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Methodological Issues Regarding the Improvement of Sustainable Forest Management Tools

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Abstract. Sustainable management of forest ecosystems should ensure the synergy of the economic, environmental and social functions. Maintenance and extension of forest ecosystems represent a major objective of the general strategy of environmental protection, particularly relevant in 2011, the year declared by the United Nations as the International Year of Forests. In this context, this paper briefly presents a compact and comprehensive overview of status and trends, as well as challenges and opportunities for forests, forest policy and forest management in Europe

Keywords: The Pan-European Indicators, Sustainable Forest Management, FOREST EUROPE

INTRODUCTION

Forests are crucial for the goods and services they provide, which people all over the world and our environment depend on. Sustainable forest management is the declared aim of the community forestry programme. (Acharya, 2002, Ridish K, 2007).

The United Nations has declared 2011 as the International Year of Forests. The overall objective of this global initiative is to raise awareness about the need to strengthen the sustainable management, conservation and sustainable development of all types of forests for the benefit of current and future generations.

The International Year of Forests was launched in February at the Ninth Session of the United Nations Forum on Forests (UNFF) in New York, USA. Events and activities throughout the world will highlight the key role of forests in our life under the theme "Forests for people". They will illustrate how we can both protect these unique renewable resources while at the same time sustainable use environmentally friendly forest and wood products.

Pan-European Ministerial Conferences on Forest Protection have determined the orientation of European forest policies in Strasbourg in 1990, in Helsinki in 1993, Lisbon in 1998 and Vienna 2003. More than 40 European countries have signed these resolutions, thus acknowledging their political orientation. The first Resolution from Helsinki refers to general principles for a sustainable management of the forests in which multifunctional, as in the synergy of the economical, ecological and social functions, have been incorporated into the concept of sustainable development, which gives a meaning that transcends the concept much beyond the mere conservation of resources.(Ilea M, et all, 2010).

The FOREST EUROPE Ministerial Conference on the Protection of Forests in Europe on 14-16 June in Oslo, Norway, was a major European contribution to the International Year of Forest. The European countries will take decisions to meet today's global challenges and focus on the role of forests in a green economy, climate change mitigation, biodiversity conservation and combating illegal logging. Various activities linked to the conference, such as tree planting and photo exhibitions, aim to engage people, create dialogue and enhance

knowledge about forests while emphasising what needs to be done to sustain their health, growth and diversity. The findings from many studies indicate that both community forestry users and authorities tend to focus on social and socio-economic aspects when evaluating the community forestry (Poschen, 2000).

"A strengthened political cooperation in Europe will be vital for achieving a balanced and stable continuity of all environmental, economic and social forest functions, and for contributing to the achievement of international agreed objectives." said the Norwegian Minister of Agriculture and Food, Mr Lars Peder Brekk, chairman of the FOREST EUROPE process. As part of the future FOREST EUROPE strategy, ministers agreed on European 2020 Targets for forests.

The Pan –European approach to National Forest Programmes, was elaborated to promote sustainable forest management in Europe. The approach constitutes a participatory, holistic, inter-sectorial and iterative process of planning, implementation, monitoring and evaluation at national level.

MATERIALS AND METHODS

Sustainable management of forest ecosystems should ensure the synergy of the economic, environmental and social functions. In this sense, the current and strategic management of the forest and its units uses a system of indicators to record, analyze and forecast specific forest and forest units.

Development and use of forest and forest indicators is a complex issue, harmonized with EUROSTAT and the system used by international forestry information system.

The assessment aims to give policy and decision makers as well as the general public a clear overview of complex issues. This should facilitate balanced strategic and operational decision-making, as well as communication and dialogue with the general public and other relevant sectors. It is also hoped that this new approach will encourage further improvements in assessing the sustainability of forest management. FOREST EUROPE has developed and adopted six criteria for sustainable forest management and a set of associated indicators to provide guidance for developing policies and to assess progress towards sustainable forest management.

The criteria and the indicators describe the different aspects of sustainable forest management in Europe. The Pan-European Indicators for Sustainable Forest Management are classified in Qualitative Indicators and Quantitative Indicators.

