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para la  
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## TWENTY-EIGHTH FAO REGIONAL CONFERENCE FOR EUROPE

Baku, Azerbaijan, 19 and 20 April 2012

### Agenda Item 8

## THE ROLE OF FORESTRY IN A CHANGING WORLD - A REGIONAL PERSPECTIVE

### Executive Summary

This document presents an overview of the situation of forests and highlights some of the major opportunities and challenges for forests and forestry. It invites the Conference to consider the implications of these opportunities and challenges for the region and to give appropriate guidance for the Organization for addressing them in its work.

## I. Introduction

1. Member countries of FAO's Europe and Central Asia region<sup>1</sup> represent a large and extremely diverse area. In terms of forestry, the extreme variations of climate, geography and populations in the region result in a wide variety of forest types and management systems. Being so diverse, the challenges and opportunities for different parts of the region vary considerably. In some cases those challenges may be more significant for one area than another and vice versa.

- In Europe itself, there are clear mechanisms operating, leading to sustainable forest management practices. Climatic conditions are favourable for forest growth and the majority of forests are under management plans.

<sup>1</sup> Albania, Andorra, Armenia, Austria, Azerbaijan, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Luxembourg, Malta, Monaco, Montenegro, Netherlands, Norway, Poland, Portugal, Republic of Moldova, Romania, Russian Federation, San Marino, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Tajikistan, The former Yugoslav Republic of Macedonia, Turkey, Turkmenistan, Ukraine, United Kingdom, Uzbekistan

- The situation for countries in Central Asia is somewhat different, including a dissimilar regime under which the forest sector operates. Many countries have low forest cover due to climatic conditions and are prone to land degradation and desertification. They have huge potential for land and forest rehabilitation and reforestation.

## II. Forests in the region

2. Forests cover just over one billion hectares in the region, approximately 38 percent of the total land area. Calculating the regions of Europe and Central Asia separately, the forest cover amounts to 45 percent and five percent respectively. The percentage of forest area of countries in the region ranges from almost 75 percent in Finland to one percent in Kazakhstan.

### Forest resources and their contribution to global carbon cycles

3. With forests covering nearly half of Europe's land surface and the forest area continuing to increase European forests are well placed to sequester greater amounts of carbon. Approximately 45 billion tonnes of carbon are stored in forest biomass in Europe. By comparison, forest cover in Central Asia is low and has an associated lower carbon storage (about 500 million tonnes) and sequestration rate but with a potential for increase.

### Productive functions

4. In Europe forests are growing rapidly with more than 50 percent of the total forest area designated primarily for production, compared with a global average of 30 percent.<sup>2</sup> The balance between net annual increment (NAI) and annual fellings provides a decisive criterion for the current and future availability of wood, and for shaping a stable growing stock.<sup>3</sup> The net annual increment is higher than fellings, approximately 40 percent of the increment is utilized. In the Russian Federation this ratio is about 20 percent while in the rest of Europe it is slightly over 60 percent.<sup>4</sup> However, Europe remains one of the largest producers of roundwood in the world. It should be noted that the demand for modern wood fuels is rapidly increasing in many European countries. The importance of non-wood forest products differs between countries and it is difficult to obtain a comprehensive overview of this, but it is clear that these products can be an important source of local income. Marketed services and social services (for example the sale of hunting licenses) can also be an important source of earnings for both public and private forest owners. Most forests in Europe have a management plan, that is a key tool for sustainable forest management (SFM).

5. In Central Asia, some countries with proportionally smaller forest areas (including Armenia, Georgia and Kazakhstan) have been manifesting a continuous decrease in forest areas over the past 20 years. In Central Asia less than one percent of the forest area is primarily designated for productive functions.

6. **Planted forests** constitute seven percent of the total forest area in the region. This is on a par with the global average. Planted forests can be significant in response to increasing demands for timber thereby saving primary forests. Simultaneously they can contribute to the protective functions of forests and socio-economic and recreation needs. Areas of planted forests have increased in both Europe and Central Asia in the period 2000–2010.

<sup>2</sup> FAO 2011 – State of the World's Forests 2011, Rome

<sup>3</sup> [http://www.unece.org/fileadmin/DAM/publications/timber/Forest\\_Europe\\_report\\_2011\\_web.pdf](http://www.unece.org/fileadmin/DAM/publications/timber/Forest_Europe_report_2011_web.pdf)

<sup>4</sup> [http://www.unece.org/fileadmin/DAM/publications/timber/Summary\\_FE2011.pdf](http://www.unece.org/fileadmin/DAM/publications/timber/Summary_FE2011.pdf)

### **Protective functions**

7. There is great awareness of the importance of forest management for the protection of water and soil, and for the provision of various ecosystem services, as well as for the protection of infrastructure and natural resources. Hence the valuable influence that forests have on watersheds and landscapes. Forests conserve water by increasing infiltration and reducing run-off velocity and surface erosion. Forests filter water pollutants, regulate water yield and flow, moderate floods, enhance precipitation and mitigate salinity. These functions are some of the ecosystem services that are provided by forests that contribute to better functioning watersheds and improved food security. About 10 percent of Europe's forest area is reported to be designated primarily for protection of soil and water.

