

## TECHNICAL SPECIFICATION

16.07.2004

### **European forest types for biodiversity assessment – a user guide**

Open call for tender: EEA/EAS/04/008

Project manager: Tor-Bjorn Larsson

#### **1. Description of service**

The overall aim of the work is to elaborate a user-friendly report presenting European-level forest types serving as a tool to assess the state and development of biological diversity. This should serve European and national organisations involved in European policy for the sustainable management of forests as well as a basis for practical implementation at different levels.

The selected contractor shall present a synthesis, structuring available information on European forest types for biodiversity assessment and selected indicators and presenting this in a clear and user-friendly format, including provision of illustrations. The work procedure and specification of content and main available basic material is further specified below.

The maximum budget available for the work is ca 50 000 euro for a contract 2004 that may be renewed up to additional ca 80 000 euro in 2005. The tender needs to describe the tasks to be executed on a 2004 contract but also describe the remaining tasks for a possible renewed contract in 2005. The tender should include cost to perform compilation and analysis of background information; for the synthesis into draft reports to be submitted for reviewing, see below, and the elaboration of a final draft report, including illustrations according to the EEA publication guidelines.

#### **2. Policy background**

On a European level the main policy activities to address are:

- The Ministerial Process for Protection of Forests in Europe (MCPFE)<sup>1</sup>. MCPFE established in 2002 an improved set of indicators for sustainable forest management, including nine specific biodiversity indicators. Several of the proposed indicators is specified to be presented 'by forest type'. The need to achieve an agreed forest type classification is reflected in the current workprogramme of MCPFE.
- The new new EU Regulation concerning monitoring of forest and environmental interactions in the Community (Forest Focus)<sup>2</sup> intends to expand the existing monitoring programme to include e.g. biodiversity aspects. In the upcoming three

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<sup>1</sup> <http://www.mcpfe.org/>

<sup>2</sup> Insert weblink (not operational for the moment)

years Forest Focus is thus expected to develop indicators and assessment framework for relevant aspects of forest biodiversity.

The European Environment Agency's (EEA) priorities related to biodiversity will be to contribute to the achievement of the 2010 target of halting biodiversity loss<sup>3</sup> through assessments of trends in biodiversity with respect to environmental issues and impacts from sectors e.g. forestry.

### **3. Background and earlier work**

The biological diversity<sup>4</sup> of European forests is the result of the evolution of the communities under ecological forces such as climate, fire, competition etc. as well as of a long history of human influence.

To deal with the spatial variability of forest ecosystems (expressed in terms of structural, compositional and functional key factors), their use by man and relation to other social factors, forest history etc we need to categorize the European forests. The use of forest types helps placing information about the forests in ecologically meaningful units. This is useful in conceptualizing, evaluating, assessing and, communicating information on forest biodiversity from the international to the local level.

On a pan-European scale there is a thus need to further develop biodiversity assessment tools; i.e. indicators of biodiversity and preferred methodologies to collect data. Validation and further definition of biodiversity indicators and/or inventory methodologies is crucial for progress in this area. A pan-European forest type classification, is needed both for the successful implementation of indicators and to facilitate the assessment to be carried out.

A EU funded project, the BEAR project<sup>5</sup>, involving specialists from 18 European countries, the European Forest Institute and a large group of users, has proposed a strategy for assessment of forest biodiversity in Europe building upon key factors and indicators to assess these and furthermore stratifying the forests in ca 30 types (Forest types for biodiversity assessment, FTBAs, Larsson 2001<sup>6</sup>).

