



## 6. Discussion on implementing criteria and indicators for sustainable forest management in Europe

This chapter builds a synthesis of the cumulative findings and lessons learnt on the basis of the information and opinions collected and analysed by the project. It provides the reader with a clear perspective on implementation of criteria and indicators (C&I) for sustainable forest management (SFM) in Europe and highlights the main trends on the subject. The chapter is divided into two sections. For each of the applications in the working definition (see chapter 4.1.2) the first section attempts to answer two questions: (1) Is the pan-European set used in the specific application, and, if so, in which manner? and (2) What are the main issues and challenges emerging from the experience of the past 15 years? The second section advances the discussion towards whether the pan-European C&I need a revision.

### 6.1 Implementation of the pan-European set of criteria and indicators of sustainable forest management 1998–2013

#### 6.1.1 Does the pan-European set of criteria and indicators serve as a framework for dialogue and communication?

*YES, because*

- The pan-European C&I set has certainly increased awareness and understanding of SFM - at least within the forest sector and among those interested in forestry issues.
- The pan-European C&I set has provided stimulus and support for communication within the forest sector in terms of mind-setting and streamlining the forestry debate.
- The pan-European C&I set has facilitated deliberation and consultation between policy makers and stakeholders, thus promoting stronger stakeholder participation in the forest policy process.

The results of the various analyses (see chapter 5) signal that the pan-European set has been in-

strumental in defining the content of SFM, and has provided structure to the pan-European forest policy. Alongside other sets developed for other regions, it has also contributed to the global forest processes, notably the non-legally binding instrument on forests. Furthermore, the pan-European set has shaped information on forest related issues by defining the structure and scope of topics addressed, e.g., in international and national forest reports as well as in forestry public relations material and actions. This has led to:

- Increased transparency and accountability of data provision and comprehensive coverage, at least on the level of broad trends;
- Streamlined publishing of forest-related information according to a formal and agreed structure.

Although negotiated and agreed at the policy level, C&I have helped to integrate science into the policy debate: policy makers need objective and structured information on forest-relevant issues, which is required in an evidence-based society. In particular the comprehensive structure has made it more challenging to ignore issues where data are weak and concepts unclear.

*Needs and potentials for further improvement*

- The pan-European C&I set is considered complex 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 as the information and rationale embedded in the set is difficult to understand for non-forestry stakeholders.
- There are also limitations for the forest sector itself: some consider the C&I too static, often not allowing identification and communication of key emerging politically relevant issues (e.g., biomass, climate change, ecosystem services). The static nature also presents obstacles to ensuring compatibility with other C&I processes.



In broader terms, conceptual shortcomings reduce the role of C&I in policy- and decision-making, as well as in communicating complex but highly forestry policy relevant topics. For instance, it was observed:

- There is no conceptual framework to explore cause-and-effect relations;
- Weak links between the quantitative and qualitative indicators;
- No composite indicators to focus on specific forest-related issues;
- Several quantitative indicators have their own conceptual shortcomings.

Furthermore, the lack and fragmentation of communication channels between forest administrations and relevant institutions as well as the intermittence of communication activities based on C&I are reported to be major limitations to a broader outreach of the forest sector.

Based on the empirical evidence, C&I are still widely perceived as a rather weak instrument as the pan-European process is non-legally binding in nature. As a consequence, progress towards Europe-wide dialogue and communication of forestry issues is limited. A stronger role of C&I in developing pan-European forest policy is currently discussed in the frame of the negotiation of a possible Legally Binding Agreement on Forests in Europe. The six criteria are embedded in the text, and the commitments are structured accordingly<sup>1</sup>.

### **6.1.2 Do the pan-European criteria and indicators serve as an adequate tool for monitoring and reporting on sustainable forest management?**

*YES, because*

- Politically endorsed, the pan-European C&I have shaped and stabilized international reporting in the region, which is highly important in terms of long-term development of national inventory systems. 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. Data collection based on C&I

has made forest sector data available to broader policy processes (e.g., Millennium Development Goals on preventing deforestation, based on FAO Forest Resources Assessment data), even though they have not always used them.

- The pan-European set 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 C&I has led to improved data availability and quality in areas which were not previously covered in forest sector statistics.

The results also showed that the pan-European C&I have been used as a reference for national applications of monitoring and reporting on SFM. Progress and adaptation of monitoring instruments based on C&I can be observed. Forest-based measurements and data collection have been streamlined. One could claim that this adaptation process has stimulated the scientific discourse on monitoring methodologies and the harmonization of monitoring systems across Europe.

