



# **Implementing Criteria and Indicators for Sustainable Forest Management in Europe**

Project Summary



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# Implementing Criteria and Indicators for Sustainable Forest Management in Europe

## Project Summary

### Introduction and objectives of the study

Since the beginning of the 1990s, an enhanced view of sustainable forest management has entered the forest policy arena, and the concept of criteria and indicators has been introduced as a tool for promoting and enhancing its implementation.

In the wake of the United Nations Conference on Environment and Development (UNCED) in Rio in 1992, several different international processes and initiatives developed criteria and indicators as a policy instrument to evaluate and report on progress towards sustainable forest management. In Europe, the initiative to promote and commit to sustainable forest management is led by FOREST EUROPE, formerly known as the Ministerial Conference on the Protection of Forests in Europe (MCPFE). In the 1990s, a set of criteria and indicators was established, which was adopted at the third MCPFE in Lisbon. At the fourth MCPFE in Vienna an improved set of six criteria and 35 quantitative indicators (describing the forest status and changes) and 17 qualitative indicators (describing the national forest policies, institutions and instruments used to move towards sustainable forest management) was endorsed.

However, until now insufficient information has been available on how the pan-European criteria and indicators have been used and what their real impact has been. Policy makers and administrative bodies, as well as professionals and the general public, are interested in knowing whether observed trends are sustainable, whether the policy systems in place are effective, and whether their efforts to implement the criteria and indicator set have made a difference. This study is the first effort to collect information on the implementation of the pan-European criteria and indicators for sustainable forest

management in the 46 signatory states of the FOREST EUROPE process. The analysis concerns how and to what extent the indicator set has been used at pan-European and national level, investigates challenges and gaps in its implementation, and explores opportunities for further improvement.

### Working definition of “implementing criteria and indicators for sustainable forest management”

The lack of a formal statement of the objectives of the pan-European criteria and indicators made it difficult to define how the set is being “implemented” and to assess whether the implementation is successful. Therefore, the research began with an analysis and conceptualization of the term “implementing criteria and indicators”, and developed a working definition, based on a review of relevant MCPFE resolutions and documents as well as publications from other international and regional processes on criteria and indicators for sustainable forest management. The working definition was then used and tested in the course of the project. This process made it possible to elaborate an improved definition for discussion, further revision and approval at the policy level in order to give direction to future work.

At the beginning of the project the working definition included five major applications of the pan-European set:

- i.) as a framework for dialogue and communication
- ii.) as a tool for monitoring and reporting
- iii.) as a tool for assessing progress towards sustainable forest management
- iv.) use in forest policy
- v.) provision of information to other indicator sets and cross-sectoral data.



## Methods used in the study

The information required to address the project objectives was collected through literature review, interviews with experts inside and outside the forest sector, an enquiry for national and sub-national assessments as well as regional workshops and a pan-European Forum on implementing criteria and indicators. The working definition was used as a framework to collect and structure the information throughout the study. This has ensured a comprehensive and balanced approach, not favouring any application over another. The key findings of the report are based on perspectives from the experts interviewed, the FOREST EUROPE national correspondents who completed the enquiry for national assessments, and participants in project events. Each group used different vocabularies and expressed different viewpoints, approaches and goals, thus providing important insights into the implementation of criteria and indicators for each of the five applications.

## Key findings

The pan-European set has served as a **framework for dialogue and communication** by providing stimulus and support for communication within the forest sector in terms of mind-setting and streamlining the forestry debate. In particular, the pan-European set has facilitated deliberation and

consultation between policy makers and forest sector stakeholders, thus promoting stronger stakeholder participation in forest policy processes. The results of the various analyses also signal that the pan-European set has been instrumental in defining the content of sustainable forest management, and has provided structure to forest policy in the pan-European region.

However, the indicator set is considered complex, static and too focused on matters of interest only to the forest sector. This complexity creates barriers in communicating forest sector issues to the general public and other sectors (e.g. energy, environment, climate change) as the information and rationale embedded in the set is difficult to understand for non-forestry stakeholders. Furthermore, the lack and fragmentation of communication channels between forest administrations and relevant institutions as well as the intermittence of communication activities based on criteria and indicators appear to be major limitations to broader outreach by the forest sector.

