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## Abstract:

Multifunctional and sustainable forest management remains the central backbone of the EU policy papers.

Several directions for changes are identified concerning the more intensive use of the forest resource including the following: promotion of increased use of forest biomass for energy generation, afforestation, encouraging the use of wood and other forest products, and encourage investments in forests *inter alia*. Therefore the continuation of the trend towards an increase in European forest area and in the volume harvested is anticipated. In the short run important changes are expected via the evolution of globalization of timber market after the crisis and depending on the Russian position regarding timber exports; the implementation of European regulation aiming at reducing the trade of illegal logging; the expected forest legally binding agreement and the expected decisions after the ministerial conference in Oslo in June 2011.

The main durable change to be retained is the evolution towards open, participatory processes to define the goals of forest management and the increasing concern over biodiversity and forest certification. The place granted to present and future societal needs in the vision of multifunctional forestry challenges the top-down, regulatory style of formulating the forest management goals. Thus participation, coordination with other sectors, expression of interests (present and future societal needs) and use of communication and educational means are the main means to implement the vision of long-term, multifunctional forestry.

## Keywords:

EU Forest Strategy, EU Forest Action Plan, Forest Europe, FLEGT, vision about future forest management, procedural norms, socio-economic trends



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## Executive summary

This review examined the drivers that affect forests and forest management in a changing environment with a particular focus on European policy.

Driving forces affecting forests and forest management practices in Europe are a result of landscape change, urban development, demand for bioenergy, demand for forest services, restitution and privatization of forests in Eastern Europe, and many other factors. For the purpose of this work, the drivers assumed to shape future forests and future forest management were classified into two categories: policies and social demands. The main objective was to identify the goals and the directions of changes specified or implicit in the policy documents (EU, national forest programmes and strategies, forest acts and codes, major forest laws) and to analyse which are the main socio-economic trends.

This work considers two hypotheses:

&1: EU-level/national-level policies that are relevant for the forest sector contain a vision about future forests and about the changes required in forest management (radical or incremental) in order to attain the goals outlined in the policy documents;

&2: This future vision and related changes are already translating the societal demands on forests; policies in general are understood as results of steering processes aiming at expressing and negotiating social demands concerning the management of forest resources under different financial and context-related constraints.

Empirical data consisted in the policy relevant documents such as EU-level policy documents, forest-related, climate change-related, nature protection-related (EU Forest Strategy, Forest Action Plan, Natura 2000 Directives, White Papers, Green Papers) documents from the Ministerial Conference on the Protection of Forests in Europe, documents from the FLEGT process). Global-level policies and documents were not directly analyzed, assuming that EU policies are coordinated and integrate global agreements, such as CBD, UNFCCC, and UNCCD. Policy relevant documents were analyzed in order to identify the future goals and vision (programmatic statements, e.g. prohibition of deforestation as a land-use change, afforestation policies, and increasing protected areas) and to identify the implicit principles behind the choices made between the different policy options.

Forest policies vary across the European Union, with each Member State being allowed to regulate the forest sector according to its own rules. The competences of the European Commission with regard to forest policy are found mostly in the areas of rural development and environmental protection. However, an additional number of policy areas/subsystems affect the forest sector: energy policy, industrial policy, research and technological development policy, trade policy, regional policy and plant health policy, a short description being provided in the Annex. The set of specific forest-related measures, policies and processes analyzed in this study include:

- European Forest Strategy, 1998 (Council Resolution of 15 Dec 1998), of which the implementation was analyzed in 2005 (Report of the European Parliament on the implementation of a EU Forestry Strategy);
- EU Forest Action Plan 2007-2011 (Conclusions on an EU Forest Action Plan adopted by the Agriculture and Fisheries Council in 2005);

- FOREST EUROPE (Ministerial Conference on the Protection of Forest in Europe) Declarations, Resolutions and Work Programme;
- Strategic Research Agenda (SRA) for the Forest-based Sector Technology Platform (FTP);
- Other EU policies: policies for wood for energy, climate change policies, green procurement policies, policies to fight illegal logging and related trade.

Sustainable forest management intends to answer many different, often contradictory, requirements regarding the use of forest resources. The EU Forest Strategy considers sustainable forest management to be important for the development of the society but also important to combat climate change or to enhance biodiversity in forests. Regarding the role of forests in combating climate change, the vision expressed in the EU Forest Strategy acknowledges three different measures: protection of existing forests, establishment of new forests and more intensive use of biomass and wood-based products. The measures are already supported in rural development policies (afforestation), environment protection policies (forest protection) and industrial and technological development policies (more intensive use of biomass calls for innovation in the forest sector). The main contributions of the EU Forest Strategy are the attempt to strive for coordination amongst the different EU-level policies regarding forests, with emphasis placed on the sustainable forest management concept, and the empowerment of the political process lead by national representatives of the forest sector from the Member States within the Ministerial Conference on the Protection of Forests in Europe. The FOREST EUROPE (known also as MCPFE process) is implicitly recognized as the forum to define and follow the implementation of the sustainable forest management concept.

The Action Plan provides a framework for forest-related actions at Community and Member-State level and serves as an instrument of coordination between Community actions and the forest policies of the Member States. The overall objective of the EU Forest Action Plan is to support and enhance sustainable forest management and the multifunctional role of forests. The Action Plan is conceived as an iterative process, its first period covering five years (2007–2011).

At the same level of relevance as the EU Forestry Research and EU Forest Action Plan, the Forest-Based Sector Technology Platform (FTP) has defined and is currently implementing the Strategic Research Agenda for the forest-based sector. The Vision 2030 has been launched in 2005. The aim was to drive the industry towards continued sustainable development and spur the innovation needed to nurture growth in the sector over the next 25 years. The attention paid to the research in EU forest-related documents and the large consultation-based process that leads to SRA makes this document a good reference point for understanding the desired future shape of the forest sector. However, the SRA deals with the whole forest sector, thus only a small part of SRA is dedicated to forest management and the future of forest management. The SRA insists many times that the forest-based sector must secure the supply of its main raw material – wood.

Both the EU Forest Strategy and the Forest Action Plan established a new frame for stakeholder participation, consultation, policy learning and collective action regarding forests at the EU level. However, while the EU Forest Strategy claims a better articulation of forest policies inside the EU policies and programs (the Strategy secures a place for the forest sector), the Forest Action Plan sets up principles of action and key actions addressed to the Commission and to the Member States. The Forest Technology Platform and the Strategic Research Agenda specified a vision about future forests which is closely related to the EU Forest Action plan vision – Forestry for society. Multifunctional and sustainable forest management remain the central idea of the EU papers, however they emphasize the need for better communication instruments to facilitate forest-related decision-making. So far, the analyzed documents proposed three new instruments with this purpose. A Green Paper

regarding Forest Protection and Information in the EU “Preparing forests for climate change” was in public consultation procedures and might be the basis of a future EU act regarding forest protection. On the other hand, the Ministerial Conference on the Protection of Forests in Europe has begun an initiative on preparing options for a decision on a possible legally -binding agreement on forests in Europe.

*What does this mean as a vision for future and implicit forecast changes?*

If the EU Forest Strategy does not contain explicitly-expressed drivers of changes, the change is already produced in policy formulation, including the elaboration of the EU Forest Action Plan, the coordination of EU forest-related policies or the place accorded to the consultation with interested stakeholders. One of the main consequences is the fact that the vision of sustainable forest management should be interpreted according to the FOREST EUROPE documents. In other words, the Strategy does not deal with the "substance" of the matter (magnitude of the problem, indicators to be attained), but with the procedures to reach the goal that is sustainable forest management. Moreover, the EU Forest Action Plan claims that national forest programs represent the suitable framework for implementing international forest-related commitments and that the open method of coordination should be applied to voluntary coordination of national forest programs. The conclusion is that multifunctional forestry is to be defined within the frame of the national forest programs or similar processes for coordinating national forest policies and has to include both EU and global, international commitments. As far as the EU forest policy documents send back to the national implementing and coordinating mechanism, the EU level represent only a “soft” constitutional decision making. Implementation of future trends depends in a large part from the Member States commitment.

Several directions for changes are identified, thus the future forest sector in Europe, if analyzed policies are implemented, can be described by the following facts:

- forest area tends to increase;
- wood mobilization will be higher;
- supply of forest products and services will diversify;
- natural regeneration will be preferred, mixed stands area will increase;
- forest protected area tends to increase;
- forest management planning will implement risk management strategies and will be based on stakeholders preferences upon forest utilization;
- volume of illegal logging and related trade tends to decrease;
- new modes of governance and better governance will be implemented (participation, coordination, accountability); more soft regulatory and voluntary policies will be implemented;
- highly integrated production chains for timber might develop (biorefineries).

If policies were not effectively implemented, it may be assumed that the drivers of changes will be represented by the current trends, e.g. increasing forest area, growing concern about forest protection, expanding markets for carbon sequestration, growing concerns about forest certification and green business development, increasing demand for timber as result of Russian log export taxes, increasing demand for timber-based energy. Market trends analysis shows that evolution regarding timber utilization from European forests will be similar to that resulting from the implementation of EU cross-sectoral policies with impact on forest sector.

The likelihood that the potential identified changes will happen in short run may be assessed as a cumulated effect of different trends. The changes are likely to happen if the same trend is sustained simultaneously by the current (policy) trends, by the socio-economic drivers, by cross-sectoral policies and forest policies. As example, extension of forest area in Europe is sustained by the combined effects of current trend (forest area is extending in Europe), current forest specific policies (protect and expand the forest area), climate change policies (forest area should be maintained for carbon sequestration) and energy policies (create plantations for energy purposes); the carbon market (EU ETS credits, joint implementation mechanism) and even by the land market in the context of the financial crisis (lack of trust in stock investments). Similarly, the wood mobilization is sustained by the existing trend, the slightly increase of prices for timber, by the renewable energy policies, and by the adaptation strategies regarding climate change, e.g. more thinning and tending for more stable stands. Limitation of this trend may come mostly from prices level (negative effect), while lack of management capabilities and nature protection policies might have only a slight negative effect. Therefore, it is likely that the mobilization of wood will continue, however it is possible that the harvested volumes remain lower compared with the demand from industries. The conclusion is that it is very likely that the identified changes will happen in the short run, but the amplitude of these changes varies according to the combination of climatic, economic and policy scenarios.

The main change to be retained is the evolution towards open, participatory processes in order to define the goals of forest management according to the target of multifunctional forestry; all interested stakeholders should have the opportunity to participate in the definition of future targets of forest management. The place granted to present and future societal needs in the vision of multifunctional forestry challenges the top down, regulatory way of formulating the forest management goals. Thus the EU Forest Action Plan encourages participation, coordination with other sectors, expression of interests (present and future societal needs) and use of informational and educational means as main drivers of changes to implement the vision of long-term multifunctional forestry.

In other words, the vision about future forests and forest management is focused on procedural norms, not substantive ones. The questions raised by the documents analyzed do not concern the suitability of future forests and forest management strategies, but rather how one may attain suitable forests and forestry. Therefore the answers are of procedural nature: via coordination, consultation, implementation of international commitments and cross-sectoral approach. As an implication for future steps in the present research project, the vision for increased multifunctionality calls for the study of the governance processes back to the selected case studies in the project.

## 1 Methodology

The main objective was to identify the goals and the directions of changes specified or implicit in the policy documents (EU, national forest programmes and strategies, forest acts and codes, main forest laws). For the reporting period, the analysis concerned only the EU level policy documents and processes.

The work was based on two hypotheses:

&1: EU level/national level policies that are relevant for the forest sector contain a vision about future forests and about the changes in the sector (radical or incremental) in order to attain the goals set up in the policy documents of all ranges;

&2: The vision about the future and the underlined changes are already translating the societal demands over forests; policies in general are understood as results of steering processes. These steering processes aim to express and negotiate social demands over the management of forest resources under different financial and context-related constraints.

The study of policy system acknowledges the presence of many variables and determinants in the political phenomena. In the field of forest sector, more open processes are replacing the public intervention at the national level via regulation. The idea of new modes of governances translates the greater role of stakeholders, in general, in the formulation of the forest policies. Besides the influence of participatory mechanism, the forest policy formulation at the national level is determined also by the multi-level coordination of policies at the national, regional, European and global levels. Thus, in this sense, “multi-level governance” is a concept used to describe and analyze structures of power sharing between levels of government and intergovernmental or inter-organizational policy-making, with no center of accumulated authority. Instead, variable combinations of governments on multiple levels of authority - international, European, national, and subnational - form policy networks of collaboration. The relations are characterized by interdependence on each other’s resources, not by competition for scarce resources (Hooghe, 1996).

There are several approaches that emphasize the role of stakeholders and their ideas, discourses or cognitive and normative frames that structure their activities within a policy subsystem (Sabatier, 1999). The Advocacy Coalition Framework emphasizes the role of basic policy beliefs, classified in:

- deep core, which includes basic ontological and normative beliefs;
- policy core beliefs, which represent a coalition’s basic normative commitments and causal perceptions across an entire policy domain or subsystem;
- secondary aspects of policy beliefs, which comprise a large set of narrower beliefs concerning the seriousness of the problem, or the relative importance of various causal factors.

