

B: Policies, Institutions and Instruments by Policy Area

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Key findings by indicator

B1. Land use and forest area

Information on land use and forest area reflects on various aspects of sustainable development, national forest policy and management in general. About 45 percent of the reporting countries aim to increase their forest area within the next decades. A few countries explicitly stated that forest expansion should not be allowed in areas with profitable agriculture or significant biodiversity. Sustainable forest and land use management was reported as the overall objective, aiming at a more balanced and sustainable use of multiple forest functions. Interest in short-rotation forestry was growing: about 25 percent of countries reported that they aimed to increase the area of short rotation crops but, for the most part, quantified targets were not defined. The main legal basis for land use and forest area was the forest law. A number of countries reported institutional changes affecting implementation and enforcement of forest policies and laws, relevant to land use and forest area management.

B2. Carbon balance

Policies on carbon balance addressed climate change mitigation and adaptation. Emphasis was put on carbon sequestration by forests and wood products and the adaptation of forests to climate change impacts. The vital role of forests in mitigating the effects of climate change was not only put forward in national climate and energy policies, but partly also in NFPs and forest laws. Sustainable forest management was often reported as a key element contributing to climate change mitigation. Most countries had established specialized

entities responsible for implementing regulations and programmes on climate change, renewable energy and energy efficiency. Newly developed and adopted national instruments were influenced by recent international climate change debates, agreements and targets.

B3. Health and vitality

Health and vitality policies encompassed general forest management and monitoring programmes as well as specific measures to prevent, mitigate and/or control the factors that contribute to forest decline. The overall reported objective was the maintenance of forest health and vitality and the various functions that vital forests provide. Most of the countries referred to rather common forest preservation and control measures, like against biotic and abiotic agents in general. Only a few countries highlighted particular instruments that make reference to invasive species, game, illegal logging, forests and soils, or forests and water. About half the countries underlined the importance of proper forest condition monitoring and the need for financial support mechanisms. A few countries emphasized the need to improve and conduct more forest research in order to gain more information and a better understanding of the complex factors that affect forest health and vitality, in particular climate change-related developments and impacts. Most of the EU Member States referred to EU financial support mechanisms as provided under the Common Agricultural Policy (CAP) or the LIFE+ programme or to the deliberations on the Green Paper on Forest Protection and Information: Preparing forests for Climate Change (COM(2010)66) in 2010.

B4. Production and use of wood

Policy objectives on the production and use of wood reflected current and future potential availability of timber, increasing demand for wood as a renewable and environmentally-friendly raw material or energy source, and the contribution that the forest and wood sector makes to economic sustainability. Most countries aimed to secure adequate domestic wood supplies for industry and, therefore, for wood mobilization. One-third of the responding countries aimed to increase annual harvests, and two-thirds aimed to increase the use of wood for energy. A few countries mentioned elements of uncertainty, e.g. the on-going financial crisis and economic downturn, changes in imports of wood or unplanned felling resulting from wind throw and consequent damage. The term 'innovation' was frequently mentioned in relation, for example, to new technology, products, services or marketing strategies to promote the use of wood and strengthen the sustainable development of the forest sector in general. In addition to the forest law, several countries referred to bioenergy, climate change or public procurement-related regulations. Furthermore, demand-side measures were mentioned, such as certification and public procurement rules, renewable energy targets or building standards as a means of promoting the use of wood.

B5. Production and use of non-wood goods and services

There was increased recognition of the value and contribution of non-wood goods (NWGs) and forest ecosystem services to economic viability; recreational use, in particular, was highlighted. Most countries aimed to maintain the diversity of goods and services that forests provide and to balance the multiple demands placed on forests. Generally, countries indicated strengthened efforts towards better promoting and marketing NWGs and forest ecosystem services. Several countries underlined the need for improved assessments and methods to allow the value of NWGs and services to be better determined. To better manage various forest goods and services, several countries support cross-sectoral governance and a multi-stakeholder dialogue. Ministries directly responsible for forest and/or environment were most frequently mentioned as the main responsible institutions. However, some countries specified other ministries, such as tourism or economy. Within the EU, NWGs and services have been addressed, for example, in the EU Forest Action Plan 2007-2009.

B6. Biodiversity

Compared to 2007, a significant number of countries reported new and more ambitious targets for forest biodiversity. Forest management practices in Europe increasingly promoted biodiversity, notably through the use of natural regeneration and mixed-species stands. Measures were also being taken to encourage higher proportions of deadwood in forests. The area of protected forests in Europe had expanded, e.g. through Natura 2000 or other protected areas. Although several countries did quantify targets for protected forest areas, the term 'protection' remained

vague in most cases. Information whether, for example, forest management practice was included or not, was usually lacking. Several countries highlighted integrated management, or the concept of SFM, as the overall approach to better contribute to forest biodiversity conservation and management. Countries with important forest sectors highlighted programmes to promote the conservation and use of forest genetic resources. While the institutional frameworks have remained stable, the legal frameworks related to biodiversity have been subject to amendment in several countries and financial instruments seem to be of higher importance than before. In particular, private forest owners were asking for adequate incentives or voluntary compensation schemes to conserve biodiversity.

B7. Protective forests

Forests fulfil important protective functions for soils, water resources, infrastructure, managed natural resources or, directly, humans. Compared to 2007, there has been a slight trend towards more emphasis on protecting soils. Twenty-four countries reported soil protection as a main policy objective, with particular focus on preventing and controlling soil erosion and degradation. Some respondents highlighted policies on water management and protection and, in particular, the role of forests in regulating natural water cycles, maintaining water reservoirs and preventing flooding. In addition, ten countries indicated actions on protecting biological diversity, managing landscape integrity and mitigating climate change effects. Few countries emphasized forest fire management, game and wildlife management or tourism and recreation. In addition to the forest law, a number of countries referred to NFPs as the main relevant policy framework to regulate protective services.

B8. Economic viability

Economic viability is a key pillar of SFM and of particular importance for maintaining forests and their multiple benefits for society, contributing to sustainable development and to human livelihood especially in rural areas (Vienna Resolution 2). The main objectives reported were to strengthen economic viability, increase profitability and enhance cost-efficiency of wood production. Several countries focused on technological innovation and related research and development, enhancement of competitiveness as well as increased raw material supply, in particular for renewable energy. A few countries referred to the multifunctional role of forests and the need for increased valuation and marketing of NWGs and services. In addition, especially in eastern Europe, countries mentioned objectives on strengthening forest owner cooperation and enhancing education and training. The most frequently used instrument was financial support. Most of the EU Member States referred to the EU Rural Development funds 2007-2013 as the main means for enhancing forest sector economic viability. In addition, reference was made to the Communication on Innovative and Sustainable Forest-based Industries in the EU (COM(2008)113).

B9. Employment (including health and safety)

Employment in the forest and forest-based sector is an important indicator for the social benefits generated by forests, especially for sustainable rural development. At the same time, having an adequate workforce, not only in terms of numbers but also skills and qualifications, with high occupational and health standards, is critical to achieving SFM. Improving forest labour skills and raising qualifications as well as enhancing the forest sector contribution to rural development were widely emphasized. Compared with the situation in 2007, aspects of social inclusion of forest workers seemed to be more in focus. About 40 percent of the responding countries mentioned specific regulatory instruments, such as labour protection laws, health and safety regulations, or various programmes to increase employment and improve working conditions, employee welfare and work capacity. Observed objectives on increasing employment appeared to be in potential conflict with the general trend of rationalization, especially the restructuring of state forest enterprises, with workers either laid off or forest operations outsourced to private contractors. Several countries indicated changes to their regulatory frameworks to comply with international standards, such as EU Directives and/or the International Labour Organization (ILO).

B10. Public awareness and participation

Raising awareness in the society of the multi-functional role of forests, particularly drawing attention to their protective and socio-economic functions, and the contribution of forests to quality of life in general was a widely declared target. Common means to achieve this in most countries were increased and improved public relations, knowledge exchange and multi-stakeholder participation. Accelerating efforts to improve institutional cooperation and communication, as well as to ensure transparency in forest management and decision making have been indicated. Compared to 2007, more countries highlighted public and multi-stakeholder participation as a crucial development in forest policy, management and decision making processes. In addition, a few countries specified the objective to ensure and/or improve transparency as a principal of good forest governance. Increased attention was also paid to forest pedagogic activities to educate children and raise awareness about forests among young generations. About one-third of the responding countries reported changes in the characteristics of their regulatory frameworks. Since 2007, a few countries have established special entities coordinating and implementing public awareness and participation strategies for the forest sector.

B11. Research, training and education

More than half the responding countries mentioned adjustments to research, training and education programmes, often resulting in institutional reform. Main reasons were the common orientation towards more interdisciplinary education and international reform processes like the Bologna process of modernization of content and practice in higher education. Although interdisciplinary education and training was a common goal, the different disciplines

and topics to be included varied. General objectives were further demand-oriented training and education and more practice-relevant research – taking into account global developments as well as the specific requirements of the forest and timber industry sector. Even though research in Europe relied heavily upon national/sub-national research programmes and policies, the European Commission through its three joint European research initiatives (COST, EUREKA and the EU Framework Programme) played a crucial role in the coordination and definition of research priorities across EU Member States.

B12. Cultural and spiritual values

Forests have many cultural and spiritual values for societies and individuals, notably for religious, aesthetic and historical reasons. Although frequently intangible and/or personal, these values are often manifested in particular sites, which are increasingly being identified, listed and protected. A common goal among FOREST EUROPE signatories was to maintain and preserve the international and national heritage of cultural and historical sites and monuments. Several countries highlighted the integration of cultural and spiritual forest values into different land uses, such as forestry, recreation and tourism, as well as the enhancement of their contribution to rural development as a main policy objective. Cultural and spiritual forest values were mainly regulated by specific laws on cultural heritage and nature protection. National forest laws were gaining more relevance. However, the majority of the responding countries reported no change in their respective legal frameworks. Public funds (like national and/or EU funds) were considered highly important by at least a few countries. In many countries, the protection of cultural and spiritual forest values was coordinated between different state authorities, like ministries and/or executive agencies responsible for culture, education, environment, spatial planning, public works and tourism, as well as state forest services and/or enterprises.

Indicator B1. Land use and forest area

Forty-five percent of the responding countries aimed to further increase their forest area.

Increasing the area of forest was a main policy objective for 16 of the 35 countries (45 percent) that reported. This was particularly true of Eastern European countries, such as the Czech Republic, Hungary, Latvia, Lithuania, Poland, Romania, Russian Federation, Slovakia, and the former Yugoslav Republic of Macedonia, but it applied also to some countries with low forest cover, like Denmark, Ireland, the Netherlands, and the United Kingdom. In most cases, countries expressed only a general ambition to enlarge their forest area or to expand forest land over the next decades, without setting specific targets. However, about 30 percent of countries reported clear targets, with precise thresholds and timeframes defined (see Table 60). Afforestation and reforestation measures were often implemented on small scaled, unmanaged abandoned agricultural land (Sweden), on areas with high sensitivity for soil erosion (Slovenia) or on burnt areas (Cyprus).

Forty-two percent of the responding countries reported no changes in their policy objectives on land use and forest area since the last Ministerial Conference in 2007.

A few countries indicated the desire not to increase forest area because of specific country or local conditions. Montenegro, for example, stated that forest land should not be expanded in certain areas to allow profitable agriculture or to preserve biodiversity of other ecosystem lands (like of natural grass or shrub lands). Switzerland reported that in some mountain regions afforestation measures were kept to a minimum and natural regeneration was combated, in order to preserve specific cultural landscapes or maintain traditional agricultural use and land.

Countries, like Slovenia, with a high percentage of existing forest cover (60 percent), intended to maintain but not to increase their forest area, mainly because high coverage already had been achieved and remaining land with its different use and structure had to be sustained. Finland, for example, reported that, in view of its existing forest cover (72 percent), it did not consider it necessary to set a specific national target for forest area. Several countries mentioned sustainable forest management and land use as an important overall objective, aiming to achieve sustainable use of various forest functions. Often, protective and recreational functions as well as the relevance of forest for biodiversity were highlighted. In terms of forest area changes, Slovenia pointed out the issue of reducing fragmentation.

Some country-specific objectives for land use and forest area were:

- Bulgaria - increasing multi-purpose use by amending the national forest act in terms of contractual (renting, leasing) or other land use rights.
- Croatia - improving forest management in deserted karst regions, and include forests affected by landmines under regular management plans (both objectives reflect particular regional forest land conditions and historical background).
- Estonia - selling public forest under the land reform process.

There was growing interest in short rotation forestry. Of the 35 reporting countries, nine (just over 25 percent) proposed to increase short rotation forestry in the next several years, mainly for energy purposes (Hungary, Croatia and Italy) or to compensate for a shortfall in roundwood production (Spain). In general, no specific policy objectives or quantified targets have been reported, mainly because short rotation forestry was not part of the national or sub-national forest policy but of the agricultural and/or renewable energy policy.

A few countries pointed out that short rotation forestry was not an issue for them or was considered to be a negligible small-scale activity (Cyprus, Estonia, Finland, Montenegro, Norway and Slovenia) or that, in the case of Latvia, specific national policy objectives had not yet been formulated.

The main legal basis for land use and forest area was the forest law.

Nineteen countries referred to an explicit national forest act, code or law, whereas others referred to other types of laws, regulations or programmes to regulate land use and forest area. In several countries, land use was regulated by general territorial land use and land use planning laws. Poland and Greece were the only countries which reported that, in addition to the forest law, the constitution was the legal basis. Fourteen countries reported either no major change, or none since the Ministerial Conference of 2007.

To adapt their national situations to changes taking place in global and European economic and political developments, several countries (like Bulgaria, Hungary, Greece and Romania) adopted new forest acts (see Table 61 and Indicator A3). These have led to changes, particularly in forest land use, rights, ownership structures,

Italy: Growing interest in short rotation forestry, but stagnation in increase observed

Italy has observed a growing interest in short rotation forestry, especially for bio-energy purposes. However, the new National Forest Inventory from 2007 shows a reduced rate of establishment of poplar plantations, with only 66 000 ha planted between 1993 and 2005. This decrease in poplar planting is explained mainly by increasing competition of low-priced imports of poplar wood from other countries, especially China and by the increasing interest in using agricultural land to grow more profitable crops, such as soya. Moreover, the requirement of the EU Rural Development Regulation (1698/2005) for a gap of two years between harvesting and replanting a plantation, has limited the potential of the short rotation forestry sector.

forest definition and the definition and enhancement of multiple forest uses and sustainable forest management. Greece, for example, adopted a new forest law and changed its definition of forest and other wooded lands in 2010, in reaction to the devastating forest fires in 2007, so that more land could be brought under the protection of forest legislation and rapid land use change could be prevented. In addition, the Greek Constitution prohibits land use change when the forest is destroyed. Romania underlined the importance of amended forest law and stricter regulatory mechanisms, to regulate or prohibit change of land use from forest, and the enforcement of compensations, like through afforestation.

