     | 160,94            | 2.807                      |
| M4           | 10.000            | 0,07%                     | 160,94            | 62                         |
| M5           | 20.000            | 0,14%                     | 160,94            | 124                        |
| M6           | 42.400            | 0,30%                     | 160,94            | 263                        |
| A1           | 285.751           | 2,00%                     | 160,94            | 1.776                      |
| D1           | 705.065           | 4,94%                     | 160,94            | 4.381                      |
| D2           | 1.793.984         | 12,56%                    | 160,94            | 11.147                     |
| D3           | 856.820           | 6,00%                     | 160,94            | 5.324                      |
| IM1          | 4.675.898         | 32,74%                    | 160,94            | 26.349                     |
| L1           | 45.695            | 0,32%                     | 160,94            | 284                        |
| L2           | 2.657.557         | 18,61%                    | 160,94            | 16.513                     |
| M7           | 944.707           | 6,62%                     | 160,94            | 5.870                      |
| M8           | 304.207           | 2,13%                     | 160,94            | 1.890                      |
| <b>TOTAL</b> | <b>14.280.551</b> | <b>100,00%</b>            |                   | <b>86.027</b>              |





## Annex 4: Timetable

[illegible]

\* Only incomplete and unvalidated data submission will be possible in 2010. In case of project prolongation data validation will be finalized in 2011 and complete and validated data sets will be submitted at a later stage.



***LIFE + Nature and Biodiversity  
Environmental Policy and Governance  
Information and Communication***

## **FINANCIAL APPLICATION FORMS**

**Proposal reference: Further Development and Implementation of an EU-level Forest Monitoring System**

**Proposal acronym: FutMon**

**NOTES:**

Please refer to guidelines for applicants when filling in this form

**FORM FA****Proposal acronym: FutMon**

| Budget breakdown categories        | Total cost in €   | Eligible Cost in € | % of total eligible costs |
|------------------------------------|-------------------|--------------------|---------------------------|
| 1. Personnel                       |                   | 14.280.551         | 44,24%                    |
| 2. Travel and subsistence          |                   | 2.858.726          | 8,86%                     |
| 3. External assistance             |                   | 9.735.815          | 30,16%                    |
| 4. Durable goods                   |                   |                    |                           |
| Infrastructure                     | 98.600            | 9.860              | 0,03%                     |
| Equipment                          | 2.592.648         | 516.554            | 1,60%                     |
| Prototype                          | 0                 | 0                  | 0,00%                     |
| 5. Land purchase / long-term lease |                   | 0                  | 0,00%                     |
| 6. Consumables                     |                   | 1.525.974          | 4,73%                     |
| 7. Other Costs                     |                   | 1.357.226          | 4,20%                     |
| 8. Overheads                       |                   | 1.993.851          | 6,18%                     |
| <b>TOTAL</b>                       | <b>34.443.390</b> | <b>32.278.556</b>  | <b>100%</b>               |

| Contribution breakdown                  | In €              | % of TOTAL     | % total eligible costs |
|---|-------------------|----------------|------------------------|
| Requested Community contribution        | 16.139.278        | 46,86%         | 50,00%                 |
| Coordinating Beneficiary's contribution | 403.856           | 1,17%          |                        |
| Associated Beneficiaries' contribution  | 16.436.767        | 47,72%         |                        |
| Co-financers contribution               | 1.463.489         | 4,25%          |                        |
| <b>TOTAL</b>                            | <b>34.443.390</b> | <b>100,00%</b> |                        |

| Breakdown of Requested Community contribution per country | a. Contribution requested in € | b. Related costs in € | b/a % |
|---|--------------------------------|-----------------------|-------|
| AT  | 757.198                        | 1.854.795             |       |
| BE  | 393.095                        | 770.961               |       |
| BU  | 132.740                        | 289.360               |       |
| CY  | 75.339                         | 159.667               |       |
| CZ  | 342.279                        | 785.900               |       |
| DE  | 4.149.287                      | 8.183.326             |       |
| DK  | 383.950                        | 817.280               |       |
| EE  | 205.855                        | 427.529               |       |
| ES  | 1.646.710                      | 3.419.958             |       |
| FI  | 970.815                        | 1.929.283             |       |
| FR  | 1.463.042                      | 3.439.630             |       |
| GR  | 151.219                        | 393.699               |       |
| HU  | 279.049                        | 594.207               |       |
| IE  | 291.585                        | 625.176               |       |
| IT  | 1.651.006                      | 3.457.212             |       |
| LT  | 111.000                        | 249.900               |       |
| LV  | 91.529                         | 197.102               |       |
| NL  | 207.651                        | 431.259               |       |
| PL  | 595.270                        | 1.385.608             |       |
| RO  | 421.129                        | 1.054.618             |       |
| SE  | 708.205                        | 1.553.200             |       |
| SI  | 406.795                        | 815.432               |       |
| SK  | 333.200                        | 783.400               |       |
| UK  | 371.331                        | 824.888               |       |
| <b>TOTAL</b>  | <b>16.139.278</b>              | <b>34.443.390</b>     |       |

Please fill in the forms FC to F7 first. In these forms you are allowed to add lines but you cannot alter the formulas. In this form you are only requested to fill in the amount of the overheads

Please refer to the relevant instructions given in the explanatory notes for filling in these forms

Important note: If the overheads cell appears in red, this means that the budgeted amount is above 7% of the total eligible direct costs excluding land purchase.

## FORM FB

Proposal acronym: FutMon

## Breakdown of costs for Actions in Euro (excluding overhead costs)

| Action number | Short name of action | 1. Personnel | 2. Travel and subsistence | 3. External assistance | 4.a Infrastructure | 4.b Equipment | 4.c Prototype | 5. Purchase or lease of land | 6. Consumables | 7. Other costs | TOTAL   |
|---------------|----------------------|--------------|---------------------------|------------------------|--------------------|---------------|---------------|------------------------------|----------------|----------------|---------|
| 1             | L1-5(BU)             | 0            | 0                         | 8.000                  | 0                  | 0             | 0             | 0                            | 0              | 0              | 8.000   |
| 2             | L2-5(BU)             | 0            | 0                         | 101.760                | 0                  | 0             | 0             | 0                            | 0              | 0              | 101.760 |
| 3             | IM1-5(BU)            | 0            | 3.500                     | 21.500                 | 0                  | 12.600        | 0             | 0                            | 0              | 0              | 37.600  |
| 4             | D2-5(BU)             | 0            | 3.500                     | 16.470                 | 0                  | 0             | 0             | 0                            | 0              | 0              | 19.970  |
| 5             | M8-5(BU)             | 0            |                           | 2.000                  | 4.000              | 0             | 0             | 0                            | 0              | 94.430         | 100.430 |
| 6             | M7-5(BU)             | 8.000        | 12.000                    | 0                      | 0                  | 0             | 0             | 0                            | 0              | 0              | 20.000  |
| 7             | L2 - 6(CY)           | 13.500       | 2.600                     |                        |                    | 2.500         | 0             | 0                            | 0              | 0              | 18.600  |
| 8             | IM1 - 6(CY)          | 61.851       | 10.000                    |                        |                    | 1.500         |               |                              | 15.000         | 4.000          | 92.351  |
| 9             | M7 - 6(CY)           | 16.640       | 17.320                    |                        |                    |               |               |                              |                |                | 33.960  |
| 10            | M8 - 6(CY)           | 1.600        | 120                       |                        |                    |               |               |                              |                | 2.800          | 4.520   |
| 11            | L1-9(EF)             | 6.550        | 2.000                     |                        |                    |               |               |                              |                |                | 8.550   |
| 12            | L2-9(EF)             | 86.000       | 23.000                    |                        |                    |               |               |                              | 5.700          | 7.700          | 122.400 |
| 13            | IM1-9(EF)            | 93.400       | 6.000                     | 56.000                 |                    |               |               |                              | 1.300          | 600            | 157.300 |
| 14            | D2-9(EF)             | 10.000       |                           | 62.000                 |                    |               |               |                              | 1.100          | 700            | 73.800  |
| 15            | M7-9(EF)             | 26.150       | 4.800                     |                        |                    |               |               |                              | 700            | 1.000          | 32.650  |
| 16            | M8-9(EF)             | 2.260        |                           | 2.000                  |                    |               |               |                              | 600            |                | 4.860   |
| 17            | M7-10(FI)            | 64.344       | 37.700                    | 0                      | 0                  | 0             |               |                              | 0              | 0              | 102.044 |
| 18            | M8-10(FI)            | 41.727       | 12.920                    | 0                      | 0                  | 0             |               |                              | 8.000          | 0              | 62.647  |
| 19            | L2-10(FI)            | 110.612      | 241.500                   | 0                      | 0                  | 0             |               |                              | 5.000          | 0              | 357.112 |
| 20            | D1-10(FI)            | 34.273       | 7.800                     | 3.000                  | 0                  | 28.000        |               |                              | 1.200          | 0              | 74.273  |
| 21            | D2-10(FI)            | 238.137      | 33.000                    | 0                      | 0                  | 2.000         |               |                              | 86.656         | 2.000          | 361.793 |
| 22            | D3-10(FI)            | 9.978        | 5.500                     | 0                      | 0                  | 21.000        |               |                              | 0              | 0              | 36.478  |
| 23            | IM1-10(FI)           | 488.957      | 84.500                    | 12.000                 | 0                  | 26.000        |               |                              | 64.500         | 2.600          | 678.557 |
| 24            | CI-SS-10(FI)         | 20.923       | 9.028                     | 8.760                  | 0                  | 0             |               |                              | 16.500         |                | 55.211  |

| Breakdown of costs for Actions in Euro (excluding overhead costs) |                      |              |                           |                        |                    |               |               |                              |                |                |         |
|---|----------------------|--------------|---------------------------|------------------------|--------------------|---------------|---------------|------------------------------|----------------|----------------|---------|
| Action number   | Short name of action | 1. Personnel | 2. Travel and subsistence | 3. External assistance | 4.a Infrastructure | 4.b Equipment | 4.c Prototype | 5. Purchase or lease of land | 6. Consumables | 7. Other costs | TOTAL   |
| 25  | C1-FoI1-10(FI)       | 38.160       | 4.900                     | 0                      | 0                  | 0             |               |                              | 0              |                | 43.060  |
| 26  | C1-Phen-10(FI)       | 23.183       | 12.740                    | 0                      | 0                  | 0             |               |                              | 0              |                | 35.923  |
| 27  | L2-16(LT)            | 100.000      | 21.000                    | 5.000                  |                    | 9.000         |               |                              | 3.000          | 3.700          | 141.700 |
| 28  | IM1-16(LT)           | 44.000       | 11.000                    | 20.000                 |                    | 15.000        |               |                              | 3.000          | 2.000          | 95.000  |
| 29  | M7-2(AT)             | 47.600       | 30.000                    | 10.000                 |                    | 36.000        |               |                              |                | 2.000          | 125.600 |
| 30  | M8-2(AT)             | 29.200       |                           |                        |                    |               |               |                              | 2.000          | 13.000         | 44.200  |
| 31  | L2-2(AT)             | 200.000      | 55.000                    |                        |                    | 10.800        |               |                              | 3.000          | 2.750          | 271.550 |
| 32  | D1-2(AT)             | 58.000       | 14.000                    |                        |                    | 84.000        |               |                              | 12.000         | 2.750          | 170.750 |
| 33  | D2-2(AT)             | 132.835      | 9.000                     | 15.000                 |                    | 123.250       |               |                              | 35.500         | 5.500          | 321.085 |
| 34  | D3-2(AT)             | 100.000      | 8.960                     | 10.000                 |                    | 110.250       |               |                              | 35.500         | 5.500          | 270.210 |
| 35  | IM1-2(AT)            | 240.000      | 23.000                    | 109.400                |                    | 42.250        |               |                              | 35.500         | 5.500          | 455.650 |
| 36  | C1-FoI2-2(AT)        | 20.000       | 2.000                     |                        |                    | 20.250        |               |                              | 3.000          | 3.000          | 48.250  |
| 37  | C1-Gro-2(AT)         | 27.000       | 2.000                     | 15.000                 |                    |               |               |                              | 2.000          | 3.000          | 49.000  |
| 38  | L2-25(SE)            | 460.000      | 185.000                   |                        |                    |               |               |                              |                |                | 645.000 |
| 39  | IM1-25(SE)           | 248.400      | 66.240                    | 143.520                |                    | 71.760        |               |                              | 22.080         |                | 552.000 |
| 40  | D2-25(SE)            | 108.000      | 28.800                    | 62.400                 |                    | 31.200        |               |                              | 9.600          |                | 240.000 |
| 41  | C-NFI-25(SE)         | 17.000       | 3.000                     |                        |                    |               |               |                              |                |                | 20.000  |
| 42  | M7-33(RP)            | 21.000       | 9.200                     |                        |                    |               |               |                              |                |                | 30.200  |
| 43  | M8-33(RP)            | 2.900        | 350                       |                        |                    |               |               |                              |                | 1.600          | 4.850   |
| 44  | L2-33(RP)            | 36.000       | 500                       |                        |                    |               |               |                              | 500            |                | 37.000  |
| 45  | D1-33(RP)            | 36.506       | 2.500                     | 6.200                  |                    | 1.700         |               |                              | 4.950          | 2.600          | 54.456  |
| 46  | D2-33(RP)            | 21.000       | 1.550                     | 30.700                 |                    | 1.700         |               |                              | 1.650          | 6.000          | 62.600  |
| 47  | D3-33(RP)            | 6.500        | 1.000                     |                        |                    | 4.200         |               |                              | 8.400          | 500            | 20.600  |
| 48  | IM1-33(RP)           | 49.000       | 3.500                     | 58.400                 |                    | 11.400        |               |                              | 2.700          | 10.000         | 135.000 |
| 49  | M7-32(NW)            | 22.000       | 2.000                     |                        |                    |               |               |                              |                |                | 24.000  |

| Breakdown of costs for Actions in Euro (excluding overhead costs) |                      |              |                           |                        |                    |               |               |                              |                |                |         |
|---|----------------------|--------------|---------------------------|------------------------|--------------------|---------------|---------------|------------------------------|----------------|----------------|---------|
| Action number   | Short name of action | 1. Personnel | 2. Travel and subsistence | 3. External assistance | 4.a Infrastructure | 4.b Equipment | 4.c Prototype | 5. Purchase or lease of land | 6. Consumables | 7. Other costs | TOTAL   |
| 50  | M8-32(NW)            | 1.500        | 300                       | 2.200                  |                    |               |               |                              | 200            | 800            | 5.000   |
| 51  | L2-32(NW)            | 5.228        | 2.100                     | 42.448                 |                    |               |               |                              | 300            |                | 50.076  |
| 52  | D1-32(NW)            | 7.500        | 2.500                     | 3.000                  |                    |               |               |                              | 1.131          | 1.426          | 15.557  |
| 53  | D2-32(NW)            | 90.710       | 8.737                     | 12.000                 |                    |               |               |                              | 2.736          | 2.453          | 116.636 |
| 54  | D3-32(NW)            | 2.525        | 500                       | 10.000                 |                    | 16.072        |               |                              |                |                | 29.097  |
| 55  | IM1-32(NW)           | 106.644      | 17.455                    | 46.241                 |                    | 18.640        |               |                              | 15.513         | 2.500          | 206.993 |
| 56  | L2-37(TH)            | 13.350       | 2.872                     |                        |                    |               |               |                              |                |                | 16.222  |
| 57  | IM1-37(TH)           | 61.886       | 9.064                     | 13.000                 |                    | 1.000         |               |                              | 650            | 88.350         | 173.950 |
| 58  | D2-37(TH)            | 14.900       | 1.995                     | 6.500                  |                    | 2.500         |               |                              | 650            | 55.700         | 82.245  |
| 59  | D3-37(TH)            | 12.800       | 1.995                     | 1.000                  |                    |               |               |                              | 650            | 10.200         | 26.645  |
| 60  | M7-37(TH)            | 0            | 3.728                     |                        |                    |               |               |                              |                |                | 3.728   |
| 61  | M8-37(TH)            | 900          | 264                       |                        |                    |               |               |                              | 2.000          |                | 3.164   |
| 62  | M7-30(NWD)           | 0            | 18.800                    |                        |                    |               |               |                              |                |                | 18.800  |
| 63  | M8-30(NWD)           | 69.168       |                           |                        |                    |               |               |                              | 20.000         |                | 89.168  |
| 64  | L2-30(NWD)           | 88.160       | 17.262                    | 32.640                 |                    |               |               |                              | 5.938          |                | 144.000 |
| 65  | D1-30(NWD)           | 187.728      | 25.902                    |                        |                    |               |               |                              | 10.196         |                | 223.826 |
| 66  | D2-30(NWD)           | 197.728      |                           |                        |                    |               |               |                              | 26.098         |                | 223.826 |
| 67  | D3-30(NWD)           | 140.728      |                           | 27.000                 |                    |               |               |                              | 56.098         |                | 223.826 |
| 68  | IM1-30(NWD)          | 323.418      | 76.423                    | 28.000                 |                    |               |               |                              | 35.559         |                | 463.400 |
| 69  | C1-30(Qlab)          | 19.880       | 2.000                     |                        |                    |               |               |                              | 120            |                | 22.000  |
| 70  | C1-30(Tree)          | 195.280      | 7.000                     | 110.000                |                    |               |               |                              | 10.720         |                | 323.000 |
| 71  | D2-40(IT)            | 172.402      | 12.000                    | 190.000                |                    | 13.000        |               |                              | 35.000         |                | 422.402 |
| 72  | IM1-40(IT)           | 593.936      | 11.000                    | 144.000                |                    |               |               |                              | 138.760        |                | 887.696 |
| 73  | C1-Water-40(IT)      | 52.470       |                           |                        |                    |               |               |                              | 21.530         |                | 74.000  |
| 74  | C1-HarmonLS-40(IT)   | 0            |                           | 40.000                 |                    |               |               |                              |                |                | 40.000  |

| Breakdown of costs for Actions in Euro (excluding overhead costs) |                      |              |                           |                        |                    |               |               |                              |                |                |         |
|---|----------------------|--------------|---------------------------|------------------------|--------------------|---------------|---------------|------------------------------|----------------|----------------|---------|
| Action number   | Short name of action | 1. Personnel | 2. Travel and subsistence | 3. External assistance | 4.a Infrastructure | 4.b Equipment | 4.c Prototype | 5. Purchase or lease of land | 6. Consumables | 7. Other costs | TOTAL   |
| 75  | M7-27(BB)            | 0            | 2.350                     |                        |                    |               |               |                              |                |                | 2.350   |
| 76  | M8-27(BB)            | 0            |                           | 10.000                 | 2.500              |               |               |                              |                |                | 12.500  |
| 77  | L2-27(BB)            | 45.664       | 3.000                     |                        |                    |               |               |                              |                |                | 48.664  |
| 78  | IM1-27(BB)           | 151.936      | 13.500                    | 54.000                 |                    | 10.000        |               |                              | 10.000         |                | 239.436 |
| 79  | D1-27(BB)            | 59.520       | 7.000                     | 5.000                  |                    |               |               |                              |                |                | 71.520  |
| 80  | D2-27(BB)            | 59.520       | 2.500                     | 32.000                 |                    |               |               |                              |                |                | 94.020  |
| 81  | D3-27(BB)            | 59.520       | 2.500                     | 8.000                  |                    |               |               |                              |                |                | 70.020  |
| 82  | IM1-39(IT)           | 315.260      | 46.000                    | 15.000                 |                    | 5.000         |               |                              | 23.700         | 40.000         | 444.960 |
| 83  | D1-39(IT)            | 29.700       | 13.000                    | 15.000                 |                    | 10.000        |               |                              | 8.300          | 2.000          | 78.000  |
| 84  | D3-39(IT)            | 39.600       | 6.000                     | 2.000                  |                    | 6.000         |               |                              | 14.200         | 9.000          | 76.800  |
| 85  | L1-39(IT)            | 0            | 7.500                     |                        |                    |               |               |                              |                |                | 7.500   |
| 86  | L2-39(IT)            | 66.900       | 13.000                    |                        |                    |               |               |                              |                | 500            | 80.400  |
| 87  | C1-22(SI)            | 39.920       |                           | 5.080                  |                    |               |               |                              |                |                | 45.000  |
| 88  | D1-22(SI)            | 56.574       | 1.000                     |                        |                    |               |               |                              |                |                | 57.574  |
| 89  | D2-22(SI)            | 20.018       | 9.000                     |                        |                    |               |               |                              |                |                | 29.018  |
| 90  | D3-22(SI)            | 24.910       |                           |                        |                    |               |               |                              |                |                | 24.910  |
| 91  | IM1-22(SI)           | 241.940      | 15.983                    | 54.000                 |                    | 41.000        |               |                              |                |                | 352.923 |
| 92  | L1-22(SI)            | 713          | 1.000                     |                        |                    |               |               |                              |                |                | 1.713   |
| 93  | L2-22(SI)            | 145.860      | 25.420                    | 1.520                  |                    | 1.000         |               |                              |                |                | 173.800 |
| 94  | M7-22(SI)            | 18.006       | 2.000                     |                        |                    |               |               |                              |                |                | 20.006  |
| 95  | M8-22(SI)            | 58.088       | 1.000                     |                        |                    |               |               |                              | 400            |                | 59.488  |
| 96  | L1-12(GR)            | 0            | 2.000                     |                        |                    |               |               |                              |                |                | 2.000   |
| 97  | L2-12 (GR)           | 22.275       | 63.000                    | 32.000                 | 20.000             | 57.300        |               |                              |                | 18.500         | 213.075 |
| 98  | IM1-12(GR)           | 0            | 8.000                     | 66.500                 | 6.000              | 13.000        |               |                              |                |                | 93.500  |
| 99  | D1-12(GR)            | 0            | 3.000                     | 6.999                  |                    |               |               |                              |                |                | 9.999   |

| Breakdown of costs for Actions in Euro (excluding overhead costs) |                      |              |                           |                        |                    |               |               |                              |                |                |         |
|---|----------------------|--------------|---------------------------|------------------------|--------------------|---------------|---------------|------------------------------|----------------|----------------|---------|
| Action number   | Short name of action | 1. Personnel | 2. Travel and subsistence | 3. External assistance | 4.a Infrastructure | 4.b Equipment | 4.c Prototype | 5. Purchase or lease of land | 6. Consumables | 7. Other costs | TOTAL   |
| 100   | D2-12(GR)            | 0            | 2.000                     | 28.000                 |                    |               |               |                              |                |                | 30.000  |
| 101   | D3-12(GR)            | 0            | 2.000                     | 22.000                 |                    |               |               |                              |                |                | 24.000  |
| 102   | M8-12(GR)            | 0            |                           |                        |                    |               |               |                              |                | 8.000          | 8.000   |
| 103   | L2-3(BE)             | 15.627       | 1.750                     |                        |                    |               |               |                              |                |                | 17.377  |
| 104   | IM1-3(BE)            | 197.295      | 14.496                    |                        |                    | 33.000        |               |                              | 8.654          | 42.455         | 295.900 |
| 105   | D1-3(BE)             | 28.208       | 4.262                     |                        |                    |               |               |                              | 379            |                | 32.849  |
| 106   | D2-3(BE)             | 30.533       | 400                       |                        |                    |               |               |                              | 941            | 53.955         | 85.829  |
| 107   | D3-3(BE)             | 30.533       |                           |                        |                    |               |               |                              | 1.860          | 11.500         | 43.893  |
| 108   | M7-3(BE)             | 7.585        | 23.000                    |                        |                    |               |               |                              |                |                | 30.585  |
| 109   | M8-3(BE)             | 0            |                           |                        |                    |               |               |                              | 2.000          |                | 2.000   |
| 110   | C1Soil-3(BE)         | 150.270      | 6.000                     |                        |                    |               |               |                              | 4.845          | 30.704         | 191.819 |
| 111   | C1Dam-3(BE)          | 16.590       | 2.000                     |                        |                    |               |               |                              | 410            | 3.000          | 22.000  |
| 112   | M7-31(MV)            | 2.320        | 5.000                     |                        |                    |               |               |                              |                |                | 7.320   |
| 113   | M8-31(MV)            | 0            |                           |                        |                    |               |               |                              | 1.400          |                | 1.400   |
| 114   | L2-31(MV)            | 26.300       | 2.000                     |                        |                    |               |               |                              | 1.000          |                | 29.300  |
| 115   | D1-31(MV)            | 4.000        | 1.000                     | 2.000                  |                    |               |               |                              |                |                | 7.000   |
| 116   | D2-31(MV)            | 8.996        | 1.000                     | 36.000                 |                    | 6.000         |               |                              |                |                | 51.996  |
| 117   | D3-31(MV)            | 4.000        | 2.000                     | 4.000                  |                    | 16.000        |               |                              |                |                | 26.000  |
| 118   | IM1-31(MV)           | 32.000       | 2.300                     | 61.000                 | 400                | 15.000        |               |                              |                | 800            | 111.500 |
| 119   | M7-35(SL)            | 5.346        | 4.400                     |                        |                    |               |               |                              |                |                | 9.746   |
| 120   | M8-35(SL)            | 0            |                           | 800                    | 1.200              |               | 0             |                              |                |                | 2.000   |
| 121   | L2-35(SL)            | 2.637        | 932                       |                        | 0                  |               | 0             |                              |                |                | 3.569   |
| 122   | IM1-35(SL)           | 37.905       | 939                       | 9.000                  | 0                  |               | 0             |                              | 3.000          | 91.338         | 142.182 |
| 123   | D2-35(SL)            | 12.612       |                           | 7.000                  | 0                  |               | 0             |                              | 400            | 18.798         | 38.810  |
| 124   | IM1-7(CZ)            | 104.000      | 41.000                    | 38.000                 | 0                  | 20.000        | 0             |                              | 18.000         | 71.000         | 292.000 |



| Breakdown of costs for Actions in Euro (excluding overhead costs) |                      |              |                           |                        |                    |               |               |                              |                |                |           |
|---|----------------------|--------------|---------------------------|------------------------|--------------------|---------------|---------------|------------------------------|----------------|----------------|-----------|
| Action number   | Short name of action | 1. Personnel | 2. Travel and subsistence | 3. External assistance | 4.a Infrastructure | 4.b Equipment | 4.c Prototype | 5. Purchase or lease of land | 6. Consumables | 7. Other costs | TOTAL     |
| 125   | D1-7(CZ)             | 22.000       | 5.000                     | 7.200                  | 0                  | 28.000        | 0             |                              | 13.000         | 4.000          | 79.200    |
| 126   | D2-7(CZ)             | 30.000       | 11.000                    | 3.500                  | 0                  |               | 0             |                              | 9.000          | 74.000         | 127.500   |
| 127   | D3-7(CZ)             | 22.000       | 2.900                     | 18.000                 | 0                  | 40.000        | 0             |                              | 5.000          |                | 87.900    |
| 128   | M7-7(CZ)             | 20.800       | 5.000                     |                        | 0                  | 0             | 0             |                              | 1.300          |                | 27.100    |
| 129   | M8-7(CZ)             | 3.400        | 1.000                     | 11.500                 | 0                  | 0             | 0             |                              | 1.000          |                | 16.900    |
| 130   | L2-7(CZ)             | 50.000       | 44.000                    | 5.000                  | 0                  | 5.800         | 0             |                              | 4.000          |                | 108.800   |
| 131   | L2-11(FR)            | 0            |                           | 399.000                | 0                  | 0             | 0             | 0                            | 0              | 0              | 399.000   |
| 132   | IM1-11(FR)           | 464.295      | 146.314                   | 616.000                | 0                  | 0             | 0             | 0                            | 14.877         | 39.200         | 1.280.686 |
| 133   | D2-11(FR)            | 388.063      | 7.782                     | 80.000                 | 0                  | 0             | 0             | 0                            | 0              | 16.800         | 492.645   |
| 134   | D3-11(FR)            | 167.496      | 20.690                    | 0                      | 0                  | 501.400       | 0             | 0                            | 0              | 8.400          | 697.986   |
| 135   | M7-11(FR)            | 296.443      | 27.000                    | 0                      | 0                  | 0             | 0             | 0                            | 0              | 0              | 323.443   |
| 136   | M8-11(FR)            | 21.403       | 0                         | 0                      | 0                  | 0             | 0             | 0                            | 15.686         | 10.000         | 47.089    |
| 137   | M7-20(RO)            | 30.500       | 20.700                    |                        |                    | 9.000         |               |                              | 4.900          | 650            | 65.750    |
| 138   | M8-20(RO)            | 13.000       | 8.400                     |                        |                    | 3.400         |               |                              | 3.300          | 350            | 28.450    |
| 139   | L1-20(RO)            | 3.400        | 1.600                     |                        |                    | 2.600         |               |                              | 1.000          | 200            | 8.800     |
| 140   | L2-20(RO)            | 239.800      | 135.000                   |                        |                    | 97.000        |               |                              | 54.000         | 15.500         | 541.300   |
| 141   | D1-20(RO)            | 26.800       | 13.500                    |                        |                    | 18.000        |               |                              | 5.300          | 1.000          | 64.600    |
| 142   | D2-20(RO)            | 35.800       | 17.500                    |                        |                    | 24.000        |               |                              | 6.900          | 1.300          | 85.500    |
| 143   | D3-20(RO)            | 26.800       | 13.000                    |                        |                    | 22.000        |               |                              | 6.100          | 1.000          | 68.900    |
| 144   | IM1-20(RO)           | 53.600       | 21.700                    |                        |                    | 49.000        |               |                              | 6.800          | 3.000          | 134.100   |
| 145   | M7-23(ES)            | 0            | 0                         | 140.184                |                    |               |               |                              |                |                | 140.184   |
| 146   | M8-23(ES)            | 0            | 0                         | 140.184                |                    |               |               |                              |                |                | 140.184   |
| 147   | L2-23(ES)            | 0            | 0                         | 927.132                |                    |               |               |                              |                |                | 927.132   |
| 148   | D1-23(ES)            | 0            | 0                         | 420.552                |                    |               |               |                              |                |                | 420.552   |
| 149   | D2-23(ES)            | 0            | 0                         | 560.736                |                    |               |               |                              |                |                | 560.736   |

