

# EUROPE'S FORESTS 2007





# Forest resources and their contribution to global carbon cycles

## Forests cover 44 percent of the land area of Europe.

At just over 1 billion ha, or 1.26 ha per capita, 25 percent of the world's forests are in Europe. About 80 percent of this forest is in the Russian Federation. Some 80 to 90 percent of forests are available for wood supply in most regions, but only around 40 percent in East Europe.

## Europe's forest area continues to increase.

The area of forest in Europe has increased by almost 13 million ha (an area roughly the size of Greece) in the past 15 years mainly due to planting of new forests and natural expansion of forests onto former agricultural land.

# Forest area in percent of land area by country, 2005 20°0'0"W 0°00" 20°0'0"E 40°0'0"E 60°0'0"E 60°0'0"N 50°0'0"N 40°0'0"N 40°0'0"N 40°0'0"N 40°0'0"N

## 74 percent of Europe's forests have been influenced by humans.

About 70 percent of the European forests are classified as semi-natural and about 4 percent as plantations, while the remaining 26 percent, located mainly in Eastern and Northern European countries, are considered undisturbed. Excluding the Russian Federation, only 5 percent of forests in Europe are undisturbed, while 8 percent are plantations.

## Wood volume in forests has reached record heights and is increasing.

The total growing stock of forests in Europe amounts to 112 billion m<sup>3</sup>. In the last 15 years, an average of 358 million m<sup>3</sup> – equivalent to the total growing stock of Slovenia – has been added each year.

# Forest biomass carbon reserves are huge, and increasing.

In forest biomass 53 gigatonnes of carbon are stored, which is an increase by 2 billion tonnes since 1990. Further substantial amounts of carbon are stored in forest litter and soils, but knowledge on these components remains limited.

# Forest ecosystem health and vitality

# Although air quality in Europe has improved, trees are still under stress. Further reductions in emissions are needed to improve ecosystem health and vitality.

Air pollution and depositions, especially of sulphur, have been reduced in recent years; however, past depositions accumulated in soils may lead to higher levels of nitrogen, sulphate and soil acidity, which make forest more vulnerable to environmental stress and changing climatic conditions. Tree crown condition has stabilized but defoliation levels are still high in most regions, indicating that trees have a reduced potential to withstand adverse environmental impacts. Further reduction of related emissions is needed to bring depositions below critical loads.

# Forests in Europe have suffered severe storm damages, and forest fires continue to be a major challenge.

Since 1999, large storm damages have occurred in Europe almost annually. Hundreds of thousands of ha of forest are burnt annually. While the number of forest fires increased, the area burnt did not increase in the period 2000-2005, mainly due to more effective fire suppression in many countries.





#### Volumes of wood harvested in Europe's forests are increasing, but remain considerably below increment.

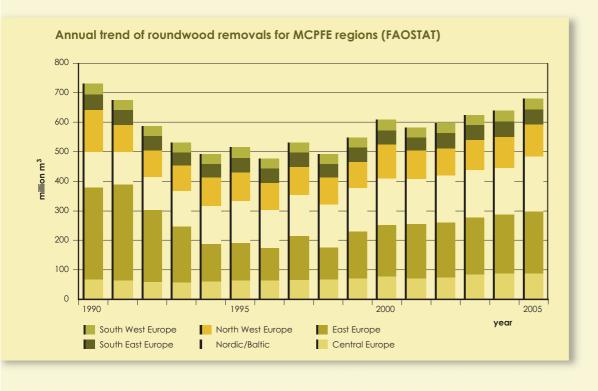
Harvesting of wood has steadily increased over the last ten years. The forests are growing at an unprecedentedly high and increasing rate that is well above the volume harvested, so the amount of wood in forests continues to increase.

## Forests provide a wide variety of goods and services other than wood.

The economic value of non-wood goods and services (NWGS) provided by forests is increasing, but often they are not marketed. In some European regions, NWGS provide more revenue than wood sales.

# 98 percent of all European forests are covered by a forest management plan or equivalent.

European forest areas are almost completely covered by plans for their longterm management.





