

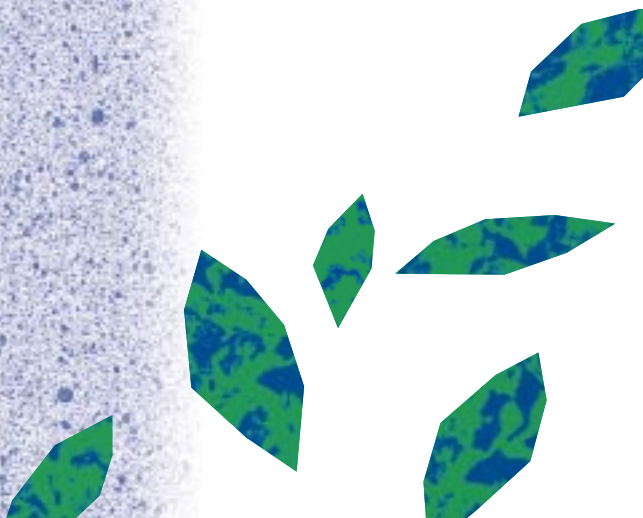
EUROPEAN PARLIAMENT



*memo*

# EUROPE AND THE FOREST

1998





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# The 15-member European Union...

## Guidelines

- a territory covering 3,236,000 km<sup>2</sup>
- a population of 372 million inhabitants and a workforce of 166 million
- a GDP of 6,190 billion ECU.

source: Eurostat - 1996

With Austria, Finland and Sweden joining in 1995, the importance of forest and timber in the EU has increased significantly.

## FORESTRY STAKES STRENGTHENED

Being a pole of consumption and production, the EU has become a major actor alongside the giants, namely North America, for the coniferous market, South-East Asian countries (exporters of tropical timber) and Japan, the leading world importer.

The EU plays an active role in the Strasbourg and Helsinki pan-European process on the protection of forests in Europe. It is also, directly, or through its member States, a partner in all international agreements on environment or trade. It has taken a clear stand in favour of a Global Convention on Forests.

## Europe and overseas forests

	Affiliated country	Area (1,000 ha)
French Guyana	France	7,790
Reunion	France	89
Guadeloupe	France	80
Martinique	France	38
Madeira	Portugal	reminder
The Azores	Portugal	reminder
The Canary Islands	Spain	reminder

## ... in the forestry world

### EU: one of the leaders in forest activities worldwide

	12-member EU	15-member EU	World rank
Forest area (10 <sup>6</sup> ha)	54	103	8 <sup>th</sup>
Forest cover	21%	31%	-
Roundwood harvest (10 <sup>6</sup> m <sup>3</sup> )	133	251	4 <sup>th</sup>
Sawnwood production (10 <sup>6</sup> m <sup>3</sup> )	35	65	2 <sup>nd</sup>
Wood pulp production (10 <sup>4</sup> t)	9	31	2 <sup>nd</sup>
Paper & paperboard production (10 <sup>4</sup> t)	44	68	2 <sup>nd</sup>
Wood-based panel production (10 <sup>6</sup> m <sup>3</sup> )	27	31	2 <sup>nd</sup>

source: UN-ECE/FAO

The European Union is an important actor in international co-operation in the field of forests:

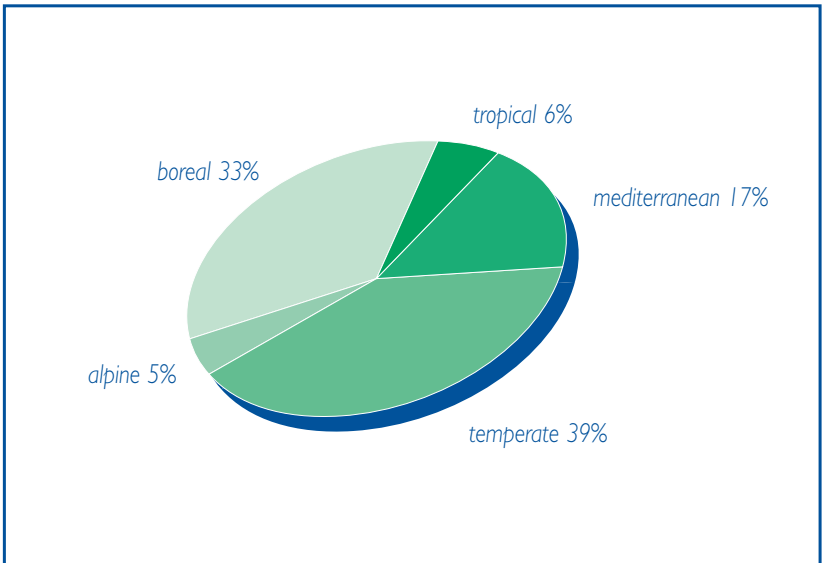
- It imports 12% of tropical non-coniferous round timber exchanged in the world, thus being the second largest consumer of tropical wood in the world, after Japan.
- With 33% of votes, it represents the leading group in the International Tropical Timber Organisation.
- It is the leading contributor to development assistance in the forest sector, spending some 600 million ECU per year, directly or through its member States.

The EU thus bears a special responsibility for defining adequate sustainable management techniques for the world's forests. Its experience in the field and the privileged relationship it enjoys through its member States with countries of different languages and cultures, are in themselves an irreplaceable asset.

# Variety of European forests: from boreal to tropical

From the Arctic polar circle to the forests in French Guyana, most of the great forest ecosystems in the world are represented within the 15-member EU.

## Main types of forests in the EU



source: Eurofor - 1996

The recent enlargement of the EU has enabled it to double its forest assets. It owns today 3% of the forests in the world, covering an area as big as China or Indonesia, but less than half of the United States or Canada.

The EU forest assets have had a rich history of intricate relationship between Man and Nature for many centuries. With the help of its Forestry Schools, Europe has contributed to training a great number of foresters and technicians who, in turn, have imparted their knowledge of, what is now called, sustainable forest management all over the world.

## Place of forests in Europe

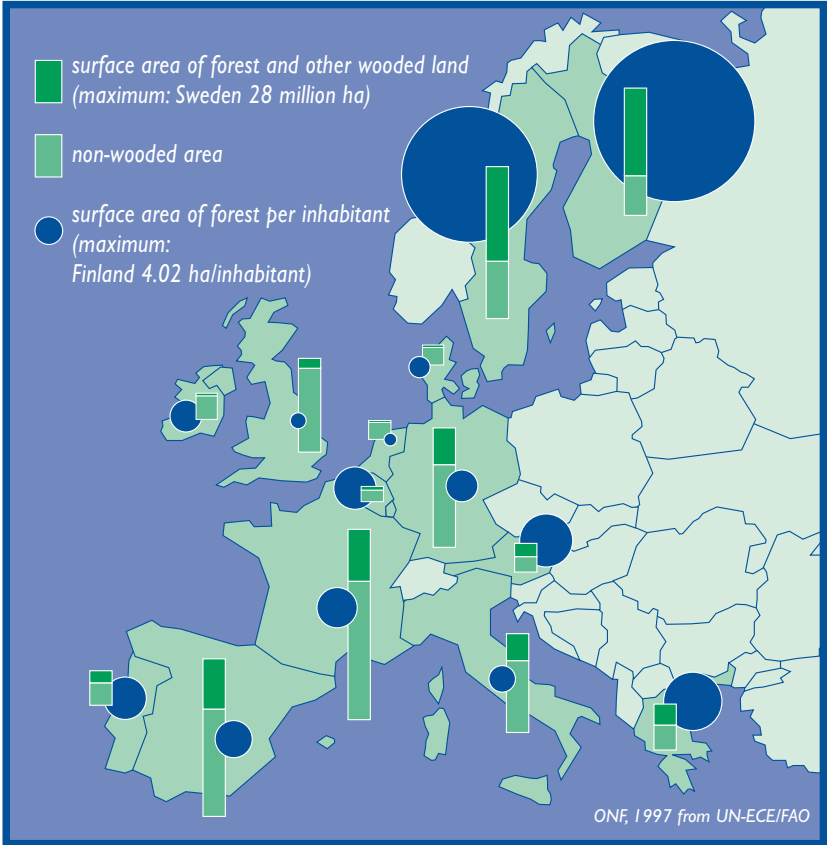
	Population (in millions of inhab)	Total surface (in millions of ha)	Forest (in millions of ha)	Other wooded land (in millions of ha)
Austria	8.05	8.39	3.88	-
Belgium & Luxembourg	10.55	3.31	0.71	-
Denmark	5.25	4.31	0.42	-
Finland	5.12	33.82	20.03	3.26
France	58.27	54.40	15.03	1.05
Germany	81.85	35.70	10.74	0.25
Greece	10.47	13.20	6.51	3.52
Ireland	3.59	7.03	0.57	0.03
Italy	57.33	30.13	6.50	1.80
Netherlands	15.49	4.15	0.33	-
Portugal	9.92	9.19	2.88	0.35
Spain	39.24	50.60	8.39	17.23
Sweden	8.84	45.00	24.43	3.58
United Kingdom	58.68	24.41	2.39	0.17
<b>15 EU Total</b>	<b>372.7</b>	<b>323.6</b>	<b>102.8</b>	<b>31.24</b>