| Breakdown of costs for Actions in Euro (excluding overhead costs) |                      |              |                           |                        |                    |               |               |                              |                |                |         |
|---|----------------------|--------------|---------------------------|------------------------|--------------------|---------------|---------------|------------------------------|----------------|----------------|---------|
| Action number   | Short name of action | 1. Personnel | 2. Travel and subsistence | 3. External assistance | 4.a Infrastructure | 4.b Equipment | 4.c Prototype | 5. Purchase or lease of land | 6. Consumables | 7. Other costs | TOTAL   |
| 150   | D3-23(ES)            | 0            | 0                         | 98.200                 |                    |               |               |                              |                |                | 98.200  |
| 151   | IM1-23(ES)           | 0            | 0                         | 841.104                |                    |               |               |                              |                |                | 841.104 |
| 152   | C1-O3-24(ES)         | 46.951       | 0                         | 6.000                  | 0                  | 0             | 0             | 0                            | 6.200          | 1.541          | 60.692  |
| 153   | M7-24(ES)            | 0            | 5.931                     | 0                      | 0                  | 0             | 0             | 0                            | 0              | 0              | 5.931   |
| 154   | M8-24(ES)            | 0            | 0                         | 0                      | 0                  | 0             | 0             | 0                            | 0              | 2.000          | 2.000   |
| 155   | C1-29(MET)           | 90.202       | 9.000                     |                        |                    | 0             |               |                              | 7.200          | 0              | 106.402 |
| 156   | L1-29(BY)            | 1.458        | 0                         | 0                      |                    | 0             |               |                              | 0              | 0              | 1.458   |
| 157   | L2-29(BY)            | 84.005       | 8.430                     | 10.100                 |                    | 13.000        |               |                              | 3.000          | 1.010          | 119.545 |
| 158   | IM1-29(BY)           | 215.380      | 25.411                    | 76.426                 |                    | 138.000       |               |                              | 20.210         | 119.173        | 594.600 |
| 159   | D1-29(BY)            | 38.664       | 4.375                     | 3.380                  |                    | 6.000         |               |                              | 1.360          | 8.400          | 62.178  |
| 160   | D2-29(BY)            | 47.743       | 6.302                     | 21.277                 |                    |               |               |                              | 8.700          | 116.270        | 200.292 |
| 161   | D3-29(BY)            | 60.920       | 2.753                     | 18.000                 |                    | 14.000        |               |                              | 0              | 0              | 95.673  |
| 162   | M7-29(BY)            | 12.742       | 13.500                    | 0                      |                    | 0             |               |                              | 0              | 0              | 26.242  |
| 163   | M8-29(BY)            | 16.423       | 0                         | 8.000                  |                    | 0             |               |                              | 2.400          | 8.000          | 34.823  |
| 164   | L2-28(BW)            | 19.380       | 1.000                     | 65.880                 |                    |               |               |                              |                |                | 86.260  |
| 165   | IM1-28(BW)           | 118.498      | 18.300                    | 59.580                 |                    | 41.900        |               |                              | 21.546         | 6.320          | 266.144 |
| 166   | D1-28(BW)            | 20.250       | 6.400                     | 27.450                 |                    | 43.000        |               |                              |                |                | 97.100  |
| 167   | D2-28(BW)            | 89.983       | 2.200                     | 34.980                 |                    | 22.000        |               |                              | 6.200          |                | 155.363 |
| 168   | D3-28(BW)            | 64.670       | 2.300                     | 52.050                 |                    | 19.500        |               |                              | 6.500          |                | 145.020 |
| 169   | M7-28(BW)            | 10.756       | 2.000                     |                        |                    |               |               |                              |                |                | 12.756  |
| 170   | M8-28(BW)            | 11.376       | 300                       |                        |                    |               |               |                              | 5.720          |                | 17.396  |
| 171   | L2-36(SN)            | 22.860       | 2.600                     |                        |                    |               |               |                              |                |                | 25.460  |
| 172   | IM1-36(SN)           | 18.902       | 3.500                     | 54.000                 |                    |               |               |                              | 5.000          |                | 81.402  |
| 173   | D2-36(SN)            | 11.621       | 2.000                     | 25.000                 |                    |               |               |                              | 2.500          |                | 41.121  |
| 174   | D3-36(SN)            | 8.902        | 3.500                     | 20.000                 |                    | 15.000        |               |                              |                |                | 47.402  |

| Breakdown of costs for Actions in Euro (excluding overhead costs) |                      |              |                           |                        |                    |               |               |                              |                |                |         |
|---|----------------------|--------------|---------------------------|------------------------|--------------------|---------------|---------------|------------------------------|----------------|----------------|---------|
| Action number   | Short name of action | 1. Personnel | 2. Travel and subsistence | 3. External assistance | 4.a Infrastructure | 4.b Equipment | 4.c Prototype | 5. Purchase or lease of land | 6. Consumables | 7. Other costs | TOTAL   |
| 175   | M7-36(SN)            | 10.771       | 2.000                     |                        |                    |               |               |                              |                |                | 12.771  |
| 176   | M8-36(SN)            | 1.591        | 600                       | 800                    |                    |               |               |                              |                |                | 2.991   |
| 177   | M7 -14 (IE)          | 0            |                           | 128.170                |                    |               |               |                              |                |                | 128.170 |
| 178   | M8 - 14 (IE)         | 0            |                           | 29.452                 |                    |               |               |                              |                |                | 29.452  |
| 179   | L1 - 14 (IE)         | 0            |                           | 8.254                  |                    |               |               |                              |                |                | 8.254   |
| 180   | L2 - 14 (IE)         | 0            |                           | 43.200                 |                    |               |               |                              |                |                | 43.200  |
| 181   | D1- 14 (IE)          | 0            |                           | 87.000                 |                    | 1.500         |               |                              |                |                | 88.500  |
| 182   | D2 - 14 (IE)         | 0            |                           | 108.000                |                    |               |               |                              |                |                | 108.000 |
| 183   | IM1 - 14 (IE)        | 0            |                           | 157.000                |                    | 23.000        |               |                              |                |                | 180.000 |
| 184   | M7-8(DK)             | 14.175       | 18.828                    |                        |                    |               |               |                              |                |                | 33.003  |
| 185   | M8-8(DK)             | 4.042        |                           |                        |                    |               |               |                              |                |                | 4.042   |
| 186   | L1-8(DK)             | 7.500        |                           |                        |                    |               |               |                              |                |                | 7.500   |
| 187   | L2-8(DK)             | 117.049      | 27.859                    |                        |                    |               |               |                              |                |                | 144.908 |
| 188   | D1-8(DK)             | 51.943       | 8.658                     |                        |                    | 13.423        |               |                              | 9.498          | 3.712          | 87.234  |
| 189   | D2-8(DK)             | 36.284       | 5.772                     | 3.543                  |                    |               |               |                              | 83.691         |                | 129.290 |
| 190   | D3-8(DK)             | 35.038       | 5.772                     |                        |                    | 4.309         |               |                              | 4.511          | 1.154          | 50.784  |
| 191   | IM1-8(DK)            | 142.033      | 12.275                    | 7.086                  |                    | 7.114         |               |                              | 98.416         | 1.557          | 268.481 |
| 192   | C-NFI-8(DK)          | 39.873       |                           |                        |                    |               |               |                              |                |                | 39.873  |
| 193   | M7-18(PL)            | 199.170      | 28.250                    |                        |                    |               |               |                              |                |                | 227.420 |
| 194   | M8-18(PL)            | 14.040       |                           | 19.500                 |                    |               |               |                              | 6.500          |                | 40.040  |
| 195   | L2-18(PL)            | 158.000      |                           | 188.000                |                    |               |               |                              | 16.400         |                | 362.400 |
| 196   | IM1-18(PL)           | 387.268      |                           | 71.800                 | 54.000             | 125.900       |               |                              | 35.910         |                | 674.878 |
| 197   | L1-26(UK)            | 7.440        |                           |                        |                    |               |               |                              |                |                | 7.440   |
| 198   | L2-26(UK)            | 176.248      | 76.000                    | 10.000                 |                    | 10.000        |               |                              | 750            |                | 272.998 |
| 199   | IM1-26(UK)           | 172.739      | 36.528                    | 5.203                  |                    | 18.506        |               |                              |                | 91.612         | 324.588 |

| Breakdown of costs for Actions in Euro (excluding overhead costs) |                      |              |                           |                        |                    |               |               |                              |                |                |         |
|---|----------------------|--------------|---------------------------|------------------------|--------------------|---------------|---------------|------------------------------|----------------|----------------|---------|
| Action number   | Short name of action | 1. Personnel | 2. Travel and subsistence | 3. External assistance | 4.a Infrastructure | 4.b Equipment | 4.c Prototype | 5. Purchase or lease of land | 6. Consumables | 7. Other costs | TOTAL   |
| 200   | D1-26(UK)            | 26.000       | 12.176                    | 2.498                  |                    | 23.070        |               |                              |                |                | 63.744  |
| 201   | D2-26(UK)            | 7.000        | 4.699                     | 1.382                  |                    |               |               |                              |                | 51.668         | 64.749  |
| 202   | D3-26(UK)            | 4.900        | 1.559                     | 541                    |                    | 1.257         |               |                              |                |                | 8.257   |
| 203   | M7-26(UK)            | 6.720        | 6.400                     |                        |                    |               |               |                              |                |                | 13.120  |
| 204   | M8-26(UK)            | 5.040        | 4.000                     |                        | 10.500             |               |               |                              |                |                | 19.540  |
| 205   | M7-13(HU)            | 1.168        | 4.000                     |                        |                    |               |               |                              |                |                | 5.168   |
| 206   | M8-13(HU)            | 1.752        | 320                       | 2.400                  |                    |               |               |                              |                | 320            | 4.792   |
| 207   | L2-13(HU)            | 124.538      | 40.249                    | 11.588                 |                    | 12.500        |               |                              | 14.582         |                | 203.457 |
| 208   | D1-13(HU)            | 0            |                           | 67.551                 |                    | 3.333         |               |                              |                |                | 70.884  |
| 209   | D2-13(HU)            | 0            |                           | 50.668                 |                    | 2.500         |               | 0                            | 0              | 0              | 53.168  |
| 210   | IM1-13(HU)           | 0            |                           | 218.838                |                    |               | 0             | 0                            | 0              | 0              | 218.838 |
| 211   | L2-17(NL)            | 0            |                           | 36.321                 |                    |               | 0             | 0                            | 0              | 0              | 36.321  |
| 212   | IM1-17(NL)           | 0            |                           | 319.666                |                    |               | 0             | 0                            | 0              | 0              | 319.666 |
| 213   | M7-17(NL)            | 4.272        | 4.800                     | 61.200                 |                    |               | 0             | 0                            | 0              | 0              | 70.272  |
| 214   | M8-17(NL)            | 0            |                           |                        |                    |               | 0             | 0                            | 0              | 5.000          | 5.000   |
| 215   | M7-21(SK)            | 38.000       | 4.000                     |                        |                    | 2.000         | 0             | 0                            | 1.000          | 0              | 45.000  |
| 216   | M8-21(SK)            | 2.600        | 1.500                     |                        |                    |               | 0             | 0                            | 3.000          | 2.000          | 9.100   |
| 217   | L1-21(SK)            | 7.000        | 0                         | 0                      | 0                  | 0             | 0             | 0                            | 1.000          | 0              | 8.000   |
| 218   | L2-21(SK)            | 55.700       | 20.000                    | 3.000                  |                    | 12.000        | 0             | 0                            | 10.000         | 0              | 100.700 |
| 219   | IM1-21(SK)           | 67.700       | 27.000                    | 152.200                |                    | 34.000        | 0             | 0                            | 19.000         | 6.000          | 305.900 |
| 220   | D1-21(SK)            | 17.400       | 9.500                     | 11.100                 |                    | 12.000        | 0             | 0                            | 3.000          | 2.000          | 55.000  |
| 221   | D2-21(SK)            | 30.100       | 10.600                    | 53.100                 | 0                  | 8.000         | 0             | 0                            | 4.700          | 4.000          | 110.500 |
| 222   | D3-21(SK)            | 35.000       | 11.900                    | 2.800                  | 0                  | 46.000        | 0             | 0                            | 8.300          | 0              | 104.000 |
| 223   | L2-34(SH)            | 7.644        | 0                         | 1.250                  | 0                  | 0             | 0             | 0                            | 0              | 1.880          | 10.774  |
| 224   | IM1-34(SH)           | 0            | 0                         | 69.000                 |                    |               | 0             | 0                            |                |                | 69.000  |

| Breakdown of costs for Actions in Euro (excluding overhead costs) |                      |              |                           |                        |                    |               |               |                              |                |                |            |
|---|----------------------|--------------|---------------------------|------------------------|--------------------|---------------|---------------|------------------------------|----------------|----------------|------------|
| Action number   | Short name of action | 1. Personnel | 2. Travel and subsistence | 3. External assistance | 4.a Infrastructure | 4.b Equipment | 4.c Prototype | 5. Purchase or lease of land | 6. Consumables | 7. Other costs | TOTAL      |
| 225   | D2-34(SH)            | 0            | 0                         | 62.000                 |                    |               | 0             | 0                            |                |                | 62.000     |
| 226   | D3-34(SH)            | 0            | 0                         | 10.000                 |                    |               | 0             | 0                            |                |                | 10.000     |
| 227   | M7-34(SH)            | 0            | 11.440                    |                        |                    |               | 0             | 0                            |                |                | 11.440     |
| 228   | M7-15(IT)            | 60.200       | 50.000                    | 200.000                | 0                  | 20.000        | 0             | 0                            | 10.000         | 0              | 340.200    |
| 229   | M8-15(IT)            | 0            | 5.000                     | 10.000                 | 0                  | 0             | 0             | 0                            | 5.000          | 0              | 20.000     |
| 230   | L2-15(IT)            | 112.220      | 78.440                    | 80.000                 | 0                  | 90.000        | 0             | 0                            | 20.000         | 0              | 380.660    |
| 231   | IM1-15(IT)           | 0            | 0                         | 200.000                | 0                  | 50.000        | 0             | 0                            | 5.000          | 0              | 255.000    |
| 232   | C1-QAC-15(IT)        | 0            | 0                         | 100.000                | 0                  |               | 0             | 0                            | 0              | 0              | 100.000    |
| 233   | C1-GV-15(IT)         | 0            | 20.000                    | 40.000                 | 0                  |               | 0             | 0                            | 0              | 0              | 60.000     |
| 234   | M8-38(LV)            | 2.198        | 0                         |                        |                    |               |               |                              |                |                | 2.198      |
| 235   | L2-38(LV)            | 52.000       | 24.540                    |                        |                    | 8.764         |               |                              | 2.000          |                | 87.304     |
| 236   | IM1 - 38(LV)         | 15.000       | 3.600                     | 56.000                 |                    |               |               |                              |                |                | 74.600     |
| 237   | L1 - 38 (LV)         | 30.000       | 3.000                     |                        |                    |               |               |                              |                |                | 33.000     |
| 238   | M1-1(DE-WFW)         | 366.398      | 25.810                    |                        |                    |               |               |                              | 6.000          |                | 398.208    |
| 239   | M2-1(DE)             | 20.000       | 0                         |                        |                    |               |               |                              |                |                | 20.000     |
| 240   | M3-1(DE)             | 276.311      | 440                       | 175.000                |                    |               |               |                              |                |                | 451.751    |
| 241   | M4-1(DE)             | 10.000       | 0                         |                        |                    |               |               |                              |                |                | 10.000     |
| 242   | M5-1(DE)             | 20.000       | 0                         |                        |                    |               |               |                              |                |                | 20.000     |
| 243   | M6-1(DE)             | 20.000       | 2.399                     |                        |                    |               |               |                              | 20.000         |                | 42.399     |
| 244   | A1-1(DE)             | 140.000      | 15.100                    | 118.251                |                    |               |               |                              | 12.400         |                | 285.751    |
| 245   | M1-1(DE-WOI)         | 171.360      | 11.667                    |                        |                    |               |               |                              | 2.644          |                | 185.671    |
| 246   | C1-MET-1(DE)         | 85.135       | 0                         |                        |                    |               |               |                              |                |                | 85.135     |
|   | TOTAL                | 14.280.551   | 2.858.726                 | 9.735.815              | 98.600             | 2.592.648     | 0             | 0                            | 1.525.975      | 1.357.226      | 32.449.541 |

Please refer to the relevant instructions given in the explanatory notes for filling in these forms

**FORM FC**

Proposal acronym: FutMon

| <b>Coordinating Beneficiary's contribution</b> |                |                        |                                 |                                     |  |
|--|----------------|------------------------|---------------------------------|-------------------------------------|--|
| Country code                                   | Beneficiary n° | Beneficiary short name | Total costs of the actions in € | Beneficiary's own contribution in € | Amount of EC contribution requested in € |
| DE   | 1              | vTI                    | 1.603.841                       | 403.856                             | 1.199.984                                |

| <b>Associated Beneficiaries' contribution</b> |                |                        |                                 |                                     |  |
|---|----------------|------------------------|---------------------------------|-------------------------------------|--|
| Country code                                  | Beneficiary n° | Beneficiary short name | Total costs of the actions in € | Beneficiary's own contribution in € | Amount of EC contribution requested in € |
| BU  | 5              | ExEA                   | 289.360                         | 156.620                             | 132.740                                  |
| CY  | 6              | Cyprus Department of   | 159.667                         | 84.328                              | 75.339                                   |
| EE  | 9              | CFPS                   | 427.529                         | 221674                              | 205855                                   |
| FI  | 10             | METLA                  | 1.929.283                       | 958.468                             | 970.815                                  |
| LT  | 16             | State Forest Survey    | 249.900                         | 138.900                             | 111.000                                  |
| AT  | 2              | BFW                    | 1.854.795                       | 1.097.597                           | 757.198                                  |
| SE  | 25             | SLU                    | 1.553.200                       | 409.995                             | 708.205                                  |
| DE  | 33             | FAWF-RP                | 367.706                         | 197.974                             | 169.732                                  |
| DE  | 32             | LANUV NRW              | 478.674                         | 261.564                             | 217.110                                  |
| DE  | 37             | TLWJF (TH)             | 327.175                         | 170.988                             | 156.187                                  |
| DE  | 30             | NWD                    | 1.852.345                       | 960.441                             | 891.904                                  |
| IT  | 40             | CNR                    | 1.494.782                       | 752.591                             | 742.191                                  |
| DE  | 27             | LFE                    | 574.510                         | 303010                              | 271500                                   |
| IT  | 39             | CRA                    | 734.620                         | 375.710                             | 358.910                                  |
| SI  | 22             | GIS/SFI                | 815.432                         | 408.637                             | 406.795                                  |
| GR  | 12             | GDF                    | 393.699                         | 242.480                             | 151.219                                  |
| BE  | 3              | INBO                   | 770.961                         | 377.866                             | 393.095                                  |

|              |    |                        |                   |                   |                   |
|--------------|----|------------------------|-------------------|-------------------|-------------------|
| DE           | 31 | LU M-V                 | 248.834           | 143.446           | 105.388           |
| DE           | 35 | LUA                    | 196.307           | 137.509           | 58.798            |
| CZ           | 7  | FGMRI/VULHM            | 785.900           | 443.621           | 342.279           |
| FR           | 11 | ONF                    | 3.439.630         | 1.576.588         | 1.463.042         |
| RO           | 20 | ICAS                   | 1.054.618         | 5.000             | 421.129           |
| ES           | 23 | ES (DGMNyPF)           | 3.347.058         | 1.735.449         | 1.611.609         |
| ES           | 24 | CEAM                   | 72.900            | 37.799            | 35.101            |
| DE           | 29 | BY                     | 1.318.212         | 749.362           | 568.850           |
| DE           | 28 | DE-BW                  | 827.563           | 477.763           | 349.800           |
| DE           | 36 | SBS Saxony             | 224.946           | 122.413           | 102.533           |
| IE           | 14 | Forest Service         | 625.176           | 333.591           | 291.585           |
| DK           | 8  | Forest & Landscape     | 817.280           | 433.330           | 383.950           |
| PL           | 18 | IBL                    | 1.385.608         | 790.338           | 595.270           |
| UK           | 26 | Forest Research        | 824.888           | 453.557           | 371.331           |
| HU           | 13 | CAO                    | 594.207           | 315.158           | 279.049           |
| NL           | 17 | LNV-DN                 | 431.259           | 223.608           | 207.651           |
| SK           | 21 | NFC                    | 783.400           | 450.200           | 333.200           |
| DE           | 34 | MLUR                   | 163.214           | 105.714           | 57.500            |
| IT           | 15 | CONECOFOR              | 1.227.810         | 677.905           | 549.905           |
| LV           | 38 | Latvian State Forestry | 197.102           | 105.573           | 91.529            |
| <b>TOTAL</b> |    |                        | <b>32.839.550</b> | <b>16.436.767</b> | <b>14.939.294</b> |

| <b>Co-financers contribution</b>                        |                             |
|---|-----------------------------|
| Co-financer's name                                      | Amount of co-financing in € |
| Swedish EPA   | 435.000                     |
| French Ministry of Environment (MEDAD)                  | 150.000                     |
| French Ministry of Agriculture (MAP)                    | 150.000                     |
| French Environmental Agency (ADEME)                     | 100.000                     |
| Ministerul Agriculturii si Dezvoltarii Rurale (Romania) | 628.489                     |
|   |                             |
|   |                             |
|   |                             |
| <b>TOTAL</b>  | <b>1.463.489</b>            |

Please refer to the relevant instructions given in the explanatory notes for filling in these forms



**FORM F1**

Proposal acronym: FutMon

| Direct Personnel costs |  |  |   |                          |                            |                           |   |
|------------------------|--|--|---|--------------------------|----------------------------|---------------------------|---|
|                        | Calculation =>   |  | A   | B                        | C =                        | A X B                     |   |
| Beneficiary number     | Type of contract   | Category   | Daily rate<br>(rounded to the<br>nearest €) | Number of<br>person.days | Number of<br>person.months | Direct personnel<br>costs | % of total direct<br>personnel costs for<br>the project |
| 5                      | Civil serv.perm.   | Head of dep.                                       | 25  | 14                       | 1                          | 350                       | 0,00%   |
| 5                      | Civil serv.perm.   | Head of dep.                                       | 25  | 18                       | 1,0                        | 450                       | 0,00%   |
| 5                      | Civil serv.perm.   | Senior expert                                      | 18  | 170                      | 8,0                        | 3.060                     | 0,02%   |
| 5                      | Civil serv.perm.   | Senior expert                                      | 18  | 170                      | 8,0                        | 3.060                     | 0,02%   |
| 5                      | Civil serv.perm.   | chief accountant                                   | 30  | 24                       | 2,0                        | 720                       | 0,01%   |
| 5                      | Civil serv.perm.   | accountant   | 20  | 12                       | 1,0                        | 240                       | 0,00%   |
| 5                      | Civil serv.perm.   | PR expert  | 20  | 6                        | 1,0                        | 120                       | 0,00%   |
| 6                      | Civil Servant<br>seconded to the<br>project                        | Project manager                                    | 128   | 130                      | 6,19                       | 16.640                    | 0,12%   |
| 6                      | Civil Servant<br>seconded to the<br>project or service<br>contract | Profesional forester or junior<br>forest scientist | 110   | 60                       | 0,71                       | 6.600                     | 0,05%   |
| 6                      | Civil Servant<br>seconded to the<br>project or service<br>contract | Three forest technicians                           | 103   | 133                      | 2,85                       | 13.699                    | 0,10%   |
| 6                      | Service contract or<br>temporary contract                          | One junior forest scientist                        | 73  | 504                      | 24                         | 36.792                    | 0,26%   |
| 6                      | Temporary contract   | Worker   | 60  | 331                      | 12,95                      | 19.860                    | 0,14%   |
| 9                      | civil servant  | project manager (part time)                        | 120   | 100                      | 5                          | 12.000                    | 0,08%   |
| 9                      | civil servant  | project adviser (part time)                        | 200   | 40                       | 2                          | 8.000                     | 0,06%   |
| 9                      | civil servant  | accounting manager (part time)                     | 140   | 64                       | 3                          | 8.960                     | 0,06%   |

## FORM F1

Proposal acronym: FutMon

| Direct Personnel costs |                       |  |   |                          |                            |                           |   |
|------------------------|-----------------------|--|---|--------------------------|----------------------------|---------------------------|---|
|                        | Calculation =>        |  | A   | B                        | C =                        | A X B                     |   |
| Beneficiary number     | Type of contract      | Category                                 | Daily rate<br>(rounded to the<br>nearest €) | Number of<br>person.days | Number of<br>person.months | Direct personnel<br>costs | % of total direct<br>personnel costs for<br>the project |
| 9                      | civil servant         | 2 senior monitoring officers (part time) | 140   | 240                      | 11                         | 33.600                    | 0,24%   |
| 9                      | civil servant         | 7 senior monitoring officers (part time) | 120   | 400                      | 19                         | 48.000                    | 0,34%   |
| 9                      | civil servant         | laboratory technican (part time)         | 100   | 400                      | 19                         | 40.000                    | 0,28%   |
| 9                      | civil servant         | 5 senior NFI officers (part time)        | 140   | 225                      | 11                         | 31.500                    | 0,22%   |
| 9                      | temp. contract        | 4 NFI specialists                        | 120   | 200                      | 10                         | 24.000                    | 0,17%   |
| 9                      | temp. contract        | technician                               | 100   | 183                      | 9                          | 18.300                    | 0,13%   |
| 10                     | Permanent             | Project manager                          | 384   | 130                      | 6,2                        | 49.920                    | 0,35%   |
| 10                     | Permanent             | Principal researchers                    | 314   | 409                      | 19,5                       | 128.426                   | 0,90%   |
| 10                     | Permanent             | Researchers                              | 282   | 859                      | 40,9                       | 242.238                   | 1,70%   |
| 10                     | Temporary             | Researchers                              | 206   | 500                      | 23,8                       | 103.000                   | 0,72%   |
| 10                     | Permanent             | Laboratory technicians                   | 178   | 678                      | 32,3                       | 120.684                   | 0,85%   |
| 10                     | Temporary             | Chemistry/Biology students               | 96  | 280                      | 13,3                       | 26.880                    | 0,19%   |
| 10                     | Permanent             | Field workers                            | 194   | 986                      | 47,0                       | 191.284                   | 1,34%   |
| 10                     | Temporary             | Field workers                            | 125   | 1020                     | 48,6                       | 127.500                   | 0,89%   |
| 10                     | Permanent             | Office workers                           | 192   | 91                       | 4,3                        | 17.472                    | 0,12%   |
| 10                     | Permanent             | Data analysts                            | 190   | 331                      | 15,8                       | 62.890                    | 0,44%   |
| 16                     | Civil serv. Permanent | 2 Project managers (part time)           | 89  | 400                      | 18,0                       | 35.600                    | 0,25%   |
| 16                     | Civil serv. Permanent | Accounting manager (part time)           | 87  | 80                       | 4,0                        | 6.960                     | 0,05%   |
| 16                     | Civil serv. Permanent | Head of department (part time)           | 84  | 85                       | 4,0                        | 7.140                     | 0,05%   |

**FORM F1**

Proposal acronym: FutMon

| Direct Personnel costs |                       |                                |   |                          |                            |                           |   |
|------------------------|-----------------------|--------------------------------|---|--------------------------|----------------------------|---------------------------|---|
|                        | Calculation =>        |                                | A   | B                        | C =                        | A X B                     |   |
| Beneficiary number     | Type of contract      | Category                       | Daily rate<br>(rounded to the<br>nearest €) | Number of<br>person.days | Number of<br>person.months | Direct personnel<br>costs | % of total direct<br>personnel costs for<br>the project |
| 16                     | Civil serv. Permanent | Senior researcher (part time)  | 85  | 110                      | 5,0                        | 9.350                     | 0,07%   |
| 16                     | Permanent contract    | 2 Senior engineers (part time) | 83  | 270                      | 12,0                       | 22.410                    | 0,16%   |
| 16                     | Permanent contract    | 2 Group leaders (part time)    | 78  | 270                      | 12,0                       | 21.060                    | 0,15%   |
| 16                     | Permanent contract    | 2 Engineers (part time)        | 60  | 270                      | 12,0                       | 16.200                    | 0,11%   |
| 16                     | Temporary contract    | Senior researcher (part time)  | 85  | 160                      | 7,0                        | 13.600                    | 0,10%   |
| 16                     | Temporary contract    | Technician (part time)         | 73  | 160                      | 7,0                        | 11.680                    | 0,08%   |
| 2                      | civil servant         | programm manager               | 400,0                                       | 130                      | 6,5                        | 52.000                    | 0,36%   |
| 2                      | civil servant         | data base manager              | 340,0                                       | 60                       | 3                          | 20.400                    | 0,14%   |
| 2                      | civil servant         | statistician                   | 340,0                                       | 30                       | 1,5                        | 10.200                    | 0,07%   |
| 2                      | civil servant         | lab manager                    | 324,2                                       | 99                       | 5                          | 32.096                    | 0,22%   |
| 2                      | civil servant         | senior researcher              | 321,8                                       | 830                      | 41,5                       | 267.053                   | 1,87%   |
| 2                      | civil servant         | engineer                       | 291,1                                       | 90                       | 4,5                        | 26.197                    | 0,18%   |
| 2                      | civil servant         | software engineer              | 240,0                                       | 80                       | 4                          | 19.200                    | 0,13%   |
| 2                      | civil servant         | technician                     | 195,0                                       | 460                      | 23                         | 89.700                    | 0,63%   |
| 2                      | civil servant         | worker                         | 168,2                                       | 140                      | 7                          | 23.548                    | 0,16%   |
| 2                      | civil servant         | administration                 | 162,3                                       | 160                      | 8                          | 25.968                    | 0,18%   |
| 2                      | civil servant         | laboratory worker              | 160,6                                       | 120                      | 6                          | 19.272                    | 0,13%   |
| 2                      | permanent employee    | data assessing                 | 210,0                                       | 50                       | 2,5                        | 10.500                    | 0,07%   |
| 2                      | permanent employee    | laboratory technician          | 206,4                                       | 80                       | 4                          | 16.512                    | 0,12%   |
| 2                      | permanent employee    | technician                     | 192,1                                       | 690                      | 34,5                       | 132.549                   | 0,93%   |

## FORM F1

Proposal acronym: FutMon

| Direct Personnel costs |                                  |   |   |                          |                            |                           |   |
|------------------------|----------------------------------|---|---|--------------------------|----------------------------|---------------------------|---|
|                        | Calculation =>                   |   | A   | B                        | C =                        | A X B                     |   |
| Beneficiary number     | Type of contract                 | Category  | Daily rate<br>(rounded to the<br>nearest €) | Number of<br>person.days | Number of<br>person.months | Direct personnel<br>costs | % of total direct<br>personnel costs for<br>the project |
| 2                      | temporary contract               | engineer  | 210,0                                       | 360                      | 18                         | 75.600                    | 0,53%   |
| 2                      | temporary contract               | technician  | 160,0                                       | 120                      | 6                          | 19.200                    | 0,13%   |
| 2                      | temporary contract               | worker  | 122,0                                       | 120                      | 6                          | 14.640                    | 0,10%   |
| 25                     | Temporary                        | Field Staff   | 242   | 2340                     | 309,5                      | 566.280                   | 3,97%   |
| 25                     | Permanent                        | Senior Scientist  | 450   | 42,5                     | 5,6                        | 19.116                    | 0,13%   |
| 25                     | Permanent                        | Technician  | 280   | 288,0                    | 38,1                       | 80.640                    | 0,56%   |
| 25                     | Permanent                        | Technician  | 260   | 643,7                    | 87,3                       | 167.364                   | 1,17%   |
| 33                     | civil servant                    | senior scientist (1)  | 437   | 35                       | 2                          | 15.295                    | 0,11%   |
| 33                     | civil servant                    | scientist (2)   | 390   | 105                      | 6,1                        | 40.950                    | 0,29%   |
| 33                     | civil servant                    | scientist (UAS) (2)   | 308   | 135                      | 7,9                        | 41.580                    | 0,29%   |
| 33                     | civil servant                    | scientist (UAS) (2)   | 275   | 35                       | 2                          | 9.625                     | 0,07%   |
| 33                     | perm. contract                   | technician (3)  | 230   | 185                      | 10,8                       | 42.550                    | 0,30%   |
| 33                     | perm. contract                   | technician (3)  | 218   | 86                       | 5                          | 18.748                    | 0,13%   |
| 33                     | temp. contract                   | student assistant (several)   | 66  | 63                       | 3,7                        | 4.158                     | 0,03%   |
| 32                     | Civil serv.perm.                 | 3 Project managers (part time)  | 273   | 91                       | 4,3                        | 24.843                    | 0,17%   |
| 32                     | Civil serv.perm.                 | 2 technicians outdoor (part time)   | 183   | 98                       | 4,7                        | 17.934                    | 0,13%   |
| 32                     | Civil serv.perm.                 | 4 technicians (part time)   | 152   | 152                      | 7,2                        | 23.104                    | 0,16%   |
| 32                     | Civil serv.perm.                 | 4 laborants (part time)   | 176   | 897                      | 43,5                       | 157.872                   | 1,11%   |
| 32                     | Civil serv.perm.                 | 1 secretary (part time)   | 142   | 87                       | 4,1                        | 12.354                    | 0,09%   |
| 37                     | temporary contract<br>/full time | Administrator (employment<br>contract especially for LIFE+ in<br>the upper grade of the civil<br>service) | 150   | 450                      | 23,7                       | 67.500                    | 0,47%   |