In the view of Advocacy Coalition Framework, a subsystem consists of those actors from a variety of public and private organizations who are actively concerned with a policy problem or issue, such as climate change, timber for bio-energy, innovation in forest sector, the illegal logging or the implementation of sustainable forest management, and who regularly seek to influence public policy in that field. Several European policy subsystems are relevant for forest sector, e.g. rural development policy, environmental policy, energy policy, industrial policy, research and technological development policy, trade policy, regional policy, plant health policy, climate change policy, EU Policy on fighting illegal logging.



The adjustment between the sub-systems can be an external source of policy change, not a determining one. In the light of the ACF, one cognitive process (the policy oriented learning) and two other non-cognitive processes (changes in the real world and turnover in the staff) are the main three sources of change. The policy change is summed up in two hypotheses (Sabatier, 1998):

Hypothesis 4 (revised in 1993): The policy core attributes of a governmental program in a specific jurisdiction will not be significantly revised as long as the subsystem advocacy coalition that instituted the program remains in power within that jurisdiction - except when the change is imposed by a hierarchically superior jurisdiction.

Hypothesis 5 (1997): Significant perturbations external to the subsystem (e.g. changes in socio-economic conditions, public opinion, system-wide governing coalitions, or policy outputs from other subsystems) are a necessary, but not sufficient, cause of change in the policy core attributes of a governmental program.

To keep focused on empirical data collection, the methodology of the study includes an additional distinction between the three possible levels of analysis (Kiser and Ostrom, 1982):

- the highest level is the world of constitutional decision-making where political and legal arrangements are established;
- the second level, is the world of collective-choice, where decisions are made by officials to enforce or change actions authorized by the constitutional rules. Collective decisions are plans for future action that are also enforceable against non-conforming individuals: officials have the power to enforce a collective plan but also to impose sanctions against individuals who violate the official rules;
- at the operational level, the actor is an individual or an organizational unit, whose behavior is largely determined by the institutional framework, i.e. collective-choice and constitutional rules (Kiser and Ostrom, 1982).

The data collection and analysis concern only the constitutional level and the collective-choice level, assumed to be those EU documents and publications assorted or not with binding force such as regulations, directives, decisions, recommendations and opinions, but also those papers that specify the general framework, such as EU Strategy, Action Plan, Working documents, Good practices guidelines, Green Papers, White Papers, etc. These papers, usually issued after consultation and participation of interested stakeholders define the main institutional frame of policies for sustainable forest management at the European level and contain also the vision about the future forests and forest management. According to one important premise of the ACF, public policies/programs:

“(...) involve value priorities, perceptions of important causal relationships, perceptions of world states (including the magnitude of the problem), and perceptions/assumptions concerning the efficacy of various policy instruments” (Sabatier and Jenkins-Smith, 1999:119).

The study proceeds to a lecture of the EU policy documents focused on 1) vision about the future, future state of forests, future forest management, challenges, risks and opportunities to be faced by forest management in the future; 2) perception about the policy instruments and measures needed to face the future challenges; 3) directions of change that may appear if the policy instruments set up are fully implemented.

The study is limited to the EU policy documents relevant for the forest sector as outcome of the policy processes. The study deals into a little extent with the decision-making process itself. Also, the constellation of stakeholders and of their interests is not part of the study, due to the presumption that the outcomes of the policy processes represent a negotiated, socially built up construction about the future shape and challenges of forest sector. The study is therefore based on the



hypothesis that the decision-making process in forest-related matters involve all the relevant stakeholders and that the result represent a common view on future forest-related policy-measures. This hypothesis is consistent with the background idea of the study – the main drivers of changes in European forest sector are represented by EU level policies (general, and forest-related), in combination with national forest policies and socio-economic factors.

## 2 State of art: study of drivers of changes in forest sector

### ***2.1 Evaluation of Regulations and Policies Relevant to Forest Policy***

The Study about the Evaluation of European Community Regulations and Policies Relevant to Forest Policy (Püzl, 2005), financed by the Federal Ministry of Agriculture, Forestry, Environment and Water Management of Austria, represents a systematic overview and analysis of forest-relevant activities located within individual Community policies and identifies, at the level of the year 2005, the relevant acts with a direct or indirect influence on forest policy.

The study reveals that in spite of a missing common forest policy, at the level of the year 2007, a large number of Directorates-General of the European Commission (17) addresses forest policy in one or the other way as these relate to European common policies. The results show that in most cases DG Agriculture and DG Environment are responsible for implementing European legislation concerning forests within the Community.

The findings of this study support the idea that the vision of future forest and forest management should be searched within most relevant policies and processes for forest sector:

- rural development policy,
- nature and forest protection,
- biodiversity related policy (protection and management);
- climate change and soil protection policy;
- industry policy and energy policy;
- consumer protection;
- research and technological development policies;
- development cooperation and trade policies.

### ***2.2 European forests and adaptation to climate change***

Under the climate change issue, two studies bring information regarding the relationship between the forest and the climate change:

- Impacts of Climate Change on European Forests and Options for Adaptation (Report to EC, 2008)
- Adaptation of forests and people to climate change (IUFRO, 2009).

The study Impacts of climate change on European forests and options for adaptation (Report to EC, 2008) compiles and summarizes the existing knowledge about observed and projected impacts of climate change on forests in Europe and reviews options for forests and forestry to adapt to climate change. The Directorate General for Agriculture and Rural Development of the European Commission has commissioned it as an initial exploration of this complex issue.

The study summarized three groups of measures related to stand management, forest management planning and policy design.

**At the forest stand level**, adaptation to climate change involves raising the level of genetic diversity; reducing susceptibility of stands to disturbances in all regions by tending and thinning; enhancing structural as well as species and genetic diversity via long regeneration periods, and by harvesting at smaller scales; using the natural regeneration. **At the level of forest management planning**, new planning and decision support tools have to be developed and applied to deal with uncertainty and risk in long-term forest planning; planning should deal with increased need for forest protection against the increasing hazards of abiotic and biotic disturbances; establishing and sustaining forest ecosystems with highly diverse tree composition, age and structure is recommended. **At the level of policy design**, the report recommends that measures are needed to adapt infrastructure and transport to climate change, e.g. restore groundwater regimes, irrigation systems and road network; nurseries and tree breeding facilities should produce well-adapted material for forest regeneration, e.g. diversified reproductive material; use participative process involving decision-makers, stakeholders, experts, and analysts for development and evaluation of adaptation strategies; monitoring of forest health, pests and diseases is absolutely crucial; a coordinated policy level adaptation strategy needs to include the full forest wood chain since changes in the biophysical production and production potentials might require responses and adaptations of downstream industry partners.

Moreover, adaptation options need to be harmonized with other emerging land use policies concerning e.g. climate change mitigation or the conservation of biodiversity. More detailed information about climate change adaptation in forest sector is also provided in the Climate Change and Forestry Report to the Standing Forestry Committee (Standing Forestry Committee, 2010).

The relevant findings of this study indicate as future challenges:

- optimizing structural, species and genetic biodiversity;
- increase the share of natural regeneration;
- how to deal with uncertainty and risk in long-term forest planning;
- how to use participative process involving decision-makers, stakeholders, experts, and analysts for development and evaluation of adaptation strategies.

The comprehensive study **Adaptation of forests and people to climate change** (IUFRO, 2009) focuses on the expected impacts of climate change on forests and woodlands and their capacity to provide vital ecosystem services. Future socio-economic impacts and vulnerabilities are assessed, and the international regime for forests in the context of the climate change is analyzed to propose solutions for a management of forest adaptation to climate change.

Conclusions of the study argue that:

- important factors affecting ecosystems and people include climate change, but also land use and land-use change, invasive species and rapid expansion of global trade;
- resilience of forest ecosystems can be overcome by severe disturbance and sufficiently large changes in climate;
- proactive adaptation measures based on knowledge of climate impact mechanisms have potential to prevent reductions in ecosystem goods and services in forests managed actively for timber and non-timber forest products;

- timber output in Europe could decline (modest changes) due to the climate-induced dieback of existing stocks of timber trees and lower investments in timber production due to lower prices, and could increase again in the second half of the century;
- timber output in Russia is expected to expand modestly through the first half of the century, with stronger increases later in the century;
- in all scenarios and across all main forest types it is very likely that the frequency and intensity of storms, fire, insect attack and disease will change, with increases in some areas;
- traditional forms of forest governance that focus on hierarchical, top-down policy formulation and implementation by the nation state and the use of regulatory policy instruments are insufficiently flexible to meet the challenges posed by climate change;
- national forest programmes are the core instruments of new forest governance arrangements at the national level: they can promote the adaptation of forests to climate change by reinforcing the use of sustainable forest management as a mechanism for reducing deforestation and forest degradation;
- adaptation strategies must give explicit attention to normative issues such as trade-offs among competing values and interests, distribution of costs among stakeholders, and potential for changing preferences and unintended consequences over time.

### ***2.3 Future challenges of forest management (Commission Staff Working Document)***

The Commission Staff Working document (Commission of the European Communities, 2006 - SEC(2006) 748) identifies the following challenges that will influence the forest management:

**1. Increased globalization.** As a consequence of globalization, a major driving force in recent years, the lowest-cost producers define the market price. As potential actions: reflect value of environmental and social functions in wood revenues; better mobilization of wood; efforts to control illegal logging.

**2. Economic growth and increasing volume of available wood.** Economic growth leads to increased trade, investment and personal incomes, resulting in stronger growth in demand for all forest products and services. Planned actions: increase output of wood and other forest products; improve connectivity between the resource base and industry requirements.

**3. Changes in population and employment structure.** The ageing of population in the EU also plays an important role in shaping societal views on and expectations from forestry. Actions: the development of new products and infrastructures.

**4. Climate change.** Climate change concerns and worldwide rising prices of fossil fuels are leading to an increasing demand for energy from renewable sources. Therefore, the use of biomass for energy purposes is growing in importance. The markets for biomass energy in rural areas are expanding due to innovative products and fuel burning technology. Actions/directions: correcting the inefficiency in collecting forest residues and small-sized timber for energy purposes; better assess the availability of wood and wood residues and the feasibility of their use for energy production.

**5. Growing awareness of the importance of biodiversity.**

## 6. Importance on good governance.

The relevant findings of this study indicate as future challenges:

- the need to enhance biodiversity protection and to control illegal logging and related trade
- the need to identify and face the change of the social demand over forest utilization
- answering the increased demand of energy from biomass
- implementing good governance in forest sector.

## 2.4 Trends related to the globalization and the economic crises

Globalization impact on European Forest sector has been also analyzed in IIASA (2007) - Study of the Effects of Globalization on the Economic Viability of EU Forestry. The study analyses different options to respond globalization and their regional suitability (Table 1). Their implementation stays however mostly on producers' side as far as globalization is market driven.

**Table 1. Strategic options to respond to globalization and their regional suitability (increasing number of stars indicating increasing suitability) – IIASA (2007)**

|   | Option 1: No commercial operation | Option 2: Niche/diversify | Option 3: Commodity competitiveness | Option 4: Next-generation products |
|---|-----------------------------------|---------------------------|-------------------------------------|------------------------------------|
| Type 1: Globalized regions/Nordic-Baltic                                  |                                   | *                         | **                                  | ***                                |
| Type 2: Wood production-oriented regions/Central Europe                   |                                   | **                        | ***                                 | **                                 |
| Type 3: Plantation-oriented (mainly) "Atlantic Rim" Western Europe        |                                   | *                         | ***                                 | *                                  |
| Type 4: Broader, multifunctional forestry oriented regions/Western Europe |                                   | **                        | ***                                 | **                                 |
| Type 5: Urban society service-influenced regions/Northwestern Europe      | **                                | ***                       |                                     | *                                  |
| Type 6: "Countries in transition" regions/Eastern Europe                  |                                   | **                        | ***                                 |                                    |
| Type 7: Low forest management intensity regions/Southern Europe           | **                                | ***                       |                                     | **                                 |

However, the economic crisis has affected the forest sector in the form of decreased demand, decreased prices, lack of profitability, and decreased investments (Nillson, 2009, UNECE and FAO, 2009). The economic growth as driver of change has to be revised in the context of financial crisis 2007-2009 with impact on:

- drop of demand, e.g. in housing sector, as one of the main drivers of global demand (from 2.2 million items in US in 2005 to 0.5 million in 2009); industrial production in forest sector in EU fall down by 8% in 2009 (UNECE and FAO, 2009);

- dramatic changes in currencies affecting the forest sectors where the products are mainly traded in US\$ and €, and which will lead to changes in competitive position of exporting countries and in trade patterns (Nillson, 2009);
- a real destruction of the demand for commodities:

“Sawlog prices fell by 5–12% worldwide in the 3Q/08 (WRI, 2009). Eucalyptus pulp prices on the European market fell from \$840/ton in August 2008 to \$540/ton at the end of February 2009. This is a price drop of over 35% in six months. Wood fiber prices declined in 4Q/08 between 10–20% worldwide” (Nillson, 2009); roundwood prices have fallen sharply, for example for softwood sawlogs by 26%, according to the Global Conifer Sawlog Price Index (Wood Resource Quarterly, 2009 – quoted by UNECE and FAO, 2009).