Some countries, while not referring explicitly to the forest act, highlighted other relevant programmes and legislation that regulate forest land, such as the NFPs (Portugal, Slovakia and Spain); a regional forest strategy (the United Kingdom); a spatial planning act (the Netherlands, the former Yugoslav Republic of Macedonia); a national action plan on afforestation and reforestation (Turkey); or so-called land use and building acts (Finland and Norway).

A number of countries reported institutional changes in the implementation and enforcement of national and/or regional forest policies and laws, linked to land use and forest area.

Table 60: Countries which reported clearly defined targets for increasing forest area

Denmark	To expand the forest area by 20-25 percent within the next 80 to 100 years
Hungary	To increase forest cover to 27 percent by 2040, with an annual afforestation rate of 15 000 ha
Ireland	To increase forest cover to 17 percent by 2030
Netherlands	To increase forest area by 400 000 ha by 2020
Poland	To expand the forest area by up to 30 percent by 2010, and up to 33 percent by 2050
Romania	To increase forest area by 2 million ha by 2035
Russian Federation	To increase forest area by 180 000 ha within next 3 years
Spain	To increase forest area by 45 000 ha between 2008 and 2012
MK	To increase forest area by 70 780 ha by 2020
United Kingdom (Scotland)	To expand the forest area by afforestation at an annual rate of 10 000 ha

Table 61: Main legal basis for land use and forest policies

Forest law, but no changes since 2006/2007	Austria, Belgium, Cyprus, Czech Republic, Ireland, Latvia, Norway, Poland, Sweden, Switzerland, Ukraine
Forest law, with amendments since 2007	Russian Federation (2007), Croatia (2008), Germany (2010)
New forest law, adopted since 2007	Bulgaria (2008), Romania (2008), Hungary (2009), Greece (2010)
New forest law, forthcoming	Montenegro (new act proposed in 2010)

The main institutions with legal authority to implement legislation at the national level, affecting forest land use and related policies, were the Ministries of Agriculture and Environment. At the sub-national or local level, they included forest departments, state forest authorities and regional administrations. In about 30 percent of countries, forest area and general forest matters fell within the competency of ministries related to agriculture, forestry, rural development or natural resources. Ministries for the Environment were mainly responsible for environmental or nature conservation related matters, such as the designation and management of protected forest areas (Czech Republic). Main institutions implementing general land use legislation were national or regional land use planning departments or agencies, including national or regional cadastre services. A number of countries reported institutional and administrative changes regarding the implementation and enforcement of national and/or regional forest policies and laws linked to land use and forest area (see Table 62). See also Indicator A2.

A few countries referred to explicit national public forest agencies, which were responsible for implementing and monitoring national regulations and programmes related to land use and forest area: the Forest Extension Service in Croatia; the State Forest Service in Italy; the

Swedish Forest Agency in Sweden; and the Forestry Commission in the United Kingdom.

Legal regulations and financial support programmes were the most frequently used instruments to maintain and enhance forest area.

Countries reported a wide range of instruments relating to forest land use. The main legal instruments that ensured implementation of objectives were legal restrictions and procedures for changing land use, such as forest acts, management regulations, afforestation/reforestation regulations and general land use acts. Several countries emphasized the importance of economic instruments, in particular, subsidies, taxation schemes or public funds to maintain and enhance forest area and support forest management planning. EU Member States often referred to the Rural Development Regulation (1698/2005/EC) and the European Agricultural Fund for Rural Development (EAFRD), providing financial support for afforestation and reforestation measures. The most commonly reported instruments that provide information on land use and forest area were national forest inventories and monitoring programmes, forest management plans and guidelines. There have been no changes since 2007 in about 35 percent of the reporting countries.

Table 62: Country examples with institutional changes, respective legal responsibility on land use and forest area

Bulgaria	In 2007, the National Forestry Board at the Ministry of Agriculture and Forests became part of the State Forestry Agency at the Council of Ministers. In 2009, the State Forestry Agency became the Executive Forest Agency at the Ministry of Agriculture and Food.
Croatia	Within the reorganization process of the Croatian Government in 2007, the Forestry Department was transferred from the Ministry of Agriculture, Forestry and Water Management to the newly established Ministry of Regional Development, Forestry and Water Management.
Denmark	A new Danish Ministry responsible for Climate and Energy was established in 2007, taking over responsibilities on forest's contribution to climate change mitigation as well as adaptation to climate change (formerly falling under the responsibility for Ministry of Environment). From 1 January 2007, Denmark moved from a three-level to a two-level governance structure. County councils were abolished, moving key responsibilities on nature protection and forest to central government and local governments.
Romania	The Forest Public Authority moved from the Ministry of Agriculture, Forests and Rural Development to the Ministry of Environment and Forests in December 2009. The Ministry of Environment and Forests is now the legal authority for land use and forests.
Russian Federation	In 2008, the Federal Agency of Forestry was removed from the control of the Ministry of Natural Resources to the Ministry of Agriculture. In 2010, the Russian Agency of Forestry was finally placed under the direct command of the Russian Federation Government. All forest districts are subordinated to local authorities.
Spain	New ministerial structure. The Ministry of Agriculture and the Ministry of Environment were merged, to form the Ministry of Environment, Rural Development and Marine. The former General Directorate for Biodiversity has been re-named the Directorate General of the Environment and Forestry Policy.

Indicator B2. Carbon balance

Increasing carbon sequestration by forests and adapting forests to climate change were the most frequently mentioned objectives.

In 2007, objectives were focused primarily on promoting bio-energy and reducing greenhouse gas (GHG) emissions. In 2010, in line with international commitments (see also Indicator A3) and debates on the mitigation of and adaptation to climate change, many countries reported a stronger focus on carbon sequestration by forests and adapting forests to climate change (see Figure 94). In addition, several countries mentioned the importance of increasing the use of wood as a raw material and a source of renewable energy (Austria, Bulgaria, Estonia, Finland, France, Hungary, Lithuania, Latvia, Montenegro, Norway and Sweden) and reducing national GHG emissions (Austria, Bulgaria, Croatia, Cyprus, France, Hungary, Italy, Latvia, Poland, Portugal, Switzerland and the former Yugoslav Republic of Macedonia). EU Member States consistently reported policy objectives that were in line with the three principal objectives of the EU Climate and Energy Package 2008⁴, which are to achieve by 2020: a) 20 percent reduction of GHG emissions, below 1990 levels, b) 20 percent of

EU energy production and consumption from renewable energy sources, and c) 20 percent reduction in primary energy use, by improving energy efficiency.

Sustainable forest management, as defined by the FOREST EUROPE process, plays a vital role in maintaining healthy and resilient forests. Sustainable forest management was reported as a key concept in mitigating climate change by several countries (Bulgaria, Croatia, Estonia, Latvia, Lithuania, Montenegro, Norway and Turkey). Both the Czech Republic and Ukraine saw the improvement of forest monitoring and national information systems as a key aim to get more reliable information about carbon stocks held in forests. Few EU Member States reported that the recent (2010) EU Green Paper, Forest Protection and Information in the EU: preparing forests for climate change⁵, as a follow-up to the White Paper on Adapting to climate change⁶, was expected to have a strong bearing on national forest policies and information systems developed by EU Member States in the coming years. Close to a half of the 36 responding countries aimed to increase or maintain carbon stocks in forests, mainly through afforestation (see Table 63).

Figure 94: Main policy objectives on carbon balance (number of countries)

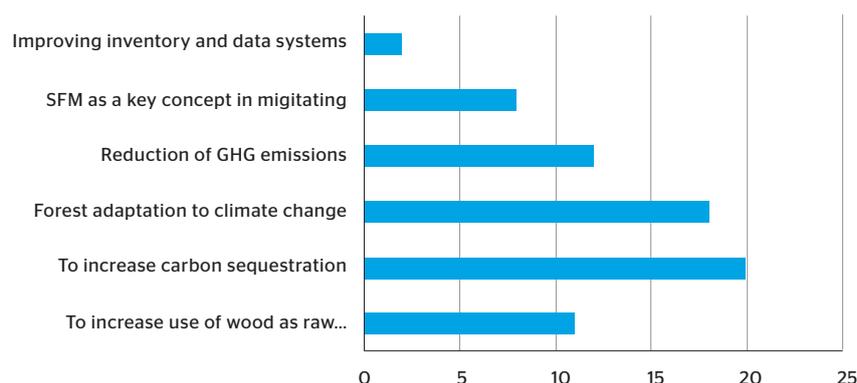


Table 63: Country examples of policy objectives on sequestration and storage of carbon by forests

Belgium	Stabilization of the carbon stock in forests; production of long-term wood products.
Czech Republic	To optimize carbon cycling in soil horizons, growing stocks, and wood products, and to improve forest monitoring to obtain more reliable information about carbon stocks.
Finland	Carbon sequestration (growing stock and soil) target: at least 10-20 million tonnes of CO ₂ .
Hungary	To maintain or increase carbon sequestration by afforestation and improved management methods.
Russian Federation	Carbon accumulation by specially created forest plantations amounting to 28 500 ha.
Slovenia	Carbon sequestration target: at least 1.3 million tonnes of CO ₂ annually.
Turkey	To enhance forests carbon stocks: 181 million tonnes of CO ₂ sequestered within 5 years (2008-2012), as supported by the National Afforestation and Rehabilitation Plan.

⁴ In January 2008, the European Commission published the EU Climate Change and Energy Package which was agreed by the European Parliament and Council in December 2008 and became law in June 2009. The package includes: a) EU Emissions Trading System (EU ETS) Directive, b) Greenhouse Gas Effort Sharing Decision, c) Renewables Directive setting out binding targets for the EU Member States, and d) Directive on the Geological Storage of Carbon Dioxide.

⁵ European Commission, COM (2010)66 final. Green paper on Forest Protection and Information in the EU: Preparing forests for climate change. See at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:0066:FIN:EN:PDF>

⁶ European Commission, COM(2009) 147 final. White Paper on Adapting to climate change: towards a European framework for action. See at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2009:0147:FIN:EN:PDF>

Table 64: Country examples of policy objectives related to forests adaptation to climate change

Belgium	Improving biodiversity at all levels, as a means to improve ecosystem resilience; avoiding soil and game damage; silvicultural practices; managing water resources; monitoring and adopting crisis management plans (for storms, fires and biotic damage).
Germany	To reduce the vulnerability and to maintain and improve the adaptability of natural, social and economic systems.
Ireland	To specify and use species in afforestation and reforestation that are well adapted to current sites and climate and which will have better resilience to a changing climate.
Norway	Measures for adaptation to climate change were under development. Measures for sustainable forest management were to be the basis for a strategy for forest adaptation to climate change.
Slovenia	Measures for forest adaptation to climate change: conservation of high growing stocks, favouring native species that are adapted to various sites, ensuring natural regeneration, prevention of forest fires, continuous cover of forest soils with vegetation, and prevention of litter gathering, prompt harvesting of wood from forests damaged by natural disasters to reduce the incidence of bark beetle outbreaks.
Spain	The National Forest Plan took into account the adaptability and resilience of the Spanish forests to climate change.
Ukraine	Assessment of forest vulnerability to climate change and the development of adaptation strategy in forestry.

Table 65: Country examples with institutional changes since 2007

Belgium	Climate Agency (Walloon) established, in order to coordinate and implement the UNFCCC and the Kyoto Protocol, as well as national air quality policy.
Croatia	The Department for Climate and Ozone Layer Protection established in 2009.
Denmark	A new Danish Ministry responsible for Climate and Energy was established in 2007, taking over responsibilities on forests' contribution to climate change mitigation as well as adaptation to climate change (formerly falling under the responsibility for Ministry of Environment).
Norway	The Climate and Pollution Agency as an executive institution established, with emphasis on climate change, including forests and climate change.
Switzerland	Climate Division at the Swiss Federal Office for the Environment established, to manage and implement the Kyoto Protocol as well as the national climate policy.
Turkey	The Coordination Board on Climate Change established, in order to fulfil UNFCCC and Kyoto Protocol requirements.
United Kingdom	Department for Energy and Climate Change established, responsible for the United Kingdom GHG inventory, including Land Use, Land Use Change and Forestry (LULUCF). ⁷

Results from UNFCCC Conference of Parties (COP) in Copenhagen (2009) and Cancun (2010)

Copenhagen, 2009

In the run-up to Copenhagen, the potential to reduce emissions from deforestation and forest degradation (known as REDD and REDD+) received considerable attention (see Copenhagen Accords). REDD+ goes beyond deforestation and forest degradation, and includes the role of conservation, sustainable management of forests and enhancement of forest carbon stocks. The principal question has been whether to finance REDD from public funds or by providing carbon credits. "Positive incentives" need to be provided for such actions and this can be achieved by the "immediate establishment of a mechanism including REDD/REDD+, to enable the mobilization of financial resources from developed countries".

Cancun, 2010

The main outcomes from COP16 have collectively been called "The Cancun Agreements". The Decision that is relevant to REDD, forest conservation and sustainable forest management in developing countries is included in the Outcome of the Work of the Ad-hoc Working Group on long-term Cooperative Action under the Convention. All the parties to the Convention "should collectively aim to slow, halt and reverse forest cover and carbon loss, according to national circumstances" and "to find effective ways to reduce the human pressure on forests that results in greenhouse gas emissions, including actions to address drivers of deforestation". Developing country Parties are encouraged to contribute to mitigation actions in the forest sector by undertaking the following activities: a) reducing emissions from deforestation; b) reducing emissions from forest degradation; c) conservation of forest carbon stocks; d) sustainable management of forest; e) enhancement of forest carbon stocks. Developing country Parties are also encouraged to develop a) national strategies or action plans, b) a national forest reference emission level/s, and c) a robust and transparent national forest monitoring system.