**FORM F1**

Proposal acronym: FutMon

| Direct Personnel costs |                              |   |   |                          |                            |                           |   |
|------------------------|------------------------------|---|---|--------------------------|----------------------------|---------------------------|---|
|                        | Calculation =>               |   | A   | B                        | C =                        | A X B                     |   |
| Beneficiary number     | Type of contract             | Category  | Daily rate<br>(rounded to the<br>nearest €) | Number of<br>person.days | Number of<br>person.months | Direct personnel<br>costs | % of total direct<br>personnel costs for<br>the project |
| 37                     | permanent contract/part time | 2 Manager (in the higher grade of the civil service)    | 150   | 104                      | 5,5                        | 15.600                    | 0,11%   |
| 37                     | permanent contract/full time | 3 Technicians (in the lower grade of the civil service) | 128   | 162                      | 8,5                        | 20.736                    | 0,15%   |
| 30                     | permanent contract           | Technicians   | 199   | 1.893                    | 100,9                      | 376.612                   | 2,64%   |
| 30                     | temporary contract           | Technicians   | 199   | 856                      | 45,6                       | 170.260                   | 1,19%   |
| 30                     | civil servant                | Scientist   | 383   | 166                      | 8,9                        | 63.741                    | 0,45%   |
| 30                     | permanent contract           | Scientist   | 323   | 395                      | 21,1                       | 127.538                   | 0,89%   |
| 30                     | temporary contract           | Scientist   | 308   | 1.155                    | 61,6                       | 355.722                   | 2,49%   |
| 30                     | civil servant                | Engineer  | 251   | 240                      | 12,8                       | 60.275                    | 0,42%   |
| 30                     | permanent contract           | Project manager   | 355   | 56                       | 3,0                        | 19.880                    | 0,14%   |
| 30                     | civil servant                | Project manager   | 403   | 37                       | 2,0                        | 14.951                    | 0,10%   |
| 30                     | civil servant                | Project manager   | 354   | 35                       | 1,8                        | 12.233                    | 0,09%   |
| 30                     | civil servant                | Scientist   | 316   | 66                       | 3,5                        | 20.877                    | 0,15%   |
| 40                     | Civil serv.perm.             | Project manager (part time)                             | 202   | 218                      | 12                         | 44.036                    | 0,31%   |
| 40                     | Civil serv.perm.             | Researcher (part time)                                  | 202   | 436                      | 24                         | 88.072                    | 0,62%   |
| 40                     | Civil serv.perm.             | Technician (part time)                                  | 176   | 872                      | 48                         | 153.472                   | 1,07%   |
| 40                     | Civil serv.temp.             | Researcher (full time)                                  | 202   | 872                      | 48                         | 176.144                   | 1,23%   |
| 40                     | Civil serv.temp.             | Technician (full time)                                  | 176   | 1744                     | 96                         | 306.944                   | 2,15%   |
| 40                     | Grant holder                 | Field and lab research assistant                        | 115   | 436                      | 24                         | 50.140                    | 0,35%   |
| 27                     | Civil serv.perm.             | Project manager (partly)                                | 264   | 325                      | 18                         | 85.800                    | 0,60%   |
| 27                     | Civil serv.perm.             | senior engineer (partly)                                | 264   | 220                      | 12                         | 58.080                    | 0,41%   |
| 27                     | Civil serv.perm.             | junior engineer (partly)                                | 200   | 220                      | 12                         | 44.000                    | 0,31%   |

**FORM F1**

Proposal acronym: FutMon

| Direct Personnel costs |  |   |   |                          |                            |                           |   |
|------------------------|--|---|---|--------------------------|----------------------------|---------------------------|---|
|                        | Calculation =>                           |   | A   | B                        | C =                        | A X B                     |   |
| Beneficiary number     | Type of contract                         | Category  | Daily rate<br>(rounded to the<br>nearest €) | Number of<br>person.days | Number of<br>person.months | Direct personnel<br>costs | % of total direct<br>personnel costs for<br>the project |
| 27                     | Civil serv.perm.                         | technican/worker(partly)                            | 184   | 325                      | 18                         | 59.800                    | 0,42%   |
| 27                     | temporary                                | junior engineer                                     | 200   | 440                      | 24                         | 88.000                    | 0,62%   |
| 27                     | temporary                                | technican/worker                                    | 184   | 220                      | 12                         | 40.480                    | 0,28%   |
| 39                     | staff or temporary<br>contract full time | Researcher 880 RPS IM1 220 SEL<br>IM1               | 205   | 1100                     | 50,0                       | 225.500                   | 1,58%   |
| 39                     | staff or temporary<br>contract full time | Technician 440 RPS IM1                              | 159   | 440                      | 20,0                       | 69.960                    | 0,49%   |
| 39                     | temporary contract<br>full time          | Research grant 220 RPS IM1 330<br>SEL D1 440 RPS D3 | 90  | 990                      | 45,0                       | 89.100                    | 0,62%   |
| 39                     | staff or temporary<br>contract part time | Researcher 210 TN L2                                | 205   | 210                      | 9,6                        | 43.050                    | 0,30%   |
| 39                     | staff or temporary<br>contract part time | Technician 150 TN L2                                | 159   | 150                      | 6,8                        | 23.850                    | 0,17%   |
| 22                     | Civil serv.perm.                         | Senior Researcher 1                                 | 220   | 46                       | 2,358974359                | 10.120                    | 0,07%   |
| 22                     | Civil serv.perm.                         | Senior Researcher 2                                 | 213   | 120                      | 6,153846154                | 25.507                    | 0,18%   |
| 22                     | Civil serv.perm.                         | Senior Researcher 3                                 | 238   | 130                      | 6,684533333                | 30.971                    | 0,22%   |
| 22                     | Civil serv.perm.                         | Senior Researcher 4                                 | 238   | 48                       | 2,461538462                | 11.405                    | 0,08%   |
| 22                     | Civil serv.perm.                         | Senior Researcher 5                                 | 226   | 44                       | 2,256410256                | 9.962                     | 0,07%   |
| 22                     | Civil serv.perm.                         | Senior Researcher 6                                 | 220   | 145                      | 7,453764103                | 31.977                    | 0,22%   |
| 22                     | Civil serv.perm.                         | Junior Researcher 1                                 | 158   | 174                      | 8,923076923                | 27.562                    | 0,19%   |
| 22                     | Civil serv.temp.                         | Junior Researcher 2                                 | 158   | 178                      | 9,128205128                | 28.195                    | 0,20%   |
| 22                     | Civil serv.perm.                         | Junior Researcher 3                                 | 167   | 150                      | 7,692307692                | 25.080                    | 0,18%   |
| 22                     | Civil serv.temp.                         | Junior Researcher 4                                 | 148   | 56                       | 2,871794872                | 8.288                     | 0,06%   |
| 22                     | Civil serv.temp.                         | Technician 1  | 126   | 177                      | 9,076923077                | 22.302                    | 0,16%   |

## FORM F1

Proposal acronym: FutMon

| Direct Personnel costs |                    |   |   |                          |                            |                           |   |
|------------------------|--------------------|---|---|--------------------------|----------------------------|---------------------------|---|
|                        | Calculation =>     |   | A   | B                        | C =                        | A X B                     |   |
| Beneficiary number     | Type of contract   | Category                                | Daily rate<br>(rounded to the<br>nearest €) | Number of<br>person.days | Number of<br>person.months | Direct personnel<br>costs | % of total direct<br>personnel costs for<br>the project |
| 22                     | Civil serv.perm.   | Technician 2                            | 132   | 189                      | 9,692307692                | 24.948                    | 0,17%   |
| 22                     | Civil serv.temp.   | Technician 3                            | 132   | 74                       | 3,794871795                | 9.768                     | 0,07%   |
| 22                     | Civil serv.temp.   | Technician 5                            | 148   | 54                       | 2,769230769                | 7.992                     | 0,06%   |
| 22                     | Civil serv.temp.   | Technician 6                            | 134   | 114                      | 5,846153846                | 15.322                    | 0,11%   |
| 22                     | Civil serv.perm.   | Technician 7                            | 109   | 150                      | 7,692307692                | 16.380                    | 0,11%   |
| 22                     | Civil serv.temp.   | Technician 9                            | 126   | 161                      | 8,256410256                | 20.286                    | 0,14%   |
| 22                     | Civil serv.temp.   | Technician 10                           | 141   | 61                       | 3,128205128                | 8.589                     | 0,06%   |
| 22                     | Civil serv.temp.   | Technician 11                           | 143   | 161                      | 8,256410256                | 22.991                    | 0,16%   |
| 22                     | Civil serv.temp.   | Technician 12                           | 109   | 318                      | 16,30769231                | 34.726                    | 0,24%   |
| 22                     | Civil serv.temp.   | Technician 15                           | 160   | 396                      | 20,28525641                | 63.290                    | 0,44%   |
| 22                     | Civil serv.temp.   | Technician 16                           | 132   | 440                      | 22,56410256                | 58.080                    | 0,41%   |
| 22                     | Civil serv.temp.   | Technician 17                           | 115   | 412                      | 21,12820513                | 47.298                    | 0,33%   |
| 22                     | Civil serv.temp.   | Technician 18                           | 109   | 412                      | 21,12820513                | 44.990                    | 0,32%   |
| 12                     | Temporary contract | L2b, University graduate (full<br>time) | 99  | 225                      | 12,0                       | 22.275                    | 0,16%   |
| 3                      | permanent staff    | senior scientist                        | 343   | 163                      | 20,8                       | 55.798                    | 0,39%   |
| 3                      | contract           | scientist                               | 286   | 442                      | 60,0                       | 126.370                   | 0,88%   |
| 3                      | contract           | scientist                               | 315   | 91                       | 13,0                       | 28.693                    | 0,20%   |
| 3                      | contract           | scientist                               | 335   | 44                       | 6,0                        | 14.805                    | 0,10%   |
| 3                      | contract           | technician                              | 135   | 442                      | 60,0                       | 59.655                    | 0,42%   |
| 3                      | contract           | technician                              | 190   | 22                       | 3,0                        | 4.206                     | 0,03%   |
| 3                      | permanent staff    | technician                              | 168   | 182                      | 24,6                       | 30.544                    | 0,21%   |
| 3                      | permanent staff    | senior scientist                        | 350   | 72                       | 5,8                        | 25.200                    | 0,18%   |
| 3                      | contract           | scientist                               | 330   | 379                      | 29,9                       | 125.070                   | 0,88%   |

## FORM F1

Proposal acronym: FutMon

| Direct Personnel costs |                               |                                      |   |                          |                            |                           |   |
|------------------------|-------------------------------|--------------------------------------|---|--------------------------|----------------------------|---------------------------|---|
|                        | Calculation =>                |                                      | A   | B                        | C =                        | A X B                     |   |
| Beneficiary number     | Type of contract              | Category                             | Daily rate<br>(rounded to the<br>nearest €) | Number of<br>person.days | Number of<br>person.months | Direct personnel<br>costs | % of total direct<br>personnel costs for<br>the project |
| 3                      | contract                      | scientist                            | 315   | 20                       | 3,4                        | 6.300                     | 0,04%   |
| 31                     | civil servant, part time      | project manager - scientist          | 248   | 118,23                   | 18,0                       | 29.321                    | 0,21%   |
| 31                     | civil servants, part time     | engineer                             | 176   | 215,8                    | 32,9                       | 37.981                    | 0,27%   |
| 31                     | permanent contract, part time | engineer                             | 216   | 47,75                    | 7,3                        | 10.314                    | 0,07%   |
| 35                     | civil serv.perm.              | 2 Junior engineers (L2)              | 215   | 9,8                      | 0,5                        | 2.107                     | 0,01%   |
| 35                     | civil serv.perm.              | Senior engineer (L2)                 | 265   | 2                        | 0,1                        | 530                       | 0,00%   |
| 35                     | civil serv.perm.              | 2 Junior engineers (IM1)             | 215   | 2                        | 0,1                        | 430                       | 0,00%   |
| 35                     | perm. contract                | 2 Field assistants (IM1)             | 192   | 169                      | 9,2                        | 32.448                    | 0,23%   |
| 35                     | civil serv.perm.              | Senior engineer (IM1)                | 265   | 1                        | 0,1                        | 265                       | 0,00%   |
| 35                     | perm. contract                | Field assistant (IM1)                | 205   | 2,25                     | 0,1                        | 461                       | 0,00%   |
| 35                     | perm. contract                | 2 Scientists (IM1)                   | 282   | 15,25                    | 0,8                        | 4.301                     | 0,03%   |
| 35                     | perm. contract                | Field assistant (D2)                 | 192   | 51                       | 2,8                        | 9.792                     | 0,07%   |
| 35                     | perm. contract                | Scientist (D2)                       | 282   | 10                       | 0,5                        | 2.820                     | 0,02%   |
| 35                     | civil serv.perm.              | Project manager (M7)                 | 297   | 18                       | 1,0                        | 5.346                     | 0,04%   |
| 7                      | permanent                     | scientists-researcher (8 pers.)      | 75  | 1770                     | 88,5                       | 132.750                   | 0,93%   |
| 7                      | permanent                     | technician (4 pers.)                 | 50  | 920                      | 46,0                       | 46.000                    | 0,32%   |
| 7                      | project -based                | scientists-research (2 pers)         | 75  | 154                      | 27,5                       | 11.550                    | 0,08%   |
| 7                      | project -based                | technician (4 pers.)                 | 50  | 1150                     | 57,5                       | 57.500                    | 0,40%   |
| 7                      | Permanent                     | National project manager (part time) | 100   | 44                       | 5,3                        | 4.400                     | 0,03%   |



**FORM F1**

Proposal acronym: FutMon

| Direct Personnel costs |                                     |   |   |                          |                            |                           |   |
|------------------------|-------------------------------------|---|---|--------------------------|----------------------------|---------------------------|---|
|                        | Calculation =>                      |   | A   | B                        | C =                        | A X B                     |   |
| Beneficiary number     | Type of contract                    | Category  | Daily rate<br>(rounded to the<br>nearest €) | Number of<br>person.days | Number of<br>person.months | Direct personnel<br>costs | % of total direct<br>personnel costs for<br>the project |
| 11                     | Permanent                           | General chief forest engineer (ICGREF), Jean-François Dhôte | 500   | 10                       | 0,5                        | 5.000                     | 0,04%   |
| 11                     | Permanent                           | General forest engineer (IGREF), Erwin Ulrich               | 310   | 288                      | 16,5                       | 89.280                    | 0,63%   |
| 11                     | Permanent                           | General forest engineer (IGREF), Manuel Nicolas             | 250   | 294                      | 16,8                       | 73.500                    | 0,51%   |
| 11                     | Permanent                           | Technical forest engineer (ITEF), Luc Croisé                | 210   | 294,4                    | 16,8                       | 61.824                    | 0,43%   |
| 11                     | Permanent                           | Senior technician (CATE), Marc Lanier                       | 276,5                                       | 294                      | 16,8                       | 81.291                    | 0,57%   |
| 11                     | Permanent (n=1) and temporary (n=2) | Three junior technicians (of the coordination center)       | 150,5                                       | 960                      | 54,9                       | 144.480                   | 1,01%   |
| 11                     | Permanent                           | 20 technicians in the 10 "directions territoriales" of ONF  | 252   | 989                      | 56,5                       | 249.228                   | 1,75%   |
| 11                     | Permanent                           | 50 local foresters (agent patrimonial)                      | 175   | 3029,4                   | 173,1                      | 530.145                   | 3,71%   |
| 11                     | Permanent                           | 20 forest workers (ouvrier forestier)                       | 164,5                                       | 246                      | 14,1                       | 40.467                    | 0,28%   |
| 11                     | Permanent                           | Secretary, Valérie Trevedy-Bénard                           | 157,5                                       | 336                      | 19,2                       | 52.920                    | 0,37%   |
| 11                     | Permanent                           | Countable, Christine Szymanski                              | 196   | 48,8                     | 2,8                        | 9.565                     | 0,07%   |

**FORM F1**

Proposal acronym: FutMon

| Direct Personnel costs |                                     |  |   |                          |                            |                           |   |
|------------------------|-------------------------------------|--|---|--------------------------|----------------------------|---------------------------|---|
|                        | Calculation =>                      |  | A   | B                        | C =                        | A X B                     |   |
| Beneficiary number     | Type of contract                    | Category   | Daily rate<br>(rounded to the<br>nearest €) | Number of<br>person.days | Number of<br>person.months | Direct personnel<br>costs | % of total direct<br>personnel costs for<br>the project |
| 20                     | Permanent contract                  | Project manager - full time                      | 90  | 470                      | 22,0                       | 42.300                    | 0,30%   |
| 20                     | Permanent contract                  | Scientific leaders of action - part<br>time      | 79  | 1450                     | 67,8                       | 114.550                   | 0,80%   |
| 20                     | Permanent contract                  | Project permanent team - part<br>time            | 50  | 2592                     | 121,1                      | 129.600                   | 0,91%   |
| 20                     | Permanent contract                  | Office and laboratory technicians -<br>full time | 37  | 1950                     | 91,1                       | 72.150                    | 0,51%   |
| 20                     | temporary contract                  | Experts - part time                              | 79  | 900                      | 42,1                       | 71.100                    | 0,50%   |
| 24                     | Permanent contract                  | Project manager                                  | 301   | 31                       | 1,6                        | 9.331                     | 0,07%   |
| 24                     | Permanent contract                  | Senior Scientist                                 | 205   | 103                      | 5,2                        | 21.115                    | 0,15%   |
| 24                     | Permanent contract                  | Junior Scientist                                 | 149   | 42                       | 2,1                        | 6.258                     | 0,04%   |
| 24                     | Temporary contract                  | Technical  | 100   | 102                      | 5,1                        | 10.247                    | 0,07%   |
| 29                     | civil servant<br>permanent contract | forest engeneer, A10 (2)                         | 245   | 310                      | 17                         | 75.950                    | 0,53%   |
| 29                     | civil servant<br>permanent contract | forest engeneer, A13 (1)                         | 310   | 62                       | 3                          | 19.220                    | 0,13%   |
| 29                     | civil servant<br>permanent contract | project manager, Scientists, A14<br>(3)          | 339   | 295                      | 16                         | 100.005                   | 0,70%   |
| 29                     | civil servant<br>permanent contract | senior scientist EG 13/5 (2)                     | 199   | 319                      | 17                         | 63.481                    | 0,44%   |
| 29                     | civil servant<br>permanent contract | senior scientist EG 14/5 (4)                     | 213   | 285                      | 16                         | 60.705                    | 0,43%   |
| 29                     | civil servant<br>permanent contract | technician EG 6/5 (1)                            | 111   | 68                       | 4                          | 7.548                     | 0,05%   |

**FORM F1**

Proposal acronym: FutMon

| Direct Personnel costs |                                     |   |   |                          |                            |                           |   |
|------------------------|-------------------------------------|---|---|--------------------------|----------------------------|---------------------------|---|
|                        | Calculation =>                      |   | A   | B                        | C =                        | A X B                     |   |
| Beneficiary number     | Type of contract                    | Category                                    | Daily rate<br>(rounded to the<br>nearest €) | Number of<br>person.days | Number of<br>person.months | Direct personnel<br>costs | % of total direct<br>personnel costs for<br>the project |
| 29                     | civil servant<br>permanent contract | technical assistant EG 9/4 (2)              | 133   | 284                      | 15                         | 37.772                    | 0,26%   |
| 29                     | civil servant<br>permanent contract | technician/ field worker EG 5/5 (2)         | 104   | 194                      | 11                         | 20.176                    | 0,14%   |
| 29                     | temp. contract                      | technician/ field worker, EG 4/6 (1)        | 101   | 268                      | 15                         | 27.068                    | 0,19%   |
| 29                     | temp. contract, part<br>time        | senior scientist EG 13/5 (2)                | 199   | 314                      | 17                         | 62.486                    | 0,44%   |
| 29                     | temp. contract, part<br>time        | student assistant (several)                 | 96  | 525                      | 29                         | 50.400                    | 0,35%   |
| 29                     | temp. contract, part<br>time        | scientific assistant (several)              | 140   | 176                      | 10                         | 24.640                    | 0,17%   |
| 29                     | temp. contract                      | forest engeneer, A11 (1)                    | 274   | 66                       | 4                          | 18.084                    | 0,13%   |
| 28                     | temp. contract                      | Scientific project leader (full time)       | 244   | 450                      | 24                         | 109.800                   | 0,77%   |
| 28                     | temp. contract                      | technician in the water lab (full<br>time)  | 171   | 450                      | 24                         | 76.950                    | 0,54%   |
| 28                     | temp. contract                      | technician in the plant/soil<br>lab.(50%)   | 171   | 225                      | 12                         | 38.475                    | 0,27%   |
| 28                     | perm. contract                      | technician in field (50%)                   | 171   | 224                      | 12                         | 38.304                    | 0,27%   |
| 28                     | temp. contract                      | scientific assistance (student,<br>partial) | 40  | 447                      | 24                         | 17.880                    | 0,13%   |
| 28                     | temp. contract                      | scientific assistance (student,<br>partial) | 40  | 447                      | 24                         | 17.880                    | 0,13%   |

**FORM F1**

Proposal acronym: FutMon

| Direct Personnel costs |                                 |  |   |                          |                            |                           |   |
|------------------------|---------------------------------|--|---|--------------------------|----------------------------|---------------------------|---|
|                        | Calculation =>                  |  | A   | B                        | C =                        | A X B                     |   |
| Beneficiary number     | Type of contract                | Category                                   | Daily rate<br>(rounded to the<br>nearest €) | Number of<br>person.days | Number of<br>person.months | Direct personnel<br>costs | % of total direct<br>personnel costs for<br>the project |
| 28                     | civil servant                   | advice department leader                   | 288   | 30                       | 2                          | 8.640                     | 0,06%   |
| 28                     | civil servant                   | advice soil / plant nutrition<br>scientist | 264   | 33                       | 2                          | 8.712                     | 0,06%   |
| 28                     | civil servant                   | subsistence for administration             | 224   | 38                       | 2                          | 8.512                     | 0,06%   |
| 28                     | perm. contract                  | internal QA by laboratory leader           | 244   | 40                       | 2                          | 9.760                     | 0,07%   |
| 36                     | Civil serv. perm.               | 3 Project managers (part time)             | 245   | 37                       | 7,8                        | 9.065                     | 0,06%   |
| 36                     | Civil serv. perm.               | 2 technicians outdoor (part time)          | 165   | 48                       | 6,5                        | 7.920                     | 0,06%   |
| 36                     | Civil employee. perm.           | 2 technician (part time)                   | 133   | 57                       | 7,7                        | 7.581                     | 0,05%   |
| 36                     | Civil employee perm.            | 2 laborants (part time)                    | 160   | 242                      | 63,0                       | 38.771                    | 0,27%   |
| 36                     | Civil employee perm.            | 1 worker (part time)                       | 130   | 87                       | 11,9                       | 11.310                    | 0,08%   |
| 8                      | Permanent                       | Senior scientist                           | 416   | 321                      | 14,6                       | 133.536                   | 0,94%   |
| 8                      | Temporary                       | Scientist                                  | 318   | 460                      | 20,9                       | 146.280                   | 1,02%   |
| 8                      | Temporary                       | Student                                    | 181   | 151                      | 6,9                        | 27.331                    | 0,19%   |
| 8                      | Permanent                       | Technician                                 | 247   | 570                      | 25,9                       | 140.790                   | 0,99%   |
| 18                     | permanent contract<br>full time | project manager                            | 255   | 294                      | 14,0                       | 74.970                    | 0,52%   |
| 18                     | permanent contract<br>full time | senior researcher                          | 202   | 525                      | 25,0                       | 106.050                   | 0,74%   |

**FORM F1**

Proposal acronym: FutMon

| Direct Personnel costs |                                 |  |   |                          |                            |                           |   |
|------------------------|---------------------------------|--|---|--------------------------|----------------------------|---------------------------|---|
|                        | Calculation =>                  |  | A   | B                        | C =                        | A X B                     |   |
| Beneficiary number     | Type of contract                | Category   | Daily rate<br>(rounded to the<br>nearest €) | Number of<br>person.days | Number of<br>person.months | Direct personnel<br>costs | % of total direct<br>personnel costs for<br>the project |
| 18                     | permanent contract<br>full time | research assistance                              | 155   | 882                      | 42,0                       | 136.710                   | 0,96%   |
| 18                     | permanent contract<br>full time | technical staff                                  | 102   | 2373                     | 113,0                      | 242.046                   | 1,69%   |
| 18                     | temporary contract<br>part time | senior researcher                                | 202   | 252                      | 12,0                       | 50.904                    | 0,36%   |
| 18                     | temporary contract<br>part time | technical staff (field workers)                  | 102   | 756                      | 36,0                       | 77.112                    | 0,54%   |
| 18                     | temporary contract<br>full time | technical staff (laboratory)                     | 102   | 693                      | 33,0                       | 70.686                    | 0,49%   |
| 26                     | Civil serv.perm.                | L2a Project leader                               | 326   | 64                       | 5,0                        | 20.864                    | 0,15%   |
| 26                     | Civil serv.perm.                | L2a Programmer                                   | 326   | 25                       | 1,4                        | 8.150                     | 0,06%   |
| 26                     | Civil serv.perm.                | L2a Senior forester                              | 432   | 90                       | 6,8                        | 38.880                    | 0,27%   |
| 26                     | Civil serv.perm.                | L2a Forester                                     | 299   | 136                      | 7,1                        | 40.664                    | 0,28%   |
| 26                     | Civil serv.perm.                | L2a Technician                                   | 140   | 40                       | 2,3                        | 5.600                     | 0,04%   |
| 26                     | Civil serv.perm.                | L2a Junior statistician                          | 240   | 40                       | 2,3                        | 9.600                     | 0,07%   |
| 26                     | Civil serv.perm.                | L2a Senior statistician                          | 326   | 10                       | 0,6                        | 3.260                     | 0,02%   |
| 26                     | Civil serv.perm.                | Project manager (part time) L1<br>implementation | 310   | 24                       | 1,4                        | 7.440                     | 0,05%   |
| 26                     | Civil serv.perm.                | Project manager (part time) L2b                  | 310   | 30                       | 4,3                        | 9.300                     | 0,07%   |
| 26                     | Civil serv.perm.                | GIS technician                                   | 227   | 100                      | 5,7                        | 22.700                    | 0,16%   |
| 26                     | Civil serv.perm.                | Senior statistician L2b                          | 347   | 8                        | 1,7                        | 2.776                     | 0,02%   |
| 26                     | Civil serv.perm.                | Junior statistician L2b                          | 255   | 16                       | 3,7                        | 4.080                     | 0,03%   |

**FORM F1**

Proposal acronym: FutMon

| Direct Personnel costs |                     |   |   |                          |                            |                           |   |
|------------------------|---------------------|---|---|--------------------------|----------------------------|---------------------------|---|
|                        | Calculation =>      |   | A   | B                        | C =                        | A X B                     |   |
| Beneficiary number     | Type of contract    | Category                                    | Daily rate<br>(rounded to the<br>nearest €) | Number of<br>person.days | Number of<br>person.months | Direct personnel<br>costs | % of total direct<br>personnel costs for<br>the project |
| 26                     | Civil serv.perm.    | Technician/Worker L2b                       | 133   | 78                       | 17,7                       | 10.374                    | 0,07%   |
| 26                     | Civil serv.perm.    | Project manager (75%) (x 2 yrs)<br>IM1      | 224   | 330                      | 18,9                       | 73.920                    | 0,52%   |
| 26                     | Civil serv.perm.    | Technician/Worker IM1; D1-3 (x2)<br>(x2yrs) | 164   | 344                      | 19,7                       | 56.416                    | 0,40%   |
| 26                     | Temp. contract      | Technician/Worker (x12) IM1; D1-3           | 164   | 428                      | 24,5                       | 70.192                    | 0,49%   |
| 26                     | Civil serv.perm.    | Proj. manager (special advice) IM1          | 296   | 3                        | 0,2                        | 888                       | 0,01%   |
| 26                     | Temp. contract      | Technician/Worker IM1; D1-3                 | 401   | 23                       | 1,3                        | 9.223                     | 0,06%   |
| 26                     | Civil serv.perm.    | Project management M7 *)                    | 560   | 12                       | 1,7                        | 6.720                     | 0,05%   |
| 26                     | Civil serv.perm.    | Communication M8                            | 420   | 12                       | 1,7                        | 5.040                     | 0,04%   |
| 13                     | Civil serv. (perm.) | M7-Project manager (part time)              | 146   | 8                        | 0,4                        | 1.168                     | 0,01%   |
| 13                     | Civil serv. (perm.) | M8-Senior engineers (part time)             | 146   | 12                       | 0,6                        | 1.752                     | 0,01%   |
| 13                     | Civil serv. (perm.) | L2-Senior engineer (part time)              | 146   | 697                      | 37,2                       | 101.762                   | 0,71%   |
| 13                     | Civil serv. (perm.) | L2-Technicians (part time)                  | 73  | 312                      | 16,6                       | 22.776                    | 0,16%   |
| 17                     | Civil serv.perm.    | Project manager (part time)                 | 356   | 12                       | 0,5                        | 4.272                     | 0,03%   |
| 21                     | Civil serv.perm.    | Project manager                             | 100   | 350                      | 40,5                       | 35.000                    | 0,25%   |
| 21                     | Perm.contract       | Researchers                                 | 76  | 1600                     | 140,5                      | 121.600                   | 0,85%   |
| 21                     | Temp. Contract      | Researchers                                 | 80  | 520                      | 48,6                       | 41.600                    | 0,29%   |
| 21                     | Perm. Contract      | Technician - database expert                | 65  | 200                      | 32,5                       | 13.000                    | 0,09%   |
| 21                     | Perm.contract       | Technicians                                 | 45  | 940                      | 105,5                      | 42.300                    | 0,30%   |