- drop of capital available in forest sector, affecting, inter alia, development in of new capacities and forest plantations in low-cost producing countries (Nillson, 2009) or investment in technological development.

In the stream of the question “What more is needed in the forest sector” put in the context of the economic crisis, Nillson (2009) argues that the forest sector is not prepared to the radical changes needed after the crisis, e.g. does not use enough the by-products of sawlogs and pulplogs industries, and therefore points out some trends that will affect the forest sector:

- the ecotourism and ecosystem services from forests will not save the sector, their contribution proving up to now to be insignificant;
- the biomass production for bioenergy is important, but 1) the production capacity will be mostly located in the Southern hemisphere, and 2) the production capacities will be established rather by the energy sector, not by the forest sector. Yet, despite the crises, wood energy markets work well (UNECE and FAO, 2009). EU have imported 1400 thousand tones pellets from USA and Canada in 2009, compared with around 600 thousand tones in 2006 and in 2007 (RISI, 2010) ;
- biorefineries are an opportunity that will only work if the refineries are producing many products based on cellulose fibers within a restructured forest industry.

Globalization and crises have had also a side effect regarding the commitment of the industrial sector to do a different type of business. In October 2008 the United Nations Environment Programme has launched the Global Green New Deal. The New Deal describes the greening of the economy as the “process of reconfiguring businesses and infrastructure to deliver better returns on natural, human and economic capital investments, while at the same time reducing greenhouse gas emissions, extracting and using fewer natural resources, creating less waste and reducing social disparities”. In this trend, voluntary agreements towards environmental and social-sound business will take a greater place in the industries daily routines, concepts such Corporate Social Responsibilities or Forest Certification will be emphasized and soft regulatory or voluntary mechanisms such Green Cart, White Cart, Good Practices Guidelines, chain of custody certification, or EU initiative of green public procurement, etc., will develop. Also, development of policies to sustain green buildings, energy-efficient, as well as the development of public procurement policies will lead to a demand for certified wood from sustainable managed forests (UNECE and FAO, 2009).

The relevant findings of these studies indicate as future challenges:

- timber sector has to overcome the effects of the financial and economic crises, new trade patterns will be established due to the variation in the currencies
- the increase demand for biomass will put pressure on the forest resource, yet the development of capacities for bioenergy production will not be under the forest sector

- value added products that will help to overcome the timber sector crises is depending on the investment on highly integrated technologies such biorefineries
- enterprises in the sector are asked to implement “green” corporate practices and to use forest certification scheme as a guarantee that the raw material is procured from sustainable managed forests.

## **2.5 European Forest Sector Outlook Study**

Driving forces in the forest sector is classified in the European Forest Sector Outlook Study (UNECE and FAO, 2005) in exogenous factors, demands from society and policy and market frameworks.

As exogenous factors the study classifies:

- changes in the population, including ageing of European population (and of the working-age population); population growth means expanding markets for forest products and services; changes in the population age may alter patterns of demand and income; increasing population results in greater competition for land (for a variety of alternative uses); the rural population in Europe will decrease significantly over the next 20 years, by 16% in Western Europe and 13% in Eastern Europe;
- changes in the income. The study however considers only the hypothesis of economic growth, not the event of economic crisis;
- accessibility of forests, likely to increase also in the future as it was in the past;
- environmental factors, encompasses a number of biological, climatic and geographical factors, e.g. short changes in the climate that will lead to sudden changes in damage to forests from fires, storms and outbreaks of pests and diseases; long-term impact on forest resources - global climate change and changes in the age-structure; historical increase in growing stock and growth rates of forest resources in Europe.

As demands of the society the study lists:

- changes in the human needs, e.g. due to the changes in the personal income, translated in more demand for fashionable, well designed forest products with a greater range of choice, greater emphasis on forest services, greater interest in the environmental credentials of the forest products;
- changes in industrial demand for forest production, e.g. labor costs will rise and industries will be looking for ways to increase labor productivity, demand for engineered wood products and products such as pre-cut lumber and for modular or panelized construction will increase.

As policy frameworks relevant as drivers for the forest sector, the study makes reference to the following policy areas:

- biodiversity and nature conservation;
- agricultural, rural and regional development policies;
- transition process in Central and Eastern Europe;
- energy and environment.



In the decade analyzed (1990-1999) some forest policies remained relatively stable, and some other aspects appeared as potential policy change and therefore as drivers of changes. The study lists as stable aspects of forest policies:

- non declining forest area (and even increased forest area) due to the fact that EU member states have strict policies of regenerating forests after harvesting and limit the deforestation for infrastructure purposes;
- multi-purpose forest management is implemented according to the principle that forests should be managed to produce a wide range of benefits to society;
- support for afforestation and forest management. The study shows that the level of the incentives for the forest sector in eleven EU countries was around 6 billion euro while the total value of wood production in these same eleven countries in the mid-1990s was about 7 billion euro (at 2000 prices and exchange rates);

Recent changes in forest policy are mentioned:

- public participation. Within the national forest programs, seen as one of the main policy tools, public participation finds new forms of manifestation;
- changes in the public ownership and management of forests, due to the changes in the land policies in former socialist countries, but also in the changes of the ownership in Western countries. Here, the trend towards gradually more private ownership of forests has been driven in a smaller extent by the privatization of some public lands (Sweden, United Kingdom) in a greater extent by the afforestation of bare lands;
- changing role of state forest organizations, as far as many European countries, e.g. Austria, Finland, Sweden, Ireland, Poland, Latvia, have reorganized their state forest management organizations to function as quasi-private companies and, in some cases, to separate the supervisory and policy functions of public forest administrations.

The study analyses several scenarios on the potential impact of present policies on forest sector and defines the baseline scenario, the conservation scenario and the integration scenario.

Relevant findings of the study are:

- the three scenarios considered show an increasing importance of biodiversity protection, use of wood for energy production and diversification of forest and timber-based products;
- demographic evolution (ageing, urban migration) is an important driver of change, yet the effect is difficult to assess;
- cross-sectorial impacts are a major driving force in the forest sector (policies for bioenergy, climate change, housing, rural development, technological development);
- the continued strong public interest on the forest sector will pose sooner or later the problem of management capabilities, particularly in private small-sized forestlands.

## **2.6 FAO Forest market Review study**

The FAO Forest market Review study (UNECE and FAO, 2009 and 2010) identify as main drivers of the forest economy for the period 2008-2010: the economic and financial crises, the wood for energy market, the carbon market, the Russian log taxis and the policies against illegally cut and traded



timber. Raw material trade flows are changing now in the region as a result of the global economic crisis, Russian log export taxes, and continued wood energy boom. In this context, industry is innovating for short-term survival and long-term growth.

Regarding the carbon market:

- the forest sector is competitive in generating carbon credits, e.g. in the voluntary carbon markets, forestry initiatives already account for 36% of all of the projects;
- the EU ETS accounted for 73% of the traded global carbon trade, while CDM was the second largest compliance market with 20% of traded carbon value, followed by voluntary markets that still held a small share.
- there are high expectations that Reduced Emissions from Deforestation and Forest Degradation (REDD) will strengthen the forest sector carbon markets;
- the EU enacted legislation to prevent wood imports and use from illegal sources will create greater incentives for certified forest products and chain-of-custody verification;

Driven by government policies for environmental reasons and energy security, wood energy is the one sector best surviving the economic downturn.

### 3 EU Forestry measures and policy documents

The forest policy is not a common policy for the European Union, each Member State being allowed to regulate the forest sector according to its own rules. The role of the EU is limited and designed principally to add value to national forest policies and programs by:

- monitoring and possibly reporting on the state of EU forests;
- anticipating global trends and drawing Member States' attention to emerging challenges;
- proposing and possibly coordinating or supporting options for early action at EU scale.

The competences of the European Commission with regard to forest policy are to be found mostly in the area of rural development, and environmental protection. However, an additional number of policy areas/subsystems affect forest sector: energy policy, industrial policy, research and technological development policy, trade policy, regional policy, plant health policy, climate change policy.

#### 3.1 EU Forestry Strategy

EU Forestry Strategy as set out in the Council Resolution of 15 December 1998 (1999/c-56/01) has the overall aim of the development and sustainable management of forests. This approach is to be defined in and implemented through national or sub-national forest programmes. With this strategy, the importance of the multi-functional role of forests and of sustainable forest management for the development of society, and in particular of rural areas, is emphasized and the contribution that forests and forestry products can make to the Community policies is underlined. The Forest Strategy supports and makes reference to the Ministerial Conference on the Protection of Forest in Europe as process defining the concept of sustainable forest management. The adoption of Forest Strategy argues for the fact that all EU common measures affecting forests and forest products should be in line with the aims and recommendations of the Forestry Strategy.

The EU Forestry Strategy is conceived as an iterative process, the Commission being invited to report to the Council on the implementation of the Forestry Strategy each five years. For the first reporting period (1999–2004), the Commission provided a description of the actions and activities implemented in the context of the EU Forestry Strategy, and concluded that the basic principles and elements identified in 1998 in the EU Forestry Strategy are still valid, namely:

- SFM and the multifunctional role of forests remain the overarching common principles;
- national forest programmes provide a suitable framework for implementing these principles;
- and there is widespread recognition of the increasing need to take global and cross-sectorial issues into account in forest policy.

The report on the implementation of the EU Forestry Strategy concludes on the need to elaborate an EU Action Plan for Sustainable Forest Management that “could provide the necessary impetus to transform the EU Forestry Strategy into a dynamic process capable of responding to the newly emerging policy context and delivering outcomes consistent with the Lisbon and the Gothenburg Strategies” (Lisbon objectives of sustainable economic growth and competitiveness, and the Gothenburg objectives of safeguarding the quantity and the quality of the natural resource base).

The future of the EU Forestry Strategy is depending on a number of parallel discussions (Hilka, 2010):

- follow-up to be given to the Green Paper on Forest protection and information;
- LULUCF accounting methods and possible integration into EU climate commitments;
- discussions on options for a Legally Binding Agreement on forests (LBA) on the Pan-European level (MCPFE/FOREST EUROPE).

### **3.2 EU Forest Action Plan**

The EU Forest Action Plan was adopted in 2006, as proposed in the report regarding the evaluation of the EU Forest Strategy implementation. The EU Forest Action Plan (FAP), adopted in 2006 for the 2007-2011 period, was the result of a multi-stakeholder process involving, among others, consultations from the Standing Forestry Committee, the Advisory Group on Forestry and Cork (AGFC) and the Commission Inter-Service Group on Forestry. The FAP works as a framework which uses existing elements in forestry policy and builds on other EU policies that are related to forest issues such as Natura 2000, the Rural Development Schemes of the Common Agricultural Policy and the Biomass Action Plan. The FAP is based on the principle of the subsidiarity and shared responsibility.

The Action Plan provides a framework for forest-related actions at Community and Member State level and serves as an instrument of coordination between Community actions and the forest policies of the Member States. The overall objective of the EU Forest Action Plan is to support and enhance sustainable forest management and the multifunctional role of forests.

The EU Forest Action Plan is based on the following principles:

- national forest programs is a suitable framework for implementing international forest-related commitments;
- the increasing importance of global and cross-sectoral issues in forest policy call for improved coherence and coordination;
- there is a need to enhance the competitiveness of the EU forest sector and good governance of EU forests;
- the respect for the principle of subsidiarity.

The Action Plan focuses on four main objectives:

- to improve long-term competitiveness;
- to improve and protect the environment;
- to contribute to the quality of life;
- to foster coordination and communication.

Eighteen key actions are proposed by the Commission to be implemented jointly with the Member States during the period of five years (2007–2011). One action addresses specifically the topic of EU compliance with the obligations on climate change mitigation of the UNFCCC and its Kyoto Protocol (Key action 6).

The Action Plan is conceived as well as an iterative process, with a first period covering five years (2007–2011). A mid-term evaluation was established for 2009 (a Progress Report is available for

2007-2008) and a final evaluation for 2012, with a report on implementation of the Action Plan to be presented to the Council and the European Parliament in 2012.

Collaboration with stakeholders on implementation of the Action Plan at Community level will be channeled mainly through the Advisory Group on Forestry and Cork. The Standing Forestry Committee is the coordinating body between the Commission and Member States for implementation of the Action Plan.

The EU Forest Action Plan was completed in 2006 by the Council Conclusions on EU Forest Action Plan and by the Opinion of the European Economic and Social Committee on EU Forest Action Plan. The Council Conclusions brings additional comments and clarification to the EU Forest Action Plan, while the Opinion has some comments regarding the EU Forest Action Plan and recommends additional principles and key actions.