8. By comparison, in Central Asia nearly 70 percent of forest is designated primarily for protection of soil and water. Clearly the protective functions of the forests that do exist in Central Asia are vital, and the sustainable management and restoration of forests in arid zones is one of the main approaches for preventing and combating desertification in the long term.

### **Biodiversity protection**

9. Notably in Europe, highest-value biodiversity occurs mainly in primary forests, however naturally regenerated forests can also reveal a great variety of biological diversity. Despite the high human population density that may inhibit the maintenance of primary forest, sustainable forest management has a history of several centuries, creating successful naturally regenerated forests that contain high biodiversity.

10. Aside from their role in maintaining and enhancing biodiversity, protected forests conserve landscapes and provide recreational opportunities. The area of protected forest in Europe has increased by around half a million hectares annually over the last 10 years due to policies to improve biodiversity.<sup>2</sup> In Europe, excluding the Russian Federation, 10 percent of forests are primarily designated for conservation of biodiversity.

11. Genetic diversity helps forests adapt to a changing climate and almost all European countries have established networks of stands or large forest areas to conserve forest genetic resources.

12. In Central Asia, conservation of biodiversity is the primary designated function of 10 percent of forests, while protective functions are close to 70 percent. Conservation of biodiversity in the region may be positively influenced by the high value of the protection function in Central Asia.

### **Forest ecosystem health and vitality**

13. Forests in Europe have suffered in the past from sulphur deposition, which has decreased over the past ten years. The tendency to acidification and eutrophication of forest soils in many parts of Europe remains an area of concern. These factors may gain increased importance under accelerated climate change scenarios and extreme events. Some 11 million hectares or 1 percent of Europe's forests are affected by forest damage. This can be due to abiotic, biotic or human induced agents, but in all cases can cause economic losses and be a threat to sustainable forest management at the local level.<sup>2</sup>

14. Forests of Central Asia are often affected by wild fires and to a lesser extent by insects and diseases.

### **Socio-economic functions and conditions**

15. In Europe, outside the Russian Federation, more than 50 percent of forests are under private ownership. In the Russian Federation and Central Asia, nearly all forests are publicly owned. While some economic functions of forests are decreasing in importance, other functions are gaining ground. The forest sector, including wood processing and pulp and paper industries, contributes on average

one percent of gross domestic product, however in recent years, many countries have shown an increase in net value added and entrepreneurial income of forest enterprises. The importance of other forest services, as a source of energy, recreation and cultural and spiritual values are increasing.

### **Driving factors of change in forests**

#### Climate change

16. Climate change is recognized as the factor having the greatest impact on humanity after poverty. Considerable effort is needed to prepare for climate-related impacts. Success depends on factors relating to biology, ecology, technology and management practices. Countries with limited economic resources and insufficient access to technology will face particular challenges in keeping abreast of the changes.

17. Adapting forests to climate change as well as mitigating the effects of climate change are extremely important. Vulnerable areas such as dry lands and mountains face particular challenges to reduce climate change impacts. At regional level, comprehensive adaptation strategies, governmental and institutional policies and programmes, and research into new technologies are needed.

#### Economic pressure

18. Wood from forests is regarded as an important means in further reducing the industrial and human ecological footprint by replacing fossil resource based energy and products with wood. Hence, industrial competition for wood is increasing, leading to higher harvesting pressure on existing forests in some parts of the region. Technologies have emerged that facilitate the production of biofuels from wood and together with fuel wood, wood energy consumption has increased by 22 percent between 2000 and 2007 in Europe.<sup>2</sup>

19. The principles of SFM require countries to use forests in a way that harvest does not exceed growth, while the region as a whole has the potential to increase the amount of wood harvested without endangering sustainability. Nevertheless, solutions are also required that ensure sound use of the available wood and wood processing should be coupled with increased recycling and reduced waste.

#### Societal demands

20. Through their different functions, forests provide essential services at all levels, from local communities to the global scale including reducing the vulnerability of society to climate change.

21. Three types of ecosystem services directly contribute to human well-being:

- Provisioning ecosystem goods: wood and non-wood forest products (NWFPs)
- Regulatory services
- Cultural services

22. While wood products are largely valued, NWFPs are not, mainly due to the absence of systems to gather and analyse NWFP data, and adequately classify and account for them. However NWFPs play an integral part in the local value of forests. Accordingly they may deserve a higher priority in national poverty alleviation policies, rural development projects and forest conservation strategies<sup>5</sup> (FRA, 2010).