Many countries (16 out of 36 reporting)⁸ have drawn attention to the need to develop measures and programmes for the adaptation of forests to changing climatic conditions and the increased frequency of extreme weather events such as heat waves, droughts, storms, fires and floods (see Table 64). Other countries highlighted recent international climate negotiations which led to national debates and processes on developing specific policies for forest adaptation to climate change (e.g. Hungary, Luxembourg and the Netherlands).

Carbon balance policies were mainly supported by specific laws and regulations related to climate change, renewable energy sources and energy efficiency.

In almost all FOREST EUROPE signatory countries, the legal basis for forests and their relevance for carbon balance was a set of laws and regulations, which related mainly to climate change, renewable energy and energy efficiency. Half of the reporting countries (18 out of 36 reporting) referred to changes in their regulatory frameworks, which had been influenced by recent developments in international and European climate change policy.

Austria, Finland, Ireland and the United Kingdom reported that their current climate and energy policies include specific forest sector measures, in recognition of the key role of forests in mitigating and adapting to climate change. Finland's National Climate and Energy Strategy 2008 includes a National Strategy for Adaptation to Climate Change, outlining adaptation measures for 15 different sectors, including the forest sector. Similarly, Ireland, in its National Climate Change Strategy for 2008-2012, has defined a target for three million tonnes CO₂ to be sequestered annually by forest carbon sinks. In April 2010, Austria adopted a new Energy Strategy and a new National Renewable Energy Action Plan, which specified measures for mobilizing forest biomass harvest, to meet the targets set in the EU Climate Change and Energy Package 2008.

The vital role of forests in reducing the impact of GHG emissions through carbon sequestration and storage and adapting to climate change was emphasized not only in national climate and energy strategies and policies but also in NFPs (e.g. Czech Republic, Slovakia and Slovenia) and forest laws (e.g. Croatia and Romania). The new NFP of the Czech Republic, for instance, takes into account

the challenges of climate change and outlines measures for carbon sequestration by forests and forest adaptation to climate change. The Forestry Act of Croatia (amended in 2008) recognizes the importance of forest carbon sequestration in mitigating climate change and outlines specific measures to increase carbon sequestration by forests. Croatia also established a National System for Calculation and Reporting on Anthropogenic Emissions of Greenhouse Gases by Sources and Sinks, based on the Regulation on Monitoring Greenhouse Gas Emissions in the Republic of Croatia (OGI/07), which includes forests. In this context, Italy adopted a Decree on the establishment of the National Register of forest carbon sinks in 2008.

Specialized entities on climate and carbon-related policies have been established in many countries.

Several countries reported the establishment, since 2007, of new national specialized coordination and executive authorities/entities (such as climate agencies, national coordination boards, climate divisions or departments) (see Table 65), with an emphasis on climate change in general, as well as on forests and climate change. The most commonly cited reason was the urgent need to better coordinate and implement national and international climate and air quality policies. The European Commission established a new Directorate General (DG) on Climate Action in February 2010.

Most countries referred to legal/regulatory instruments, often in combination with economic and/or informational means to support national policies on carbon balance.

Most of the common financial mechanisms, used between 2007 and 2010 to support carbon and climate change-related policies, included transfer payments mainly for afforestation and regeneration, renewable energy and energy efficiency measures. Several EU Member States referred to the EU co-financing of forestry measures as part of national Rural Development Programmes (see also A4 Financial instruments). Bulgaria, Croatia and France, on the other hand, established national funds for financing investment projects in the field of renewable energy and energy efficiency. Only three countries (Germany, Montenegro and Norway) reported the increased use and improvement of informational instruments, such as forest monitoring to get better information on carbon sink and source effects.

⁷ The current EU GHG reduction commitment does not include emissions and removals of CO₂ in the LULUCF sector. In case no international agreement is reached on LULUCF, the EU Effort Sharing Decision (ESD) requires the Commission to assess possible modalities for including emissions and removals related to LULUCF in the EU's GHG reduction commitment by mid 2011.

⁸ Including the European Commission.

Indicator B3. Health and vitality

Several countries highlighted the importance of general forest protection measures, in particular against pests and diseases, but also improved forest condition monitoring.

Half the responding countries (17 out of 34) reported no change to their objectives. Almost all countries had as their overall principal objective the maintenance of forest health and vitality and the multiple benefits that forests provide. Most countries clearly distinguished between objectives about forest management and silvicultural measures and objectives related to forest condition monitoring and information. Some countries wished to undertake more and better forest research, to have a better understanding of forest health and vitality complexities. Belgium pointed out the need to improve communication and information flow among scientists, forest managers and forest owners, in order to develop more effective prevention and mitigation measures, particularly in cases when quick response mechanisms are necessary, like in the situation of large-scale storm damage or aggressive pests and diseases outbreaks.

About half of reporting countries expressed the importance of continuing to undertake and improve forest condition monitoring. However, most of the countries referred to common forest preservation and control measures, specifically on pests and diseases (15 out of 34 reporting) and/or biotic and abiotic agents in general (6 out of 34 reporting), rather than on any specific threat (see Figure 95). Only three countries (Hungary, Sweden and the Former Yugoslav Republic of Macedonia) highlighted climate change as an issue - referring mainly to the resilience and adaptability of forests to climate change. Five countries (Austria, Cyprus, Germany, Italy and the Netherlands) cited a need for reductions in air pollution and improved monitoring. Seven countries, mostly from the Mediterranean and Eastern Europe (Cyprus, Italy, Lithuania, Portugal, the Russian Federation, Turkey and Ukraine) underlined the importance of proper forest fire control and mitigation measures.

Protecting forest soils to maintain their productive potential and the vitality of forests was mentioned only by Austria, Estonia and Lithuania. Still with reference to forest soils, the Netherlands referred also to the relationship among healthy forests, soils and water. It is worth pointing out, however, that many more countries (than in 2007) reported the importance of protecting forest soils as part of ecosystem services (see indicator B7 Protective services).

Only the Czech Republic underlined the requirement to achieve a balance between forest and game. Two countries addressed the issue of invasive species (Estonia and Slovakia) and two others addressed illegal logging (Montenegro and Ukraine). There was no mention of objectives related to storms, drought, snow or the damage resulting from forest operations and/or farm livestock (see Indicator 2.4 Forest damage).

In addition to the Forestry Acts, a large variety of legal frameworks regulated forest health and vitality issues.

The forest law was specified as the principal regulating instrument by eleven countries. Compared to 2007, most of the countries that reported also referred to various specific regulations on prevention, mitigation and/or forest health control measures. Several of the EU Member States provided links to specific EU regulations or programmes, in particular to the Financial Instrument for the Environment LIFE+ (1614/2007/EC), the Plant Health Directive (2000/29/EC)⁹ and the Directive on importing wood packaging material into the EU (2004/102/EC)¹⁰.

In most countries, forest health and vitality policy was based on general forest protection (Bulgaria, Hungary and the Russian Federation) or plant health (sanitary and phytosanitary) regulations (Bulgaria, Lithuania and Slovakia). A few countries also referred to specific regulations, such as the ordinance against the introduction and spread of harmful organisms in Croatia, the Forest Insect and Fungi Damage Prevention Act in Finland, the national action plan on combating illegal logging in Montenegro and the national prevention plan on pine wood nematodes in Spain.

Only Germany highlighted air quality and emission control acts, and only Switzerland referred to its hunting act. NFPs (Austria and Czech Republic) and general nature or environmental laws (Slovakia, Switzerland and the former Yugoslav Republic of Macedonia), providing an overall framework for regulation, seemed to be of minor relevance in terms of forest protection.

In most countries forest health and vitality matters were controlled by specialized institutions/departments.

Though half of the reporting countries (17 out of 34) indicated no major change in institutional structure, a few countries (see Table 66) reported changes related mainly to the integration of competent institutional bodies/units into existing bodies.

Most countries had specialized bodies that deal with forest health at all levels of forest administration. At the ministerial level, France had the Department of Forest Health under the Ministry of Food, Agriculture and Fisheries, while in Turkey, the Department of Forest Protection and Fire operated under the General Directorate of Forestry of the Ministry of Environment and Forestry. In addition to the ministries, state forest services, specific institutions/bodies, expert panels and the forest owner itself may have responsibility for coordinating or providing administrative and/or information support on forest health-related issues. Among such bodies listed by countries were the Plant Protection Agency in Hungary, the Team of Specialists on Forest Protection in Poland, the Forest Protection Service in Slovakia and the Forest Protection Association in Ukraine. A very few countries highlighted the role that national or regional forest research institutions play, particularly in respect to providing better data and information about the health

Figure 95: Addressed threats and topics related to forest health and vitality

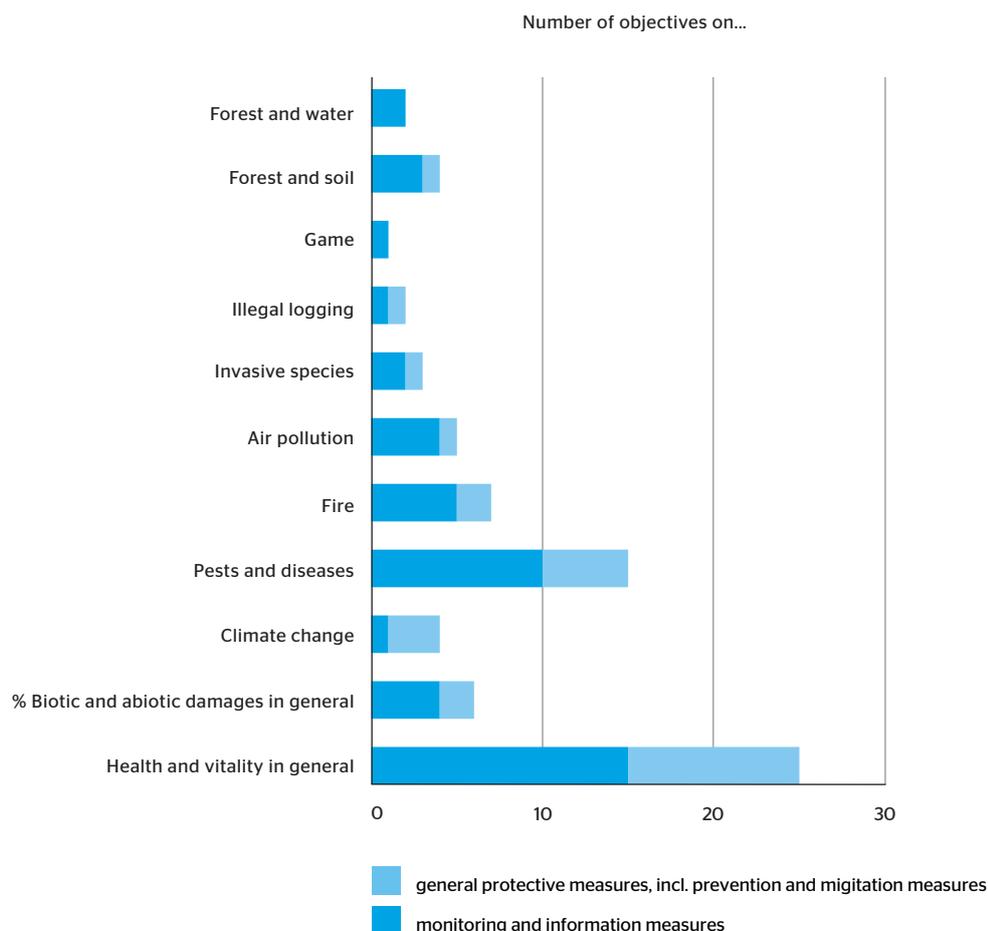


Table 66: Countries reporting changes in the institutional framework

Germany	The former "Biologische Bundesanstalt (BBA)" has been merged with other national research institutes. Since 2008, it has become part of the Federal Research Centre for Cultivated Plants, Julius-Kühn-Institute (JKI). The JKI provides information and advice to the federal government, in particular to the Ministry of Food, Agriculture and Consumer Protection (BMELV). It evaluates the resistance of plants to pathogens and abiotic stress, analyses plant protection products and contributes to national and international standards on plant health.
Hungary	The Plant Protection Agency was integrated into the Central Agriculture Agency in 2007, in particular to improve the cooperation between forest and plant protection authorities within the same organization.
Portugal	New coordination structures were adopted at regional/forest management unit level for improved implementation of forest fire control and mitigation measures.
Spain	In 2008, the Ministry for Environment and Rural and Marine Affairs was created, by merging the former Ministry for Environment and the Ministry for Agriculture. As a result, coordination between the national plant health service and the national forest health service has been improved.

⁹ The Council Directive 2000/29/EC lays out protective measures against the introduction into the Community of organisms harmful to plants or plant products and against their spread within the Community.

¹⁰ The Commission Directive 2004/102/EC and the amended Council Directive 2005/15/EC introduced new requirements for the import of wood packaging material and for dunnage into the EU.

and vitality of forest ecosystems. Two countries, Belgium and Finland, referred to the national food security authority as the responsible body for the control of general plant health and plant trade and imports, including timber.

Monitoring was the most frequently reported instrument.

Half of the 34 reporting countries¹¹ (17 out of 34) underlined the importance of proper forest condition monitoring systems, backed up with adequate financial support. EU Member States, for example, often referred to the EU Financial Instrument for the Environment LIFE+ and the current FutMon project¹², which provided financial support for forest condition monitoring on Level I and II plots in 2009 and 2010¹³. However, many EU Member States pointed to potential shortfalls in long-term financial support for forest condition monitoring and for maintaining long-term time series. A few countries referred, in this respect, to recent debates and EU communications, such

as the Green Paper on Forest Protection and Information (COM(2010)66) (please see box for more information).

Most countries employed a broad range of regulatory, financial and information instruments (see Table 67). Finance for these various mitigation, prevention and control measures came from both national and European Union sources. EU Member States often made reference to the EU Rural Development Regulation (1257/1999/EC and 1698/2005/EC) as the main instrument providing financial support for, e.g., reforestation or prevention measures. Austria, the Netherlands and Poland, for example, highlighted research and education as one of the relevant instruments. Poland in particular cited the importance of good education of local forest managers, who monitor the state and development of forest and propose and implement necessary measures to maintain a healthy and vital forest.