According to the mid-term evaluation of Forest Action Plan, the Plan does contribute to a more co-ordinated approach for forest-related actions in the EU. However, there are expectations for a more co-ordinated approach and presentation of the EU forest sector in the international climate change negotiations (Mid-term evaluation, 2009). Recommendation is made that the Standing Forestry Committee should discuss the challenge of the different sets of sustainability criteria that are being defined in different policy areas (i.e. energy, public procurement, etc.) and sustainable forest management practices; also, means of improving the utilization of the existing structures (the Standing Forestry Committee, the Advisory Group on Forestry and Cork and the Inter-Service Groups on Forestry within the Commission) should be discussed; and the link between the EU FAP and the policy formulations and decision-making at the EU level and at the national levels should be further strengthened.

### ***3.3 Forest-Based Technology Platform and the Strategic Research Agenda***

At the same level of relevance than EU Forestry Research and EU Forest Action Plan, the Forest-Based Sector Technology Platform (FTP) has defined and is currently implementing the Strategic Research Agenda for forest-based sector. The Vision 2030 has been launched in 2005. The aim was to drive the industry toward the continued sustainable development and innovation needed to nurture growth in the sector over the next 25 years. The resulted SRA is based on proposals from across Europe, encompassing the full range of complexity and variety the sector represents, from paper to packaging, from building with wood to bio-energy from wood, from trees to new trends.

The attention paid to the research in EU forest-related documents and the large consultation-based process that leads to SRA recommends this document as a good reference point for understanding the desired future shape of the forest sector. However, the SRA deals with the whole forest sector, thus only a small part of SRA is dedicated to forestry and the directions of change in forestry. The SRA insists many times that forest-based sector must secure supplies of its main raw material – wood.

The document explains that the sector is subject to a variety of threats and challenges (increased global competition, changes in the energy market and the concern for the effects of climate change) and that new concepts that use wood will further contribute to mitigate climate change as all wood products in essence stock carbon. For forestry, the SRA focuses on several directions of research: Commercializing soft forest values; Trees for the future: “Tailor-made” wood supply; Forests for multiple needs; Advancing knowledge on forest ecosystems; Adapting forestry to climate change.

SRA identifies as main challenges:

- increased global competition;
- growing concern over climate change;
- an increasing need for sustainable materials and energy sources;
- continuous changes in the customer/consumer base and the shifting expectations of other stakeholders.

### 3.4 Other EU policies

**1. Wood as renewable resource.** In 2005 woody biomass which includes wood from forests, by-products from wood and paper industries, black liquors, pellets and also wood from short rotation coppices accounted for nearly 86 % of the biomass used for primary energy production in the EU (European Commission-DG Environment, 2009). The EU approved in December 2008 a package related to the use of renewable energy sources (Directive 2009/28/EC). Wood energy and other forms of bioenergy constitute an important part of this package. The Directive sets legally binding targets for each Member State:

- to reduce greenhouse gas emissions by at least 20 per cent;
- to ensure that 20 per cent of final energy consumption is met with renewable sources;
- to raise energy efficiency by 20 per cent.

The Directive fixes biofuels sustainability criteria to ensure that only biofuels that have no negative environmental impact will be supported.

A report from 2008 of the Standing Forestry Committee ad hoc Working Group on mobilization and efficient use of wood and wood residues for energy generation (2008) identified eight focus areas for action which relate to an increase of supply of wood for energy and for raw material together:

- improve data on supply and use of wood;
- develop national / regional wood mobilization strategies;
- increase the potential of wood for energy and material use ensure sustainable provision of forest biomass;
- develop and maintain efficient wood supply chains and markets;
- strengthen efforts for forest owner motivation, organization and awareness rising;
- enhance support means, incentives and coordination efforts for wood mobilization;
- promote research and technological development in the field of forest production, harvesting technologies and wood utilization.

A strong increase in wood demand is forecast specifically for energy generation. Reserves for mobilization are seen in smaller private forest holdings, specifically in forest residues and first thinning (Standing Forestry Committee ad hoc Working Group, 2008). Long-term supply relationships/contracts and trading of standardized wood fuels are critical to enable the operation of local/district heating facilities and their suppliers. Generally the supply from larger holdings does not vary much, while harvests on smaller estates may differ significantly, due to the lack of market access and information or interest. The reserves for additional wood mobilization are located in the small scale private forests, first thinning age classes. Private forest owners are often not market-driven actors, showing a less price elastic market behavior (Standing Forestry Committee ad hoc Working

Group, 2008). Forest fragmentation does not appear for the first time as an impeding factor of implementing policies. Usually the solutions proposed to cope with forest fragmentation are voluntary creation of forest owner associations and cooperatives, yet until now there are no signs for such trend.

**2. Policies to reduce illegal logging and timber trade.** The EU's 2003 Forest Law Enforcement, Governance and Trade Action Plan lead to adoption of stricter rules to eliminate illegally harvested wood from the EU market (Council Regulation 2173/2005; Commission Regulation 1024/2008; EU Regulation No 995/2010). The Regulation 995/2010 outlines a due diligence system to ensure legality of the source of the wood products. Companies must institute a properly documented and audited system that will ensure legality, document the country of origin and also ensure that the wood they purchase has been harvested according to the laws of that country. These rules apply to all wood marketed in the EU, including domestic supplies from EU members (Commission of the European Communities, DG Environment, 2008).

The due diligence system referred to in Article 4(2) shall contain the following elements:

- measures and procedures providing access to the information regarding the timber origin
- risk assessment procedures enabling the operator to analyze and evaluate the risk of illegally harvested timber or timber products derived from such timber being placed on the market.
- risk mitigation procedures which consist of a set of measures and procedures that are adequate and proportionate to minimize effectively that risk and which may include requiring additional information or documents and/or requiring third party verification.

Each Member State shall designate one or more competent authorities responsible for the application of this Regulation. Member States shall submit to the Commission, by 30 April of every second year following 3 March 2013, a report on the application of this Regulation during the previous two years. The Regulation should apply as from 3 March 2013.

Impacts of different options were estimated (European Commission, 2008) before the event of financial and economic crises. The potential estimated impacts of the Regulation 995/2010 are based on the assumption that the measures will be implemented effectively:

- Forest industries could suffer from reduced supply and higher raw material prices compared to the business as usual scenario;
- forestry gains in the Nordic region as a result of declining imports from Russia;
- elimination of the illegal supply from the EU Member States will drives roundwood prices higher in other regions;
- the highest costs to be assumed would be found in countries where the great majority of the timber supply is non-certified and the private sector has established only few ISO certified management systems (Eastern part of Europe). The cost of high tech solutions for tracing timber origin could affect trade in some Member States where the demand for pulpwood is low (e.g. Eastern part of the EU);
- the cost of legality control could be significant for the "micro" SMEs and non-industrial forest owners who could be put in a slightly disadvantaged position as roundwood suppliers because of higher than average costs associated with legality control.

**3. EU policies on climate change and the forests and the Green Paper on Forest Protection.** The Commission White Paper on Adapting to Climate Change: Towards a European Framework for Action (COM (2009) 147) proposes to open a debate at the EU level on forest protection and forest information systems, including the issues such as monitoring, climate factors, biodiversity and the protective functions of EU forests. On 1st March 2010, the European Commission adopted a Green Paper (Green Paper on Forest Protection and Information in the EU: preparing forests for climate change), which sets out options for a European Union approach to the protection of forests and to information about forest resources and their condition. The follow up of the Green Paper, discussed in the Valsáin Declaration (2010) will be important for the future evolution of EU forest-related policies. Green Paper is expected to be adopted in spring 2011. The answers to the questions raised by the green paper and the conclusions and resolutions of the different EU institutions will allow the Commission to consider next steps in relation to forest protection and information.

**4. (Wood) Green procurement policies.** Green Public Procurement (GPP) means that public authorities seek to procure goods, services and works with a reduced environmental impact throughout their life-cycle compared to goods, services and works with the same primary function that would otherwise be procured. The general EU legal framework for public procurement of goods and services is set by the Procurement Directive 2004/18/EC15. The Directive clarifies how the contracting authorities may contribute to the protection of the environment and the promotion of sustainable development, whilst ensuring the possibility of obtaining the best value for money for their contract” when procuring goods, works or services. On 27 January 2011, the European Commission has launched a public consultation for the preparation of the future legislative proposal on the reform of the EU public procurement rules. Two years before, the Standing Forestry Committee ad hoc Working Group on Public Procurement for wood and wood based-products has started a work in 2009 with the aim to exchange experiences between the Member States, Commission Services and stakeholders regarding the wood procurement. The ad hoc Group finalized the Report in 2010 (Report to the standing Forestry Committee, 2010), arguing, inter alia, to work towards the use of the same sustainability criteria (as developed by the FOREST EUROPE (MCPFE) process, the International Tropical Timber Organization (ITTO) and work done by CBD) regardless of the end-use of wood, including as biomass for energy.

A synthesis of EU policies shaping forest use and forest management are provided in the Box 1.

#### **Box 1. Relevant EU policies shaping forest use and forest management**

Source: European Commission, 2010. COM(2010)66 final, Green paper On Forest Protection and Information in the EU: Preparing forests for climate change SEC(2010)163 final

In addition to the EU FS, the EU FAP and the Communication on Innovative and Sustainable Forest-based Industries, which are the only forest specific EU policy tools, a number of other EU policies are relevant though not specifically related to forests and forestry. Many key actions in the EU FAP refer to these policies, which are outlined below:

- In the Natura 2000 network, forest habitats constitute almost 20 % of the designated terrestrial sites.
- EU climate policy recognizes that to achieve its overall targets, all sectors, including land use, land-use change and forestry (LULUCF), must make a contribution. The Effort Sharing Decision and the ETS directive include provisions for the Commission to assess options for including LULUCF in the EU GHG reduction commitment.
- The Rural Development Regulation (2007-2013) is the main instrument for financing of forest measures and includes provisions for co-financing for afforestation, payments for Natura 2000 areas, prevention and



restoration and other forest environmental measures as well as a wide range of investments in forest management and wood processing. Measures related to the use of advisory services by forest holders contribute to promote the sustainable use of forests, increase awareness in climate change, encourage mitigation actions and assist forest holders in adaptation measures.

The cross-compliance mechanism can as well have an effect on forest management, especially after the Health Check modification that introduced water management in the Good Agricultural and Environmental Condition (GAEC) framework with the new standard “Establishment of buffer strips along water courses” that will be compulsory from 2012 at the latest. Wooded buffer strips may be created or preserved within the implementation of this policy.

- The Directive on the promotion of energy from renewable sources (RES-D) sets a binding target for the EU to achieve a 20 % renewable energy share by 2020, in which the largest contribution is expected to come from biomass from agriculture, forestry and waste for heat and power generation as well as transport fuels.

- The Action Plan on Sustainable Consumption and Production and Sustainable Industrial Policy (SCP/SIP), aims at improving the energy and environmental performances of products. An EU Green public procurement policy for public bodies and the revised EU Eco-label are part of this.

- The Community plant health regime (CPHR) aims at preventing the spreading of alien forest species or of organisms harmful to forests. Its ongoing revision might introduce more flexibility regarding limitations on the use and trade of forest reproductive material and/or cope with the effects of climate change on pest and diseases as well as their vectors.

- Council Directive 1999/105/EC of 22 December 1999 on the marketing of forest reproductive material recognizes that the choice of forest reproductive material is important for forestry purposes and that this material should be genetically suited to the various site conditions and be of high quality.

- The 7th Research Framework Program (FP7) launched the concept of European Technology Platforms in areas where Europe's competitiveness, economic growth and welfare depend on important research and technological progress. The Forest Technology Platform brings together stakeholders, under industrial leadership, to define and implement a Strategic Research Agenda. - FP7 also funds collaborative research on sustainable production and management of biological resources from forest and on the prediction of forthcoming ecological changes.

- The Commission's JRC work on remote sensing, climate change, forest monitoring, forest fragmentation, fires and forest information systems. COST projects have addressed Protected Forest Areas and NFIs.

- Current Cohesion Policy supports investments in renewable energy and co-finances programmes that preserve and promote natural areas and biodiversity.

- The EU Solidarity Fund assists MS in dealing with damage caused by major natural disasters including storms and forest fires.

- The EU Civil Protection Mechanism provides the framework for organising mutual assistance between the MS for responding to major disasters including forest fires and storms, which overwhelm the response capacities of the affected MS.

- The EU approach on natural and man-made disasters recently endorsed by the Council takes a multi hazard approach to risk assessment and management and identifies forest fires as an important priority for EU work on risk assessment and management.

## 4 FOREST EUROPE process

Funded in 1990, The FOREST EUROPE (Ministerial Conference on the Protection of Forests in Europe – MCPFE) represents the major pan-European co-operation for the sustainable management of European forests. The Declarations and Resolutions adopted in 1990, 1993, 1998, 2003 and 2007 provide guidelines towards the achievement of the objectives of sustainable forest management, including the implementation of objectives stemming from other international processes, e.g. objectives laid down in the United Nations Convention on Biological Diversity and Convention on Climate Change or regional processes like Europe and North Asia Forest Law Enforcement and Governance Process. The Forest Europe documents are also underlining the importance of improving knowledge (research) and communication for an information-based decision making.

