Forest Europe growing life

Implementation of ***the FOREST EUROPE Commitments***

National and Pan-European Actions 2008-2011

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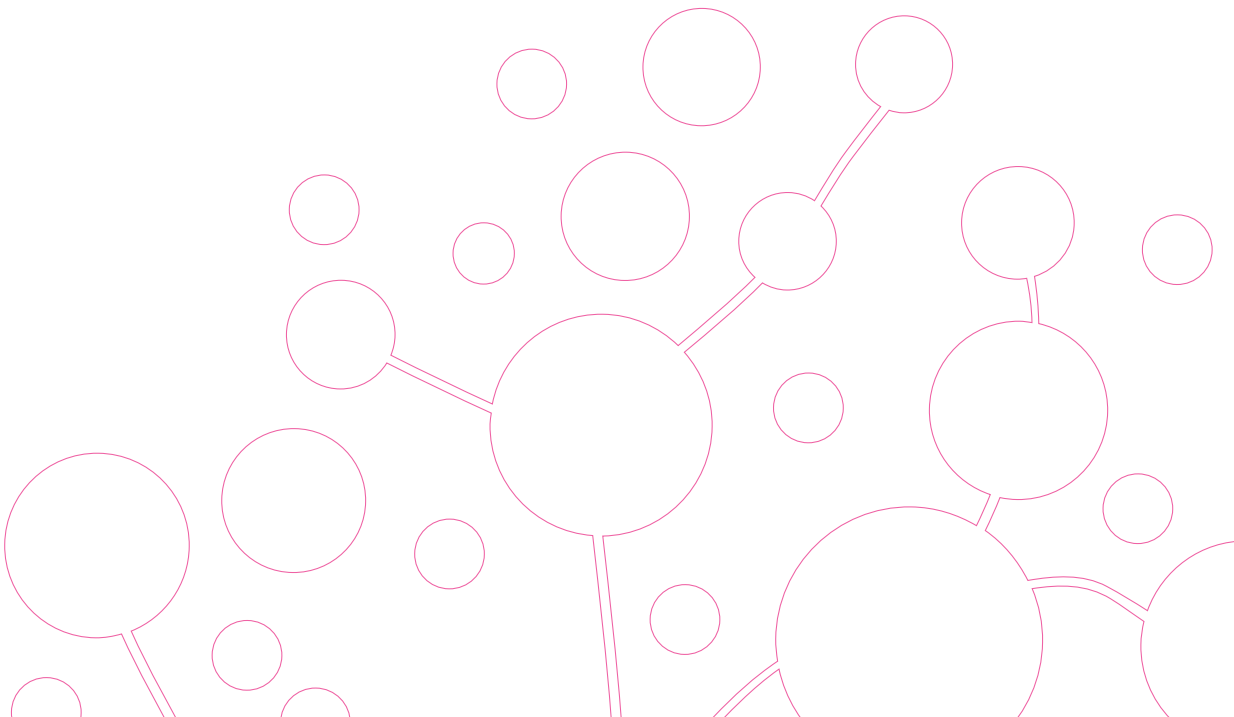

Foreword

FOREST EUROPE has developed pan-European policies and tools for sustainable forest management since the first Ministerial Conference on the Protection of Forests in Europe in Strasbourg, France, in 1990. This publication presents national and pan-European implementation of FOREST EUROPE commitments to the Ministerial Conference on the Protection of Forests in Europe, Oslo, Norway, 14-16 June 2011, focusing on activities since the Ministerial Conference in Warsaw, Poland, November 2007.

Reporting on implementation is important to evaluate progress made in putting political decisions into action, to facilitate exchange of experience across countries and to serve further policy development. This report summarises activities related to the decisions of FOREST EUROPE at national and pan-European levels in the period 2008-2011. It should be considered a reference document summarising implementation, and complements the report State of Europe's Forests 2011.

The report consists of three main parts: national implementation, pan-European implementation, and recent activities on former FOREST EUROPE commitments under the lead of designated international co-ordinators.

I take this opportunity to thank all those who have contributed to the implementation of FOREST EUROPE commitments. We thank international organisations and institutions, as well as co-organising countries, for their help and support in organising activities and actions at pan-European level. Special thanks to all those who contributed to this publication, FOREST EUROPE national correspondents for providing national reports on implementation of FOREST EUROPE commitments, and representatives of international co-ordinators for former ministerial resolutions providing information on recent developments.

Arne Ivar Sletnes
Head of FOREST EUROPE Liaison Unit Oslo

National Implementation

Introduction

The FOREST EUROPE policies and tools for sustainable forest management focus on common challenges and opportunities across Europe. The responsibility for implementation and follow-up rests mainly on signatory countries. The following reports on national implementation reflect the ways in which individual countries have followed up the political commitments agreed at European level.

It is the fifth time that national reports on implementation of pan-European commitments have been collected. For this round, the FOREST EUROPE national correspondents were asked to report on national actions related to the FOREST EUROPE commitments since the last Ministerial Conference, convened in Warsaw, Poland in 2007. The following national reports therefore do not present a complete picture of implementation of FOREST EUROPE commitments. The reports were collected together with national reporting on the pan-European qualitative indicators, that are presented in the report State of Europe's Forests 2011.

The national reports are presented in alphabetical order and as received from countries. They reflect diverse natural, economic and demographic/socio-cultural situations, presenting a wide variety of national actions and approaches, as well as priorities, from south to north, and east to west of the pan-European region. It is envisaged that the reports can facilitate exchange of ideas and experiences across countries and, through this, also contribute to facilitating further progress on sustainable forest management in Europe.

The following countries provided national reports:

Albania
Austria
Belarus
Belgium
Bulgaria
Croatia
Cyprus
Czech Republic
Denmark
Estonia
European Commission
Finland
France
Germany
Ireland
Italy
Latvia
Lithuania
Moldova, Republic of
Montenegro
Netherlands
Norway
Poland
Portugal
Romania
Slovakia
Slovenia
Sweden
Switzerland
Turkey
Ukraine
United Kingdom

Albania

National implementation of Warsaw Declaration
In implementation of Warsaw resolution focusing on the forestry resources as an integral part of natural resources, the aproach for considering that, has been inplemented in the national forestry program, focusing the wood as renewable energetic resource mainly for local community, and protective funcion of the forests for water and soil. In terms of climate change mitigation forest areas are dedicated to carbon sequestration, in the frame of credits of carbon.

National implementation of Warsaw Resolution 1 Forests, Wood and Energy
Design of communal forestry management plans with the aim sustainabe managament of forestry,, mainly as an energy resource for local population.and other services they provide. Advisory service for technical suport to local government and forestry users / owners has to be attached in the near future

National implementation of Warsaw Resolution 2 Forests and Water
Integrated management plans for watersheds has been carried out considering forestry, pasture, agricolture and other activities, with the aim protecton of soils and water in the watersheds. Coolaboration between forestry sector and water and soil sector authrities is importatnt to be harmonised.

Austria

National implementation of Warsaw Declaration
The Austrian Forest Dialogue (Austrian NFP) addresses the full range of forest issues and puts focus on topical and emerging issues. Since 2007, the Austrian Forest Dialogue was taken significant steps further. A series of workshops and other activities (publications, studies etc.) was carried out in implementing the NFP's plan of action.

National implementation of Warsaw Resolution 1 Forests, Wood and Energy
Adoption of a national renewable energy action plan according to Article 4 of the EU-Directive on the promotion of the use of energy from renewable sources by June 2010 on the basis of the Austrian Energy Strategy, setting out Member States' national targets for the share of energy from renewable sources consumed in 2020, taking into account i.a. existing biomass resources and the mobilisation of new biomass resources.

In January 2009, the Federal Research and Training Centre for Forests, Natural Hazards and Landscape published the study «Holz- und Biomasseaufkommen für Östereich (HOBI) – Wood and Biomass Supply in Austria» commissioned by the Federal Ministry of Agriculture and Forestry, Environment and Water Management. One major goal was to provide answers to the question of renewable energy from forests and the future availability of wood.

National implementation of Warsaw Resolution 2 Forests and Water
The relation between forests, their management and water has been addressed since long in Austria and is institutionalized in form of the Austrian Service for Torrent and Avalanche Control. A special focus was on forest management in watersheds in mountainous areas. As in response to floods in the lowlands, in 2002 the business field «Protection Against Natural Hazards» was established for better coordination of forest and water related policies. In recent years, emphasis was given to coordinating spacial planning, risk analyses, research and development. A special focus is put on adaptation to climate change.

Belarus

Major activities since 2007 in implementing former commitments of the Ministerial Conference on the Protection of Forests in Europe

Vienna Resolution 1

The Austrian Forest Dialogue (Austrian NFP) engages stakeholders and experts from 80 different organizations and institutions on a regular basis in a structured long term oriented process. It is the main instrument for cross-sectoral cooperation on forest related issues in Austria and widely considered a role model in new governance. Aside the ongoing implementation of its plan of action, at present, the whole process and programme are undergoing a thorough through evaluation that will provide the basis for setting new priorities and adjustments.

National implementation of Warsaw Declaration

The practical implementation of the principles of sustainable forest management and use is guaranteed in Belarus through the annual increase in felled timber, the economic and environmental security of the State, the stability of the national economy, maximizing the revenue from other uses of forest resources, strengthening the environmental role of forests as the most important factor in nature conservation.

From 2007 to 2010, the quality of forested areas in the Republic of Belarus improved: the total wooded area (forested land) increased fro 8.5 to 8.6 million hectares; forest coverage of republic increased from 38 per cent to 38.5 per cent; average timber per hectare – from 186 to 196 cubic metres.

The forests of the Republic play an increasingly active role in meeting the basic needs of the population of rural areas and cities, and in reducing factors that have a negative impact on the climate. Owing to the implementation of development programmes for specifically protected forest areas, forest biodiversity, including genetic resources, is being supported, regenerated and increased. The increase in wood supplies and the development of new technologies are enabling an increase in the importance of the use of timber as a renewable raw material for energy production. Improvement of forestry legislation with regard to forest water conservation is strengthening the role of forests in conserving and increasing the quantity and quality of water resources, and enabling a decrease in natural flooding, drought and other unfavourable natural phenomena.

With regard to international cooperation, a system has been developed for international, intergovernmental, NGO processes in respect of forest management and use, forestry research, staff training, forest certification etc. Positive foreign experiences in forestry reforms have served as guidance for reorganizing the forestry sector in Belarus. The Ministry of Forestry is gradually developing cooperation with forestry departments in other countries. International interdepartmental agreements have been concluded with the Russian Federation, Poland, Lithuania, Latvia, Slovakia and Sweden, and under the aegis of international organizations (the social forestry movement, the Pan-European

Forest Certification Council, the FAO Committee on Forestry) and States Members of the Commonwealth of Independent States (in the context of the Inter-Governmental Council for Timber Processing and Forestry).

Despite the positive trends in forestry dynamics in Belarus, there are still problems that are impeding the increase in the effectiveness of forest management and State revenue from forest resources; Small proportion of mature standing timber, especially conifer and hardwood varieties; Inappropriate species structure of forests; Lack of an effective structure for forest management, including grouping together into one management category all functions related to planning and carrying out timber felling and functions related to forestry maintenance; Low level of revenue capability from forestry owing to low timber prices; Lack of up-to-date technology for forest regeneration, timber harvesting and forest maintenance activities.

National implementation of Warsaw Resolution 1 Forests, Wood and Energy

Timber use is the economic basis of forestry and its level of intensity. There are various uses, with a main focus on timber stocking. The total timber stock for the period 2007–2010 increased from 1.47 to 1.57 billion cubic metres. The proportion of mature and overmature timber increased from 11.6 per cent to 12.6 per cent. As a result, it is possible to maintain the increase in all types of cut timber in order to meet the timber needs of the national economy, the local population and that required for export to European countries. In 2008, the total timber harvest amounted to 15 million cubic metres. Problems that remain to be solved include: Incomplete use of all fellable areas, owing to a lack of forest roads that can be used year-round; Lack of demand for significant amounts of softwood timber owing to a lack of technology and equipment for advanced timber manufacturing.

In order to increase the effectiveness of the forestry sector, as well as to diversify sources of heating and electrical energy, from 2007 - 2010 steps were taken to increase the use of previously unused timber fuel resources, and to develop the infrastructure for the storage and transport of timber fuel supplies to direct consumers, including mini thermal power stations that are either already in use or under construction. The proportion of timber fuel used is increasing owing to the following programmes adopted by the State: Targeted programme to guarantee that no less than 25 per cent of heating and electrical energy is produced using local fuels and alternative sources of energy until 2012; The State comprehensive programme for modernizing the main production facilities of the Belorussian energy system, energy efficiency and increasing the proportion of local fuel resources used from 2006–2010. Timber fuel stocks include:Waste from timber cutting; Wood from planned felling; Forest waste; Fallen timber and dead wood.

In order to introduce the use of state of the art technology and techniques for the collection, transportation and processing of forest waste and dead wood, technical projects have been developed entitled «Comprehensive technology for the storage and processing of timber supplies for progressive techniques in energy use», and «Technical requirements for machinery for the production of wood chips and their transportation». In line with these requirements, the Ministry of Industry of the Republic of Belarus has developed mobile and stationary drum chippers and trailer-mounted wood-chippers with engines. The storage and transport of wood fuel supplies for each power producer is conducted through individually developed projects. One continuing problem is the lack of demand for large quantities of wood fuel owing to the lack of techniques for the collection, transportation and chipping of timber and wooden waste materials from timber felling and wood processing for use as a type of wood fuel for heating and electrical energy.

National implementation of Warsaw Resolution 2 Forests and Water

Under the Forest Code of the Republic of Belarus, forest coverage in the Republic includes designated water conservation zones (highly protected forest zones, and forests bordering water conservation areas on the banks of rivers, lakes, reservoirs and other bodies of water). The area of water conservation forests totaled 1.51 million hectares on 1 January 2010, which was an increase from 0.04 million hectares in 2007. Specially designated water conservation forests account for 16 per cent of forested land in the Republic.

Belgium

Furthermore, all forests in the Republic contribute to some degree to water conservation.

In order to optimize forest coverage and hence increase the water conservation functions of forests a sectoral programme is currently being developed for forest regeneration, forest cultivation and increasing forest coverage in the Republic of Belarus until 2020.

In order to incorporate the principles of sustainable land use into national policy, a programme to overcome land degradation has been established. The following measures will be taken with a view to overcoming land degradation and optimizing land use in forest management: Improvement of legal provisions; Implementation of a system to increase the proportion of partial felling to 25 per cent; Planting forests on unforested lands; Recultivation of forests on lands destroyed by quarrying of non-metallic minerals; Planting forests on land used for peat excavation in order to prevent erosion; Integrate sectoral principles for sustainable management into national plans and programmes, and develop mechanisms for the implementation of these principles in land use for economic purposes;Improve scientific, informational, educational and technological support for conservation and sustainable land use.

Major activities since 2007 in implementing former commitments of the Ministerial Conference on the Protection of Forests in Europe

In order to implement the Strasbourg Resolution (S1), forest monitoring has been conducted exclusively on the European system of 16 x 16 km since 2007.

In order to implement the Helsinki Resolution (H1) a programme for the development of forest management in the Republic of Belarus from 2007–2011 was developed and is being implemented. The programme for 2011–2015 is currently being drafted.

In order to conserve the biodiversity of European forests (Helsinki Resolution H2), a new schema for specifically protected natural areas is being developed.

National implementation of Warsaw Resolution 1 Forests, Wood and Energy

Research has been developed on:

- impact of the harvest of small residues on the nutrient cycle and soil fertility;
- possibility to increase the share of wood energy: the study show that the potential increase is low in forest and in the forest sector, but potential harvests exist out of forest, or by energetic plantations (short rotation coppice) in agricultural land.
- an «Wood Energy plan» has been launched in Wallonia, for projects at a local level (municipalities).

Projects are developped for the constitution of owners groups, with the aim to improve the management and the infrastructure and to increase the harvest.

National implementation of Warsaw Resolution 2 Forests and Water

In the new forest law in Wallonia, some former water protection recommendations became mandatory for forest owners: no drainage, limitation of clear cuts size, no conifers along rivers, no pesticides in forests; specifications for harvest operations are also given, to avoid damages on soils and water. The general objective, considering the risk of droughts, is to keep water in forest soils and to limit the evapotranspiration.

A «plan-pluies» in Wallonia has been launched to avoid or limit the risk of floods. One of the objectives is to keep excess of rain longer in the head of the watersheds, by actions at the landscape level. Forest management mentionned above are included in this plan.

A multidisciplinary expert group has elaborated a report on the impact of climate change on walloon forests, on the role of these forests and wood on the carbon balance, and on recommandations for the forest policy makers and managers. (see above). The main recommandations are included in Forest Law.

Relations between forest, water and climate change are included in these recommandations (see above).

Bulgaria

Research is developed (research framework between fotrest service and universities) on these relations, as per example the conception of maps giving the risk of water stress (taking into account soils, topography and the forest species in place). The role of silvicultural methods (like continuous forest cover, dynamic siviculture...) on water cycle are also evaluated, both with a qualitative and quantitative approach..

Major activities since 2007 in implementing former commitments of the Ministerial Conference on the Protection of Forests in Europe

Principles and criteria of sustainable management are now explicitly included in forest laws. (Helsinki resolutions);
SFM Indicators are periodically evaluated in regional forest inventories, and are used to improve the forest policies. (Lisbon 2).
PEOLG are largely used in the management practices and recommandations, and are also used in the SFM certification schemes, especially for PEFC certification. (Lisbon 2).

National implementation of the Warsaw Declaration

1. Participation in an INTERREG IV C project FutureForest with main vision: «Through regional cooperation to establish instruments, methods, policies and programmes to support the forest owners and decision makers to carry on securing the multiple benefits from the forests and to leave for the next generations forests that are well adapted and flexible to nature risks and climate changes». The topics within the project are related to important aspects of forest management like: impact upon the circle of water, relation with Framework Directive 2000/60/EC for the water policy; impact upon the soil preservation; relation with Framework directive COM (2006) 232 for soil protection; biodiversity impact, relation with NATURA 2000; upon the timber production (economic function); negative or positive impact upon the tree species; will the carbon sequestration increase; increase the risk of nature disasters like forest fires, pests and diseases);

2. Elaborated Concept for sustainable, multifunctional and close-to-nature forest management under Phare Twinning Light project «Strengthening of the administrative capacity of the State Forestry Agency in the field of implementation of the requirements of EC Resolution from 15th of December 1998 for the EU Forest Strategy, EU Forest Action Plan and other legislative documents related to sustainable, multifunctional and close-to-nature forest management».

National implementation of Warsaw Resolution 1 Forests, wood and energy

1. See 2 above.

2. As a part of the implementation of a project «Assistance to the forest sector reform in Bulgaria» was prepared an analyses of the forest infrastructure and the timber supply chain, as well as a review of the timber market and wood processing industry development. Concept for development of combined forest and wood processing sector was elaborated, as well as proposal for Action Plan with 41 priority issues in relation to mid term strategic development of the Bulgarian forest and wood processing sector.

3. As a priority goal in the Bulgarian forests management, EFA had a goal for enlarging the share of utilization of the woody biomass from the forests for energy production (RES). **Other goals of** the management are related to establishment of Intergovernmental council for scientific services, participation in implementation and introduction of European an world practices and initiatives in relation to the prevention and forest adaptation to the climate change, as well as improvement of the cadastre and data base for Bulgarian forests via introduction of satellite technologies.

4. Within the implementation of a project under the Operative Programme Administrative Capacity «Strengthening the transparency and reporting of the EFA Activity» a Communication strategy and media-plan for the agency have been elaborated as an important tool for improvement the transparency and reporting to the community for the activities of the state forest sector, as well as the improvement of their image. In the framework of this project has been optimized the EFA web page, have been created web pages of all Regional Forest Directorates, Nature Parks Directorate, Forest protection and Seed control stations at EFA, and also a related training has been organized. Via these web pages the people and business representatives can obtain aster and easier information for the status problems and services in the state forest sector, also to look at up-dated of national strategic documents, incl. National Strategy for sustainable development of the forest sector in Bulgaria (2006–2015) and Strategic plan for forest sector development (2007–2011). The project started with the establishment if 4 regional information centers in Varna, Veliko Tarnovo, Stara Zagora and Sofia. There each citizen or company can obtain information for the auction for entrusting the harvesting or timber sale, how to buy fuel wood, information about the management and utilization of the forests and the game, and other related to administrative and other services in the forests.

National implementation of Warsaw Resolution 2 Forests and water

1. Ministry of Environment and Waters is responsible for the Vision for elaboration of a national strategy for development of the water sector till the end of 2010. We hope there will be a visible link between the forests and the water.

2. In 2009 started a SEE project Climate change and impacts on water supply relates to establishment of methods and instruments to forecast the influence of the land use changes upon the waters, as well as elaboration of proposals for measures for adaptation of the water management to those changes and identification of a suitable model for quantity appraisal of the climate changes on the watershed level via analyzing the water balance.

Specific goals of the project:

- Identification of future stock of drinking water related to climate changes and land use changes impact
- Demarcation of the anthropogenic influence and natural one upon the water stocks and their protection
- Establishment of common tools for risk appraisal related to the supply of drinking water in the conditions of changing climate
- Establishment of suitable technical measures and legislative base in order to diminish the negative influence of the climate change and land use changes upon the water management
- Proposals for economic and social measures
- Establishment of system for optimization the supplies from drinking water
- Experience exchange in Southeast Europe, awareness raising and proposals for a common approach for sustainable trans-national water management
- Proposals for measures towards the local structures and the society as end water users

3. In 2009 started a SEE project «Practical Use of MONITORing in Natural Disaster Management» with main goals: minimizing the specified discrepancies in the information flow, development of instruments and procedures for introduction of different information sources; improvement the access and effectiveness in the plans for disaster and risk maps; improvement the information reliability; analyzing the necessity of the different societal groups to specialized information.

Expected results:
Development of a common integrated monitoring system, analyses, simulation modeling and risk management related to floods and torrents on the bases of research done,

Croatia

collected data and aliases done in the framework the this MONITOR project in a pilot region within the watershed of river Varbitsa. The system will aim to preserve data from past events and to support a dynamic map of the risk zones and objects; to report the diverse activities and regimes in different plans and projects; to warn the stakeholders when the risk is higher than definitive level; to model the dynamic processes related to consequences of high waves (risk zones, flood zones, torrent energy and etc.).

National implementation of Warsaw Declaration

Better coordination and synergy of national forestry and water management policy is advanced and enlarged since 2007 by founding a new ministry - Ministry of Regional Development, Forestry and Water management.

National implementation of Warsaw Resolution 1 Forests, Wood and Energy

Strategy of Energetic Development in the Republic of Croatia, from October 2009 (OG 130/09) anticipates, in its basic projection, a participation of renewable energy resources in brutto direct energy consumption of 20 % until 2020. In mentioned amount, 33 % or 26,47PJ could be content by biomass.

According to the National Energetic Report (presented at workshop «Policy options for wood energy», Dubrovnik 2009.) the Republic of Croatia has had installed capacities for heating energy production on 512MW (annual production 13 380TJ) and installed capacities for electricity production on 2MW (7,02 GWh).

In 2007, «Hrvatske šume» Ltd. initiated founding of daughter-enterprise - «Šumska biomasa/Forest biomass» Ltd. whose goals are market establishing and more effective use of forest biomass through collecting of wood and wooden chips.

HEP Group (National electricity company) was founded in October 2006 HEP - Obnovljivi izvori energije (HEP Renewable Energy Sources), a daughter-enterprise of Hrvatska Elektroprivreda, for the purpose of grouping and supporting projects by renewable energy resources.

In October 2007 HEP Group and «Hrvatske šume» Ltd. have undersigned the «Contract on cooperation in the area of renewable energy resources» which contains necessary preconditions for use an idle forest biomass as the main energy-generating product for planned power plants on biomass.

National implementation of Warsaw Resolution 2 Forests and Water

The sustainable forest management in Croatia is planned through Forest Management Plan of the Republic of Croatia, valid from 2006-2015. This document regulates manage-

ment methods according to Forest Law and it is harmonized with conditions and measures on the nature protection.

The Nature Protection Act (Article 123, OG 70/05), through Forest Management Plans, regulates the establishing of protected (tampon) zones around water streams and sources. In those zones forest falling is prohibited, aiming to abate erosion and to protect an adequate water regime. Mentioned measure is one of conditions of nature protection, regulated by the Decision of the Ministry of Culture (KLASA:UP/I 612-07/05-33/648, URBROJ: 532-08-02-01/9-06-4).

The Water Act (OG 107/95 and OG 150/05) regulates that water infrastructure and facilities must be projected and constructed on the way that do not cause damages on forests and other flora and fauna, on the property or on the law based interest of the other persons. The new Water Act is in progress.

Major activities since 2007 in implementing former commitments of the Ministerial Conference on the Protection of Forests in Europe

S1: «Monitoring of forest ecosystems»
Ordinance on the data collecting, grid, register and usage of the data on damages in forest ecosystems (OG 129/06) prepared the conditions for operative data collecting input in the unique data base and enhancing data with domestic and foreign institutions and bodies.