The Qualitative Indicators refers to:

- Overall policies, institutions and instruments for sustainable forest management
  - National forest programmes
  - Institutional frameworks
  - Legal/regulatory frameworks and international commitments
  - Financial instruments/economic policy
  - Informational means
- Policies, institutions and instruments by policy area

The Quantitative Indicators and the criteria that were established are presented in Fig.1

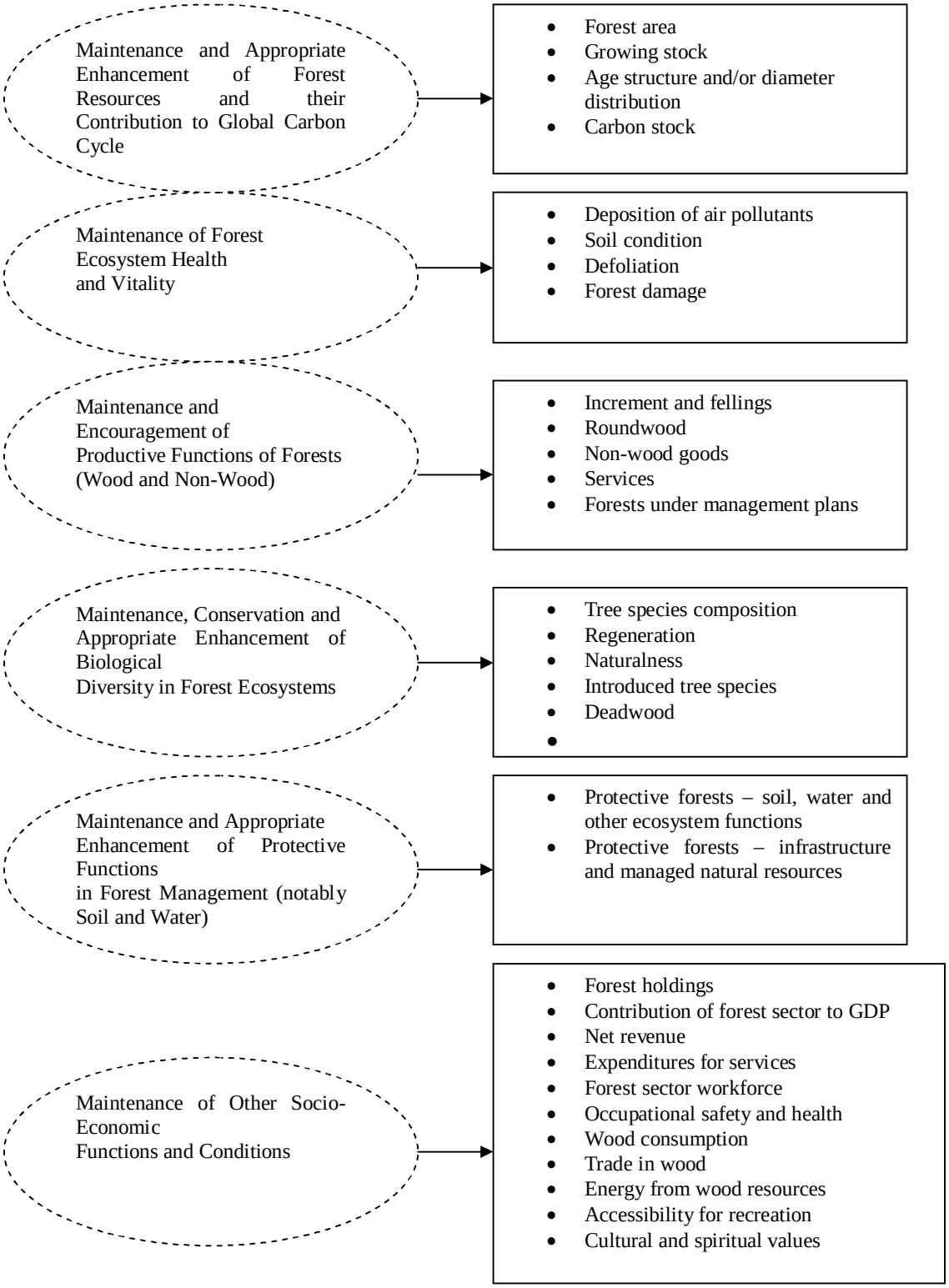

Fig. 1. The criteria and the Pan-European Indicators for Sustainable Forest Management

RESULTS AND DISCUSSION

To describing the status and trends for the quantitative and qualitative indicators, the State of Europe's Forests 2011 report assesses progress towards sustainable forest management in Europe. For this purpose, a new, experimental method has been used. For each indicator, the official data supplied by countries were assessed on a scale from one tree to five trees, using objective and transparent parameters and thresholds. These results were combined to provide assessments at the level of six country groups, and have been accompanied by detailed comments to put the situation in context. Despite shortcomings, the results appear sufficiently robust to be used for giving a broad picture of developments at the country group level. The data and method are not yet suitable to assess individual countries, or to provide a single overall assessment for sustainability.