European Commission documents and studies related to EU forest protection policy, published between 2007 and 2010	
	<ul style="list-style-type: none"> • Green Paper on Forest Protection and Information: Preparing forests for Climate Change (COM(2010)66), Council Conclusions CC 10973/10 of 11th June 2010. • EU policy options for the protection of forests against harmful impacts (2009) • Mid-term evaluation of the implementation of the EU Forest Action Plan (2009) • Impacts of climate change on European forests and options for adaptation (2008) • Feasibility study on means of combating forest dieback in the European Union (2007)

Table 67: Country examples highlighting different forest health and vitality related instruments in place

Croatia	The Forest Fire Register, operative since January 2009, is harmonized with the European Forest Fire Information System; and the Register about damage to forest ecosystems in the Republic of Croatia, operative since 2007, is harmonized with ICP Forests standards. Preparation of the new ordinance on monitoring forest damages was in progress in 2011.
Hungary	Financial support for reconstruction of forests was introduced in 2008 after abiotic damage, but there were no subsidies for prevention of biotic damage and reconstruction after damage. Careful reconsideration of the European and the national forest condition monitoring system (see also Green paper of the EU on climate change and monitoring) was deemed to be urgent and the maintenance and further development of the monitoring system with more attention to climate change effects was considered necessary.
Ireland	The favourable health status of Ireland's forests was recognized under the EU Plant Health Directive (Council Directive 2000/29/EC), under which Ireland was granted Protected Zone Status for the forest pests and diseases and for which national surveys were conducted annually.
Romania	There were no changes in political instruments related to forest health and vitality. The Forest Code contained several provisions on maintaining forest health and vitality. In addition, specific "Norms and Technical Guidelines on Forest Protection" had been developed.
Russian Federation	The Forest Fire Monitoring controlled all the territory covered by the Forest Fund in the Russian Federation by means of ground, aerial photographs, and satellites assessments.
Turkey	Within the scope of International Co-operative Programme on Assessment and Monitoring of Air Pollution Effects on Forests, operating under the UNECE Convention on Long-range Transboundary Air Pollution, a project titled "Forest Ecosystems Monitoring Level I and Level II Programmes in Turkey" started in 2006, in collaboration between Ministry of Environment and Forestry (MEF)-Directorate General of Forestry (GDF) and MEF-Research and Development Department.
United Kingdom	The United Kingdom has expanded and continued a programme of containment and eradication of <i>Phytophthora ramorum</i> and <i>P. kernoviae</i> , sometimes referred to as "Sudden Oak Death". In response, the Forestry Commission, with private sector support, has set up a Bio-security Programme, which aims to "Preserve the health and vitality of our forests, trees and woodlands through strategies, which exclude, detect, and respond to, existing and new pests and pathogens of trees, whether of native or exotic origin." The Programme was to be directed by the Bio-security Programme Board, which would include representatives from the Forestry Commission, Forest Research and the forestry and wood-using sectors.

Indicator B4. Production and use of wood
Two-thirds of the reporting countries had targets for increasing the use of wood for energy, and one-third of countries reported that they aimed to increase annual wood harvests.

Several countries reported that a main current objective was to undertake measures to enhance the productivity of forests and the efficiency of their utilization, while others emphasized maintaining or increasing the diversity of uses (e.g. NWGs). One-third of countries (13) reported the aim to increase both the harvests and the rate of utilization of the annual increment, whereas 16 countries defined the target for harvests to remain the same. Five countries reported that they had no quantified target for harvests (Czech Republic, Germany, Italy, Romania and Spain).

A clearly visible trend in the 2010 reports compared with those from 2007 is the increased use of wood to meet renewable energy targets (see Figure 96).

Almost two-thirds of the reporting countries (23 out of 36) aimed to increase their use of wood for energy. Only Belgium and Latvia reported that they aimed to keep the use of wood for energy at present levels. There were 17 countries that stated targets to increase wood's contribution to meeting energy needs with 12 of them set for the time horizon 2020 (see Tables 68 and 69). Furthermore, 13 countries reported targets for increasing use of wood for construction (see Figure 96)¹⁴. In addition, some countries indicated targets for other uses, such as furniture (Slovakia and Croatia) other wood products (Ireland) and non-timber products (Bulgaria).

In addition to the increased use of wood for energy, countries also reported the aim of securing the domestic supply of wood for industries and increasing wood mobilization (e.g. Austria and Norway). But there were also reports on elements of uncertainty, e.g. due to financial crisis, economic downturn, changes in imports of wood (Latvia) or incidental fellings caused by wind throws

Figure 96: Countries reporting targets for use of wood

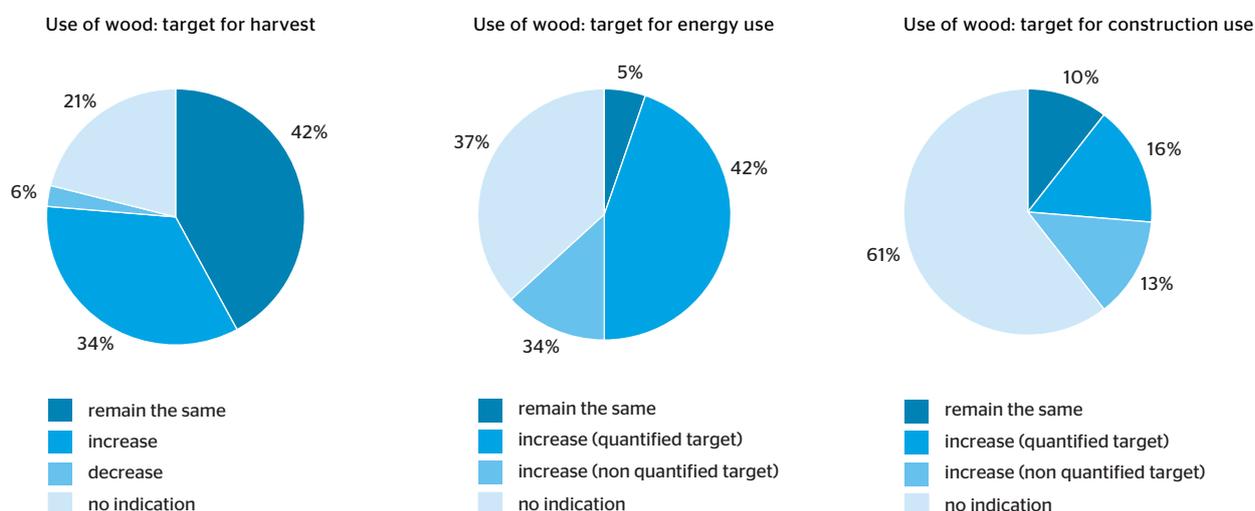


Table 68: Country targets for increased energy consumption from wood, expressed as % or respective energy units

Croatia	by 26 PJ (petajoule) by 2020
Czech Republic	by 25 percent by 2020
Denmark	60 percent by 2020
France	by 40 percent (+4 mil TOE), tonne Oil Equivalent by 2020
Italy	by 20 percent by 2020
Norway	by 14 twh (Terra watt hours) by 2020
Slovakia	by 35 percent. In the period 2010-2013 consumption of energy from wood shall increase approximately 5-8 percent per year first of all from harvesting residues.

Table 69: Country targets for increased energy consumption from wood, in m³ or tonnes

Finland	by 13.5 million m3 per year until 2020
Hungary	by 1.0-1.5 million m3 per year (of which half shall be based on energy plantations and not forests) until 2020
Ireland	by 1.9 million tonnes by 2020
Romania	by 2 million m3 by 2020
Switzerland	by 1.5 million m3 by 2020
MK	by 955 000 m3 per year by 2010
United Kingdom	by 2-3 million m3 within five years

¹¹ Hungary, Poland, Switzerland, the Russian Federation, Finland, Latvia, Sweden, Belgium, France, Turkey, Italy, Germany, Bulgaria, Croatia, Cyprus, Greece, the former Yugoslav Republic of Macedonia.

¹² "Further Development and Implementation of an EU-level Forest Monitoring System" project

¹³ FutMon is being carried out by 38 beneficiaries from nearly all EU Member States. The project has a total budget of EUR 34.44 million. Under the funding of LIFE+ the EU contributes EUR 16.14 million to the total budget. The remaining budget is provided by national authorities of the respective beneficiaries.

¹⁴ Quantified objectives: CH, FI, DE, MC, SL, UK; non-quantified objectives: AT, BE, BG, CY, FR, LU, SE

and consequent damage (Czech Republic). For example, in Latvia, the Amendment to the Decision of Cabinet of Ministers "Maximum amount of timber harvest 2006-2010" (2008) increased harvesting from state-owned forests in the years 2009 and 2010 to stabilize wood supplies from domestic sources.

The main legal basis or policy document for the production and use of wood was the forest law but, in addition, several countries referred to specific regulations dealing with bioenergy, climate change and public procurement.

As in 2007, almost all reporting countries cited their forest law as the main legal and operational basis for policies on the production and use of wood: in particular, for harvesting, thinning and regeneration. These policies were supported by NFPs (e.g. Czech Republic, Slovakia, Slovenia and Turkey), forest sector development plans (e.g. Ireland and the United Kingdom) or other forest policy documents. With regard to roundwood production and use, changes in regulations for roundwood sale were reported. In Lithuania, a rule change by the Ministry of Environment (2009) allowed for the sale of wood remaining on site after harvesting, to be sold in the same way as roundwood, and for a trade in fuel wood to develop. Slovenia also reported a specific objective to establish a market for low quality wood and wood residues for energy production.

Compared to 2007, more countries (Croatia, Estonia, Ireland, Norway and Ukraine) referred to climate change and bioenergy-related legislation. Estonia and Ireland, for instance, mentioned bioenergy action plans specifically, in relation to the EU RES Directive¹⁵ and related national Action Plans developed in 2010. The United Kingdom (e.g. England and Scotland) referred explicitly to climate change acts. Demand-side measures, such as public procurement rules and targets, were mentioned by Belgium, Latvia, Luxembourg, the Netherlands and Slovenia. Austria referred to building regulations and Croatia to the harmonization of standards.

The majority of countries reported no change in institutional structures.

Though most countries reported no major change, there were some administrative/re-structuring changes reported, especially in Central and Eastern Europe (Bulgaria, Croatia, Hungary, Slovakia and Slovenia).

Slovakia created a Section of forest management and wood processing as a common unit at the Ministry of Agriculture, and Hungary established a new Ministry of Rural Development and a new state asset management holding company. Furthermore, two other countries, Finland and Portugal, reported administrative and institutional changes related to their responsible ministries. Portugal, for example, has established a unit more focused on industry-related clusters. The United Kingdom reported that an expected decrease in resources would affect the organizations in the future.

The most important instruments were forest management and development plans, but several countries reported demand-side measures.

As in 2007, most countries, in particular those in Central and Eastern Europe, referred to forest management and/or regional development plans as the main instruments to secure sustainable use of wood. Compared to 2007, however, several more countries (including Belgium, France, Germany, Latvia, the Netherlands, Switzerland and Slovenia) reported measures to promote the use of wood by creating demand through public procurement (or green public procurement), certification schemes, as well as building standards and regulations. The term "Innovation" (which may include new or improved technologies, products, services and marketing strategies aimed at strengthening the sustainable development of the forest sector and promoting the use of wood) was frequently mentioned.

The EU Rural Development Programmes 2007-2013 were mentioned (e.g. by Cyprus, Czech Republic, Poland, Portugal, Slovenia and the United Kingdom)¹⁶ as providing both financial and informational means, and supporting activities such as funding equipment or forest owners' advisory services.

Austria: Praxisplan Waldwirtschaft

In 2008, the Federal Ministry of Agriculture, Forestry, Environment and Water Management presented a free software tool for small forest owners to support sustainable forest management ("Praxisplan Waldwirtschaft"). The software allows forest owners to draw up basic management plans. It is hoped that this will help to encourage active forest management and motivate forest owners to increase their production of wood.

Switzerland: Wood promotion

To implement the objectives of the National Forest Programme, the Swiss Federal Office of the Environment (FOEN) formulated a wood resource policy in 2008, which is coordinated with other relevant sectoral policies (e.g. energy policy, regional development policy). This policy defines the direction to be taken by federal policy in relation to wood promotion on completion of the "Wood 21" promotion programme. Under this programme, based on the national forest law, Art. 31 (research/innovations) and 38a (financial support to promotion of wood), a wood action plan was drawn up in 2009. The main focus of the action plan is the ecologically and economically effective use of wood. The plan prioritizes the cascaded use of wood to achieve more efficient wood utilization.

Belgium: Example of promoting timber and timber procurement policies

In Belgium, the Flemish Government recently updated its timber procurement policy. FSC¹⁶ and PEFC¹⁷ are now both accepted as sustainable wood certificates, and the Flemish authorities (regional, provincial and local) are asking for sustainable wood in their public contracts. Forest groupings (cooperative structures between forest owners and managers), as well as FSC group certification are promoted by providing a "bonus" in financial incentives for forest operations. Furthermore, certified products are recommended for public procurement policies at national, regional and local levels.

Indicator B5. Production and use of non-wood goods and services

There was a steadily growing interest in the promotion and better marketing of non-wood goods and forest ecosystem services, especially in the use of forests for recreation.

The overall objective reported by most countries was to maintain the diversity of forest goods and services and to achieve balance among multiple uses of forest. More than half the responding countries (21 out of 35) reported that promoting the use of forests for recreation was among the principal goals for non-wood goods (NWGs) and services. Other stated goals (for 17 out of 35 reporting countries) were to enhance the variety and production and improve management for NWGs and services (see Figure 97). Finland, for example, planned to promote entrepreneurship based on ecotourism as well as new business sectors based on the processing of NWGs. In the former Yugoslav Republic of Macedonia, the national forest strategy clearly prescribed the promotion and support of small and medium enterprises based on non-wood forest products and services, with a focus on providing new job opportunities and income for rural households. A general observation, highlighted by several countries, was the need for better forest products marketing and increased recognition of multiple forest ecosystem services and values.