95 permanent bioindicating points for monitoring are established and managed by Croatian Forest Research Institute (National centre for coordination).

Data base on forest ecosystems damages and WEB GIS for presentation of data base are operating since 2006.

S2: «Genetic resources»
In 2009, Republic of Croatia adopted the Act on Forest Reproductive Material (OG 75/09) completely harmonized with Directive 1999/105/EZ. The same Act regulates establishing of Seed Saving Bank, Gene Bank and Seed Bank of forest tree species in order to prevent the shortages of forest reproductive material intended for cultivation of the planting stock necessary for sustainable forest management and conservation of forest genetic resources.

National network plans for ex- and in-situ methods of genetic variety protection in economic tree species stands are developed.

S3: «Data bank on forest fires»
The Forest Law (OG 140/05, 82/06 and 129/08) regulates founding of the Forest Fires Register. The Register is in operational use at Ministry of Regional Development, Forestry and Water Management since 01.01.2009.

On the base of the Ordinance on the data collecting, register and usage of data on forest fires (OG 126/06) data input about fires has to be done in the Register by «Hrvatske šume» Ltd. and Forest Extension Service in 8 days after fire extinction.

S4: «Adapting the management of mountain forests to new environmental conditions»
Since 2008, Republic of Croatia is a partner in the INTERREG IVc, the EU program dedicated to regional issues and valorisation of mountain areas and forests.

Local and regional authorities of Lika and Gorski kotar, mountain regions extremely oriented to forests and rich with this heritage, are trying to nominate projects for developing forest general benefits which could, directly or indirectly, strengthen local economy and life. Main reason of local communities engagement for adapting on the new environmental conditions is a mass apparition of fir tree dieback (Abies alba). From economic aspect, fir is one of the most valuable and at the same time, most damaged croatian trees because of unfavourable factors synergy, such as long dry periods during last past years. The fir tree dieback is comming very troublesome. Mentioned dieback occupies more than 100 000ha.

S5: «Expansion of the EUROSILVA Network of research on tree physiology»
Since 2006 Republic of Croatia participated in the working group «Ecophysiology of European beech populations and their sensitivity to changes in climate» which is a part of

COST Action E52 «Evaluation of Beech Genetic Resources for Sustainable Forestry». The scientists from Croatian Forest Research Institute and Faculty of Forestry in Zagreb participated in joint researches with their colleagues from Europe on more workshops which main themes were ecophysiology of European populations of the beach (Fagus sylvatica).

Croatian Forest Research Institute and Faculty of Forestry in Zagreb are making a joint research of the oak (Quercus robur) physiological characteristics as economic most valuable tree specie, cooperating with their colleagues from Slovenia, Austria and from other countries.

S6: «Research into forest ecosystems»
The Agency for Nature Protection (AZO) made (and carries on) ISZO – Infosystem for Nature Protection which contents (since 2007) a Data base on forest ecosystems damages in the Republic of Croatia with description of forest phytocenosis (http://ostecenost-suma.azo.hr) and the Base of proposed localities and points for permanent soil monitoring in Croatia (http://motrenje-tlo.azo.hr).

The data are collecting by Croatian Forest Research Institute and Faculty of Forestry in Zagreb and they are a base for an annual update of Infosystem for nature protection.

H1: «General guidelines for the sustainable management of forests in Europe»
The international FSC certificate proves a professional and responsible forest management on the principles of sustainable management. The same certificate is renewed for all state owned forests, valid from 2007-2012. The Forest Extension Service is trying to prepare conditions to attach a FSC certificate for privately owned forests (22 % of total forest area in Croatia). That will be possible to realise after preparing of forest management plans for all private owned forests.

H2: «General guideline for the conservation of the biodiversity»
The Forest Law (2005.) emphasizes a main goal – biodiversity maintenance and management ensured on the principles of economic viability, social responsibility and ecological acceptability.

The Act on Forest Reproductive Material (2009) protects forest biodiversity by adopting forest reproductive material on the habitat and ensuring that forest rehabilitation is realised according to the principles of the protection of forest genetic resources.

A primary goal of the Nature Protection Act (OG 70/05) is to conserve and restore the present biological and landscape diversity in the state of natural equilibrium and harmonized interactions with human activities.

H3: «Cooperation with countries with economies in transition»
Research Centre of the Croatian Forest Research Institute was founded in Varaždin in 2009. Thanks to the decision of European Forest Institute (EFI), the Regional Office of the European Forestry Institute for South-East Europe (EFISEE) began working in Varaždin. By its activities, EFISEE will support and cover the whole region of south-eastern Europe.

As an active member of FOPER program (The Forest Policy and Economics Education and Research) the Republic of Croatia supports a capacity enhancement and education on modern forestry policy and management in the region of so called Western Balkan, through magisterial studies (coordinated by EFI).

H4: «Adaptation of forests in Europe on climate change»
Since 2006, CARBONPRO project, intended for determining of carbon balance and absorption in the forest biomass, is in implementation.

In February 2010, Croatian Government adopted Decision on Adoption 5. National report of the Republic of Croatia to the United Nations Framework Convention on Climate Change (UNFCCC, OG 24/10). In chapter 4.4.6. «Measurements and activities in using land sector, changes in using land and forestry» implemented measures to increase CO2 elimination are described:
MCP-1 Improvement in forest management in private owned forests;
MCP-2 New forests rising on the uncovered forest land;
MCP-3 Taking a part of degradeted agricultural areas

covered by succession into forest management
MCP-4 Improvement of CO2 sequestration into forest soils
MCP-5 Improvement in agricultural land management.

L1: «Socio-economic aspects of sustainable forest management»

In October 2007, «Hrvatske šume» Ltd. renewed a group FSC certificate on 5 years. FSC acreditated certification means a forest managing according to strict ecological, social and economic principles. Sustainable forest management according above mentioned principles, besides acknowledgement to several century old croatian forestry heritage, is a precondition of general development and dedication of rural habitants on the surrounding forests too. A group FSC certification system in «Hrvatske šume» Ltd, in this moment, is the biggest on the world.

The Forest Extension Service, founded in 2006, is a public institution whit main goal to improve forest management in private forest. Reasons for founding are:

- 47,5 % of the territory of the Republic of Croatia are covered by forest and forest land
- 22 % of forest and forest lands are privately owned (cca 600 000ha)
- cca 600 000 private owners
- estimated growing stock in private forest is cca 148m³/ha and in the state owned forests cca 233m³/ha
- international obligations in sustainable forest management.

L2: «Pan-european criteria, indicators and PEOLG for sustainable forest management»

The Forest Law (2005) regulates sustainable and ecologically acceptable management for all forests in the Republic of Croatia by applying principles of natural composition and natural rehabilitation. Forest Management Plan, valid for 10 years (according to the Ordinance on Forest Measurement, OG 111/06, for all state owned forests) is the base of mentioned management. It takes into account, as the Forest Law too, six pan-european criteria for sustainable forest management.

V1: «Cross-sectoral co-operation and national forest programs»

The National Forest Inventory (CRONFI) is multifunctional and integral data collecting on forest condition required for forest policy and forest operative sector, ecology, hunting, environmental and nature protection, wood industry, governmental and international organizations needs for the purpose of a quality planning in forestry. This first National Forest Inventory in the Republic of Croatia is in final stage and will present surfaces, wood stocks and forestry resources assessment as basic inputs for more quality and responsible sustainable forest management in the national forestry.

National Forestry Policy and Strategy (OG 120/03) analyzes condition and gives directions for development of croatian forestry on the base of sustainable forest management. Through seven integral units, it presents condition and priority goals of complex forestry sector:

1) management in forest ecosystems
2) forestry administration and legislation
3) non-wood products - tourism, hunting and other products of forest and other wooded land
4) wood industry
5) environment and physical planning
6) education, research and international commitment
7) public awareness and publicity.

V2: «Economic viability of sustainable forest management»

Croatian forestry has more than 250 years long tradition in sustainable forest management. Professional and engaged synergy in forestry - science and operative sector - constantly demonstrates that the sustainable forest management is the only way to keep and enlarge forest economic viability. The importance of general benefits forest function is, at least, equivalent to, economic measurable, wood exploitation. Legislative support for this is given in Forest Law (2005) which, by incorporating six pan-european criteria for sustainable forest management, explicitly enforces tradition of sustainable management with national forest heritage.

V3: «Social and cultural dimensions of sustainable forest management»

KEC project (Karst ecosystems), a program on karst and subsoil ecosystems conservation finished in 2007. It contains

many coordinated institutional, professional and educational activities aimed on conservation of biological and landscape diversity. The same project supported sustainable natural resources management according socio-economic development in local society. Financed by Global Environment Fund (GEF) and Croatian Government, this project covered karst area of Croatia mountainous regions due to their extraordinary natural values on the european and global level.

Concerning social dimension, one of great results of mentioned project was Program of small donations – subventions to local society for activities which try to demonstrate possibilities for natural resources management and their protection (www.kec.hr).

V4: «Forest biological diversity»

Republic of Croatia is a country with great biodiversity, and therefore is obligated to conserve this valuable resource to NATURA 2000. The proposal of NATURA 2000 in Croatia will present an ecological network with many locations as key anchorages for long-term conservation of endangerous and rare species and habitats. Intensive researches on biodiversity in Croatia are in progress and their results will be incorporated in the Proposal filling in the same time a data base of NATURA 2000.

Monitoring of biodiversity is one of most important duties of the National Institute for Nature Protection (central institution for professional works on the nature protection in the Republic of Croatia, founded by Croatian Government 30.10.2002.).

The National Strategy and Action Plan on Protection of Biological and Landscape Diversity is a basic and strategic document on the nature protection in the Republic of Croatia (OG 81/99 and OG 143/08).

Forest Law (OG 140/05, 82/06 and 129/08) regulates the cultivation, protection, utilization and disposition of forests and forest land as a natural resource with the objective of preserving the biological diversity and ensuring the management based on the principles of economic sustainability, social responsibility and ecological acceptability. It also obligates to manage forests by preserving and improving the biological and landscape diversity and taking care of protecting the forest ecosystem.

V5: «Climate change and sustainable forest management in Europe»

National FRA 2010 (Forest Resources Assessment) report shows an increase in total forest area in the Republic of Croatia, from 2 078 289 (1996) on 2 402 782ha (2006).

The surface of the protected forest is significantly increased – for 41,6 % since 1996 (from 90 313ha to 154 539ha). The tendency on increasing of protected forest surface is evidenced in forest management plans. Their authors marked surfaces which have to be included in procedure to be pronounced as protective forests.

Cyprus

National implementation of Warsaw Declaration

At the time of the Warsaw Conference, many commitments of Warsaw Declaration were already in the phase of implementation through the strategy known as the Rural Betterment Strategy for the forest sector adopted in the National Forest Programme. This Strategy aimed at safeguarding forest resources for the benefits of the whole community. The strategy has been implemented with the following actions:

- Action to protect and enhance forest cover, water supplies, wildlife and the national heritage in State forests
- Afforestation and reforestation of degraded land
- Safeguarding particular places which have outstanding scenery, cultural importance, exceptional ecological or scientific interest, and developing them for recreation and tourism where this does not conflict with conservation aims.
- Encouraging, guiding and controlling recreation and tourism development through local plans, zoning and development permits
- Providing information and publicity about the forest and the flora and fauna they contain, directed particularly at schools, colleges, tourists and the general public

The NFP coved the period 2000-2009. At the beginning of 2010, the revision of the NFP has started and a new NFP will be prepared by the end of 2010.

National implementation of Warsaw Declaration 1: «Forests, Wood and Energy»

The productive potential of the Cyprus forests and other wooded land is low due to unfavorable climatic conditions. As a result, Forests and OWL are managed mainly for non wood products and services and emphasis is given on recreation, protection of biodiversity and on the protective functions. Therefore, under these conditions, the forests can not support the production of raw material for energy production.

National implementation of Warsaw Resolution 2: «Forests and Water»

The forests provide various protective functions and have a close relationship with the water resources. For this reason, sustainable forest management is of vital importance for the supply of good quality and quantity of fresh water and for combating desertification.

The Department of Forests which is the responsible body for the management of forest takes the following measures and management practices to protect the water resources:

- Expansion of forest cover in the lowland, particularly in marginal areas and abandoned agricultural land
- Reforestation and afforestation of degraded land
- Monitoring of air pollution and air pollution effects and other factors and agents that have an impact on forests
- Protection of Forests against forest fires – prevention – suppression - restoration
- Avoiding the use of pollutants in forest areas
- Public awareness
- Conservation of ecosystems, flora and fauna
- Forest management plan for state forests

The Department of Water Development which is the responsible body for the Water Framework Directive cooperates with all interested parties, including the Department of Forests, in order to prepare water management plans for all watersheds.

The Department of Forests is going to develop forest management guidelines for measures regarding soil and water protection incorporating and implementing many aspects of Warsaw Resolution 2 for «Forests and Water».

Czech Republic

National implementation of Warsaw Declaration

The Czech Republic is recognising the importance of messages in the Warsaw Declaration and resolutions. In accordance with those messages, there had been taken progressive steps forward at national level mostly contained in The National Forest Programme for the period until 2013 (hereinafter «NFP II»).

National implementation of Warsaw Resolution 1 Forest, Wood and Energy

NFP II - Key Action No.4 aiming «To promote and foster the use of forest biomass for energy generation» facilitating e.g. dialogue with stakeholders, analysing the existing potential wood resources and assessing feasibility and constraints of mobilising wood;

There are taking place ongoing activities of the Ministry of Industry and Trade and the Ministry of Agriculture to develop and improve data collection on the consumption of wood for energy as well as activities within the Ministry of Agriculture interlinking wood mobilising strategies with strategies of land use, agriculture and sustainable development to ensure enabling conditions for optimum wood production for the period after 2013.

National implementation of Warsaw resolution 2 Forests and Water

NFP II - Key action 3

- To enhance valuation and marketing of forest non-wood benefits and services:
- To create conditions and prerequisites (informative, legislative, motivational) for increased income of forest owners, e.g. through the merchandise of certain recreational and environmental services and goods including the building of efficient marketing.
- To propose and negotiate the payment of services to owners who manage their forests by using methods beneficial for water quality (rewards to forest owners for the maintenance of underground water quality) from resources outside the state budget.

NFP II – Key action 9 –

9.7 To ensure that forests and their sustainable management play active role in the maintenance and enhancement of water quality and its amount, in the mitigation of consequences of natural disasters such as floods, drought spells, avalanches, landslides, and in controlling soil erosion.

9.8 To develop coherence between forest and water management policies, and to coordinate sustainable forest management and integrated management of water resources.

9.9 To develop and introduce innovation tools, such as payment for ecosystem services or other measures, to ensure water management services provided by forests.

9.10 To provide in forest management for a sufficient protection of forest soils against erosion and degradation.

9.11 To revise the measures of technical forest reclamation and torrent control with a view to increase the retention capacity of the forests and reduce the negative impact on the natural morphology of watercourses.

Major activities since 2007 in implementing former commitments of the Ministerial Conference on the Protection of Forest in Europe

NFP II amends and complements the National Forest Programme passed by Resolution of the Government of the Czech Republic No. 53 of 13 January 2003 and fosters also the implementation of former commitments of the MCPFE.

Denmark

National implementation of Warsaw Declaration

Denmark has implemented the Warsaw Declaration in accordance with national circumstances and priorities. Examples of priority areas include an increase in funding made available for afforestation activities serving multiple objectives. Improved ground water protection and improved possibilities for out door recreation (close to cities) are amongst the key objectives. Detailed guidelines have been developed, they are updated on a regular basis. Another priority area is the further development and colaboration on public procurement policies for timber. To that end, DK organised and hosted an international workshop on public procurement policies for timber in 2008 and launched new, operational and updated DK guidelines in 2010, covering all types of timber and timber products. A third example, on global and regional cooperation, was Forest Day 3, which was organised and co-hosted by the Danish Government and CPF - The Collaborative Partnership on Forests. Forest Day 3 took place alongside with COP15 under the UNFCCC and highlighted both challenges and oppurtunities for forest's and forestrys contribution to climate change mitigation and adaptation needs.

National implementation of Warsaw Resolution 1 Forests, Wood and Energy

Proper framework conditions have paved the way for a substantial investment in combined heat and power production platforms in Denmark. Due to this the Danish harvest of wood for energy has just about doubled over the past 10 years (1998 to 2008). With an annual cut still significantly below total annual increament further future increases should be possible and is also foreseable. However, it is questionable if wood for energy from Danish forests alone will be able to meet the foreseen and even more rapidly growing demands for wood for energy in DK. Thus increased imports of wood for energy is foreseen as well.

National implementation of Warsaw Resolution 2 Forests and Water

Water protection is a key priority for the Danish allocation of sites for afforestation. Thus DK has through integrated planning identified areas of key interest for afforestation, with particularly high priority given to sensitive water resources close to larger cities. Afforestation on these sites provides protection of the ground water and at the same time excellent recreational opportunites for urban citicens. The finansial arrangements include higher grants for afforestation in such areas as well as collaboration with drinking water supply compagnies. These compagnies cover part of the costs for afforestation, in return they keep acces to clean ground water resources, which is drinkable without purification.

Major activities since 2007 in implementing former commitments of the Ministerial Conference on the Protection of Forests in Europe

An Ad Hoc advisory board on Forest Policy Development was established in 2010 by the Danish Minister for the Environment.

The task of the board is to review the Danish Forest Policy, inter alia with a view to address emerging issues on climate change mitigation and adaptation.

The board will report on its findings early 2011.

The findings of the board may serve as basis for a future revision of the Danish NFP.

Estonia

National implementation of Warsaw Declaration

The Estonian forestry has taken advantage of Forest Europe commitments including Warsaw Declaration for finetuning legal and supporting framework so that people could benefit from forests. Efforts have been made in awareness building, management planning and auctioning-off forest remaining from land reform to extend the area of sustainably managed forests. Timber provided by forests is a renewable resource for making wood based products and for energy purposes, both equally important for Estonian well-being. Forests also sequestrate carbon while growing thus balancing Estonian CO2 emissions to a great extent. Estonian Foresty Development Plan until 2020, the NFP currently under compilation, considers all functions of forests important to be addressed and competitiveness of the sector to be enhanced in co-operatin with other sectors. The most challenging of them is increasing collaboration in renewable energy production.

National implementation of Warsaw Resolution 1 Forests, Wood and Energy

Efforts have been made to enchance sustainable forest management and increase the use of wood by removing admininistrative obstacles from the Forest Act. Within the process of forestry development planning for the next ten years, the timber harvesting potential was assessed and three scenarios of possible wood supply were calculated. In order to facilitate the mobilization of wood, support system comprising public financed management planning, extention service and capacity building of owners' associations has been already been established and implemented, but will be developed futher. Co-operation with energy sector has proven to be successful due to common objectives in renewable energy production.

National implementation of Warsaw Resolution 2 Forests and Water

In Estonian forestry a lot of attention has been paid to the quality and management of water. The Nature Conservation Act foresees forest bufferzones to be maintained along waterbodies, starting from bigger ditches. Although the percipitation exceeds evaporation in Estonia, the impact of drainage to forests and water quality is also assessed and considered before the activities. Three major watermanagement plans have been prepared for the country where forest management is addressed. According to the plans forestry can and should contribute to the quality of water in rivers and lakes, mainly by buffering function. Futher studies about the influence of forestry operations to water and soil are planned to be carried out.

European Commission

Implementation of Warsaw Ministerial Commitments 2007 in the European Union

At EU level, the Forestry Strategy (FS)[1] for the EU (1998) sets out common principles of EU forestry, such as SFM and multifunctionality of forests, and lists international processes and activities to be followed at EU level. The Strategy underlines the importance of contribution with existing and future measures at the EU level with regards to protection of forests, development and maintenance of rural areas, use of wood as renewable source of energy, forest biodiversity and forest heritage as well as the role of forests in climate change. The Forestry Strategy also addresses the national forest programmes or equivalent instruments as means to facilitate implementation of international commitments by the EU member States and underlines a necessity of active participation in all international commitments related to the forest sector.

The EU Forest Action Plan (FAP)[2], adopted on 15 June 2006, is designed to maintain and enhance the multifunctional role of European forests and sustainable provision of goods and services to the European societies and is characterized by the following principles: (1) national forest programmes as a suitable framework for implementing international forest-related commitments; (2) the increasing importance of global and cross-sectoral issues in forest policy, calling for improved coherence and coordination; (3) the need to enhance competitiveness of the EU forest sector and good governance of EU forests; (4) respect for the principle of subsidiarity. While respecting the main elements of the Forestry Strategy, the FAP aims at providing a coherent framework for the implementation of forest-related actions and serving as an instrument of coordination between Community actions and the forest policies of the Member States.

The Commitments included in Ministerial Declaration and two Warsaw resolutions: *Forests, Wood and Energy* and *Forests and Water* correspond with some of the elements of the FS and with a number of Key Actions of the FAP.

Warsaw Ministerial Declaration

Competitiveness of the forest sector is a necessary basis for the multiple benefits that sustainable forestry provides to society. The forest sector has great potential to further develop high-quality and value-added products and services for the diverse and growing demands of society based on a renewable raw material source, thus contributing to a law carbon economy.

To strengthen competitiveness of the EU forest sector and enhance its contribution to quality of life of the European citizens a Communication on innovative and sustainable forest-based industries in the EU - A contribution to the EU's Growth and Jobs Strategy (COM(2008)113 final)[3] was adopted by the European Commission on 27th February 2008. It proposes an action plan to reinforce the competitiveness and sustainability of the forest-based industries to meet the economic and environmental challenges the European Union will be facing in the future, including climate change, innovation, increasing global competition and the supply of wood and energy.

The Commission also financed a study on the effects of globalization on the economic viability of EU forestry.

The Rural Development Regulation 1698/2005[4] under axis 3: *Quality of life in rural areas and diversification of the rural economy* provides possibility to support measures aimed at promoting the quality of life and the diversification of activities in rural areas. This axis is horizontal in nature and different measures may include actions relevant to the forest sector.

Research and technological development, diversification, innovation and investment in job quality and human capital are needed to develop a strong and dynamic sector capable of meeting the challenges of global change. The main instrument for funding research in Europe is the EU's Seventh Framework Programme for Research and Technological Development (FP7). From 2007 to 2013, FP7 will support research on areas such as forests and climate change, biomass for energy, forest biodiversity, use of wood and wood-based materials, forest pests and pathogens, etc. The Standing Forestry Committee in February 2008 adopted an opinion on forthcoming forest sector research activities within FP7.

[1] Council Resolution of 15 December 1998 on a forestry strategy for the European Union (1999/C 56/01).
[2] Communication from the Commission to the Council and the European Parliament on an EU Forest Action Plan of 15.6.2006 (COM(2006) 302 final).
[3] Communication from the Commission to the Council and the European Parliament on Innovative and Sustainable Forest-based Industries in the EU: A contribution to the EU's 1 Growth and Jobs Strategy (COM (2008) 113 final).
[4] Council Regulation (EC) No 1698/2005 of 20 September 2005 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD).

Under the FAP objective to contribute to the quality of life by preserving and improving the social and cultural dimension of forests actions related to environmental education and information campaigns, particularly those targeted at children, have been addressed.

Warsaw Resolution 1: *Forests, Wood and Energy*

Using wood as an energy source can help to mitigate climate change by substituting fossil fuel, can enhance the security of energy supply and improve self-sufficiency through providing a renewable domestic energy source, and can provide job opportunities in rural areas.

In April 2009, the EU institutions adopted the Directive on the Promotion of the use of energy from renewable energy sources (RE Directive)[5], which sets up a binding Renewable energy target: by 2020, the share of renewable energy sources in EU gross final energy consumption has to reach at least 20 % at EU level. This strong commitment is part of the EU overall climate and energy package. The RE Directive contains a binding sustainability scheme for biofuels and bioliquids with a list a criteria to be met for biofuels to be accounted in MS targets and to be financially supported.

The Directive required the Commission to draft a report on such requirements for solid and gaseous biomass for heating/cooling and electricity production by the end of 2009. This report was adopted by the Commission in February 2010[6]. The Commission came to the conclusion that, at this stage, there was no need for setting up a binding sustainability scheme at the EU level. However, it does not mean that no further action is needed. Therefore, the Commission recognises that solid and gaseous biomass consumption flows and national sustainability schemes potential impacts need to be closely monitored so as to assess whether further action would be needed at EU level. That is why the Commission committed itself to adopt a new report on solid and gaseous biomass sustainability requirements in 2011.

According to the RE Directive the National Renewable Energy Action Plans had to be elaborated by the Member States and submitted to the Commission by 30th June 2010. In the coming months, the Commission will carry out an evaluation of these plans which will have to identify Member States´ domestic biomass production potential and imports until 2020, as well as measures for mobilisation.