source: Eurostat/UN-ECE/FAO

The definition of forest area varies from country to country, or depends on the period in question. It either includes only exploitable forest (page 14), or forest (in their totality), or other wooded land (open para-forest zones, etc.). The difference is particularly perceptible under limited conditions (in the Mediterranean, mountainous or coastal regions, in the northern territories, etc.). The modification of the typologies employed is the cause of tangible variations and makes it difficult to interpret precisely the evolution of the total European forest.

# Population, territories and forests

## Forests and land use



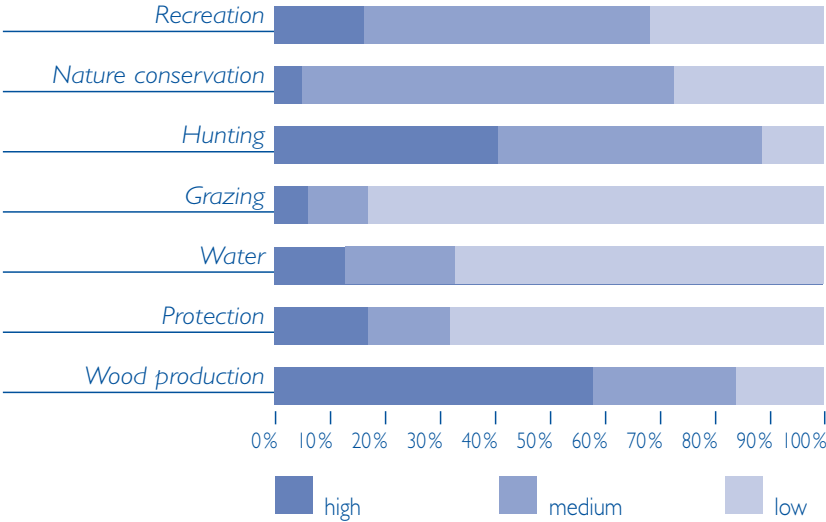
The forest cover shows an overall increase in the member States. The EU has benefited from forestation and reforestation policies implemented a few decades ago. In most of the countries forests still continue to expand and recover abandoned agricultural lands.

Bearing in mind the present situation all over the world, successive social needs have shaped the forests. Shortages, the harmful effects of deforestation or conflicts over the use have led the European countries to develop an elaborate know-how in the area of multi-functional forest management. In contrast to "reductionist" specialisations, each massif is managed in a way that optimises the numerous ecological, economic and social objectives defined for forests. A long-term and periodically-adjusted management plan (forest management) defines the practical actions to be implemented and ensures their continuity between generations.