In the further discussions of the implementation of the BEAR recommendations, e.g. within the MCPFE, the need to further consolidate the proposed FTBAs was recognised:

- Investigate the possibility to reduce the proposed scheme by merging types;
- Better aligning the proposed types with the EUNIS Habitat Classification<sup>7</sup>

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<sup>3</sup> 'The Sixth Environment Action Programme of the European Community', <http://europa.eu.int/comm/environment/newprg/index.htm> cf also the EEA strategy 2004-2008 <http://org.eea.eu.int/documents/strategy.pdf>

<sup>4</sup> Biodiversity = biological diversity, for definition see [www.cbd](http://www.cbd) etc

<sup>5</sup> <http://www.algonet.se/~bear/>

<sup>6</sup> Larsson 2001: Biodiversity Evaluation Tools for European forests - Ecol. Bull. 50, see also <http://www.algonet.se/~bear/>

<sup>7</sup> <http://mrw.wallonie.be/dgrne/sibw/EUNIS/home.html>

- Update the scheme and if necessary introduce new types to cover larger parts of Europe;
- Make the descriptions of the types more consistent, prioritising the key factors relevant for each type.

A first attempt was made by Marchetti et al.<sup>8</sup>

The IUFRO Unit 8.07.01 ‘Key factors and ecological functions for forest biodiversity’ organised under the auspices of the Italian EU Presidency of the EU a conference “Monitoring and indicators of forest biodiversity in Europe – from ideas to operationality” that was held in Florence, Italy, 12-15 November 2003<sup>9</sup>.

In connection with the Florence Conference Barbati & Marchetti proposed a forest type scheme that can be considered to be an overview of current state of forest type development.

**Table 1. Proposed forest types for biodiversity assessment**

|                                                                     |
|---------------------------------------------------------------------|
| 1. Boreal forest                                                    |
| 2. Hemiboreal and nemoral Scots pine forest                         |
| 3. Alpine coniferous forest                                         |
| 4. Atlantic and nemoral oakwoods, Atlantic ashwoods and dune forest |
| 5. Oak-hornbeam forest                                              |
| 6. Lowland to submontane beech forest                               |
| 7. Montane beech forest                                             |
| 8. Thermophilous deciduous forest                                   |
| 9. Mediterranean and Macaronesian sclerophyllous forest             |
| 10. Mediterranean and Macaronesian coniferous forest                |
| 11. Swamp forest                                                    |
| 12. Floodplain forest                                               |
| 13. Native plantations                                              |
| 14. Exotic plantations                                              |

<sup>8</sup> Marchetti et al. 2002: [Deriving an harmonized scheme of forest types at European continental level](#) - BEAR Technical Report 8., see <http://www.algonet.se/~bear/>

<sup>9</sup> [http://www.efi.fi/events/2003/Monitoring\\_and\\_indicators/](http://www.efi.fi/events/2003/Monitoring_and_indicators/) Abstracts of all presentations are available at the Conference website (proceedings are expected to be published September 2004)

#### 4. Objectives of the study

The overall aim of the work is to present European-level forest types serving as a tool to assess the state and development of biological diversity. This should serve European and national organisations involved in European policy for the sustainable management of forests as well as a basis for practical implementation at different levels.

This includes for the 2004 contract:

- presenting a synthesis, structuring available information analysing the usefulness of European forest types for biodiversity assessment and selected indicators

and for a possible renewed contract in 2005:

- elaborating detailed descriptions of each forest type with respect to the actual and potential distribution in Europe, actual and potential tree species composition and other structural, biological and functional characteristics, including silviculture and other human impact;
- elaborating user-guide drafts processing consultation comments;
- presenting a final draft report in a clear and user-friendly format, according to EEA guidelines and including provision of illustrations.

The overall task of the successful tenderer under the 2004 contract is thus to provide a report presenting a synthesis, structuring available information analysing the usefulness of European forest types for biodiversity assessment and selected indicators. A possible renewal of the contract in 2005 should result in a final draft, in a clear and user-friendly format, for European forest types for biodiversity assessment – a user guide’.

#### 5. Tasks

The tenderer should provide in his offer a proposal for a work plan according to the specification of content, work procedure and deliverables according to the tasks below. All texts related to the project should be elaborated in English.

*Task 1 should be completed under the budget available for 2004:*

##### **Task 1. Further analyse the usefulness of European forest types for assessment of relevant key factors of forest biological diversity**

The scheme of fourteen European forest types in Table 1 should serve as a starting point for an analysis of the feasibility of the scheme to assess key factors of biological diversity as reflected by the nine MCPFE biodiversity indicators<sup>10</sup>. The priority should be the MCPFE indicators ‘4.1 Tree species composition’ and ‘4.5 Deadwood’, but other key factors/indicators may be included (e.g. forest fire, traditional cultivation system). The studies presented in Appendix 1 A-C should be taken into account.