The sustainable forest management is implemented via different tools and instruments:

- Improved pan-European indicators for sustainable forest management (2002);
- Pan-European Understanding of the Linkage Between the Ecosystem Approach and Sustainable Forest Management (2006);
- Pan-European Guidelines for Afforestation and Reforestation with a special focus on the provisions of the UNFCCC (2008);
- Good practice guidance on sustainable mobilization of wood in Europe (2010);
- Technical guideline for genetic conservation and use of tree species in Europe developed by EUFORGEN (2006);
- Assessment of Forest Fire Risks and Innovative Strategies for Fire Prevention (2010).

The Work Programme guides the FOREST EUROPE actions between the conferences. The latest Work Programme provides frame of action for implementing Warsaw commitments and put also the frame to discuss further strategic direction of the MCPFE.

### 4.1 Wood for Energy

Responding to environmental challenges, and in particular to climate change, the FOREST EUROPE signatory countries have committed themselves to ensure enabling conditions for enhanced sustainable wood production and supply. Promoting public procurement policies that demand legally and sustainably produced timber and wood products is a high-priority issue for Forest Europe (<http://www.foresteurope.org>).

Main Forest Europe lines regarding the use of wood are to be found in the MCPFE Warsaw Declaration and Resolution 1 – Forests, Wood and Energy (MCPFE, 2007). Complying with the principle of sustainable forest management is required for wood production, even for short rotation and fast growing energy crops. To increase wood production and mobilization in order to address the growing demand for wood, the Signatory States and the European Community commit themselves to take effective measures within the framework of sustainable forest management:

- to increase the use of woody biomass for energy generation, e.g. processing residues and recovered wood;
- to increase the mobilization of wood;

- to promote the use of a range of sustainable management systems including short rotation and coppice forestry in accordance with national law;
- to strengthen efforts to promote good governance and forest law enforcement to combat illegal logging and related trade of forest products;
- to strengthen the competitiveness of the forest sector.

## **4.2 Forest and the Climate change**

The MCPFE position regarding the forests and the climate change is underlined in Warsaw Declaration and Resolution 1, and in Vienna Declaration V5 (Climate change and sustainable forest management in Europe). The Signatories States and the European and the European Community commit themselves to:

1. contribute to the reduction of greenhouse gas net emissions through
  - promoting the efficient and sound use of wood in order to replace non-renewable resources and energy intensive production techniques;
  - promoting a significant increase in the efficient generation and use of bio-energy from sustainable managed forest resources as well as wood residues;
2. contribute to the implementation of the UNFCCC and the Kyoto Protocol by maintaining the carbon stock and enhancing carbon sequestration of forests in Europe through:
  - encouraging sustainable forest management practices;
  - establishing national forest programmes or plans that provide appropriate guidance so that afforestation and reforestation takes due regard of environmental, in particular biodiversity, economic and social values, with a view to mitigating potential negative effects of large scale afforestation.

The document recognizes the importance of afforestation in mitigation of the climate change, however afforestation and the creation of energy-intended plantation should comply with the frame of sustainable forest management. In this sense, national forest programmes are viewed as the means to enhance social dialogue and public participation regarding the decisions to be taken on the afforestation issue. The Forest Europe has developed “Pan-European Guidelines for Afforestation and Reforestation with a special focus on the provisions of the UNFCCC” in cooperation with the Environment for Europe/Pan-European Biological and Landscape Diversity Strategy (EfE/PEBLDS). The guidelines are targeted at afforestation and reforestation programmes that aim, inter alia, at carbon sequestration and reduction of CO<sub>2</sub> emissions. The Guidelines provide recommendations for implementing economically viable, environmentally sound, socially equitable, and culturally acceptable afforestation and reforestation projects (<http://www.foresteurope.org/>).

## **4.3 Forest and Water**

Through the Warsaw Resolution on Forests and Water, adopted at the latest Ministerial Conference, the responsible ministers emphasized the vital role of sustainable forest management in protecting water quality and promoting overall watershed management. The Forest Europe member countries committed themselves to maintaining and enhancing the protective functions of forests for water and soil, as well as for mitigating local water-related natural disasters through sustainable forest management, including the use of public and private partnerships (<http://www.foresteurope.org/>).

In the Warsaw Resolution the Signatories States commit themselves:

- to 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,
- to assess afforestation and reforestation programmes in terms of their effects on quality and quantity of water resources, flood alleviation and soil
- to 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.

#### **4.4 Forest and the Biodiversity**

The conservation and appropriate enhancement of biological diversity in all types of forests is considered an essential element for the sustainable management. Forest biodiversity conservation was one of the main issues addressed at the Ministerial Conference in Helsinki in 1993, as a response to the objectives and measures set out in the Convention on Biological Diversity. Helsinki Resolution 2 provides General Guidelines for Conservation of the Biodiversity of European Forests. In 2003, the forest ministers adopted Vienna Resolution 4, Conserving and Enhancing Forest Biological Diversity in Europe, as well as the MCPFE (now Forest Europe) Assessment Guidelines for Protected and Protective Forest and Other Wooded Land in Europe. Several of the Forest Europe criteria and indicators for sustainable forest management are relevant to forest biodiversity. Criterion 4, with nine associated indicators, is directed exclusively towards biodiversity in forests. The Pan-European Guidelines for Afforestation and Reforestation with a special focus on the provisions of the UNFCCC comprise, among others, a set of ecological guidelines, taking into account effects of afforestation on biological diversity. The Convention on Biological Diversity has recognized that the concept of sustainable forest management as defined and developed by Forest Europe is consistent with the application of the ecosystem approach to forest ecosystems in the pan-European region. (<http://www.foresteurope.org/>).

Signatories States committed in Vienna Resolution V4 Forests Biological Diversity:

- to promote the compatibility of trade regulations with forest biodiversity related goals;
- to analyse and further develop protected forest networks, taking into account existing networks;
- to prevent and mitigate losses of forest biological diversity due to fragmentation and conversion to other land uses and maintain and establish ecological connectivity, where appropriate;
- to promote the conservation of forest genetic resources as an integral part of sustainable forest management and continue the pan-European collaboration in this area.

As instruments of implementing biodiversity conservation, the MCPFE Vienna Resolution states that forest biological diversity should be addressed in national forest programmes and other relevant policies and programmes. Vienna Resolution set up also a framework for cooperation with ministerial process Environment for Europe.

#### **4.5 Principle for action and future changes**

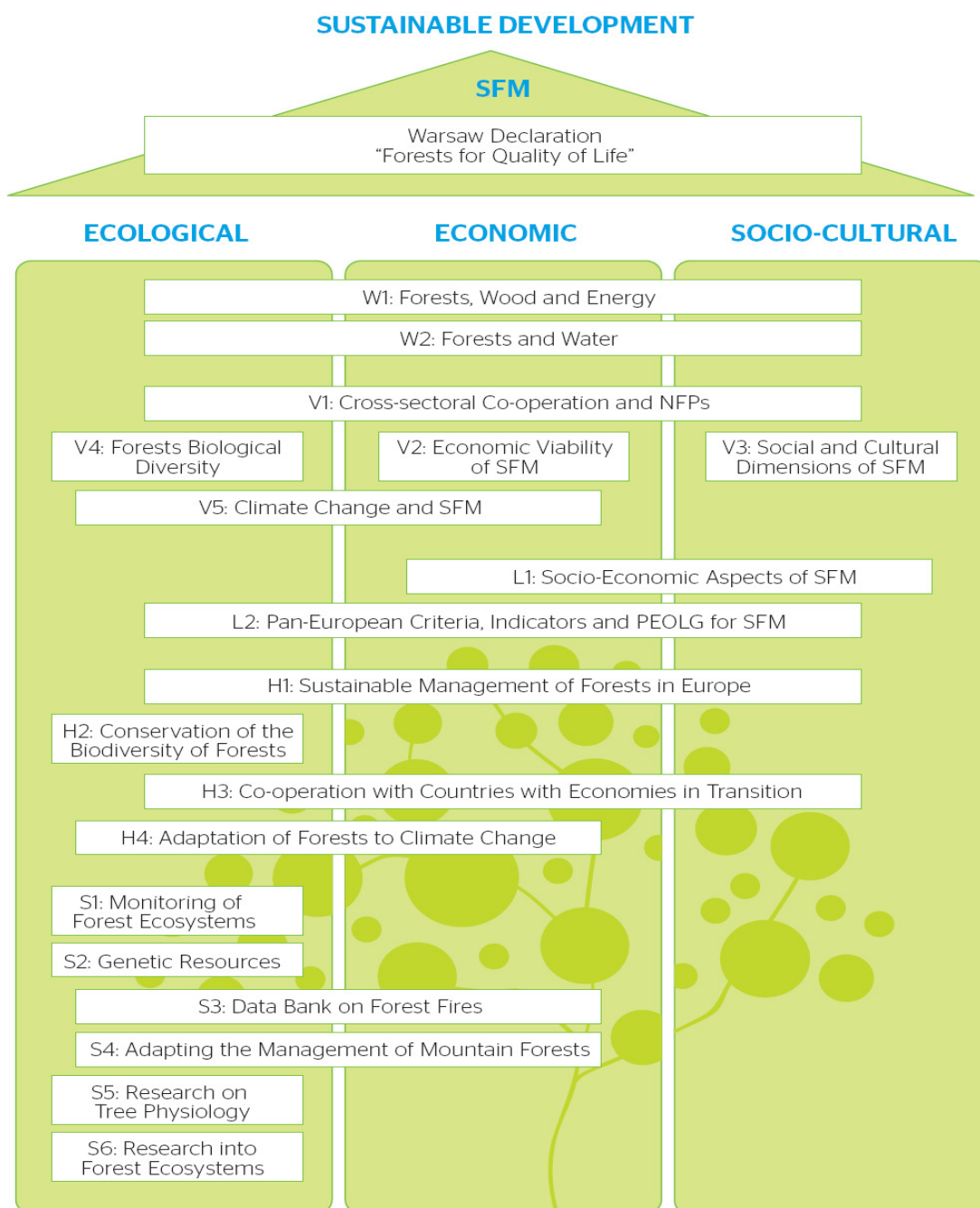
In the Warsaw Declaration, the ministers responsible for forests emphasized that sustainable forest management contributes significantly to environmental, economic, social and cultural dimensions of sustainable development and particularly to the achievement of internationally agreed goals, including 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). The almost two decades of work and efforts of the Ministerial Conference on the Protection of Forests in Europe (MCPFE) regarding the SFM represent a strong European input to the international forest policy dialogue.

Regional-global cooperation and partnership are a key element of the MCPFE Work Programme. One principle of the Work Programme is to contribute to the implementation of forest related global commitments and the achievement of relevant global goals as well as to strengthening collaboration with forest related institutions, processes and initiatives at global, regional and sub-regional levels.

As example of international cooperation, the FOREST EUROPE position regarding the biological conservation is online with the Convention on Biological Biodiversity, the Intergovernmental Panel on Forests / Intergovernmental Forum on Forests, the United Nations Forum on Forests, the World Summit on Sustainable Development and the Ministerial Process "Environment for Europe / Pan-European Biological and Landscape Diversity Strategy".

The cooperation within FOREST EUROPE develops policies to safeguard the vitality of forests in order to meet societies' needs (FOREST EUROPE, 2011) and to enhance the role of sustainable forest management concerning the delivery of goods and services to society as well as contributing to achievement of international objectives (FOREST EUROPE, 2010). Since Vienna Conference, implementation of Ministerial Conference commitments by the participating States was mainly done via the national forest programmes, recognized also as having the potential to introduce new modes of governance in forest sector, e.g. public participation, multi-level governance, cross-sectoral cooperation, accountability and expertise and iterativity. National data collection applying the set of MCPFE Criteria & Indicators for the periodic report "State of Forests and Sustainable Forest Management in Europe" is considered also a core tool for monitoring changes regarding the sustainable forest management.

New principles for action in the next stages will be developed at the Ministerial Conference that will be held in Oslo in June 2011. The conference tasks are to develop a framework for future political collaboration and to prepare options for decision by ministers on a possible legally binding agreement on forests in Europe. A significant change will occur in the policy process, as far as up to date the European initiatives regarding the forest sector are seldom based on legally binding instruments.



**Figure 1. Overview of the FOREST EUROPE commitments in relation to the three pillars of sustainable forest management**

(Source: <http://www.foresteurope.org/eng/Commitments/>)

## 5 Vision and directions for changes expressed in the policy documents

### 5.1 EU Forestry Strategy

EU Forestry Strategy stresses out the importance of the multifunctional role of forests and sustainable forest management for the development of society and, in particular, rural areas.

The conservation and enhancement of biodiversity in forests is essential to the sustainable management. It is also important that appropriate measures should be integrated in the forest programmes or equivalent instruments of the Member States.

The sustainable forest management is one of many measures to combat climate change. The role of forests as carbon sinks and reservoirs within the European Union can be best ensured through sustainable forest management.

The contribution to the climate change strategies can best be achieved through the protection and enhancement of existing carbon stocks, the establishment of new carbon stocks and encouragement of the use of biomass and wood based products.