The pan-European set has served as an adequate **tool for monitoring and reporting on sustainable forest management**. Politically endorsed, the set has shaped and stabilized international reporting in the region, which is highly important in terms of the long-term development of national forest inventories, as well as other data collection and analysis systems, including those originating in other sectors (e.g. national accounts). The pan-European set has contributed conceptually and practically to improving the comparability of forest information among European countries by setting a common reporting framework, which also reflects the global structure of the seven thematic areas approved by the UN and applied in the global Forest Resource Assessment. Furthermore, it has helped to improve information availability and quality, and promoted a broader understanding of forest-related information for European and national policy making. In addition, an approach based on criteria and indicators has led to improved data availability and quality in areas which were not covered previously in forest sector statistics.

However, there is a broad consensus among the FOREST EUROPE national correspondents and the experts that the collection of large amounts of data, in particular related to sub-indicators and





parameters, imposes a considerable and questionable burden on data collection agencies, while making it more difficult to achieve data completeness. Furthermore, recurring challenges in ensuring acceptable data verification and validation processes are evident. Similarly, institutional challenges in monitoring and reporting are frequently encountered relating to the maintenance and regularity of the applied monitoring instruments, support for the provision of capacities, education and training, and institutional coordination among national and international data providers.

The pan-European set has made a limited contribution to **assessing progress towards sustainable forest management**, by providing time trends for a first assessment step. Two assessment prototypes were presented as pilots in the State of Europe's Forests report (SoEF) 2007 and 2011. Despite the progress and the two pilot approaches, there is a clear notion that assessment procedures based on criteria and indicators are hindered by their structural and conceptual shortcomings. Thresholds and trade-offs for individual indicators have not yet been developed, and there is no indication of balance between the indicators. In general, there is an acknowledged need for a well-developed and approved assessment methodology which allows a balanced approach.

To respond to this need, ECE/FAO is leading an effort which builds on the pilot experience. It has developed a method, through a transparent process, which will be applied on a pilot basis in the next study of the State of Europe's Forests in 2015. A clear political commitment to support the assessment of sustainable forest management would give this effort more impact. The Pan-European Operational Level Guidelines (PEOLG) have certainly influenced certification schemes, notably PEFC (Programme for the Endorsement of Forest Certification), by providing reference frames and stimulating assessment procedures on local/regional levels. Thus the pan-European criteria and indicators set, on which PEOLG is based, has had an indirect influence on the forest management level.

The pan-European set has **facilitated the development and adaptation of national**



**policy instruments**, as it serves as a reference framework for forest-related policies in many instances. The indicator set is perceived as providing a comprehensive framework for multi-functional forest management. By means of its implicit normative power increased political commitment to accept and support criteria and indicators, and integrate them into national policy instruments has been observed. For instance, the concept of criteria and indicators is included in many national forest programmes, and in some cases has been integrated into national legislative and/or policy instruments.

Also, by shaping the debate on sustainable forest management at a national level, criteria and indicators have supported new modes of governance in national forest policy making at least indirectly. In broader terms, the pan-European set is now an accepted tool to stimulate and promote sustainable forest management and implement policy at the national level. However, there is wide variation in



the methods and quality of adaptation of the pan-European set to the national level. Little guidance for national implementation is provided by the pan-European process. Its non-legally binding nature also does not secure wide implementation of the criteria and indicators in national forest policies, programmes and laws, but the incentives are tangible in the countries where it was considered. Furthermore, selective and interest-driven indicator use may be practised, but that does not allow the complexity of sustainable forest management to be addressed. The study has also shown that operational linkages between the policy and forest management unit level are scarce, and such linkages would be required to explore and display the full compliance of appropriate approaches and the impact of policy-making at the operational level.

The pan-European set has only **generated limited information of intersectoral relevance**. Data collected according to the set, or national/sub-national sets, are not in fact often used by indicator

sets developed in other sectors, or for society and the economy as a whole. Collaboration and attempts for harmonization among criteria and indicators processes in forestry exist, in particular relating to the assessment of sustainable forest management, and communication is ongoing on conceptual questions (e.g. with the Montréal Process, International Tropical Timber Organization, Global Forest Resources Assessment). There are few examples of linkages between processes in different sectors (i.e. sectors other than the forest sector) on the national, EU and pan-European levels. However, in many cases forest sector data are not considered relevant by the “non-forest” processes or are not expressed in a form applicable for use. One of the reasons for these reservations is the use of concepts and definitions which are only partially harmonized with those of other sectors. In summary, other sector policies are reserved in response to forest sector issues and there are communication deficits (in both directions) on cross-sectoral data needs.