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<sup>10</sup> Criterion 4: Maintenance, conservation and appropriate enhancement of biological diversity in forest ecosystems, see further <http://www.mcpfe.org/>

The study should examine the basic justification for the forest types for biodiversity assessment – i.e. that they significantly differ with respect to relative importance and/or interpretation of key factors/indicators, cf. the BEAR project above.

As an outcome of the analysis modifications of the forest type scheme may be suggested. This analysis will also form a part of the user guide (Task 3).

The outcome of the work under task 1 should be presented in the final report for the contract based upon the budget available 2004, cf. ‘Time table and deliverables’.

*Task 2-4 should be completed under the budget expected to be made available for 2005:*

### **Task 2. Elaborate a description of European forest types**

The European scheme of forest types for biodiversity assessment, according to Table 1 (and possibly modified as a result of the study in task 1) should be further elaborated by more detailed descriptions of each forest type with respect to the actual and potential distribution in Europe, actual and potential tree species composition and other structural, biological and functional characteristics, including silviculture and other human impact.

The variation within the inevitably broad types of a European scheme should be taken into account. The description should include overview maps and photographs.

The description of each type should give reference to major existing European classifications (e.g. EUNIS, the EU Biogeographic regions<sup>11</sup>, the Potential Natural Vegetation of Europe<sup>12</sup>).

The outcome of the work under task should be presented in an interim report, cf. ‘Time table and deliverables’.

### **Task 3. Elaborate user-guide drafts processing consultation comments**

Elaborate draft reports, as below, according to the tentative content outline in Table 2.

| Report section/chapter   | Note regarding content                                                     | Number of pages ca |
|--------------------------|----------------------------------------------------------------------------|--------------------|
| 0. The use of the report | The purpose of the report in relation to envisaged use at different levels | 1-2                |
| 1. Biodiversity of       | An introduction to the biodiversity of                                     |                    |

<sup>11</sup> <http://europa.eu.int/comm/environment/nature/home.htm>

<sup>12</sup> Map of the Natural Vegetation of Europe Scale 1:2 500 000, compiled and revised by Udo Bohn *et al.*, Bundesamt für Naturschutz, Bonn, 2004

|                                                                  |                                                                                                                                                                                                                                                                                                    |        |
|------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| European forests                                                 | European forests with particular emphasis on key factors and the geographical variation                                                                                                                                                                                                            | 5      |
| 2. Biodiversity assessment based upon key factors and indicators | Emphasis on MCPFE indicators and the related biodiversity key factors. Explain the rationale for forest types to facilitate assessment. Also the logic behind the proposed scheme of forest types (cf. task 1) and the overall links to other systems of forest/nature classification (cf. task 2) | 5-10   |
| 3. A European Forest Type scheme                                 | Main section presenting each of the ca 14 forest types according to task 2                                                                                                                                                                                                                         | 70-80  |
| 4. Examples of assessing forest biodiversity at European level   | Present examples of forest biodiversity assessment taking use of forest types (cf task 1), at least for the MCPFE indicators '4.1 Tree species composition' and '4.5 Deadwood',                                                                                                                    | 10-15  |
| Total ca                                                         |                                                                                                                                                                                                                                                                                                    | 90-105 |

Table 2. Tentative outline of the report 'European forest types for biodiversity assessment – a user guide'

The draft report should include illustrations (maps, photographs etc.).

The work procedure for report drafting should take place in interaction with EEA (which includes a consultation/review procedure set up by EEA). Comments given are expected to be taken into account when further elaborating drafts. The EEA interaction will focus on the user side of the report and the consultant is expected to establish an additional quality control procedure. This should also include language check. The work procedure includes the following steps/deliverables:

1. An initial content outline for acceptance;
2. A first draft for first round of comments;
3. A second draft for final comments;
4. A draft to be accepted for further processing into printable format ('Final draft', task 4).