**FORM F1**

Proposal acronym: FutMon

| Direct Personnel costs |                        |  |   |                          |                            |                           |   |
|------------------------|------------------------|--|---|--------------------------|----------------------------|---------------------------|---|
|                        | Calculation =>         |  | A   | B                        | C =                        | A X B                     |   |
| Beneficiary number     | Type of contract       | Category                                   | Daily rate<br>(rounded to the<br>nearest €) | Number of<br>person.days | Number of<br>person.months | Direct personnel<br>costs | % of total direct<br>personnel costs for<br>the project |
| 34                     | Permanent contract     | Head (Landeslabor Schleswig-Holst.)        | 194,84676                                   | 2                        | 0,1                        | 390                       | 0,00%   |
| 34                     | Permanent contract     | Technicians                                | 132,115608                                  | 20                       | 1,7                        | 2.596                     | 0,02%   |
| 34                     | Permanent contract     | Head of Lab (Landeslabor Schleswig-Holst.) | 194,84676                                   | 2                        | 0,2                        | 359                       | 0,00%   |
| 34                     | Permanent contract     | Technicians                                | 132,115608                                  | 33                       | 2,9                        | 4.299                     | 0,03%   |
| 15                     | Civil. serv. permanent | Thechnician (full time)                    | 140   | 430                      | 19,6                       | 60.200                    | 0,42%   |
| 15                     | Civil. serv. permanent | Project Manager (full time)                | 140   | 430                      | 19,6                       | 60.200                    | 0,42%   |
| 15                     | Civil. serv. permanent | Field operator (part time)                 | 90  | 578                      | 26,3                       | 52.020                    | 0,36%   |
| 38                     | permanent              | project manager                            | 180   | 2,8                      | 0,1                        | 497                       | 0,00%   |
| 38                     | permanent              | project leaders (2)                        | 140   | 55,2                     | 2,8                        | 7.730                     | 0,05%   |
| 38                     | permanent              | project researchers (5)                    | 120   | 461,6                    | 23,1                       | 55.397                    | 0,39%   |
| 38                     | permanent              | project field workers, technicians (4)     | 90  | 395,3                    | 19,8                       | 35.574                    | 0,25%   |
| 1                      | perm.employee (WOI)    | Project manager (part time), WOI           | 272   | 220                      | 27,5                       | 59.840                    | 748,00%   |
| 1                      | project empl. (WOI)    | Senior scientist - WOI                     | 272   | 410                      | 55                         | 111.520                   | 1394,00%  |
| 1                      | perm.empl.             | Senior scientist - WOI                     | 272   | 313                      | 7,35                       | 85.136                    | 1064,20%  |
| 1                      | permanent              | Professor                                  | 300   | 40                       | 2,22                       | 12.000                    | 38,10%  |
| 1                      | permanent              | Senior scientist, project manager          | 255   | 324                      | 18                         | 82.620                    | 262,29%   |

**FORM F1**

Proposal acronym: FutMon

| Direct Personnel costs |                  |                        |   |                          |                            |                           |   |
|------------------------|------------------|------------------------|---|--------------------------|----------------------------|---------------------------|---|
|                        | Calculation =>   |                        | A   | B                        | C =<br>B/Productive        | A X B                     |   |
| Beneficiary number     | Type of contract | Category               | Daily rate<br>(rounded to the<br>nearest €) | Number of<br>person.days | Number of<br>person.months | Direct personnel<br>costs | % of total direct<br>personnel costs for<br>the project |
| 1                      | permanent        | Senior scientist       | 415   | 324                      | 18                         | 134.460                   | 426,86%   |
| 1                      | temporary        | Junior scientist       | 278   | 432                      | 24                         | 120.096                   | 381,26%   |
| 1                      | temporary        | Junior scientist       | 278   | 432                      | 24                         | 120.096                   | 381,26%   |
| 1                      | temporary        | Junior scientist       | 278   | 432                      | 24                         | 120.096                   | 381,26%   |
| 1                      | temporary        | Junior scientist       | 278   | 432                      | 24                         | 120.096                   | 381,26%   |
| 1                      | permanent        | Administration officer | 173   | 90                       | 5                          | 15.570                    | 49,43%  |
| 1                      | permanent        | Administration officer | 173   | 90                       | 5                          | 15.570                    | 49,43%  |
| 1                      | temporary        | Administration officer | 173   | 432                      | 24                         | 74.736                    | 237,26%   |
| 1                      | temporary        | Administration officer | 173   | 216                      | 12                         | 37.368                    | 118,63%   |
| TOTAL =>               |                  |                        |   | 86027                    | 5168                       | 14280551                  | 100%  |

Please refer to the relevant instructions given in the explanatory notes for filling in these forms



**FORM F2**

Proposal acronym:

| Travel and subsistence costs |   |                           |  |              |                   |                                    |   |
|------------------------------|---|---------------------------|--|--------------|-------------------|------------------------------------|---|
| Calculation =>               |   |                           |  | A            | B                 | A + B                              |   |
| Beneficiary number           | Destination (From / To)   | Outside Europe (YES / NO) | Purpose of travel/number of trips and persons travelling, duration of trip (in days)     | Travel costs | Subsistence costs | Total travel and subsistence costs | % of total travel and subsistence costs |
| 5                            | From Sofia to project area  | No                        | 148 trips/2 tech. assistants/3 days under Action IM1                                     | 1.000        | 2.500             | 3.500                              | 0,12%                                   |
| 5                            | From Sofia to project area  | No                        | 12 trips/5 persons/3 days under Action D2  | 500          | 3.000             | 3.500                              | 0,12%                                   |
| 5                            |   | No                        | FutMon Status Workshop/2trips/2 persons under Action M7                                  | 2.080        | 1.936             | 1.996                              | 0,07%                                   |
| 5                            |   | No                        | Data Submission Workshop/2trips/1 persons under Action M7                                | 1.020        | 976               | 4.016                              | 0,14%                                   |
| 5                            |   | No                        | Meeting for heads of laboratories/2 trip/2 person  | 2.080        | 1.936             | 1.996                              | 0,07%                                   |
| 5                            |   | No                        | International cross calibration course forest condition (Central Europe)/2 trips/1person | 1.020        | 976               | 1.996                              | 0,07%                                   |
| 5                            |   | No                        | Damage type course/2trips/1 person under Action M7                                       | 1.020        | 976               | 1.996                              | 0,07%                                   |
| 6                            | Cyprus/other European   | No                        | Participation in field exercises, damage,  | 6.000        | 6.000             | 12.000                             | 0,42%                                   |
| 6                            | Cyprus/other European   | No                        | FutMon Status Workshop (One trip, one person for   | 750          | 750               | 1.500                              | 0,05%                                   |
| 6                            | Project area Visits (within   | No                        | 325 trips, 2 -3 persons and one day in each trip, fuels                                  | 10.200       | 3.340             | 13.540                             | 0,47%                                   |
| 6                            | Cyprus/other European   | No                        | Experts meetings (Two trips, one person x four days                                      | 1.500        | 1.500             | 3.000                              | 0,10%                                   |
| 9                            | Tartu, Estonia-N/A  | No                        | Project technical and co-ordination meetings/14 trips, 20 persons, 40 days               | 21.000       | 6.600             | 27.600                             | 0,97%                                   |
| 9                            | Project area (Estonia)  | No                        | Project area visits / 180 person-days  | 7.000        | 1.200             | 8.200                              | 0,29%                                   |
| 10                           | M7-10(FI), Finland, Rovaniemi/Helsinki/Joensuu/Punkaharju to Parkano (and back) | No                        | Project technical coordination meetings (2/year), 10 researchers, 1-2 day meetings       | 6.600        | 6.500             | 13.100                             | 0,46%                                   |
| 10                           | M7-10(FI), Finland to Germany (and back)  | No                        | Expert meetings/Status workshops, 1-2 researchers/meeting, 1-2 day meetings              | 17.600       | 7.000             | 24.600                             | 0,86%                                   |
| 10                           | M8-10(FI), Finland, Rovaniemi/Parkano/Joensuu/Punkaharju to Helsinki (and back) | No                        | 1-day dissemination events, 10 researchers   | 7.920        | 5.000             | 12.920                             | 0,45%                                   |

## FORM F2

Proposal acronym:

| Travel and subsistence costs |   |                           |  |              |                   |                                    |   |
|------------------------------|---|---------------------------|--|--------------|-------------------|------------------------------------|---|
| Calculation =>               |   |                           |  | A            | B                 | A + B                              |   |
| Beneficiary number           | Destination (From / To)   | Outside Europe (YES / NO) | Purpose of travel/number of trips and persons travelling, duration of trip (in days) | Travel costs | Subsistence costs | Total travel and subsistence costs | % of total travel and subsistence costs |
| 10                           | L2-10(FI), Extensive monitoring plots throughout Finland                        | No                        | Field measurements, 15 field workers + researcher, 2 months continuous work/year     | 44.000       | 35.000            | 79.000                             | 2,76%                                   |
| 10                           | L2-10(FI), Finland, Rovaniemi/Helsinki/Joensuu/Punkaharju to Parkano (and back) | No                        | Project technical meetings (2/year), 10 researchers, 1-2 day meetings                | 3.300        | 1.200             | 4.500                              | 0,16%                                   |
| 10                           | L2-10(FI), Extensive monitoring plots throughout Finland                        | No                        | Field measurements, 15 field workers , 4 months continuous work/year                 | 88.000       | 70.000            | 158.000                            | 5,53%                                   |
| 10                           |   | No                        |  | 0            | 0                 | 0                                  | 0,00%                                   |
| 10                           | D1-10(FI), 18 intensive monitoring plots throughout Finland                     | No                        | Field measurements, 5 field workers, 1-2 day trips, 6 times/year                     | 3.850        | 1.700             | 5.550                              | 0,19%                                   |
| 10                           | D1-10(FI), Finland, Rovaniemi/Helsinki/Joensuu/Punkaharju to Parkano (and back) | No                        | Project technical meetings (2/year), 10 researchers, 1-2 day meetings                | 1.650        | 600               | 2.250                              | 0,08%                                   |
| 10                           | D2-10(FI), 18 intensive monitoring plots throughout Finland                     | No                        | Field measurements, 15 field workers, 1-2 day trips, 8 times/year                    | 16.500       | 11.000            | 27.500                             | 0,96%                                   |
| 10                           | D2-10(FI), Finland, Rovaniemi/Helsinki/Joensuu/Punkaharju to Parkano (and back) | No                        | Project technical meetings (2/year), 10 researchers, 1-2 day meetings                | 3.850        | 1.650             | 5.500                              | 0,19%                                   |
| 10                           | D3-10(FI), 18 intensive monitoring plots throughout Finland                     | No                        | Field measurements, 5 field workers, 1-2 day trips, 6 times/year                     | 3.850        | 1.650             | 5.500                              | 0,19%                                   |
| 10                           | IM-1-10(FI), 18 intensive monitoring plots throughout Finland                   | No                        | Field sampling/measurements, 20 field workers, 1-2 day trips, 13 times/year          | 42.900       | 35.000            | 77.900                             | 2,72%                                   |

**FORM F2**

Proposal acronym:

| Travel and subsistence costs |   |                           |   |              |                   |                                    |   |
|------------------------------|---|---------------------------|---|--------------|-------------------|------------------------------------|---|
| Calculation =>               |   |                           |   | A            | B                 | A + B                              |   |
| Beneficiary number           | Destination (From / To)   | Outside Europe (YES / NO) | Purpose of travel/number of trips and persons travelling, duration of trip (in days)      | Travel costs | Subsistence costs | Total travel and subsistence costs | % of total travel and subsistence costs |
| 10                           | IM-1-10(FI), Finland, Rovaniemi/Helsinki/Joensuu/Punkaharju to Parkano (and back) | No                        | Project technical meetings (2/year), 10 researchers, 1-2 day meetings                     | 4.400        | 2.200             | 6.600                              | 0,23%                                   |
|                              |   | No                        |   | 0            | 0                 | 0                                  | 0,00%                                   |
|                              |   | No                        |   | 0            | 0                 | 0                                  | 0,00%                                   |
| 10                           | C1-SS-10(FI), Finland, Rovaniemi to Level II plots (and back)                     | No                        | Field sampling, one 5-day trip/year, 2 field workers                                      | 3.388        | 1.500             | 4.888                              | 0,17%                                   |
| 10                           | C1-SS-10(FI), Hamburg, Germany  | No                        | Two, 2-day expert meetings/year, 1 person   | 2.640        | 1.500             | 4.140                              | 0,14%                                   |
| 10                           | C1-Fol1-10(FI), Hamburg, Germany  | No                        | Two, 2-day expert meetings/year, 1.5 persons  | 3.300        | 1.600             | 4.900                              | 0,17%                                   |
| 10                           | C1-Phen-10(FI), Hamburg, Germany  | No                        | Three, 2-day expert meetings/year, 1 person   | 9.240        | 3.500             | 12.740                             | 0,45%                                   |
| 16                           | Kaunas/EU   | No                        | Workshops, experts meetings, international trainings (3 trips/1 person/2-3 days one trip) | 2.000        | 1.000             | 3.000                              | 0,10%                                   |
| 16                           | Kaunas/LT   | No                        | Project coordination, consultation (50 trips/2 persons/2 days)                            | 2.000        | 500               | 2.500                              | 0,09%                                   |
| 16                           | Kaunas/Project area   | No                        | Field exercises for the training of the assessment of forest (7 trips/8 persons/1 day)    | 700          | 400               | 1.100                              | 0,04%                                   |
| 16                           | Kaunas/Project area   | No                        | Field works on project area (800 person-days)   | 20.000       | 5.400             | 25.400                             | 0,89%                                   |
| 2                            | Vienna/N.N.   | No                        | workshops/training/calibration/16 meetings/1-2 persons/1-3 days/24 trips                  | 12.000       | 12.000            | 24.000                             | 0,84%                                   |
| 2                            | Vienna/project area   | No                        | Assessment L2a/8 persons/55 days  | 7.700        | 22.000            | 29.700                             | 1,04%                                   |
| 2                            | Vienna/project area   | No                        | Assessment L2b/3 persons/150 days   | 6.600        | 22.500            | 29.100                             | 1,02%                                   |
| 2                            | Vienna/Level II plots   | No                        | Assessment IM1/8 persons/50 days  | 3.960        | 20.000            | 23.960                             | 0,84%                                   |
| 2                            | Vienna/core plots   | No                        | Installation&Assessment D1/2 persons/70 days  | 5.280        | 7.000             | 12.280                             | 0,43%                                   |
| 2                            | Vienna/core plots   | No                        | Installation&Assessment D2/4 persons/30 days  | 3.960        | 6.000             | 9.960                              | 0,35%                                   |
| 2                            | Vienna/core plots   | No                        | Installation&Assessment D3/4 persons/30 days  | 3.960        | 6.000             | 9.960                              | 0,35%                                   |

## FORM F2

Proposal acronym:

| Travel and subsistence costs |   |                           |   |              |                   |                                    |   |
|------------------------------|---|---------------------------|---|--------------|-------------------|------------------------------------|---|
| Calculation =>               |   |                           |   | A            | B                 | A + B                              |   |
| Beneficiary number           | Destination (From / To)                         | Outside Europe (YES / NO) | Purpose of travel/number of trips and persons travelling, duration of trip (in days)                    | Travel costs | Subsistence costs | Total travel and subsistence costs | % of total travel and subsistence costs |
| 2                            | Vienna/n.n.                                     | No                        | visit of labs within FFCC/2 visits  | 1.000        | 1.000             | 2.000                              | 0,07%                                   |
| 2                            | Vienna/n.n.                                     | No                        | visit within C1-Gro/3 visits  | 1.500        | 1.500             | 3.000                              | 0,10%                                   |
| 25                           | Travel within Sweden                            | No                        | Fieldwork L2 (900 plots*2;3 persdays/plot)  | 40.300,00    | 96.000,00         | 136.300                            | 4,77%                                   |
| 25                           | Travel within Sweden                            | No                        | Fieldwork IM1/D2 (12 plots)   | 37.004,00    | 90.926,00         | 127.930                            | 4,48%                                   |
| 25                           | Sweden - Europe                                 | No                        | Expert meetings - NFI (5 meetings/1 pers/2 days)  | 4.000,00     | 1.000,00          | 5.000                              | 0,17%                                   |
| 25                           | Sweden - Europe                                 | No                        | IC meetings and training (15 meetings/1pers)  | 10.200,00    | 3.610,00          | 13.810                             | 0,48%                                   |
| 33                           | Trippstadt / Germany                            | No                        | 20 proj. coord. Germ. Länd., 1(2) pers., 1-3 d.   | 1.500        | 250               | 1.750                              | 0,06%                                   |
| 33                           | Trippstadt / EU                                 | No                        | 15 meet. (coord., interc., works.), 1 pers. 2-5d.   | 4.800        | 250               | 5.050                              | 0,18%                                   |
| 33                           | Trippstadt / projekt area                       | No                        | 30 trips grid-plots (contr./prep.), 1pers. 1-3 d.   | 1.500        | 100               | 1.600                              | 0,06%                                   |
| 33                           | Trippstadt / core plots                         | No                        | 250 trips D1-3, IM1 1-2 pers. 1-2 days  | 9.300        | 100               | 9.400                              | 0,33%                                   |
| 33                           | Trippstadt / core plots                         | No                        | 15 dissemination activitys 1-2 pers. 1 day  | 800          |                   | 800                                | 0,03%                                   |
| 32                           | from Recklinghausen to different destinations   | No                        | 2 international QA/QC meetings, 1 person and 2 days in each case  | 836          | 94                | 930                                | 0,03%                                   |
| 32                           | from Recklinghausen to different destinations   | No                        | 4 national koordination meetings, 1 person and 1,5 days in each case + 2 one day meetings               | 1.324        | 146               | 1.470                              | 0,05%                                   |
| 32                           | from Recklinghausen to FutMon large scale plots | No                        | field assessments, 1 - 2 persons in each case, usually 1 day trips                                      | 696          | 56                | 752                                | 0,03%                                   |
| 32                           | from Recklinghausen to 4 FutMon IM I plots      | No                        | QA/QC, field assessments, data collection and sampling, 1 - 2 persons in each case, usually 1 day trips | 28.160       | 2.280             | 30.440                             | 1,06%                                   |
| 37                           | Gotha (Germany) / plot 1605 (Großer Eisenberg)  | No                        | sampling (every 14 days) and check-up (weekly) / 52 trips per year/ 1 person / 1 day                    | 3.248        |                   | 3.248                              | 0,11%                                   |
| 37                           | Gotha (Germany) / plot 1606 (Possen)            | No                        | sampling (every 14 days) and check-up (weekly) / 52 trips per year/ 1 person / 1 day                    | 2.562        |                   | 2.562                              | 0,09%                                   |
| 37                           | Gotha (Germany) / plot 1607 (Holzland)          | No                        | sampling (every 14 days) and check-up (weekly) / 52 trips per year/ 1 person / 1 day                    | 4.164        |                   | 4.164                              | 0,15%                                   |
| 37                           | Gotha (Germany) / Deutschland (meeting point??) | No                        | coordination of the project, meetings / 4 trips per year/ 2 persons / 2 days                            | 1.056        | 2.400             | 3.456                              | 0,12%                                   |

## FORM F2

Proposal acronym:

| Travel and subsistence costs |   |                           |  |              |                   |                                    |   |
|------------------------------|---|---------------------------|--|--------------|-------------------|------------------------------------|---|
| Calculation =>               |   |                           |  | A            | B                 | A + B                              |   |
| Beneficiary number           | Destination (From / To)   | Outside Europe (YES / NO) | Purpose of travel/number of trips and persons travelling, duration of trip (in days)   | Travel costs | Subsistence costs | Total travel and subsistence costs | % of total travel and subsistence costs |
| 37                           | Gotha (Germany) / Europa (meeting point??)  | No                        | coordination of the project, meeting/ 1 trip per year / 1 person / 3 days  | 1.200        | 800               | 2.000                              | 0,07%                                   |
| 37                           | Gotha (Germany) / 26 plots in Thuringia   | No                        | assessment of crown condition on 26 Level I plots / 2 persons / 2 plots per day  | 1.144        |                   | 1.144                              | 0,04%                                   |
| 37                           | Jena (Germany) / plot 1605 (Großer Eisenberg)   | No                        | check-up/maintenance of the meteorological instruments / 14 trips per year/ 2 persons/1 day  | 1.417        |                   | 1.417                              | 0,05%                                   |
| 37                           | Jena (Germany) / plot 1606 (Possen)   | No                        | check-up/maintenance of the meteorological instruments / 14 trips per year/ 2 persons/1 day  | 1.355        |                   | 1.355                              | 0,05%                                   |
| 37                           | Jena (Germany) / plot 1607 (Holzland)   | No                        | check-up/maintenance of the meteorological instruments / 14 trips per year/ 2 persons/1 day  | 308          |                   | 308                                | 0,01%                                   |
| 37                           | Gotha (Germany) /Thuringia (presentation point ??)  | No                        | public relation/presentation project/ 3 trips per year/ 2 persons/ 1 day   | 264          |                   | 264                                | 0,01%                                   |
| 30                           | From Göttingen, Germany, to 90 Level 1 plots (average distance (345km) in 2009                        | No                        | tree assessment [(0,22€/km)x90x345] by car, 90 trips (84x1day+6x2days), 1 pers. [diem allowance: 84x14€(<24h) + 6x24€(=24h)], 6x80€(accommodation) | 6.831        | 1.800             | 8.631                              | 0,30%                                   |
| 30                           | From Göttingen, Germany, to 90 Level 1 plots (average distance (345km) in 2010                        | No                        | tree assessment [(0,22€/km)x90x345] by car, 90 trips (84x1day+6x2days), 1 pers.  | 6.831        | 1.800             | 8.631                              | 0,30%                                   |
| 30                           | From Göttingen, Germany, to 9 Level 2 plots (average distance (345km), 26-27 trips (per plot) in 2009 | No                        | sampling, plot maintenance [(0,22€/km)x9x345x26] by car, 240 trips, 1 pers. (234x1day+6x2days)   | 17.761       | 3.900             | 21.661                             | 0,76%                                   |

## FORM F2

Proposal acronym:

| Travel and subsistence costs |   |                           |   |              |                   |                                    |   |
|------------------------------|---|---------------------------|---|--------------|-------------------|------------------------------------|---|
| Calculation =>               |   |                           |   | A            | B                 | A + B                              |   |
| Beneficiary number           | Destination (From / To)   | Outside Europe (YES / NO) | Purpose of travel/number of trips and persons travelling, duration of trip (in days)  | Travel costs | Subsistence costs | Total travel and subsistence costs | % of total travel and subsistence costs |
| 30                           | From Göttingen, Germany, to 9 Level 2 plots (average distance (345km), 26-27 trips (per plot) in 2010 | No                        | sampling, plot maintenance [(0,22€km)x9x345x26] by car, 240 trips, 1 pers. (234x1day+6x2days)   | 17.761       | 3.900             | 21.661                             | 0,76%                                   |
| 30                           | From Göttingen to 99 plots  | No                        | circumference measurements installation, 1 pers. [99x345x0,22€] [diem allowance: 33x12€+3x24€, 3x80€(accommodation)]                      | 7.514        | 708               | 8.222                              | 0,29%                                   |
| 30                           | From Göttingen to Level 2 plots 2009/2010   | No                        | plot maintenance, installation/upgrading, 90 trips a 2 days (9 plots, 2 trips per year per plot), 2 pers., accommodation, daily allowance | 29.662       | 3.440             | 33.102                             | 1,16%                                   |
| 30                           | From Göttingen, Germany, to 99 plots (average distance (345km)  | No                        | LAI by LICOR 2000, 51 trips, 1 pers. (90 plots in 2009, 30 plots in 2010), 1 pers., (43 x 1 day, 8 x 2 days)                              | 9.791        | 1.434             | 11.225                             | 0,39%                                   |
| 30                           | From Göttingen, Germany, to 9 Level 2 plots (average distance (345km)                                 | No                        | LAI by LICOR 2000, 18 trips, 1 pers., 1 day (90 plots in 2009, 30 plots in 2010), 1 pers.   | 2.049        | 378               | 2.427                              | 0,08%                                   |
| 30                           | From Göttingen, Germany, to 9 Level 2 plots (average distance (345km), two trips per year (2009/2010) | No                        | Phenology, 3 pers., 90 trips (9 plots, 2 trips per year)  | 2.732        | 1.296             | 4.028                              | 0,14%                                   |
| 30                           | From Göttingen, Germany, to "Flight area" for LAI (by Liiterfall) measurements                        | No                        | LAI by Litterfall, 1 pers., 1 trip, 2 days  | 700          | 300               | 1.000                              | 0,03%                                   |
| 30                           | From Göttingen, Germany to NN   | No                        | Status Workshops (yearly), 2 trips., 2 pers., 2-3 days  | 2.800        | 1.200             | 4.000                              | 0,14%                                   |

## FORM F2

Proposal acronym:

| Travel and subsistence costs |                               |                           |  |              |                   |                                    |   |
|------------------------------|-------------------------------|---------------------------|--|--------------|-------------------|------------------------------------|---|
| Calculation =>               |                               |                           |  | A            | B                 | A + B                              |   |
| Beneficiary number           | Destination (From / To)       | Outside Europe (YES / NO) | Purpose of travel/number of trips and persons travelling, duration of trip (in days) | Travel costs | Subsistence costs | Total travel and subsistence costs | % of total travel and subsistence costs |
| 30                           | From Göttingen, Germany to NN | No                        | Meetings of Experts, 6 trips, 1 pers., 2 days  | 4.200        | 1.800             | 6.000                              | 0,21%                                   |
| 30                           | From Göttingen, Germany to NN | No                        | Training courses, 4 trips, 1 pers., 4 days   | 3.200        | 1.600             | 4.800                              | 0,17%                                   |
| 30                           | From Göttingen, Germany to NN | No                        | Data submission workshop, 1 trip, 1 pers. 2 day                                      | 700          | 300               | 1.000                              | 0,03%                                   |
| 30                           | From Göttingen, Germany to NN | No                        | 1 Meeting for heads of laboratories, 1 pers., 2 days                                 | 700          | 300               | 1.000                              | 0,03%                                   |
| 30                           | From Göttingen, Germany to NN | No                        | Helping programme for laboratories, 2 trips, 1 pers. 4 days                          | 1.400        | 600               | 2.000                              | 0,07%                                   |
| 30                           | From Göttingen, Germany to NN | No                        | QA-C-workshop data quality, 1 trip, 2 pers., 2-3 days                                | 1.400        | 600               | 2.000                              | 0,07%                                   |
| 30                           | From Göttingen, Germany to NN | No                        | Travellings for organization D1, estimated trips 3, 2 pers., 1-2 days                | 4.200        | 1.800             | 6.000                              | 0,21%                                   |
| 40                           | Verbania/N.N.                 | No                        | Status workshop/3 trips/1 person/2 days  | 1.500        | 1.500             | 3.000                              | 0,10%                                   |
| 40                           | Verbania/N.N.                 | No                        | Meeting for head of laboratories/3 trips/1 person/2                                  | 1.500        | 1.500             | 3.000                              | 0,10%                                   |
| 40                           | Verbania/N.N.                 | No                        | Expert meeting "Nutrient cycling"2 trips/1 person/2                                  | 1.000        | 1.000             | 2.000                              | 0,07%                                   |
| 40                           | Roma/N.N.                     | No                        | Status workshop/3 trips/1 person/2 days  | 1.500        | 1.500             | 3.000                              | 0,10%                                   |
| 40                           | Roma/N.N.                     | No                        | Meeting for head of laboratories/3 trips/1 person/2                                  | 1.500        | 1.500             | 3.000                              | 0,10%                                   |
| 40                           | Roma/N.N.                     | No                        | Expert meeting "Nutrient cycling"/3 trips/1 person/2                                 | 1.500        | 1.500             | 3.000                              | 0,10%                                   |
| 40                           | Roma/N.N.                     | No                        | Visit to project areas/35 trips/1-2 persons/2 days                                   | 3.000        | 3.000             | 6.000                              | 0,21%                                   |
| 27                           | Eberswalde/project area       | No                        | field work data recording  | 18.180       | 6.420             | 24.600                             | 0,86%                                   |
| 27                           | Eberswalde/N.N.               | No                        | Status workshop/2 trips/2 persons/2 days   | 1.000        | 1.250             | 2.250                              | 0,08%                                   |
| 27                           | Eberswalde/N.N.               | No                        | Meeting for heads of laboratories/1 person/2 days                                    | 1.000        | 250               | 1.250                              | 0,04%                                   |
| 27                           | Eberswalde/N.N.               | No                        | Ozone visible injury field training/1 trip/1 Person/2                                | 1.000        | 250               | 1.250                              | 0,04%                                   |
| 27                           | Potsdam/N.N.                  | No                        | Combined expert Meetings/2 trips/2 Persons/2 days                                    | 1.000        | 500               | 1.500                              | 0,05%                                   |
| 39                           | project areas                 | No                        | field visit and works IM1 meteo (20/2/1)   | 7.400        | 16.000            | 23.400                             | 0,82%                                   |
| 39                           | expert panel meeting          | No                        | expert panel meeting "meteorology" IM1 (2/1/2)                                       | 1.000        | 1.600             | 2.600                              | 0,09%                                   |
| 39                           | project areas                 | No                        | field surveys IM1 growth (22/5/1)  | 3.700        | 14.300            | 18.000                             | 0,63%                                   |