As regards activities carried out within the FAP, the Standing Forestry Committee (SFC) ad hoc Working Group on mobilisation and efficient use of wood for energy generation was launched in July 2007 with the aim to facilitate investigation and dissemination of experiences on mobilisation of low-value timber, small-sized wood and wood residues for energy production. The Working Group collected information on country experiences and good practices on wood mobilization, including policy instruments promoting the use of wood for energy production and the environmental sustainability of forest biomass use for energy generation. The group analysed the influence of forest ownership on wood mobilisation and factors inhibiting removal of more wood and reviewed the use and the potential of forest biomass. Based on the report from the working group and the SFC discussions, the opinion of the SFC on mobilisation and efficient use of wood and wood residues for energy generation was elaborated and adopted at the SFC meeting on 23rd February 2009.

The Commission financed a number of studies on these issues, including on prospects for market supply from fragmented forest structures, which concentrates on the market supply from small private properties in selected regions of the EU, and on real potential for changes in growth and use of EU forests.

Under the Intelligent Energy Europe (IEE) programme a series of projects is carried out to foster the practical application of bioenergy solutions, including the mobilisation of wood, residues and waste for energy purposes.

On 16-18th June 2009 the Commission participated in the Workshop on Strategies for increased mobilisation of wood resources from sustainable sources in Grenoble. As a follow-up a publication: *Good practice guidance on the sustainable mobilisation of wood in Europe* was jointly issued in 2010 by the European Commission, the Forest Europe process and the UN Economic Commission for Europe (UNECE)/ FAO.

In addition to the above activities, the Commission is also funding research on forests, wood and energy through FP7.

Warsaw Resolution 2: *Forests and Water*

Forests provide goods and services that benefit citizens, their health and their quality of life, including amenities and recreation, protection of soil and water and protection against erosion, desertification and natural hazards. The increasing threat of natural disasters, extreme weather events as well as erosion and desertification problems in parts of Europe highlight the importance of the protective functions of forests, among others those related to water.

The Commission financed in 2009 a study on economic value of groundwater and biodiversity in European forests in order to analyse growing vulnerability of water systems. The study report concluded that the availability and quality of water in many regions of the world are more and more threatened by overuse, misuse and pollution.

It has long been recognised that forests can play a positive role to ensure sustainable supplies of clean water by protecting drinking water supplies. Forestry usually has is no or a significant lower input of nutrients, pesticides and other chemicals than more intensive land uses such as agriculture. Forests can also protect soils and reduce erosion rates. However, afforestation measures and management practices have to be thoroughly chosen to avoid possible negative impacts on water supply and on erosion. The EU is supporting sustainable forest management and the expansion of forest cover through rural development. The improvement of hydrological services is one of the objectives of these measures, and an important consideration in the development of the rural development programmes. The Rural Development Regulation also includes measures that can be used to restore degraded forests, with positive impacts on soils and hydrology.

Most ecosystem services are treated as public goods. They neither have a price on a market, nor are they financially recognised. But this does not mean they have no economic value. In recent years, innovative financing and incentive mechanisms, including payments for ecosystems services (PES) have been recognised as effective solutions to overcome shortcomings in service provision due to market failures.

The EU's flagship legislation on water protection is the Water Framework Directive. It includes a number of key elements that respond to the commitments contained in Resolution 2, including the concept of river-basin management plans, which considers watersheds across national boundaries.
In order to exchange and assess experiences on the valuation and marketing of non-wood forest goods and services, an SFC ad hoc Working Group on valuation and compensation methods for non-wood forest goods and services was established in 2007. This working group collected information on individual country experiences, specific national and international projects, COST actions and briefings related to financing mechanisms for i.a. water services. These include possible support measures provided by Rural Development Programmes (RDP) and State Aid rules.

The study on the development and marketing of non-marketed forest products and services was completed by the Commission in 2008. Based on the reports from the working group and the study, the opinion of the SFC on valuation and financing methods for non-marketed forest goods and services was in 2009.

The Commission *Green Paper on Forest Protection and Information in the EU: Preparing forests for climate change*[7], published in 2010, recalls a major role forests play in the storage, purification and release of water to surface water bodies and subsurface aquifers. Forests' purification role, including that of forest soils, includes breaking down or absorbing most air pollutants carried by rain. Their soils buffer large quantities of water, reducing flooding. Many MS make use of the water regulating role of forests in the provision of drinking water. It also recognises that some of these functions are being threatened by climate change either directly, or by aggravating the impact of other existing pressures. The Green Paper is followed up by a public debate on whether the emerging challenges require new action.

[5] Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC.
[6] Report from the Commission to the Council and the European Parliament on sustainability requirements for the use of solid and gaseous biomass sources in electricity, heating and cooling (COM(2010)11).
[7] Green Paper on Forest Protection and Information «Preparing forests for Climate Change» (COM(2010)66) – Council Conclusions CC 10973/10 of 11th June 2010.

Finland

National Implementation of the Commitments of the Ministerial Conference on the Protection of Forests in Europe

Warsaw Declaration

Changes in the business environment

The operating environment of the forest sector has changed rapidly since 2008. As a result of long-lasting over-supplies especially in the European markets and poor price development, some of the capacity in the paper industry has been closed down in Finland. This led to a decrease in the wood sales by 2.8 million m^3 in 2008. The focus is now on new customer-oriented products and services which can be created using wood and its constituent materials in the production of, for example, bioenergy, chemicals or pharmaceuticals. Forest-based entrepreneurship will be diversified by promoting opportunities for ecotourism, the use of natural produce and forest-based service entrepreneurship.

Social and cultural aspects

The measures based on the Finland's National Forest Programme 2015 and the Strategic Programme for the Forest Sector will improve the vitality of rural areas by creating jobs and business opportunities, thus also giving a positive contribution to regional development. The growing demand for ecotourism and related services increase the employment and business opportunities in the tourism sector.

Recreational use of forests also improves the mental and physical welfare of the population. As leisure time increases and the population ages, the recreational value of forests will grow even further. The recreational use of forests is based on free access to roam in the woods, the so-called 'Everyman's right'. It is a traditional Finnish and Nordic concept that gives people the right of access to public or privately owned land and waterways. In Finland the Everyman's rights are quite wide in scope, including the right to pick wild berries and mushrooms, and they also apply to foreign citizens.

Forests have played an important role in the Finnish culture, which must be cherished and honoured. The rights of the indigenous people, the Sámi, to engage in their traditional livelihoods in northern Finland will be ensured on the basis of their cultural autonomy as set down in the Finnish Constitution.

Forests and climate change

The Finnish net sink of forests was 41. 9 million tonnes CO^2 equivalent in 2008. The net sink of forest land represented 55 % of all Finland's greenhouse emissions. The ability of forests to act as net sinks must be ensured through proper management and regeneration of forests.

Finland's National Forest Programme 2015 emphasises the mitigation of and adaptation to climate change. Increasing renewable energy production and carbon sequestration in wood products as well as making preparations for responding to the impacts are the main tools available. Finland's National Strategy for Adaptation to Climate Change is a part of the National Climate and Energy Strategy. The aim of the Adaptation Strategy is to reinforce and increase the capacity to adapt to climate change and to mitigate the costs to the society. The Strategy describes the impacts and potential adaptation measures by sectors up until 2080. Measures have been outlined for altogether 15 different sectors.

Enhancing biodiversity

Sustainable forest management is promoted by producing recommendations and manuals for practical silviculture and other forest management practices. Environmental and quality assurance systems are used and forest industry corporations and the State forest enterprise Metsähallitus have environmental management systems of their own based on the ISO 14001 standard. In addition, nearly 95 % of Finland's commercial forest area is certified according to the PEFC Finland forest certification system.

The Forest Biodiversity Programme METSO 2008–2016 aims to halt the ongoing decline in the biodiversity of forest habitats and species and establish stable favourable trends in forest ecosystems in southern Finland. The METSO Programme covers both private and State-owned lands. It is a collaborative effort between the Ministry of the Environment, the Ministry of Agriculture and Forestry, the Finnish Environment Institute and the Forest Development Centre Tapio. The programme includes conservation schemes that

are largely based on voluntary participation by landowners who are willing to safeguard biodiversity in their forests.

Forests and water

Finland is uniquely rich in surface waters: almost 10 % of Finland's total area is covered by different types of freshwater bodies. Finland has exceptionally large and pure groundwater resources, which are also used for the abstraction of drinking water. Thus, Finland can well be described as a land of clean waters. A map of the ecological status of Finland's water resources was published in 2008. It is evident that although the status of most of the country's surface waters and groundwater is either excellent or good, the water quality of the coastal areas and the open Baltic Sea has deteriorated. Although most of the point sources are under control, much remains to be done in e.g. municipal wastewater treatment. The main contributor (approx. 50 %) of diffuse loading of nutrients is still agriculture. However, measures under the agri-environment payment scheme have led to a decrease in phosphorous input by 64 % and nitrogen by 36 % within the last 10 years. Several voluntary projects also aim for improved water management measures in agriculture. Contamination of groundwater is less of a problem as there is national legislation prohibiting all actions that may cause deterioration of groundwater.

Forest management has impacts on waters through ditch cleaning and supplementary ditching, regeneration fellings and related tilling as well as fertilisation. Forest management recommendations include measures to avoid or minimise the negative effects of forest management activities on water resources.

As there are no mountain areas in Finland, forests have not the same kind of protective function for water resources and against erosion as in many other European countries. There are no particular natural hazards except for the seasonal flooding of rivers along the west coast. Forests cover 73 % of land, which is why it has not been considered necessary to apply any extensive afforestation programmes.

Competitiveness and acceptability

The increasingly technological working environment, diversifying jobs and the reorganisation of tasks calls for more versatile expertise as well as special skills in supervision and management. Education should be gathered into units with robust resources and educational ability the provision of diverse, high quality and cost-effective education. The contents of education in the forest sector will be developed to reflect current and anticipated needs of the labour market, and the university professorships necessary for the future of the forest sector will be ensured.

The Finnish Forest Research Institute Metla conducts research and generates research information about the forest nature and environment, the different uses of forests, and forestry and the forest cluster. There are several research programmes on topical issues underway, e.g. Wellbeing from forests, Functioning of forest ecosystems and use of forest resources in changing climate, Bioenergy from forests, and Safeguarding forest biodiversity. Forestcluster Ltd is an innovation company established to network top-level research and innovation in the Finnish forest cluster. Finnpro, an association founded by Finnish companies, promotes the growth and competitiveness of Finnish companies through internationalisation.

The acceptability of the forest sector can only be achieved by using the best possible professional expertise and through open and transparent actions. Acceptability must be achieved on the ethical, social, political and economic levels. It is also important that children and young people develop solid relationships to forests, sustainable forest management and forest products. This calls for cooperation between schools and forest sector authorities and companies as well as NGOs, such as the Finnish Forest Association.

Mobilisation of wood

Forest planning is used to ensure the sustainability of forestry. It gives the forest owner information about the state of her/his forests, harvesting potential and management needs. Plans for individual holdings cover silvicultural measures and other management aspects. Forests owned by the State, municipalities, corporations and other legal bodies are nearly all covered by forest planning, but the planning also covers 46 % of privately-owned forest land. The changeover to electronic system wills make it possible to offer better advisory

services for forest owners to improve their awareness of the harvesting potential and management needs of their forests.

Limited Government subsidies are granted for silvicultural and environmental measures to private forest owners, based on the Act on the Financing of Sustainable Forestry. In addition, harvesting and chipping wood for energy purposes are subsidised by the Government as well as promoted under the EU-funded rural development work and projects. Temporary tax concessions have also been granted by the Government on revenue from timber sales for transactions carried out in 2008–2010.

Coherence and cooperation

Finland's National Forest Programme 2015 was prepared in broad-based collaboration with interest groups steered by the Department of Forestry of the Ministry of Agriculture and Forestry. The Forest Biodiversity Programme METSO 2008–2016 was drawn up to complement the National Forest Programme in the conservation of forest biodiversity, and the Strategic Programme for the Forest Sector, prepared by the Ministry of Employment and the Economy in 2009, supports the implementation of the NFP. In addition, the National Forest Programme is coherent with the following strategies: the Strategy for Sustainable Development in Finland (2006), National Climate and Energy Strategy (2008) and the National Strategy, Action Plan for Biodiversity in Finland for 2006–2016 and Development Policy Programme 2007.

International forest policy

Finland participates actively in the preparation and implementation of international forest policy and EU affairs. The main events in the near future are in the context of the United Nations Forum on Forests UNFF, United Nations Framework Convention on Climate Change UNFCCC, the Convention on Biological Diversity CBD, follow-up of the Ministerial Conferences on the Protection of Forests in Europe and the preparations for the next conference (FOREST EUROPE), and forest cooperation with neighbouring and some other countries. For example, Finland supported the work of FOREST EUROPE and the UNFF by organising and hosting a Pan-European workshop «Forests in the Changing Environment» in 2008.

Finland hosted a meeting of an ad-hoc expert group on biodiversity and climate change in support of the work under the CBD and contributed to the preparation and organisation a country-led-initiative on national forest programmes in China in support of the work of the UNFF in 2009. Finland is actively engaged with several other organisations, e.g. FAO, ITTO and EFI, and participates in processes to combat illegal logging, e.g. EU-FLEGT and ENA-FLEG. The Advisory Board for International Forest Policy comprised of representatives of different sectors, organisations and interest groups assists the Ministry of Agriculture and Forestry in dealing with international forest policy issues and assessment of their impacts. There are several working groups that ensure coherence and coordination of forest policy affairs in collaboration with relevant stakeholders and actors.

Warsaw Resolution 1: Forests, Wood and Energy

I. Enhancing the role of the forest sector in energy production

The use of forest-based energy in Finland

Wood-based fuels are classified in liquids, solids and other wood fuels. Liquid wood fuels are mainly black liquor, which is a by-product of paper manufacture. Solid wood fuels, like firewood and chips, are used in heating and power plants and in small residential houses. Chips are usually made from branches and crowns, small-diameter wood, stumps or stemwood. Pellets made by compressing cutter shavings and/or sawdust are also used for fuel. Other wood fuels contain other by-products of forest industry, and they include solid or liquid wood products, like methanol or tall-oil soap. The use of wood-based fuels and their share of the total energy consumption have grown since 2001. In 2008 waste liquors and other by-products of the forest industry accounted for 48 % (144 PJ) of the consumption of wood-based fuels and the rest (153 PJ) was used in heating and power plants and in small residential houses.

The main objectives and means

Increasing renewable energy production is considered to be vital for the attainment of the climate and energy policy objectives and energy self-sufficiency in the EU. According

to Finland's Climate Change and Energy Strategy 2008, Finland is committed to increasing the share of renewables to 38 % by the year 2020. In Finland the production of renewable energy is mainly based on wood.

As a result of long-lasting over-supplies and poor price development, some of the capacity in the paper industry has been closed down, both in Finland and in elsewhere in Europe. Due to the diminished production capacity, the share of forest industries by-products of all wood-based fuels has decreased. As the capacity reductions in forest industry are likely to continue also in the future, the proportion of solid wood fuels must be increased in order to increase the production of wood-based energy. According to Finland's National Forest Programme 2015, the most promising ways for increasing the use of wood for energy is to increase the use of wood chips in heating plants and to develop the biorefinery concept at pulp mills. The main objective in energy production is to increase the overall use of wood-based energy and raise the volume of forest chips used for energy production to 8–12 million m^3 per year.

In April 2010, the Finnish Government decided to promote the use of wood in energy production with a 36 million € support package, with the main purpose of replacing fossil fuels with renewable wood energy. The use of wood will be increased up to 13.5 million m^3 per year until 2020. The support package was prepared to achieve the climate goals set by the EU. The growing volume of wood stock and the decrease of the use of wood in conventional forest industry enable the increased use of wood-based bioenergy in the future.

According to the Pellervo Economic Research Institute PTT, every 10th forest owner has sold wood for energy to the market or has given it away without receiving any income. In 2010 every 5th forest owner is planning to sell wood for energy to the market. The Strategic Programme for the Forest Sector prepared by the Ministry of Employment and the Economy in 2009 is crucial for promoting the use of wood for energy now when the market is still developing.

Research and development

Wood-based fuel production has been studied intensively in Finland. The Finnish Forest Research Institute Metla has an extensive research programme, Bioenergy from forests 2007–2011, which includes programmes studying the technology and logistics of energy wood harvesting, the economy of production chains and the ecological effects, as well as development of novel fuel products. The studies carried out within the programme have been combined with the studies under the climate change programme. Moreover, the Finnish Funding Agency for Technology and Innovation is launching a project competition for enterprises in the energy wood sector in order to activate development in 2010.

The Climate Change Adaptation Research Programme (ISTO 2006–2010) is part of the Finland's National Strategy for Adaptation to Climate Change, and it implements the Adaptation Strategy by providing funding for research aimed to produce information in support of the planning of the practical adaptation measures. The National Strategy for Adaptation to Climate Change was adopted in 2005 as an independent section of the Finland's Climate Change and Energy Strategy 2008.

The use of wood-based fuels can be an ecological alternative to fossil fuels, but energy production must take place in a sustainable manner. The main funding agency for basic research, the Academy of Finland, is financing studies related to sustainable energy production. The Finnish Forest Research Institute is coordinating the COST Action «Development and Harmonization of new operational research and assessment procedures for sustainable forest biomass supply».

Sustainability in raw material production

Energy wood harvesting must be done following the principles of sustainable forest management (SFM). Forest certification systems are a good way to verify the sustainability. Some 95 % of Finland's commercial forest area is certified according to the Programme for the Endorsement of Forest Certification PEFC Finland- certification system, which is a non-profit, non-governmental organisation dedicated to promoting sustainable forest management through independent third-party certification. The system is a part of the international PEFC. The criteria related to the harvesting of energy wood define e.g. the minimum amount of biomass left

into the forest. Certification ensures that the management of forests does not threat the valuable habitats and it takes account of the conservation of non-drained peatlands and water.

According to the Act on the Financing for Sustainable Forestry, a private forest owner may receive financial support from the Government for forest management and improvement work, as well as for the harvesting and transport of wood sold for energy production purposes in association with the management of young forests. It also applies to the piling and hauling of wood felled in connection with the tending of young stands to be supplied for energy use. Financial support is also available to the chipping of energy wood.

II. Mobilisation of wood resources

Information and advice

Finland has a reliable database of the existing and potential wood resources of the country. The Finnish Forest Research Institute Metla has carried out national forest inventories since the 1920s. Forest management plans based on field inventories can be made by the Regional Forestry Centres for all forest estates. The overall trunk volume of Finnish forests is 2206 million m^3 over bark, and in 2008 and 73 % of annual growth was utilised.

Information on wood-based energy is shared by the Regional Forestry Centres and Forestry Development Centre Tapio to encourage capacity building of forest owners and other actors. Local Forest Management Associations provide advice and information on practical matters to forest owners. There are also non-governmental organisations like Finnish Bioenergy Association FINBIO, which promotes the use of bioenergy in Finland by influencing energy policy and improving the business and R&D network through active dissemination of information. The membership of FINBIO consists of 100 organisations representing all players in the bioenergy sector in Finland.

Operational preconditions

The forest sector is the most significant user of transport services in Finland, where long distances call for efficient logistics and a traffic network that is usable throughout the year. In order to keep the road network in a good condition, the Government is subsidising forest road construction and restoration. Growing volumes of roundwood acquisition will lengthen the transport mileage and increase the need for rail and maritime transport.

The demand for labour in forest management will increase as a result of growing volumes of energy wood harvesting. This may also create possibilities to new entrepreneurs and new kinds of enterprises. Because of the demand, the Ministry of Education estimates that forest and wood-based bioenergy sector needs new labour from 1300 to 1800 persons per year.

The growing market entry of forest chips requires greater resources in the sourcing chain, and the functioning of the entire chain must be improved. The Strategic Programme for the Forest Sector contains proposals for the development of energy wood trade and price information, the measurement and promotion of harvesting and transport technologies, investments in energy wood terminals, and the reform of subsidies for energy wood procurement.

Warsaw Resolution 2: Forests and Water
Background information

Surface water

Finland is uniquely rich in surface waters, with a grand total of 187 888 lakes and ponds larger than 500 square metres, and rivers totalling 25 000 kilometres in length. Almost a tenth of the Finland's total area is covered by water, but most of these water areas are not very deep. Lakes are shallow and easily contaminated by pollution. Even relatively low concentrations of excess nutrients, acidic deposition or other harmful contaminants can easily disrupt their sensitive aquatic ecosystems.

Groundwater

Approximately 60 % of the total amount of water distributed by the Finnish waterworks is groundwater. This figure also includes water from artificially maintained reservoirs of groundwater fed from lakes and rivers. Groundwater reserves are also vulnerable to acidification in the same areas where there have been acidification problems in lakes.

Groundwater acidification usually occurs only after a long time lag, however, since it may take many years for the acidifying substances to penetrate down through the soil. Where groundwater becomes acidified, harmful heavy metals may leach from the surrounding soil into the water. Harvesting of logging waste may accelerate the acidification process.

The Baltic Sea

The total length of the intricate coastlines of the Baltic Sea in the west and south adds up to an impressive 46 000 kilometres, when the shorelines of islands are included. The Baltic Sea is also shallow, and sensitive to pollution. The Baltic Sea is virtually an inland sea, and is burdened by exceptionally heavy loads of contaminants originating from its extensive catchment area, which is home to more than 80 million people.

I. Sustainable forest management in relation to water

As there are no mountain areas in Finland, forests have not the same kind of protective function for water resources and against erosion as in many other European countries. Forests cover 73 % of land, which is why it has not been considered necessary to apply any extensive afforestation programmes. The Forest Act requires that after regeneration felling, a new viable stand must be established in the area within a reasonable period of time either through natural regeneration, planting of seedlings or direct seed sowing.

The greatest impacts on waters from forest management are caused by ditch cleaning and supplementary ditching, regeneration fellings and related tilling as well as fertilisation. This may cause increased loads of nutrients and suspended solids which weaken the condition of headwaters, brooks and other small water systems. Therefore, important groundwater areas are taken into consideration in forest management and fellings. The nitrogen load from forestry has decreased as a consequence of the decreased drainage projects. The fertilisation of peatlands has increased the phosphorus load caused by drained mires. The Government subsidises in certain cases the reconditioning of small water bodies in private forests, such as brooks and springs.

The phosphorus load from forest management accounted for 5.6 % of the total anthropogenic nutrient load in 2008, and the nitrogen load for 4.4 %. The loads of phosphorus and nitrogen from forestry have decreased as a consequence of the decrease in drainage projects.

Finland has a better starting point in water protection than many other European countries. Nevertheless, the water quality of the Baltic Sea has deteriorated so that now the quality may be very bad in many areas near the coast, and small water bodies are subject to diffuse pollution. In some places even groundwater is less usable than previously.

II. Coordinating policies on forests and water

Legislation

The Forest Act defines certain habitats of special importance and gives guidelines as to how they should be managed. These key biotopes include, for example, minor water bodies and forest stands adjacent to them, and small swamps. The Nature Conservation Act preserves the diversity of nature in Finland by ensuring that the favourable conservation status of different natural habitat types is maintained or restored.

The new Water Act is under preparation. The main legislation in the area of water protection is contained in the Act on Water Resources Management. It lays down provisions on the classification of waters, general aims for the quality of water and investigation of factors affecting water quality, the tasks of the competent authorities, and the organisation of water management planning. The Environmental Protection Act implements the European Union directive on Integrated Pollution Prevention and Control (IPPC), which obligates the EU Member States to integrate the control of emissions caused by industry. The Act also contains a proposal on bringing into force the legislative regulations of the Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes.

In Finland's National Forest Programme 2015 the main water-related objective is to decrease the load to water caused by

forestry and forest management. Harvesting operations and increased use of wood for energy including the collection harvesting residues and stumps leads to changes in forest soil and water, but the loads can be reduced considerably with proper water protection measures. A national network for monitoring environmental loads to water caused by forestry has been established.

Practical monitoring and guidance

The standard of water protection in harvesting and soil preparation works in private forests and forests of the forest industry companies and the State forestry enterprise Metsähallitus is monitored in conjunction with the assessment of the quality of nature management in commercial forests. According to the Act on the Financing of Sustainable Forestry, a water protection plan must always be included in plans concerning water bodies, such as ditch cleaning and supplementary ditching. The Programme for the Endorsement of Forest Certification, PEFC Finland, certification system also takes waters into account, and some 95 % of Finland's commercial forest area is certified according to this.

Metsähallitus and the Forestry Development Centre Tapio have renewed their forestry guidelines and recommendations to give more consideration to the need to safeguard biodiversity and water resources. The quality of water is monitored by the environmental administration, and statistics on e.g. the nutrient load are compiled by the Finnish Environment Institute.

The proposed amendments to the Environmental Protection Act and the Water Act require that the decisions on permits must indicate how water management planning has been taken into account. A follow-up programme for monitoring the state of waters should also be considered in the instructions issued under the Environmental Protection Act and the Water Act.

In 2006 The Finnish Government approved a new set of national Water Protection Policy Outlines to 2015 in a resolution that also defines measures needed to improve water quality. It has been prepared in close cooperation with different stakeholder groups, with due account for the social and economic impacts of its measures, as well as their environmental effects.