In several countries, national initiatives have further developed criteria and indicators to suit local conditions of monitoring and planning of forest management (Spilsbury, 2005; Barbati, 2007).

To describing the status and trends for the quantitative and qualitative indicators, the State of Europe's Forests 2011 report assesses progress towards sustainable forest management in Europe (Tab. 1).

Tab. 1

The criteria and the Pan-European Indicators for Sustainable Forest Management

	Forest resources and global carbon stock	Health and vitality	Productive functions	Biodiversity	Protective functions	Socio-economic functions	Overall policies, institutions and instruments for sustainable forest	Policies, institutions and instruments by policy area
Russian Federation	▲▲▲	▲▲▲	▲▲▲	▲▲▲	▲▲▲▲	▲▲▲	▲▲▲	▲▲▲▲
North Europe	▲▲▲	▲▲▲	▲▲▲	▲▲▲	▲▲▲	▲▲▲	▲▲▲	▲▲▲▲
Central-West Europe	▲▲▲	▲▲▲	▲▲▲▲	▲▲▲	▲▲	▲▲▲	▲▲▲	▲▲▲▲
Central-East Europe	▲▲▲▲	▲▲▲	▲▲▲	▲▲▲	▲▲▲	▲▲	▲▲▲	▲▲▲
South-West Europe	▲▲▲▲	▲▲▲	▲▲▲	▲▲	▲▲▲	▲▲▲	▲▲▲	▲▲
South-East Europe	▲▲▲	▲▲	▲▲	▲▲	▲▲▲	▲▲	▲▲▲	▲▲▲

Source: processing after data from the FOREST EUROPE Implementation Report 2008-2011

The State of Europe's Forests 2011 report indicates that most of the countries in South-East Europe have rather large rural populations and low per capita income by European standards. Fire is an issue throughout the region. In one country, the forest it self is under severe pressure from overgrazing and over-cutting (mostly for fuel) by the rural population. It appears that, in many areas, the forests are not intensively managed and not well protected for biodiversity – but information is very weak, so this cannot be verified. Due to the lack of adequate information provided, and possibly also because the relevant forest-sector

information does not exist at the national level, it is not possible to say with any objectivity whether or not forest management is sustainable.

Areas of concern identified are one country with steeply falling forest cover and growing stock; nearly all land area of the region at risk of eutrophication due to nitrogen deposition; significant fire damage; fellings greater than net annual increment in one country; rather low per hectare values for marketed non-wood goods; several countries with a high share of single species stands; low share of forest protected for conservation of biodiversity in many countries; and low levels of wood consumption.

In Romania, the National Statistics Institute (INSSE) provides the role of ensuring the content and comparability of the information. The economic activity in forestry is reflected in several categories of products and services related indicators underlying the expression of results, the forestry activity in the physical volume and value. Quantitative indicators such that the volume and quantity of products and services, enable trading prices to determine values of key indicators.

Tab. 2

Evolution of main indicators of forest in Romania in 2010 compared with 2009

Indice	U. M.	2009	2010	
Forest fund - total of which forest area	ha	6 494 728	6 515 173	0.3%
	ha	6 334 052	6 353 658	0.3%
Harvested wood table	ha	16 520	16 992	2.9%
Area covered with forest regeneration cuttings - total of which - cuts races	ha	92 377	99 229	7.4%
	ha	3 816	4 826	4.9%
Artificially regenerated area	ha	10 962	10 106	-7.8%
Harvested wood table valued	thousand m^3	11 964	13 427	-57.4%
Forest seeds recovered	tons	54	23	41.9%
Seedlings and ornamental capitalize		28 441	29 138	12.2%
Berries valued	tons	4 825	6 849	2.5%

Source: own processing after data from the National Institute of Statistics, Romanian Statistical Yearbook

CONCLUSIONS

The forest is a resource of global strategy, regenerating, limited and dependent of the human activity.

The findings from many studies indicate that both community forestry users and authorities tend to focus on social and socio-economic aspects when evaluating the community forestry.

The relevant forest-sector information does not exist at the national level, it is not possible to say with any objectivity whether or not forest management is sustainable. The approach constitutes a participatory, holistic, inter-sectorial and iterative process of planning, implementation, monitoring and evaluation at national level.

Analysis of forest management in Romania shows a concern for maintaining and expanding forest cover.

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