## FORM F2

Proposal acronym:

| Travel and subsistence costs |                         |                           |  |              |                   |                                    |   |
|------------------------------|-------------------------|---------------------------|--|--------------|-------------------|------------------------------------|---|
| Calculation =>               |                         |                           |  | A            | B                 | A + B                              |   |
| Beneficiary number           | Destination (From / To) | Outside Europe (YES / NO) | Purpose of travel/number of trips and persons travelling, duration of trip (in days) | Travel costs | Subsistence costs | Total travel and subsistence costs | % of total travel and subsistence costs |
| 39                           | expert panel meeting    | No                        | expert panel meeting IM1 growth (1/2/1)  | 1.000        | 1.000             | 2.000                              | 0,07%                                   |
| 39                           | project areas           | No                        | field surveys D1 (13/5/1)  | 2.100        | 8.900             | 11.000                             | 0,38%                                   |
| 39                           | expert panel meeting    | No                        | expert panel meeting D1 (1/2/1)  | 1.000        | 1.000             | 2.000                              | 0,07%                                   |
| 39                           | project areas           | No                        | field visit and works D3 (5/2/1)   | 2.000        | 4.000             | 6.000                              | 0,21%                                   |
| 39                           | expert panel meeting    | No                        | International meetings L1 (Kickoff selection criteria LSM, NFI studies)(1/1/2)       | 700          | 800               | 1.500                              | 0,05%                                   |
| 39                           | expert panel meeting    | No                        | International meetings L1 (Expert meetings on NFI harmonisation) (1/4/2)             | 2.800        | 3.200             | 6.000                              | 0,21%                                   |
| 39                           | expert panel meeting    | No                        | International meetings L2 (Futmon status, Expert meetings) (1/3/3)                   | 2.200        | 3.600             | 5.800                              | 0,20%                                   |
| 39                           | project areas           | No                        | Field exercise/courses L2 (1/1/1)  | 700          | 400               | 1.100                              | 0,04%                                   |
| 39                           | Internal meetings       | No                        | Internal meetings/field visits L2 (2/5/1)  | 2.000        | 3.000             | 5.000                              | 0,17%                                   |
| 39                           | Seminars/workshops      | No                        | Seminars/workshops L2 (1/1/1)  | 700          | 400               | 1.100                              | 0,04%                                   |
| 22                           | Ljubljana/n.n.          | No                        | Kick off Workshop "Selection criteria for large scale                                | 500          | 500               | 1.000                              | 0,03%                                   |
| 22                           | Ljubljana/n.n.          | No                        | 1st EP meeting on harmonisation of NFIs/1-1-3  | 500          | 500               | 1.000                              | 0,03%                                   |
| 22                           | Ljubljana/n.n.          | No                        | Phenological intercomparison/1-1-3   | 500          | 500               | 1.000                              | 0,03%                                   |
| 22                           | Ljubljana/n.n.          | No                        | Combined Expert Meeting "Tree Vitality"[1]/1-1-3                                     | 500          | 500               | 1.000                              | 0,03%                                   |
| 22                           | Ljubljana/n.n.          | No                        | Combined Expert Meeting "Nutrient Cycling and  | 500          | 500               | 1.000                              | 0,03%                                   |
| 22                           | Ljubljana/n.n.          | No                        | 1st FutMon Status Workshop[3]/1-1-3  | 500          | 500               | 1.000                              | 0,03%                                   |
| 22                           | Ljubljana/n.n.          | No                        | Ground vegetation field intercomparison back to                                      | 500          | 500               | 1.000                              | 0,03%                                   |
| 22                           | Ljubljana/n.n.          | No                        | Training course new methods[4]   | 500          | 500               | 1.000                              | 0,03%                                   |
| 22                           | Ljubljana/n.n.          | No                        | 1st Data Submission Workshop/1-1-3   | 500          | 500               | 1.000                              | 0,03%                                   |
| 22                           | Ljubljana/n.n.          | No                        | International cross calibration course forest  | 500          | 500               | 1.000                              | 0,03%                                   |
| 22                           | Ljubljana/n.n.          | No                        | Ozone visible injury field training and  | 500          | 500               | 1.000                              | 0,03%                                   |
| 22                           | Ljubljana/n.n.          | No                        | Meeting for heads of laboratories/1-1-3  | 500          | 500               | 1.000                              | 0,03%                                   |
| 22                           | Ljubljana/n.n.          | No                        | Ozone visible injury field training and  | 500          | 500               | 1.000                              | 0,03%                                   |
| 22                           | Ljubljana/n.n.          | No                        | 2nd FutMon Status Workshop1/1-1-3  | 500          | 500               | 1.000                              | 0,03%                                   |
| 22                           | Ljubljana/n.n.          | No                        | Combined Expert Meeting "Tree Vitality"1/1-1-3                                       | 500          | 500               | 1.000                              | 0,03%                                   |



## FORM F2

Proposal acronym:

| Travel and subsistence costs |                         |                           |  |              |                   |                                    |   |
|------------------------------|-------------------------|---------------------------|--|--------------|-------------------|------------------------------------|---|
| Calculation =>               |                         |                           |  | A            | B                 | A + B                              |   |
| Beneficiary number           | Destination (From / To) | Outside Europe (YES / NO) | Purpose of travel/number of trips and persons travelling, duration of trip (in days) | Travel costs | Subsistence costs | Total travel and subsistence costs | % of total travel and subsistence costs |
| 22                           | Ljubljana/n.n.          | No                        | Combined Expert Meeting "Nutrient Cycling and  | 500          | 500               | 1.000                              | 0,03%                                   |
| 22                           | Ljubljana/n.n.          | No                        | Expert Meeting Ground Vegetation/1-1-3   | 500          | 500               | 1.000                              | 0,03%                                   |
| 22                           | Ljubljana/n.n.          | No                        | 2nd EP meeting on harmonisation of NFIs/1-1-3  | 500          | 500               | 1.000                              | 0,03%                                   |
| 22                           | Ljubljana/n.n.          | No                        | Damage type course/1-1-3   | 500          | 500               | 1.000                              | 0,03%                                   |
| 22                           | Ljubljana/n.n.          | No                        | Ozone visible injury field training and  | 0            | 0                 | 0                                  | 0,00%                                   |
| 22                           | Ljubljana/n.n.          | No                        | Field exercise for the training of the assessment of                                 | 0            | 0                 | 0                                  | 0,00%                                   |
| 22                           | Ljubljana/n.n.          | No                        | Expert Meeting Ground Vegetation back to back with                                   | 0            | 0                 | 0                                  | 0,00%                                   |
| 22                           | Ljubljana/n.n.          | No                        | 3rd FutMon Status Workshop1  | 0            | 0                 | 0                                  | 0,00%                                   |
| 22                           | Ljubljana/n.n.          | No                        | International cross calibration course forest  | 0            | 0                 | 0                                  | 0,00%                                   |
| 22                           | Ljubljana/n.n.          | No                        | Meeting for heads of laboratories  | 0            | 0                 | 0                                  | 0,00%                                   |
| 22                           | Ljubljana/n.n.          | No                        | Phenological intercomparison   | 0            | 0                 | 0                                  | 0,00%                                   |
| 22                           | Ljubljana/n.n.          | No                        | 3rd EP meeting on harmonisation of NFIs  | 0            | 0                 | 0                                  | 0,00%                                   |
| 22                           | Ljubljana/n.n.          | No                        | Combined Expert Meeting "Tree Vitality" (incl.                                       | 500          | 500               | 1.000                              | 0,03%                                   |
| 22                           | Ljubljana/n.n.          | No                        | Combined Expert Meeting "Tree Vitality" (incl.                                       | 0            | 0                 | 0                                  | 0,00%                                   |
| 22                           | Ljubljana/n.n.          | No                        | Combined Expert Meeting "Nutrient Cycling and  | 500          | 500               | 1.000                              | 0,03%                                   |
| 22                           | Ljubljana/n.n.          | No                        | 2nd Data Submission Workshop   | 0            | 0                 | 0                                  | 0,00%                                   |
| 22                           | Ljubljana/n.n.          | No                        | 4th FutMon Status Workshop1  | 0            | 0                 | 0                                  | 0,00%                                   |
| 22                           | Ljubljana/n.n.          | No                        | Combined Expert Meeting "Tree Vitality"  | 0            | 0                 | 0                                  | 0,00%                                   |
| 22                           | Ljubljana/n.n.          | No                        | Combined Expert Meeting "Nutrient Cycling and  | 500          | 500               | 1.000                              | 0,03%                                   |
| 22                           | Ljubljana/n.n.          | No                        | Damage type course   | 0            | 0                 | 0                                  | 0,00%                                   |
| 22                           | Ljubljana/n.n.          | No                        | Ozone visible injury field training and  | 0            | 0                 | 0                                  | 0,00%                                   |
| 22                           | Ljubljana/n.n.          | No                        | 5th FutMon Status Workshop1  | 0            | 0                 | 0                                  | 0,00%                                   |
| 22                           | Ljubljana/n.n.          | No                        | International cross calibration course forest  | 0            | 0                 | 0                                  | 0,00%                                   |
| 22                           | Ljubljana/n.n.          | No                        | Meeting for heads of laboratories  | 0            | 0                 | 0                                  | 0,00%                                   |
| 22                           | Ljubljana/n.n.          | No                        | 5th EP meeting on harmonisation of NFIs  | 0            | 0                 | 0                                  | 0,00%                                   |
| 22                           | Ljubljana/n.n.          | No                        | Combined Expert Meeting "Tree Vitality"/1-1-3  | 500          | 500               | 1.000                              | 0,03%                                   |
| 22                           | Ljubljana/n.n.          | No                        | Combined Expert Meeting "Nutrient Cycling and  | 1.000        | 1.000             | 2.000                              | 0,07%                                   |

## FORM F2

Proposal acronym:

| Travel and subsistence costs |   |                           |  |              |                   |                                    |   |
|------------------------------|---|---------------------------|--|--------------|-------------------|------------------------------------|---|
| Calculation =>               |   |                           |  | A            | B                 | A + B                              |   |
| Beneficiary number           | Destination (From / To)   | Outside Europe (YES / NO) | Purpose of travel/number of trips and persons travelling, duration of trip (in days) | Travel costs | Subsistence costs | Total travel and subsistence costs | % of total travel and subsistence costs |
| 22                           | Ljubljana/n.n.  | No                        | Expert Meeting Ground Vegetation   | 0            | 0                 | 0                                  | 0,00%                                   |
| 22                           | Ljubljana/n.n.  | No                        | Helping programme for laboratories: designated                                       | 0            | 0                 | 0                                  | 0,00%                                   |
| 22                           | Ljubljana/n.n.  | No                        | Field assessments  | 18.242       | 12.161            | 30.403                             | 1,06%                                   |
| 12                           | Scheduled meeting   | No                        | L1 /1 meeting/2 person/4 days  | 1.000        | 1.000             | 2.000                              | 0,07%                                   |
| 12                           | Scheduled meeting   | No                        | L2a/6 meetings/1 person/4 days   | 3.000        | 3.000             | 6.000                              | 0,21%                                   |
| 12                           | Scheduled meeting   | No                        | IM1/8 meetings/ 1 person/4 days  | 4.000        | 4.000             | 8.000                              | 0,28%                                   |
| 12                           | Scheduled meeting   | No                        | D1/3 meetings/1 person/4 days  | 1.500        | 1.500             | 3.000                              | 0,10%                                   |
| 12                           | Scheduled meeting   | No                        | D2/2 meetings/1 person/4 days  | 1.000        | 1.000             | 2.000                              | 0,07%                                   |
| 12                           | Scheduled meeting   | No                        | D3/2 meetings/1 person/4 days  | 1.000        | 1.000             | 2.000                              | 0,07%                                   |
| 12                           | From various Greek areas to Athens  | No                        | L2a Training/ 20 persons/1meeting/ 5 days  | 5.000        | 12.000            | 17.000                             | 0,59%                                   |
| 12                           | From the local forest services to the plots   | No                        | L2a large scale assessment on FutMon plots/ 2 persons/ 98 visits, 2 day per visit    |              | 20.000            | 20.000                             | 0,70%                                   |
| 12                           | From the local forest services to the plots   | No                        | L2b large scale assessment on NFI plots/ 2 persons/ 98 visits, 2 day per visit       |              | 20.000            | 20.000                             | 0,70%                                   |
| 3                            | Geraardsbergen to 5 monitoring plots (Torhout, Gontrode, St. Genesius_Rode, Ravels, Brasschaat=760 km) (24 times/year) in 2009 - 2010 (IM1) | No                        | bi-weekly sampling deposition + soil solution(1 pers.) (48 trips - 144 days)         | 8.026        | 1.555             | 9.581                              | 0,34%                                   |
| 3                            | Geraardsbergen to 5 monitoring plots (Torhout, Gontrode, St. Genesius_Rode, Ravels, Brasschaat=760 km) (2 times/year) in 2009 - 2010 (IM1)  | No                        | maintenance plot/equipment (1 pers) (4 trips - 12 days)                              | 669          | 130               | 799                                | 0,03%                                   |

**FORM F2****Proposal acronym:**

| <b>Travel and subsistence costs</b> |   |                                  |   |                     |                          |   |  |
|-------------------------------------|---|----------------------------------|---|---------------------|--------------------------|---|--|
| <b>Calculation =&gt;</b>            |   |                                  |   | <b>A</b>            | <b>B</b>                 | <b>A + B</b>                              |  |
| <b>Beneficiary number</b>           | <b>Destination (From / To)</b>  | <b>Outside Europe (YES / NO)</b> | <b>Purpose of travel/number of trips and persons travelling, duration of trip (in days)</b> | <b>Travel costs</b> | <b>Subsistence costs</b> | <b>Total travel and subsistence costs</b> | <b>% of total travel and subsistence costs</b> |
| 3                                   | Geraardsbergen to 2 monitoring plots in 2009 - 2010 (IM1)   | No                               | maintenance/data captation meteo stations (1 pers) (50 trips - 50 days)                     | 1.980               | 540                      | 2.520                                     | 0,09%  |
| 3                                   | Geraardsbergen to 5 monitoring plots (Torhout, Gontrode, St. Genesius_Rode, Ravels, Brasschaat=760 km) (1 time/year) in 2009 - 2010 (IM1) | No                               | tree vitality assessment (1 pers) (4 trips - 10 days)                                       | 669                 | 108                      | 777                                       | 0,03%  |
| 3                                   | Geraardsbergen to 5 monitoring plots (Torhout, Gontrode, St. Genesius_Rode, Ravels, Brasschaat=760 km) in 2009 - 2010 (D1)                | No                               | phenological obser. (1 pers) (20 trips - 48 days)   | 3.344               | 518                      | 3.862                                     | 0,14%  |
| 3                                   | Geraardsbergen to 5 monitoring plots (Torhout, Gontrode, St. Genesius_Rode, Ravels, Brasschaat=760 km) in 2009 - 2010 (IM1+D1)            | No                               | growth measurements (1 pers) (3 trips - 11 days)  | 502                 | 119                      | 621                                       | 0,02%  |
| 3                                   | Geraardsbergen to 5 monitoring plots ( 760 km) in 2009 - 2010 (IM1)   | No                               | c-ordination sampling foliar (1 pers) (1 trip - 3 days)                                     | 167                 | 32                       | 199                                       | 0,01%  |

**FORM F2**

Proposal acronym:

| Travel and subsistence costs |  |                           |  |              |                   |                                    |   |
|------------------------------|--|---------------------------|--|--------------|-------------------|------------------------------------|---|
| Calculation =>               |  |                           |  | A            | B                 | A + B                              |   |
| Beneficiary number           | Destination (From / To)  | Outside Europe (YES / NO) | Purpose of travel/number of trips and persons travelling, duration of trip (in days) | Travel costs | Subsistence costs | Total travel and subsistence costs | % of total travel and subsistence costs |
| 3                            | Geraardsbergen to 5 monitoring plots (Torhout, Gontrode, St. Genesius_Rode, Ravels, Brasschaat=760 km) in 2009 - 2010 (IM1+D2) | No                        | vegetation assessments (4 trips - 12 days)   | 669          | 130               | 799                                | 0,03%                                   |
| 3                            | Geraardsbergen to NN   | No                        | EP meeting harmonisation NFI (1 pers - 3 days) (2009)                                | 600          | 400               | 1.000                              | 0,03%                                   |
| 3                            | Geraardsbergen to NN   | No                        | phenol. Intercomparison (1 pers) (1 pers - 3 days) (2009)                            | 600          | 400               | 1.000                              | 0,03%                                   |
| 3                            | Geraardsbergen to NN   | No                        | combined EP meeting Tree vitality (2 pers - 3 days) (2009)                           | 1.200        | 800               | 2.000                              | 0,07%                                   |
| 3                            | Geraardsbergen to NN   | No                        | combined EP meeting Nutrient cycling & water budget (2 pers - 3 days) (2009)         | 1.200        | 800               | 2.000                              | 0,07%                                   |
| 3                            | Geraardsbergen to NN   | No                        | 1st FutMon status workshop (2 pers - 3 days) (2009)                                  | 1.200        | 800               | 2.000                              | 0,07%                                   |
| 3                            | Geraardsbergen to NN   | No                        | ground vegetation Intercomp. + Vegetation EPM (1 pers - 3 days) (2009)               | 600          | 400               | 1.000                              | 0,03%                                   |
| 3                            | Geraardsbergen to NN   | No                        | training course new methods (1 pers - 3 days) (2009)                                 | 600          | 400               | 1.000                              | 0,03%                                   |
| 3                            | Geraardsbergen to NN   | No                        | 1st data submission workshop (1 pers - 3 days) (2009)                                | 600          | 400               | 1.000                              | 0,03%                                   |
| 3                            | Geraardsbergen to NN   | No                        | Cross calibration (1 pers - 3 days) (2009)   | 600          | 400               | 1.000                              | 0,03%                                   |
| 3                            | Geraardsbergen to NN   | No                        | O3 visible injury field training (1 pers - 3 days) (2009)                            | 600          | 400               | 1.000                              | 0,03%                                   |
| 3                            | Geraardsbergen to NN   | No                        | meeting for heads of laboratories (1 pers - 3 days) (2010)                           | 600          | 400               | 1.000                              | 0,03%                                   |
| 3                            | Geraardsbergen to NN   | No                        | 2nd FutMon status workshop (2 pers - 3 days) (2010)                                  | 1.200        | 800               | 2.000                              | 0,07%                                   |

## FORM F2

Proposal acronym:

| Travel and subsistence costs |   |                           |  |              |                   |                                    |   |
|------------------------------|---|---------------------------|--|--------------|-------------------|------------------------------------|---|
| Calculation =>               |   |                           |  | A            | B                 | A + B                              |   |
| Beneficiary number           | Destination (From / To)   | Outside Europe (YES / NO) | Purpose of travel/number of trips and persons travelling, duration of trip (in days) | Travel costs | Subsistence costs | Total travel and subsistence costs | % of total travel and subsistence costs |
| 3                            | Geraardsbergen to NN  | No                        | combined EP meeting Tree vitality (2 pers - 3 days) (2010)                           | 1.200        | 800               | 2.000                              | 0,07%                                   |
| 3                            | Geraardsbergen to NN  | No                        | combined EP meeting Nutrient cycling & water budget (2 pers - 3 days) (2010)         | 1.200        | 800               | 2.000                              | 0,07%                                   |
| 3                            | Geraardsbergen to NN  | No                        | EP meeting ground vegetation (1 pers - 3 days) (2010)                                | 600          | 400               | 1.000                              | 0,03%                                   |
| 3                            | Geraardsbergen to NN  | No                        | EP meeting harmonisation NFI (1 pers - 3 days) (2010)                                | 600          | 400               | 1.000                              | 0,03%                                   |
| 3                            | Geraardsbergen to NN  | No                        | damage type course (1 pers - 3 days) (2010)  | 600          | 400               | 1.000                              | 0,03%                                   |
| 3                            | Geraardsbergen to NN  | No                        | organisation meeting training course damage causes 2010 (2 pers - 3 days - C1Dam)    | 1.200        | 800               | 2.000                              | 0,07%                                   |
| 3                            | Brussels/NN   | No                        | Soil Expert panel 2009 - 2 persons - 3 days (C1Soil)                                 | 1.200        | 800               | 2.000                              | 0,07%                                   |
| 3                            | Brussels/NN   | No                        | Soil Expert panel 2010 - 2 persons - 3 days (C1Soil)                                 | 1.200        | 800               | 2.000                              | 0,07%                                   |
| 3                            | Brussels/NN   | No                        | Lab help 2009 - 1 person - 3 days (C1Soil)   | 600          | 400               | 1.000                              | 0,03%                                   |
| 3                            | Brussels/NN   | No                        | Lab help 2010 - 1 person - 3 days (C1Soil)   | 600          | 400               | 1.000                              | 0,03%                                   |
| 3                            | Geraardsbergen to 10 large scale monitoring plots (1800 km)               | No                        | crown assessments (L2a - 2009-2010) (1 pers - 5 days/yr, 2 yrs) (10 trips - 10 days) | 1.058        | 108               | 1.166                              | 0,04%                                   |
| 3                            | Geraardsbergen to 10 large scale monitoring plots (1800 km)               | No                        | measurements NFI (L2b - 2009-2010) (1 pers - 5 days) (5 trips - 5 days)              | 529          | 54                | 583                                | 0,02%                                   |
| 31                           | Projekt area  | No                        | Assessments on large scale plots;  | 3.120        | 35                | 3.155                              | 0,11%                                   |
| 31                           | Projekt area mostly Schwerin- Lohmen or Schwerin - Ferdinandshof and back | No                        | Assessments on intensive plots;  | 5.545        | 110               | 5.655                              | 0,20%                                   |
| 31                           | Projekt area - Schwerin/Germany   | No                        | Meetings of the national working group for futmon; 20 trips/ 1 person/ 2 days        | 2.050        | 110               | 2.160                              | 0,08%                                   |

**FORM F2**

Proposal acronym:

| Travel and subsistence costs |   |                           |  |              |                   |                                    |   |
|------------------------------|---|---------------------------|--|--------------|-------------------|------------------------------------|---|
| Calculation =>               |   |                           |  | A            | B                 | A + B                              |   |
| Beneficiary number           | Destination (From / To)                               | Outside Europe (YES / NO) | Purpose of travel/number of trips and persons travelling, duration of trip (in days)                                       | Travel costs | Subsistence costs | Total travel and subsistence costs | % of total travel and subsistence costs |
| 31                           | Projekt area - Schwerin/Europe                        | No                        | International status workshop of futmon; 5 trips/ 1 person/ 2 days   | 2.150        | 180               | 2.330                              | 0,08%                                   |
| 35                           | 3 plots statewide                                     | No                        | Large scale monitoring / 6 trips / 2 persons / 1 day (L2)  | 132          |                   | 132                                | 0,00%                                   |
| 35                           | Germany   | No                        | Training course / 2 trips / 2 persons / 2 days (L2)  | 650          | 150               | 800                                | 0,03%                                   |
| 35                           | Saarbrücken-Fischbach                                 | No                        | Collecting samples / weekly / 2 persons / 1 day (IM1) *  | 595          |                   | 595                                | 0,02%                                   |
| 35                           | Saarbrücken-Fischbach                                 | No                        | Controlling meteorological station / biweekly / 1 person / 1 day (IM1)   | 300          |                   | 300                                | 0,01%                                   |
| 35                           | Eppelborn-Fischbach                                   | No                        | Forest growth assessment, foliar sampling / 2 trips / 2 persons / 1 day (IM1)  | 22           |                   | 22                                 | 0,00%                                   |
| 35                           | Saarbrücken-Fischbach                                 | No                        | Assessment ground vegetation, soil / 2 trips / 2 persons / 1 day (IM1)   | 22           |                   | 22                                 | 0,00%                                   |
| 35                           | Germany   | No                        | National status workshop / 4 trips / 1 person / 2 days (M7)  | 1.600        |                   | 1.600                              | 0,06%                                   |
| 35                           | Germany   | No                        | Data management workshop / 2 trips / 1 person / 2 days (M7)  | 800          |                   | 800                                | 0,03%                                   |
| 35                           | Europe  | No                        | International Status workshop / 2 trips / 1 person / 2 days (M7)   | 2.000        |                   | 2.000                              | 0,07%                                   |
| 7                            | Strnady-Prague/N.N.                                   | No                        | workshops/12trips/2-4 persons/3-4 days   | 6.800        | 3.300             | 10.100                             | 0,35%                                   |
| 7                            | Strnady /inten mon.plots                              | No                        | sampling-assessment/170 trips/1-2 pers/1-3 days  | 41.250       | 17.550            | 58.800                             | 2,06%                                   |
| 7                            | Prague/Hamburg  | No                        | Status workshop/2 trips/2 persons/4 days   | 3.800        | 2.200             | 6.000                              | 0,21%                                   |
| 7                            | Strnady / L.scale mon plots                           | No                        | sampling-assessment/97 trips/1-2 pers/3-4 days   | 29.000       | 6.000             | 35.000                             | 1,22%                                   |
| 11                           | Paris to Hamburg or another city in Europe            | No                        | Project coordination meetings, 5 trips per year=10 trips, 3 days per meeting (incl. trip duration)=60 days for two persons | 18.000       | 9.000             | 27.000                             | 0,94%                                   |
| 11                           | Fontainebleau to 46 plots distributed all over France | No                        | Soil re-sampling, 5 days per plot, 4 persons per plot  | 7.820        | 72.220            | 80.040                             | 2,80%                                   |

**FORM F2**

Proposal acronym:

| Travel and subsistence costs |  |                           |  |              |                   |                                    |   |
|------------------------------|--|---------------------------|--|--------------|-------------------|------------------------------------|---|
| Calculation =>               |  |                           |  | A            | B                 | A + B                              |   |
| Beneficiary number           | Destination (From / To)  | Outside Europe (YES / NO) | Purpose of travel/number of trips and persons travelling, duration of trip (in days)   | Travel costs | Subsistence costs | Total travel and subsistence costs | % of total travel and subsistence costs |
| 11                           | Fontainebleau to 14 core plots distributed all over France   | No                        | Installation of soil humidity sensors, tensiometers, soil temperature sensors etc., 2 persons, 7 days per plot, travel time included, which is often 1 day per plot, as distances are quite long in France | 2.380        | 15.386            | 17.766                             | 0,62%                                   |
| 11                           | Fontainebleau to 14 core plots distributed all over France   | No                        | Maintenance of the soil humidity sensors, tensiometers, soil temperature sensors etc. installations, 1 person, 2 days two times per year per plot on 14 plots  | 4.760        | 4.396             | 9.156                              | 0,32%                                   |
| 11                           | Nancy to 8 core plots  | No                        | Sampling of soil for determination of pF curves (different work than for re-sampling of soil...), 1 person, 3 days par plot, 8 plots   | 1.040        | 1.884             | 2.924                              | 0,10%                                   |
| 11                           |  | No                        |  |              |                   | 0                                  | 0,00%                                   |
| 11                           | Fontainebleau to 14 core plots distributed all over France   | No                        | Ground vegetation sampling for nutrient budgets, 1 person, 2 times per year, 14 plots, 2,5 days per plot   | 2.856        | 3.297             | 6.153                              | 0,22%                                   |
| 11                           | Several origins for about 15 experts to the 46 plots   | No                        | Tree condition observations, 2 persons, 0,6 day par plot, 2 times per year, 46 plots   | 6.440        | 3.367             | 9.807                              | 0,34%                                   |
| 11                           | 10 different cities to 46 plots  | No                        | Foliar sampling 2009, two persons once per year, 0,7 days per plot, travel time included, 46 plots in 2009   | 1.727        | 2.198             | 3.925                              | 0,14%                                   |
| 11                           | Travels from local foresters to their plots for local observations during the year and litterfall sampling | No                        | local travels of ca 20 km per travel, 10 times per year on 46 plots for two years and on 14 plots for 3 years  | 5.126        | 0                 | 5.126                              | 0,18%                                   |
| 11                           | Travels from local foresters to their plots for deposition and soil solution sampling                      | No                        | local travels of ca 20 km per travel, 30 times per year on 14 plots for 5 years  | 3.360        | 0                 | 3.360                              | 0,12%                                   |

## FORM F2

Proposal acronym:

| Travel and subsistence costs |  |                           |  |              |                   |                                    |   |
|------------------------------|--|---------------------------|--|--------------|-------------------|------------------------------------|---|
| Calculation =>               |  |                           |  | A            | B                 | A + B                              |   |
| Beneficiary number           | Destination (From / To)  | Outside Europe (YES / NO) | Purpose of travel/number of trips and persons travelling, duration of trip (in days)   | Travel costs | Subsistence costs | Total travel and subsistence costs | % of total travel and subsistence costs |
| 11                           | Travels from several cities to common meeting places not yet known in advance (situated in France) | No                        | Annual work meetings for 50 local foresters and 10 technicians for presentation of the interim results of the work and for management purposes, 3 days per meeting travel time included, 3 times during the project duration | 9.450        | 14.130            | 23.580                             | 0,82%                                   |
| 11                           | Fontainebleau to Paris/Nancy/Arras/Bordeaux/Toulouse/several other cities not known in advance     | No                        | 15 travels per year of the project manager or his assistant for management (technical meetings) and administration purposes, 1,5 days per meeting, travel time included  | 7.650        | 5.299             | 12.949                             | 0,45%                                   |
| 20                           | Romania-n.n.   | No                        | Kick off workshop/1/3/2  | 1.950        | 900               | 2.850                              | 0,10%                                   |
| 20                           | Romania-n.n.   | No                        | Expert meeting/6/2/2   | 7.800        | 3.600             | 11.400                             | 0,40%                                   |
| 20                           | Romania-n.n.   | No                        | Intercalibration course/2/2/3  | 2.600        | 1.800             | 4.400                              | 0,15%                                   |
| 20                           | Romania-n.n.   | No                        | Phenological intercomparison/1/2/3   | 1.300        | 900               | 2.200                              | 0,08%                                   |
| 20                           | Romania-n.n.   | No                        | Status Workshop/3/3/2  | 5.850        | 2.700             | 8.550                              | 0,30%                                   |
| 20                           | Romania-n.n.   | No                        | Data submission Workshop/2/2/2   | 2.600        | 1.200             | 3.800                              | 0,13%                                   |
| 20                           | Romania-n.n.   | No                        | meeting on harmonisation NFIs/2/2/3  | 2.600        | 1.800             | 4.400                              | 0,15%                                   |
| 20                           | Romania-n.n.   | No                        | meeting heads of laboratories/2/2/3  | 2.600        | 1.800             | 4.400                              | 0,15%                                   |
| 20                           | Romania-n.n.   | No                        | Tehcnical co o rdination meeting/1/3/3   | 1.950        | 1.350             | 3.300                              | 0,12%                                   |
| 20                           | Bucharest-Brasov (Ro)  | No                        | Training courses/2/55/1  | 7.260        | 6.600             | 13.860                             | 0,48%                                   |
| 20                           | Bucharest-Brasov (Ro)  | No                        | Training courses/1/50/2  | 5.500        | 6.000             | 11.500                             | 0,40%                                   |
| 20                           | Project area visit (Ro)  | No                        | Field work/1/4/4   | 440          | 960               | 1.400                              | 0,05%                                   |
| 20                           | Project area visit (Ro)  | No                        | Field work/2/60/9  | 9.702        | 64.800            | 74.502                             | 2,61%                                   |
| 20                           | Project area visit (Ro)  | No                        | Field work/1/48/16   | 3.927        | 46.080            | 50.007                             | 1,75%                                   |
| 20                           | Project area visit (Ro)  | No                        | Field work/1/27/1  | 3.366        | 6.480             | 9.846                              | 0,34%                                   |
| 20                           | Project area visit (Ro)  | No                        | Field work/1/27/1  | 3.366        | 6.480             | 9.846                              | 0,34%                                   |
| 20                           | Project area visit (Ro)  | No                        | Field work/1/27/1  | 3.366        | 6.480             | 9.846                              | 0,34%                                   |
| 20                           | Project area visit (Ro)  | No                        | Field work/2/8/2   | 1.453        | 3.840             | 5.293                              | 0,19%                                   |
| 24                           | Valencia to Other European contrys   | No                        | Visible injury intercalibration/5 trips/2 persons/3 days   | 2.400        | 1.531             | 3.931                              | 0,14%                                   |