The Government approved new Regional Water Management Plans in 2009, which include national aims and measures based on the EU Water Framework Directive. The water protection outlines support the EU Marine Strategy, and the preparation and implementation of a joint action plan for the protection of the Baltic Sea by the coastal states. The management plan has been prepared for each water management area, and it is based on the drainage areas, which means that any corrective steps can be considered in a longer perspective and with a view to the entire water management area. Actors, including forestry operators, using the water have participated in water management planning, which has been organised by regional environment centres, which have set up the cooperation groups required.

III. Forests, water and climate change

Climate change is estimated to increase annual precipitation and runoff, which in turn increase the risk of siltation and erosion, especially in fine-grained soils in connection with soil preparation, stump harvesting and ditch reconditioning. Climate change can also increase nutrient leaching and thereby weaken the quality of water. Due to that, research on the environmental load on water caused by forestry will be carried out, in particular from the perspective of climate change.

IV. Economic valuation of water-related forest services

Water services may be compromised, for example, due to drought or floods. To ensure the functioning of water services in all conditions we need regional cooperation and partnerships, combined networks and emergency water supplies. The State supports both the regional planning of water services and investments in improving the preparedness. A guidebook has been published to improve the preparation for special water supply situations.

France

Warsaw Resolution 1

One can quote the national law on engagement for the environment of 3 August 2009, said Grenelle I, into which the state entered (art 34) «to recognise and develop the environmental services rendered by the forest».

Nothing of more concrete on the water and forest aspects in the Grenelle II law.

Warsaw Resolution 2

The objectives of energy wood mobilization (see B2 and B4) have been fixed in respect of available resource evaluations. The impact one are environment studying: a practical guide «the reasoned harvest of the slash in forest» (la récolte raisonnée des rémanents en forêt) was published to help foresters to harvest logging residues without jeopardizing fertility of soils.

Where the available resource is not a limit, the first challenge is to incite owners to sell wood. In the project of law «law of modernisation of agriculture and of fishing» action plans (plans multi-annual regional of development forestry) are schemed to encouraged to mobilize wood in priority forests. The decree of 25 February 2010 (see B4) should also incite owners to group wood supply.

The second challenge is to improve accessibility of some forests to allow their exploitation in French rural development plan 2007-2013, there are financial supports for the creation and repair of forestry road and for the mechanisation of exploitation in mountainous area.

Germany

Major activities since 2007 in implementing former commitments of the Ministerial Conference on the Protection of Forests in Europe

In Germany national implementation of the Warsaw commitments coincides with the political aim to develop a new national forest strategy. Preparations have started 2008 with stakeholder consultations 2009 and 2010. Principal objectives of the new strategy are to balance growing demands on German forests, including for timber and biodiversity, and to promote multifunctional forest management taking new challenges like climate change into account. Work is ongoing. Launch of the new strategy is invisaged for the International Year of Forests 2011.

Ireland

National implementation of Warsaw Declaration

Forestry in Ireland operates within the principles of Sustainable Forest Management and the muliti-fuctional benefits and role of forestry within society is constantly being promoted. As Ireland has low forest cover, the Government allocates significant resources to increase national forest cover and encourage the sustainable management of the resource. This is reflected in the National Forest Standard, Code of Best Forest Practice and a suite of environmental guidelines which govern forestry operations in Ireland. There is increased focus on conservation of existing riparian forests and the creation of new riparian woodlands in restocking and afforestation projects. This is in recognition of the contribution forests can make to increasing water quality and to biodiversity linkage in the landscape. An extensive research programme into a range of forestry related issues is ongoing. In relation to forests and water, a number of projects are being undertaken such as the SANIFAC (assessment and mitigation of soil and nutrient losses from acid-sensitive catchmentst) and HYDROFOR (an assessment of the impacts of forest operations on the ecological quality of water). In relation to forests and climate change, the CLI-MIT programme involves a number of individual research projects, the objective being to to provide stakeholders with the required tools and knowledge for formulating and achieving effective forest mitigation and adaptation policies. Further information on the research programme is available at www.coford.ie

National implementation of Warsaw Resolution 1 Forests, Wood and Energy

Continuation of National Bioenergy Action Plan. The Renewable Energy Feed In Tariff (REFIT) scheme supports power generation from renewable energy sources, including biomass. The Greener Homes Scheme provides support to homeowners to install biomass heating systems. The Renewable Heat (ReHeat) Deployment Programme provides assistance for biomass heating systems in industrial, commercial and public buildings. Support is also available to increase the deployment of biomass fuelled CHP.

To support the projected increase in demand for biomass, a number of measures have been put in place. A series of demonstrations, workshops, seminars and pilot projects were held around the country over the past four years to develop and improve biomass supply chains to the energy sector. Outcomes included improved supply chain logistics, wood fuel pricing models, techniques for drying of energy wood in Irish forest settings and improved information on wood fuel properties from Irish forests. A web-based advisory service has been established to provide advise to the forest sector and the general public on wood fuel supply chains, fuel quality, cost and related issues. Support has also been provided towards the establishment of producer groups to encourage private forest owners the work collectively to sustainably manage their forests and market forest products, with a particular emphasis on wood energy production. In addition, a grant scheme to support the purchase of wood-chippers and residue bundlers operated in 2007/08.

National implementation of Warsaw Resolution 2 Forests and Water

Continue to assess forest operations (restock, afforestation, harvesting) for potential impact on water quality. Research programmes and monitoring programmed on forestry and water quality. Publication of «Forestry and Freshwater Pearl Mussel Requirements» which addresses the mandatory measures for the protection of the freshwater pearl mussel in relation to forest cover and forest operations. Challenge will be to implement the River Basin District Plans (per the Water Framework Directive) to protect and restore water quality.

Italy

National implementation of Warsaw Declaration
Warsaw Declaration and resolutions, together with all the other international forest related commitments taken by Italy and channeled mainly through the structure of the EU Forest Action Plan, have been enshrined into the new National forest programme called «Framework Programme for the Forest Sector» (PQSF), http://www.reterurale.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/591. Started on 1 January 2009, it will last until 2018 and will be subject of two evaluations. It is currently under implementation to coordinate and mainstream regional/local forest activities (forest management in Italy is mainly under the competences of local authorities) and in need of financial resources to be more effective.

National implementation of Warsaw Resolution 1 Forests, Wood and Energy
National activities on energy are in general under the responsibility of the Ministry of Economic Development, http://www.sviluppoeconomico.gov.it/ and not under the Ministry of agriculture food and forest policies. However it main forest parts already received some guidelines by the PQSF.

National implementation of Warsaw Resolution 2 Forests and Water
National activities on water are in general under the responsibility of the Ministry of Environment, http://www.minambiente.it/ and not under the Ministry of agriculture food and forest policies. However it main forest parts already received some guidelines by the PQSF.

Major activities since 2007 in implementing former commitments of the Ministerial Conference on the Protection of Forests in Europe
All the previous MCPFE commitments, where not alrerady done before and still having a meaning, have been resumed and recalled inside the PQSF.

Latvia

National implementation of Warsaw Declaration
Forest sector is very important to Latvia's national economy. Wood in Latvia is the main resource and in comparison, for example with oil, wood is renewable. Latvia is trying to improve use of this opportunity. Several initiatives in last years was in line with Warsaw Declaration.

The initiative on development of program «Rational use (mobilization) of forest resource potential» started in beginning of 2008. The target of the program was to stimulate development of forest sector with taking in account climate change impact and renewable energy policy. The work was interrupted due to economic situation.

A lot of work is done to raise capacity in field of forestry related climate change impacts - Ministry of Agriculture participate in INTERREG IVC European project - FUTUREforest (http://www.futureforest.eu/). Project - is looking at how trees and woodlands can adapt to the effects of climate change and provide opportunities for mitigation. The output of project will be Good Practice Guide for forest management in climate changes, policy and strategic recommendations. Research project «Adaptation of forestry to climate changes» is started with support of stock company «Latvijas valsts meži».

Forest stakeholders' consultations process within the Forest Advisory Board form coordination of activities in sector and intersectoral collaboration. *The Forest Advisory Board, established in 1997 by the Minister of Agriculture, is a body where the government and the forest sector stakeholders meet to elaborate on the issues related to the forest's economic, ecological, and social aspects.*

Latvia's forest sector representatives share experiences in forest sector reform (separation of state supervision and management functions in 2000) and sustainable forest management. Delegations from Russia Federation, Kyrgyzstan and other countries with economies in transition visited Latvia during last years.

Lithuania

National implementation of Warsaw Resolution 1 Forests, Wood and Energy

Latvia's target for energy from renewable resources is 40 % in 2020. Forest sector actively participate in a dialogue about energy production and potential of renewable energy sources in Latvia. Forest sector experts together with researchers in energy field estimated the potential of solid biomass (forest residues, wood processing side-products (chips, dusts)) in Latvia. Forest sector produce ~10 mill m^3 energy wood per year, the domestic consumption is around 60 %, the rest is exported (roundwood, products for energy production, pulpwood and woodchip for pulp production). It shows that Latvia has great potential, but in same time balance between forests based sector and energy sector is important – first of all creating products with higher added value and using in energy production mainly production side-products. The Ministry of Agriculture and Forest sector stakeholders are involved in development of law on energy production from renewable resources and Renewable Energy Action Plan for Latvia.

National implementation of Warsaw Resolution 2 Forests and Water

According the Law on Protection Belts special protective zones along rivers, lakes and see coast are stated. These territories have special forest management regimes with restrictions to tree harvesting for keeping water quality.
National research program – Climate Change Impact on Water Environment in Latvia (2006-2009) is finished. Researchers in Latvia have joined forces to investigate how climate change will potentially influence Latvian lakes, rivers and the Baltic Sea coast and coastal waters, and to elaborate science-based proposals to adapt to and mitigate adverse impacts.

National implementation of Warsaw Declaration

Main national measures implementing Warsaw Declaration:

- Forest Management Schemes- prepared for forest governors and region territories, and are purposed for defining of the general forest land use policies, preparation of their management concepts. Forest Management Scheme is a document of strategic territory planning (valid for 10 years) which meeting social, ecological and economical needs.

At the moment schemes preparation process still ongoing, most of the schemes are approved by the Minister of Environment and covers major part of forest land in Lithuania.

Legal acts on Forest Management Schemes:

Name: *Rules on Preparation of Forest Management Schemes and Forest Management Plans* (last amended on 07 Nov. 2009)
Formal status- Order of Minister of Environment

- Rules on Forest Cuttings (new) approved 27 Jan. 2010 by the Minister of the Environment. Those rules enabling to facilitate sustainable and continuous use of timber resources, formation of stable and productive forest stands, biodiversity conservation and landscape stability. Also enabling to use residuals after forest cuttings for biofuels, adjust more forest areas for recreation. Additional requirements are set for biodiversity conservation.

Legal acts on Forest Cuttings:

Name: *Rules on Forest Cuttings*
Formal status- Order of Minister of Environment

- Regulation on Forest Regeneration and Afforestation (last amended on 01 Sep. 2009). Regulation lay down obligations to enhance the biological diversity, and future forest stability by planting mixed forest stands from native species. Selection of certain tree species ensures future forest stand stability, productivity and sanitary condition. Regulation specifies which tree species should be planted in water protective areas. Those requirements contribute to maintaining water quality and quantity.

Afforestation of stabile and productive forests on agricultural lands may reduce negative effect of climate change. Since the 1st January 2007 the forest land area has increased by 20000 ha corresponding to 1 percent of total forest cover.

Legal acts on Forest Regeneration and Afforestation:
Name: *Regulation on Forest Regeneration and Afforestation* (last amended on 01 Sep. 2009)
Formal status- Order of Minister of Environment

National implementation of Warsaw Resolution 1 Forests, Wood and Energy

Main national measures implementing Warsaw Resolution 1:

- National Energy Strategy approved 18 Jan. 2007 by the Parliament of the Republic of Lithuania. The Strategy defines the main targets set by the State and directions for their implementation until 2025 by fully adjusting these targets and directions to growing state needs and the most recent international requirements, having regard to the aspects of efficiency, energy security, environmental and management improvement. Strategic objectives of the strategy - to increase the share of renewable energy resources in the national balance of primary energy at least up to 20 % by 2025. Seeking to use local energy resources to the maximum and thus reduce the import of fuel and the use of gas in generation of electricity and district heating, to create new jobs and reduce CO2 emission, a programme aimed at a more speedy use of biofuel for heat and electricity generation will be drafted and implemented envisaging:
- the application of modern technologies when using all the economically justified potential of the logging waste, which, by 2025, will amount to approximately 180 000 toe (investments amount to nearly LTL 120 million);
- planting of the energy crop plantations and constantly expanding their area to achieve the supply volume of approximately 45 000 toe by 2015 and by 2025 – nearly 70 000 toe for energy purposes.

For the implementation of the provisions of the strategy, the Government shall approve a five-year strategy implementation plan and programmes of actions.

- The Law on heat sector (last amended on 12 May 2009). One of the main purpose and objectives of the Law is to increase the use of local fuel, bio fuel and renewable energy resources when producing heat and to reduce the negative impact of the heat sector on the environment.

The Law promotes cogeneration of heat production from bio fuel and renewable sources of energy. The state (municipalities) shall promote the buying to heat supply systems of heat produced from bio fuel and others renewable sources of energy.

Remaining challenges:
Cooperation of private forest owners
In Lithuania the average size of a private forest holding is about 3,3 ha. The network of forest owners' co-operatives and other economic entities developed very slowly, and the Lithuania Forest Owners Associations covers only a very small number of the total forest owners. The small size estates, giving little income, their forest management knowledge are insufficient, and the ownership duty concept is poorly developed for ensuring observance of the sustainable forest management principles.

Mobilisation of wood from small forest holdings
The fragmentation and small size of private forest holdings is a major challenge for increased wood mobilisation in Lithuania. During the last few years action on wood mobilisation driven by increasing wood prices and domestic demand for wood has slowed down because of economical crises.

National implementation of Warsaw Resolution 2 Forests and Water

Main national measures implementing Warsaw Resolution 2:
Lithuanian forests are divided in to four major groups (Group I – strict reserves forests, Group II - ecosystem protection

Republic of Moldova

forests and recreational forests, Group III – protective forests, Group IV – economic (commercial) forests). The procedure and regulations for forest ascribing to certain groups shall be defined and performed by the Government upon the proposal of the Ministry of Environment. Group III is protective forests (as for January 2009, protective forests 15, 7 percent of total forest are). 45 percents (15 3487 ha) of protective forests is forests of protective zones of water bodies.

Legal acts on water protection:
Name - *Description of Procedure on Forest Ascriptions to Groups* (last amended on 15 Jun. 2008)
Formal status- Governmental regulation

Name – *Description of Procedure on Surface Water Protection Zones and Coastal Protection Band* (last amended on 14 Feb. 2007).
Formal status- Order of Minister of Environment

Major activities since 2007 in implementing former commitments of the Ministerial Conference on the Protection of Forests in Europe
Lisbon resolution, commitment - to evaluate the potential impacts of forest certification system

All state forests have been certified according to FSC certification system. Judging from the management changes, there can be drawn out conclusions that certification had a positive effect on SFM. This impact has been most significant in regard to environmental and social aspects of forest management as more of biodiversity conservation measures has been started to be applied as well as communication on forests to the society has improved, work safety standards has been raised.

National implementation of Warsaw Declaration
Starting from 2010 the wood selling process is based on tender.

Through different international commitments (country reports on climate change) country continue to contribute to mitigation of and adaptation to climate change.

In 2007 by law was abbolished the taxes for apiculture in forest area. The apicultures were allowed to install bees inside the forest area.

In 2007 was approved by Law the list of indicator (detailed one) for each indicator of sustainable forest management.

National implementation of Warsaw Resolution 1 Forests, Wood and Energy
During 2007–2010, 30000 ha of energy species (fast growing species) were planted.

National implementation of Warsaw Resolution 2 Forests and Water
Were planted river protection belts on around 1000 ha.

Montenegro

National implementation of Warsaw Declaration

Various commitments of the Declaration have been integrated in new forest policy (adopted in 2008) and draft forest law (currently in adoption procedure), as well as in certain national forestry plans and projects, such as: (a) defining role of forests and their sustainable management in the sustainable rural development, climate change mitigation, conservation of biological diversity, maintaining and enhancing water quality and in mitigating natural hazards: (b) providing enabling conditions for strengthen the competitiveness of the forest sector (by including EU rural development subsidy scheeme) and increasing sustainable use of wood from forests; (c) obliging wood production on sustainable bases; (d) introducing obligation for all legal entities for payments of forest ecosystem services; (e) promote national forest programme for intersectoral cooperation; (f) combat illegal logging and related trade of forest products (by implementation of corresponding national action plan); (g) strengthen forest and forest sector related education, training and communication (through international forestry projects / institutions) and (h) promote the use of woody biomass (through international projects).

National implementation of Warsaw Resolution 1 Forests, Wood and Energy

In addition to the results given under implementation of Declaration, the following commitments have been tackled: (a) certain policy instruments, e.g. feed-in tarrifs for supporting enabling conditions that encourage investments in the production and distribution of bio-energy, are under preparation; (b) the existing and potential wood resources, based on forest management planning inventories (state forests) and national forest inventory (ongoing), as well as the feasibility and constraints for wood mobilisation are under assessment; (c) the position of the forest sector is beeing strengthened in cross-sectoral debates (supported by international project) concerning renewable and efficient energy use through providing information and developing communication about the existing forest potential and multiple benefits of production and using woody biomas; (f) partnerships among public and private forest owners, forestbased industries and energy producers aiming at the development of markets for bio-energy has been started to be encouraged.

National implementation of Warsaw Resolution 2 Forests and Water

In addition to the results given under implementation of Declaration, the following commitments have been tackled through new forest policy and draft forest law: (a) coordination of forest and water resources management policies and legislation (through usual inter-sectoral cooperation within the Ministry for agriculture, forestry and water management) and (b) incorporation of the assessment of the economic value of forest functions and services, among others also related to water resources.

Major activities since 2007 in implementing former commitments of the Ministerial Conference on the Protection of Forests in Europe

Major achievements regarding implementation of the commitments are given within 1st part of the questionnaire.

Netherlands

National implementation of Warsaw Declaration
Since 2007 two documents has been published that affect the forest sector and in which many elements of the commitments made have been incorporated, although some of those commitments were already common practice of Dutch forest policy. These documents are:

- Agenda for the Dutch Forest 2020 (Manifest from the Dutch forestry parties, with support from the Ministry). This sector based document has been drafted after stakeholders meetings that has been initiated by the government.
- The Biodiversity Policy Programme of the Netherlands 2008–2011: 'Biodiversity works: for nature, for people, forever'. This publication sets out the Dutch government's priorities in addressing the biodiversity loss and promoting the sustainable use of biodiversity and natural resources in the period 2008–2011 Cooperation between ministries and with other authorities and actors in civil society is a key feature of this policy. Its intention is to tighten the focus of the current efforts to protect biodiversity. It also sets out the Dutch government's policy response to various signals from the scientific community and society.

Although the latter document focuses on biodiversity many issues are addressed which are Part of Warsaw Declaration and apply to forestry. Relevant priorities are Trade chains and biodiversity (sustainable timber trade); Payment for Ecosystem Services; Ecological Networks and so called supporting priorities are: new coalitions (cooperation among stakeholders), knowledge networks and communication.

An important challenge is the recognition of payment for ecosystem services by the private sector and creating an enabling environment so private money can form a larger share of total financial resources for forests finance.

National implementation of Warsaw Resolution 1 Forests, Wood and Energy
The implementation of this resolution is being reflected by the policy document «Programme 'Schoon en zuinig' regarding renewable energy and biomass: cooperation with the forestry sector and companies. In this document actions are identified and agreements made to use more biomass for energy production.

National implementation of Warsaw Resolution 2 Forests and Water
Although water management in The Netherlands is a very important issue the role of forests in water management is very limited, especially when it applies to water quantity. The water quantity is mainly determined by land use types in the watersheds outside the Netherlands as the Netherlands is situated along a river delta.

The role of forests and nature areas in general is significant when it relates to water quality. The extraction of clean water from the ground below these areas is significant.

Water management policies and land use policies (including forest) are already an important part of cross sectoral policies.

Norway

National implementation of Warsaw Declaration
The White paper Climate Challenges – Agriculture part of the solution (2008–2009) is, together with the endorsement of the Nature Diversity Act (2009), representas a landmark in Norwegian forest policy. The attention paid to forestry and forest policy has been further increased since the ministerial cinference in Warsaw..

National implementation of Warsaw Resolution 1 Forests, Wood and Energy

Enhancing the role of the forest sector in energy production:
Bioenergy is an important part of both forest policy and of climate policy. The white paper (no.39 2008–2009) Climate Challenges – Agriculture part of the solution emphasizes the importance of increasing the production and use of bioenergy.

In 2009, a scheme for increased production of wood chips for energy purposes was launched. The purpose of the scheme is to stimulate the use of forest material which has not been sufficiently exploited so far. The scheme was started as a measure for securing employment during the financial crisis. However, it is equally important as a measure for achieving the aim of producing 14 TWh bioenergy within 2020.

The Bioenergy Scheme, administered by Innovation Norway, is one of the main instruments for increasing the production and use of bioenergy. The budget of the bioenergy scheme is increased during the last years.

Mobilisation of wood resources:
In the White paper on climate challenges in the agricultural sector it is estimated that the annual harvest potentially may be increased by around 5 mill m3 within the framework of sustainable forest management.

Mobilisation of wood resources has been highlighted in Norwegian Forest Policy for a long time. In 2007, a strategy for increased harvesting was introduced, as a result of a request from the National Assembly. Norwegian Forest Policy encompasses a wide range of measures directed at the mobilisation of wood resources.

National implementation of Warsaw Resolution 2 Forests and Water
The Forestry Act contains provisions on water management related to forestry. The current situation on water resources in Norway does not require more thorough provisions for forests and water. However, there is focus on the possible effects on water of climate change and measures directed at adaptation to climate change. The EU framework for Community action in the field of water policy is implemented in Norway.

Poland

National implementation of Warsaw Declaration

From among all the commitments listed in the Warsaw Declaration, most have been implemented in Poland for at least two decades now, when the current Act on Forests came into force (1992). This includes sustainable forest management, maintaining, conserving and enhancing biological diversity of forests, maintaining and enhancing water quantity and quality as well as all protective forest functions. However, since 2007 the following achievements should be listed as activities contributing to implementation of Warsaw Declaration commitments in particular:

- Establishing and developing Natura 2000 network, as a tool to maintain, conserve, restore and enhance the biological diversity of forests. As for now the network covers or is to cover around 2.6 mill. hectares of state-owned forests (36 % of all) and some 250 thou. hectares of private forests (18 % of all).
- Developing the Programme for Small Scale Water Retention in the State Forests (see below).
- Enhancing international co-operation with countries with economies in transition. In 2009 Poland launched the project aiming at developing rules for complex forest management in Georgian forests (in the Racha region), financed within the support programme «Polish Aid» by the Polish Ministry of Foreign Affairs. The project is implemented by the Forest Research Institute and will be continued during the next several years.

There are also several challenging tasks related to the Warsaw Declaration to be undertaken soon in the coming years. These include in particular:

- Developing and implementing the strategy of adaptation forests to climate change.
- Enhancing the the use of wood as a source of energy from sustainably managed forests.
- Supporting and enhancing the role of private forest owners and their associations in emerging forest-related issues and problems: mitigating climate change, protecting water resources as well as conserving and maintaining forest biological diversity.

National implementation of Warsaw Resolution 1 Forests, Wood and Energy

According to the «Poland's Climate Policy» (2003), which presents strategies for greenhouse gas emission reductions in Poland until 2020, the specific objectives for forests and forestry in this area are as follows:

- the protection of forests e.g. against fires and pest gradation;
- the integration of carbon dioxide sinks in agriculture;
- the growth of CO^2 sinks as a result of biomass increases and of carbon sinks in the soils of forest ecosystems developed on post-agricultural land;
- measures in support of afforestation;
- the prevention of land-use change;
- the protection of forest soils against a decrease in carbon content;
- the integration of climate issues in the principles of silviculture and forest management instructions;
- the promotion of the use of wood in construction;
- the use of the auxiliary mechanisms of the Kyoto Protocol.

All the objectives are included in the current legal regulations. However, the Warsaw Resolution 1 commitments concerning enhancing the role of the forest sector in energy production and mobilization of wood resources for this purpose still need to be transposed and developed in the domestic regulations, policies and rules, as well as effectively implemented.

National implementation of Warsaw Declaration 2 Forests and Water

Maintaining and enhancing protective functions of forests is one of the objectives of forest policy in Poland and this is one of the main aims of forest management, specified in the Act on Forests (Dz.U. 1991.101.444 with amendments, Art. 7.4). This aim is achieved, *inter alia*, by designating water-protective forests. Currently, some 1.47 mill. hectares of state-owned forests are water-protective ones, which constitutes 21 % of all forests belonging to the state, and 44 % of all protective forests.

