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EUROPEAN FORESTRY COMMISSION

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CROSS SECTORAL APPROACH TO FOREST SECTOR ISSUES: WOOD ENERGY, IMPLICATIONS OF KYOTO PROTOCOL; AND COOPERATION ON FOREST FIRES

INTRODUCTION

1. The importance of a cross-sectoral approach is widely recognized. For instance, the European Forest Sector Outlook Study recommended such approach, which was also taken up by the General Declaration of the Vienna Ministerial Conference on the Protection of Forests in Europe (MCPFE) in 2003. In October 2005, a workshop in Riga, Latvia, examined some of the major issues involved.
2. The objectives of this agenda item are:
 - to present the results of the Riga workshop to the Commission
 - to exchange information and experiences on three cross-sectoral issues of general interest and where FAO is active:
 - wood energy
 - climate change
 - wildland fires

WORKSHOP ON FORESTS - COMMON BENEFITS, SHARED RESPONSIBILITIES, MULTIPLE POLICIES, RIGA, LATVIA, OCTOBER 2005

3. The workshop, held under the joint auspices of the United Nations Economic Commission for Europe (UNECE), FAO, MCPFE and the Governments of Latvia and Switzerland, gathered experts from the forest sector and other fields to exchange experiences. They made specific recommendations for linkages with energy, agriculture nature conservation, water and trade. Among other things, they recommended that:
 - UNECE, FAO and MCPFE strengthen cross sectoral dimensions in all aspects of their programmes
 - national forest sector institutions
 - develop a clear vision of other sectors as a precondition for forest sector policies

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- emphasize communication with other sectors
- strengthen the capacity of forest sector institutions to address cross-sectoral issues, for instance by employing specialists from other sectors.

4. Delegates are invited to review and comment on the results of the workshop, in particular to indicate to what extent their national institutions are increasing their capacity to analyse and influence multi-sector policy issues.

WOOD ENERGY: SITUATION AND ISSUES FOR FOREST POLICY

5. Energy has long been a major use for wood in Europe and elsewhere, although its relative importance has been dropping steadily in most parts of Europe over the last decades. Several recent developments have brought wood energy back to the centre of policy attention:

- The high price of oil and other conventional fuels has made wood more attractive.
- There has been an increase in the co-firing of conventional power stations with wood together with other fuels, such as coal.
- Many Governments and the European Union (EU) have established objectives of a higher share of renewable sources of energy, including wood, in total energy supply, and put in place policy measures to achieve these objectives.
- Measures to mitigate climate change and the commitments of the Kyoto Protocol encourage the use of wood as a carbon-neutral energy source when produced on a sustainable basis.
- With its Biomass Action Plan adopted in December 2005, EU aims at doubling, by 2010, the use of bio-energy sources (wood, wastes, agricultural crops), through 31 measures promoting biomass in heating and cooling, electricity production and transport (biofuels). At present the bio-energy sources account for four percent in the EU's energy mix.
- Concerns about the security of energy supplies have encouraged the use of domestic energy sources, including wood.
- In areas of rural poverty, wood can make a useful contribution to poverty alleviation.
- In many parts of the region, wood of certain species, of low quality, or from remote or inconvenient areas, has difficulty finding outlets. The energy market can make an important contribution to sustainability of forest management in these areas.
- Modern wood burning installations at the household or district heating level are convenient, automatic and efficient and they meet stringent emission standards.
- Wood-based pellets and briquettes, as well as wood chips, have established circuits and technologies and are shipped long distances and in bulk according to market conditions
- In some countries wood processing industries have acquired expertise in generating and supplying wood for energy. In some cases these developments have been encouraged by policy measures including a carbon tax on non-renewable fuels, measures to promote combined heat and power, district heating or sale of electricity to the public grid from independent sources.
- There is a revival in research into the production of ethanol and methanol from cellulosic sources such as wood, as part of renewable energy policies.
- However, concern has been expressed by wood based industries, notably pulp and panel industries, about competition for limited supply and the upward impact on the cost of their raw material.

6. At present the international community and most national governments are not in a position to monitor developments for wood energy, because of the low quality and incompleteness of information. This question is being addressed by the FAO/ECE Working Party on Forest Economics and Statistics (see TIM/EFC/WP.2/2006/7). Measures to improve information quality have a policy rationale and should have policy support, as it will be necessary to commit funds to gain improvements. Low information quality makes it difficult in most countries to make rational, fact-based, policy decisions on wood energy issues.