Despite the progress and the various approaches in implementing the pan-European criteria and indicators for sustainable forest management, there is still room for improvement in order to consider them as a powerful tool for promoting sustainable forest management, both at national, sub-national and pan-European levels. Based on the results of the project, the CI-SFM team has prepared a number of recommendations which are summarized below.

### **Recommendations for implementation at national and sub-national levels**

#### **Review implementation at the national and sub-national level**

The study has shown that the pan-European set of criteria and indicators for sustainable forest management is being used in many countries in a variety of different ways. Those responsible for forest sector policy at the national and sub-national level should review whether they are using the pan-European set of criteria and indicators to its maximum potential, drawing on the experiences gained by other countries. In particular they should consider:



- Constructing a *national/sub-national set* of criteria and indicators, based on the pan-European set, if one does not exist already.
- Preparing a *national/sub-national report on the state of forests* structured around the national/sub-national set, if they have not already done so, or repeat an earlier reporting exercise.
- Using the concepts underlying the set, and the data collected in accordance with it, more intensively *to inform policy and policy instruments* for the forest sector and adjacent sectors in need of forestry information.
- Structuring *national forest resource assessments* around the set of criteria and indicators.
- *Exchanging experience* in the use of criteria and indicators between stakeholders

### **Promote smart use of criteria and indicators**

The study has shown that the cost/benefit ratio of implementing criteria and indicators is not necessarily favourable, and their impact does not always meet expectations. To counteract this, users, notably forest administrations and researchers, should consider more efficient methods of implementation, in particular:

- Streamlining the collection of data connected to criteria and indicators with the collection of standard management information.
- Linking information collection, distribution and analysis at the Forest Management Unit (FMU), sub-national, national and international levels, for instance by using the same concepts, definitions and units, or by integrating information systems, thus economizing on resources and improving data quality and availability.
- Collecting only the information required for use by managers and policy makers, avoiding excessive detail and/or frequency.
- Focusing improvement efforts on areas where there are major gaps or inadequacies, rather than on improving the reliability of existing sets which are already adequate for decision making.
- Integrating international needs into national, sub-national and FMU-level data collection systems, which would simplify the international reporting process, improve the quality of international information and avoid unnecessary

national data collection or conversion to international definitions.

- Using data originating outside the forest sector, e.g. national labour force and economic statistics.

### **Develop capacity in the field of criteria and indicators**

Many countries and regions in Europe do not have the necessary capacity to implement criteria and indicators in the comprehensive way described by this project. A set of workshops along the lines of those carried out by this project could be organized in regions where countries have experienced difficulties in implementing criteria and indicators. Such workshops should, if possible, take place before the start of any revision of the pan-European set. Such an approach will ensure that the countries concerned can make a full contribution to the revision process and find their specific circumstances fully taken into account at the pan-European level. Other tools might also be desirable to facilitate and improve the implementation of criteria and indicators, such as guidelines.

### **Develop or enhance the use of criteria and indicators at the sub-national level**

The project has shown that the pan-European set of criteria and indicators, or a set based on it, is also used at the sub-national level, notably in countries where forest policy responsibility is at that level. An effort should be made to share this experience and widen knowledge of the use of criteria and indicators at a sub-national level.





### **Use criteria and indicators indirectly to improve practice at the forest management unit (FMU) level**

The pan-European set of criteria and indicators, although they cover all aspects of sustainable forest management, are not normative and are not intended for use at the FMU level. However the Pan-European Operational Level Guidelines for sustainable forest management (PEOLG), which are normative and intended for the FMU level, are based on the pan-European set as approved at the ministerial conference in Lisbon in 1998. PEFC, one of the two leading forest certification systems, is explicitly based on the PEOLG, which provides the foundation for the PEFC principles. There has certainly been strong mutual influence between the criteria and indicators for sustainable forest management and the forest certification systems, notably as regards what constitutes the components of sustainable forest management, at all levels. The project has shown that many countries and experts consider that the pan-European set has a major indirect impact on forest management practice, as it defines sustainable forest management in a comprehensive and balanced way, even though it is not normative. When revising the criteria and indicators set, stakeholders should take this indirect influence of the pan-European set into account.