The main initiative in the field of forests and water interactions is the project «Enhancing Water Storage Capacity

Portugal

and Preventing Floods and Drought in Lowland Forest Ecosystems» (Small Scale Water Retention). Although the State Forests since the mid-90's have been undertaking small scale water retention activities, being financed from own and external funds (i.e. Ecofund, National Fund for Environmental Protection and Water Management), only in 2006 decision was made to aggregate individual initiatives taken by particular Forest Districts into a single, comprehensive project. The project implemented by the State Forests is the first one to be conducted on such a large scale, combining water retention activities in forest ecosystems with the protection against surface water run-off. It aims at:

- counteracting negative changes in hydrological wwconditions in lowland forest ecosystems,
- preventing drought and floods, and
- restoring wetlands.

The main idea of the project is to promote environmentally sound methods of water storage in the forests. The project activities consist of constructing small scale water retention infrastructure (e.g. sluices, dikes, stopbanks) and also restoration of moor, marshes and other types of wetlands. Planned capacity of water storage reached ca. 45 mln m^3.

The project is implemented by 191 forest districts located in lowland areas in Poland (some 45 % of all forest districts), and by around 400 communes (i.e. some 16 % of all). According to estimations made at the end of 2007, the total costs of the project will amount some 45 mill. €, 85 % of which will be financed by the EU Cohesion Fund in frames of Operational Programme «Infrastructure and Environment», Priority Axis III «Resource management and counteracting environmental risks» (for more details see: Coordination Center for Environmental Projects, http://www.ckps.pl).

One of the most significant challenges related to implementation of the Warsaw Declaration 2 is to assess the economic value of forest services related to quality and quantity of water resources and to incorporate the economic valuation of water-related forest services into relevant policies and strategies on forests and water. As for now, some steps towards estimating economic value of water-protective forest functions have been taken at the Forest Research Institute.

National implementation of Warsaw Declaration

Forest policy considers the forest sector development as an integral component of sustainable development and a contributing sector to mitigate climate change, as expressed in the Forest Policy Act (Law nº33/96, of 17th August) and in the Sustainable Development Plan for Portuguese Forests (Council of Ministers Resolution 27/99, of 8th April). Furthermore, the National Forest Strategy (Council of Ministers Resolution nº144/2006, of 15th September) took into consideration the need to adapt forests to the possible impacts of a climate change scenario, like the increasing risk of forest fires or of pests and diseases.

The National Plan for Climate Change considers the mitigation potential of forests - Portugal choose forest management activities under article 3.4 of the Kyoto Protocol.

Biodiversity is an integral component of the National Forest Strategy and of the Regional Forest Management Plans, which follow the C&I of the MCPFE process. They cover all types of forestry, including short rotation fast growing species, and define the management models for each sylvicultural system, as well as targets in terms of species composition fo the forest.

The National Strategy for Energy, approved by the Government in 2005, defined the main policy goals and measures in the energy sector, putting the emphasis on renewable sources and considering specific goals for biomass (see W1 bellow) and mentioning the close integration with the existing and potential forest resources at regional level and the linkage with policies to decrease forest fires risk

ensure that forests and their sustainable management play an active role in maintaining and enhancing water quality and quantity and in mitigating natural hazards, such as floods, droughts, avalanches, land slides as well as in combating soil erosion and desertification, strengthen the competitiveness of the forest sector in order to increase its capacity to benefit the quality of life,

There are permanent campaigns to promote the profile and awareness of the multiple benefits of forests and fore-

stry, directed to several sectors of society. The forest week – the week around the 21st of March the international day on Forests – constitutes an annual opportunity to increase awareness. We publish material, distribute small plants and forest experts go to schools and to workshops nad make presentations all over the country. In 2010, for instance, the Theme was «Forest certification for a sustainable forest».

National implementation of Warsaw Resolution 1 Forests, Wood and Energy

Enhancing the role of the forest sector in energy production The National Strategy for Energy, approved by the Government in 2005, defined the main policy goals and measures in the energy sector, putting the emphasis on renewable sources (Resolução do Conselho de Ministros n.º 169/2005 of 24th October) .

For Biomass, the goal was to increase in 100MW the installed capacity g (67 % higher) and to establish a decentralized forest biomass power plant grid with a total of 250MW of capacity, specifically mentioning the close integration with the existing and potential forest resources at regional level and the linkage with policy to decrease forest fires risk. Energy from forest biomass has an increase on the tariff paid. (Decree-Law 225/2007)

In order to have a close integration of the forest and energy policies, the location of the power plants was decentralized, and took into account the technical requirements of the energy net as well as the fire risk, aiming at locating the plants where the risk of fire was higher and there was the need to promote the use of biomass as a means to contribute to fuel management. The National Forest Authority, using data from National Forest Inventories, produced a map of the «fitovolume» which, combined with the map of structural fire risk, gave an indication of possible best locations. The decision to have small capacity plants (ranging from 2 to 11 MVA) was also guided by the objective of lowering the cost of transport of biomass and also of developing local economies.

The National Forest Authority (NFA) also collaborated on the establishment of the requirements for open tender to build the power plants. To make sure that forest resources were available in quantity to supply each of foreseen plants, candidates should commission and present a specific study on the sustainability of the nearby forest resources. In order to assure that the power plants will not utilize wood that otherwise would have been for other industrial uses, the NFA also had a specific definition for forest biomass that clearly avoids that possibility. In addition, the power plants promoters were encouraged to have supply contracts with forest owners, but each hectare contracted couldn't supply more than 1 ton of biomass per year.

Forest Biomass- «Biodegradable fraction of the products and of the residous of forestry activities. Includes only material resulting from the fuel management operations, conducting operations (eg thinning and pruning) and the harvest residues ie branches, pecking, stumps, leaves, roots, bark. Original Biomassa florestal - Fracção biodegradável dos produtos, e dos desperdícios de actividade florestal. Inclui apenas o material resultante de operações de gestão dos combustíveis, das operações de condução (ex: desbaste e desrama) e da exploração dos Povoamentos Florestais, ou seja: ramos, bicadas, cepos, folhas, raízes, cascas».

Main challenges: although there were several requirements established, as mentioned above, the recent forest fires have led to a situation that questions the capacity of forests to supply the biomass needed. There are ongoing discussions concerning the possibility of having forest energy plantations. National Forest Policy doesn't provide any frame for this kid of silvicultural models, as they weren't considered in the regional forest management plans.

Mobilisation of wood resources

The question of mobilization of wood resources isn't a recognised problem in the country, although in some more remote areas, the abandonment of agriculture and of rural activities, in general, led to a situation of vast areas of forest that seem to be «no man's land» and where wood mobilisation decreased. The main concern, however, is the increased fire risk of those abandoned areas. The promotion of Forest Integration Zones was a solution that has been promoted to this end. The excessive fragmentation of forest property constitutes a critical problem. The objective of the FIZ is the-

refore to ensure, in specific areas, both forest protection and sustainable forest management, as they will have a specific pan for forest protection as well as a forest management plan. This will, in turn, ensure in a step-by-step process, the protection of large continuous forest areas, particularly through the establishment and maintenance of firebreak areas and other prevention infrastructures as set by the National Plan of Forest Fire Protection (PNDFCI PNDFCI. Existing FIZ cover now abut 600 thousand hectares.

Portuguese forests have undergone significant changes in the past decade, both as a result of the abandonment of agriculture and the consequent transfer of land use to forestry, as well as due to forest fires that have reached huge proportions. Consequently, in the past 5 years took place a restructuring process in order to adapt forest related institutions to these changes, while at the same time it was undertaken a deep reflection and revision of the forest strategy and a large planning process: both the National Strategy for the Forests and the National Plan of Forest Fire Protection (PNDFCI) were approved in 2006 and the 21 Regional Plans for Forest Management (PROF), covering Continental Portugal, were finalized and entered into force between July 2006 and April 2007 and are now being implemented.

Portugal has a strong planning system in relation to land use change, based on the municipal level: the main objective is to optimize the spatial distribution of several land use categories, classifying and qualifying land use units. The starting point is the identification of restrictions that can limit the use of the soil, like the National Agriculture Reserve and the National Ecological Reserve (about 50 % of the territory). Therefore, deforestation and afforestation follow an authorized/planned procedure.

The regional forest management plans (PROF) above mentioned provide the basic planning instrument. They constitute the frame for forest management activities taking into account the multifunctional role of forests, according to the C&I for SFM. All forest functions are considered, on a hierarchical system, and for each homogeneous area the Regional Plan provides the silvicultural models more suitable for the main objectives of the forests on those areas.

A new inquiry on energy in the domestic sector started recently and there is expectation that this will improve information concerning the use of woodfuel in this sector, as existing data is poor and outdated.

The existing instruments, under the rural development measures, promote capacity building of forest owners and their associations, provide support for small enterprises for preparing access to wood markets and to develop new products, support for innovative techniques, specially in relation to the use of biomass for energy and, in general, aim to promote the competitiveness of the forest sector

National implementation of Warsaw Resolution 2 Forests and Water

In Portugal, Forest Resources and Water Resources follow similar planning processes. Both have a legal framework that provide for strategic planning. The complementarily of forest and water planning is assured trough cross-sectoral references on the planning documents. The protection of water resources (and soil) was considered as a function in the Regional Forest management plans and 81 % of forest have this function as one of the 3 priority functions – this include protection of hydrological basins, protection against hydric erosion and floods. Furthermore, there are specific management plans for dams and those include measures concerning forest management on a buffer around the maximum water level. National Forest Authority is member of the accompanying committee established for each of the Plans and the National Institute for Water had the opportunity to collaborate in the forest regional plans, while the regional institutions responsible for water participated in the accompanying committee for forest regional management plans

Good practice guidelines for forest projects, building on the operational level guidelines of Lisbon Resolution L2, include consideration of water and soil protection. I addition, forest fire legislation consider mandatory immediate actions after fire, in order to prevent soil erosion and reduced water quality.

Being Portugal a member of Annex IV of the Convention to Combat Desertification, it is affected by desertification and

Romania

therefore forests, there sustainable management, and the prevention of forest fires, are included in the National Action Plan to Combat Desertification. As the National Focal point for UNCCD is the national Forest Authority, the consideration and integration of the relationship between forests and water is facilitated. As an example of activities, workshops to discuss the role of forest in combating desertification took place in 2010. The NAP is now being revised.

National implementation of Warsaw Declaration

Forest conservation and sustainable forest management are ones of the highest priorities in the forestry legislation and the whole system of forest management planning in Romania. According to Forest Code/2008, the management of forests – ensuring administration or providing forest services are compulsory and should be provided by forest districts for all forests, disregarding ownership type. Thus, the owners should ensure forest management through their forest districts (forest management structures with professional staff), or could contract forest management or providing forest services with other forest districts, including the National Administration of Forests, in charge with state owned forest management. The tool used to promote the forest conservation and sustainability in the forest management planning is the «functional zoning» system of the forests, based on two major «functional groups» according to ecological, economical and social functions to be accomplished by forests:

- Group I - forests with special protection function: water, soil, against climate and industrial damaging factors, recreation, preservation of flora and flora and biodiversity conservation, improvement of environmental conditions etc. and
- Group II - production and protection forests.

55 categories of functional zones corresponding to different protection functions are set within these two groups and subsequent sub-groups and appropriate cutting systems are assigned to them in specific technical norms to be observed by forest management planning.

This allows forests to play an active role in maintaining and enhancing all the protection functions and in sustainable development and well being of society, for both rural and urban areas. The use of wood as a renewable raw material or source of energy, like any other destinations of wood is based on annual allowable cut established through forest management plans.Maintenance, conservation, restoration and enhancement of the biological diversity of forests is ensured, according to provisions of the Forest Code from the Chapter «Biodiversity Conservation», applying intensive forestry treatments, promoting natural regeneration,

using species of natural forest type and conserving pristine forests.

Romania continued to implement the Forest Development Programme (FDP), project financed by Romanian Governmental funds, a loan from the World Bank and a contribution of the National Administration of Forests – ROMSILVA for 5 years, starting with 2004. FDP has been designed to address the major current concerns of the forestry sector in Romania, which are related to the extension of the private forest sector and the creation of adapted institutional structures, instruments and procedures. FDP has strengthened the capacity of the forest administration and enabled it to properly assist the private forest owners, private sector and local communities in the planning and management of forests, aiming also to increase awareness of the public, forest owners and decision makers, about the role and the importance of the national forest patrimony.

In order to prevent and combat illegal logging, appropriate legislation has been developed in this respect, the main and latest outcome being the Romanian System for Timber Flow Control and for Tracking the Wood Source (SUMAL) in place since 2008, as an integrated information system involving forest managers, economic operators and forest authorities. Wood tracking is carried out from harvesting and transportation to end users through special regime documents in a unique numbering system, allowing precise identification of wood sourcing. Appropriate supporting software is used by all wood holders in order to ensure analytical management of wood by assortments and recording of wood inputs and outputs. Technical support is provided by the territorial forest authority. SUMAL software has two components: one is for the «client» being distributed for free to the forest management structures/forest districts and the operators involved in wood logging, processing, stocking and trading wood products and the other is for the central unit in charge with collecting, processing and analyzing information, managed by the forest authority.

The Romanian Government, supported by the Liaison Unit Oslo of MCPFE - Forest Europe, European Forest Institute and the World Bank, organized the Expert Meeting on Forest Law Enforcement and Governance - Progress and Lessons Learned (Bucharest, October 13–15, 2008). The Conference, attended by more than 70 representatives from 21 countries from Europe and Asia and 15 national and international organizations and also by several NGOs, aimed to support the commitments of countries participating in MCPFE, particularly on the points 23 and 36 of the Warsaw Declaration. The event was a good opportunity to review FLEGT and ENAFLEG developments and to make a useful exchange of experience on extending good practices and identified solutions at national level in participating countries.

Among challenges:

- Further raise the profile and awareness of the multiple benefits of forests and forestry as well as the role of the forest sector, within private sector and the general public.
- Further promote national forest programme for cross-sectoral national coordination and as a mean for coherent implementation of forest related international commitments.

National implementation of Warsaw Resolution 1: Forests, Wood and Energy

Forest sector and Wood have been considered in the Biomass Master Plan for Romania which was prepared in 2010 by the Ministry of Economy, Trade and Business Environment, Center for Promoting Clean and Efficient Energy in Romania, assisted by the Agency for Energy from Netherlands and in cooperation with other ministries and institutions involved. This incorporated conclusions and recommendations resulted further to three studies on biomass development in Romania:

1. Biomass potential and possible scenarios
2. Markets and technologies
3. Stakeholders in bioenergy sector and organization of this sector

The wood biomass has been also considered in the National Action Plan on Energy from Renewable Sources, implementing the Directive 2009/28/EC. Due attention has been also given in the National Program for Rural Development (NPRD):

- The Measure 121 - Modernization of agricultural holdings, having in view the eligible investment concerning the establishment of forest cultures with short rotation with purpose to produce renewable energy.
- The Measure 123 - Adding value to agricultural and forestry products, «Stimulating micro enterprises in the field of primary processing of wood and non wood forest products».
- Wood mobilization and use of wood biomass is indirectly supported by growing of wood resources in areas with low forest cover by afforestation through the Measure 221 First afforestation of agricultural land under (NPRD) or by afforestation of degraded lands, carried out under national legislation.

Remaining challenges are to:

- Significantly increase the partnerships aiming at the development of markets for bio-energy and use of wood biomass for heating/energy by local communities.
- Increase efficiency of burning facilities using firewood used in households in rural areas and replacing them with modern installations based on wood biomass.
- Identify solutions to encourage establishment of forest cultures with short rotation on lands outside the forests on forest biomass production purpose.

National implementation of Warsaw Resolution 2: Forests and Water

Protective functions of forests for waters and soil are carefully established during the forest management planning, according to specific sub-groups under functional zoning mentioned before, and then appropriate forest management is established accordingly in forest management plans.
Complex forest management is carried out in watersheds from mountain region, including torrent control works, in order to prevent floods. Expenditures from the state budget and external funding have constantly been done for such torrent control works. The same activity is approached also in the National Program for Rural Development, Sub measure 125 b «Improving and developing infrastructure related to the development and adaptation of forestry», even if this measure is not operational yet. Appropriate management of forests in relation to water resources is considered not only in forest legislation but also in the Law on Waters – specific provisions being stipulated in this respect

Flood reduction, conservation of biodiversity, ecological reconstruction and soil protection are also approached through the afforestation of degraded lands and establishment of shelter belts as mentioned above, as a priority of the forestry sector, especially in the areas where percentage of forests is small. A challenge is still to develop economic tools, like payments for ecosystem services, in order to diversify the financial support for protective function of forests for waters.

Slovakia

National implementation of Warsaw Declaration

The Warsaw Declaration was fully involved and in-processed in details mainly in the Forest Development Strategy

Since 2007, following documents in the area of production and energy utilization were elaborated and adopted by Ministry of Agriculture:

- Forest Development Strategy
- National Forest Programme of the Slovak Republic and Action Plan for National Forest Programme of the Slovak Republic
- Rural Development Programme of the Slovak Republic 2007–2013 (RDP SR)
- Conception of the Agricultural Development 2007–2013
- Action Plan for Biomass Utilization of the Slovak Republic 2008–2013
- National Inventory and Monitoring of Forests of Slovakia (NFI SR)

Within the scope of Ministry of Economy, following documents were adopted:

- Law on Renewable Energy Resources
- Strategy for Renewable Energy Resources

Slovakia is committed to increase the share of renewable energy resources exploitation in the total energy consumption.

National implementation of Warsaw Resolution 1 Forests, Wood and Energy

The Warsaw Resolution 1 Forests, Wood and Energy was fully involved and in-processed in details mainly in the Forest Development Strategy

The main motives for the gradual growth of the use of wood for energy purposes is a gradual increase of fossil fuel prices, the need to meet emission limits, particularly burning of coal, the possibilities of co-financing the construction and reconstruction of biomass energy resources from the structural funds, and since 2010 also increased purchase prices of electricity produced from renewable energy resources.

Growth in the production and use of wood for energy purposes is in Slovakia far from the potential opportunities. The main reasons of insufficient use of wood for energy purposes:

- The lack of applicable concept and support of wood production for energy purposes in forest management and the lack of financial resources to implement necessary technology
- Absence of legislation, applicable concept and wood production support in non-forest areas enabling a significant growth of available resources of raw material, that can be used for energy production including intensive stands of fast-growing wood species and energy stands.
- Lack of effective cooperation of ministries and sectors that are involved in the effective growth of renewable energy resources exploitation and promoting of rural areas development, particularly in development of common concepts to supportive programmes and necessary legislation.
- Lack of support for science and research in the field of energy production and use of wood and its economic, ecologic and social impacts.
- Lack of applicable concept of sustainable production and use of wood as and important factor of rural development, including necessary capacity building of infrastructure and support of timber market.

National implementation of Warsaw Resolution 2 Forests and Water

The Warsaw Resolution 2 Forests and Water was fully involved and in-processed in details mainly in the Forest Development Strategy

In Slovakia, protective functions of forests for water and soil are traditionally secured through protective forests. Thanks to long existing site survey, the process of designation of protective forests is almost finished and it is possible to say that majority of vulnerable forest soils are managed as protective soils. However, our concept of water protection does not include riparian buffer zones of water bodies, which results in lower efficiency of our water protection form the point of view of sediment loads in streams.

Slovenia

Forest cover of Slovakia is continuously increasing and thus, the afforestation or reforestation programmes are, under normal circumstances, not necessary. Forest cover of vast majority of mountain watersheds is sufficient from the water viewpoint. Degraded forests in the areas important for water protection are extremely rare in Slovakia and thus we do not need special programs for their restoration.

Coordination between forest and water management is still not satisfactory in Slovakia. Forests and water management belongs under different ministries. There was an attempt to merge both these ministries together, which could improve the situation, however, because of recent parliament elections, both ministries will remain independent. It will be necessary to search for new ways of cooperation and communication improvement.

In the field of research, the project on forest functions was completed (at National Forest centre – Forestry research institute), which was focused also at water-related forest functions, as well as payments for water-related services. Now it is prepared for implementation into forestry practices.

A recent approval of the National Water Plan (Government Decree No 109 from 10 February 2010) should improve the situation in the cooperation between both sectors. The plan directly implements the Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy (the EU Water Framework Directive - WFD).

National implementation of Warsaw Declaration

In 2007, soon after Warsaw Declaration had been signed, the Slovenian Parliament adopted Resolution on National Forest Programme (NFP), which is a fundamental strategic document for ensuring sustainable forest management. The NFP has been prepared in a participatory process in which all major stakeholders were involved and all sectors related to various forest functions represented.

The NFP is the major policy document that ensures adequate balance of all forest functions and thus actively contributes to the quality of life both in rural and urban areas. The objectives and guidelines set in the NFP have to be respected in management plans, which are prerequisite for management in public and in private forests. Forest functions that are important for the quality of life are evaluated and mapped in order to be respected in forest management decisions set in forest management plans. Adequate attention is thus given to tourism and recreation functions of forests, environmental functions as well as production functions that contribute to employment and source of income for forest owners especially in remote rural areas. Forestry measures were thus integrated into Rural Develoment Programme for the period 2007-2013, whose implementation is also supported by the European Union.

The role of sustainable forest management in combating the negative effects of climate change through both mitigation and adaptation measures has been recognised and ensured through special objectives and guidelines of the NFP as well as the Government Strategy for Adaptation of Agriculture and Forestry, which was adopted in 2008, followed by an action plan.

Forest biological diversity is of particular importance in Slovenia, because forests are represented in Natura 2000 sites by 70 percent, thus causing that half of all forests are part of Natura 2000 network. To ensure that these forests are maintained in favourable conservation status according to the criteria of the EU Habitat and Birds Directives, governmental Natura 2000 Sites Management Programme 2007-2013 stipulates that forest management plans shall act as management plans for forested Natura 2000 sites.

This is possible because requirements for habitats and species are similar to what is generally a characteristic of close-to-nature forest management, a way of management of forests requested in the Forest Act as well as the NFP. Another reason to give the forest management plans a status of management plans for Natura 2000 sites is that the procedure for adoption of forest management plans is open to the inluence of all stakeholders, including nature conservation representatives and that guidelines produced by Nature Conservation institute have to be integrated in forest management plans.

In terms of enhancing the use of wood as a renewable raw materal and source of energy from sustainably managed forests, a governmental Decree on Green Public Procurement has been prepared, which gives advantage to wood.

National implementation of Warsaw Resolution 1 Forests, Wood and Energy

Concerning mobilization of wood resources, there were two major types of activities identified: (1) to increase allowable cut in forest management plans and (2) support forest owners to execute the allowable cut. In the process of adopting the NFP it has been found out that the actual average growing stock of approximate 300 cubic metres per hectare is relatively quickly approaching an optimal average growing stock of the country's forests, which was assessed at 320 to 330 cubic metres per hectare. It was decided that allowable cut should be set at 75 percent of increment for the comparable period, which is considerably higher than the allowable cut that was planned before.

Support for forest owners to implement forest management plans and execute the allowable cut consisted especially of promoting associations of forest owners established for more efficient harvesting and marketing of timber as well as subsidising investments in forestry infrastructure and mechanisation. These measures were together with measures supporting small scale primary processing of wood included in Rural Development Programme 2007–2013 and are co-financed by the EU.

Another more administrative measure was prohibition of fragmentation of forest parcels introduced in the amended Forest Act of 2007.

The Slovenian Forest Service, which provides information, education, training and extension services to forest owners also intensified its activities to increase mobilisation of wood from private forests, especially where forest owners were inactive due to small properties they own.

As far as energy wood is concerned, measures are oriented towards intensifying thinning in pole-stands of boadleaf species, where the prerequisite is good accessibility for improving harvesting conditions. Support for investment in forest roads and skidding tracks as well as subventions for tending in young forests were major measures indirectly supporting availability of wood for energy, but also for industrial use, where low quality wood is required. Support to micro-undertakings includes production of chips and pelets.

It has been noted that the above mesures have been successful to certain extent although market still plays the major role. Real effects are expected in the next mid-term period.

National implementation of Warsaw Resolution 2 Forests and Water

Protective function of forests for water and soil and for mitigating water-related natural disasters is probably the most important environmental function that has been recognised long ago in Alpine space and given appropriate attention in oldest forest ordinances. According to the Forest Act and special regulations for forest management planning, all forests are evaluated in relation to their protective function. Where the function is particularly emphasized, special guidelines, which are generally laid down in the NFP of 2007, apply. They aim at preservation and increase of forest cover in areas liable to erosion and landslides and provision and sustainable maintenance of such structure of forests that can optimally fullfil protective function.

Forests that are particularly important in terms of protective functions were declared protection forests by a governmental decree, which is going to be amended in 2010. According to the decree, only the minister responsible for forests can

Sweden

allow a change of use of a protection forest for other purposes while setting special requirements. Another provision of the decree is that the State ensures active management of protective forests to optimise their structure and provides resources to control mountain torrents in forested areas.