23. Regulatory services cover factors that affect the ambient biotic and abiotic environment, such as flood and disaster control. Regulatory services of forests provide many direct and indirect benefits

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<sup>5</sup> FAO 2010, "Global Forest Resources Assessment, 2010 – Main Report. FAO Forestry Paper 163. Rome, Italy (Also available at <http://www.fao.org/forestry/fra/fra2010/en/>)

to humans, including clean air and water, erosion control, climate regulation and pollination and disease control.

24. For society in general, cultural services, such as recreational, spiritual, or religious services, are gaining in importance. With increased urbanization, there is a higher demand for recreational activities in forests. Land management activities for recreation are particularly important in forests close to inhabited areas. Unlike forest goods, many forest services, whether regulatory or cultural are not paid for. The quality of ecosystem services depends largely on the size of the forest and on the consistency of forest management between neighbouring forests.

#### Forest related economics

25. Economic activities related to forests are surpassing forestry operations and can be grouped in the following additional categories:

- Forestry
- Manufacturing of wood and wood products(wood-based industry), and
- Manufacture of paper and paper products (paper industry)

#### Wood based industry

26. The recent financial crisis has affected manufacturing in general in major industrialized countries, although it had a comparatively milder impact for developing countries. High levels of growth in developing countries have been observed particularly in primary processing industries such as the wood product industry. Trends in the three main categories (round wood as a source, sawn wood and wood-based panels as primary products) reveal an overall decreased production in Europe compared with increases in Central Asia.

#### Paper industry

27. The pulp and paper industry has undergone massive worldwide transformations in recent years. Between 2000 and 2005 alone, many mills closed in developed countries, while capacity continued to grow in less developed regions. Major changes are likely to be required for companies to remain competitive in the light of falling global demand. Contrary to many forecasts, wood pulp consumption has actually increased continuously in the region as a whole.

### III. Future challenges and opportunities for forests and forestry in the region

28. While the forest sector plays a major role in **climate change mitigation** through carbon sequestration and substitution of non-renewable energy and raw materials, it must at the same time adapt to a changing climate. This necessitates significant investment, both in Europe and in Central Asia.

29. Energy supply security and the sustainable production of renewable energy result in greater use of **wood for energy**. This development is likely to further accelerate until 2020 and beyond due to the ambitious and binding targets on energy from renewable sources, set by the EU 27 member states. The challenge is to ensure that not only is wood available but that it comes from sustainably managed forests.

30. In Europe, progress in the **conservation of forest biodiversity** has been significant although there are still challenges related to monitoring and measuring forest biodiversity. Recently set targets<sup>6</sup>

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<sup>6</sup> Oslo Ministerial Decision: European Forests 2020, paragraph 19. VI

propose to at least halve the rate of loss of forest biodiversity at habitat level, and where feasible, bring it close to zero, and take measures to significantly reduce forest fragmentation and degradation and restore degraded forests. Sustainable forest management is key to balancing the protection and production functions of forests and safeguarding forest biodiversity while meeting demands for wood. In Central Asia, proportionally more primary forests exist, and many represent valuable ecosystems of dryland forests. The forest area designated for biodiversity protection has almost doubled over the last 20 years in Central Asia.

31. Wood products are low carbon products and can help economies to significantly decrease their carbon footprint. They have the potential to play a major role in the emerging low carbon economy – by promoting sustainable production and consumption patterns, green building, green jobs in the sector, the supply of renewable energy, as well as payment for ecosystem services. As economies go greener their demand for wood may increase.

32. In Central Asia there is potential to reduce the effects of desertification and land degradation and focus on opportunities for forest rehabilitation and restoration. This will provide the opportunity for greater protection of forest functions, including soil and water conservation, and improved watershed management, with its associated improved watershed functions.

33. A new initiative for addressing challenges and opportunities was launched by FOREST EUROPE. At the Oslo Ministerial Conference in June 2011 ministers responsible for forests decided to initiate negotiations on a legally binding agreement on forests in Europe as a new means for reinforcing and strengthening implementation of sustainable forest management.

34. This new agreement should address a full gamut of issues related to sustainable forest management with a view to achieving balanced and stable continuity of all economic, environmental, cultural and social forest functions and should provide a platform for addressing changing and emerging needs and challenges in the future, taking into consideration specific national forest conditions.

35. Ministers further decided that in developing a legally binding agreement due attention should be given to global discussions on possible improvement of international arrangements on forests, avoiding duplications and seeking synergies with those instruments; and to the possibility of bringing the agreement under the United Nations umbrella. In this context FAO was invited, together with other international organizations, to service the negotiating process based upon its expertise and the resources that it can contribute within its mandate. The FAO European Forestry Commission requested FAO to contribute to the servicing of the negotiation of the Legally Binding Agreement on Forests in Europe<sup>7</sup>.

36. The Regional Conference for Europe may wish to consider the information on the status, challenges and opportunities for forests in the region contained in this report and provide guidance to the Organization for addressing them in its programme of work.

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<sup>7</sup> ERC/12/INF/6 paragraph 6