Several countries, including the Czech Republic, Estonia, Slovakia and the former Yugoslav Republic of Macedonia, underlined the need for improved approaches

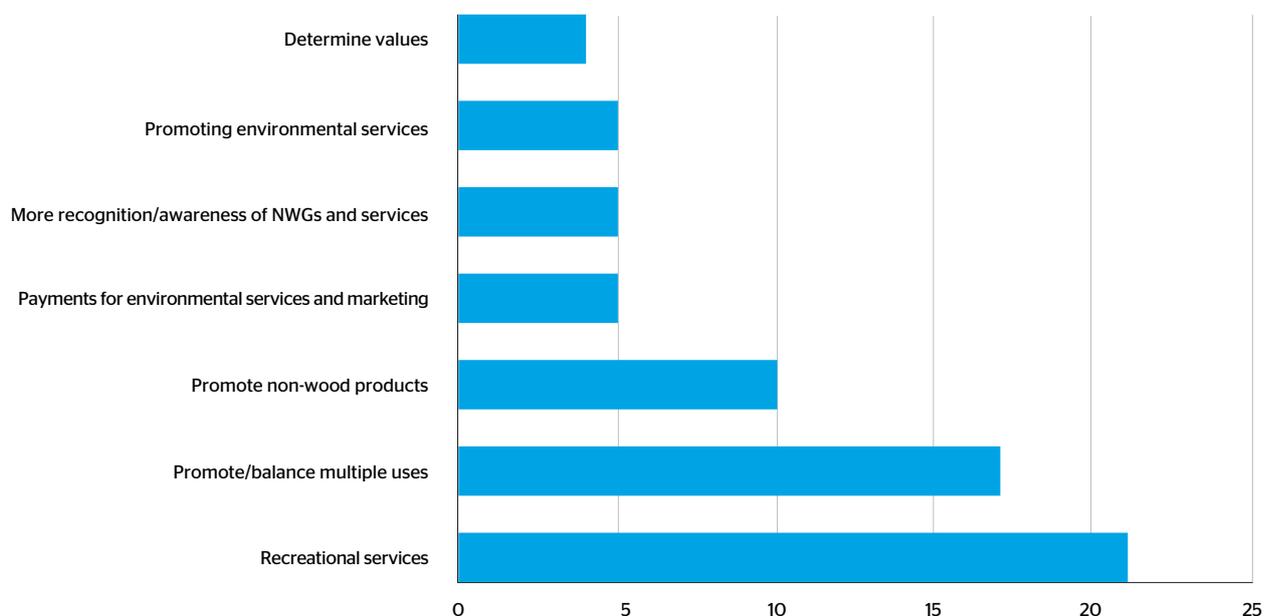
and methods to better assess the value of NWGs and services. Czech Republic, Slovakia and the Russian Federation reported that they were actively supporting the development of new approaches like payments for environmental services. Compared with 2007, more countries reported on NWGs and services specifically also under indicator B8 Economic viability (e.g. Austria, Bulgaria, Croatia, Cyprus and Czech Republic) - indicating a growing awareness of the economic importance of NWGs and services.

Non-wood goods and services were regulated mainly by the forest law.

One-third of countries reported that their forest law was the main regulatory instrument for NWGs. To a lesser extent, countries mentioned other legislation as having relevance, in particular acts about nature conservation and environmental protection. Some countries (Austria, Cyprus, Czech Republic, Finland, Slovakia, Slovenia and Turkey) mentioned their NFPs or forest strategy, as well as rural development programmes, as further regulating instruments. Two countries (Estonia and the Russian Federation) referred to game or hunting regulations. Estonia, for example, approved a new development plan for hunting for 2008-2013 and the Russian Federation adopted a new law on hunting in 2009.

A few countries highlighted specific regulations, such as those on mushrooms and berries (Italy, the Russian Federation and Slovenia) or on outdoor recreation

Figure 97: Main policy objectives for production and use of non-wood goods and services (number of countries)



¹⁵ Directive of the European Parliament and of the Council on the promotion of the use of energy from renewable sources Directive 2009/28/EC

¹⁶ Forest Stewardship Council <http://www.fsc.org/>

¹⁷ Programme for the Endorsement of Forest Certification <http://www.pefc.org/>

¹⁸ For further information please see DG AGRI report on forestry measures in 2007-2013 Rural Development Plans Report on implementation of Forestry Measures under the Rural Development Regulation 1698/2005/EC for the period 2007-2013 - Executive Summary: http://ec.europa.eu/agriculture/fore/publi/index_en.htm

(Finland, Norway and Slovenia). Several countries (9 out of 35 reporting) referred to free access rights to forests, often regulated by the national forest law or other laws, like the National Civil Code in Switzerland. In some countries, specific restrictions or amendments to forest access rights were described (see Table 70 and also Indicator B12 Cultural and Spiritual values).

To manage various forest goods and services, several countries support cross-sectoral governance and a multi-stakeholder dialogue.

Along with the growing recognition of the value and importance of different goods and services from forests and of the key role of stakeholder groups, there was a growing awareness of the need for a more cross-sectoral and multi-level (national, regional and local) approach to forest management. Ministries with direct responsibility for forests were frequently mentioned in relation to managing forest goods and services (examples are ministries for agriculture and rural development, for forests and for environment). However, some countries specified other ministries, such as the Ministry for Commerce, Tourism, Interior and Town Planning and Housing in Cyprus, the Ministry for Tourism in Ireland and the Ministry for Economy in the Netherlands.

A few countries (7 out of 38 reporting) underlined the relevance of sub-national and local administrative level authorities to manage the production and use of NWGs and services on the ground: in Switzerland, the cantonal forest service and, in Ukraine, the regional forest management service. Some countries mentioned also the role of private forest owners, municipalities or national/regional tourist associations.

In the Russian Federation, the new Forest Codex requests and clearly supports the participation of citizens and public associations in forest management decisions. In Switzerland, forest owners' associations have increasingly tried to change legal provisions in recent years, allowing compensation (transfer) payments for NWGs and services, like close to nature management and other

biodiversity-related provisions, such as increasing the amount of deadwood in forests.

Most countries referred to financial or informational instruments to support and coordinate the marketing of non-wood goods and services.

About one-third of countries reported the use of financial instruments (usually subsidies or specific tax reductions) to promote the provision of NWGs and services. Several countries highlighted financial support to maintain or build infrastructure for forest recreation.

Most countries used various informational means to increase knowledge or to raise awareness about multiple forest functions, goods and ecosystem services. Latvia and Lithuania, for example, included NWGs and services as a new indicator in their national forest inventory. Austria organized a national symposium in 2010 to address the topic "Sport and Recreation in Forests and Nature", and Switzerland highlighted vocational training courses for forest owners on how to raise revenue by the sale of non-wood products.

The EU Forest Action Plan 2007-2008 gives emphasis to NWGs and services. To support the implementation of its Key Action 3, "exchange and assess experiences on the valuation and marketing of non-wood forest goods and services", the Standing Forestry Committee set up an ad hoc Working Group in June 2007 and published a final report in 2008²⁰. In addition, the European Commission has financed the following studies: a) Economic value of groundwater and biodiversity in European forests (conducted by IUCN and CEPF, 2009)²¹ and b) Development and Marketing of Non-Market Forest Products and Services (conducted by EFIMED, 2009)²². Furthermore, the Standing Forestry Committee adopted and published an opinion paper in 2009 on the valuation and financing methods for non-marketed forest goods and services²³. The Green Paper on Forest Protection and Information - Preparing forests for Climate Change (COM(2010)66), published in 2010, gives additional support to the topic of NWGs and services.

Table 70: Countries reporting about restrictions or amendments to forest access rights

Hungary	Access restrictions partly given due to danger from forest operations or hunting.
Slovenia	National Decree on prohibition of the use of motor vehicles in natural environment.
Switzerland	The public has free access to pick mushrooms (up to certain quantities defined by the cantons).
Sweden	The right of public access is amended by the phrase "Do not disturb, do not destroy".

Ireland: Promotion of recreational activities in forests

The Forest Service in Ireland employs various instruments to promote recreation as a key non-timber function, which includes sports and outdoor activities, public health, environmental education, and related enterprises and tourism. For example, the Neighbour Wood Scheme provides financial support to local authorities, private landowners and others to develop attractive local woodland amenities in and around villages and towns, specifically for public access and enjoyment (currently 10 forest parks and more than 150 recreation sites established). In 2006, the *Comhairle na Tuaithe*¹⁹, a countryside forum, comprising farming organizations, recreational users and state bodies, published a National Countryside Recreation Strategy. It sets out the broad principles under which sustainable countryside recreation should be managed over the coming five years.

Indicator B6. Biodiversity

Increasing efforts were being made to conserve forest biodiversity, in particular through protected forest areas.

Compared to 2007, a significant number of countries reported new and more ambitious targets related to forest biodiversity. While eight of 37 countries reported no change to their main policy objectives on forest biodiversity, several countries have developed new objectives and related instruments, or have further developed existing policies.

Protected forest areas (Natura 2000 as well as strictly protected areas) have been increased or will be increased in several countries. In Central and Eastern Europe, Bulgaria and Romania, for instance, have put measures in place to identify stands with high conservation value together with the designation of Natura 2000 areas. Several countries have reported their efforts to include biodiversity conservation in sustainable forest management practice by, for example, aiming for greater natural species composition and diversity in their forests, or by integrating islands of old wood/dead wood in managed forest (reported Belgium and Latvia).

Some countries (Croatia, France and Romania) reported specific programmes to improve ecological connectivity between protected areas. Programmes to control invasive species were seldom mentioned, except by Austria. Countries with important forestry sectors (such as Austria, Spain and Sweden) frequently mentioned specific strategies focussing on the conservation and enhancement of forest genetic diversity, including gene banks.

In most cases, objectives were rather general (like to stop the loss of biodiversity) or instrument-oriented targets (like to increase protected forest areas). No country reported quantified forest biodiversity targets that related directly to specific biodiversity indicators. A significant number of countries (18 out of 37 reporting) emphasized a general (political) goal to increase the protected forest area, with about one-third (12 out of 37 reporting) setting quantified goals for this objective (see Table 71).

Several countries had quantified targets for protected forest area but, in most cases, the term 'protection' remained vague: information about forest management practice and whether or not, for instance, wood production might be allowed in protected areas, was missing.

Table 71: Countries with clearly defined targets to increase their protected forest areas

Albania	To increase the network of protected forest areas by 25 percent of the total forest area by 2020.
Belgium	To increase forest protected areas by 7 500 ha by 2011.
Denmark	To increase forest protected area by 2 000 ha from 2004 area.
Finland	To increase forest protected areas by 188 000-282 000 ha by 2016.
France	To increase forest protected areas by 350 000 ha (general objective not specific to forest areas) ha by 2020.
Germany	To protect 5 percent of forest area by 2020 (objective still under discussion).
Luxembourg	Target to protect 5 percent of public forests as a total forest reserve.
Montenegro	To increase protected areas (including forest areas) by 11 percent (150 000 ha) of national territory by 2020.
Netherlands	To increase forest protected areas by 400 000 ha by 2020.
Russian Federation	To increase forest protected area by 752 000 ha over the period 2007-2010.
MK	To increase forest protected areas by 298 566 ha by 2020.
Ukraine	To increase forest protected area by 20 percent by 2015.

¹⁹ <http://www.pobail.ie/en/RuralDevelopment/NationalRuralDevelopment/ComhairlenaTuaithe/>

²⁰ http://ec.europa.eu/agriculture/fore/publi/sfc_wgi_final_report_112008_en.pdf

²¹ http://ec.europa.eu/environment/forests/pdf/grounwater_report.pdf

²² http://ec.europa.eu/agriculture/analysis/external/forest_products/index_en.htm

²³ http://ec.europa.eu/agriculture/fore/opinion_on_valution_en.pdf

While the institutional (organizational) framework remained as in 2007, the legal framework had been subject to change in several countries.

In the majority of countries (22 out of 37 reporting), the institutional framework remained stable compared to the last reporting in 2007. In most cases, responsibility for forest biodiversity was either assigned to ministries or agencies of agriculture/forestry/natural resources or the environment. In some cases, responsibilities were shared.

There has been reorganization in 10 of 37 countries, some minor in their impact while others have been more fundamental in nature. Most restructuring took place in Central and Eastern Europe. In Poland, for example, a new General Directorate for Environmental Protection has now centralized biodiversity-related activities which formerly were shared between the Ministry of Environment and regional governance authorities.

Most countries reported that amendments had taken place to the legal framework between 2007 and 2010. Some reports explicitly mentioned new and additional requirements about forest biodiversity. For instance Lithuania and Poland reported new acts on information about the environment, environmental protection, social participation in protection of the environment and environmental impact assessment.

Biodiversity conservation was mostly addressed by regulatory instruments, and voluntary financing schemes grew in importance.

Regulatory instruments on forest biodiversity included laws on forest and nature conservation; biodiversity strategies (e.g., the German National Biodiversity Strategy); the implementation of the Habitats and Birds Directives; environmental and forest planning (e.g. forest inventories and management plans in protected areas) or action plans e.g. on invasive species. This focus on regulatory instruments remained unchanged from the last reporting period.

Most EU Member States referred to EU-funded programmes, such as measures under the Rural

Development regulation or LIFE+. Financial incentives related mainly to establishing protected areas in EU Member States, first and foremost Natura 2000 areas.

In Ireland, for instance, a Forest and Rural Environment Protection Scheme provided incentives for forest owners to conserve biodiversity. The Nordic countries like Finland, Norway and Sweden had developed voluntary protection programmes for private forest owners, such as the Forest Biodiversity Programme for Southern Finland METSO 2008–2016. In Switzerland, the National Financial Adjustment mechanism provided the basis for addressing biodiversity protection measures in a federal system. In France, tax exemptions on non-used agricultural land in areas with high importance for biodiversity conservation were provided. A few countries, particularly from Central and Eastern Europe, mentioned biodiversity-related updates in their NFPs. The Russian Federation reported the establishment of a Russian National Forest Stewardship Council Standard, to strengthen forest biodiversity activity. Moreover, a variety of informational instruments, including habitat mapping and Red Lists, were implemented across Europe.

While forest biodiversity conservation was, as a rule, addressed predominately by regulatory (and voluntary/informational) policy approaches, financial instruments seemed to be of greater importance than before. In addition, regional differences could be seen in the 'mode' by which forest biodiversity was addressed by instruments. Most Eastern and Southern European countries focused almost exclusively on regulatory policy instruments, whereas voluntary and financial instruments tended to be dominant in the Nordic countries (Finland, Norway and Sweden). EU biodiversity, agriculture and rural development policies had led, however, to a convergence of approaches: for instance, Natura 2000 as a basically regulatory policy approach had to be implemented by EU Member States - and was often implemented by candidate and accession countries, too.