Forests and their artistic and cultural connotations are also firmly rooted in the cultures and traditions of the EU.

## Relative importance accorded to the different functions of forests in the EU

(declaratory survey in the 1990s)

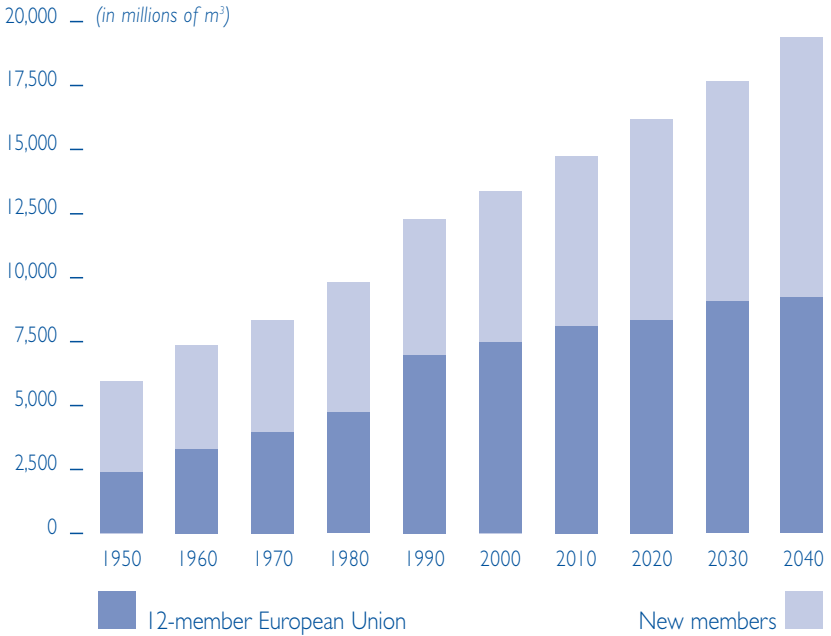


source: UN-ECE/FAO - FRA 1990 - The Forest Resources of the Temperate Zones, vol.III - Benefits and Functions of the Forests - 1994



# Unfettered expansion of European forests

## Growing stock in the EU forests



Sources: FAO - World Forest Inventory - 1963.  
UN-ECE - Forest resources in the EEC region - 1986.  
FAO - World Forest Resources - 1995.

UN-ECE/FAO - The outlook for the European forest resources and roundwood supply - 1996.

The growing stock has increased significantly since the post-War period. More recently, the stimulating effect of the increase in the atmospheric CO<sub>2</sub> levels on photosynthesis has accentuated the biomass storage phenomenon.

The annual increment of European forests is significantly greater than the harvest, and this gap is widening steadily. The impact of forestry or agricultural policies is supplemented by a greater use of recycled resources (wood residues, recovered paper). This differential might eventually result in a pronounced ageing of European forests with a regularisation of the stands. A more dynamic silviculture would help prevent this unwanted trend and increase harvests instead.