7. A recent rapid enquiry circulated by the secretariat (posted on the UNECE website) concluded that in the harsh winter conditions of 2005/6, with energy security concerns in several countries, the use of wood for energy had increased significantly - by more than 10 percent over normal levels in at least eight of the 20 responding countries - and made a significant contribution to energy supply especially in poorer rural areas. However, no special policy measures appeared to have been put in place to guide or encourage this tendency.
8. In case of strong energy demand and higher prices for energy wood, there could be many consequences at the forest sector policy level, including for instance:
- The need to set up new commercial and marketing circuits to address a new class of clients
 - Some areas at present economically unviable for wood production would become viable, with social and environmental consequences (e.g. more employment and revenue, possibly changed biodiversity due to more intensive silviculture)
 - The opportunity to develop community enterprises using local sources of wood to meet local energy needs and generating social and economic capital in the process, thereby strengthening the rural economy
 - Possibility of establishing new forests in some areas
 - Pressure to use more intensive silviculture in some areas to provide the very large amounts of renewable energy called for in national energy strategies
 - Need for companies and infrastructure to handle large new flows of wood
 - Large-scale research and development work on new wood based energies
 - Need to integrate large-scale wood energy plants into existing forest strategies.
9. Delegations are invited to address the following issues:
- How to improve knowledge of wood energy trends (from traditional forest sector information sources, or from energy sector information bases)?
 - To what extent are forest and energy strategies coordinated or interactive? Have efforts been made to communicate forest sector concerns to the energy community?
 - Have forest sector programmes and strategies, including national forest programmes, been modified to take account of wood energy developments, and if so, how?
 - What could be the role for FAO in this arena.

CONSEQUENCES FOR EUROPE'S FORESTS OF THE ENTRY INTO FORCE OF THE KYOTO PROTOCOL

Future climate in Europe and its effects on forests

10. By their diversity, forest ecosystems in the European region illustrate the fact that forests respond very sensitively to site factors, including climatic differences. According to various studies, summer temperatures over much of Europe may increase between four and seven degrees Celsius, while precipitation may simultaneously decrease by between ten and fifty percent. In addition, extreme weather events, such as intense storms and floods are expected to occur more frequently. Forest ecosystems are also likely to experience these climatic changes, and therefore the forest sector must start adapting forest management and policies now if it wants to prevent forests from falling victim to climate change.

11. Not all consequences of increased levels of CO₂ and climate change will be negative for forests. Warmer average temperatures, longer growing seasons and increased precipitation might benefit e.g. productivity of Scandinavian forests and enlarge their palette of timber species.

Role of Europe's forests in climate change

12. In contrast to the role of *forests as a net source of greenhouse gases* in most parts of the world, Europe's forests are a large net sink and thus demonstrate the *potential of forests to mitigate climate change* via carbon sequestration. During the 1990-2005 period they annually sequestered ca.500 Mt of CO₂ in their biomass, an amount that equals approximately two times

the five percent emission reduction commitments in the Kyoto Protocol. With roughly 5 Gt of annual greenhouse gas emissions, Europe's fossil fuel emissions dwarf the role of its forests as carbon sinks. Nevertheless, its forest ecosystems store an amount of carbon that is equivalent to approximately 130 years of fossil fuel emissions at the current rate. There is room for more effective communication to the public on the role of forests in climate change, including their role as a source of carbon-neutral, renewable energy and the function of wood products as carbon stores and as substitutes for materials with a high demand for energy.

Europe's forests in the international climate change agreements

13. All countries in Europe have ratified the United Nations Framework Convention on Climate Change (UNFCCC) and report periodically, including on the management of forests for adaptation to climate change. While a few countries have not ratified the Kyoto Protocol, a majority has assumed reduction commitments as so-called Annex I Parties. In Europe, one quarter are Non-Annex I countries and do not have quantified obligations to reduce emissions.

Challenges for the forest sector

14. Annex I countries must prepare to collect data required for obligatory accounting of carbon sequestration and greenhouse gas emissions during the 2008-2012 first commitment period from all afforestation, reforestation and deforestation since 1990. Complementary information to be reported includes prior or posterior land uses and the geographical location of affected areas.

15. By the end of 2006, countries must decide on a forest definition under the Kyoto Protocol and whether to opt for "forest management" as an eligible activity. This decision and the need to track new and former forest areas, as well as limed, drained, fertilized or burnt forest areas, will necessitate adapting or creating national forest inventory systems to facilitate carbon stock change assessments and greenhouse gas emissions. This effort will have to consider all carbon pools, that is, above- and below ground biomass, deadwood, litter and soil carbon. Effective methods to adjust traditional forest inventories to include these carbon pools are a challenge for forest assessments, particularly since national systems must be in place no later than 1 January 2007.

16. Challenges imposed by Kyoto exceed the realms of forest inventory system and carbon assessments, including

- distribution of potential carbon credits to forest ownerships and possible additional practices to accumulate added carbon;
- responsibility for paying potential carbon losses from forests (who owns the carbon in forests?);
- changes in laws related to forests and to forest policy. National forest programmes could be an effective instrument for integrating the Kyoto Protocol into the forest sector.

Opportunities

17. Carbon markets also offer opportunities for added revenues to forest owners. Prices in the EU emission trading market have exceeded Euro 80 per ton of carbon. For countries that decide to include carbon increment in forest as offsets to national emissions from fossil fuels, this value accumulates in forests with each ton of carbon. Since on average each cubic meter of growing stock corresponds to 0.4 t of carbon, carbon revenues exceed net revenues from low grades of timber. In addition, a national regime for wood energy could enhance the market and value of small timber and logging wastes.