Ecological networks in Europe (EEA, 2007)

- Pan-European Ecological Network (PEEN): aims to enhance ecological connectivity across Europe by promoting synergies between nature policies, land use planning and rural and urban development
- Natura 2000: a network of Special Protection Areas for birds and Special Areas of Conservation for other species and habitats, established by European Union legislation and involving up to 20 percent of the European Union's land area
- Emerald Network: initiated under the Convention on the Conservation of European Wildlife and Natural Habitats (also known as the Bern Convention), extends a common approach to the designation and management of protected areas to European countries (non-European Union) not covered by Natura 2000, as well as to Africa
- European Green Belt: is an IUCN-driven initiative, aiming to create an ecological network that runs from the Barents to the Black Sea, spanning 23 countries and some of the most important habitats for biodiversity and distinct biogeographical regions in Europe.

Indicator B7. Protective services

While the main focus was on soil and water protection, as in 2007, the protection of other environmental services, like biodiversity, was gaining in importance.

Nearly half of the 34 countries reporting on protective services stated that no significant changes had occurred in their main policy objectives for forest protective services. Water protection and flood prevention were highlighted by most countries (18 out of 34 reporting) with 11 out of 34 countries placing emphasis on the protection of human lives and health, as well as infrastructure and the prevention of natural hazards in general.

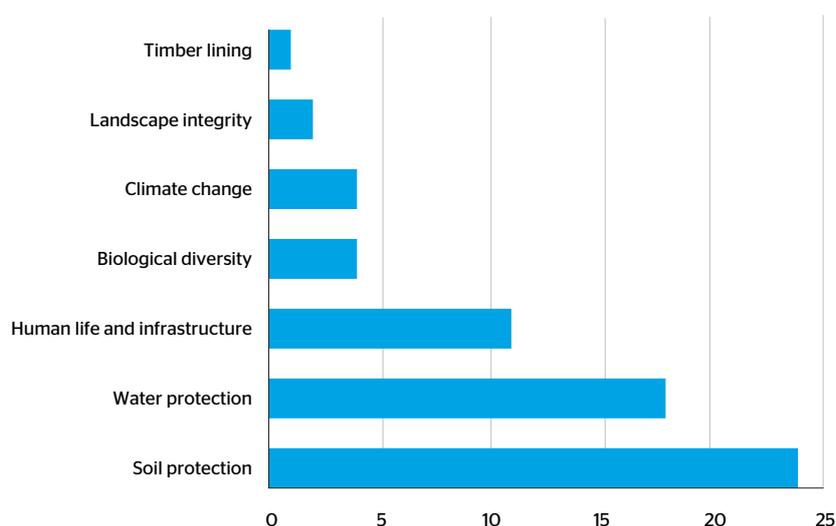
However, compared to 2007, a slight trend towards greater emphasis on protecting soils could be observed. Many FOREST EUROPE countries (24 out of 34 reporting) reported soil protection as a main policy objective, in particular preventing and controlling soil erosion and degradation, sand erosion and drifting, landslide and mudflows, rock falls and avalanches (see Figure 98).

Ten out of thirty-four countries reported significant changes in their policy objectives, to take account of new environmental issues and cross-sectoral complexities, as these examples show:

- protecting biodiversity (Croatia, Hungary, Slovakia and the Russian Federation)
- mitigating the effects of climate change (Croatia, Czech Republic, Slovenia and the United Kingdom)
- landscape integrity (Hungary and Turkey)
- protecting the treeline, between forest and unwooded land (Finland)

France, Poland, Portugal, Slovakia and Turkey emphasized forest fire management. Hungary and Turkey cited game and wildlife management, and Croatia referred to tourism and recreation as relevant for maintaining forest protective functions.

Figure 98: Issues considered in main policy objectives related to forest protective services for the period 2007-2010 (number of countries)



Public benefits from forest protective functions

Protective forests are used primarily for the protection of land, water, settlements, buildings and other property. Public benefits from forest protective functions for example are:

- protection of soil from water and wind erosion;
- balancing water supply and preventing floods;
- purification of water through percolation into forest soil and the supply of underground streams and water sources with drinking water;
- creation of favourable influence on climate and agricultural activities;
- purification of polluted air;
- creation of favourable conditions for human health;
- mitigating the «greenhouse effect» through carbon sequestration and oxygen enrichment of the environment.

Protective forest services were mainly regulated by the forest law. National Forest Programmes as well as EU legislation and support programmes were gaining more relevance.

In most countries, forest law regulated forest protective services. The following countries in Eastern Europe placed their main emphasis on forest regulatory frameworks as a basis for securing protective forest functions: Bulgaria, Croatia, Latvia, Poland, Romania, the Russian Federation and the former Yugoslav Republic of Macedonia. Supplementing forest law, NFPs were cited as a main relevant policy framework by Austria, Cyprus, Czech Republic, Lithuania, Slovakia, Slovenia, Sweden and Switzerland.

Finland, Italy, Montenegro and the United Kingdom highlighted nature and/or environmental protection as well as rural development and plant health regulations. Three EU Member States (Ireland, Luxembourg and Portugal) referred to specific EU legislation and policy initiatives as the main policy and legal framework for maintaining forest protective services: the EU Water Framework Directive (2000/60/EC), the EU Green Paper on Forest Protection and Communication (COM (2010)66 final), and the EU approach on reinforcing the EU Disaster Response Capacity (COM (2008) 130 final).

Almost half of FOREST EUROPE countries (16 out of 34 reporting) stated that there had been no significant change in their legal/ regulatory frameworks, whereas several countries (13 out of 34 reporting) and the European Commission reported significant changes. Eastern European countries, including Bulgaria, Croatia, Russian Federation, the former Yugoslav Republic of Macedonia and Turkey, together with Ireland and Finland amended their forest laws or other specific legislation to cover the provision of forest protective services, particularly biodiversity conservation and water protection. Other countries, Austria for example, adopted soft law mechanisms and signed a new declaration on mountain forests. The Czech Republic and Slovenia incorporated objectives on forest protective functions into their NFPs.

In most countries, the State forest administrations played a crucial role in implementing and coordinating forest legislation about forest protective services.

The majority of countries (26 out of 34 reporting) reported either no change, or no significant change, in their institutional frameworks related to forest protective services. Several countries (Austria, Bulgaria, Croatia, Estonia, Finland, Hungary and the Russian Federation) reported institutional changes or specific programmes or entities that had been established to coordinate and promote forest protective services.

Strict regulatory instruments were applied in most countries to secure forest protective services.

While under half of reporting countries (15 out of 34) indicated no change to the policy instruments they used to secure protective forest services, some countries (7 out of 34 reporting) had changed their policy means marginally and several others (8 out of 34 reporting) reported larger changes.

The majority of the reporting countries (20 out of 34) stated that they used regulatory instruments based on forest-relevant legislation to secure forest protective services. These included three sub-groups of interlinked policy instruments:

- legal requirements, bans, rules and procedures;
- management regulations, standards, guidelines and plans; and
- forest function zoning and/or categorization.

To illustrate, Slovenia issued a governmental decree on protective forests and forests, in particular to better regulate forest land use change and to provide management guidelines. The Russian Federation has established the following legal categories of protective forests:

- forests located in protected areas;
- forests located in water protection zones; and
- forests providing protection to natural and other objects.

The United Kingdom provided another example of the application of regulatory instruments, where standards and guidelines for forest, soil and water management were drafted and have been implemented recently.

Some countries (7 out of 34 reporting) used economic instruments such as national or international (EU) subsidies and public funds as well as transfer (compensation) payments to support various forest protection services. For example, Bulgaria and Ukraine provided state support for shelter belts on eroded lands and for planting protective forests, respectively. Croatia collected so-called "green taxes" to fund measures to secure forest protective functions, and Montenegro and Romania paid financial compensation from national funds to forest owners to cover reduced timber revenues in protected or protective forests (see also Indicator B5 NWGs and services).

Several countries (11 out of 34 reporting) indicated that they applied a range of informational instruments, such as research and education. For example, France set in place a training programme for forest fire management and prescribed burning, and Poland started a research project on small water bodies, like fire dams, in forests, intending to store and retain 31 million m³ of water in 3 300 small hydrological appliances.

Austria: Forest Protection Strategy

Within the framework of the Austrian Forest Protection Strategy, stakeholder platforms on forest protective functions (Schutzwaldplattformen) were established. The main objective is to strengthen cooperation, information exchange between different stakeholders and improve forest protective function related measures. Creating awareness within the local population, balancing between different interests and providing conflict solving solutions are in focus. Furthermore, the Federal Ministry of Agriculture, Forestry, Environment and Water Management issued topic related publications. The Austrian Service for Torrent and Avalanche Control is currently working on a new strategy, which will contain major guidelines and objectives until the year 2015.

Indicator B8. Economic viability

No major changes to the principle objectives on economic viability were reported, but more references were made to adding value to forest production.

Approximately half of the 34 responding countries, including the European Commission, reported no changes since 2007 to objectives for economic viability. Overall, countries reported objectives that touched on two fundamental issues:

- to enhance economic viability or profitability; and
- to enhance the cost-efficiency of production.

Many of the objectives reported were specific. Several countries focussed on technological innovation and related research and development, to enhance competitiveness and to increase raw material supply.

Multiple use and multifunctional utilization of forest benefits were specifically highlighted by Bulgaria and Cyprus. NWGs and services related objectives were also reported by the following countries:

- Austria - study carried out on potential assessment of NWGs and services, including guidelines for creating new fields of business.
- Croatia - to enhance economic potential of NWGs and services and valorization of the benefits.
- Czech Republic - to enhance valuation and marketing of NWGs and services.

Forest sector development was frequently reported as part of the rural and/or economic development goals, e.g. securing investments in processing and aiming to increase the sector contribution to GDP, to increase value-added production or to increase economic and social well-being. Finland, France and Montenegro reported on objectives related to forest-based industry, e.g. sawmilling and wood processing. Finland also pointed out the objective to create new forms of business operations and new technology and service enterprises.

Forest owner cooperation and increased organization were reported as aims by the Czech Republic, Poland and Slovenia, but several other countries referred to improving services to forest owners to strengthen economic viability.

With no major institutional change, forest law remained the legal basis in most cases, but a number of references were made to specific rural development programmes and strategies.

Most countries based their main policies on the economic viability of forestry on their forest law. The European Commission referred in this case to Objective 1 of the Forest Action Plan, "Improving long-term competitiveness" and the Communication on Innovative and Sustainable Forest-based Industries in the EU (COM(2008)113).

Half the countries (17 out of 34 reporting) reported no change in legal frameworks on economic viability since 2007. The other half reported amendments to key legal documents regulating forest sector economic viability, such as the forest law (e.g. Belgium [Wallonia], Hungary, Montenegro and the former Yugoslav Republic of Macedonia), the NFP or respective Action Plan (e.g. the Czech Republic, Slovakia, Slovenia and Ukraine) or specific regulations about financial support (e.g. the Russian Federation and Turkey). Several countries mentioned updates of their rural development programmes and related strategies and policies. The EU Rural Development regulation 2007-2013 and its national implementation were specifically mentioned by Central and Eastern European countries (e.g. Estonia, Lithuania, Slovakia and Slovenia) and also by Portugal and the United Kingdom. Some countries reported crucial on-going revision and amendment processes: Montenegro was preparing a new National Forestry Strategy and Plan and renewing its Wood-processing Development Programme, while Italy was engaged in a forthcoming update of the Government Decree on the Modernization of the National Forest Sector.

The most frequently used instrument was economic support, such as EU rural development funds provided to EU Member States.

The most commonly used instrument for strengthening the economic viability of forestry was financial support, followed by providing advice and training to forest owners. Most countries employed instruments to support forestry measures and to enhance economic viability, competitiveness and/or rural development. These often comprised investment support measures to promote innovation, upgrade technology or to support forest owner co-operation. The EU Member States often reported using the EU Rural Development Programme 2007-2013 as a co-financing instrument. (see Table 72.)

Table 72: Countries and instruments and means to promote economic development

France	"Sawmill Plan" 2007-2009 comprising measures aimed at stimulating investments to encourage sawmill modernization and to better respond to the requests of the markets. The plan financed a total of 284 projects and supported EUR 227 million of investment over three years.
Poland	State forests' wood auction web portal established in 2006, with the aim of promoting stronger competition between wood users and increasing wood prices.
Ukraine	To attract investment in wood processing and create favourable conditions for development of wood processing, there has been a gradual separation of wood processing facilities of State Forestry Committee enterprises from forest management, through liquidation of inefficient production, restructuring, sale or lease. The expected result is a more effective use of forest resources in the country, increasing the flow of investment in the wood industry, increasing wood processing production and improving quality.

Compared with the 2007 report, most countries' support focused more on cost-reduction measures. In addition, investigations on new opportunities to increase value-added production and exploit new income streams were highlighted by Austria, Croatia and Finland, for example. Countries also indicated bioenergy plans and support schemes related to these. Norway, for example, mentioned two state budget schemes for value creation: the Wood-based Innovation Scheme with an annual budget of 34 million NOK²⁴ (2010), and the Bioenergy Scheme with an annual budget of 56 million NOK. Furthermore, certification schemes and encouraging forest certification were reported by Belgium and Turkey as ways to increase the value of forest products.

Some countries also reported measures to support the sector when facing economic crises (see also B4 Production and Use of Wood). For example, in Latvia, the Amendment to the Decision of Cabinet of Ministers "Maximum amount of timber harvest 2006-2010" (2008) increased harvesting from state-owned forests in the years 2009 and 2010 to stabilize wood supplies from domestic sources.

Indicator B9. Employment (including safety and health)

Ensuring occupational health and safety, and increasing employment in the forest sector were of increasing importance.

As in 2007, most countries focused their employment policy efforts on improving work conditions in the forest sector. Just over one-third of the countries (12 out of 34 reporting) and the European Commission aimed to ensure occupational health and safety for forest workers. Occupational health and safety in the forest sector and especially in terms of technical operations require a well-trained, educated and motivated labour force. Reflecting this, for 7 of 34 countries (i.e. Austria, Bulgaria, Finland, Lithuania, Netherlands, Portugal, and Romania, and the European Commission), the main objective was to improve forest labour skills and to raise qualifications in the forest sector. Finland stated that labour marketing and recruitment would be targeted on young people, women, the urban population and immigrants and foreign labour.

Compared to the 2007 report, more countries (25 percent) focused on increasing and/or maintaining the employment rate in the forest sector (see Figure 99). This partly reflected the impact of the global economic crisis of recent years. In Hungary, for example, the government provided support for seasonal job opportunities in the state forest service, mainly addressed to unemployed and rural population²⁵. In addition, policies that promote increased biomass use and increased harvesting of wood for energy were expected to have positive effects on employment in the forest sector, with France, for instance, expecting several thousand new jobs to be created between 2010 and 2020). Five countries (out of 37 reporting) from Central and South-East Europe (Cyprus, Croatia, Czech Republic, Montenegro and Slovenia) stated the wish to increase employment and to enhance the contribution of the forest sector to rural development. However, there was an apparent contradiction between this objective and the general trend towards restructuring state forest enterprises, with workers laid off and forest operations being outsourced to private contractors (see 2007 report).