### **Recommendations for implementation at pan-European level**

#### **Formulate objectives for a revised pan-European set of criteria and indicators for sustainable forest management**

The project has shown that implementation of the pan-European set has been weakened by the fact that its objectives have been developed over time in the light of experience and not explicitly formulated. It would be desirable in the future to base implementation and revision of the pan-European set of criteria and indicators on an explicit set of objectives which is based on a broad consensus. A widespread consultation should therefore be held on the objectives of a possible revised pan-European set of criteria and indicators for sustainable

forest management. This consultation should be led by FOREST EUROPE or be under the aegis of the proposed Legally Binding Agreement on Forests in Europe. The consultation should involve a wide range of stakeholders, including national and sub-national policy makers and forest administrations, scientists, forest owners and forest industries, civil society and international organizations. Representatives of other sectors should be invited to participate actively. This review of the objectives of the pan-European set of criteria and indicators should be open and transparent, and take place before the process of revising the indicator set starts. It should also consider the option of not revising the set if the likely ratio between the costs of revising and implementing a new set and the benefits in terms of improved policy, information and communication is not seen as favourable.

The project team proposes the following draft set of objectives, as a basis for discussion. This draft is based on the working definition used in the project, modified to take account of suggestions made in enquiries and expert consultations carried out during the project:

The objectives of the pan-European criteria and indicator set, or a national set derived from it, and specifically the information structured according to it, are to carry out one or more of the following functions:

1. Provide a framework for dialogue and communication on sustainable forest management and forest policy development between policy makers inside and outside the forest sector, relevant stakeholders, and society as a whole.
2. Monitor and report on the state and trends of the forest sector and on the implementation of national commitments with regard to sustainable forest management.
3. Provide structured information and analysis making it possible to assess progress towards the goal of sustainable forest management, and on that basis to identify emerging issues and areas of concern.
4. Provide tools for use by those who formulate, implement, monitor and evaluate national or sub-national forest programmes, policies and/or plans, laws and improve forest sector governance.



5. Provide a structure and conceptual framework for research into sustainable forest management.
6. Provide information and/or assessment for analysis to other sectors and initiatives which are relevant to the forest sector, and provide input for cooperation with forest sector processes and policies in other regions.

#### Notes on the proposed objectives

- (i) The pan-European set of criteria and indicators may be used at several levels: pan-European, EU, national and sub-national. It is not intended for direct use at the forest management unit level, but may be used indirectly, for instance as a reference for guidelines or certification schemes.
- (ii) “Forest sector” is the area covered by the pan-European set of criteria and indicators, including the quantitative indicators in the six criteria and all the qualitative indicators.

#### Revise the pan-European set of indicators

The analysis of this project leads to the conclusion that it is desirable to revise the pan-European set for many reasons, including changed circumstances, ambiguity about objectives, lack of a coherent logical framework, unfavourable cost/benefit ratio for several indicators and uses, weak impact in some areas, notably communication with other sectors, and issues related to specific indicators which are summarized in the previous chapters. This revision should include not only the addition or removal of specific quantitative indicators but also the structure of the set as a whole, the relations between quantitative and qualitative indicators, linkages between indicators and the desirability of composite indicators. A number of experts interviewed by the project proposed that the criteria themselves should be revised, but the project team believes that as the criteria were formally approved in a long and delicately balanced process and fit into a global conceptual framework, the cost of reopening the process of defining the criteria would be excessive compared to the likely benefits. The project team recommends therefore that revision should take place within the framework of the existing criteria.

An open, participatory and science-based process should be put in place, under the auspices of FOREST EUROPE or the proposed Legally Binding Agreement, to prepare a revised pan-European set. This process should be founded on the following principles:

- All indicators in the revised set should contribute to achieving the agreed objectives. Those indicators which do not contribute to these objectives or which do not have a favourable cost/benefit ratio should be removed.
- A logical framework for the revised set should be designed and applied, if possible.
- The revision process should start from the existing set and relevant experience, as presented in this report. Stakeholders, notably national and international data providers for the ‘State of Europe’s Forests’ process, should be consulted throughout the revision.
- Weak data availability or low quality of the data should not, in itself, be a reason for dropping an indicator if it is meaningful and there is the potential for it to develop usable information.