As coming out from the EU Forestry Strategy statements, the sustainable forest management is attempted to answer all different, often contradictory, requirements regarding the use of forest resource. The strategy sees the sustainable forest management important for the development of the society but also important to combat the climate change or to enhance the biodiversity in forests. Regarding the role of forest in combating the climate change, the EU Forest Strategy acknowledges three different measures:

- protection of existing forests;
- establishment of new forests;
- more intensive use of biomass and wood based products.

The measures are already supported in rural development policies (afforestation), environment protection policies (forest protection) and industrial and technological development policies (more intensive use of biomass calls for innovation in the forest sector).

The main contributions of the EU Forestry Strategy are:

- the attempt to strive for coordination amongst the different EU level policies regarding forests;
- the emphasis put on the sustainable forest management concept;
- the empowerment of the FOREST EUROPE political process. As lead by national representatives of forest sector from the Member States, the process is implicitly recognized as the forum to define, follow and monitor the implementation of the sustainable forest management concept.

Therefore, the EU Forestry Strategy has not contributed to set up a “new” vision of future forests and forest management, but it set up the procedures to obtain such vision, based on the negotiation and discussion between the representatives of Member States within FOREST EUROPE. Most of the Strategy contributions belong to procedures to reach Member States commitments and to harmonize the existing European policies: the Strategy attempts to reach a better visibility of forest

sector amongst the EU level policies, a better insertion of EU initiative regarding forests in the context of global commitments, a better coordination between different policies regarding forestry and a better/more powerful role for the political process represented by the MCPFE. The Strategy is acknowledging the need for coordination, communication and cooperation within the Commission, between the Commission and Member States, as well as between the Member States. Also, the Strategy lays down the basis of an iterative process; the first evaluation of the Strategy leading to the adoption of a more pragmatically oriented Action Plan.

## **5.2 EU Forest Action Plan and the subsequent documents**

The Commission and the Member States have developed a common vision of forestry and of the contribution that forests and forestry make to modern society expressed in the assertion:

*Forests for society: long-term multifunctional forestry fulfilling present and future societal needs and supporting forest-related livelihoods.*

Multifunctional forestry delivers economic, environmental, social and cultural benefits. It supplies renewable and environmentally friendly raw materials and plays an important role in the economic development, employment and prosperity of Europe, in particular in rural areas. Forests make a positive contribution to the quality of life, providing a pleasant living environment, opportunities for recreation and preventive healthcare, while maintaining and enhancing environmental amenities and ecological values. Forests are to maintain the spiritual and cultural heritage they contain.

The vision that the EU Forest Action Plan promotes is that of **multifunctional forestry**. The principles expressed and the key action proposed in FAP show an implicitly acknowledged direct causal relationship between the forest potential and the social and economic demands. Multifunctional forestry needs:

- specific approaches and actions for different types of forests;
- to be related with the competitiveness of forest sector;
- valuation and marketing of non wood forest goods and services (implicit principle: forest owners provide for free these goods, they are entitled to ask for compensation or payment – as affirmed in the Vision 1 of Forest technology Platform – Strategic Research Agenda);
- to comply and to take measures regarding the climate change, the biodiversity protection, the monitoring of European Forests, and the protection of EU forests (forest fires).

### Directions for change:

- use of forest biomass for energy generation;
- promote afforestation for environmental and protective objectives;
- promote agro-forestry systems;
- promote Natura 2000-forest measures;
- encourage the use of wood and other forest products from sustainable managed forests;



- encourage investments to enhance ecological value of forests, economic value of forests, for natural hazard prevention and safety.

The EU Forest action Plan calls for the elaboration of three instruments: European Forest Monitoring System, European Forest Fire Information System and European Forest Information and Communication Platform.

**Council Conclusions on the EU Forest Action Plan 2007 – 2011** clarified that the measure for multifunctional forestry should avoid market distortion, should be complementary in nature and in line with the principle of subsidiarity. Member States and Commission are invited to make the best use of the forest contribution to the mitigation of climate change, biodiversity protection, combating desertification, preserving water resources and protecting soils. In particular, the Member States are invited to use at the best all instruments provided by EU financing programmes, from rural development to research areas.

Council Conclusions on EU Forest Action Plan leads to several ideas:

- Community intends to strengthen the role of EU in international processes regarding the protection of forests or simply forest-related;
- the need of coordination with other initiative is maintained (“establishing coherence and synergy with other relevant Community initiatives, in particular the Biomass Action Plan, the EU FLEGT Action Plan, the Biodiversity Action Plan to 2010 and beyond, the Community strategic guidelines for rural development, the 7th Research Framework Programme and the Commission's forthcoming Communication on the competitiveness of the forest-based industries”);
- for implementing the set of actions proposed in the plan, the Member States are suggested to use all the financing lines available, but also to include forests contribution in all national policy programmes and plans deriving from measures to combat desertification, conserve biodiversity, preserve water resources, mitigate climate change, etc.

All these ideas from the Council Conclusions maintain the actions established in the Plan. The Council Conclusions bring additional support for the implementation of 18 key actions, in the meanwhile reminding the EU main working rules, and giving to the Member States some guidance how to finance the implementation. By that the Council Conclusions locates again the debate, from the sectoral/technical based, as established by the Forest Action Plan, to the holistic approach launched in the EU Forest Strategy. The same movement may be identified in the content of the **Opinion of the European Economic and Social Committee**, which reminds essential rules of EU policy making.

### ***5.3 Forest Technology Platform and Strategic Research Agenda***

The FTP has as its vision (for the year 2030): The European forest-based sector plays a key role in a sustainable society. It comprises a competitive, knowledge-based industry that fosters the extended use of renewable resources. It strives to ensure its societal contribution in the context of a bio-based, customer-driven and globally competitive European economy.

Back to the forestry-related research objectives, there are several “visions”:

Vision 1: Commercializing soft-wood values: Forest owners generate substantial income from products and services that are not directly related to wood-based products.



This Research Area aims to identify a scientific basis for calculating so-called ‘soft forest values’ to be found in the contribution from indirect goods and services such as recreation, tourism, health and the environment. Using this knowledge, the sector can aid growth across a wide range of non-wood forest resources that are perhaps under-utilized today.

Vision 2: Trees for the future: Europe leads the world in quantitative and bio-technological science related to the improvement of trees.

Research will help develop strategies on how to utilize best genetically superior trees in plantations and semi-natural forests under various growing conditions.

Vision 3: Tailor-made wood supply: “Tailor-made” wood supplies substantially increase the productivity and value of forest products manufacturing.

Research in this area will help the forest-based sector to provide raw materials that are adapted to a whole host of customer demands, including energy production.

Vision 4: Forests for multiple needs. Europe’s forests fulfill the multiple needs of forest owners, industry, society and environment.

Forest owners need to do more than ever to balance commercial forest management and sustainable land use strategies with the demands of global competition, society, public authorities and other stakeholders. As such, the goal will be to strive toward multifunctional forestry. This would match the sector’s desire for economically viable and sustainable forest management with outcomes that are politically, environmentally and socially acceptable. Finding optimal solutions will require improved decision-support tools that allow forest owners to consider when it is better to separate production areas from areas providing other services, and when integrating multiple functions in the same forest.

Vision 5: Advancing knowledge on forest ecosystems: Profound insights are gained into how forest ecosystems function in areas such as biodiversity, as well as understanding responses to environmental change.

This Research Area will help the sector understand the dynamics and responsiveness of forest ecosystems at landscape, species and gene levels. The insights gained will help the sector assure biodiversity, for example, by assessing the buffering capacities of species. In this way, the SRA will help the forest-based sector to develop sound strategies for safeguarding forest functions in relation to future changes.

Vision 6: Adapting forestry to climate change: Forest-based biomass production is adapted to optimize the benefits and reduce the risks related to climate change and other environmental changes.

Within this Research Area, new approaches to forest management and improved silvicultural regimes will be developed to enable forest biomass production to adapt to climate change and other associated environmental changes.

**In short, realizing the vision will result in major contributions to society in the following areas:**

- new and innovative products tailored to consumer needs;
- maintaining sustainably managed forests;
- reduced environmental impacts;
- contributions to combat climate change and its effects;

- lowering Europe's dependence on oil;
- participation in Europe's strategy for growth and jobs;
- sustaining employment, especially in rural areas.

#### **5.4 Other EU policies**

The Directive 2009/28/EC promotes the sustainability criteria for the production of biofuels. The vision is to help Europe transform into a low-carbon economy and increase energy security.

The ambitions of the energy and climate package are the best synthesized by the Commission President José Manuel Barroso: "The EU's climate and energy package is part of the solution both to the climate crisis and to the current economic and financial crisis. It represents a green "new deal" which will enhance the competitiveness of EU industry in an increasingly carbon-constrained world. Moving to a low carbon economy will encourage innovation, provide new business opportunities and create new green jobs." (Europa, Press release, 2008).

This vision will strengthen the efforts of the forest sector regarding the wood mobilization, afforestation and the increase the competitiveness of the forest sector. Due to the lack of management capabilities of the forest owners with small forestlands area, it is likely that the wood for energy would come rather via the creation of new plantations (and imports) than via the mobilization of wood from existing forests.

Vision regarding the Green Paper adopted in the Valsain Declaration (2010):

"making possible for forests to continue to provide in the future the goods and services that they provide currently and to join forces to increase their quality and quantity. Protection of forest is a part of Sustainable Forest Management".

#### **5.5 FOREST EUROPE**

In preparing the 2011 Conference in Oslo in June, the Expert Level Meeting assessed the need to strengthen the European forest policy framework. Ministers at the FOREST EUROPE Ministerial Conference are expected to adopt a vision, goals and targets for Europe's forests and consider opening negotiations on a legally binding agreement on forests in Europe (FOREST EUROPE, 2011).

Six pan-European criteria and indicators express the FOREST EUROPE vision on the sustainable forest management:

1. Maintenance and appropriate enhancement of forest resources and their contribution to global carbon cycles;
2. Maintenance of forest ecosystem health and vitality;
3. Maintenance and encouragement of productive functions of forests (wood and nonwood);
4. Maintenance, conservation and appropriate enhancement of biological diversity in forest ecosystems;
5. Maintenance and appropriate enhancement of protective functions in forest management (notably soil and water);
6. Maintenance of other socio-economic functions and conditions.

The analysis of FOREST EUROPE process shows that there are several drivers of change that could be classified in:

- policy high top priority issues: wood for energy, forest and the climate change, forests and the water, biodiversity. As mentioned in a Press release (FOREST EUROPE, 2011) priority topics of FOREST EUROPE are to strengthen the role of forests in mitigating climate change, to secure the supply of good-quality fresh water, enhance and preserve forest biodiversity and provide renewable forest products;
- principles of policy action (procedural norms): international cooperation, cross-sectoral coordination, national forest programmes and the potential legally binding agreement for forest protection in Europe.

FOREST EUROPE programmatic statements promote a vision of forestry that maintain and enhance in the same time ecological, economical and social-cultural functions of forests (as Figure 1 illustrates as well). It may be expected then that any other initiative promoting a particular forest or timber utilization would be interpreted and translated in FOREST EUROPE documents in a way to find a balanced manner of implementation.

FOREST EUROPE represents the main policy forum where international commitments and priority issues are discussed, harmonized and integrated in forest-specific instruments. In one hand, the regional and global cooperation promoted by FOREST EUROPE has harmonized and integrated many international initiatives external to the forest sector into the European forest dialogue. On the other hand, the FOREST EUROPE is expressing the European forest sector voice in the international policy processes.

For this reason, the vision of FOREST EUROPE that will be probably expressed in the next Ministerial Conference will be of significant importance for the European forest sector. It is expected that this vision will be directly implemented in the national forest policies and it might find also an expression in a legally binding agreement. This option will find support in the European Union, as one of the signatories of political commitments of FOREST EUROPE. A study ordered by the European Commission – DG Environment (2009) have already mentioned a forest framework directive as a possible policy option to better protect European forests against harmful factors and to assure the coordination of policy efforts in this direction. Type of discourse such “Protection of forest is a part



of Sustainable Forest Management” (Valsaín Declaration) is also an argument for the potential further development of a legally binding agreement regarding forest protection.

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## Conclusion

### *EU level policies – a soft constitutional decision-making level*

Both the EU Forest Strategy and the Forest Action Plan established a new frame for stakeholder participation, consultation, policy learning and collective action regarding forests at the EU level. EU Forest Strategy claims a better articulation of forest policies inside the EU policies and programme, making then room to the forest sector. The Forest Action Plan sets up principles of action and key actions addressed to the Commission and to the Member States. Mid-term evaluation of Forest Action Plan said also that the Plan is not widely known outside the forest administrations; there is still a need of coherent and proactive approach to forest sector; the national or sub-national measures do not connect with the Forest Action Plan and that the reporting of Member States activities is not systematically done (Hilkka, 2010). Therefore the strategy and the action plan are “soft” instruments (Hilkka, 2010) because what can be achieved depends on the interests, position and activity of forest administrations in the Member States.