## FORM F2

Proposal acronym:

| Travel and subsistence costs |                                    |                           |   |              |                   |                                    |   |
|------------------------------|------------------------------------|---------------------------|---|--------------|-------------------|------------------------------------|---|
| Calculation =>               |                                    |                           |   | A            | B                 | A + B                              |   |
| Beneficiary number           | Destination (From / To)            | Outside Europe (YES / NO) | Purpose of travel/number of trips and persons travelling, duration of trip (in days)  | Travel costs | Subsistence costs | Total travel and subsistence costs | % of total travel and subsistence costs |
| 24                           | Valencia to Other European contrys | No                        | Coordination meetings/2 trips/1 person/1day   | 1.200        | 800               | 2.000                              | 0,07%                                   |
| 29                           | Freising-                          | No                        | FutMon Workshop and combined expert meeting ("Nutrient Cycling and Water budget); (2/4/2); coordinator C1; lab expert; project manager; experts (D1-D3) | 6.800        | 1.200             | 8.000                              | 0,28%                                   |
| 29                           | Freising-                          | No                        | lab help programm, (2/1/2); labexpert   | 1.400        | 600               | 2.000                              | 0,07%                                   |
| 29                           | Freising-                          | No                        | meeting for heads of laboratories(1/1/2); lab expert  | 700          | 300               | 1.000                              | 0,03%                                   |
| 29                           | Freising-                          | No                        | intern. field exerc.training "Core Variables"; (1/1/2); projektmanager  | 700          | 300               | 1.000                              | 0,03%                                   |
| 29                           | Freising-                          | No                        | intern. Joint WS-meeting "sampling design"; (1/1/2); projektmanager   | 700          | 300               | 1.000                              | 0,03%                                   |
| 29                           | Freising-                          | No                        | national coordinating group; (4/1/1); projectmanager  | 1.400        | 600               | 2.000                              | 0,07%                                   |
| 29                           | Freising-                          | No                        | national QA and Demonstration Projekt-Meeting (D1-D3); (1/2/1); experts   | 700          | 300               | 1.000                              | 0,03%                                   |
| 29                           | Freising-                          | No                        | national coordination meeting data submission; (1/1/1); expert  | 450          | 150               | 600                                | 0,02%                                   |
| 29                           | Freising-                          | No                        | int phenological intercomparison meeting (1/2/2); coordinator C1  | 1.400        | 600               | 2.000                              | 0,07%                                   |
| 29                           | Freising-                          | No                        | int.trainings course "new methods" (1/1/2); coordinator C1  | 700          | 300               | 1.000                              | 0,03%                                   |
| 29                           | Freising-                          | No                        | intern harmonisation NFI (1/1/2); expert  | 700          | 300               | 1.000                              | 0,03%                                   |
| 29                           | Freising-                          | No                        | intern cross callibration course crown condition (1/1/2); expert  | 700          | 300               | 1.000                              | 0,03%                                   |
| 29                           | Freising-                          | No                        | nat. crown condition and damage callibration course (2/1/2); expert   | 700          | 300               | 1.000                              | 0,03%                                   |
| 29                           | Freising-                          | No                        | trips to project area (service;mesurements;rmaintainance) (IM1)   | 17.718       | 7.593             | 25.311                             | 0,89%                                   |

## FORM F2

Proposal acronym:

| Travel and subsistence costs |  |                           |  |              |                   |                                    |   |
|------------------------------|--|---------------------------|--|--------------|-------------------|------------------------------------|---|
| Calculation =>               |  |                           |  | A            | B                 | A + B                              |   |
| Beneficiary number           | Destination (From / To)                      | Outside Europe (YES / NO) | Purpose of travel/number of trips and persons travelling, duration of trip (in days)   | Travel costs | Subsistence costs | Total travel and subsistence costs | % of total travel and subsistence costs |
| 29                           | Freising-                                    | No                        | trips to project area;(service;measurements;maintenance) (D1-D3)   | 9.401        | 4.029             | 13.430                             | 0,47%                                   |
| 29                           | Freising-                                    | No                        | trips to project area;(service;measurements;maintenance) (L2)  | 5.901        | 2.529             | 8.430                              | 0,29%                                   |
| 28                           | Freiburg/N.N.                                | No                        | Status workshop/4 trips/ 3 persons/800€, 2 days  | 1.280        | 1.920             | 3.200                              | 0,11%                                   |
| 28                           | Freiburg/N.N.                                | No                        | Exp. Meetings tree vitality, NFI 2 trips 1 pers., 3 days   | 640          | 960               | 1.600                              | 0,06%                                   |
| 28                           | Freiburg/N.N.                                | No                        | Exp. Meetings nutrient, water 2 trips 1 pers., 3 days  | 640          | 960               | 1.600                              | 0,06%                                   |
| 28                           | Freiburg/N.N.                                | No                        | Exp. Meetings veget., phenolog. 2 trips 1 pers., 3 days  | 520          | 760               | 1.280                              | 0,04%                                   |
| 28                           | Freiburg/N.N.                                | No                        | Intern. cross calib. course 1 trip 1 pers., 3 days   | 400          | 560               | 960                                | 0,03%                                   |
| 28                           | Freiburg/N.N.                                | No                        | field trips to 5 IM-plots every 14 days (320km)  | 20.860       | 3.000             | 23.860                             | 0,83%                                   |
| 36                           | from Pirna to the plots of FutMon Monitoring | No                        | Mostly sampling of soil and water on Large scale and intensive monitoring plots, data collection on plots, QA/QC, one day trips                                      | 9.052        | 2.498             | 11.550                             | 0,40%                                   |
| 36                           | from Pirna to N.N.(Germany)                  | No                        | national project meetings/up to 5/1p./two day meetings (incl. M7/M8)   | 1.000        | 750               | 1.750                              | 0,06%                                   |
| 36                           | from Pirna to N.N.(Germany)                  | No                        | international project meetings/up to 5/1p./1-2days (incl. M7/M8)   | 740          | 160               | 900                                | 0,03%                                   |
| 8                            | Copenhagen/Europe                            | No                        | Status workshop/2 trips/2 persons/2 days   | 2.819        | 1.208             | 4.027                              | 0,14%                                   |
| 8                            | Copenhagen/Europe                            | No                        | Exp. panels + training/18 trips/1 person/ 2days  | 12.143       | 5.204             | 17.348                             | 0,61%                                   |
| 8                            | Copenhagen/Europe                            | No                        | IC courses/2 trips/2 person/ 2days   | 2.240        | 960               | 3.200                              | 0,11%                                   |
| 8                            | Copenhagen/DK int. plots                     | No                        | Field work IM+D/30 trips/2 persons/2 days  | 16.238       | 16.238            | 32.477                             | 1,14%                                   |
| 8                            | Copenh./DK L1+NFI plots                      | No                        | Field work L/8 trips/2 persons/5 days  | 11.056       | 11.056            | 22.113                             | 0,77%                                   |
| 18                           | Project meeting venues                       | No                        | Attendance in the project related meetings according to the meeting schedule / 15 trips in total / 21 persons / estimated duration of trips: 39 person-days in total | 14.500       | 13.750            | 28.250                             | 0,99%                                   |
| 26                           | UK/Denmark/Sweden                            | No                        | NFI Expert meeting Annual  | 2.500        | 2.500             | 5.000                              | 0,17%                                   |

## FORM F2

Proposal acronym:

| Travel and subsistence costs |                         |                           |  |              |                   |                                    |   |
|------------------------------|-------------------------|---------------------------|--|--------------|-------------------|------------------------------------|---|
| Calculation =>               |                         |                           |  | A            | B                 | A + B                              |   |
| Beneficiary number           | Destination (From / To) | Outside Europe (YES / NO) | Purpose of travel/number of trips and persons travelling, duration of trip (in days) | Travel costs | Subsistence costs | Total travel and subsistence costs | % of total travel and subsistence costs |
| 26                           | L2b fieldwork/UK        | No                        | Fieldwork  | 17.000       | 18.000            | 35.000                             | 1,22%                                   |
| 26                           | UK / meeting location   | No                        | Soil ring test (1 staff member)  | 500          | 500               | 1.000                              | 0,03%                                   |
| 26                           | UK / meeting location   | No                        | Foliar ring test (1 staff member)  | 500          | 500               | 1.000                              | 0,03%                                   |
| 26                           | UK / meeting location   | No                        | Expert Panel Meeting Tree Vitality (1 staff member)                                  | 1.000        | 1.000             | 2.000                              | 0,07%                                   |
| 26                           | UK / meeting location   | No                        | Expert Panel Nutrients (1 staff member)  | 1.000        | 1.000             | 2.000                              | 0,07%                                   |
| 26                           | UK / meeting location   | No                        | PhenoCams and LAI (1 staff member)   | 500          | 500               | 1.000                              | 0,03%                                   |
| 26                           | UK / meeting location   | No                        | Phenology intercomparison (1 staff member)   | 500          | 500               | 1.000                              | 0,03%                                   |
| 26                           | UK / meeting location   | No                        | Laboratory participation in soil moisture comparison testing (1 staff member)        | 500          | 500               | 1.000                              | 0,03%                                   |
| 26                           | UK / meeting location   | No                        | Futmon Status workshops (1 staff member)   | 1.000        | 1.000             | 2.000                              | 0,07%                                   |
| 26                           | UK / meeting location   | No                        | EP Ground veg (1 staff member)   | 1.000        | 1.000             | 2.000                              | 0,07%                                   |
| 26                           | UK / meeting location   | No                        | Depo collector ring test (1 staff member)  | 500          | 500               | 1.000                              | 0,03%                                   |
| 26                           | UK / meeting location   | No                        | Vegetation intercomparison (1 staff member)  | 500          | 500               | 1.000                              | 0,03%                                   |
| 26                           | UK / meeting location   | No                        | Ozone injury (1 staff member)  | 1.000        | 1.000             | 2.000                              | 0,07%                                   |
| 26                           | UK / meeting location   | No                        | AQ passive collector inter-comparison (1 staff member)                               | 500          | 500               | 1.000                              | 0,03%                                   |
| 26                           | UK / meeting location   | No                        | Meeting of head of labs (1 staff member)   | 500          | 500               | 1.000                              | 0,03%                                   |
|                              |                         | No                        |  |              |                   |                                    | 0,00%                                   |
| 26                           | UK / meeting location   | No                        | 2009 International cross calibration course forest condition (1 staff member)        | 500          | 500               | 1.000                              | 0,03%                                   |
| 26                           | Project area (IM1)/UK   | No                        | Project area visits (IM1; D1-3)  | 30.762       | 4.200             | 34.962                             | 1,22%                                   |
| 26                           | L2a fieldwork/UK        | No                        | Fieldwork  | 17.940       | 18.060            | 36.000                             | 1,26%                                   |
| 26                           | M7 project management   | No                        | Staff and field visits   | 3.200        | 3.200             | 6.400                              | 0,22%                                   |
| 26                           | M8 Communication        | No                        | National dissemination meetings/conferences  | 2.000        | 2.000             | 4.000                              | 0,14%                                   |
| 13                           | EU                      | No                        | M7-Co-ordination/4 trips/1 pers./2 days  | 2.800        | 1.200             | 4.000                              | 0,14%                                   |
| 13                           | Project area            | No                        | M8-Organization/4 trips/1 pers./2 days   | 240          | 80                | 320                                | 0,01%                                   |
| 13                           | EU                      | No                        | L2-Workshops/9 trips/1 pers./2 days  | 6.300        | 2.700             | 9.000                              | 0,31%                                   |
| 13                           | Project area            | No                        | L2-Fieldwork/180/2 pers/2 days   | 24.749       | 6.500             | 31.249                             | 1,09%                                   |

## FORM F2

Proposal acronym:

| Travel and subsistence costs |                                     |                           |  |              |                   |                                    |   |
|------------------------------|-------------------------------------|---------------------------|--|--------------|-------------------|------------------------------------|---|
| Calculation =>               |                                     |                           |  | A            | B                 | A + B                              |   |
| Beneficiary number           | Destination (From / To)             | Outside Europe (YES / NO) | Purpose of travel/number of trips and persons travelling, duration of trip (in days)                                     | Travel costs | Subsistence costs | Total travel and subsistence costs | % of total travel and subsistence costs |
| 17                           | Utrecht/Hamburg                     | No                        | Status workshop/2 trips/2 persons/2 days   | 4.000        | 800               | 4.800                              | 0,17%                                   |
| 21                           | Zvolen / n.n.                       | No                        | Status workshop/ 2 trips/2 persons/2 days  | 2.600        | 1.000             | 3.600                              | 0,13%                                   |
| 21                           | Zvolen / n.n.                       | No                        | Expert meetings /5 / 1 person/ 2 days  | 3.500        | 1.500             | 5.000                              | 0,17%                                   |
| 21                           | Zvolen / n.n.                       | No                        | Combined expert meetings /4 / 2 pers. / 2 days   | 5.600        | 2.400             | 8.000                              | 0,28%                                   |
| 21                           | Zvolen / n.n.                       | No                        | Courses, trainings / 9 / 1 person /2-3 days  | 6.900        | 2.900             | 9.800                              | 0,34%                                   |
| 21                           | Zvolen / large-scale plots          | No                        | Survey-sampling / 224 trips / 3 persons / 1 day  | 11.000       | 4.500             | 15.500                             | 0,54%                                   |
| 21                           | Zvolen / intens. m. plots and sites | No                        | Sampling / 460 trips / 2 pers. / 1 day   | 29.000       | 12.200            | 41.200                             | 1,44%                                   |
| 21                           | Zvolen / Bratislava                 | No                        | National meetings - status workshops /4 /8 /1  | 1.000        | 400               | 1.400                              | 0,05%                                   |
| 34                           | Open, Europe                        | No                        | Status workshop/5trips/2persons/2 days   | 2.400        | 1.600             | 4.000                              | 0,14%                                   |
| 34                           | Open, Europe                        | No                        | Meeting heads of labs/3 trips/2persons/2 days  | 1.440        | 960               | 2.400                              | 0,08%                                   |
| 34                           | Open, Germany                       | No                        | national project meetings/ 5 trips/1person/1-2 days  | 1.600        | 800               | 2.400                              | 0,08%                                   |
| 34                           | Open, Germany                       | No                        | National intercalibration courses/2 tr./2p./3-4 d.   | 800          | 640               | 1.440                              | 0,05%                                   |
| 34                           | Open, Germany                       | No                        | National Datamangement Workshop/2tr/1p/2d  | 800          | 400               | 1.200                              | 0,04%                                   |
| 15                           | Roma / n.n.                         | No                        | 4 technical coordination meetings at National level - 40 persons and 3 days per meeting                                  | 4.000        | 16.000            | 20.000                             | 0,70%                                   |
| 15                           | Roma / n.n.                         | No                        | 12 technical and coordination meetings at international level - 2 persons and 3 days per meeting                         | 12.000       | 2.000             | 14.000                             | 0,49%                                   |
| 15                           | Project area                        | No                        | 800-1000 travels project area visits and sampling on 260 Lev. I and 31 Lev. II plots - 2 persons and 1-3 days per travel | 100.000      | 19.440            | 119.440                            | 4,18%                                   |
| 38                           | IM 1 meeting place                  | No                        | expert meeting , 2 person 2 days eash 2 trips eash, accomondation included in travel costs                               | 3.200        | 400               | 3.600                              | 0,13%                                   |
| 38                           | IM 1 project area                   | No                        | field measurements, calibration seminars, 5 persons, 28 days each, travel 10000 km                                       | 2.000        | 1.000             | 3.000                              | 0,10%                                   |
| 38                           | L2-LV meeting place                 | No                        | expert meeting , 2 person 2 days eash 2 trips eash, accomondation included in travel costs                               | 3.200        | 400               | 3.600                              | 0,13%                                   |

## FORM F2

Proposal acronym:

| Travel and subsistence costs |                          |                           |  |              |                   |                                    |   |
|------------------------------|--------------------------|---------------------------|--|--------------|-------------------|------------------------------------|---|
| Calculation =>               |                          |                           |  | A            | B                 | A + B                              |   |
| Beneficiary number           | Destination (From / To)  | Outside Europe (YES / NO) | Purpose of travel/number of trips and persons travelling, duration of trip (in days)       | Travel costs | Subsistence costs | Total travel and subsistence costs | % of total travel and subsistence costs |
| 38                           | L2-LV project area       | No                        | field measurements, calibration seminars, 5 persons, 56 days each, travel 23000 km         | 5.000        | 2.000             | 7.000                              | 0,24%                                   |
| 38                           | L2-LV meeting place      | No                        | expert meeting , 2 person 2 days eash 2 trips eash, accomondation included in travel costs | 3.200        | 400               | 3.600                              | 0,13%                                   |
| 38                           | L2-LV project area       | No                        | field measurements, calibration seminars, 7 persons, 100 days each, travel 24000 km        | 5.340        | 5.000             | 10.340                             | 0,36%                                   |
| 1                            | Eberswalde/N.N.          | No                        | Status workshop/2 trips/3 persons/2 days   | 4.800        | 2.200             | 7.000                              | 0,24%                                   |
| 1                            | Eberswalde/N.N.          | No                        | Expert meetings/2 trips/ 2 persons/2 days  | 3.200        | 1.467             | 4.667                              | 0,16%                                   |
| 1                            | Kick-off Meeting         | No                        | 1 trip, 2 persons, 3 days  | 700          | 800               | 1.500                              | 0,05%                                   |
| 1                            | Status Workshops         | No                        | 2 trips, 2 persons, 3 days   | 1.400        | 1.600             | 3.000                              | 0,10%                                   |
| 1                            | Exp. Meetgs. NFI-Harmon. | No                        | 2 trips, 2 persons, 3 days   | 1.400        | 1.600             | 3.000                              | 0,10%                                   |
| 1                            | Combined Expert Meetgs.  | No                        | 4 trips, 3 persons, 4 days   | 4.200        | 6.600             | 10.800                             | 0,38%                                   |
| 1                            | Internat. Cross-calib.   | No                        | 4 trips, 1 person, 3 days  | 1.400        | 1.600             | 3.000                              | 0,10%                                   |
| 1                            | North America, Asia      | Yes                       | Scientific meetings, 4 trips, 1 person, 5 days   | 12.000       | 2.600             | 14.600                             | 0,51%                                   |
| 1                            | External scientific      | No                        | 9 trips, 1 person, 3 days  | 3.150        | 3.600             | 6.750                              | 0,24%                                   |
| 1                            | Data submission          | No                        | 2 trips, 1 persons, 3 days   | 700          | 400               | 1.100                              | 0,04%                                   |
| TOTAL =>                     |                          |                           |  | 1.555.518    | 1.305.229         | 2.858.726                          | 100%                                    |

**FORM F3**

Proposal acronym: FutMon

| External assistance costs |               |  |           |                                      |
|---------------------------|---------------|--|-----------|--------------------------------------|
| Beneficiary number        | Procedure     | Description  | Costs (€) | % of total external assistance costs |
| 5                         | Public Tender | Monitoring and selection actions:L1-5(BU), L2-5(BU)  | 109.760   | 1,13%                                |
| 5                         | PublicTender  | IM1-5(BU)  | 21.500    | 0,22%                                |
| 5                         | Public Tender | D2-5(BU)   | 16.470    | 0,17%                                |
| 5                         | Public Tender | Renting premises for the workshops/seminars  | 2.000     | 0,02%                                |
| 9                         | public tender | Carrying out analyses of soil, air, water, vegetation etc.<br>Samples. L2-9(EF), IM1-9(EF), D2-9(EF) | 120.000   | 1,23%                                |
| 10                        | public tender | IM-1-10(FI), forest road snow ploughing  | 1.000     | 0,01%                                |
| 10                        | public tender | IM-1-10(FI), field sampling ( 1 Level II plot)   | 2.000     | 0,02%                                |
| 10                        | public tender | IM-1-10(FI), maintenance of datloggers   | 8.000     | 0,08%                                |
| 10                        | public tender | IM-1-10(FI), identification of moss samples  | 1.000     | 0,01%                                |
| 10                        | public tender | D1-10(FI), maintenance of web cameras  | 3.000     | 0,03%                                |
| 10                        | public tender | C1-SS-10(FI), express delivery of ringtest water samples   | 8.760     | 0,09%                                |
| 16                        | Tender        | Laboratory analysis  | 25.000    | 0,26%                                |
| 2                         | contract for  | external high expertise for evaluation within C1-Gro   | 15.000    | 0,15%                                |
| 2                         | contract for  | Sampling within D1-D3  | 25.000    | 0,26%                                |
| 2                         | direct treaty | Sampling within IM1 (done locally: deposition, soil water, ...)                                      | 58.000    | 0,60%                                |
| 2                         | contract for  | external analysis (DOC, Ntot, D2 passam etc)   | 44.400    | 0,46%                                |
| 2                         | contract for  | Sampling of needles&leaves (once IM1)  | 7.000     | 0,07%                                |
| 2                         | contract for  | data base development  | 10.000    | 0,10%                                |

**FORM F3**

Proposal acronym: FutMon

| External assistance costs |                               |  |           |                                      |
|---------------------------|-------------------------------|--|-----------|--------------------------------------|
| Beneficiary number        | Procedure                     | Description  | Costs (€) | % of total external assistance costs |
| 25                        | Direct agreement with experts | Work within IM1 and D2 (through institutional collaboration; no tender procedure)                  | 205.920   | 2,12%                                |
| 33                        | restricted                    | data validation meteo  | 2.000     | 0,02%                                |
| 33                        | framework                     | analy. soil, soil sol., leaves (incl. transport, conditioning,                                     | 42.000    | 0,43%                                |
| 33                        | direct treaties               | analysis passive sampling (3900 per year)  | 7.800     | 0,08%                                |
| 33                        | framework                     | analysis deposition (including transport, conditioning, QA)  | 43.500    | 0,45%                                |
| 32                        | Tender                        | crown condition/tree growth assessment at 39 FutMon large<br>scals plots                           | 17.247    | 0,18%                                |
| 32                        | Tender                        | data collecion, deposition and soil solution samling at 4 IM I<br>plots (weekly routine)           | 41.442    | 0,43%                                |
| 32                        | Tender                        | Calculation of water budgets from 3 IM plots   | 25.600    | 0,26%                                |
|                           |                               |  |           | 0,00%                                |
| 32                        | Tender                        | ambient air passive sampling/analyses at 4 IM I plots  | 10.000    | 0,10%                                |
| 32                        | Tender                        | Critical Loads simulations from 4 IM plots   | 18.000    | 0,18%                                |
| 32                        | Tender                        | web design, layout, public information   | 3.600     | 0,04%                                |
| 37                        | direct treaty                 | calculate critcal loads and exceedance for plot 1605-1607<br>(Steady state model); action D 2 - TH | 1.500     | 0,02%                                |
| 37                        | direct treaty                 | plausibility check, data gap replacement (meteorology), plot<br>1605-1607; action IM1 - TH         | 2.000     | 0,02%                                |
| 37                        | direct treaty                 | determination of pF-curves; plot 1607; action D 3 - TH   | 1.000     | 0,01%                                |
| 37                        | restricted<br>tender          | nutrient budget of ground vegetation; plot 1605-1607; action<br>D 2 - TH                           | 5.000     | 0,05%                                |
| 37                        | direct treaty                 | ambient air quality (passive samplers); plot 1605-1607;<br>action IM 1 - TH                        | 11.000    | 0,11%                                |
| 30                        | public tender                 | Vegetation assessment  | 10.000    | 0,10%                                |

**FORM F3**

Proposal acronym: FutMon

| <b>External assistance costs</b> |                  |   |                  |   |
|----------------------------------|------------------|---|------------------|---|
| <b>Beneficiary number</b>        | <b>Procedure</b> | <b>Description</b>  | <b>Costs (€)</b> | <b>% of total external assistance costs</b> |
| 30                               | public tender    | Tree condition assessment   | 32.640           | 0,34%                                       |
| 30                               | direct treaty    | External plot managers 2009   | 9.000            | 0,09%                                       |
| 30                               | public tender    | Water retention function  | 27.000           | 0,28%                                       |
| 30                               | direct treaty    | Guiding LIDAR Flight  | 9.000            | 0,09%                                       |
| 30                               | public tender    | LIDAR Flight  | 101.000          | 1,04%                                       |
| 30                               | direct treaty    | External plot managers 2010   | 9.000            | 0,09%                                       |
| 40                               | public tender    | Ozone analysis  | 120.000          | 1,23%                                       |
| 40                               | public tender    | External assistance in elaboration of harmonisation criteria  | 40.000           | 0,41%                                       |
| 40                               | public tender    | Analysis of soil solution samples   | 190.000          | 1,95%                                       |
| 40                               | public tender    | Soil sampling and pedological characterisation, IM plots  | 24.000           | 0,25%                                       |
| 27                               | framework        | passive sampler analysis  | 16.000           | 0,16%                                       |
| 27                               | restricted       | leaf-, ground-vegetation-, litterfall-analysis  | 7.000            | 0,07%                                       |
| 27                               | restricted       | deposition analysis   | 40.000           | 0,41%                                       |
| 27                               | restricted       | soil-solution analysis  | 16.000           | 0,16%                                       |
| 27                               | public tender    | maintenance contract IM-plots   | 20.000           | 0,21%                                       |
| 27                               | public tender    | web-page development and maintenance  | 10.000           | 0,10%                                       |
| 39                               | Public tender    | maintenance and professional assistance   | 32.000           | 0,33%                                       |
| 22                               | contract with    | Field-data entry  | 1.520            | 0,02%                                       |
| 22                               | contract -       | Forest service assistance   | 54.000           | 0,55%                                       |
| 22                               | agreement        | Skogoglandskap (Mr. N. C.)  | 5.080            | 0,05%                                       |
| 12                               | Public tender    | L2a: creation of spatial database in GIS where the actual position of the plots are located and their features. | 32.000           | 0,33%                                       |



**FORM F3**

Proposal acronym: FutMon

| <b>External assistance costs</b> |                    |  |                  |   |
|----------------------------------|--------------------|--|------------------|---|
| <b>Beneficiary number</b>        | <b>Procedure</b>   | <b>Description</b>   | <b>Costs (€)</b> | <b>% of total external assistance costs</b> |
| 12                               | Direct treaty      | IM1: environmental chemical analysis and assesement, collection of ecological parameters | 66.500           | 0,68%                                       |
| 12                               | Direct treaty      | D1: environmental chemical analysis and assesement, collection of ecological parameters  | 6.999            | 0,07%                                       |
| 12                               | Direct treaty      | D2: environmental chemical analysis and assesement, collection of ecological parameters  | 28.000           | 0,29%                                       |
| 12                               | Direct treaty      | D3: environmental chemical analysis and assesement, collection of ecological parameters  | 22.000           | 0,23%                                       |
| 31                               | public tender      | Laboratory analysis of water- and soilsamples of the intensive plots                     | 70.000           | 0,72%                                       |
| 31                               | framework contract | Laboratory analysis of the diffusive samplers for air monitoring on intensive plots      | 4.000            | 0,04%                                       |
| 31                               | public tender      | Analysis of wasserbudget data and critical loads calculation                             | 8.000            | 0,08%                                       |
| 31                               | direct treaty      | installation of monitoring equipment and maintenance                                     | 21.000           | 0,22%                                       |
| 35                               | direct treaty      | Internetpresentation (M8)  | 800              | 0,01%                                       |
| 35                               | direct treaty      | Foliar chemistry (IM1)   | 1.000            | 0,01%                                       |
| 35                               | direct treaty      | Data evaluation and data management (IM1)  | 8.000            | 0,08%                                       |
| 35                               | direct treaty      | Foliar chemistry (litterfall), intensive foliar surveys(D2)                              | 4.000            | 0,04%                                       |
| 35                               | direct treaty      | Data evaluation and data management (D2)   | 3.000            | 0,03%                                       |
| 7                                | direct treaty      | collecting of samples from adult trees   | 2.800            | 0,03%                                       |
| 7                                | tender             | analyse of passive ozone samplers  | 10.000           | 0,10%                                       |
| 7                                | tender             | calibration and servis of meteorological instruments                                     | 20.000           | 0,21%                                       |
| 7                                | direct treaty      | service of other instruments   | 7.600            | 0,08%                                       |
| 7                                | tender             | LAI assesment and phenological service   | 12.200           | 0,13%                                       |
| 7                                | direct treaty      | service of soil water equipment  | 7.600            | 0,08%                                       |
|                                  |                    |  |                  | 0,00%                                       |

**FORM F3**

Proposal acronym: FutMon

| <b>External assistance costs</b> |                                |   |                  |   |
|----------------------------------|--------------------------------|---|------------------|---|
| <b>Beneficiary number</b>        | <b>Procedure</b>               | <b>Description</b>  | <b>Costs (€)</b> | <b>% of total external assistance costs</b> |
| 7                                | tender                         | database development  | 5.500            | 0,06%                                       |
| 7                                | framework contract             | data transmission (remote connection)                                   | 6.000            | 0,06%                                       |
|                                  |                                |   |                  | 0,00%                                       |
| 7                                | tender                         | Printing of annual reports  | 11.500           | 0,12%                                       |
| 11                               | public tender                  | Ozone and ammonia passive samplers and chemical analysis                | 66.600           | 0,68%                                       |
| 11                               | direct treaty                  | Ozone symptom description in the field and validation in the laboratory | 55.000           | 0,56%                                       |
| 11                               | public tender                  | Deposition and soil solution analysis by a specialised laboratory       | 149.301          | 1,53%                                       |
| 11                               | direct treaty or public tender | Foliar chemical analysis by a specialised laboratory                    | 15.834           | 0,16%                                       |
| 11                               | public tender                  | Litter chemical analysis by a specialised laboratory                    | 80.000           | 0,82%                                       |
| 11                               | direct treaty                  | Soil chemical analysis by a specialised laboratory                      | 55.800           | 0,57%                                       |
| 11                               | direct treaty                  | Ground vegetation observations by expert teams                          | 30.420           | 0,31%                                       |
| 11                               | public tender                  | Ground vegetation chemical analysis by a specialised laboratory         | 84.630           | 0,87%                                       |
| 11                               | public tender                  | Technical maintenance of the meteorological measurements                | 79.045           | 0,81%                                       |
| 11                               | public tender/direct treaty    | Additional measurements on NFI plots (action L2b)                       | 399.000          | 4,10%                                       |
| 11                               | direct treaty                  | Part of the data evaluation and reporting done by external contracts    | 37.370           | 0,38%                                       |

**FORM F3**

Proposal acronym: FutMon

| <b>External assistance costs</b> |                                      |  |                  |   |
|----------------------------------|--------------------------------------|--|------------------|---|
| <b>Beneficiary number</b>        | <b>Procedure</b>                     | <b>Description</b>   | <b>Costs (€)</b> | <b>% of total external assistance costs</b> |
| 11                               | direct treaty<br>ro public<br>tender | Development of a web-interface for direct acces for potential users to a mirror data base with search and selection modules  | 42.000           | 0,43%                                       |
| 23                               | Public tender                        | Carrying out Action L2a: Large scale representative monitoring in 2009 - 2010. Field assessments on FutMon large-scale plots, including annual assessments of mandatory parameters foreseen for large scale monitoring in the ICP Forests manual                                       | 927.132          | 9,52%                                       |
| 23                               | Public tender                        | Carrying out Action IM1: monitoring on basic plots and selection of core plots in 2009 - 2010, It aims at the selection of "core" intensive monitoring plots as well as to define existing or new monitoring attributes to be assessed on them during the further implementation phase | 841.104          | 8,64%                                       |