See also 'Time table and deliverables' below.

#### **Task 4. Elaborate final report**

All drafts should be elaborated according to EEA guidelines. When the draft has been accepted by EEA ('Final draft' step 4 under task 3) this task is established to stress the

need to make a final draft report in a format that is attractive and widely understandable to meet the needs of envisaged users.

Furthermore this work should secure:

- That the text in every detail follows the EEA guidelines for publications and is written in a clear language;
- That maps are produced according to EEA guidelines;
- That photographs are of printable quality and copyright agreed (payments to be settled by the consultant).

EEA will provide guidelines for this task.

## **6. Geographical coverage**

The geographical coverage should be the 31 EEA member countries<sup>13</sup>.

## **7. Time schedule and organisation of work**

The work should begin within two weeks of signing the contract and be executed in discussion with the respective EEA Project Manager. A detailed work plan and outline for the report must be elaborated at the start of the project and submitted at least one week before the start-up meeting for approval by the EEA Project Manager.

There are no special requirements regarding the location of work. It is envisaged that up to 4 meetings with the EEA Project Manager or visits to the EEA will be necessary that may – e.g. in the case of a multi-national consortium - be combined with project meetings.

Furthermore one or two representatives of the project are expected to present the main outcome at the upcoming IUFRO World Congress that will take place in Brisbane, Australia, 8-13 August 2005<sup>14</sup>. The representative will through the EEA Project Manager be invited to a session organised by IUFRO Unit 8.07.01 ‘Key factors and ecological functions for forest biodiversity’.

## **8. Deliverables**

The tenderer should submit the following deliverables for 2004 Contract:

| Deliverable                                | Time table (month after signing of contract) |
|--------------------------------------------|----------------------------------------------|
| Work plan and outline for the report       | 0,5                                          |
| Report task 1 (Final report contract 2004) | 3                                            |

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<sup>13</sup> <http://www.eea.eu.int/>

<sup>14</sup> <http://iufro.boku.ac.at/>

For a renewal of the contract 2005 the following deliverables are envisaged:

| Deliverable                                                         | Time table (month after signing of a renewed contract) |
|---------------------------------------------------------------------|--------------------------------------------------------|
| Interim report task 2                                               | 2                                                      |
| A first draft for first round of comments                           | 3                                                      |
| A second draft for final comments;                                  | 6                                                      |
| A draft to be accepted for further processing into printable format | 9                                                      |
| Final report ((Final report contract 2005)                          | 12                                                     |

#### **9. Payment in relation to the 2004 contract**

- 30 % within 45 days of signing of the contract;
- The balance within 45 days of acceptance of Final report (2004 contract).

#### **10. Contract**

In drawing up the bid, the tenderer should bear in mind the provisions of the **standard contract** attached to this invitation to tender (Annex I)

This contract can be extended according to the original conditions. Such an extension has to be applied for at least one month before expiry of the original contract.

#### **11. Submission of tenders**

a) The tender must include:

- All the information and documents required by the authorising department for the appraisal of tender, on the basis of the selection and award criteria in Section 13;
- The filled-out identification sheet (Annex III to this technical specification)
- The price in accordance with Section 12.

b) Postal address: European Environment Agency, Kongens Nytorv 6, DK-1050 Copenhagen K, Denmark, for the attention of Mr. Tor-Bjorn Larsson and marked "Reply to open call for tender EEA/EAS/2004/008".

c) Languages in which they must be drawn up: 1 of 13 official languages of the European Environment Agency (the 11 official European Community languages plus Norwegian or Icelandic).

d) Deadline for submission: 52 days from dispatch of this notice.

e) Other requirements: Tenders must be submitted in an original plus three copies and placed inside two sealed envelopes. The inner envelope, addressed to the person indicated above, should be marked: “Invitation to open call for tender EEA/EAS/2004/008 Not to be opened by the internal mail department”. If self-adhesive envelopes are used, they must be sealed with tape and the sender must sign across the tape.