The number of countries reporting support for social inclusion of forest workers has significantly increased (Czech Republic, Latvia, the Russian Federation, Slovakia and the United Kingdom). Social inclusion refers to the equitable provision of rights, such as employment, health care, education and training, among all individuals and groups in society.

Slovakia: Increasing employment, strengthening social inclusion and building capacities

Slovakia aims to increase the employment rate, strengthening social inclusion (i.e. incorporation) and employment of people, who are most sensitive to changes in the labour market, through the Operational Programme on Employment and Social Inclusion covering the period of 2007 to 2013, which was approved in 2007. This includes the forest and timber sector. The programme is supported by the EU European Social Fund (ESF).

Almost all countries had specific regulations and policies on employment, occupational safety and health, training and education for forest workers in place.

In several countries, employment, occupational safety and health policies were mainly based on labour protection legislation such as labour/work protection acts or laws (Belarus, Finland, Latvia, Lithuania and Norway). Forest law and other forest policy related documents provided an important legal reference basis in several other countries (9 out of 34 reporting), including Austria, Croatia, Lithuania, the former Yugoslav Republic of Macedonia, Ukraine and the United Kingdom.

Several countries indicated changes to their regulatory frameworks to meet international standards, such as EU Directives and/or the International Labour Organization (ILO) (see Table 73). Only a few countries reported amendments to existing forest laws (Austria, Slovakia and the former Yugoslav Republic of Macedonia) and NFPs (Czech Republic and Slovenia). Specific regulations and policies on forest-related employment have been newly adopted (or amended) by just over 40 percent of the reporting countries (14 out of 34). The most frequent changes related to specific regulations on occupational health and safety (Bulgaria, Ireland and Poland), and regulations on employ-

ment, social inclusion, education and training (Estonia, Russian Federation, Sweden, Switzerland and Turkey). The Health and Safety Authority of Ireland, for example, published a Code of Practice for Managing Safety and Health in Forestry Operations in 2009, and Switzerland revised its ordinance on professional basic education for forest workers in 2010²⁶.

Only a few countries reported changes in the institutional structures and frameworks related to forest sector employment.

In a range of countries (10 out of 34 reporting), the main responsible institutions at the national level were the ministries of employment and economy, labour, agriculture, rural development or environment. Implementing organizations included regional and national work and labour authorities, such as regional governments, forest agencies and private enterprises. Few of the 34 countries reported significant change to their institutional structures and frameworks concerned with forest sector employment. Cyprus, for example, reported that, since 2007, the Department of Forests has put more emphasis on the implementation of occupational health and safety legislation focussed on risk assessment for all forest activities. In the

Figure 99: Employment - main policy objectives for the period 2007-2010

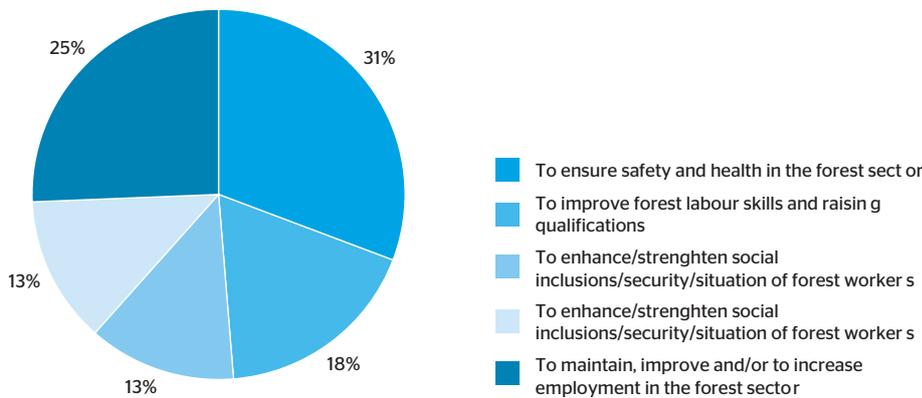


Table 73: Countries reporting changes to legal/regulatory frameworks for forest sector employment (incl. safety and health issues)

Austria	Amendment of the Forest Act, to comply with the EU Directive 2005/36/EC on the recognition of professional qualifications in the forest sector.
Bulgaria	Amendment of the law on health and safety labour conditions in 2010.
Poland	Amendment of the Instruction on Occupational Safety and Health in forest operations (in force since 1996).
Slovakia	Operational Programme Employment and Social Inclusion adopted for 2007-2013.
Sweden	Implementation of the EU Directive 2006/42/EC on machinery (particular relevance for forest operations).
Switzerland	Ordinance on professional basic education for forest workers and federal work certificate, revised 2010.

²⁴ 31 Dec.2009 1 EURO = 8.300 NOK, i.e. wood-based innovation scheme approximately EUR 4 million, and Bioenergy scheme approximately EUR 6 million.

²⁵ In 2009 about 5 000 people were employed, and this number was expected to increase in 2010.

²⁶ Verordnung über die berufliche Grundbildung Forstwartin/Forstwart mit eidgenössischem Fähigkeitszeugnis (EFZ), adopted 2006, revised 2010.

Russian Federation, the entire forest management system was reformed in line with new forest legislation and administration and executive agencies were established. (See also Indicator A2.) Poland provides another example, where a national association was established with the objective of integrating more women into the forest and timber sector and promoting women to leading positions, as well as protecting and educating about women's rights.

Employment policies were supported by regulatory instruments, often in combination with specific informational means for better workforce education and training.

Many reporting countries (14 out of 34) used specific regulatory instruments such as labour protection laws, health and safety regulations, or various programmes to increase employment and improve working conditions, employee welfare and work capacity. For example, in 2009, the Ministry of Employment and Economy in Finland launched the HYVÄ project²⁷, with its focus on the social and health care services and improving employee welfare, productivity and working conditions in each industrial sector, including the forest sector (towards better labour and industrial policy). In 2007, Belgium enacted a mutual recognition regulation for wood buyers and contractors for working more closely with the Flemish public forest sector, and through forest owner groupings, employment opportunities were better promoted, in particular to rural and unemployed people.

Several countries (9 out of 34 reporting) emphasized the importance of informational means such as education and training courses, workshops, and campaigns designed:

- to improve forest labour skills and qualifications;
- to decrease the number of accidents in technical forest operations; and
- to promote the forest and timber sector as a working place.

Only a few countries (4 out of 34 reporting) reported on financial instruments (mainly national funds and subsidies). For example, Switzerland established a national fund, into which all forest enterprises have to pay, to support education and training for forest workers. In Ireland, the Department of Agriculture, Fisheries and Food provided funding to an organization named Forestry Training and Education Ireland (FTEI), to support training for forestry operatives, including health and safety training.

Sweden: Information campaigns with clear targets

Two information campaigns have started in Sweden. The first one, running from 2007 to 2009, focussed on safety in forestry operations among private forest owners and aimed at decreasing the number of accidents in private forestry by 15 %. The second programme, which is still running, is directed towards small agricultural and forestry enterprises (farmers) and aims to reduce the number of accidents by 50 % by 2013.

Indicator B10. Public awareness and participation

Raising public awareness, improving institutional cooperation and communication, as well as ensuring transparency in forest management were policy objectives in most countries.

Several countries (14 out of 33 reporting) reported no change to their policy objectives since the Ministerial Conference of 2007. According to the data submitted by the 33 responding countries, the most frequently stated policy objective was to raise public awareness about sustainable forest management, particularly the protective and socio-economic functions of forests. Two countries (Hungary and the United Kingdom) explicitly emphasized the link between climate change and the forest sector: both aimed to raise public awareness about the role of forests in reducing GHG emissions and in renewable energy supply.

Committed to the principle that public access to forest-related and/or environmental information is crucial for managing national forest resources, several countries (Belgium, Estonia, Lithuania, Montenegro and Portugal) specified policy objectives in this context. Montenegro, for example, followed guidelines, outlined in the National Forest and Forest Land Administration Policy, on how to establish a forestry information system and how to ensure public access to information about the forest sector and forests. Belgium referred to the Walloon Decree on the Access to Environmental Information (1991), intended to ensure regular public access to environmental and forest-related information.

In terms of public participation, and in comparison to 2007, more countries highlighted public and multi-stakeholder participation as a crucial component in forest policy, management and planning processes (Finland, Montenegro, the Russian Federation, Slovenia and Turkey). This underlines the increasing complexity but also consideration of various stakeholder views, values and objectives in forest governance and the decision-making process.

Bulgaria, Finland, Hungary and the former Yugoslav Republic of Macedonia specified an objective to ensure and/or improve transparency as an important principle of good forest governance and public participation. In Hungary, for example, the new Forest Act (2009) includes provisions on transparency in forest management, which specify that forest authorities must provide information to the public on activities like road construction, forest cuttings, recreation and changes in forest management plans. Good forest governance and the attainment of sustainable forest management depend also on good institutional collaboration. This was highlighted particularly by those countries which aimed to improve cooperation and communication amongst various state and public authorities (Table 74).

Several countries reported significant changes to their regulatory frameworks, including forest laws and National Forest Programmes.

One-third of reporting countries (11 out of 33) identified the forest law as the main reference document for public

awareness and participation policies (see Figure 100). Many countries reported significant changes to their regulatory frameworks since the Ministerial Conference of 2007. Romania, for example, included a new chapter on public awareness in the Forest Code in 2008. However, several countries, in particular from Central and Eastern Europe, reported that policies related to public awareness and participation were further specified and guided by NFPs and/or strategies, most of which were adopted and implemented after the Ministerial Conference of 2007. In two countries (Bulgaria and Estonia) public awareness and participation policies were based on specific national communication strategies.

A few countries established special units/entities responsible for coordinating and implementing public awareness and participation policies.

Since 2007, Belgium, Luxembourg, Slovenia and Ukraine have established special units/entities responsible for public awareness and participation matters. For instance, Slovenia created a special organization responsible for public hearings in the adoption process of forest management and hunting plans, forest education contribu-

tions and workshops. Ukraine created Public Councils to support and enhance public participation in forest management and planning. Similarly, the Federal Agency of Forestry in the Russian Federation established a unit of Public Ecological Advice with the aim of increasing public participation and strengthening cooperation between state and public forest authorities.

Increased attention was paid to education to raise awareness about forests among young generations.

Nearly all countries reported the use of a wide range of informational instruments, often combined with regulatory and/or economic means, to increase public awareness and participation. Apparently, the most common approach to increase awareness and disseminate information was through the media (TV, radio, internet), information systems and databases, printed educational materials and scientific publications. About 30 percent of countries mentioned the organization and conduct of various events (e.g. forest weeks, forest days, forest campaigns, public hearings and consultations, and workshops and conferences) to strengthen communication within and outside the forest sector.

Figure 100: Main legal documents regulating public awareness and participation (percent of total legal documents reported)

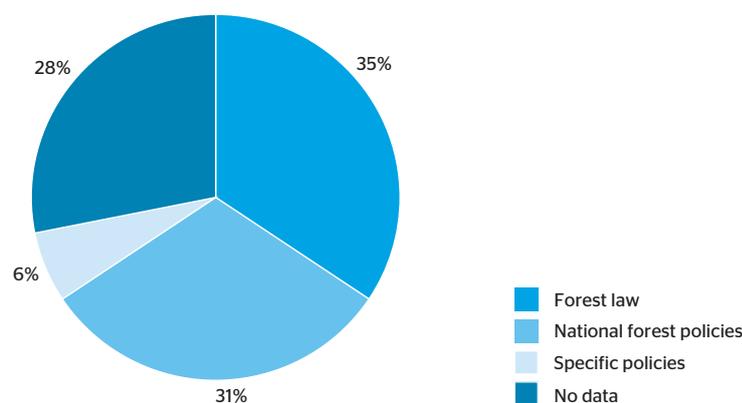


Table 74: Countries specifying objectives related to institutional cooperation, communication and transparency in forest management and planning

Bulgaria	To secure transparency of the Executive Forest Agency (EFA) and its activities, and to promote its role as a national authority aiming for and securing common wealth.
Czech Republic	To utilize the potential of state forest authorities in communicating with the public.
Finland	To increase cooperation between forest sector companies and schools as well as other educational institutions in the forest sector.
Slovakia	To improve coordination and cooperation between forest and non-forest public organizations.

²⁷ <http://www.tem.fi/?l=en&s=3124>

Several countries (Austria, Czech Republic, Ireland, Italy, Norway, Poland, Portugal, Sweden and Switzerland) and the European Commission acknowledged the importance of forest education programmes, providing basic knowledge about forest ecosystems, values and sustainable forest management to children. Austria, for example, organized a Forest Opera for children in 2008 and nearly 30 000 attended. Ireland launched a forest education programme, which focused on the threat of the non-native grey squirrel (*Sciurus carolinensis*) to broadleaved forests. The Czech Republic adopted a Strategy on Forest Pedagogy, and in 2009 the EU launched a project on forest pedagogy under its Leonardo da Vinci programme, called PAWS-Med.

PAWS-Med – a European project on forest pedagogy in the Mediterranean region

PAWS-Med (2009-2011) is a European project on forest pedagogy directed mainly towards Mediterranean countries. Guided by training and research institutes based in Germany and Austria, it gathers partners from six Mediterranean countries (Cyprus, Greece, Italy, Portugal, Spain and Slovenia) to accomplish a common concept of forest pedagogy and a common base of training methods, activities and materials for training foresters. For further information see: <http://www.paws-europe.org>

United Kingdom: Increasing public awareness on forests' vital role in tackling climate change

The United Kingdom Forestry Commission embarked on a partnership project (with the News of the World and the Royal Mail) to communicate forests' role in mitigating climate change and to help get more than a million trees planted across the country. The campaign started in 2009 and will encourage schoolchildren, late primary and early secondary years, to grow tree seeds to a stage where they can be planted. The main objective of the programme is to increase awareness amongst the general public, business and politicians that forestry offers one of the most cost-effective ways to achieve GHG reduction targets.