#### **Biological diversity** in forest ecosystems

#### Forest management practices increasingly promote biodiversity.

Forest management practices have changed in ways that promote the conservation and enhancement of biological diversity, notably through the increased use of natural regeneration and more mixed species stands. Measures are also being taken to encourage deadwood accumulation.

#### Share of protected area (%) by MCPFE classes 1.1–1.3 and 2 of total forest and other wooded land area protected in the MCPFE region, 2005 37 MCPFE Class 1.1 = no intervention 55 MCPFE Class 1.2 minimum intervention MCPFE Class 1.3 = active management MCPFE Class 2 MCPFE region (excluding the Russian Federation)

MCPFE region

protection

#### Less than 1 percent of Europe's forests are dominated by introduced tree species.

In Europe excluding the Russian Federation, the area dominated by introduced tree species is around 4%. In many countries, introduced tree species are closely related to the establishment of plantations. Very few introduced tree species are invasive, and while significant in some countries, the total area is not increasing.

#### The area of protected forests has been expanding by about 2 million ha in the last five years to reach almost 5% of Europe's forests.

About 3 percent of Europe's forests are protected with the main objective of conservation of biodiversity and another 1.7 percent with the main objective of conserving landscapes and specific natural elements. For the MCPFE region excluding the Russian Federation, the figures are 8 percent and 10 percent, respectively. In the MCPFE region, these areas have increased by around 455 000 ha annually over the last five years.

#### **Protective functions** in forest management

#### More than one-fifth of European forests are managed primarily to protect water, soil and infrastructure.

Ten percent of European forests are designated primarily for the protection of soil and water, and 11 percent for the protection of infrastructure or managed natural resources. In some areas, notably mountains, the protective functions are particularly important and override the others.

# Socio-economic functions and conditions

# Forests are mainly public in about half of European countries, and mainly privately owned in the other half.

Due to the vast areas of public forests in the Russian Federation, in Europe as a whole, 90% of forest area is public and 10% is privately owned, but ownership patterns and trends vary widely across regions and countries. Without the Russian Federation, almost half of Europe's forest area is owned by private forest owners. The number of private forest holdings, currently more than 11 million, continues to grow, mainly due to the ongoing restitution process in some European countries as well as fragmentation due to inheritance laws.

# European production and consumption of wood is increasing, as are exports of wood products.

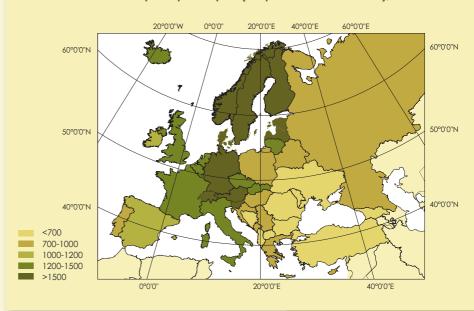
Since the mid-1990s, wood consumption per capita has been rising, reaching 1.1 m³ in 2005. At the same time, Europe has become a major net exporter of wood products to other regions (100 million m³ per year). Large volumes of wood are used for energy, with a significant increase in recent years. Forestry activities, wood industries, and the pulp and paper industry combined contribute about 1% to the gross domestic product in Europe and substantially more in a few countries. The total added value and the net revenue of forestry activities remain stable.

## Around 4.3 million people work in the European forest sector.

Employment in forestry continues to decrease in Europe, but the loss of jobs is slowing down. In 2005, employment in forestry activities, wood industries and pulp and paper industries accounted for 1.1% of total employment in Europe. Occupational safety is improving, but forestry remains one of the most hazardous sectors.



#### Wood consumption per capita (m³ per 1000 inhabitants), 2005



## More than 90% of European forests are open to public access.

More than 90% of the forests in Europe are open to public access, and the area of forest available for recreation is increasing. A very large number of archaeological sites, nature monuments, and other sites of cultural and spiritual value are found in forests.