Borrowing the term used above, this analyze argue that the EU Forest Strategy and Forest Action Plan are “soft” constitutional decision-making level. Both policy papers and subsequent documents establish the needed political and legal arrangements for building, negotiating, discussing and implementing the vision of the sustainable forest management and multifunctional forestry, but they are of “soft” nature as far as the competences on forestry measures belong to the Member States. The same statement applies also to FOREST EUROPE process, yet in this case the implementation is facilitated by a simplified policy-decision making schemes (compared with the EU level), a clearer Work Programme, and a stronger national commitment, e.g. via the national forest programmes, periodical reporting for the conferences, and the implementation of criteria and indicators. This leads to the conclusion that, in the present conditions, it is likely that the FOREST EUROPE measures and decisions will be more effectively implemented in the Signatories States than other EU level policies and measures. One may draw up also the hypothesis that strong public forest sector administrations will be likely to implement easier FOREST EUROPE commitments, at least in a formal level, e.g. materialized in regulations, norms or guidelines.

Compared with this hypothesis, changes are expected regarding the EU decision-making due to:

- the follow up of the Green Paper regarding the Forest Protection and Information in the EU;
- the next Ministerial Conference for the Protection of Forests in Europe that will be held in 2011 and that will probably lead to a new vision of forest and a legally binding agreement;
- the discussions on the future of the Strategy and Forest action Plan. A special Working Group of the Standing Forestry Committee has to be established.

Changes will mostly affect the constitutional decision making level, e.g. mostly rules of decision-making and implementation. It is likely that the present view of sustainable forest management and multifunctional forestry will not be challenged.

### *Which vision for future of forests in Europe?*

The key word of the EU Forestry Strategy is sustainable forest management, and for the definition of sustainable forest management the reference is made to Ministerial Conferences on the Protection of Forest in Europe (FOREST EUROPE process). The EU Forest Strategy proposes a holistic approach on forest-related policy measures, yet the programmatic statements of the EU Forest Strategy do not call for significant changes in the vision about forest or forest management in Europe. If the strategy

does not contain explicit expressed drivers of changes, the change is already produced in policy formulation, including the elaboration of EU Forest Action Plan, its mid term evaluation, the coordination of EU policies forest-related or the place accorded to the consultation with interested stakeholders. As consequence, the vision of sustainable forest management should be interpreted according to the MCPFE documents. In other words, the Strategy does not deal with the "substance" of the matter (magnitude of the problem, indicators to be attained), but with the procedures to reach the goal that is sustainable forest management.

The key word coming out from the EU Forest Action Plan is the multifunctional forestry, translated in 18 key actions (plus 3 mentioned in the Opinion). In recognizing the wide range of natural, social, economic and cultural conditions and differences in ownership regimes of EU forests, the Action Plan acknowledges the need for specific approaches and actions for different types of forests. Moreover, the EU Forest Action Plan claims that national forest programmes represent the suitable framework for implementing international forest-related commitments and that the open method of coordination should be applied to voluntary coordination of national forest programmes. The conclusion is that multifunctional forestry is to be defined within the frame of the national forest programmes or similar processes for coordinating national forest policies and has to include both EU and global, international commitments. So far the main change is not on the substantial legal norms of multifunctional forestry (the definition of multifunctional forestry is not under discussion), but on the attention paid to good governance and to the formulation of the national forestry programmes.

The main change to be retained is the evolution towards open, participatory processes to define the goals of forest management according to the target of multifunctional forestry; all interested stakeholders should have the opportunity to participate in the definition of future targets of forest management. The place granted to present and future societal needs in the vision of multifunctional forestry challenges the top down, regulatory way of formulating the forest management goals. Thus the EU Forest Action Plan encourages participation, coordination with other sectors, expression of interests (present and future societal needs) and use of communication and educational means as main drivers of changes to implement the vision of long –term multifunctional forestry. This participatory and information-based view of decision-making is online with the concept argued in the IUFRO study Adaptation of people and forests to climate change (Seppälä et al, 2009):

“A key management strategy applicable to all forests is adaptive co-management; this is a systematic process that recognizes the importance of stakeholder cooperation and aims to continually improve management policies and practices by monitoring and learning from the outcomes of operational programmes”.

In other words, the vision about future forests and forest management is focused on procedural norms, not substantial ones, and promote policy learning and communication. The question raised in the analyzed documents is not “which are the suitable future forests and forest management”, but “how one may attain suitable forests and forestry in the future”. Therefore the answers are of procedural nature: via coordination, consultation, implementation of international commitments, cross-sectoral approach, etc. As implication for future steps in the present research project, the vision of multifunctionality calls for the study of the governance processes back to the selected case studies in the project.

*Which directions of change or forecast changes may be identified in policy documents?*

Several directions for changes are identified in policy documents. These concern the more intensive use of forest resource: use of forest biomass for energy generation, promoting afforestation, encouraging the use of wood and other forest products, encouraging investments in forests. Therefore the continuation of the forest extension trend may be expected in forest area in Europe.

The different direction of change, if policies implemented, are synthesized in the Table 2.

The future forest sector in Europe, if analyzed policies are implemented, can be described by the following facts:

- forest area tends to increase;
- wood mobilization will be higher;
- supply of forest products and services will diversify;
- natural regeneration will be preferred, mixed stands area will increase;
- forest protected area tends to increase;
- forest management planning will implement risk management strategies and will be based on stakeholders preferences upon forest utilization;
- volume of illegal logging and related trade tends to decrease;
- new modes of governance and better governance will be implemented (participation, coordination, accountability); more soft regulatory and voluntary policies will be implemented;
- highly integrated production chains for timber might develop (biorefineries).

If policies were not effectively implemented, it may be assumed that the drivers of changes will be represented by the current trends, e.g. increasing forest area, growing concern about forest protection, expanding markets for carbon sequestration, growing concerns about forest certification and green business development, increasing demand for timber as result of Russian log export taxes, increasing demand for timber-based energy. Market trends analysis shows that evolution regarding timber utilization from European forests will be similar to that resulting from the implementation of EU cross-sectoral policies with impact on forest sector: more demand for wood for energy purposes (that might be provided by European forests or imported); growing concern for forest protection, forest certification, biodiversity and business involvement in corporate social responsibilities regarding environment protection; recovering of the demand in housing industry as result of the better economic condition in USA; diversification of supply as result of cumulated effects of demographic evolution, innovation and technologies, customer demands and current supporting policies for timber utilization. Therefore it may be assessed that, in the present situation, even without the implementation of forest-related policies, it is likely that the market trends will lead to the changes listed above. An exception is the catastrophe scenario with large scale disturbances leading to a long term decline of forest area in Europe.



**Table 2. Needs for action and directions of change in European forest-related policies**

| Perception of the current / future state  | Vision/need for actions   | Directions of change, if policies implemented   |
|---|---|---|
| <b>General trend of forest relevant policies</b>  |   |   |
| increasing importance in the present policies of biodiversity protection, use of wood for energy production and diversification of forest and timber-based products   | <ul style="list-style-type: none"> <li>• protection of existing forests, promote Natura 2000-forest measures</li> <li>• establishment of new forests, promote afforestation for environmental and protective objectives</li> <li>• enhance and preserve forest biodiversity</li> <li>• encourage investments to enhance ecological value of forests, economic value of forests, for natural hazard prevention and safety</li> <li>• more intensive use of biomass and wood based products</li> <li>• encourage the use of wood and other forest products from sustainable managed forests, provide renewable forest products</li> </ul>   | Forest extension<br>Wood mobilization (increase of harvesting)<br>Increase of innovation regarding forest products  |
| <b>Ecology-related drivers</b>  |   |   |
| important factors affecting ecosystems and people include climate change, but also land use and land-use change, invasive species and rapid expansion of global trade   | <ul style="list-style-type: none"> <li>• optimizing structural, species and genetic biodiversity</li> <li>• to 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</li> <li>• to prevent and mitigate losses of forest biological diversity due to fragmentation and conversion to other land uses and maintain and establish ecological connectivity, where appropriate</li> <li>• to analyze and further develop protected forest networks, taking into account existing networks</li> <li>• to strengthen efforts to promote good governance and forest law enforcement to combat illegal logging and related trade of forest products</li> </ul> | Forest extension<br>Natural regeneration extended<br>Natura 2000 (and other forms of forest protection) area increases<br>Better governance of timber logging and trade |
| resilience of forest ecosystems can be overcome by severe disturbance and sufficiently large changes in climate;<br>in all scenarios and across all main forest types it is very likely that the frequency and intensity of | <ul style="list-style-type: none"> <li>• increase the share of natural regeneration</li> <li>• maintain and enhance the protective functions of forests for water, soil, as well as for mitigating local water-related natural disasters</li> <li>• to promote the conservation of forest genetic resources as an integral part of sustainable forest management and continue the</li> </ul>  | Natural regeneration extended<br>Natura 2000 (and other forms of forest protection) area increases<br>Restrictions in harvesting areas and methods                      |



|  |  |  |
|--|--|--|
| storms, fire, insect attack and disease will change, with increases in some areas  | <p>pan-European collaboration in this area</p> <ul style="list-style-type: none"> <li>• to strengthen the role of forests in mitigating climate change</li> <li>• reducing susceptibility to disturbances by tending and thinning</li> <li>• enhancing structural (species and genetic) diversity via long regeneration periods, and by harvesting at smaller scales</li> </ul>  | <p>Increase of forest area<br/>         More wood mobilized from thinning and tending</p>  |
| <b>Decision making and policy related drivers</b>  |  |  |
| <p>how to deal with uncertainty and risk in long-term forest planning<br/>         how to use participative process involving decision-makers, stakeholders, experts, and analysts for development and evaluation of adaptation strategies</p>   | <ul style="list-style-type: none"> <li>• adaptation strategies must give explicit attention to normative issues such as trade-offs among competing values and interests, distribution of costs among stakeholders, and potential for changing preferences and unintended consequences over time</li> <li>• proactive adaptation measures based on knowledge of climate impact mechanisms have potential to prevent reductions in ecosystem goods and services in forests managed actively for timber and non-timber forest products</li> <li>• planning should deal with risk management</li> <li>• establishing and sustaining forest ecosystems with highly diverse tree composition, age and structure</li> </ul> | <p>Information-sound decision making will increase the role of science/research<br/>         National forest inventories or similar harmonized<br/>         Participatory and negotiation based approached in forest management planning are implemented<br/>         Future forests are diverse<br/>         Pure, monoculture stands are avoided</p> |
| <p>traditional forms of forest governance that focus on hierarchical, top-down policy formulation and implementation by the nation state and the use of regulatory policy instruments are insufficiently flexible to meet the challenges posed by climate change</p>                       | <p>national forest programmes are the core instruments of new forest governance arrangements at the national level: they can promote the adaptation of forests to climate change by reinforcing the use of sustainable forest management as a mechanism for reducing deforestation and forest degradation</p>  | <p>New modes of governance are implemented<br/>         National forest programmes are established and implemented<br/>         Criteria for SFM are implemented</p>   |
| <p>need to enhance biodiversity protection and to control illegal logging and related trade; implementing good governance in forest sector; to strengthen efforts to promote good governance and forest law enforcement to combat illegal logging and related trade of forest products</p> | <ul style="list-style-type: none"> <li>• enterprises in the sector are asked to implement “green” corporate practices and to use forest certification scheme as a guarantee that the raw material is procured from sustainable managed forests;</li> <li>• to promote the compatibility of trade regulations with forest biodiversity related goals</li> </ul>   | <p>Trade patterns will change<br/>         Less timber imported, higher prices for timber in Europe, more timber mobilized from private forests (slight increase of logging)<br/>         Strong development of certification schemes</p>  |
| <p>cross-sectorial impacts are a major driving force in the forest sector (policies for bioenergy,</p>   | <ul style="list-style-type: none"> <li>• need of coordination inter sectors and amongst policies</li> </ul>  | <p>Potential binding act regarding forests in Europe</p>   |



|  |   |   |
|--|---|---|
| climate change, housing, rural development, technological development)   | <ul style="list-style-type: none"> <li>• need to strengthen the role of forest sector in the international/regional dialogue regarding climate change, energy or environment</li> </ul>   | Afforestation as result of carbon markets (likely to occur rather in low-cost land countries in Eastern Europe)   |
| the increase demand for biomass will put pressure on the forest resource, yet the development of capacities for bioenergy production will not be under the forest sector | <ul style="list-style-type: none"> <li>• to promote the use of a range of sustainable management systems including short rotation and coppice forestry in accordance with national law</li> <li>• to assess afforestation and reforestation programmes in terms of their effects on quality and quantity of water resources, flood alleviation and soil</li> <li>• promote agro-forestry systems</li> </ul> | Increase of area with forest vegetation for energetic purposes  |
| the continued strong public interest on the forest sector will pose the problem of management capabilities, particularly in private small-sized forestlands              | <ul style="list-style-type: none"> <li>• Need to motivate forest owners for (adaptative) forest management</li> <li>• Need of different policies</li> </ul>   | New forest policy means (regulatory or incitative) developed  |
| <b>Socio-economic drivers</b>  |   |   |
| growing concern over climate change  | <ul style="list-style-type: none"> <li>• to increase the use of woody biomass for energy generation, e.g. processing residues and recovered wood</li> </ul>   | Wood mobilization increased<br>Better prices for timber   |
| an increasing need for sustainable materials and energy sources  | <ul style="list-style-type: none"> <li>• answering the increased demand of energy from biomass</li> <li>• to promote the use of a range of sustainable management systems including short rotation and coppice forestry in accordance with national law</li> </ul>  | Wood mobilization increased, better prices for timber<br>Innovation developed<br>Criteria for SFM implemented, forest certification and corporate social responsibility developed |
| timber sector has to overcome the effects of the financial and economic crises   | <ul style="list-style-type: none"> <li>• to increase the mobilization of wood</li> <li>• value added products that will help to overcome the timber sector crises is depending on the investment on highly integrated technologies such biorefineries</li> </ul>  | new trade patterns will be established<br>Highly integrated production chains for timber might develop  |
| timber output in Europe could slightly decline due to the climate-induced changes, but it will increase again in the second half of the century                          | <ul style="list-style-type: none"> <li>• Increase investments in forest sector</li> <li>• Need for adaptative forest management</li> </ul>  | Prices for timber will slightly increase<br>Wood mobilization increased   |
| increased global competition (yet affected by the  | <ul style="list-style-type: none"> <li>• to strengthen the competitiveness of the forest sector</li> </ul>  | Innovation developed in forests sector  |



|  |   |   |
|--|---|---|
| economic crisis)   | <ul style="list-style-type: none"> <li>• to increase investment in forest sector/industry</li> </ul>  |   |
| demographic evolution (ageing, urban migration) is an important driver of change; continuous changes in the customer/consumer base and the shifting expectations of other stakeholders | <ul style="list-style-type: none"> <li>• the need to identify and face the change of the social demand over forest utilization</li> <li>• need to involve local stakeholders/communities in forest management planning</li> </ul> | Diversified forest services and products<br>New modes of governance implemented |