Indicator B11. Research, training and education ***More demand-oriented education and training as well as practice-relevant research were the main objectives.***

As in 2007, the majority of the FOREST EUROPE signatories reporting on research, training and education reported explicit support for forest-related research. Nearly half of the countries (16 out of 34 reporting) put emphasis on specific research needs. The most frequently mentioned topics for research were:

- the competitiveness of the forest sector
- forests and climate change
- sustainable forest management
- forest modelling and management tools
- support to the timber industry
- bioenergy
- ecological and/or biological aspects

Few countries stated an urgent need for more demand-oriented research, linked to recent policy processes and debates and the specific requirements of the forest and timber sector.

The main objective for some countries (8 out of 34 reporting) was to adjust education and training towards the specific needs of the forest sector, a similar situation to the one described in the 2007 report. The most frequently mentioned goals were the provision of well-trained workers (reported by Finland, Latvia, Russian Federation, Switzerland, the former Yugoslav Republic of Macedonia and Ukraine), with a special focus on safety conditions (Switzerland and the former Yugoslav Republic of Macedonia) and the provision of well-trained forest managers (Austria, the Russian Federation and Slovenia).

The objective of providing comprehensive education and training for forest workers and other professionals, and the increasing recognition of the various forest functions, has led to a need for cross-sectoral education and training programmes. The new inter-disciplinary orientation often means that education and training is more policy- and economic-oriented and is likely to include topics such as marketing, communication, participatory planning and industrial design. Although interdisciplinary education and training was a common goal, the disciplines and topics to be included differed among countries (see Table 75). Croatia, Czech Republic, Finland, Switzerland and Ukraine stated changes to their universities and the degrees they offer.

Forest research, training and education policies were often based on specific policy programmes.

In line with the trend of defining and prioritizing new research areas (see above), several countries (14 out of 34 reporting) reported changes to their regulatory frameworks.

The most common changes related to the improvement of specific forest educational and training programmes:

- Bulgaria - amended its Law on Professional Education and Training and the Law on High Education.
- Finland - adopted a new University Act.
- Romania - referred to its Sectoral Plan for Research and Development for the period 2006-2010.
- Switzerland - specified the Ordinance on professions, basic education of forest workers and federal work certificate, revised in 2010.
- United Kingdom - adopted a new Science and Innovation Strategy for British Forestry for the period 2010-2013.

Organizational and structural changes were observed in universities and research institutions in most countries.

Forest research and education was mainly conducted by national/regional forest research centres, universities and technical forestry schools (see also Indicator A2 Institutional frameworks), of which some experienced crucial reforms in recent years. Universities were engaged in changing their structure and education systems to fit with the Bologna process²⁸.

Even though research in Europe relies heavily upon national/sub-national research programmes and policies, the European Commission through its three joint European research initiatives (COST, EUREKA and the EU Framework Programme) plays a crucial role in the coordination and definition of research priorities across the EU Member States. In this context, Slovakia and Slovenia emphasized the influence of the EU research agenda in the definition of their national priorities for forest research.

A few countries reported about education programmes and facilities that were targeted particularly at the general

public and children (see also indicator B10 Public awareness and participation). In Germany, for instance, the Association for the Protection of German Forests supported the education of children, and in Poland the States Forest Holding established a forest education web portal for children as well as forest education centres for the public.

A few countries mentioned the special committees or technological platforms which define and set up national or regional forest research agendas, e.g. Latvia, Lithuania and the United Kingdom. France stated the importance of good connections between research and companies, and instilled innovation into companies and improved transfer of knowledge via technical institutes.

Financing or co-financing research, education and training was the most frequently used instrument.

Almost all countries reported that forest research was funded mainly by the state. In principle, state or federal forest organizations/boards established funds to support or co-finance forest research as well as education and training for forest workers. In Bulgaria, for instance, forest research was co-financed by the National Forestry Board (NFB), and in Latvia state support came from the Forest Sector Development Fund. In several countries, however, co-funding came partly from the private sector. For instance, the Federal Organization of Employment in Switzerland recently established a fund, co-financed by private forest enterprises, to support basic training and education of forest workers. In Sweden, the Forestry Research Institute was partly funded by the private forest sector and carried out research, mainly in applied sciences.

A few countries reported possible reductions in state budgets for research. In Latvia, for example, due to the economic crisis, public financing had been decreased in all public sectors, including forest research, education and training. More specifically, the financial resources of the

Table 75: Countries reporting on new subjects in education and training programmes for the period 2007-2011

Belgium	The scope of the Forestry Educational and Training Centre was revised in 2004-2005, with the aim of expanding its activities and integrating other disciplines, e.g. more emphasis on nature conservation, landscape, and management of public green areas and parks.
Croatia	To adapt forest education system programmes to meet changing needs, such as information technology, language capacity and marketing.
Hungary	Besides classic wood engineering, the faculty of wood sciences offers art studies, industrial products design and IT graphics and mechatronics.
Slovakia	To improve education and technical training in the forest sector about the requirements of the labour market and increasing knowledge in economics.
Sweden	Some measures have been undertaken to further address forest policy issues and needs in research programmes. One example is the establishment of the forest policy institute at the Swedish University of Agricultural Sciences (SLU). This could be seen as the starting point for improvement in forest education.
Switzerland	The basic education for forest workers was reformed. Different measures (campaigns, training courses, establishing of a trainings concept) were undertaken and should help to improve safety in the private forest sector.
MK	Participatory management as a new subject in education and training programmes. Forest policy in the Faculty Curricula introduced and Forest Policy and Economics International Master courses started in 2007.

²⁸ The Bologna Process aimed to create a European Higher Education Area by 2010, in which students can choose from a wide and transparent range of high quality courses and benefit from smooth recognition procedures. The Bologna Declaration of June 1999 has put in motion a series of reforms needed to make European Higher Education more compatible and comparable, more competitive and more attractive for Europeans and for students and scholars from other continents. The Bologna process is named after the Bologna Declaration, signed in Bologna, Italy June 1999. See at: http://ec.europa.eu/education/higher-education/doc1290_en.htm

Forest Sector Development Fund were reduced by 60-80 percent between 2008 and 2010. The United Kingdom also reported that the state budget for all public sectors, including forest research, might be reduced.

The role of the European Commission in defining priorities and funding research through the 7th Framework Programme²⁹ is widely recognized by most of the EU Member States. The 7th Framework Programme for research and technological development (FP7) is the EU's main instrument for funding research in Europe over the period 2007-2013. The biggest specific programme within FP7 is the Cooperation programme, where forest-related research is supported in four of the ten FP7 thematic areas.

International cooperation was highlighted by a few countries (Montenegro, Luxembourg, Slovenia and the former Yugoslav Republic of Macedonia) as an important mechanism to support forest research, education and training. Luxembourg, for example, established new partnerships with research organizations in Belgium and Germany, whereas Montenegro emphasized its international collaboration with Luxembourg in providing forestry education and training for forest professionals and forest owners. In this context, the former Yugoslav Republic of Macedonia referred to the international programme of Forest Policy and Economics Education and Research FOPER (see box below).

EFI Forest Policy and Economics Education and Research programme (FOPER)

FOPER (Forest Policy and Economics Education and Research) is the international programme, coordinated by the European Forest Institute (EFI) and financed by the Ministry of Foreign Affairs of Finland, which is intended to enhance forest policy and economics in the Western Balkans region. The goal of FOPER is to institutionalize the capacity for sustaining and expanding the capacities in education and research in forest policy and economics in the South-East Europe. The two main educational components of FOPER are the Regional International Masters of Science Programme and the Graduate College and Support Programme for Doctoral/PhD students on Forest Policy and Economics.

EFI Mediterranean Forest Research Agenda

The Mediterranean Forest Research Agenda (MFRA), coordinated and developed by EFIMED, and published in 2009, presents a joint vision on the challenges that Mediterranean forests and forestry face as well as the main research priorities for the period 2009-2020 within the Mediterranean region. The MFRA is an integral part of the Strategic Research Agenda (SRA) of the European Forest-Based Sector Technology Platform (FTP) and included an intensive consultation process, gaining input from established National Support Groups, Focal Points and other stakeholders (like private and public forest owners) and relevant organizations (like FAO and Silva Mediterranea). The implementation of MFRA will support the creation of a triangle of Mediterranean forestry knowledge of research, education and innovation, as well as a geographic triangle with its cooperation between Mediterranean Europe, North Africa and the Middle East.

Indicator B12. Cultural and spiritual values ***The maintenance of national and international heritage of cultural and historical sites and monuments was an objective in most countries.***

Compared to 2007, more than half of the responding countries reported either no (18 out of 37) or no substantial (4 out of 37) change to their policy objectives on cultural and spiritual values. However, some countries (Bulgaria, Hungary, Italy, Russian Federation and the United Kingdom) indicated significant changes, like the adoption of new or the revision of existing objectives.

Following the Vienna Resolution from April 2003 on preserving and enhancing the social and cultural dimensions of sustainable forest management in Europe, the majority of countries (20 out of 37 reporting) stated that their main policy objectives were to maintain and preserve national cultural and historical sites, natural monuments, monumental trees, important landscapes and memorial territories. Several countries (Cyprus, Czech Republic, Estonia, Poland, Netherlands, Slovakia, Slovenia, Switzerland and the United Kingdom) highlighted their commitment to the protection of national and international cultural and historical heritage through sustainable forest management. Estonia, for example, emphasized the maintenance of traditional craftsmanship. Finland sought to better preserve local culture and the reindeer herding practices of the Sami local population and to promote traditional wooden housing. Other countries (such as Bulgaria, Ireland and Latvia) were trying to find a balance between the socio-cultural interests of society and forest owners.

Some countries (Austria, France, Hungary and Sweden) reported that they aimed to raise awareness among the public, and in particular among forest managers, about numerous cultural and spiritual values that forests have for society and various groups, which might be different for religious, aesthetic and historical reasons. This objective was often supported by various forest education programmes, communication activities and the objective of strengthening cooperation between different stakeholders and authorities. The integration of cultural and spiritual forest values into different land uses, such as forestry, recreation and tourism, as well as the enhancement of its contribution to rural development was highlighted as a main policy objective by several countries (Austria, Cyprus, Hungary, Ireland, Lithuania, Netherlands, Poland and Slovenia).

Cultural and spiritual forest values were mainly regulated by specific laws on cultural heritage and nature protection. National forest laws were gaining more relevance.

In most FOREST EUROPE countries (24 out of 37 reporting), cultural and spiritual values were mainly regulated by specific laws such as cultural heritage protection (14 out of 37) and/or nature protection laws (10 out of 37). Finland and the Netherlands referred to land use and spatial planning laws as the legal reference for protecting forest cultural and historical sites. In several countries, the

maintenance of cultural and spiritual forest values was subject to regulations of the Forest Law (12 out of 37 reporting) and/or was part of the NFP (3 out of 37 reporting). Only two countries (Austria and Ireland) made reference to the UNESCO convention on cultural heritage, the FOREST EUROPE Vienna Resolution 3 on social and cultural dimensions of sustainable forest management in Europe, as well as to the European Landscape Convention of the Council of Europe³⁰ and the EU Environmental Impact Assessment (EIA) Directive (85/337/EEC)³¹.

The majority of the responding countries (23 out of 37) reported no change to their respective legal frameworks since the Ministerial Conference of 2007. Yet several countries indicated that they adopted new legal provisions or changed existing provisions in their forest and specific laws to provide for better protection of cultural and spiritual forest values. Changes were reported mainly from Central and Eastern Europe (Bulgaria, Hungary, Montenegro, the Russian Federation and Slovakia) and by Italy. The former Yugoslav Republic of Macedonia indicated that the policy objective of protecting the cultural and historical heritage was not the subject of any legislation.

In most countries, state authorities played a key role in protecting and managing cultural and spiritual forest values.

In many countries, the protection of cultural and spiritual forest values was coordinated among different state authorities, like ministries and/or executive agencies responsible for culture, education, environment, spatial planning, public works, and tourism as well as state forest services and/or state forest enterprises. In most countries, research institutes, regional (county) administrations and local authorities (municipalities) and museums, as well as non-governmental organizations and forest owners, were involved in coordination and cooperation on cultural and spiritual forest and landscape values.

The majority of the reporting countries (23 out of 37) reported no change to the institutional framework since the Ministerial Conference of 2007. Only three countries reported that they changed their existing and/or created new institutions and structures. For example, Austria established a network (Netzwerk Land) relevant for all stakeholders related to landscape and rural development. Bulgaria closed its state agency on tourism and transferred its responsibilities to the Ministry of Economy, Energy and Tourism. Italy transferred the responsibility for designating and managing protected natural landscapes with high cultural and spiritual values, to the regional administrative level.

Regulatory and informational instruments were applied in most countries to manage forest sites designated as representing high cultural and spiritual values.

A considerable number of countries (18 out of 37 reporting) stated that they used regulatory instruments to identify, assess and protect cultural and spiritual forest values. The policy means particularly included a) legal requirements, rules and procedures as well as b) protection and management regulations, standards, guidelines and plans. Countries frequently reported the application of informational instruments. The most common communication tools used by countries were publications and workshops (Austria and Latvia), education and training activities (Czech Republic, Norway, Romania and Sweden) and awareness raising and public relations activities such as forestry days and/or cultural events. Efforts were also undertaken to further establish and improve advisory services (Austria, Italy, Latvia, Norway and Slovakia), information systems (France, Luxembourg, Norway, Romania and Sweden) and/or inventories and listings of cultural and spiritual heritage sites (Finland, Italy, Latvia, Lithuania, Poland, Slovakia and Slovenia).

In terms of the application of financial instruments, several countries (Austria, Cyprus, Czech Republic, the Netherlands and Switzerland) reported using public funds (national and/or EU funds and subsidy systems) to promote the protection of cultural and spiritual values. Belgium, for example, applied both public funds and fiscal incentives to support and implement forest-related socio-cultural programmes and objectives.

Finland: Policy objectives on cultural and spiritual values

Culture associated with forests will be honoured, cherished and developed further. The programme on the cultural heritage of forests will be drawn up, and Sámi culture and reindeer herding will be developed on the terms of the Sámi people themselves and by means of community support. Traditional wood building will be enhanced, and operating conditions of the Finnish forest museum Lusto will be ensured.

²⁹ http://cordis.europa.eu/fp7/home_en.html

³⁰ http://www.coe.int/t/dg4/cultureheritage/heritage/landscape/default_en.asp

³¹ <http://ec.europa.eu/environment/eia/eia-legalcontext.htm>