#### *Needs and potentials for further improvement*

To achieve compliance with the pan-European C&I there is usually a need for modification and conversion of data measured at the national level. The collection of large amounts of data, in particular related to sub-indicators and parameters, impose a considerable 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:

- Maintenance and regularity of monitoring instruments (e.g., monitoring cycles of national forest inventories) in times of economic crises are under pressure in many countries.
- Hence, support for the provision of capacities, education and training to implement and further develop C&I are increasingly questioned.
- Weak institutional coordination among national data providers can lead to uncertain data quality and inefficiency of data provision, and increase monitoring burdens for a broad array of reporting duties.

<sup>1</sup> In the Article 4 of the draft negotiating text for a legally binding agreement on forests in Europe as of 14th June 2013.



### 6.1.3 Do the pan-European criteria and indicators serve as a tool for assessing progress towards sustainable forest management?

*PARTLY, because*

- By providing time trends available for the period 1990–2010 a first assessment step may be made to review differences in trends and benchmark trends between countries.
- 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 C&I sets, on which the PEOLG are based, have had an indirect influence on the forest management level.

In addition, on the pan-European level, two assessment prototypes were presented in SoEF 2007 and 2011, which will be subject to further revision and development. An improved approach is under development for use on a pilot basis in the next State of Europe's Forests report. Examples at national level are found for assessment-type implementation reaching from using basic information and awareness-raising on forestry trends for policy makers to identification of targets and objectives for individual indicators.

#### *Needs and potentials for further improvement*

In general, the assessment procedures currently suffer from the lack of clear and explicit objectives for the C&I set. Thresholds and trade-offs for individual indicators have also not yet been developed, and there is no indication about balance between indicators. A clear political commitment to support assessment of SFM is needed. Furthermore, the pilot approaches mentioned above are being implemented, but the process is far from complete. A well-developed and approved assessment methodology allowing for a balanced approach has not yet been developed. This requires, in addition to what has already been done:

- Overcoming structural and conceptual shortcomings of indicators for SFM assessment, such as systemic components and causal indicator linkages, key indicators/parameters and com-

posite indicators/parameters.

- Agreement, based on a widespread consultation process, on a common interpretation of indicators at the pan-European level, i.e., what is considered as a positive or alarming development or what can be regarded as acceptable.
- Better coherence and completeness of C&I data for assessment.
- Better prioritization, focus and understanding of the aim (at least of outputs).

### 6.1.4 Does the pan-European set of criteria and indicators facilitate the development and adaptation of national policy instruments?

*YES, because*

- C&I serve as a reference framework for SFM-related policies in many instances, and are perceived as safeguarding a normative and comprehensive framework for multi-functional forest management.
- By means of this implicit normative power of the SFM concept, increased political commitment to accept and support C&I, and integrate them into national policy instruments has been observed. For instance, the concept of C&I is maintained in many national forest programmes. In some cases C&I have been integrated into national legislative and/or policy instruments.

Also, by shaping the debate on SFM at national level, C&I have supported new modes of governance in national forest policy-making at least indirectly. C&I are now accepted tools to stimulate and promote SFM and implement policy at the national level. However, new approaches to political and practical implementation will be required in order to contribute to improving forest management practices by example and demonstration.

#### *Needs and potentials for further improvement*

- There is wide variation in the methods and quality of adaptation of the pan-European C&I set to the national level, and little guidance for national implementation is provided by the pan-European process. Its non-legally binding nature provides also few incentives to implement the C&I in national forest policies, programmes and laws.



- Maintaining adequate resourcing and capacities for implementing and further developing C&I remains particularly challenging, especially as most stakeholders (at least before this project) saw “implementation” of the pan-European set as, above all, supplying data for State of Europe’s Forests reports.

Furthermore, selective and interest-driven indicator use may be practised, but that does not allow the complexity of SFM to be addressed. Research has shown that operational linkages between the policy and FMU level are still scarce. Such linkages would be required in order to explore and display the full compliance of SFM approaches and the impact of policy-making at the operational level.

#### **6.1.5 Does the pan-European set of criteria and indicators generate information of inter-sectoral and international relevance?**

*LIMITED, because*

- Collaboration and attempts for harmonization among C&I processes in the field of SFM do exist and there is at least communication ongoing on conceptual questions (e.g., with Montréal Process, Global Forest Resources Assessment). The Collaborative Forest Resources Questionnaire brings together FAO/FRA, ECE/FAO, Forest Europe, Montréal process, Observatory of Central African Forests– OFAC, and ITTO for harmonized data collection in 2014-2015.
- There are examples of linkages between different sectoral processes on national level (e.g., with biodiversity reporting for CBD), pan-European level (e.g., SEBI –Streamlining European Biodiversity Indicators), and EU level (e.g., European Committee for Standardization CEN/TC 383 – Sustainably produced biomass for energy applications).