*How far these trends are likely to become significant changes for forest sector in short run?*

In the light of the ACF, one cognitive process (the policy oriented learning) and two other non-cognitive processes (changes in the real world and turnover in the staff) are the main three sources of change. The EU forest related policies analyzed in this study show a strong perception of the policy makers about the changes in progress in the real world: climate change, globalization, increased supply of wood, demographic changes, increase perception of the biodiversity, etc. Therefore the ongoing changes in the real world (climate change, financial and economic crisis) will lead to policy changes.

As example, the EU (forest) related policies take for granted the fact that the climate change is ongoing and that there is a need of immediate and effective actions to cope with. Thus, climate alteration is then one important source of policy change, including in forest sector. As “soft” constitutional mechanisms, EU forest-related policies and FOREST EUROPE process may not be interpreted fully as being the “hierarchically superior jurisdiction” that would impose the policy change in the national governmental programmes related with forests. Moreover, the policy changes brought are still under the umbrella of “sustainable forest management concept” or are put under this concept, as far as the EU Forest Strategy and Forest Action plan specifically referred FOREST EUROPE process for the sustainability criteria, e.g for afforestation with energy purposes, for afforestation and the supply of other forest services. Otherwise, the changes are not radical compared with the present EU forest policies. The question appears then how far the EU forest-related policies, if implemented, will lead to significant changes in the forest sector in Europe.

The likelihood that the potential identified changes will happen in short run may be assessed as a cumulated effect of different trends. The changes are likely to happen if the same trend is sustained simultaneously by the current (policy) trends, by the socio-economic drivers, by cross-sectoral policies and forest policies. As example, extension of forest area in Europe is sustained by the combined effects of current trend (forest area is extending in Europe), current forest specific policies (protect and expand the forest area), climate change policies (forest area should be maintained for carbon sequestration) and energy policies (create plantations for energy purposes); the carbon market (EU ETS credits, joint implementation mechanism) and even by the land market in the context of the financial crisis (lack of trust in stock investments). Therefore it may be assessed that there is a very high probability that the forest area will continue to expand in Europe.

Table 3 is based on estimation of current trends and current socio-economic and policy-drivers. Of course, the evolution may be different if the scenarios are changed, e.g. considering that European forest sector is severely affected by the economic recession, forest dieback due to the climate change and forest protection policy failure.

**Table 3. Cumulated effects of different trends regarding forest sector in Europe.**

Sign (+) shows that the driver will reinforce the trend; sign (–) explain the limiting effect of the driver; sign (±) shows that the driver may have either negative of positive effect; and sign (?) shows that is uncertain to forecast the effect of the driver.

| Changes                        | Current trends   |                                   | Future   |   |   |   |                                     |   |
|--------------------------------|--|-----------------------------------|--|---|---|---|-------------------------------------|---|
|                                |  |                                   | Socio-economic drivers                                   |   | Cross-sectoral policies with impact of the forests sector |   | EU forest-related policies          |   |
| <b>Forest area</b>             | Forest area is increasing                                      | +                                 | Abandonment of agricultural lands                        | + | Agriculture   | + | Forest Europe                       | + |
|                                | Dieback, storms and fires, perturbations increase              | –                                 | Rural migration  | + | Climate change  | + | Illegal logging                     | + |
|                                | Shifting environmental conditions, positive or negative effect | ±                                 | Urban development  | ± | Energy  | + | EU Forest Strategy and Action Plan  | + |
|                                |  |                                   | Globalization  | ± | Environment   | ± |                                     |   |
|                                |  |                                   | Carbon markets   | + |   |   |                                     |   |
|                                |  | Concern about climate change      | +  |   |   |   |                                     |   |
|                                |  | Deeper crisis and extreme poverty | -  |   |   |   |                                     |   |
| <b>Timber harvesting</b>       | Slightly increasing  | +                                 | Concern about climate change                             | + | Environment   | ± | Forest Europe                       | + |
|                                | Diversified supply   | +                                 | Concern about local produced timber versus globalisation | + | Agriculture   | ± | Forest governance (illegal logging) | + |
|                                | Highly integrated wood production units                        | ?                                 | Higher prices  | + | Energy  | + | EU Forest Strategy and Action Plan  | + |
|                                |  |                                   | Forest owners interest                                   | ± | Climate change  | ± |                                     |   |
|                                |  |                                   | Russian log tax  | + |   |   |                                     |   |
| <b>Protected forests</b>       | Stable, slightly increasing                                    | ±                                 | Concern about climate change                             | + | Climate change  | + | Forest Europe                       | + |
|                                | Natural regeneration preferred, mixed stands                   | +                                 | Concern about biodiversity                               | + | Energy  | ± | EU Forest Strategy and Action Plan  | + |
|                                | Risk management  | +                                 | Forest certification trend                               | + | Environment   | + | Forest governance (Illegal logging) | + |
|                                |  |                                   | Carbon markets   | + |   |   |                                     |   |
| <b>New modes of governance</b> | Increasing implementation                                      | +                                 | Concern about biodiversity                               | + | Environment   | + | Forest Europe                       | + |
|                                | Voluntary instruments  | +                                 | New Green Deal   | + | Climate change  | + | EU Forest Strategy and Action Plan  | + |
|                                | Regulatory instruments   | +                                 | Forest certification                                     | + |   |   |                                     |   |
|                                | European level legal act on forests                            | ?                                 | Carbon markets   | + |   |   |                                     |   |

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## 6 Annex

### EU policies relevant for forest sector

Source: Annex to the Communication from the Commission to the Council and to the European Parliament on an EU Forest Action Plan (COM92006) 302 final)

Several EU policies, such as the common agricultural policy (CAP), environment, energy, enterprise and industry, and research affect sustainable forest management and the forest policies of the Member States. The Community objectives in these policy areas also provide an important reference point in the preparation of the EU Forest Action Plan.

#### 1. Rural development policy

The EU rural development policy, the second pillar of the CAP, seeks to establish a coherent and sustainable framework for the future of the rural areas. The multifunctionality of agriculture and forestry, i.e. its varied role over and above the production of foodstuffs and raw materials is one of the cornerstones of the Community rural development policy. This implies the recognition and encouragement of the range of services provided to society by farmers and forest owners. The Community also takes a multi-sectoral and integrated approach to the rural economy. Consequently, the new Rural Development Regulation provides a key tool in efforts to create growth and jobs in rural areas, while enhancing sustainable development and aiming to improve competitiveness, stimulate diversification, and improve environmental protection. The European Agricultural Rural Development Fund (EARDF) is one of the main Community instruments for the implementation of the Action Plan.

#### 2. Environment policy

The 6th Community Environment Action Programme seeks to promote the integration of environmental concerns in all Community policies and to contribute to the achievement of sustainable development. The key environmental priorities to be met by the Community are set by the Programme in the following areas: climate change; nature and biodiversity; environment and health, quality of life; natural resources and wastes. Since the adoption of the Kyoto Protocol, the EU and its Member States have taken the lead of international efforts to turn the constraining emission reduction targets into a working system. Concerning forests, a balance will need to be struck in the future between mitigation measures (removal of green-house gases from the atmosphere) and adaptation measures (adaptation of forests and forestry to a changed climate). The mitigation measures would have to be socially and environmentally acceptable, while the adaptation strategies would need to be given a higher profile, from both a biodiversity and a socio-economic perspective. Awareness about the potential of forests to simultaneously sequester substantial amounts of carbon and help create renewable alternatives to the consumption of fossil fuels and non-renewable materials, should be raised. As forest cover in the EU is continuously expanding, the potential for carbon sequestration and production of bioenergy feedstock and environmentally friendly raw materials is increasing. Some Member States have chosen to include forest management, under Article 3.4 of the Kyoto Protocol, in their emission reduction measures. In the area of biodiversity, the Commission has adopted in May 2006 the Communication “Halting the loss of biodiversity by 2010 – and beyond”, in which the Commission proposes four key policy areas for action to 2010 and beyond, and an action plan to meet the EU highlevel objectives to halt the loss of biodiversity by 2010, secure the recovery of habitats and natural systems and to contribute to significantly reducing rate of biodiversity loss worldwide by 2010.

### 3. Energy policy

The Community objectives in the area of energy policy call for the doubling of the renewable primary energy production in the EU with an increasing share of the electricity production from renewable energy sources, significant production of biofuels (5.75% by 2010 on energy basis) with emphasis on second generation of biofuels after 2008, and increased use of energy from renewable sources in general. In December 2005, the Commission adopted a Biomass Action Plan (BAP)<sup>41</sup> designed to increase the use of energy from forestry, agriculture, and waste materials. The BAP aims at reducing Europe's dependence on imported energy, cut greenhouse gas emissions, protect jobs in rural areas and extend the EU's technological leadership in these sectors. The BAP outlines measures in three sectors – heating, electricity, and transport – announcing more than 20 actions, most of them to be implemented from 2006 onwards. The BAP includes: reviews of: how fuel standards could be improved to encourage the use of biomass for transport, heating, and electricity generation; investment in research, in particular in making liquid fuels out of wood and waste materials; and a campaign to inform farmers and forest owners about energy crops.

### 4. Industrial policy

The Commission adopted in 1999 a Communication on the State of Competitiveness of the EU Forest-based and Related Industries. This Communication included a thorough analysis of the key features and competitiveness factors of forest-based industries and identified key challenges lying ahead. The Commission Communication has been subject of an impact evaluation, which *inter alia* concluded that the scope and depth of the preparatory work brought strong credibility to the Communication as well as a close and sustained cooperation between different industry stakeholders. The Commission is presently involved in the process of preparation of a Communication on the sustainable competitiveness of the EU forest-based industries, as it was indicated in the Commission Communication on Implementing the Community Lisbon Programme: A policy framework to strengthen EU manufacturing – towards a more integrated approach for industrial policy, adopted in October 2005.

### 5. Research and technological development policy

The programme 7th Research Framework Programme 2007–2013 (FP7) places greater emphasis than in the past on research relevant to the needs of European industry, to help it compete internationally and to develop its role as a world leader in certain sectors. FP7 is organised in four specific programmes, corresponding to four major objectives of European research policy: cooperation, ideas, people, and capacities. European Technology Platforms have been initiated to provide a framework for stakeholders, led by industry, to define research and development priorities, timeframes and action plans on a number of strategically important issues. In this context, The “Forest-Based Sector Technology Platform” aims at establishing and implementing the forest sector's research and development roadmap for the future.

### 6. Trade policy

The EU's trade policy seeks to secure prosperity, solidarity and security in Europe and around the globe. The EU has promoted the integration of sustainable development into international trade (for instance through its work on trade-related sustainability impact assessment) and in global efforts to curb unsustainable production and consumption patterns.

### 7. Regional policy

The European Regional Development Fund (ERDF) can provide financial support to the Member States for the implementation of specific actions of the EU Forest Action Plan under the condition



these actions are coherent to the regional priorities of development and the Community Strategic Guidelines.

#### 8. Plant health policy

In the field of plant health, forest reproductive material is covered by Council Directive No 2000/29 on protective measures against the introduction into the Community of organisms harmful to plants or products and against their spread within the Community<sup>51</sup>. The use of forest reproductive material is dealt with by Council Directive No 1999/105 on the marketing of forest reproductive material.