## Forest policies and institutions

#### Public participation in decisionmaking related to forests is increasing, but challenges remain.

National forest programmes (NFPs) are increasingly widely acknowledged and used across Europe to govern the diversity of forest-related issues in a more open and adaptive manner, but challenges remain. These include better ways and means for cross-sectoral coordination and continued political commitment to further develop NFPs into an effective policy tool.

# Forest-related institutions are changing.

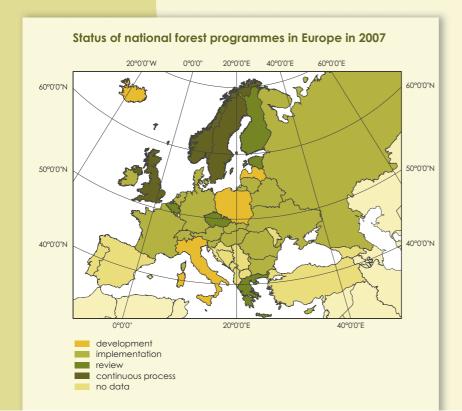
Changes in institutional frameworks in Europe indicate an emphasis on further improving the efficiency and effectiveness of state forestry organizations as well as on reorganizing forest research. In addition, organizational structures for private forest owners are further developed. However, it seems that well-functioning coordination mechanisms between different levels of government and stakeholder groups (which are increasingly diverse) are still rare.

#### Sustainability is given prominence in forest laws and other policy instruments.

MCPFE countries are pursuing sustainable forest management (SFM) through creating new policy instruments and adjusting existing ones. This is done through integrating SFM more systematically into legal and regulatory frameworks when revised, through financial support measures addressing the different dimensions of SFM, through efforts to strengthen both the forest-related information base, and by improving communication with the public.

# Forest policies are becoming more target-oriented, but further improvements are needed.

Several European countries pursue active and often target-oriented policies in a number of areas. In particular, some countries aim to enlarge forest area, increase the use of wood (material and energy use), improve biodiversity conservation and strengthen the economic viability of forestry. However, in other policy areas, including climate change, forest health and vitality, employment, and cultural and spiritual values, the policies at present seem to be less focused or less pro-actively pursued (and are often more dependent on decisions in other policy areas).







The MCPFE report
State of Europe's Forests 2007

It is evident that the MCPFE has played a major role in promoting sustainable forest management and in coordinating and cooperating on forest-related matters across Europe. A number of important and new policy means and instruments have been developed through the MCPFE to address new challenges. These, together with generally well-developed forest-related national organizations, should safeguard the sustainability of European forests and the multiple benefits that they provide.

The MCPFE report State of Europe's Forests 2007 does not judge whether forest management in a country or region is sustainable or not, since this judgment is dependent on the relative importance given to the different criteria and indicators in countries. However, the report does provide most of the relevant information on which governments and other stakeholders can carry out this assessment. This represents a significant advance in the monitoring of sustainable forest management, but there are still many gaps and weaknesses that should be addressed at the technical and policy level.

The report provides relevant information on a range of major issues, including options for the use of the accumulated growing stock, the need to address threats to forest health by air pollution, storm, fire and other damaging factors, and on the role of forests and wood in the interlinked policy debates on energy and



climate change. It provides information that should facilitate decisions related to the role of forests in sustainable development within a globalizing world and with changing demands from society. Further, it points to potentially unsustainable situations in some indicators in a few countries. Overall, are European forests sustainably managed? The answer is a qualified "yes", with caveats in all three areas of sustainable development: economic, social and environmental.

This publication presents
the key findings of the report
State of Europe's Forests 2007,
the report was jointly prepared by
the MCPFE Liaison Unit Warsaw,
United Nations Economic
Commission for Europe and Food
and Agriculture Organization
of the United Nations.

The MCPFE report State of Europe's Forests 2007 is a comprehensive and up-to-date description of the situation and the management of European forests as well as the related policies and institutions. It shows the status and trends related to forests and sustainable forest management in Europe, structured according to the Pan-European Criteria and **Indicators for Sustainable Forest** Management, including, for the first time, qualitative indicators on policies and institutions.



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