In 2008 severe wind-breaks hit Slovenian forests. The Government acted immediatelly with provision of adequate financial support for implementation of forest restoration plans prepared by the Slovenian Forest Service. Lessons learned while conducting the restoration, including research based findings, were duly noted and some minor changes were made also in forest finance regulations.

Slovenian research institutions participated in the EU funded Interreg projects Forest and Water, Protection Forests and Mountain Forests. An important result of the projects was exchange of information and practical approaches among participating partners. Conclusions from the projects were integrated in relevant policy documents including improved co-operation with Slovenian Agency for Environment, which is responsible for water management.

Major activities since 2007 in implementing former commitments of the Ministerial Conference on the Protection of Forests in Europe

The most important forest policy related activity since 2007 was preparation of the National Forest Programme (NFP), which particularly refers to Vienna Resolution No. 1 on NFP-s and mentions all other MCPFE resolutions signed in Strasbourg 1990, Helsinki 1993, Lisbon 1998 and Vienna 2003. In the course of participatory preparation process of the NFP, operational level guidelines of the Lisbon resolution L2 were particularly taken into account as were the newly endorsed Pan-European indicators for sustainable forest management.

Below a short description on the implementation in Sweden of the Warsaw commitments is listed for each of the respective commitments:

10 - The sustainable management of Swedish forests provides a wide range of benefits to society. Forest products stand for 11 % of the country's total export income and play an active role in the sustainable development and well being of Sweden. In order to facilitate enabling conditions for profitable forestry throughout the country infrastructure (forest roads, bridges, railways) are an important part of our instrument package.

11 - Since 2005, when the storm Gudrun hit the south of Sweden, a large number of research projects and other activities have been ongoing and carried out with respect to (the effects of) climate change. There has been a clear incline in climate-related research as well as targeted education of/ extension services towards forest owners. Moreover, there has been an increase in the use of bioenergy.

12 - The issue of maintaining and enhancing biological diversity is a challenge. The follow up of the 16 Environmental quality objectives that have been adopted by Parliament shows e.g. that it will be very difficult to achieve the objective on «A rich diversity of plant and animal life» until 2020. Sweden continues to work with nature conservation in ordinary forest management (the so-called «general consideration» measures). Sweden has come up with a strategy for the formal protection of forests. The development of long-term protection is proceeding (slowly).

13 - Wood is a renewable raw material that is commonly used in constructions, especially for detached houses. Until 1994 it was not allowed to build wooden three storey houses or higher for firefighting reasons, but in the last years it has been more popular to build up to five or six storey houses in wood. In part, this has been due to the development of construction techniques for building multi-storey houses in wood with a high degree a fire safety. The use of wood for energy generation has steadily increased. In 2009 bioenergy became the largest source of energy in Sweden and took over that role from oil. 32 % of the total energy use came from bioenergy and 31 % from oil in 2009. Statistics also

show that today 46.3 % comes from renewable energy according to EU definitions. The EU target for Sweden for 2020 is 49 % renewable energy. Moreover, there is an increase in research on the use of wood in this respect.

14 - Sweden is working actively with the implementation of the EU Water Framework Directive. Part of this work has been the wide-spread information provision to forest owners (through best-practice guidance and training courses) on how to implement the Water Framework Directive in day-to-day forest management. This has been an effort in cooperation with, amongst others, river basin district authorities. At the policy level Sweden is now in the process of amending the current Forest Act with provisions reflection the aim of the Water Framework Directive, such as the inclusion of «water quality» and due care for «water passages» in the environmental consideration paragraphs of the Forest Act.

15 - As a guiding principle Sweden considers its forest sector as a competitive sector, which means that work in this field is continuous. Amongst others this means that a liberal policy approach is taken - not too many regulations and steering instruments but rather an approach based on «freedom under responsibility» for the sector. In addition there is research ongoing on how the state can facilitate enabling conditions for a competitive forest sector.

16 - Climate change discussions have been a driver for the profile of forests as delivering multiple benefits, i.e. a raised awareness of forests among climate policy and experts. In general we can say that raising awareness on the multiple benefits of forests is an ongoing process in Sweden. The Swedish Forest Agency as well as forest owners' associations regularly arrange forest days, both for forest owners and the general public. Moreover, an extensive range of other communication tools is used continuously, e.g. forest sector newspapers and magazines, internet sites, education campaigns for schoolchildren etc.

In this context it has to be noted that Sweden is covered for about two thirds of its surface with forests, which leads to a situation where the general public has a relatively close relationship to the forest (compared to other countries). This implies that the forest is continuously in focus in different contexts. Most recently an inventory has started in order to identify those forests with high social values (often close to urban areas).

17 - Since 1992 the forest sector has seen a deregulation (see comments under paragraph 15). The Swedish government has engaged on creating enabling conditions and the Swedish Forest Agency have strengthened extension services towards new forest owners, including training courses and the publication of a basic guide/manual for forest owners.

18 - Sustainable forest management has been laid down in the Forest Act already for a long time. Important instruments for measuring politically important aspect of our forests and forestry include our National Forest Inventory and a detailed so-called «Polytax» inventory. Sweden has set up goals for the forest sector, together with the forest sector, and discussions on achieving those goals is continuous.

19 - There has been an increase in climate-related extension services towards forest (land) owners. Prior to this there has been a large-scale training program for Swedish Forest Agency employees in order to facilitate the climate-related advice to forest owners.

20 - A strong cross-sectoral approach was chosen for the implementation of the EU Water Framework Directive by means of forming a national level reference group, based on the specific assignment given to the Swedish Forest Agency by the Government in 2008 with regard to the implementation of the WFD. The group consisted of representatives from one River Basin District Authority, the Swedish Environmental Protection Agency, the Swedish Board of Fisheries, two private forest companies, one state owned company, two forest associations and the World Wide Fund for Nature.

The Swedish Environmental Protection Agency has initiated a project relating to the programs of measures and putting the Environmental Quality Standards into practice. The Swedish Forest Agency participates together with several other national authorities.

Switzerland

In each of Sweden's five River Basin Districts there is a «regional» forest and water council consisting of representatives from the River Basin District Authority, the County Administrative Board, three or four private forest companies, one state owned company, two or three forest associations, and the Swedish Forest Agency.

On the local level, water councils have been set up with the involvement of a wide variety of stakeholders.

21 – Research is still ongoing in this field.

22 – Although coordination within the forest sector knows a long tradition in Sweden, cross-sectoral coordination is an area where we are investigating possibilities for strengthening.

23 – Governance is functioning well in Sweden and compliance with forest law is satisfactory.

24 – Within the frame of various research (and R&D) projects and initiatives support is given to the development of innovative products. Focus on supporting advisory services and translating research to practice has increased.

25 – EU Rural Development Program funding has provided increased opportunities for advisory services.

26 – As mentioned earlier, various initiatives in this respect have been carried out and are ongoing. At the more day-to-day level we have also seen an increased awareness for these issues, e.g. within the Swedish Forest Agency.

National implementation of Warsaw Declaration (reference to commitments in relevant documents)

12: sfm is included in draft for the new national forest programme and the national forest biodiversity strategy.

13: use of wood energy is promoted through information campaigns, financial support to installation of heating systems (depending on different mix of funds Federal, cantons and municipalities)

14: slight increase of funds (since 2008) for maintaining protective functions of forests to mitigate natural hazards.

National implementation of Warsaw Resolution 1 Forests, Wood and Energy

13/14: Substantive research has recommendations on processing residues etc. for energy production and their environmental impact been carried out, in order to provide later on the corresponding recommendations.

15: From 2010 onwards there will be a substantial increase of financial support to renewable energy (mainly wood and solar within a total of annually over 60 Mio. CHF for 10 years). The programme will be managed by the 26 cantons with different priorities.

16: forest sector has a strengthened its position due to its role as guardian of sustainable production.

17: increased number of partnership for implementation of schemes of heating system. Public campaigns had a peak during 2007–2009, now the market for bio-energy is established.

19: data quality has already substantially improved and will further strengthened for reporting to UNECE timber committee purposes.

23 and 28: special study on potential of wood production for energy use outside the forest has been mandated and will be published soon. Next step will be considerations for implementation.

Turkey

National implementation of Warsaw Resolution 2 Forests and Water

13: in general, funds for implementation have been slightly increased since 2008 for enhancing protective functions of forests against natural disasters including water-related. These is public partnership and funding, not private funding.

15: increase of funding for implementation of national programme for restoration of floodplains. Also NGOs have increasingly launched awareness campaigns for this activity.

18–22: Switzerland is actively managing together with France the Interreg Project alpeau http://www.alpeau.org/ in order to better understand the relation of water and forest management, including the impact of and the adaptation to climate change, as well to value the forest services in this respect. At national level a similar group with the similar purpose exists in the Federal Administration.

19: Switzerland is funding a number of international/transboundary Pilot Projects on management of water and forest management.

22/23: in 2009 a long term research programme on the adaptation of forest to climate change has started, where water will be a part of the focus

24–26: There is still an ongoing political debate on the role of PES in Switzerland. The present legislation is already very strict on special treatment for water-sensitive areas.

24: A study has been mandated by FOEN to this topic.

National implementation of Warsaw Resolution 1 Forests, Wood and Energy

A Bioenergy Working Group was established by the Directorate General of Forestry (DGF), the Ministry of Environment and Forestry (MEF). The group has prepared a report titled «Forest Biomass Situation as a Renewable Energy in Turkey». Thus, Turkey's annual biomass capacity which was obtained by forest and is suitable to get bioenergy was determined. In the light of the report, activities about bioenergy have been continuing.

The feasible studies about wood pellet production were made by domestic and foreign private sector companies. These initiatives were backed up by the Turkish Prime Ministry and the DGF. These studies have been continuing.

A panel about on making use of rest materials at the end of harvesting activities in forests was organized. In the panel, some heating systems that pellet is utilized were demonstrated and information about pellet production was presented. The representatives of the Turkish private sector in the panel informed the participants on how to product energy from biomass.

A project on clear energy production was started on September 1, 2007 and will be finalized in September 1, 2010.

There is a pipeline project on pellet production especially on the sensitive areas for forest fire in the south of Turkey. Its budget has been planned 3 million Euros. The projects partners are a firm from the Netherlands, a firm from Turkey, Isparta, Suleyman Demirel University and the DGF.

National implementation of Warsaw Resolution 2 Forests and Water

The two units (the DGF and the State Hydrologic Works) have been working under the MEF. Therefore, there are many advantages such as working the units together and developing common projects about integrated management of forest and water. The units are in the process of searching common activities and projects.

Ukraine

National implementation of Warsaw Declaration
Aiming at improving public understanding of forests and forestry problems the forestry campaign «Future forest in your hand» is annually held by the State Forestry Committee since 2006. Besides forest workers there are participating pupils, representatives of state authorities and mass media. Forestry campaign activities include planting forests, a drawing and essay competition among pupils on forest topics, round tables, «open doors» days, pres-conferences, performances on radio and television, lectures, etc. Conducting campaign creates powerful information occasion to enhance environmental advocacy on the importance of creating and maintaining forests and improving the ecological situation in the country.

In order to protect domestic timber market and secure its openness and transparency it was introduced a mechanism of auctions for round wood in 2008.

Forestry measures provided according to the requirements of sustainable development are the basis of strategy of adaptation of forest management in condition of climate change. This strategy underlies the ordinary forestry practice in Ukraine.

In 2009 according to the initiative of the State Forestry Committee it was approved a new National target oriented programme «Forests of Ukraine» for 2010–2015 years and 11 decrees and orders of the Ukrainian Government, which are aimed at improving forest management and financial and economic situation of forest enterprises.

National implementation of Warsaw Resolution 1 Forests, Wood and Energy
Keeping in mind necessity of implementing commitments under the Kyoto Protocol and need for cheapening energy sources, the question of a wider use of biofuel is very important for Ukraine. Currently in Ukraine there is operating or will be putted into service this year about 100 companies producing wood pellets from wood wastes. Prepared in 2008 concept of national target oriented scientific and technological programme on development of biofuel has been approved by the Government of Ukraine (Order from 12.02.2009 N 276-p) and the program is currently under development.

On 21.05.2009 Ukrainian Parliament has adopted a new edition of Law of Ukraine «About alternative sources of fuel». This law provides the necessary legislative basis and incentive for the introduction of modern technologies of use of wood biomass for energy purpose.

Considerable work has been done on this issue by forestry enterprises. The forestry enterprises installed 1200boilers and boiler houses that permit them converting used wood waste as a biofuel. In 2009 the Government is allocated funds from the Stabilization Fund for the purchasing of technological systems and equipments for producing chip fuels. In 2010 State Forestry Committee initiated development of program on substitution of imported natural gas by wood biofuels during 2010–2020. The main restricting factor for increasing the use of wood as biofuel is insufficient density of forest roads.

National implementation of Warsaw Resolution 2 Forests and Water
State Forestry Committee of Ukraine carries out an active policy aimed at improving the hydrological role of forests. First of all, it refers to the organization of research aimed at deeper understanding of mechanisms of interaction of forests and water, as well as raising awareness and capacity building in forest hydrology and better reflection the results of these studies in by-law regulations. For example, in the recently approved «Regulation of final fellings in mountainous forests of the Carpathians» (2008) there are included requirements for considering hydrological aspects of forest management. These aspects are also included in National target oriented programme of integrated flood protection in the basins of the Dniester, Prut and Siret (2008). In the Research Institute of Mountain Forestry during of almost half a century it is functioning hydrological stazionars where experiments are conducted aiming to establishing connection between logging and hydrological regime in mountainous forest areas.

State Forestry Committee of Ukraine is making efforts for

improving transport network in the forests aiming reducing the number of skidding trails, bringing significant changes in the hydrological regime of the territory and causing erosion. Over the past three years only in the Ukrainian Carpathians there are built 340 km of new forest roads. It is worth mentioned that road construction is carried out using environment-friendly methods based on Austrian experience of placement roadbed on the slopes.

In February 2010, in framework of European Technical Assistance and Information Exchange instrument there was held seminar aiming discussing the European experience of flood protection measures and improving legislative regulation of hydrological functions of forests. Experts from Austria, Germany and Italy shared their experience.
At present it was started work on launching cooperation with the Netherlands to promote the consolidation of land, water and forest policy.

Major activities since 2007 in implementing former commitments of the Ministerial Conference on the Protection of Forests in Europe

S4 - «Adapting the management of mountain forests»
In 2007, Ukraine was approved strategy and action plan aimed at implementing the Framework Convention on the Protection and Sustainable Development of Carpathians, signed by Ukraine. Implementation of the Convention is provided through incorporation of its requirements under the new laws and regulations on forest management and through their incorporation in the planning of forestry activities in mountain forests. With the assistance of the Ukrainian-Swiss project FORZA it was developed guidelines on close to nature forestry, which aimed to use mainly selective methods of cutting and forming uneven close to natural vegetation. Provisions of close to nature forestry are included in the approved rules on improvement the quality of the forests.

S6 - «Research on forest ecosystems»
In Ukraine it is currently implemented the project on the adaptation and implementation methodology for identification forest especially valuable for conservation (HCVF). The aim of the project is providing methodology which can help identifying forest especially valuable for conservation in connection with its certification, sustainable use and providing recommendations on maintenance, management and monitoring of forests.

H1 - «Sustainable forest management in Europe» and L2 - «Pan-European Criteria, indicators and PEOLG for SFM»
Resolution implementation is provided through incorporation principles of sustainable forest management in the new legislative and normative documents, developed within the framework of Forest act adopted in 2006.

Besides pan-European criteria and indicators were taken into account under developing of national standard «Certification of management systems. The principles, criteria and indicators». The standard passed the official national system of approval in 2008 and is being prepared for submission for registration of FSC.

H2 - «Conservation of the biodiversity of forests» and the Vienna resolution number 4 «Forest biological diversity»
According to a decree of President of Ukraine in 2007–2009 new protected areas were created and territories of existing protected areas expanded by 109 thou ha and it is expected to create new and expand existed protected areas by 155,7 thou ha to 2012.

H4 - «Adaptation of forests to climate change», and V5 «Climate change and SFM»
At present Ukraine has almost completed the work on building national legislative frameworks necessary for implementing the Kyoto Protocol at the national level.

V3 - «Social and cultural dimensions of SFM»
Forest enterprises improve recreational areas over 1.5 thou ha (recreational areas along highways, rivers, historical and natural attractions, etc.) at annual base.

One of the priorities of the State Forestry Committee determined in 2010 is promoting recreational activities in forests and tourism.

United Kingdom

National implementation of Warsaw Resolution 1 Forests, Wood and Energy

Climate change

The UK Government is committed to combating climate change by reducing greenhouse gas emissions by 80 % of 1990 levels by 2050. In 2008, Government signed up to European targets to produce 15 % of all energy consumed in the UK from renewable sources, equivalent to an eight-fold increase in renewable energy consumption from current levels by 2020. The UK Government is committed to combating climate change by reducing greenhouse gas emissions by 80 % of 1990 levels by 2050. In 2008, Government signed up to European targets to produce 15 % of all energy produced in the UK from renewable sources and the recent Renewable Energy Strategy proposed that 30 % of that renewable energy would come from bioenergy. Woodfuel is a sustainable and low carbon source of bioenergy that can make a substantial contribution to achieving these targets. For more information on national renewable energy and climate change policy visit the Department for Energy and Climate website.

Renewable Energy

The Renewable Energy Business Unit has increased its effective support of Renewable Energy development objectives in England and Scotland particularly over the past year. To meet the increasing importance of this area, there will be a new internal business unit in Forestry Commission Scotland, Forest Renewables, which will promote and manage the development of all wind and hydro energy resources on the national forest estate in Scotland.

Forestry Commission in England is supporting the development of woodfuel, through the *Woodfuel Strategy for England* (3.9 MB). The Implementation Plan for the wood fuel strategy will set out how the Forestry Commission, in partnership with a wide group of stakeholders, is encouraging the market for logs, chips and pellets to develop.

National implementation of Warsaw Resolution 2 Forests and Water

Please give a description of national implementation of the commitments, including major achievements and remaining challenges

The United Kingdom Forestry Standard (UKFS) sets out the approach of the governments in the UK to sustainable forest management. This approach is based on internationally recognised science and good forestry practice. The UKFS defines standards of management, and provides a basis for regulation and monitoring according to agreed principles and criteria for sustainable forestry. The Water Guidelines were revised relatively recently (4th edition 2003), the new format of the UKFS coupled with significant developments in legislation, particularly the Water Framework Directive, meant that a new version was required. In addition, it was agreed that more scope was needed for detailed practical guidance in separate publications thus enabling the Guidelines series to concentrate on the key principles and concepts and link these to the UKFS.

Major activities since 2007 in implementing former commitments of the Ministerial Conference on the Protection of Forests in Europe

There have been major steps in climate change policy across the UK in the past 12 months. The UK has passed world-leading legislation through the UK and Scotland Climate Change Acts. Work has begun to put in place policies and mechanisms to meet the targets set out in these Acts, through the Government publishing the UK Low Carbon Transition Plan in July 2009.

The UK is developing of a Code of Good Practice on Forest Carbon Projects in the UK. This code will provide assurance in the capacity of woodland creation to deliver effective mitigation, thereby increasing confidence among potential investors. The Code will ensure compliance with the UK Forestry Standard in order to meet the requirements of sustainable forest management. It will provide robust protocols for measuring carbon and will put in place rigorous processes for registering, validating and verifying claims of carbon uptake through woodland creation.
«Combating Climate Change - a role for UK forests» was launched on 25 November at an event in London. The independent assessment was commissioned by the Forestry Commission to examine the potential of the UK's trees and woodlands to mitigate and adapt to our changing climate. It forms part of the response to the Intergovernmental Panel on Climate Change (IPCC) 4th Assessment Report published in 2007. The assessment aims to provide a better understanding of how UK forestry can adapt to and improve its contribution to mitigation of climate change. The study is considered to be the first national assessment of its kind in the world and is already attracting interest from other countries keen to form their own climate change plans and policies. http://www.forestry.gov.uk/forestry/infd-7y4gn9

Pan-European Implementation

Introduction

This part presents joint pan-European actions and implementation of FOREST EUROPE commitments, supplementing the national reports on follow-up activities. The pan-European actions reflect the political priorities addressed by the ministers at the Ministerial Conference in Warsaw 2007. Actions were selected on the basis that they should add value at the pan-European level and support implementation of forest policy commitments at European as well as global levels.

Relevant pan-European actions in following up the commitments from Warsaw were identified in the FOREST EUROPE Work Programme (adopted by the FOREST EUROPE Expert Level Meeting in May 2008). This part of the report follows the structure of the work programme, describing the implementation of Warsaw Ministerial Commitments. The Work Programme also included consideration of the strategic direction of the FOREST EUROPE process.

Implementation of the Warsaw ministerial commitments are presented under five thematic programme elements:

- Sustainable Forest Management and Climate Change;
- Wood Mobilisation and Sound Use of Wood;
- Multiple Forest Ecosystem Services, including Forests and Water;
- Regional-Global Co-operation and Partnership; and
- Cross-Cutting Activities.

On the strategic direction of FOREST EUROPE, activities include an external review of the FOREST EUROPE process and work by two working groups and other activities related to a possible legally binding agreement on forests in Europe.

Implementation of the **Warsaw Ministerial Commitments**

Programme Element 1: Sustainable Forest Management and Climate Change

In the Warsaw Declaration and Warsaw Resolution 1 on Forests, Wood and Energy, the ministers responsible for forests recognised the role of forests, sustainable forest management and forest products in climate change mitigation and the on-going need for adaptation to climate change. They expressed their commitment to ensure that forests and sustainable forest management play an active role in combating the negative effects of climate change.

I. FORESTS AND CLIMATE CHANGE – MITIGATION AND ADAPTATION

Workshop on harvested wood products in the context of climate change policies

In collaboration with the Swiss Federal Office for the Environment and UNECE/FAO Timber Section, a workshop on harvested wood products in the context of climate change was convened in Geneva, Switzerland, 8–9 September 2008. The objective of the workshop was to provide information for policy- and decision-makers on the climate-relevant carbon storage and substitution effects of harvested wood products and their accounting, and to discuss measures and policies to increase the role of forest products in climate change mitigation.

The workshop was attended by more than 100 participants. The results, conclusions and recommendations, are available in the proceeding from the workshop at http://www.unece.org/timber/workshops/2008/hwp/Proceedings_28Oct08.pdf.

Workshop on the assessment of forest fire risk and innovative strategies for fire prevention

In collaboration with the Hellenic Ministry for the Environment, Energy and Climate Change, the Republic of Cyprus Department of Forests, the Union of South European Foresters (USSE), Silva Mediterranea and UNECE ToS on Forest Fires, a workshop on the assessment of forest fire risk and innovative strategies for fire prevention was convened in Rhodes, Greece, 4–6 May 2010. The objective of the workshop was to review current systems for fire prevention, identify innovative strategies, best practices and possible policy instruments, and develop policy conclusions and recommendations for forest fire prevention in Europe. The workshop was attended by more than 70 experts and forest policy advisers. The report of the workshop is available at www.foresteurope.org/WorkshopForestFirePrevention. Presentations, working group results, etc. are available at http://www.foresteurope.org/eng/Commitments/Documents/Meetings_2010/Workshop+on+the+Assessment+of+Forest+Fire+Risks+and+Innovative+Strategies+for+Fire+Prevention.9UFRrSXp.ips.

II. SUSTAINABLE FOREST MANAGEMENT AND SUSTAINABILITY CRITERIA

An open-ended, ad-hoc working group on sustainability criteria for forest biomass production, including bio-energy, was initiated in response to new developments and other processes addressing the sustainability of biomass production, notably the emerging focus on the role of forests and sustainable forest management related to climate change and energy. Sweden had a leading role in the work. The working group had three meetings from October 2008 to June 2009, and produced a report, available at www.foresteurope.org/WorkingGroupSustainabilityCriteria. Based on extensive analysis, the working group recommendations were that the FOREST EUROPE tools for sustainable forest management should be refined and further developed in order to better meet new requirements, such as climate change issues, wood-based bioenergy, and various forest services. The group further stressed that any refinements should build on former work and existing processes, and that duplication of work should be avoided.

The working group also stressed the importance of effective communication with broader society, including raising awareness of the existing FOREST EUROPE tools for sustainable forest management outside the forest sector. Responding to this, the Liaison Unit Oslo produced «A Quick Guide to the pan-European policy and tools for sustainable forest management» and fact sheets on selected thematic issues to facilitate communication with energy and other related sectors at national and European levels.

The FOREST EUROPE Expert Level Meeting in November 2009 welcomed the recommendations from the working group and underlined the need to regularly assess the FOREST EUROPE tools, particularly the indicators for sustainable forest management, and to refine them based on new developments and needs. It was decided to accommodate these aspects through the thematic elements proposed for follow-up after the next ministerial conference.