**FORM F3**

Proposal acronym: FutMon

| External assistance costs |   |  |           |                                      |
|---------------------------|---|--|-----------|--------------------------------------|
| Beneficiary number        | Procedure   | Description  | Costs (€) | % of total external assistance costs |
| 23                        | Public Agreement (signed with another Public Organism still not decided) or Public Tender (if carried out with a private Institution) | Carrying out Actions D1-D2-D3 in 2009-2010. Works related to the implementation of demonstration projects D1 (Tree vitality and adaptation), D2 (Nutrient cycling and critical loads) and D3 (Water budgets) | 1.079.488 | 11,09%                               |
| 23                        | Public tender   | Carrying out works related to Actions M7 (national project management) and M8 ( national dissemination of information ) in the period 2009-2010  | 280.368   | 2,88%                                |
| 24                        | Tender  | Courses organisation   | 6.000     | 0,06%                                |
| 29                        | restricted tender   | draft, design and print layout of adapted flyers for project areas Level II (incl. LIFE+ logo)   | 1.500     | 0,02%                                |
| 29                        | restricted tender   | redesign of and reprint of publishing boards for project areas (incl. LIFE+ logos and link)  | 1.500     | 0,02%                                |
| 29                        | direct treaty   | redesign homepage and internetpräsentation   | 5.000     | 0,05%                                |
| 29                        | restricted tender   | field survey crown condition and damage parameters   | 10.100    | 0,10%                                |
| 29                        | restricted tender   | upgrade of software crown condition  | 3.000     | 0,03%                                |

**FORM F3**

Proposal acronym: FutMon

| <b>External assistance costs</b> |                    |  |                  |   |
|----------------------------------|--------------------|--|------------------|---|
| <b>Beneficiary number</b>        | <b>Procedure</b>   | <b>Description</b>   | <b>Costs (€)</b> | <b>% of total external assistance costs</b> |
| 29                               | restricted tender  | tree climbing and foliar collection  | 11.830           | 0,12%                                       |
| 29                               | direct treaty      | weekly sampling and data collection  | 55.053           | 0,57%                                       |
| 29                               | restricted tender  | LAI measurements   | 6.000            | 0,06%                                       |
| 29                               | restricted tender  | pF-determinations of soils   | 12.000           | 0,12%                                       |
| 29                               | framework contract | service and analysis of passive sampler (ozone and ammonia)                              | 31.200           | 0,32%                                       |
| 28                               | framew.contra      | technician in the field (public tender)  | 75.240           | 0,77%                                       |
| 28                               | service            | specific scientific evaluations in L2, IM1, D1, D2, D3-actions                           | 109.800          | 1,13%                                       |
| 28                               | service            | perform./ eval. crown cond. survey (public tender)                                       | 54.900           | 0,56%                                       |
| 36                               | Tender             | vegetation on FutMon Level II  | 3.200            | 0,03%                                       |
| 36                               | Tender             | ambient air passiv samplers on Level II  | 5.000            | 0,05%                                       |
| 36                               | Tender             | Increment on Level II and I  | 5.000            | 0,05%                                       |
| 36                               | Tender             | Regionalization of data to the calculation of water budget                               | 18.500           | 0,19%                                       |
| 36                               | Tender             | Investigations to pF-curves  | 22.000           | 0,23%                                       |
| 36                               | Tender             | Laborant for laboratory analysis (water, soil solution, litterfall, leafs+needles, etc.) | 30.000           | 0,31%                                       |
| 36                               | Tender             | Calculation of water budget on Level II and Level I                                      | 15.300           | 0,16%                                       |
| 36                               | Tender             | Public Relation service contract   | 800              | 0,01%                                       |
| 14                               | Tender             | Project Management   | 169.553          | 1,74%                                       |
| 14                               | Tender             | Field assessments, sample collection & site maintenance                                  | 121.023          | 1,24%                                       |
| 14                               | Tender             | Laboratory analysis and related consumables  | 190.500          | 1,96%                                       |
| 14                               | Tender             | Data evaluation, interpretation, formatting & reporting                                  | 80.000           | 0,82%                                       |

**FORM F3**

Proposal acronym: FutMon

| <b>External assistance costs</b> |                    |   |                  |   |
|----------------------------------|--------------------|---|------------------|---|
| <b>Beneficiary number</b>        | <b>Procedure</b>   | <b>Description</b>  | <b>Costs (€)</b> | <b>% of total external assistance costs</b> |
| 8                                | Direct treaty      | Ground vegetation field work IM1  | 7.086            | 0,07%                                       |
| 8                                | Direct treaty      | Foliar sampling D2  | 3.543            | 0,04%                                       |
| 18                               | public tender      | Field assessment and measurements of monitoring parameters on all (376) L2 plots  | 188.000          | 1,93%                                       |
| 18                               | public tender      | Equipment maintaining and samples collection on intensive monitoring plots. Providing and analysis of passive samplers of ambient air quality (O3, NH3, NO2, SO2) on all (12) IM1 plots | 71.800           | 0,74%                                       |
| 18                               | public tender      | Translating service and printing of reports and informative materials   | 19.500           | 0,20%                                       |
| 26                               | Direct treaty      | Specialised equipment installation/sample analyses (IM1; D1-3)  | 8.822            | 0,09%                                       |
| 26                               | Direct treaty      | Specialised sample collection (e.g. foliar samples) (IM1; D1-3)   | 802              | 0,01%                                       |
| 26                               | Public tender      | Specialised sample collection L2b   | 10.000           | 0,10%                                       |
| 13                               | Framework contract | M8-Design and production of logo, information material etc.   | 2.400            | 0,02%                                       |
| 13                               | Framework contract | L2-Plot selection and network design  | 7.500            | 0,08%                                       |
| 13                               | Framework contract | L2-Technical assistance   | 4.088            | 0,04%                                       |
| 13                               | Framework contract | IM1-Level II monitoring activities (2009-2010)  | 218.838          | 2,25%                                       |
| 13                               | Framework contract | D1-Development and testing of new methods following D1 on 8 Level II plots, WEB cams on 4 plots (2009-2010)   | 67.551           | 0,69%                                       |

**FORM F3**

Proposal acronym: FutMon

| <b>External assistance costs</b> |                                       |  |                  |   |
|----------------------------------|---------------------------------------|--|------------------|---|
| <b>Beneficiary number</b>        | <b>Procedure</b>                      | <b>Description</b>   | <b>Costs (€)</b> | <b>% of total external assistance costs</b> |
| 13                               | Framework contract                    | D2-Development and testing of new methods following D2 on 8 Level II plots and soil solution on 2 plots(2009-2010) | 50.668           | 0,52%                                       |
| 17                               | framework contract                    | IM 1 deposition measurements   | 213.466          | 2,19%                                       |
| 17                               | framework contract                    | L2 measurements  | 36.321           | 0,37%                                       |
| 17                               | framework contract                    | IM 1 soilmoisture measurements   | 106.200          | 1,09%                                       |
| 17                               | framework contract                    | coordination activities on national level  | 61.200           | 0,63%                                       |
| 21                               | Framework contract                    | Laboratory analyses of samples of water, soil and vegetation   | 210.000          | 2,16%                                       |
| 21                               | Direct treaties / framework contracts | Expert consultances and assessments (D1 - D3, IM1)   | 7.200            | 0,07%                                       |
| 21                               | Framework contract                    | Database development and maintenance   | 5.000            | 0,05%                                       |
| 34                               | public tender                         | IM1-34(SH) (2009)  | 38.000           | 0,39%                                       |
| 34                               | public tender                         | IM1-34(SH) (2010)  | 31.000           | 0,32%                                       |
| 34                               | public tender                         | D2-34(SH) (2009/10)  | 62.000           | 0,64%                                       |
| 34                               | public tender                         | D3-34(SH) (2009/10)  | 10.000           | 0,10%                                       |
| 34                               | public tender                         | L2-34(SH), module L2a  | 1.250            | 0,01%                                       |
| 15                               | Public tender                         | Plot management and surveys in the Regions with special status   | 200.000          | 2,05%                                       |

**FORM F3**

Proposal acronym: FutMon

| <b>External assistance costs</b> |                  |  |                  |   |
|----------------------------------|------------------|--|------------------|---|
| <b>Beneficiary number</b>        | <b>Procedure</b> | <b>Description</b>   | <b>Costs (€)</b> | <b>% of total external assistance costs</b> |
| 15                               | Public tender    | Organization of events and materials for dissemination, incl. notice boards      | 10.000           | 0,10%                                       |
| 15                               | Public tender    | Scientific coordination of large-scale monitoring of crown condition             | 80.000           | 0,82%                                       |
| 15                               | Public tender    | Scientific coordination of intensive monitoring on basic plots                   | 200.000          | 2,05%                                       |
| 15                               | Public tender    | Scientific coordination of QA/QC in vegetation assessment at international level | 40.000           | 0,41%                                       |
| 15                               | Public tender    | Scientific coordination of QA/QC activities at international level               | 100.000          | 1,03%                                       |
| 38                               | public tender    | IM 1 chemical soil water analyses  | 20.000           | 0,21%                                       |
| 38                               | public tender    | IM 1 chemical precipitation water analyses                                       | 15.000           | 0,15%                                       |
| 38                               | public tender    | IM 1 chemical other analyses   | 7.000            | 0,07%                                       |
| 38                               | public tender    | maintenance of computer and data management programs                             | 4.000            | 0,04%                                       |
| 38                               | public tender    | car leasing  | 10.000           | 0,10%                                       |
| 1                                | Tender           | Database development, scientific analyses of data                                | 293.251          | 3,01%                                       |
| <b>TOTAL =&gt;</b>               |                  |  | <b>9.735.815</b> | <b>100%</b>                                 |



**FORM F4 a**

Proposal acronym: FutMon

| <b>Durable goods: Infrastructure costs</b> |                                 |   |                    |                                     |  |
|--|---------------------------------|---|--------------------|-------------------------------------|--|
| <b>Beneficiary number</b>                  | <b>Procedure</b>                | <b>Description</b>  | <b>Actual cost</b> | <b>Depreciation (eligible cost)</b> | <b>% of total Infrastructure costs</b> |
| 5  | Direct treaty                   | Materials for notice boards   | 4.000              | 400                                 | 4,06%                                  |
| 12   | Direct treaty                   | IM1, Fencing, painting and accesibility of the intensive monitoring plots | 6.000              | 600                                 | 6,09%                                  |
| 12   | Direct treaty                   | L2b, Accessibility, marking of the plots                                  | 20.000             | 2.000                               | 20,28%                                 |
| 31   | direct treaty                   | Sticker Life+ / notice board of Futmon                                    | 400                | 40                                  | 0,41%                                  |
| 35   | direct treaty                   | Notice boards (M8)  | 1.200              | 120                                 | 1,22%                                  |
| 27   | Tender                          | Notice boards   | 2.500              | 250                                 | 2,54%                                  |
| 18   | direct treaty                   | Fencing   | 38.000             | 3.800                               | 38,54%                                 |
| 18   | direst treaty                   | Air quality measurement facilities (technical constructions)              | 16.000             | 1.600                               | 16,23%                                 |
| 26   | Direct treaty (Forest Research) | Plot noticeboards (M8)  | 10.500             | 1.050                               | 10,65%                                 |
| <b>TOTAL</b>                               |                                 |   | <b>98.600</b>      | <b>9.860</b>                        | <b>100%</b>                            |

Please refer to Articles **25.6 to 25.9** of the Common Provisions to see if the infrastructure in question is subject to depreciation and what depreciation rates should be applied

Please refer to the relevant instructions given in the explanatory notes for filling in these forms

## FORM F4 b

Proposal acronym: FutMon

## Durable goods: Equipment costs

| Beneficiary number | Procedure            | Description                                       | Actual cost | Depreciation (eligible cost) | % of total Equipment costs |
|--------------------|----------------------|---|-------------|------------------------------|----------------------------|
| 5                  | Tender               | Spare parts and equipment                         | 12.600      | 2.520                        | 0,49%                      |
| 6                  | Public tender        | Digital camera                                    | 1.000       | 200                          | 0,04%                      |
| 6                  | Public tender        | Equipment for dendrometry                         | 1.500       | 300                          | 0,06%                      |
| 6                  | Public tender        | Purchase one laptop                               | 1.500       | 300                          | 0,06%                      |
| 10                 | Tender               | 7 weather stations                                | 26.000      | 5.200                        | 1,00%                      |
| 10                 | Tender               | 4 web cameras                                     | 8.000       | 1.600                        | 0,31%                      |
| 10                 | Tender               | 18 girth measurement units                        | 20.000      | 4.000                        | 0,77%                      |
| 10                 | Tender               | 2 leaf area meters                                | 2.000       | 400                          | 0,08%                      |
| 10                 | Tender               | 3 TDR moisture meters                             | 21.000      | 4.200                        | 0,81%                      |
| 16                 | Tender               | Computers, monitors, measurement equipment        | 24.000      | 4.800,00                     | 0,93%                      |
| 2                  | purchase after offer | 6 webcams1) (including towers, equipment for data | 84.000      | 16.800                       | 3,24%                      |
| 2                  | purchase after offer | 6 meteo station (tower+logger+sensors+GSM)        | 75.000      | 15.000                       | 2,89%                      |
| 2                  | purchase after offer | 6*3 soil water (lysimeter+pumps+power)            | 21.000      | 4.200                        | 0,81%                      |
| 2                  | purchase after offer | 6*10 litterfalltraps                              | 7.000       | 1.400                        | 0,27%                      |
| 2                  | purchase after offer | Lab instruments (15% share from 540000,- €)       | 81.000      | 16.200                       | 3,12%                      |
| 2                  | purchase after offer | 6 soil humidity (data logger + multiplexer + GSM) | 54.000      | 10.800                       | 2,08%                      |
| 2                  | purchase after offer | 6*12 dendrometer                                  | 36.000      | 7.200                        | 1,39%                      |
| 2                  | purchase after offer | depo equipment                                    | 16.000      | 3.200                        | 0,62%                      |
| 2                  | purchase after offer | passam equipment                                  | 6.000       | 1.200                        | 0,23%                      |
| 2                  | purchase after offer | 6 GPS   | 5.400       | 1.080                        | 0,21%                      |
| 2                  | purchase after offer | 3 binoculars                                      | 2.400       | 480                          | 0,09%                      |
| 2                  | purchase after offer | 3 digital camera                                  | 3.000       | 600                          | 0,12%                      |
| 2                  | purchase after offer | database license (12,5% of Oracle, 2 years)       | 20.000      | 4.000                        | 0,77%                      |

## FORM F4 b

Proposal acronym: FutMon

**Durable goods: Equipment costs**

| Beneficiary number | Procedure                     | Description   | Actual cost | Depreciation (eligible cost) | % of total Equipment costs |
|--------------------|-------------------------------|---|-------------|------------------------------|----------------------------|
| 2                  | purchase after offer          | specific software   | 16.000      | 3.200                        | 0,62%                      |
| 25                 | Tender                        | Core plot equipment   | 102.960     | 20.592                       | 3,97%                      |
| 33                 | public tender                 | Meteostation 1 new stations   | 12.000      | 2.400                        | 0,46%                      |
| 33                 | restricted tender             | 1 MDE (mobile field computer)   | 4.500       | 900                          | 0,17%                      |
| 33                 | restricted tender             | datalogger (water budget)   | 2.500       | 500                          | 0,10%                      |
| 32                 | Direct treaty                 | TDR technology at 1 IM plot   | 8.300       | 1.660                        | 0,32%                      |
| 32                 | Direct treaty                 | electronic tensiometer equipment at 2 IM plots  | 7.772       | 1.554                        | 0,30%                      |
| 32                 | Direct treaty                 | meteorological automatic weather stations incl. data logger and transmission technology at 2 IM plots | 18.640      | 3.728                        | 0,72%                      |
| 37                 | direct treaty                 | personal computer (laptop)  | 1.000       | 200                          | 0,04%                      |
| 37                 | direct treaty                 | sampler litterfall; plot 1605; action D 2 - TH  | 2.500       | 500                          | 0,10%                      |
| 40                 | request for offers (3 to 5)   | GPS system for field use  | 5.000       | 1.000                        | 0,19%                      |
| 40                 | request for offers (3 to 5)   | Sampling tools for soils  | 4.000       | 800                          | 0,15%                      |
| 40                 | request for offers (3 to 5)   | Forest mensuration precision tools  | 4.000       | 800                          | 0,15%                      |
| 27                 | Tender                        | meteorological sensors (radiation, humidity,  | 10.000      | 2.000                        | 0,39%                      |
| 39                 | Public tender / direct treaty | tensiometers  | 6.000       | 1.200                        | 0,23%                      |
| 39                 | Public tender / direct treaty | laptop and PC   | 5.000       | 1.000                        | 0,19%                      |
| 39                 | Public tender / direct treaty | n. 2 vertex IV bluetooth kit 360  | 4.220       | 844                          | 0,16%                      |
| 39                 | Public tender / direct treaty | n. 4 Pressler tree wood borer 30 cm   | 900         | 180                          | 0,03%                      |

**FORM F4 b**

Proposal acronym: FutMon

**Durable goods: Equipment costs**

| Beneficiary number | Procedure                     | Description   | Actual cost | Depreciation (eligible cost) | % of total Equipment costs |
|--------------------|-------------------------------|---|-------------|------------------------------|----------------------------|
| 39                 | Public tender / direct treaty | n. 470 UMS D1-k and D1-L permanent girth bands  | 4.700       | 940                          | 0,18%                      |
| 39                 | Public tender / direct treaty | n. 10 KDS diameters rules   | 180         | 36                           | 0,01%                      |
| 22                 | small purchase                | 10x automatic meteostations   | 14.000      | 2.800                        | 0,54%                      |
| 22                 | small purchase                | 7 x dendrometers  | 9.100       | 1.820                        | 0,35%                      |
| 22                 | small purchase                | 7 x THP probe   | 10.500      | 2.100                        | 0,40%                      |
| 22                 | small purchase                | 10x plot restoration  | 7.400       | 1.480                        | 0,29%                      |
| 22                 | small purchase                | field calculators   | 1.000       | 200                          | 0,04%                      |
| 12                 | Public tender                 | L2a: 13 PCs for the Local Forest Services which will carry out the assessment and process the data.                 | 19.500      | 3.900                        | 0,75%                      |
| 12                 | Direct treaty                 | L2a: 15 tree hight meassuring devices used by the Local Forest Services which will carry out the assessment         | 9.000       | 1.800                        | 0,35%                      |
| 12                 | Direct treaty                 | L2a:13 GPS which will be used by the Local Forest Services to locate the plots with precision                       | 4.000       | 800                          | 0,15%                      |
| 12                 | Direct treaty                 | L2a: 16 digital photo cameras which will be used by Local Forest Services to have pictures of the forest ecosystems | 4.800       | 960                          | 0,19%                      |
| 12                 | Public tender                 | L2a: Special shoftware for analysis of satellite images.  | 20.000      | 4.000                        | 0,77%                      |
| 12                 | Direct treaty                 | IM1: Automatic titrator for water and soil samples  | 8.000       | 1.600                        | 0,31%                      |

**FORM F4 b**

Proposal acronym: FutMon

**Durable goods: Equipment costs**

| Beneficiary number | Procedure     | Description   | Actual cost | Depreciation (eligible cost) | % of total Equipment costs |
|--------------------|---------------|---|-------------|------------------------------|----------------------------|
| 12                 | Direct treaty | IM1: Sensors for soil temperature and moisture  | 5.000       | 1.000                        | 0,19%                      |
| 3                  | Tender        | 3 Meteostations   | 30.000      | 6.000                        | 1,16%                      |
| 3                  | direct treaty | 3 solar panels  | 3.000       | 600                          | 0,12%                      |
| 31                 | direct treaty | Installation of devices to analyze the water budget of intensive plots  | 16.000      | 3.200                        | 0,62%                      |
| 31                 | direct treaty | monitoring equipment and devices for intensive plots  | 21.000      | 4.200                        | 0,81%                      |
| 7                  | Tender        | meteorological instruments  | 20.000      | 4.000                        | 0,77%                      |
| 7                  | Tender        | phenological cameras and supporting equipment   | 28.000      | 5.600                        | 1,08%                      |
| 7                  | Tender        | soil moisture equipmment (TDR, datalogers, others)  | 40.000      | 8.000                        | 1,54%                      |
| 7                  | Trade order   | Device for data acquisiton  | 2.600       | 520                          | 0,10%                      |
| 7                  | Trade order   | PC with periphery for data base   | 3.200       | 640                          | 0,12%                      |
| 11                 | Public tender | Soil humidity and temperature measurement equipment for 14 plots, will be bought in the beginning of 2009, 5 years of depreciation, so its depreciated within the project life time | 365.400     | 73.080                       | 14,09%                     |
| 11                 | Public tender | Tensiometers for the measurement of the matrix potential, will be bought in the beginning of 2009, 5 years of depreciation, so its depreciated within the project life time         | 126.000     | 25.200                       | 4,86%                      |

## FORM F4 b

Proposal acronym: FutMon

**Durable goods: Equipment costs**

| Beneficiary number | Procedure  | Description  | Actual cost | Depreciation (eligible cost) | % of total Equipment costs |
|--------------------|--|--|-------------|------------------------------|----------------------------|
| 11                 | Part of an existing contract (enterprise selected through a public tender) | Spare parts for maintenance of automatic meteorological stations | 10.000      | 2.000                        | 0,39%                      |
| 20                 | request for offers   | operating system and database software                           | 2.000       | 400                          | 0,08%                      |
| 20                 | request for offers   | server   | 4.000       | 800                          | 0,15%                      |
| 20                 | request for offers   | desktop computer (x2)  | 8.000       | 1.600                        | 0,31%                      |
| 20                 | request for offers   | measurement equipment - GPS (x2)                                 | 10.000      | 2.000                        | 0,39%                      |
| 20                 | request for offers   | laptop computer (x2)   | 4.000       | 800                          | 0,15%                      |
| 20                 | request for offers   | measurement equipment - electronic hipsometer                    | 5.000       | 1.000                        | 0,19%                      |
| 20                 | direct treaty  | measurement equipment - increment borer and electric drill       | 5.000       | 1.000                        | 0,19%                      |
| 20                 | direct treaty  | measurement equipment - dendrometer bands                        | 5.000       | 1.000                        | 0,19%                      |
| 20                 | request for offers   | measurement equipment - digital linear positioning system        | 10.000      | 2.000                        | 0,39%                      |
| 20                 | request for offers   | measurement equipment - digital registering caliper              | 5.000       | 1.000                        | 0,19%                      |
| 20                 | request for offers   | measurement equipment - multifunctional dendrometer              | 6.000       | 1.200                        | 0,23%                      |
| 20                 | direct treaty  | measurement equipment - tree tomograph                           | 14.000      | 2.800                        | 0,54%                      |
| 20                 | direct treaty  | measurement equipment - monitoring precipitations system         | 2.500       | 500                          | 0,10%                      |
| 20                 | direct treaty  | measurement equipment - ph-metre and conductmetre                | 2.000       | 400                          | 0,08%                      |

## FORM F4 b

Proposal acronym: FutMon

**Durable goods: Equipment costs**

| Beneficiary number | Procedure          | Description  | Actual cost | Depreciation (eligible cost) | % of total Equipment costs |
|--------------------|--------------------|--|-------------|------------------------------|----------------------------|
| 20                 | public tender      | measurement equipment - meteorological station WMO compatible (x2)   | 24.000      | 4.800                        | 0,93%                      |
| 20                 | direct treaty      | measurement equipment - temperature senzors  | 1.500       | 300                          | 0,06%                      |
| 20                 | public tender      | measurement equipment - leaf area index indirect assessment system   | 18.000      | 3.600                        | 0,69%                      |
| 20                 | direct treaty      | measurement equipment - storage recipients for precipitation samples   | 4.000       | 800                          | 0,15%                      |
| 20                 | direct treaty      | measurement equipment - soil humidity probe  | 1.000       | 200                          | 0,04%                      |
| 20                 | request for offers | measurement equipment - ozone active monitoring system   | 10.000      | 2.000                        | 0,39%                      |
| 20                 | public tender      | measurement equipment - microwave digestive system   | 25.000      | 5.000                        | 0,96%                      |
| 20                 | public tender      | service car  | 15.000      | 3.000                        | 0,58%                      |
| 20                 | public tender      | off road car   | 30.000      | 6.000                        | 1,16%                      |
| 20                 | request for offers | measurement equipment - system for heavy metal mineralisation of water   | 7.500       | 1.500                        | 0,29%                      |
| 20                 | direct treaty      | climbing and safety equipment  | 1.000       | 200                          | 0,04%                      |
| 20                 | direct treaty      | measurement equipment - soil and geological survey kit   | 3.000       | 600                          | 0,12%                      |
| 20                 | direct treaty      | measurement equipment - other laboratory equipment   | 2.500       | 500                          | 0,10%                      |
| 29                 | restricted tender  | durable equipment of Standard Meteostation7 plots (incl. wighing rain gauge, data logger, sensors, power supply) | 105.000     | 21.000                       | 4,05%                      |

**FORM F4 b**

Proposal acronym: FutMon

**Durable goods: Equipment costs**

| Beneficiary number | Procedure         | Description  | Actual cost | Depreciation (eligible cost) | % of total Equipment costs |
|--------------------|-------------------|--|-------------|------------------------------|----------------------------|
| 29                 | restricted tender | equipment of stemflow measurements 3 plots (scales)                                  | 15.000      | 3.000                        | 0,58%                      |
| 29                 | restricted tender | equipment of soil moisture measurements 1,5 plots (Trase)                            | 14.000      | 2.800                        | 0,54%                      |
| 29                 | restricted tender | mobile communication equipment 6 plots   | 18.000      | 3.600                        | 0,69%                      |
| 29                 | restricted tender | mobile field data recording equipment (handheld PC), GPS receiver, binocular         | 13.000      | 2.600                        | 0,50%                      |
| 29                 | restricted tender | Pheno CAM, digital recording with power supply and (Solar) net connection, 1 plot    | 6.000       | 1.200                        | 0,23%                      |
| 28                 | public tender     | 5 weather stations (temp.humid., precipit., wind,                                    | 41.900      | 8.380                        | 1,62%                      |
| 28                 | restricted tender | 5 suction cup stations (5 depths, 5 suction cups                                     | 43.000      | 8.600                        | 1,66%                      |
| 28                 | public tender     | 5 soil hydrol. stations (3 depths, 5 tensiometers, 3                                 | 22.000      | 4.400                        | 0,85%                      |
| 28                 | public tender     | 5 data logger with weather-proof housing   | 19.500      | 3.900                        | 0,75%                      |
| 36                 | Direct treaty     | TDR technologie and electronic tensiometer equipment at 2 IM plots for water content | 12.000      | 2.400                        | 0,46%                      |
| 36                 | Direct treaty     | data logger for data registration  | 3.000       | 600                          | 0,12%                      |
| 14                 | Tender            | Web Cams and accessories   | 1.500       | 300                          | 0,06%                      |
| 14                 | Tender            | Passive samplers, weather stations and accessories                                   | 23.000      | 4.600                        | 0,89%                      |
| 8                  | Direct treaty     | Meteo station renovation   | 7.114       | 1.423                        | 0,27%                      |
| 8                  | Direct treaty     | Tensiometers and soil temperature loggers  | 4.309       | 862                          | 0,17%                      |
| 8                  | Direct treaty     | Webcams  | 13.423      | 2.685                        | 0,52%                      |
| 18                 | public tender     | Automatic meteorological stations (6 sets)   | 61.500      | 12.300                       | 2,37%                      |
| 18                 | public tender     | Lizymetes for soil solution measurements (9 sets)                                    | 58.200      | 11.640                       | 2,24%                      |
| 18                 | direct treaty     | LI-COR LAI-2000 (1 set)  | 6.200       | 1.240                        | 0,24%                      |



## FORM F4 b

Proposal acronym: FutMon

## Durable goods: Equipment costs

| Beneficiary number | Procedure          | Description   | Actual cost | Depreciation (eligible cost) | % of total Equipment costs |
|--------------------|--------------------|---|-------------|------------------------------|----------------------------|
| 26                 | Direct treaty      | Toughbooks (x2) L2  | 7.000       | 1.400                        | 0,27%                      |
| 26                 | Direct treaty      | GIS software L2   | 3.000       | 600                          | 0,12%                      |
| 26                 | Public tender      | Webcam, solar panel, logger, pole IM1                                   | 23.070      | 4.614                        | 0,89%                      |
| 26                 | Direct treaty      | Tensiometer + loggers   | 1.257       | 126                          | 0,05%                      |
| 26                 | Public tender      | Automatic Weather Stations (x2) IM1                                     | 18.506      | 1.851                        | 0,71%                      |
| 13                 | Purchase           | L2-Software for field survey  | 12.500      | 2.500                        | 0,48%                      |
| 13                 | Purchase           | D1-Equipments for web camera observations                               | 3.333       | 667                          | 0,13%                      |
| 13                 | Purchase           | D2-Equipments for soil solution   | 2.500       | 500                          | 0,10%                      |
| 21                 | Framework contract | Sets of lysimeters with vacuum pumps and sampling devices (for IM1, D2) | 26.000      | 5.200                        | 1,00%                      |
| 21                 | Direct treaty      | Webcams for phenological recording - 4                                  | 8.000       | 3.600                        | 0,31%                      |
| 21                 | Framework contract | Equipment for measuring soil moisture regime (for D3)                   | 56.000      | 9.200                        | 2,16%                      |
| 21                 | Framework contract | Meteostations + dataloggers - 2   | 12.000      | 2.400                        | 0,46%                      |
| 21                 | Framework contract | Digital cameras - 2 (fish-eye lens, for LAI assessment)                 | 4.000       | 800                          | 0,15%                      |
| 21                 | Framework contract | Laptop computers - 2 (M7, M8 and other use)                             | 2.000       | 400                          | 0,08%                      |
| 21                 | Framework contract | Software for database management  | 6.000       | 1.200                        | 0,23%                      |
| 15                 | Public tender      | 1 service car   | 30.000      | 6.000                        | 1,16%                      |
| 15                 | Public tender      | 2 off-road car  | 45.000      | 9.000                        | 1,74%                      |
| 15                 | Public tender      | PC, laptops, printers, fax  | 20.000      | 4.000                        | 0,77%                      |
| 15                 | Public tender      | GPS devices for field use   | 45.000      | 9.000                        | 1,74%                      |
| 15                 | Public tender      | Forest mensuration precision tools                                      | 20.000      | 4.000                        | 0,77%                      |
| 38                 | public tender      | L2 -LV GPS receivers (programs, maintenance)                            | 7.964       | 1.593                        | 0,31%                      |
| 38                 | public tender      | L2 - LV binoculars (4 researcers involved in field works)               | 800         | 160                          | 0,03%                      |