## **12. Prices**

Prices must be fixed amounts in EURO. Apart from a total offer for the services, rates per day should be given. In addition the tenderer is requested to detail the expected part of the budget allocated to each task.

Travel and subsistence expenses likely to be incurred in the course of execution of the contract are not covered by daily rates. Estimated travel and subsistence expenses must thus be indicated separately. (Travel and subsistence expenses will not be taken into account when deciding whom to award the contract to.)

Travel and subsistence expenses shall be reimbursed in accordance with the rules and conditions relating to the payment of missions expenses in force at the Agency (see Annex IV).

The estimate of costs should be based on Annexes I, II and IV of these specifications and include any travel required to meet representatives of the Agency. In any event it should include the maximum amount of travel and subsistence expenses payable for the services provided.

Tenders from **consortiums** of firms or groups of service providers, contractors or suppliers must specify the role, qualifications and experience of each member of each group.

## **13. Selection of contractors and award of contracts**

The selection of contractors and the award of contracts will be based on the following steps:

1. A check whether certain contractors should be excluded based on grounds for exclusion;
2. A check on contractors' financial and economic standing and technical and professional competence based on selection criteria;
3. A comparison of tenders on the basis of the award criteria

### **13.1 Grounds for exclusion**

Irrespective of the award procedure used, any contractor may be excluded from participating in a contract if:

- They are bankrupt, being wound up or has suspended business activities, his affairs are being administered by the court, he has entered into an arrangement with creditors or similar measures or is the subject of any proceedings of that nature;
- They have been convicted of an offence concerning his professional conduct by a judgement which is not open to appeal;
- They have been guilty of grave professional misconduct;
- They have not fulfilled obligations relating to the payment of social security contributions or taxes;
- They are guilty of serious misrepresentation in supplying the information required by the authorising department.

Potential contractors must certify that they are not in one of the situations listed above by signing and including the attached **Declaration on Exclusion Criteria** (Annex VI).

### **13.2 Selection criteria**

The selection criteria for contractors is based on financial and economic standing and technical and professional competence.

#### ***Financial and economic standing***

Evidence of financial and economic standing may be furnished by **one or more** of the following references:

- Statements from bankers;
- Balance sheets or extracts from balance sheets;
- A statement of overall turnover and turnover relating to the relevant supplies, works or services.

#### ***Technical and professional competence***

Evidence of technical and professional competence must be furnished by the following references:

- The educational and professional qualifications of the proposed consultants;
- A list of relevant contracts provided in the last three years;
- A statement of the service provider's average annual manpower and the number of managerial staff for the last three years;
- A description of the service measures for ensuring quality;
- An indication of the proportion of the contract, which the service provider may intend to sub-contract.

### **13.3 Award criteria**

The contract will be awarded to the most advantageous offer taking into account:

- Expertise - the consultants' knowledge of European forest biodiversity in particular with reference to forest types and European-level assessment of forest biodiversity, to the expertise in synthesizing and presenting information, and to producing user-friendly texts as evident from their previous projects and publications/reports;
- Methodology - the degree to which the methodology and detail of the consultants' work plan shows the capacity to provide the required deliverables;
- Project management – based on the quality of the team organisation and project management procedures, which should be clearly outlined in the tender;
- Understanding – the degree to which tenderers have taken into consideration all the aspects of the tasks required by the contract, such as they appear above, as well as the contents of the deliverables; and
- Value for money – total price and number of working days offered in comparison to overall project output.

### **Points system**

A points system is used to choose the best tender. The distribution of maximum points to each criterion is as follows:

- 35 points to 'Expertise'
- 30 points to 'Methodology'
- 15 points to 'Project Management'
- 10 points to 'Understanding'
- 10 points to 'Value for money'

## **ANNEXES**

Annex I: Model for standard study contract

Annex II: General terms and conditions applicable to contracts awarded by the EEA

Annex III: Identification sheet

Annex IV: Reimbursement of travel expenses

Annex V: VAT and excise duty exemption form

Annex VI: Declaration on Exclusion Criteria