- The set should be designed to generate enough meaningful information to satisfy the agreed objectives, without excessive volumes of data not needed for those purposes.
- The cost/benefit ratio<sup>1</sup> of each indicator and of the set as a whole should be explicitly considered.
- Improvement efforts should give priority to remedying major data gaps and inadequacies, rather than on increasing the reliability of data sets which are already adequate for the purpose.
- The revised set should maintain the balance between the aspects of sustainable forest management which is at the heart of the concept.

In summary, it will be essential for the long-term usefulness of the indicator set that this revision be carried out in depth, in a firm logical framework,

<sup>1</sup> The ratio between the cost of collecting and analysing the information and the benefit provided by that information, especially in the form of better evidence-based policies.

based on sound science and a realistic assessment of past experience and with widespread participation of all stakeholders.

### **Develop harmonized methods to assess sustainability of forest management at the national and sub-national level, using criteria and indicators**

Different approaches have been developed to assess (i.e. not only describe) progress towards sustainable forest management, identify areas of concern for sustainability and policy responses to them, as well as to identify emerging policy issues on an objective basis<sup>2</sup>. Some practices at national level were identified by the project team. At the international level, ECE/FAO is leading an effort in this direction, on a pilot basis, for use in the next SoEF. Building on the pilot exercise, a method should be developed and applied based on a wide consensus, to provide sound foundations for clear statements about the sustainability of forest management in Europe.

The effort to assess the sustainability of forest management probably implies the agreement of thresholds, at least for some of the indicators. This must be done in a transparent and consultative way, taking account of national specificities. In the opinion of the project team and many of the experts interviewed, the improvements in significance and impact of this approach justify this exercise.

### **Develop understanding and use of the qualitative indicators**

At the international level, a considerable amount of information has been collected on the qualitative indicators, notably about the policy instruments in place. However, this has remained descriptive in nature. Work should be undertaken to develop objective ways to analyze the current approach and information supplied by countries, notably in two respects:

- What are the links between qualitative and quantitative indicators? In other words can trends in certain quantitative indicators be linked to specific policy instruments?

<sup>2</sup> See for instance Part III of SoEF 2011.



- What types of policy instruments have been most effective and efficient in achieving the stated objectives (where objectives have been formulated in measurable terms)?

Answers to these questions would help forest sector policy makers to demonstrate the effectiveness of the policy instruments in place and adapt policy and policy instruments in the light of results, thus demonstrating evidence-based policy making. This approach has been applied successfully at the national level in a few countries.

### **Develop subsets of indicators or composite indicators to address specific policy issues**

The pan-European set and the national/sub-national sets based on it are balanced and comprehensive in their approach. However, to address specific policy issues, it may be desirable to use a subset of the indicators, or to create composite indicators to measure progress or to set goals, even to manage tradeoffs. These subsets or composite indicators may be necessary only in certain regions or for a limited time/purpose according to changing needs, even though they are constructed inside the framework of the general indicator set. The revised indicator set should be designed with this need in mind, and could perhaps identify certain subsets which might be relevant to specific policy challenges.

### **Build bridges to other sectors**

The project has shown that data from criteria and indicators for sustainable forest management are little known or used by other sectors (e.g. energy, biodiversity, sustainable development) or by broader indicator sets applied to the whole of society. One reason is that the information collected in the context of the forest sector indicators is not in a form which can be easily used and understood by the other sectors – and *vice versa* (information generated by other sectors is often not used in the forest sector). To remedy this, during a possible revision process the forest sector at the national and pan-European level should approach institutions, organizations or processes which may have use of or a need for forest indicator information. This could be, for instance, in the context of indicator



sets based on their sector, in order to identify issues, define needs and take these into account. The needs of other sectors should be balanced against the cost of the proposed changes. A strengthened Forest Indicators Partnership<sup>3</sup> might contribute to this effort.

In conclusion, the proposed actions above seek to address current barriers to implementation and to strengthen the process and use of criteria and indicators - not only as a tool for monitoring and reporting, but also for policy making at national and European level. A number of proposed actions will require further investigation in order to better capture and understand the complexity of the indicators and help build capacity for more effective implementation. The proposed recommendations support the work of FOREST EUROPE, particularly their Work Programme in relation to the further development and improvement of sustainable forest management and its tools, and provide a sound basis for targeted exchange both at a political and scientific level.

<sup>3</sup> An informal partnership between the Montréal Process, ITTO, FOREST EUROPE and FAO.



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Sustainable Forest Management in Europe

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