**FORM F4 b**

Proposal acronym: FutMon

**Durable goods: Equipment costs**

| Beneficiary number | Procedure | Description | Actual cost | Depreciation (eligible cost) | % of total Equipment costs |
|--------------------|-----------|-------------|-------------|------------------------------|----------------------------|
| TOTAL =>           |           |             | 2.592.648   | 516.554                      | 100%                       |

Please refer to articles **25.6 to 25.9** of the Common Provisions to see if the equipment in question is subject to depreciation and what depreciation rates should be applied

Please refer to the relevant instructions given in the explanatory notes for filling in these forms

**FORM F4 c**

**Proposal acronym: FutMon**

[illegible]

**FORM F5**

**Proposal acronym: FutMon**

[illegible]

**FORM F6**

Proposal acronym:

| Consumables        |                             |   |          |                             |
|--------------------|-----------------------------|---|----------|-----------------------------|
| Beneficiary number | Procedure                   | Description   | Cost (€) | % of total Consumable costs |
| 6                  | Public tender/Direct treaty | Purchase of new water samplers/repair of old samplers   | 2.500    | 0,16%                       |
| 6                  | Public tender/Direct treaty | Passive samplers (purchase and analysis)  | 8.000    | 0,52%                       |
| 6                  | Public tender/Direct treaty | Purchase of meteorological recorder tapes   | 500      | 0,03%                       |
| 6                  | Public tender/Direct treaty | Purchase of chemicals and other laboratory consumables  | 4.000    | 0,26%                       |
| 9                  | direct treaty               | Different materials from different suppliers (not exceeding EUR 9000 from one supplier) for indoor and outdoor activities, core and basic plots, handling of samples. L2-9(EF), IM1-9(EF), D2-9(EF), M7-9(EF), M8-9(EF) | 9.400    | 0,62%                       |
| 10                 | Pubic tender                | M8-10(FI), printed material, notice boards etc.   | 8.000    | 0,52%                       |
| 10                 | Pubic tender                | L2-10(FI), field equipment (< 1000€ each)   | 3.000    | 0,20%                       |
| 10                 | Pubic tender                | L2-10(FI), miscellaneous field supplies   | 2.000    | 0,13%                       |
|                    |                             |   | 0        | 0,00%                       |
|                    |                             |   | 0        | 0,00%                       |
| 10                 | Pubic tender                | D1-10(FI), miscellaneous field supplies   | 1.200    | 0,08%                       |
| 10                 | Pubic tender                | D2-10(FI), laboratory chemicals   | 60.156   | 3,94%                       |
| 10                 | Pubic tender                | D2-10(FI), miscellaneous laboratory supplies  | 6.500    | 0,43%                       |
| 10                 | Pubic tender                | D2-10(FI), miscellaneous field supplies   | 11.000   | 0,72%                       |
| 10                 | Pubic tender                | D2-10(FI), field equipment (< 1000€ each)   | 9.000    | 0,59%                       |
| 10                 | Public tender               | CI-SS-10(FI), laboratory chemicals  | 14.500   | 0,95%                       |
| 10                 | Public tender               | CI-SS-10(FI), miscellaneous laboratory supplies   | 2.000    | 0,13%                       |
| 10                 | Pubic tender                | IM1-10(FI), laboratory chemicals  | 11.200   | 0,73%                       |
| 10                 | Pubic tender                | IM1-10(FI), miscellaneous laboratory supplies   | 5.500    | 0,36%                       |
| 10                 | Pubic tender                | IM1-10(FI), miscellaneous field supplies  | 30.100   | 1,97%                       |
| 10                 | Pubic tender                | IM1-10(FI), field equipment (< 1000€ each)  | 6.500    | 0,43%                       |
| 10                 | Pubic tender                | IM1-10(FI), field samplers (< 1000€ each)   | 2.200    | 0,14%                       |
| 10                 | Pubic tender                | IM1-10(FI), datalogger spare parts/sensors (< 1000€ each)   | 9.000    | 0,59%                       |

**FORM F6**

Proposal acronym:

| Consumables        |   |   |          |                             |
|--------------------|---|---|----------|-----------------------------|
| Beneficiary number | Procedure   | Description   | Cost (€) | % of total Consumable costs |
| 16                 | according to the principles of public procurement | Field consumables   | 6.000    | 0,39%                       |
| 2                  | direct order                                      | consumables in lab  | 104.500  | 6,85%                       |
| 2                  | direct order                                      | consumables in field (boards, fences, ...)  | 14.000   | 0,92%                       |
| 2                  | direct order                                      | maps (analog and digital)   | 3.000    | 0,20%                       |
| 2                  | direct order                                      | reference materials (JRC: water, leaves, ....)  | 5.000    | 0,33%                       |
| 2                  | direct order                                      | consumables in C1-Gro   | 2.000    | 0,13%                       |
| 25                 | Tender  | Materials for experiments   | 16.000   | 1,05%                       |
| 25                 | direct treaty                                     | Computers   | 4.000    | 0,26%                       |
| 25                 | direct treaty                                     | Throufall collectors  | 3.000    | 0,20%                       |
| 25                 | direct treaty                                     | Presipitation collectors  | 3.000    | 0,20%                       |
| 25                 | direct treaty                                     | Soilmoisture tules  | 2.500    | 0,16%                       |
| 25                 | direct treaty                                     | Timber material   | 1.500    | 0,10%                       |
| 25                 | direct treaty                                     | Miscellaneous   | 1.680    | 0,11%                       |
| 33                 | direct treaty (regularly after internet           | sampler, batteries, modems,tdr, circumference bands, cabel....                        | 13.250   | 0,87%                       |
| 33                 | restricted tender                                 | 9 Tensiometer (water budgets; stability < 5 years)                                    | 4.950    | 0,32%                       |
| 32                 | Framework contract                                | laboratory chemicals and devices, gas, etc.   | 12.323   | 0,81%                       |
| 32                 | on account  | devices for deposition/ soil solution sampling and field assessments (D 2 activities) | 7.557    | 0,50%                       |
| 37                 | direct treaty                                     | consumables for data management   | 750      | 0,05%                       |
| 37                 | direct treaty                                     | consumables for public relations (paper, maps, posters etc.); action M 8 - TH         | 2.000    | 0,13%                       |
| 37                 | direct treaty                                     | consumables for plots (spare and wear parts, building material for fence etc.)        | 1.200    | 0,08%                       |
| 30                 | direct treaty                                     | Analysis (chemicals, filters, gas, etc.)  | 93.277   | 6,11%                       |

**FORM F6**

Proposal acronym:

| <b>Consumables</b>        |                               |  |                 |                                    |
|---------------------------|-------------------------------|--|-----------------|------------------------------------|
| <b>Beneficiary number</b> | <b>Procedure</b>              | <b>Description</b>   | <b>Cost (€)</b> | <b>% of total Consumable costs</b> |
| 30                        | direct treaty                 | Reparation of technical utensils and sampling devices, poles, gas fuel, passive samplers, sample packaging material, circumference measurement, marker tape/colour, batteries etc. | 40.612          | 2,66%                              |
| 30                        | public tender/direct treaty   | Material for information circulation (website for demonstration  | 20.000          | 1,31%                              |
| 30                        | public tender/direct treaty   | Printing costs for reports and fotocourses   | 10.840          | 0,71%                              |
| 40                        | request for offers (3 to 5)   | Consumables for chemical analyses of deposition samples  | 122.290         | 8,01%                              |
| 40                        | request for offers (3 to 5)   | Consumables for deposition sampling  | 30.000          | 1,97%                              |
| 40                        | request for offers (3 to 5)   | Consumables for chemical analyses of soil samples, IM1   | 8.000           | 0,52%                              |
| 40                        | request for offers (3 to 5)   | Consumables for chemical analyses of foliar samples  | 20.000          | 1,31%                              |
| 40                        | request for offers (3 to 5)   | Consumables for foliar sampling  | 10.000          | 0,66%                              |
| 40                        | request for offers (3 to 5)   | Consumables for laboratory equipments  | 5.000           | 0,33%                              |
| 27                        | Tender                        | taking of samples equipment (bulk sampler; suction cups;   | 10.000          | 0,66%                              |
| 39                        | Public tender / direct treaty | materials for experiments and dissemination  | 46.200          | 3,03%                              |
| 22                        | small purchase M8 - copying   | Dissemination of reports   | 400             | 0,03%                              |
| 3                         | direct treaty                 | data national weather stations   | 500             | 0,03%                              |
| 3                         | direct treaty                 | various consumables  | 2.000           | 0,13%                              |
| 3                         | tender                        | Passive samplers (O3 + NH4)  | 5.740           | 0,38%                              |
| 3                         | direct treaty                 | Flowmeters   | 344             | 0,02%                              |
| 3                         | direct treaty                 | Vertex tree height measurement devices   | 319             | 0,02%                              |
| 3                         | direct treaty                 | literature   | 750             | 0,05%                              |
| 3                         | direct treaty                 | lysimeters, vacuumpumps  | 881             | 0,06%                              |
| 3                         | direct treaty                 | TDR devices, tensiometers, soil temperature  | 1.800           | 0,12%                              |
| 3                         | direct treaty                 | printing costs reports (M8)  | 1.500           | 0,10%                              |
| 3                         | direct treaty                 | Printing of Soil condition report (2010) (C1Soil)  | 2.000           | 0,13%                              |
| 3                         | direct treaty                 | Photocopies for Expert panels (1 EP) (C1Soil)  | 400             | 0,03%                              |

**FORM F6**

Proposal acronym:

| Consumables        |   |  |          |                             |
|--------------------|---|--|----------|-----------------------------|
| Beneficiary number | Procedure   | Description  | Cost (€) | % of total Consumable costs |
| 3                  | direct treaty                                     | Printing costs of ringtest report + distribution by airmail (1 RT) (C1Soil)  | 2.445    | 0,16%                       |
| 3                  | direct treaty                                     | printing costs report training course 2010 (C1Dam)   | 410      | 0,03%                       |
| 31                 | direct treaty                                     | print costs - dissimulation of information   | 1.400    | 0,09%                       |
| 31                 | direct treaty                                     | Consumables for large scale plots - e.g. marker spray, ...   | 1.000    | 0,07%                       |
| 35                 | according to the principles of public procurement | Ongoing maintenance of the plot, consumables for measuring equipment (IM1)   | 600      | 0,04%                       |
| 35                 | direct treaty                                     | Passiv samplers (IM1)  | 2.400    | 0,16%                       |
| 35                 | according to the principles of public procurement | Consumables for measuring equipment (D2)   | 400      | 0,03%                       |
| 7                  | direct treaty                                     | dissemination  | 5.000    | 0,33%                       |
| 7                  | direct treaty                                     | soil sampling material (action D3)   | 1.000    | 0,07%                       |
| 7                  | direct treaty                                     | supporting material for soil moisture measurement (action D3)  | 4.000    | 0,26%                       |
| 7                  | direct treaty                                     | material for litterfall sampling (action D2, D1)   | 5.000    | 0,33%                       |
| 7                  | direct treaty                                     | material for soil solution sampling (actions D2)   | 10.000   | 0,66%                       |
| 7                  | tender  | supporting material for soil meteo measurement (action IM1)  | 10.000   | 0,66%                       |
| 7                  | tender  | supporting material for increment measurement (D1)   | 10.000   | 0,66%                       |
| 7                  | direct treaty                                     | Maps, disk media, batteries  | 4.000    | 0,26%                       |
|                    |   |  |          | 0,00%                       |
| 7                  | direct treaty                                     | supporting material (literature, publication M7,M8)  | 2.300    | 0,15%                       |
| 11                 | direct treaty                                     | Small material for soil sampling in the field  | 4.000    | 0,26%                       |
| 11                 | direct treaty                                     | Small material for foliar sampling (1 campaign on 46 plots)  | 3.877    | 0,25%                       |
| 11                 | direct treaty                                     | Small material for the deposition samplers, spare parts included for the 14 plots for the 2 years period (500 Euros par year per plot) | 7.000    | 0,46%                       |



**FORM F6**

Proposal acronym:

| Consumables        |                                 |   |          |                             |
|--------------------|---------------------------------|---|----------|-----------------------------|
| Beneficiary number | Procedure                       | Description   | Cost (€) | % of total Consumable costs |
| 11                 | direct treaty                   | Edition and printing of reports   | 15.686   | 1,03%                       |
| 20                 | direct treaty                   | binoculars  | 500      | 0,03%                       |
| 20                 | direct treaty                   | recipients for precipitations sampling  | 5.000    | 0,33%                       |
| 20                 | direct treaty                   | refractometer   | 1.500    | 0,10%                       |
| 20                 | direct treaty                   | Munsell catalog   | 300      | 0,02%                       |
| 20                 | direct treaty                   | field pH-meter  | 500      | 0,03%                       |
| 20                 | direct treaty                   | litterfall sampling recipients  | 1.000    | 0,07%                       |
| 20                 | direct treaty                   | field soil solution sampling equipment  | 2.000    | 0,13%                       |
| 20                 | direct treaty                   | air pollution passive samplers  | 6.000    | 0,39%                       |
| 20                 | direct treaty                   | Ground vegetation guide   | 500      | 0,03%                       |
| 20                 | public tender/request for offer | deposition consumables lab (small laboratory apparatus and chemical reactives, glass recipients, etc)                           | 32.000   | 2,10%                       |
| 20                 | public tender/request for offer | soil consumables lab (small laboratory apparatus and chemical reactives, glass recipients, etc)                                 | 39.000   | 2,56%                       |
| 24                 | Tender                          | Laboratory material   | 3.200    | 0,21%                       |
| 24                 | Tender                          | Courses material  | 3.000    | 0,20%                       |
| 29                 | direct treaty                   | tools, spares, tubes,bottles, boxes<br>cabins,cups,modules,outdoor<br>saves,modules,chargers,accumulators,samplers, collectors, | 42.870   | 2,81%                       |
| 28                 | public tender                   | project specific homepage comaptible to co-ordinators feature   | 3.320    | 0,22%                       |
| 28                 | public tender                   | printing and dissemination of reports, especially from  | 2.400    | 0,16%                       |
| 28                 | public tender                   | producing project specific notice boards and stickers,  | 800      | 0,05%                       |
| 28                 | direct treaty                   | chemicals, gas, filters, tubes for the laboratory analyses  | 20.000   | 1,31%                       |
| 28                 | direct treaty                   | consumable for installation of measuring devices in the field   | 13.446   | 0,88%                       |
| 36                 | Framework contract              | Gas and other consumable materials in the laboratory  | 7.500    | 0,49%                       |
| 8                  | Direct treaty                   | Lab analyses: deposition 2 yr IM1 1)  | 66.376   | 4,35%                       |

**FORM F6**

Proposal acronym:

| Consumables        |                    |  |          |                             |
|--------------------|--------------------|--|----------|-----------------------------|
| Beneficiary number | Procedure          | Description  | Cost (€) | % of total Consumable costs |
| 8                  | Direct treaty      | Lab analyses: Soil, once, IM1  | 9.960    | 0,65%                       |
| 8                  | Direct treaty      | Lab analyses: Foliar condition, once, IM1  | 4.980    | 0,33%                       |
| 8                  | Direct treaty      | Lab analyses: Soil solution, 2 yr D2   | 75.168   | 4,93%                       |
| 8                  | Direct treaty      | Lab analyses: Litterfall chemistry, 2 yr D2  | 2.685    | 0,18%                       |
| 8                  | Direct treaty      | Lab analyses: soil water retention, once, D3   | 3.511    | 0,23%                       |
| 8                  | Direct treaty      | Lab analyses: Ringtests, IM1 and D2  | 15.101   | 0,99%                       |
| 8                  | Direct treaty      | Materials for field experiments, D1  | 9.498    | 0,62%                       |
| 8                  | Direct treaty      | Materials for experiment maintenance IM, D2, D3  | 8.838    | 0,58%                       |
| 18                 | direct treaty      | Materials necessary for preparing country version of manuals, field courses instructions and explanatory items etc. (M7)   | 16.400   | 1,07%                       |
| 18                 | direct treaty      | Office materials necessary to prepare and disseminate reports, maintain project country homepage, notice boards (M8)   | 6.500    | 0,43%                       |
| 18                 | direct treaty      | Analytical compounds necessary for chemical analyzes of foliage, soil, throughfall, ambient air quality, and laboratory consumable materials (glass, filters etc.), sample packing materials (IM1) | 35.910   | 2,35%                       |
| 26                 | Direct treaty      | L2a Materials for production of updated field manual   | 750      | 0,05%                       |
| 13                 | Purchase           | L2-Rechargeable batteries  | 4.166    | 0,27%                       |
| 13                 | Purchase           | L2-Monopod and equipment holders   | 2.333    | 0,15%                       |
| 13                 | Framework contract | L2-Print out   | 7.083    | 0,46%                       |
| 13                 | Purchase           | L2-Folders and brochures for dissemination   | 1.000    | 0,07%                       |
| 21                 | Direct purchase    | Material for general maintenance of plots (e.g. fencing, sticks, colors)   | 10.000   | 0,66%                       |
| 21                 | Direct purchase    | Material for large-scale monitoring L2 (e.g. binoculars, measuring and editing tools)  | 11.500   | 0,75%                       |

**FORM F6**

Proposal acronym:

| Consumables        |                      |  |           |                             |
|--------------------|----------------------|--|-----------|-----------------------------|
| Beneficiary number | Procedure            | Description  | Cost (€)  | % of total Consumable costs |
| 21                 | Purchase after offer | Material for intensive/core plots monitoring IM1, D1 (e.g. measuring bands, simple samplers, boxes for transport of samples, sticks) | 26.500    | 1,74%                       |
| 21                 | Direct purchase      | Booklets, other information tools  | 2.000     | 0,13%                       |
| 15                 | Direct treaty        | Consumables for sampling areas   | 20.000    | 1,31%                       |
| 15                 | Direct treaty        | Consumables for dissemination of results   | 20.000    | 1,31%                       |
| 38                 | public tender        | L2 - LV field equipment (15 persons) < 1000 EUR  | 2.000     | 0,13%                       |
| 1                  | Tender               | Dissemination of reports   | 2.644     | 0,17%                       |
| 1                  | Tender               | Distribution of Layman's and Scientific Reports  | 8.000     | 0,52%                       |
| 1                  | Tender               | Dissemination of reports   | 2.399     | 0,16%                       |
| 1                  | Tender               | Printing of 2 Layman's and 2 Scientific Reports  | 28.000    | 1,83%                       |
| TOTAL =>           |                      |  | 1.525.974 | 100%                        |

Please refer to the relevant instructions given in the explanatory notes for filling in these forms

**FORM F7**

Proposal acronym: FutMon

| Other costs        |                                 |   |        |                        |  |
|--------------------|---------------------------------|---|--------|------------------------|--|
| Beneficiary number | Procedure                       | Description   | Costs  | % of total Other costs |  |
| 5                  | Direct treaty                   | Catering during workshops/seminars  | 2.000  | 0,15%                  |  |
| 5                  | Tender 1)                       | Laboratory analyses   | 92.430 | 6,81%                  |  |
| 6                  | Public tender/Direct treaty     | Repair / replace of meteorological equipments   | 4.000  | 0,29%                  |  |
| 6                  | Public tender/Direct treaty     | Information (notice boards, printing information material)  | 2.800  | 0,21%                  |  |
| 9                  | direct treaty                   | Repair and maintenance of outdoor and laboratory equipment. L2-9(EF), IM1-9(EF), D2-9(EF)                 | 3.440  | 0,25%                  |  |
| 9                  | direct treaty                   | costs of workshops, catering, presentation facilities. L1-9(EF), L2-9(EF), IM1-9(EF), D2-9(EF)            | 3.360  | 0,25%                  |  |
| 9                  | direct treaty                   | training costs, development of skills necessary for the project. L2-9(EF), L3-9(EF), IM1-9(EF), IM2-9(EF) | 3.200  | 0,24%                  |  |
| 10                 | Participation fee               | IM1-10(FI), Participation in international laboratory ring tests  | 1.000  | 0,07%                  |  |
| 10                 | Participation fee               | D1-10(FI), Participation in international laboratory ring tests   | 800    | 0,06%                  |  |
| 10                 | Participation fee               | IM2-10(FI), Participation in international laboratory ring tests  | 2.800  | 0,21%                  |  |
| 16                 | Tender                          | Maintenance of field equipment  | 5.700  | 0,42%                  |  |
| 2                  | purchase                        | Printing of reports   | 6.000  | 0,44%                  |  |
| 2                  | purchase                        | equipment repair (5% from total equipment)  | 22.000 | 1,62%                  |  |
| 2                  | purchase                        | conference fees   | 2.000  | 0,15%                  |  |
| 2                  | purchase                        | WEB hosting   | 7.000  | 0,52%                  |  |
| 2                  | purchase                        | Printing of reports within C1-Gro (results of   | 3.000  | 0,22%                  |  |
| 3                  | purchase                        | Printing of reports within C1-Fol (results of ring test )   | 3.000  | 0,22%                  |  |
| 33                 | direct treaty/restricted tender | equipment repairs (fence, deposition platform...)   | 2.100  | 0,15%                  |  |
| 33                 | direct treaty                   | 3 contracts (workers on core pl.) incl. postal,   | 17.000 | 1,25%                  |  |
| 33                 | direct treaty                   | contract publicity, assistant works (with student)  | 1.200  | 0,09%                  |  |
| 33                 | direct treaty                   | poster information, labels  | 400    | 0,03%                  |  |

| Other costs        |                       |  |        |                        |
|--------------------|-----------------------|--|--------|------------------------|
| Beneficiary number | Procedure             | Description  | Costs  | % of total Other costs |
| 32                 | Framework contract    | office supplies, requirement for public information  | 3.000  | 0,22%                  |
| 32                 | on account            | repair costs and distinct material/small devices for maintenance of 4 IM plots   | 4.179  | 0,31%                  |
| 37                 | framework contract 1) | chemical analysis of deposition; plot 1605-1607; action IM 1 - TH  | 52.000 | 3,83%                  |
| 37                 | framework contract 1) | chemical analysis of foliar chemistry (2009); plot 1605-1607; Action IM 1 - TH   | 350    | 0,03%                  |
| 37                 | framework contract 1) | chemical analysis of soil solution, plot 1605-1607, action D2 - TH   | 34.000 | 2,51%                  |
| 37                 | framework contract 1) | chemical analysis of litterfall; plot 1605-1607; action D2 - TH  | 8.500  | 0,63%                  |
| 37                 | framework contract    | electrical power supply, plot 1605-1607; action IM 1 - TH  | 13.500 | 0,99%                  |
| 37                 | framework contract    | data transmission, plot 1605-1607; Action D 2 / 3 - TH   | 2.400  | 0,18%                  |
| 37                 | framework contract    | maintenance (technical service) of the measuring instruments (samplers, sensors etc.), plot 1605-1607; action D 2 / 3 - TH | 9.000  | 0,66%                  |
| 37                 | direct treaty         | equipment/spares/repairs, plot 1605-1607; action IM 1 - TH   | 2.000  | 0,15%                  |
| 37                 | direct treaty         | equipment/spares/repairs, 1605-1607; action D 2 / 3 - TH   | 4.000  | 0,29%                  |
| 37                 | framework contract    | maintenance (technical service) of the meteorological measuring instruments, plot 1605-1607; action IM 1 - TH              | 20.000 | 1,47%                  |
| 37                 | direct treaty         | special costs for mor intensive foliar surveys; plot 1605-1607; action D 2 - TH  | 3.000  | 0,22%                  |
| 37                 | direct treaty         | special costs for leaf area index, plot 1605-1607; action D 2 - TH   | 5.000  | 0,37%                  |

| Other costs        |  |  |        |                        |
|--------------------|--|--|--------|------------------------|
| Beneficiary number | Procedure  | Description  | Costs  | % of total Other costs |
| 37                 | direct treaty  | analysis of ozon injury; plot 1605-1607; action IM 1 - TH  | 500    | 0,04%                  |
| 39                 | Public tender / direct treaty                                      | equipment repairs, insurance, meeting  | 51.500 | 3,79%                  |
| 12                 | Direct Treaty  | L2a training costs (field trip, cofee breaks and meals as well as bus transfer to the training area) | 3.500  | 0,26%                  |
| 12                 | Direct Treaty  | L2a Spatial data, satellite images and chartographic data.   | 15.000 | 1,11%                  |
| 12                 | Direct Treaty  | M8, costs for the dissemination of results   | 8.000  | 0,59%                  |
| 3                  | Tender   | foliar sampling (tree climbers)  | 2.100  | 0,15%                  |
| 3                  | direct treaty  | Transport costs for ringtest soil samples to laboratory (1 RT) (C1Soil)                              | 1600   | 0,12%                  |
| 3                  | direct treaty  | Recipients and packing for sending ringtest samples (1 RT) (C1Soil)                                  | 3370   | 0,25%                  |
| 3                  | direct treaty  | Webinterface for submitting data (1 RT) (C1Soil)   | 3024   | 0,22%                  |
| 3                  | direct treaty  | organisation training course 2010 (C1Dam)  | 3.000  | 0,22%                  |
| 3                  | direct treaty (1)  | chemical analysis deposition samples   | 27.644 | 2,04%                  |
| 3                  | direct treaty (1)  | participation ringtests water samples  | 598    | 0,04%                  |
| 3                  | direct treaty (1)  | chemical analysis soil solution samples  | 35.870 | 2,64%                  |
| 3                  | direct treaty (1)  | foliar analysis  | 7.098  | 0,52%                  |
| 3                  | direct treaty (1)  | chemical analysis litterfall   | 16.900 | 1,25%                  |
| 3                  | direct treaty (1)  | chemical analysis vegetation   | 1.185  | 0,09%                  |
| 3                  | direct treaty (1)  | participation ringtests foliar analysis  | 1.015  | 0,07%                  |
| 3                  | direct treaty (1)  | participation ringtests passive sampler  | 1.000  | 0,07%                  |
| 3                  | direct treaty (1)  | participation ringtests soil   | 3.000  | 0,22%                  |
| 3                  | direct treaty (1)  | determination pF, Ksat, bulk density   | 11.500 | 0,85%                  |
| 3                  | direct treaty (1)  | (C1Soil) Laboratory preparation of ringtest samples and prescreening analysis (3 RT)                 | 22.710 | 1,67%                  |
| 31                 | direct treaty  | metrological data for each year  | 800    | 0,06%                  |
| 35                 | costs charged by LUA laboratory; refer to justification on Form A5 | Laboratory costs (deposition) (IM1)  | 81.460 | 6,00%                  |

| Other costs        |  |   |         |                        |
|--------------------|--|---|---------|------------------------|
| Beneficiary number | Procedure  | Description   | Costs   | % of total Other costs |
| 35                 | costs charged by LUA laboratory; refer to justification on Form A5 | Laboratory costs (soil) (IM1)   | 4.578   | 0,34%                  |
| 35                 | costs charged by LUA laboratory; refer to justification on Form A5 | Quality assurance (ring tests water, soil) (IM1)  | 5.300   | 0,39%                  |
| 35                 | costs charged by LUA laboratory; refer to justification on Form A5 | Laboratory costs (D2)   | 18.798  | 1,39%                  |
| 7                  | internal service   | chemical analyses of plant samples (leaves, litterfall) 1)  | 24.800  | 1,83%                  |
| 7                  | internal service   | chemical an. of water samples (deposition, soil solution) 1)  | 124.200 | 9,15%                  |
| 11                 | direct treaty  | General annual maintenance of the plots by many small   | 56.000  | 4,13%                  |
| 11                 | direct treaty  | Special maintenance spare parts for the soil humidity and soil temperature sensors and tensiometers (300 Euros per plot per year) | 8.400   | 0,62%                  |
| 11                 | direct treaty  | Notice boards for 46 plots  | 10.000  | 0,74%                  |
| 20                 | direct treaty  | Conference fees - workshops, trainings, dissemination   | 5.000   | 0,37%                  |
| 20                 | direct treaty  | Catering costs - workshops, trainings, dissemination  | 7.000   | 0,52%                  |
| 20                 | direct treaty  | Dissemination activities -  | 5.000   | 0,37%                  |
| 20                 | direct treaty  | Equipment repairs   | 2.000   | 0,15%                  |
| 20                 | direct treaty  | Shipping and insurance costs  | 1.000   | 0,07%                  |
| 20                 | direct treaty  | Documentation - ortophos with FutMon plots designed, photo guides, etc  | 3.000   | 0,22%                  |
| 24                 | Tender   | Courses (coffe break, reports material,...)   | 1.541   | 0,11%                  |
| 24                 | Tender   | Dissemination cost  | 2.000   | 0,15%                  |
| 29                 | direct treaty  | print of designed flyers, posters and boards for the local presentation at plot area (incl. LIFE+ pres.)                          | 8.000   | 0,59%                  |

| Other costs        |  |   |           |                        |
|--------------------|--|---|-----------|------------------------|
| Beneficiary number | Procedure  | Description   | Costs     | % of total Other costs |
| 29                 | costs charged by the laboratory; refer to explanatory note at the bottom of this Form 1) | water, soil and foliar analysis incl. ringtests                                 | 213.687   | 15,74%                 |
| 29                 | direct treaty  | just in time transport and shipping of samples                                  | 9.696     | 0,71%                  |
| 29                 | direct treaty  | program upgrade field sampling  | 1.010     | 0,07%                  |
| 29                 | direct treaty  | local supporting services at plot area (put up fences, mowing, snow clearing..) | 14.460    | 1,07%                  |
| 29                 | direct treaty  | ozone injury assessment and validation at validation center                     | 6.000     | 0,44%                  |
| 28                 | equipment repairs in the field at IM plots   | repairing electric devices, pressure systems and                                | 6.320     | 0,47%                  |
| 8                  | Direct treaty  | Equipment repairs   | 1.485     | 0,11%                  |
| 8                  | Direct treaty  | Conference fees   | 2.062     | 0,15%                  |
| 8                  | Direct treaty  | Meetings and workshops  | 1.823     | 0,13%                  |
| 8                  | Direct treaty  | Other costs   | 1.054     | 0,08%                  |
| 26                 | Direct Treaty (Forest Research labs)   | Laboratory analyses fees (IM1; D1-3) 1)   | 143.280   | 10,56%                 |
| 13                 | Purchase of services   | M8-Conferences  | 320       | 0,02%                  |
| 17                 | direct treaty  | dissemination of results  | 5.000     | 0,37%                  |
| 21                 | Framework contract   | Calibration and repairs of equipment  | 11.000    | 0,81%                  |
| 21                 | Framework contract   | Conference fees, travel insurance costs, other charges                          | 1.000     | 0,07%                  |
| 21                 | Framework contract   | Catering costs - presentation of results  | 2.000     | 0,15%                  |
| 34                 | direct treaty  | Material costs for Chemical analyses (leaf samples) for L2-34(SH)               | 1.880     | 0,14%                  |
| TOTAL =>           |  |   | 1.357.226 | 100%                   |

1) The chemical analysis of soil, water, nutrients and element contents of the samples taken on FutMon plots is carried out by the laboratory of the own research centre. This was found to be the most cost-efficient way while complying with the need of synergy, scientific soundness and high quality. The laboratory is a separate section of the Reserach Centre and will charge the costs of its services for the project, excluding profit, overheads and VAT.”