*Needs and potentials for further improvement*

- Data collected according to the pan-European set, or national/sub-national sets are in fact not much used either by national broader sets (e.g., one example of complex indicator sets embedded in the national context of Finland are the so called “Findicators”) or by information sets for other sectors, presumably because the data are not considered relevant or because they are

not expressed in a form which is usable by the intended users. Also, the data generated through forest C&I sets are scarcely used in national and European statistics outside the forest sector. One of the reasons is the use of concepts and definitions which are only partially harmonized with those for other sectors.

- Overall, other sector policies are not very responsive to forest sector issues. Therefore, key forestry issues are often not properly conveyed to other sectors by means of the C&I for SFM. These C&I sets, which are instruments driven by sectoral concerns, are strongly defined by forest sector boundaries, and are not responsive to cross-sectoral information demands.

In addition, there are communication deficits on cross-sectoral data needs. This affects how C&I could be further integrated and adapted to address these needs at international, pan-European, European Union, national, and sub-national levels. The different objectives and interests of the sectors, e.g., protection vs. production, also play a significant role in the integration and adaptation of the C&I. Finally, like in other sectors (e.g., environment), most commonly (with a few exceptions), the role of the forest sector in national economies is usually small, which very often leads to a lack of political recognition of forestry issues in other sectors, and hence information generated through forest-based C&I has only marginal visibility.

## **6.2 Revision of the pan-European C&I for SFM**

### **6.2.1 Does the pan-European set of criteria and indicators for sustainable forest management need to be revised?**

*YES because*

- The pan-European indicators focus on the current state and changes of the forest sector. However, the lack of data and explicit thresholds to a time dimension or evolution over time may impose a limited use of the indicators as an indication of progress towards SFM or of the success of forest policies and programmes.
- As systems develop over time in a changing environment, individual indicators may decrease in relevance and may have to be adapted, sup-



ported or replaced by others to meet the current or emerging needs. It is important to maintain flexibility and the ability to revise the indicator set quickly in response to new challenges and policy developments inside and outside the forest sector, without, of course, losing continuity and the ability to monitor trends over time.

- The pan-European quantitative (i.e., measurable) indicators can support evaluations of the effectiveness of measures, but need to be balanced by and linked to the qualitative (i.e., policy) indicators that provide information about the governance of the forest sector in a country.
- The main driver for the development of the pan-European indicators is the need for adopting a policy instrument for evaluating and reporting on progress towards SFM at pan-European and national levels. However, explicitly defined goals and objectives for the pan-European set or individual indicators are missing, which creates difficulties to achieve a consistent approach to implementation of C&I for SFM at pan-European and national levels.

*More specifically, consideration might be given to:*

- Formulation of explicit objectives of the pan-European C&I;
- Cause-and-effect relations and linkages between qualitative and quantitative indicators;
- Baseline indicators for assessing SFM by maintaining the integrity of the concept;
- A core set of composite indicators for use by policy makers and civil society by maintaining the integrity of the SFM concept;
- Strengthening partnership and collaboration with other forest and forest-related processes and policies;

- Improvement of data availability, quality and comparability;
- Recent policy developments in the European forest sector, global forestry and global trends in other sectors, e.g., in relation to sustainable wood fuel production, sustainability criteria for biomass, forest contribution to the global carbon cycle, forest governance.

### **6.2.2 Indicator by indicator analysis**

Even though an extensive review of the individual pan-European indicators is outside the scope of this study, during the data collection some of the experts and national correspondents gave examples of how to enhance the effectiveness of the pan-European criteria and indicators in terms of content. Based on these cumulative experiences collected in the project, Annexes 4 and 5 provide an overview of the challenges and conceptual issues related to individual indicators.

Annex 4 gives an overview of monitoring aspects of indicators that have been reported as challenging with regard to data quality and availability, data coverage across European countries, and other issues encountered in the national enquiries. The project team has summarised these issues, giving a final statement for each indicator as regards its monitoring and data situation.

Annex 5 summarizes conceptual considerations by characterizing each indicator via its linkages to other indicators, its potential nature in cause-effect relationships, its role in an assessment procedure, and the context of its data provision.

Both Annexes do not anticipate any proposals for new indicators, or formulations to revise existing indicators.