III. PAN-EUROPEAN AFFORESTATION AND REFORESTATION GUIDELINES

As a follow-up to the collaborative efforts between FOREST EUROPE and the Environment for Europe/Pan-European Biological and Landscape Diversity Strategy (PEBLDS) on pan-European afforestation and reforestation guidelines, the FOREST EUROPE Expert Level Meeting and the Bureau of PEBLDS in November 2008 adopted the Pan-European Guidelines for Afforestation and Reforestation with a special focus on the provisions of the UNFCCC (United Nations Framework Convention on Climate Change). The jointly developed guidelines were finalised in Malahide, Ireland, in September 2008. The guidelines are available at www.foresteurope.org/Pan-EuropeanAfforestationReforestationGuidelines

Programme Element 2: Wood Mobilisation and Sound Use of Wood

At the Ministerial Conference in Warsaw the ministers recognised the need to enhance wood supply to meet increasing demands. They expressed their commitment to ensure enabling conditions for increased sustainable wood production and mobilisation. The ministers also emphasised the need to enhance the use of wood from sustainably managed forests, and to co-operate on and promote public procurement policies that demand timber and timber products from legal and sustainable sources.

I. WOOD MOBILISATION

A workshop on strategies for increasing the mobilisation of wood resources from sustainable sources was organised in Grenoble, France, 16-18 June 2009. The workshop was co-organised by CEPI, CEPF, UNECE/FAO, COPA-COGECA, EFI, and FOREST EUROPE, and attended by close to 50 participants. The conclusions and recommendations from the workshop are available at http://www.foresteurope.org/WorkshopWoodMobilisation.

Based on the discussions and work related to the workshop, the report «Good practice guidance on sustainable mobilisation of wood in Europe» was developed. The report provides a range of examples of successful and sustainable means of mobilising wood, targeted at policy makers and practitioners. The report was published by European Commission DG Agriculture and Rural Development, jointly prepared with FOREST EUROPE Liaison Unit Oslo and UNECE/FAO. The full report is available at http://foresteurope.org/WoodMobilisationGuidanceReport. A brochure giving a compact presentation of the report «Good practice guidance on sustainable mobilisation of wood in Europe'»was published by FOREST EUROPE Liaison Unit Oslo, and jointly developed with the European Commission DG Agriculture and Rural Development and UNECE/FAO. The brochure is available at www.foresteurope.org/WoodMobilisationGuidanceBrochure

II. SOUND USE OF WOOD

Workshop on public procurement policies for timber

A workshop on public procurement policies for timber was convened 7-8 April 2008, in Copenhagen, Denmark. The meeting focused on discussing social criteria for procuring legal and sustainable wood and wood products.

Expert meeting on forest law enforcement and governance

An Expert meeting on forest law enforcement and governance (FLEG) - progress and lessons learned, co-organised with Romania, EFI and the World Bank, was held in Bucharest, Romania, 13-15 October 2008. The meeting was designated to provide support to and consistency in the evolution of FLEGT and ENA-FLEG progresses, and served the implementation of FOREST EUROPE commitments, in particular the Warsaw Declaration, paragraph 36.

Programme Element 3: Multiple Forest Ecosystem Services, including Forests and Water

At the Ministerial Conference in Warsaw the ministers responsible for forests in the Pan-European region recognised the importance of the full economic value of the multiple services provided by forests as well as measures to secure these services. In previous commitments ministers have stressed the issue of improving enabling conditions for the market-based provision of a diversified range of non-wood goods and services from sustainably managed forests. The Warsaw Resolution 2 on Forests and Water stresses the role of forests and forest management in protecting water quality and in overall watershed management.

International «Forest and water» Conference

A scientific conference on forest and water was held in Mragowo, Poland on 14-17 September 2008, co-organised by the Polish Forest Research Institute, the Norwegian Forest and Landscape Institute and the General Directorate of the State Forests in Poland.

International Conference on Water and Forests: A convenient truth?

A scientific conference on water and forests focusing on the Mediterranean region was held in Barcelona, Spain on 30–31 October 2008. The conference was organised by EFIMED and partners.

Workshop on forests and water: Sustainable Forest Management and Influences on Water Resources – Co-ordinating Policies on Forests and Water

A FOREST EUROPE workshop on forests and water was convened in Antalya, Turkey, 12–14 May 2009. The workshop was co-organised by Turkey, as the host country, Switzerland, FOREST EUROPE, the UNECE Water Convention and the FAO. The aim of the workshop was to examine the inter-relationships and mutual influences of forests and water, how countries approach these topics, and how they currently are and could be reflected in forest and water policies in the pan-European region. The workshop provided the opportunity for both forest and water sectors to participate in discussing the linkages between forests and water, and how to strengthen co-operation between the sectors.

95 participants from the forest and water sectors, representing 27 countries and 7 organisations in the FOREST EUROPE and UNECE regions and neighbouring countries, took part in the workshop. The presentations and conclusions from the workshop are available at www.foresteurope.org/forests_and_water/workshop.

Programme Element 4: Regional – Global Co-operation and Partnership

In the Warsaw Declaration the ministers responsible for forests emphasised that sustainable forest management contributes significantly to the achievement of internationally agreed goals, including the Four Global Objectives on Forests, the Millennium Development Goals and the 2010 Biodiversity Targets. They expressed their commitment to contribute to the international forest policy dialogue by continued co-operation on forest issues in Europe and by sharing European achievements and experiences with other regions.

FOREST EUROPE, through its Liaison Unit, has a tradition of providing input to and participating in a range of activities among related organisations and initiatives. Some major activities in the period 2008 to mid-2011 by the Liaison Unit Oslo, in addition to activities presented separately in this report, are presented briefly below.

FOREST EUROPE has provided inputs to United Nations Framework Convention on Climate Change on different occasions during 2008–2010. FOREST EUROPE, together with the Polish State Forest Service, convened a side event at the second Forest Day on the occasion of the UNFCCC COP14 in Poznan, Poland, in December 2008. Written messages on FOREST EUROPE's relevance to the climate negotiations were distributed to UNFCCC and Forest Day participants at COP14 and COP15 (Copenhagen, Denmark 2009). FOREST EUROPE together with the Norwegian Ministry of Agriculture and Food convened a side event at

the meeting of the subsidiary bodies of UNFCCC in Bonn, Germany, in June 2009.

FOREST EUROPE provided input to the United Nations Forum on Forests (UNFF) sessions 2009: «Forests in a changing environment and Means of implementation» and «2011: Forest for people, livelihoods and poverty eradication». Also, an analysis was conducted of the potential role of FOREST EUROPE as a regional process in the implementation of the non-legally binding instrument on forests (United Nations 2007).

The workshop on Forests in the Changing Environment, a pan-European regional contribution to the UNFF, was held in Finland, 3–5 September 2008.

FOREST EUROPE provided inputs to the United Nations Convention on Biological Diversity: FOREST EUROPE arranged side events at SBSTTA 13 in Rome, Italy, in February 2008 and SBSTTA 14 in Nairobi, Kenya, in May 2010. As a contribution to the International Year of Biodiversity 2010, an assessment of contributions by FOREST EUROPE to the implementation of CBD commitments on forest biological diversity was prepared for the CBDs 10th Conference of Parties (COP), 2010. The assessment, entitled 'Enriching Forest Biodiversity; FOREST EUROPE is implementing Convention on Biological Diversity provisions', is available at http://www.foresteurope.org/EnrichingForestBiodiversity

Programme Element 5: Cross-Cutting Activities

In the Warsaw Declaration the ministers responsible for forests expressed their commitment to raising the profile and awareness of the multiple benefits of forests, forestry, and the role of the forest sector. They highlighted actions towards raising public awareness of the cross-sectoral importance of forests and the forest sector. Monitoring and reporting facilitate information sharing with broader society, and at the same time provide information on trends in the state of Europe's forests and progress in implementing FOREST EUROPE commitments, which is helpful for further policy development.

I. COMMUNICATION AND OUTREACH

FOREST EUROPE Communications Strategy
To support implementation of the ministerial commitment, a FOREST EUROPE Communications Strategy with definite and strategic goals was developed, and is now being implemented.

Visual Profile
A new visual profile was developed that reflects the present and future environmental, economic and social importance of the process in the European region and globally, as well as its priority topics and the diversity of the participating countries and stakeholders. The visual profile has subsequently been implemented in all FOREST EUROPE communications tools.

New Brand Name
The communications strategy and an external review identified that effective outreach requires a brand name which makes clear association and profile possible, and includes the main message of the process. For this reason the participating countries decided to replace the brand name MCPFE with FOREST EUROPE. The brand name FOREST EUROPE has since been shown to be an essential tool for communicating the importance of Europe's forests and stepping up dialogue at the national, regional and global levels. Officially, the policy process is still operating under the name Ministerial Conference on the Protection of Forests in Europe.

Relaunch Website
The FOREST EUROPE website, www.foresteurope.org, is a key communication tool and was relaunched to enhance the knowledge of professionals in forest-related sectors, the media and public about the work, activities, structure and process. Specific information services for the press, including a press kit, were designed to facilitate the work of international media and journalists.

Information Tools and Publications
FOREST EUROPE has developed various communications tools to inform about its work and enhance dialogue with target audiences. These include an image brochure, guidance on wood mobilisation, publications on Pan-European Guidelines for Afforestation and Reforestation, Forests

and Water, a report on Forest Fire Risks and Innovative Strategies, and a poster to communicate the FOREST EUROPE Ministerial Conference in Oslo. Furthermore FOREST EUROPE factsheets on Sustainable Forest Management, European Forest Resources, Renewables, Forests and Climate Change and a FOREST EUROPE guide to policy tools have been publisheded. FOREST EUROPE activities are also presented in regular issues of the *Forest Europe* newsletter.

Media Work
For the website, specific information services for the press, including a press kit, were designed to facilitate the work of international media and journalists. Press releases on relevant issues have been distributed to international media.

Building pan-European Communications Network
Building a pan-European communications network with people responsible for communications in signatories to FOREST EUROPE is a key element of the strategy. This has recently been initiated and is ongoing.

European Forest Week
The ministers at the Ministerial Conference in Warsaw also declared the week of 20–24 October 2008 to be the European Forest Week. The main objective of European Forest Week was to raise awareness of the contribution of forests to mitigating climate change, providing wood and renewable energy, securing the supply of fresh water and protecting our environment. European Forest Week was jointly organised by the European Commission, the Food and Agriculture Organization of the United Nations (FAO), the Ministerial Conference on the Protection of Forests in Europe (FOREST EUROPE) and the United Nations Economic Commission for Europe (UNECE).

Forest Communicators' Network
Through participation in the Forest Communicators' Network (FCN), the Liaison Unit Oslo has contributed to preparations of European Forest Week, development of an EU forest communication strategy, and deliberations on a Strategic Framework for Forest Communication in Europe.

Contributions to the International Year of Forests 2011
The FOREST EUROPE Ministerial Conference on the Protection of Forests in Europe convened in Oslo, Norway, 14-16 June 2011 and communications activities related to this event are a major contribution to the celebration of the International Year of Forests 2011.

II. MONITORING AND REPORTING, INCLUDING CRITERIA & INDICATORS

Preparation of «State of Europe's Forests 2011»
UNECE, FAO and FOREST EUROPE Liaison Unit Oslo have, together with numerous other organisations and experts, prepared the State of Europe's Forests 2011. Based on national reporting on pan-European quantitative and qualitative indicators, this publication presents status and trends in sustainable forest management in Europe. The report provides solid information on challenges and opportunities for forests and forest management and for further policy development, as well as a solid basis for communication with broader society. The report is available on foresteurope.org, where more information on additional sources of documentation is also available.

Further work on refinement of forest types
The UNECE/FAO Team of Specialists on monitoring sustainable forest management, the European Environment Agency (EEA), IUFRO, and FOREST EUROPE have continued work on the refinement of European forest types. The new European forest types, EFT, have been developed by a consortium of experts from a number of European countries led by the Italian Academy of Forest Sciences. Pilot reporting according to the European forest types was conducted, connected to the reporting for the State of Europe's Forests 2011 report. National reporting according to the EFTs showed a high response rate on compulsory indicators (forest area and growing stock) and availability of complete time series (1990, 2000, 2005, 2010) for a consistent number of countries. A brief report on the pilot application of European Forest Types is included in the State of Europe's Forests 2011.

Strategic Direction of FOREST EUROPE

Over the last twenty years, FOREST EUROPE has defined and further developed the concept of sustainable forest management in the pan-European region. At the Warsaw Conference several ministers and heads of delegations argued for considering innovative forms for future co-operation in order to meet challenges ahead and to progress towards the envisioned long-term objectives. The ministers proposed to explore the potential for a legally binding agreement on forests in Europe, and decided to carry out a review of the Ministerial Conference on the Protection of Forests in Europe process.

External Review of FOREST EUROPE

The external review of the Ministerial Conference on the Protection of Forests in Europe was conducted under the responsibility of the International Institute for Applied Systems Analysis (IIASA), by a consortium of experts from IIASA, European Forest Institute (EFI), International Union of Forest Research Organizations (IUFRO) and the European Commission. The mandate was to assess progress made and obstacles faced in the implementation of FOREST EUROPE commitments. The review was conducted in the period January to October 2009. The main report is available at www.foresteurope.org

The External Review report consists of two main parts: the findings of Document analysis, Written survey and Group discussions; and a set of derived recommendations from the review team based on an analysis of the findings. The recommendations point to a need for change within FOREST EUROPE and possible paths for the future direction of the process.

Developing a possible legally binding agreement on forests in Europe

At the Fifth Ministerial Conference on the Protection of Forests in Europe, 5-7 November 2007 in Warsaw, Poland, a proposal was tabled to begin a process for exploring the possibility of a legally binding agreement on forests in the European region. Two Working Groups were set up and charged with dealing with the following tasks.

The first group, WG1, was mandated to explore the potential added value of, and possible options for, a legally binding agreement on forests in the pan-European region. It worked from November 2008 until October 2009.

The second group, WG2, was requested to prepare options for a decision on a possible legally binding agreement on forests in Europe and to produce a «non-paper» that sets out options for a legally binding agreement. WG2 worked from January to November 2010.

The results from the two working groups and the outcomes of the comprehensive scoping exercise and technical preparations were presented and discussed at the FOREST EUROPE Expert Level Meeting in December 2010. More detailed analysis and reports developed by the WGs on a possible legally binding agreement on forests in Europe can be found at:
http://www.foresteurope.org/eng/What_we_work_for/Legally_Binding_Agreement/

The conclusions and recommendations from these two working groups were used to develop «Oslo Ministerial Mandate for Negotiating a Legally Binding Agreement on Forests in Europe», brought for consideration by the ministers responsible for forests in Europeat the Ministerial Conference on the Protection of Forests in Europe in Oslo, Norway, 14-16 June 2011.

Implementation of **Helsinki and Strasbourg Resolutions** *since 2007*

Reported by respective international coordinators

Coordination of implementation of some of the former FOREST EUROPE commitments is assigned to relevant European organisations and cooperative partnerships. These organisations and partnerships were invited to provide an update on the implementation of the former resolutions since the FOREST EUROPE Ministerial Conference in Warsaw, Poland in 2007.

Updates on the implementation since 2007 were provided for five resolutions:

-Forestry Cooperation with Countries with Economies in Transition
Reported by the UNECE/FAO Forestry and Timber Section

Helsinki Resolution 4:
Strategies for a Process of Long-Term Adaptation of Forests in Europe to Climate Change
Reported by the International Union of Forest Research Organizations (IUFRO)

Strasbourg Resolution 2:
Conservation of Forest Genetic Resources
Reported by the Bioversity International

Strasbourg Resolution 3:
Decentralized European Data Bank on Forest Fires
Reported by the European Commission Joint Research Centre

Strasbourg Resolution 5:
Expansion of the EUROSILVA Network of Research on Tree Physiology
Reported by the University of Oulu, Finland

Helsinki Resolution 3
Forestry Cooperation with Countries with Economies in Transition

Report from the UNECE/FAO Forestry and Timber Section

General approach

As the international coordinator for the follow-up to Resolution H3 (Forestry Cooperation with Countries with Economies in Transition), the UNECE/FAO Forestry and Timber Section supports a number of activities such as information collection and analysis through regular and ad-hoc surveys, production of national reports and organization of seminars and workshops on emerging policy issues. A dedicated Team of Specialists contributes to these activities, also in the framework of the Krtiny Declaration which addresses recommendations to governments in the region and to international organizations to strengthen the forest policy and institutional structure. Following the Strategic Review of the UNECE/FAO Integrated Programme of Work on Timber and Forestry in 2008, the Team is known as the, «Team of Specialists on Forest Policy in Eastern Europe and Central Asia» as a response to a two needs: one to focus actions on forest policy and, the other, to integrate Central Asia into its core activities.

Implementation

The Team of Specialists gathers national experts from the UNECE region, with the following objectives:

i) Exchanging information and experiences on forest policy formulation and implementation;
ii) Identifying priority issues in eastern European and central Asian countries;
iii) Promoting a transparent regional discussion of priorities and best practices in reforming policies and institutions in the sector; and
iv) Integrating countries into existing policy networks.

At its inaugural meeting held on 4-6 March 2009 in Budapest, the Team of Specialists adopted an elaborate workplan, reflecting countries' requirements and needs for the period until 2013. The workplan is being implemented in cooperation with the FAO sub-regional offices for Central and Eastern Europe (Budapest) and Central Asia (Ankara) and FAO Headquarters. At a second meeting in Istanbul (20-22 September 2010), country representatives exchanged national experiences, challenges and «success stories» for forest policy formulation and implementation while countries facing similar situations discussed the possibility of «matching» experiences in order to develop regional or bilateral cooperation on core issues. The Team, supported by the Secretariat, is currently working on the harmonization of terms and definitions related to forest policy, in order to facilitate better understanding.

As part of its programme of work, the UNECE/FAO Forestry and Timber Section is active in the region through a number of activities in different work areas. One result of this enhanced presence has been improved responses to enquiries conducted by the section in the fields of forest assessment, wood energy and wood production, consumption and trade. Examples of these activities include:

- A regional workshop for national correspondents from Russian-speaking countries (Budapest, 3-5 November 2008), resulting in tangible improvement in terms of data for the FAO Global Forest Resource Assessment 2010 report. Similar results were achieved by working closely with correspondents to the State of Europe's Forests 2011 report.
- A number of workshops on wood energy (Timisoara, 16-17 September 2008; Belgrade, 2-3 December 2008; Dubrovnik, 17-20 November 2009; Minsk, 1-4 June 2010) to bring together experts from the forestry and energy sectors and encourage collaboration between public and private actors.
- A workshop on Forest Products Statistics for CIS-region National Statistical Correspondents (Moscow, 16-19 February 2009) resulted in enhanced understanding of replies to the annual Joint Forest Sector Questionnaire.
- Information and advice on developments in forest products markets was also shared through workshops organized in South Eastern Europe (Belgrade, 13-14 April 2010; Mavrovo, the former Yugoslav Republic of Macedonia, 7-9 December 2010).

In all of the above activities, the participation of national experts and policymakers from countries with economies in transition was supported by the UNECE and FAO in collaboration with other partners.

Assessment

The assistance provided to these countries has produced

effective and positive results. Closer regional cooperation was made possible by building or strengthening cross-sectoral and cross-institutional networks among experts and policymakers. However, extra-budgetary funding has not been sufficient to meet all of the programme's aspirations. In this regard, UNECE/FAO is now focussing its efforts on attracting extra funding and extending its networks in order to address the following priorities and challenges:

i) Encouraging sustainable forest management as well as developing marketing skills and access to markets for countries with significant forest resources as an opportunity for economic growth,
ii) Improving access to forest information management and communication,
iii) Increasing wood energy information in the region through additional workshops and capacity building activities, with the support of other international organizations.

Helsinki Resolution 4 *Strategies for a Process of* **Long-Term Adaptation** *of Forests in Europe* **to Climate Change**

Author/Institution: Alexander Buck, International Union of Forest Research Organizations (IUFRO)

Helsinki Resolution H4 aims at promoting international cooperation and research addressing adverse effects of climate change on forests and the adaptation of forests to changing climatic conditions. Since the 5th Ministerial Conference in November 2007, IUFRO has continued to promote international science collaboration in the areas of research set out in Resolution H4, and to disseminate the outcomes of these activities to policy makers, practitioners and stakeholders.

Climate change has been the subject of more than 30 international scientific workshops and conferences organized under the umbrella of IUFRO in that period. The scientific evidence gathered at these IUFRO meetings has further improved our understanding of the complex cause-effect relationships with regard to global and local climatic changes and the associated impacts on forest ecosystems.

In October 2007, IUFRO initiated the most comprehensive scientific assessment to date of current knowledge concerning the impacts of climate change on forests and people along with options for adaptation. The assessment was carried out by a Global Forest Expert Panel of more than 35 leading forest scientists, constituted under the Collaborative Partnership on Forests. Several Panel members also served as key experts in the Intergovernmental Panel on Climate Change. The results of the assessment were published in April 2009 as IUFRO World Series Volume 22 (Annex 4)[1]. A policy brief «Making Forests Fit for Climate Change» was prepared on basis of the full assessment and launched on the occasion of the 8th session of the United Nations Forum on Forests in April 2009.

The scientific evidence gathered by IUFRO suggests that higher temperatures - along with the prolonged droughts, more intense pest invasions, and other environmental stresses that could accompany climate change - would lead to considerable forest destruction and degradation. This could create a dangerous feedback loop in which damage to forests from climate change significantly increases global carbon emissions which then exacerbate the greenhouse effect. The risk of losing the carbon sink regulating service is particularly significant in boreal forests due to the large quantities of carbon contained in soils. Furthermore, climate change is projected to increase the risk of fire especially in southern Europe and the Mediterranean as a result of reduced summer precipitation. At the same time, climate change is expected to increase forest productivity in northern and – to a lesser extent - western Europe.

Available scientific information indicates the need to focus greater attention on helping forests and people to adapt to anticipated problems. Towards this end, sustainable forest management is essential for reducing vulnerability to climate change and for decreasing non-climatic stresses. Forest management measures to adapt to climate change should be supported by appropriate policy means that are sensitive to national and sub-national contexts and that promote inter-sectoral coordination. National forest programmes provide a basic governance framework for collaboration and policy learning that should address adaptation.

[1] Recommended catalogue entry: Risto Seppälä, Alexander Buck and Pia Katila. (eds.). 2009. Adaptation of Forests and People to Climate Change. A Global Assessment Report. IUFRO World Series Volume 22. Helsinki. 224 p.

Strasbourg Resolution 2
Conservation of Forest Genetic Resources

Author/Institution: Jarkko Koskela, Bioversity International, Regional Office for Europe, Rome, Italy

General approach

The European Forest Genetic Resources Programme (EUFORGEN) was established in October 1994 as an implementation mechanism for Resolution S2. The overall goal of EUFORGEN is to promote conservation and sustainable use of forest genetic resources in Europe. The Programme is financed by its member countries and coordinated by Bioversity International in technical collaboration with FAO. It is overseen by the Steering Committee, which is composed of National Coordinators from all member countries.

During Phase III (2005–2009), EUFORGEN carried out its work through a thematic Forest Management Network and three species-oriented Networks (Conifers, Scattered Broadleaves and Stand-forming Broadleaves). These Networks brought together a total of 101 experts from 31 member countries to exchange information, analyze relevant policies and practices, and to develop tools and guidelines for the management of forest genetic resources.

In 2009, the EUFORGEN Steering Committee reviewed the progress made during Phase III and identified needs for further action on forest genetic resources at pan-European level. It also welcomed the continued commitment of the Signatory States and the European Community to actively manage forest genetic resources, as indicated in the Warsaw Declaration (2007) and the FOREST EUROPE Work Plan (2008). Subsequently, at its sixth meeting in Thessaloniki, Greece in June 2009, the Steering Committee endorsed the continuation of EUFORGEN into Phase IV (2010–2014) with revised objectives and modus operandi. During Phase IV, the objectives of EUFORGEN are as follows:

6. Promote appropriate use of forest genetic resources as part of sustainable forest management to facilitate adaptation of forests and forest management to climate change;
7. Develop and promote pan-European gene conservation strategies and improve guidelines for management of gene conservation units and protected areas;
8. Collate, maintain and disseminate reliable information on forest genetic resources in Europe.

Instead of the Networks, the EUFORGEN activities are now carried out through smaller working groups (about 10 experts) focusing on specific tasks. Key findings and recommendations for conservation and use of forest genetic resources will be also presented to a broader group of stakeholders during workshops. More information is available on the EUFORGEN website (www.euforgen.org).

Progress in implementation since Warsaw, 2007

The EUFORGEN Networks met five times (2007–2009) to plan their work and to discuss their results. In addition, two expert group meetings (2008) and four training workshops (2009) were organized as part of the EUFGIS project (Establishment of a European Information System on Forest Genetic Resources) which was co-funded by the European Commission. The project was coordinated by Bioversity International and implemented in collaboration with the EUFORGEN member countries. In February 2010, EUFORGEN was a co-organizer of a round-table meeting which was held in Brussels to discuss European collaboration and opportunities for better incorporation of forest genetic resources into research, environment, agricultural and rural development policies of the EC. In September 2010, the final meeting of the EUFGIS project was held in Vienna, Austria in conjunction with the seventh meeting of the EUFORGEN Steering Committee. Reports of the meetings can be found on the EUFORGEN and EUFGIS (www.eufgis.org) websites.