18. Annex I countries in the European region with pressing needs in creating new forests and managing their existing forests with added revenues from carbon sequestration have the option of hosting forestry projects under the Protocol's Joint Implementation, and non-Annex I countries

may do so under the Protocol's Clean Development Mechanism¹. In this context, countries should strive to include credits from forestry projects in the EU carbon market.

19. Beyond these immediate challenges, Europe's foresters face an added responsibility: negotiations for the second and following commitment periods of the Kyoto Protocol have started. It might be advisable to shape up the role of forests in these negotiations, including by increasing forestry expertise.

20. Delegates are invited to discuss

- future forestry in light of intensifying carbon market and the challenges climate change poses for Europe's forests. What changes are needed in forestry policy and practice?; and
- ways to improve forestry expertise in the future climate change negotiations.

COOPERATION AND NETWORKING ON FOREST FIRES, WITH A FOCUS ON THE BALKAN AND MEDITERRANEAN AREAS

21. Cooperation on forest fires in the region has a long tradition. Since 1981, the FAO/UNECE Team of Specialists on Forest Fire has provided a platform for communication and cooperation among fire scientists, managers and policy makers. The main activities include (1) organization of seminars; (2) networking between governments and non-government partners especially on science and technology transfer; and (3) the production of International Forest Fire News (IFFN). The newsletter is co-sponsored by the U.S. Bureau of Land Management (BLM), the UN International Strategy for Disaster Reduction (UNISDR), the World Bank, the World Conservation Union (IUCN), (German Development Cooperation Agency (GTZ), the International Union of Forest Research Organizations (IUFRO), the International Boreal Forest Research Organisation (IBFRA) and the International Geosphere-Biosphere Programme (IGBP). The Global Fire Monitoring Center (GFMC), based in Freiburg, Germany is in charge of team coordination.

22. With the creation of the UNISDR Global Wildland Fire Network in 2002, the activities on forest fires in the region began to diversify into subregional networks and settings:

The Regional Baltic Network covers countries bordering the Baltic Sea, including the Russian Federation as well as the United Kingdom, the Netherlands and Belarus. The recent activities include a Regional Wildland Fire meeting (Helsinki, Finland, May 2004) and a regional forest fire exercise BALTEX 2000 (Kuopio, Finland, June 2000).

The Regional South East Europe Network's major activity was the "UNECE/FAO Conference on Forest Fire Management and International Cooperation in Fire Emergencies in the Eastern Mediterranean, Balkans and adjoining Regions of the Near East and Central Asia" (Antalya, Turkey, 30 March - 3 April 2004), which was followed by an "Eastern European, Near East and Central Asian States Exercise on Wildland Fire Information and Resources Exchange – EASTEX FIRE 2005". At a regional consultation in the Republic of Macedonia in 2005, the network members decided to expand its coverage to all of Southeast Europe. A proposal for a regional FAO Technical Cooperation Programme (TCP) "Development of a Strategy for International Cooperation in Wildland Fire Management in Southeast Europe" is under preparation.

The Regional Mediterranean Network covers several networking arrangements, including the *Silva Mediterranea* that includes member states of the European Union, and those countries of North Africa and the Near East that border the Mediterranean Basin. The network organized two workshops on Multilateral Assistance Against Forest Fires in the Mediterranean Basin (Zaragoza, Spain, 2003 and 2004), which laid the foundation for bilateral agreements for mutual assistance in wildland fire emergencies, first activated by the fire crisis year 2003.

¹ Moldova e.g. hosts one of two approved CDM project methodologies involving afforestation

23. Coordination of activities with the European Commission (EC) is an increasing priority. Therefore the EC, represented by its Joint Research Centre (Ispra), has joined the FAO/UNECE Team of Specialists and the UNISDR Wildland Fire Advisory Group.
24. FAO has issued Forest Fire Management Working Papers as supplements to the Global Forest Resources Assessment 2005. Thematic reports on forest fires in the Baltic, Balkan and Mediterranean Regions were published in March 2006. These documents will be available at the session.
25. Delegates are invited to review and comment on the subregional networking activities on forest fires, as well as to support the proposed TCP project to develop a subregional network in Southeast Europe.

Reference sources for forest fires:

FAO/UNECE Team of Specialists on Forest Fire: <http://www.fire.uni-freiburg.de/intro/team.html>

FAO/UNECE International Forest Fire News (IFFN): <http://www.fire.uni-freiburg.de/iffn/iffn.htm>

Regional Wildland Fire Networks with background information and statistics by countries:

<http://www.fire.uni-freiburg.de/GlobalNetworks/globalNet.html>

Global Fire Monitoring Center (GFMC): <http://www.fire.uni-freiburg.de/> or www.gfmc.org