The most significant achievement since the Warsaw Conference is the EUFGIS Portal (http://portal.eufgis.org) which provides geo-referenced information on dynamic gene conservation units of forest trees across Europe. Dynamic gene conservation involves active management measures to favour genetic processes that maintain the long-term viability of tree populations. Prior to creating the database, the project also developed pan-European minimum requirements and data standards for the gene conservation units. The pan-European minimum requirements include basic management recommendations for these units which are typically located in forests managed for multiple uses, protected areas and seed stands. The data is provided and frequently upda-

ted by a network of 35 National Focal Points. In January 2011, the EUFGIS Portal contained data on 2358 units, which are managed for gene conservation of 105 tree species in 31 countries. The units harbour a total of 3137 tree populations.

During 2008–2011, EUFORGEN also produced 12 new technical guidelines for genetic conservation and use of Mediterranean firs (*Abies spp.*), Italian alder (*Alnus cordata*), silver birch (*Betula pendula*), beech (*Fagus sylvatica*), oriental beech (*F. orientalis*), European larch (*Larix decidua*), Bosnian pine (*Pinus leucodermis*), Macedonian pine (*P. peuce*), European white poplar (*Populus alba*), aspen (*P. tremula*), cork oak (*Quercus suber*) and Turkey oak (*Q. cerris*). These six-page guidelines summarize the latest scientific knowledge of the species, including distribution maps, for practical forest managers. Several countries have translated selected guidelines into their national languages or published articles based on them in professional forestry magazines. All guidelines and distribution maps are available from the EUFORGEN website.

In September 2010, the Steering Committee adopted a new EUFORGEN work plan for 2011–2012 and discussed new challenges related to both conservation and use of forest genetic resources in Europe. Firstly, climate change will have an effect on setting priorities for conservation of forest genetic resources at pan-European level. Secondly, it is necessary to re-evaluate how European networks of gene conservation units of forest trees, as well as individual units in a given site and environment conditions, should be managed under climate change. Thirdly, the current seed and provenance zones, delineated at national level, do not provide adequate guidance on how forest reproductive material should be used under changing climatic conditions. To address these challenges, the Steering Committee established three working groups which are focusing on 1) pan-European gene conservation strategies for forest trees, 2) genetic monitoring methods for the gene conservation units of forest trees, and 3) use and cross-border transfer of forest reproductive material.

Assessment

Since the Warsaw Conference, many European countries have demonstrated continued commitment to the pan-European implementation of Resolution S2 and this has also benefitted the practical conservation of forest genetic resources at national level. However, as compared to Phase III, the level of commitment has somewhat declined and only 26 countries have joined Phase IV.

The new pan-European minimum requirements for the gene conservation units have prompted action in many countries to improve management of forest genetic resources. The EUFGIS Portal has contributed to these efforts by making available more accurate data. It is also a useful tool for international reporting efforts, such as the State of Europe's Forests (2011) and the State of World's Forest Genetic Resources (2013) reports.

Through EUFORGEN, the countries have taken action to tackle the new challenges created by climate change for conservation of forest genetic resources in Europe. Furthermore, they have also recognized that the use of forest genetic resources offers opportunities to mitigate the negative impacts of climate change on forests. However, these opportunities are not yet fully acknowledged in relevant policies, such as national forest programmes (NFPs) and national adaptation strategies to climate change. Increasing number of NFPs do mention conservation and use of forest genetic resources as an important element of sustainable forest management but policy recommendations in this area are not always translated into action at practical forest management. Furthermore, national biodiversity action plans often neglect forest genetic diversity and focus only on habitat and species conservation.

The pan-European approach to conservation of forest genetic resources remains essential. This approach is also becoming more relevant for the use of forest genetic resources as climate change is increasing countries' interdependence on each others' genetic resources. The new Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (ABS) is also likely to have implications for the European forest sector. Therefore, FOREST EUROPE should add the use of forest genetic resources into its agenda after the Oslo Conference.

Strasbourg Resolution 3
Decentralized European Data Bank on Forest Fires

Author/Institution: Jesús San-Miguel-Ayanz, Institute for Environment and Sustainability, European Commission Joint Research Centre

General approach

Following the establishment of a European information system on forest fires, which was initiated in 1992 (EC Reg. 2158/92), the European Commission Joint Research Centre (JRC) collects yearly fire data from European countries and stores them into the European Forest Fire Information System (EFFIS) European Fire Database. EFFIS was established in 1998, following discussion on a harmonized system of information on forest fires with the countries. The system includes information from EU and non-EU countries. Datasets on individual fire events occurred in a given, described on the basis of a common core set of variables, are delivered every year by the countries participating into the EFFIS network to the JRC. Data are then consolidated, i.e. transformed in a common format, validated and stored in the European Fire Database. The data stored in this database are used to support several European policies and also activities on validation and calibration of other EFFIS products. Information on aggregated data from the database are available through the EFFIS Web interface (http://effis.jrc.ec.europa.eu). Currently 26 countries participate to the EFFIS network and the information system is open to all signatory countries to Resolution S3.

Cooperation has been established between the EC and UNECE for the exchange of fire statistical data. Under this agreement the EC acts as data provider to UNECE for those countries in the EFFIS network. Cooperation has been established also with FAO for the extension of the system to non-European countries in the Mediterranean basin, in the context of the FAO Silva-Mediterranea network.

The work in EFFIS fulfills the main principles called for by the S3 Resolution. Furthermore, EFFIS goes beyond those principles by implementing modules that were the basis of the Resolution, such as those of deriving a common fire risk for Europe, providing on-line and updated information to alert the European public, analyzing the causes of forest fire causes, and assessing the socio-economic impact of forest fires.

Progress in implementation since Warsaw, 2007

The number of countries actively participating to the information system has increased significantly (from 19 to 26).

The EFFIS web site (effis.jrc.ec.europa.eu) has been enhanced. Maps of fire danger, fire frequency and burned areas can be retrieved by any user.

New EFFIS modules on: (1) Socio-economic impact of fires, (2) Harmonization of fire causes reporting, (3) Elaboration of a European fire fuel map, and (4) Estimation and modeling of forest fire emissions have been developed.

Assessment

The different agencies interested in forest fire statistical data collection in the European region (UNECE, FAO, the European Union) have continued to work together effectively. Communication channels and co-ordination of work have been maintained among the agencies, improving the quality and coverage of the work accomplished. Particularly successful has been the cooperation between EC, UNECE, and FAO.

This successful outcome is the result of an efficient co-ordination of the work between the different actors. The collaborative role of individual countries in supporting EFFIS by providing the required data has been crucial to this success.

Strasbourg Resolution 5

Expansion of the EUROSILVA Network *of* Research on Tree Physiology

Reported by Satu Huttunen, Univeristy of Oulu, Finland, Professor and Coordinator of S5

General approach

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Annex 1: *Publications by the FOREST EUROPE Liaison Unit Oslo 2008–2011*

Assessment of Forest Fire Risks and Innovative Strategies for Fire Prevention. Rhodes, Greece, 4–6 May 2010. Workshop Report. FOREST EUROPE, 2010.

Enriching Forest Biodiversity. FOREST EUROPE is implementing Convention on Biological Diversity provisions. An assessment of the contributions by FOREST EUROPE to the implementation of the Convention on Biological Diversity (CBD) provisions. FOREST EUROPE, 2010.

Factsheet European Forest Resources. FOREST EUROPE, 2010.

Factsheet Forests and Climate Change. FOREST EUROPE, 2010.

Factsheet Renewable Resources. FOREST EUROPE, 2010.

Factsheet Sustainable Forest Management. FOREST EUROPE, 2010.

FOREST EUROPE Brochure. FOREST EUROPE, 2010.

FOREST EUROPE Ministerial Conference Poster. FOREST EUROPE, 2010.

FOREST EUROPE Policy Tools. FOREST EUROPE, 2010.

Good practice guidance on sustainable mobilisation of wood in Europe, report prepared based on the workshop on strategies for increased mobilisation of wood resources from sustainable sources, Grenoble, France, 16–18 June 2009. European Commission DG Agriculture and Rural Development, prepared jointly with UNECE/FAO Timber Section and FOREST EUROPE, 2010.

Good practice guidance on sustainable mobilisation of wood in Europe, brochure prepared for broader distribution of outcome of the workshop on strategies for increased mobilisation of wood resources from sustainable sources, Grenoble, France, 16–18 June 2009. FOREST EUROPE, prepared jointly with European Commission DG Agriculture and Rural Development and UNECE/FAO Timber Section, 2010.

Implementation of the FOREST EUROPE Commitments. National and Pan-European Actions 2008–2011. FOREST EUROPE, 2011.

Pan-European Guidelines for Afforestation and Reforestation with a special focus on the provisions of the UNFCCC. Adopted by the MCPFE[1] Expert Level Meeting on 12–13 November, 2008 and by the PEBLDS Bureau on behalf of the PEBLDS Council on 4 November, 2008.

Sustainable Forest Management and Influences on Water Resources - Coordinating Policies on Forests and Water. Report from Workshop on Forests and Water, 12–14 May 2009 in Antalya, Turkey. FOREST EUROPE, 2009.

State of Europe's Forests 2011. Status and trends in sustainable forest management in Europe. FOREST EUROPE, UNECE and FAO, 2011.

State of Europe's Forests 2011. Summary for Policy Makers. FOREST EUROPE, UNECE and FAO, 2011.

Work Programme, Pan-European Follow-Up of the 5th Ministerial Conference, 5–7 November 2007, Warsaw, Poland. Adopted by the FOREST EUROPE Expert Level Meeting, 7–8 May 2008, Oslo, Norway. All publications are accessible and can be ordered from www.foresteurope.org.

The webpage also contains links to other documents developed by the Liaison Unit Oslo with partners, including documents for working groups and unpublished materials from other activities in the period 2008–2011.

[1] The Ministerial Conference on the Protection of Forests in Europe has changed its brand name from MCPFE to FOREST EUROPE.

Annex 2: *Warsaw Declaration, Warsaw Resolution 1 and Warsaw Resolution 2*

FIFTH MINISTERIAL CONFERENCE ON THE PROTECTION OF FORESTS IN EUROPE

5-7 November, 2007, Warsaw, Poland

WARSAW DECLARATION

Conditions of life on our planet are threatened and call for immediate action. The challenge for all governments and civil society is to protect and sustainably use the Earth's natural resources. European forests have a vital role to play, as they can improve and benefit the quality of life and in particular contribute to climate change mitigation, energy supply and water protection.

1. Being aware of continuous change of climate conditions and the foreseen consequences for forest ecosystems and forestry, and recognising the role of forests, sustainable forest management and forest products in climate change mitigation, as well as the ongoing need for adaptation to climate change.
2. Stressing the importance of using sustainably produced wood as a renewable raw material and renewable energy source and recognising the need to enhance wood supply.
3. Stressing the role of forests for water quality and quantity and for alleviating floods and droughts, as well as noting impacts of climate change on forest and water.
4. Recognising the importance of the full economic value of the multiple services provided by forests and the need to have adequate means and measures to secure these services.
5. Acknowledging that secure property and land tenure rights are a prerequisite for the implementation of sustainable forest management.
6. Emphasizing that sustainable forest management contributes significantly to environmental, economic, social and cultural dimensions of sustainable development and particularly to the achievement of internationally agreed goals, including the Four Global

Objectives on Forests agreed by the United Nations Forum on Forests (UNFF), the Millennium Development Goals, the 2010 Biodiversity Targets of the Convention on Biological Diversity (CBD) and the pan-European Biological and Landscape Diversity Strategy (PEBLDS).

7. Highlighting the importance of providing European input to the international forest policy dialogue.

8. Welcoming the Non-legally Binding Instrument on All Types of Forests and the Multi-year Programme of Work of the United Nations Forum on Forests for 2007 – 2015 adopted at the Seventh Session of UNFF.

9. Building on the 17 years of achievements and experiences and continuous efforts of the Ministerial Conference on the Protection of Forests in Europe (MCPFE) to strengthen the economic, environmental, social and cultural aspects of forests at all levels.

As representatives of the Signatory States and the European Community, we commit ourselves to:

Benefiting Quality of Life

10. ensure that forests and their sustainable management play an active role in the sustainable development and well being of European society, for both rural and urban areas,

11. ensure that forests and their sustainable management play an active role in combating the negative effects of climate change through both mitigation and adaptation measures,

12. maintain, conserve, restore and enhance the biological diversity of forests, including their genetic resources through sustainable forest management,

13. enhance the use of wood as a renewable raw material and source of energy from sustainably managed forests,

14. ensure that forests and their sustainable management play an active role in maintaining and enhancing water quality and quantity and in mitigating natural hazards, such as floods, droughts, avalanches, land slides as well as in combating soil erosion and desertification,

Tackling Challenges

15. strengthen the competitiveness of the forest sector in order to increase its capacity to benefit the quality of life,

16. raise the profile and awareness of the multiple benefits of forests and forestry as well as the role of the forest sector, within government structures, private sector and with the general public,

17. create enabling conditions in order to increase the mobilisation of wood from sustainably managed forests for all uses,

18. ensure that all wood production, including short rotation and fast growing energy crops, is guided by the principles of sustainability in order to provide for fair competition between sectors,

19. continue to contribute to mitigation of and adaptation to climate change and in this regard to further develop pan-European guidance for afforestation and reforestation,

20. establish coherence between policies on forest and water resources and coordinate sustainable forest management and integrated water resources management,

21. develop and implement innovative tools for securing water-related services provided by forests, such as payments for ecosystem services (PES)[1] or other measures,
22. further promote national forest programmes or equivalents for cross-sectoral coordination and as a means for coherent implementation of forest related international commitments,
23. further strengthen efforts to promote good governance and forest law enforcement to combat illegal logging and related trade of forest products, inter alia by cooperating on and promoting public procurement policies that demand timber and timber products from legal and sustainable sources,
24. take effective measures to improve understanding between policy makers, practitioners and the scientific community in order to better use scientific knowledge and research results relevant to forests and the forest sector as a sound basis for decision making,
25. strengthen forest and forest sector related employment, education, training and communication and ensure equal opportunities in accessing them,
26. promote research, especially on the role of forests in climate change mitigation, adaptation of forests to climate change as well as the use of wood and biomass, the relationship between forest and water and functioning of forest ecosystems,

Global - Regional Cooperation and Partnerships

27. further promote effective implementation of sustainable forest management at all levels and contribute to the international forest policy dialogue by continued cooperation on forest issues in Europe and by sharing European achievements and experiences with other regions,
28. further support and cooperate with countries undertaking forest sector reform, particularly those countries with economies in transition to fully incorporate the principles of sustainable forest management in their forest sectors,
29. contribute to the achievement of the Four Global Objectives on Forests as well as the implementation of the Non-legally Binding Instrument on All Types of Forests and the Multi-year Programme of Work of the United Nations Forum on Forests for 2007 – 2015,
30. develop, in cooperation with other regional bodies, processes and agreements, consistent inputs from the pan-European region to the work of the United Nations Forum on Forests for 2007 – 2015, addressing issues of the agenda items of UNFF sessions and strengthening the collaboration with the international arrangement on forests, *inter alia*, through sharing regional perspectives, approaches and experiences,
31. support objectives and actions at the pan-European level that enhance the regional contribution to the achievements of the Four Global Objectives on Forests agreed by the UNFF and other relevant global commitments,
32. undertake further efforts towards strengthening collaboration of the MCPFE with the United Nations Framework Convention on Climate Change (UNFCCC) with the aim to recognise diverse roles of forests and their products in climate change mitigation, in the

[1] payments for ecosystem services (PES)- contractual transactions between buyers and sellers for ecosystem services or land use/management practices likely to secure those services. In: "Recommendations on Payments for ecosystem services in Integrated Water Resources Management", UNECE Water Convention, 2006.

context of the post-2012 climate regime, as far as it contributes to the ultimate objectives of the UNFCCC,

33. strengthen collaboration of the MCPFE with the United Nations Convention on Combating Desertification (UNCCD) with the view to enhance the role of forests in combating desertification and combating floods,

34. contribute to the implementation of the relevant programmes of work of the CBD through effectively implementing the MCPFE commitments,

35. encourage joint activities of the forest and water sectors and enhance cooperation between the MCPFE and the Water Convention of the United Nations Economic Commission for Europe (UNECE),

36. support Forest Law Enforcement and Governance (FLEG) ministerial processes and enhance collaboration between the MCPFE and the Europe and North Asia Forest Law Enforcement and Governance (ENA FLEG),

37. use innovative and effective approaches to further strengthen the existing cooperation with other regional bodies and processes in Europe, such as Environment for Europe/PEBLDS, Food and Agriculture Organization of the United Nations European Forestry Commission (FAO EFC), and UNECE Timber Committee (UNECE TC) in order to benefit from synergies, including for the development of consistent pan-European input to UNFF sessions,

Putting MCPFE commitments into action

38. develop a work programme for the implementation of commitments of the Fifth Ministerial Conference on the Protection on Forests in Europe in cooperation with relevant organizations, institutions and processes and to reinforce implementation of previous commitments,

39. organise in this context together with stakeholders actions to communicate at all levels and to raise public awareness on the cross-sectoral importance of forests, and the forest sector,

40. carry out a review of the MCPFE process by the Sixth Ministerial Conference, by assessing progress made and obstacles faced in the implementation of its commitments.

FIFTH MINISTERIAL CONFERENCE ON THE PROTECTION OF FORESTS IN EUROPE

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WARSAW RESOLUTION 1

Forests, Wood and Energy

1. Supporting the objectives of mitigating climate change and increasing security of supply of energy.
2. Emphasising that forest biomass, wood processing residues and recovered wood represent important sources of renewable energy that can reduce greenhouse gas emissions by replacing fossil fuels.
3. Recognising the need to improve both energy and resource efficiency in production and consumption of bio-energy.
4. Recognising the need to increase knowledge on the role of forest ecosystems as well as forest based products in long term carbon sequestration as a contribution to mitigate climate change in the context of the post-2012 climate regime.
5. Acknowledging that sustainable forest management practices and enlargement of the forest area in Europe have resulted in an increased availability of forest resources, providing in many parts of Europe the potential for increasing wood mobilisation while respecting the principles of sustainable forest management.
6. Recognising the significance of European forestry and forest-based industries, as well as the importance of maintaining their long term economic viability and competitiveness and emphasising that forests provide raw material for the forest-based sector as well as for energy.
7. Noting the increased competing demand for wood as a renewable raw material and as a renewable energy carrier and the need to avoid undue distortion of competition between different end uses.
8. Noting a need for improved and more comprehensive information on wood resources and wood consumption as a basis for better informed policy making and strategy setting.
9. Recognising that an increasing demand for wood, creates new income opportunities for forest owners, entrepreneurs and managers and also for wealth, jobs and economic growth, especially in rural areas.

10. Being aware that the fragmentation of forest ownership in Europe represents a challenge for maintaining active and sustainable management of forests and mobilising wood.
11. Recognising the complementary role of using woody biomass in reducing forest fire risk.
12. Building on previous MCPFE commitments, and recognising the ongoing work in the area of forests, wood and energy carried out by international conventions, organisations and processes.

The Signatory States and the European Community, commit themselves to:

I. Enhancing the role of the forest sector in energy production

13. take effective measures within the framework of sustainable forest management to increase the use of woody biomass for energy generation, taking into account the importance of processing residues and recovered wood as renewable energy sources,
14. assess environmental impacts of wood production for energy including impacts on soil, water, biodiversity and nutrient cycles,
15. adjust policies and instruments, including research and development, to support enabling conditions that encourage investments in the production and distribution of bio-energy, increased mobilisation, efficient use of wood and energy,
16. strengthen the position of the forest sector in cross-sectoral debates concerning energy through developing communication and raising awareness about present assets, the existing potential in the forest sector and the multiple benefits of using wood fuel,
17. encourage partnerships among public and private forest owners, forest based industries and energy producers aiming at the development of markets for bio-energy,

II. Mobilisation of wood resources

18. analyse and assess on a scientific and practical basis, and in dialogue with stakeholders, the existing and potential wood resources in Europe, inter alia, based on national forest inventories, as well as the feasibility and constraints for wood mobilisation,
19. develop and further improve systems of data collection on the consumption of wood for energy,
20. ensure enabling conditions for increased sustainable wood production through stronger interlinking of national forest policies with policies on sustainable development, agriculture, land use, rural development, environment, energy and industry,
21. identify and remove unintended barriers to an increase of sustainable wood production and mobilisation in forests of all types of ownership,
22. examine different practices under sustainable forest management and promote the use of a range of sustainable management systems including short rotation and coppice forestry in accordance with national law, to increase wood production and mobilisation in order to effectively address a growing demand for wood,
23. assess feasibility of mobilising wood resources from areas outside forests,

24. encourage capacity building of forest owners and their cooperatives and facilitate their cooperation and information exchange, inter alia, on access to wood markets, providing information, education, training and extension services, to empower and motivate proactive sustainable forest management in order to mobilise more wood,
25. promote development of the capacity of the forest workforce, entrepreneurs and managers in order to increase their ability to better respond to the needs of wood markets through education, training, and the use of innovative techniques,
26. promote adequate forestry and logistical infrastructures in order to facilitate access to wood resources and flexibility in responding to market demands,
27. support mobilisation of biomass from forests with high risk of fires, decreasing in this way a level of forests vulnerability,
28. encourage the application of sustainable management practices for wood production outside forests.

FIFTH MINISTERIAL CONFERENCE ON THE PROTECTION OF FORESTS IN EUROPE

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WARSAW RESOLUTION 2

Forests and Water

1. Recognising the close interrelation between forests and water.
2. Concerned that there is a growing imbalance between freshwater supply and demand.
3. Aware of the need to ensure adequate water quality and quantity.
4. Stressing the need for adequate water conditions in order to sustain European society.
5. Emphasising the role of forests and forest management for biodiversity of water ecosystems.
6. Concerned that climate change will have severe effects on the frequency, scale and intensity of natural hazards such as floods, debris flow, avalanches, storms, and droughts and will have an impact on forest and water resources and their management.
7. Stressing the role of forests and forest management in protecting water quality, managing water resources for the quantity of all waters, flood alleviation, combating desertification and soil protection as well as the importance of mountain forests in the reduction of land slides, erosion and effects of avalanches.
8. Concerned that the frequency and size of forest fires is increasing and that fires occur more frequently, even at higher latitudes and altitudes, resulting in severe impacts on watersheds, water quality, quantity and soil erosion.
9. Emphasising that the full economic value of forests has to be adequately recognised and in particular the value of providing ecosystem services.
10. Recognising that forest owners have rights and responsibilities and noting the importance of prior consultations regarding the provision of water-related services.
11. Stressing the need to involve local communities and other relevant stakeholders in planning and implementation of water related forest policies.
12. Building on previous MCPFE commitments and recognising the ongoing work in the area of forests and water carried out by international conventions, organizations and processes.

The Signatory States and the European Community, commit themselves to:

I. Sustainable management of forests in relation to water

13. maintain and enhance the protective functions of forests for water and soil, as well as for mitigating local water-related natural disasters through sustainable forest management, including through public and private partnerships,
14. assess afforestation and reforestation programmes in terms of their effects on quality and quantity of water resources, flood alleviation and soil,
15. promote the restoration of degraded forests, particularly in floodplains and upper watershed areas for the benefit of the water environment, flood reduction, conservation of biodiversity and soil protection,

II. Coordinating policies on forests and water

16. develop and improve policies for forest and water resources management that contribute to the maintenance of ecosystems and the sustainable provision of their services,
17. coordinate forest and water resources management policies through national forest programmes or equivalents and integrated water resources management plans and strategies at the appropriate levels,
18. develop adequate or improve the existing institutional arrangements to better cooperate in addressing the interrelation between forest and water issues,
19. address the management of forests and water at the transboundary watershed level through enhanced international cooperation,
20. enhance education, training, research and extension services to promote knowledge and understanding of forest and water interactions,
21. increase awareness of the relationship between forests and water as well as the potential of forests and their sustainable management to improve the water environment,

III. Forests, water and climate change

22. develop a deeper understanding of the potential consequences of climate change on forest and water interactions, including desertification and biodiversity loss as well as the frequency, scale and intensity of floods, storms, droughts, forest fires, pests and diseases,
23. develop appropriate policies and strategies for managing forests and water resources sustainably to adapt to climate change and contribute to its mitigation,

IV. Economic valuation of water-related forest services

24. assess the economic value of forest services related to quality and quantity of water resources and flood alleviation from which society benefits,

25. incorporate the economic valuation of water-related forest services into relevant policies and strategies on forests and water,

26. facilitate the development and implementation of measures, which may include economic tools such as payments for ecosystem services (PES)[2] in order to broaden and diversify the financial basis for sustainable forest management and to maintain the protective functions of forests.

[2] payments for ecosystem services (PES) – contractual transactions between buyers and sellers for ecosystem services or land use/management practices likely to secure those services. In: "Recommendations on payments for ecosystem services in Integrated Water Resources Management", UNECE Water Convention, 2006.

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