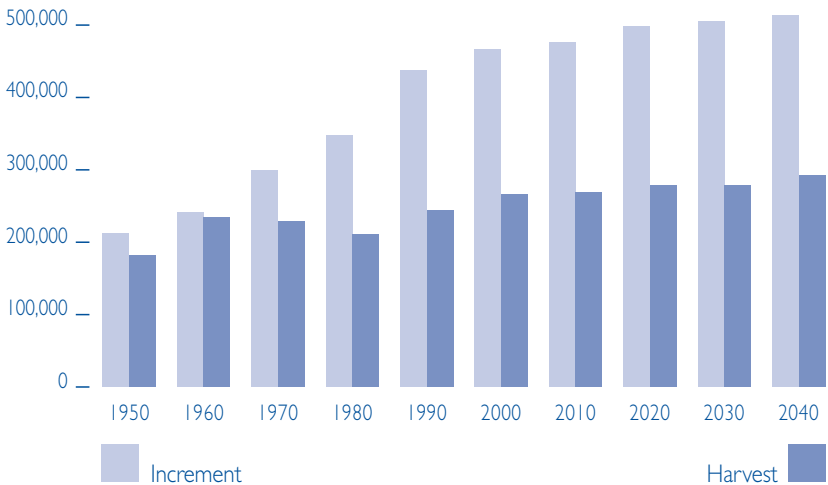
# A growing resource

This surplus of forest resources offers the European forest industries a scope for development, and endows the EU with an asset in a world where forests are regressing at an alarming rate of some 14 million ha per year.

The extension of woodlands, however, gives rise to new challenges as far as land use planning is concerned. By maintaining agricultural activity or developing maintenance techniques for the open areas, the creation of a continuous forest cover, often with negative results (on the landscape in semi-mountainous regions, on fire prevention in Mediterranean areas, etc.), can be avoided, particularly in fragile areas.

## Increment and harvest in the EU forests

600,000 — (in millions of m<sup>3</sup> - increment over bark - removals under bark)

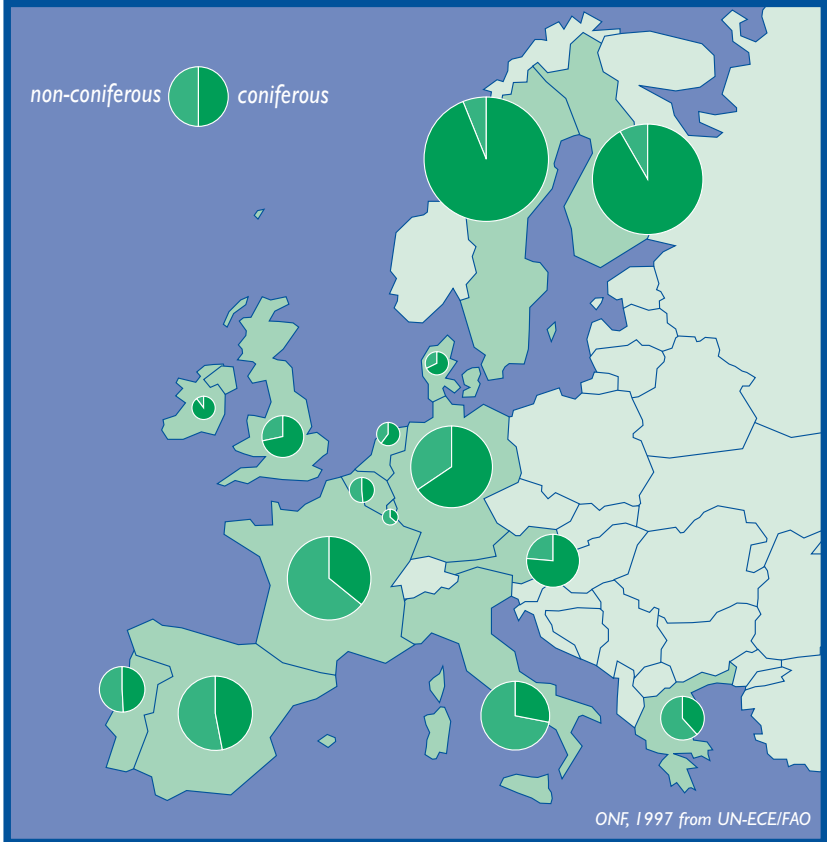


Sources: FAO - World Forest Inventory - 1963.  
UN-ECE - Forest resources in the EEC region - 1986.  
FAO - World Forest Resources - 1995.  
UN-ECE/FAO - The outlook for the European forest resources and roundwood supply - 1996.

# Diversified forests

## Composition of forests in the EU

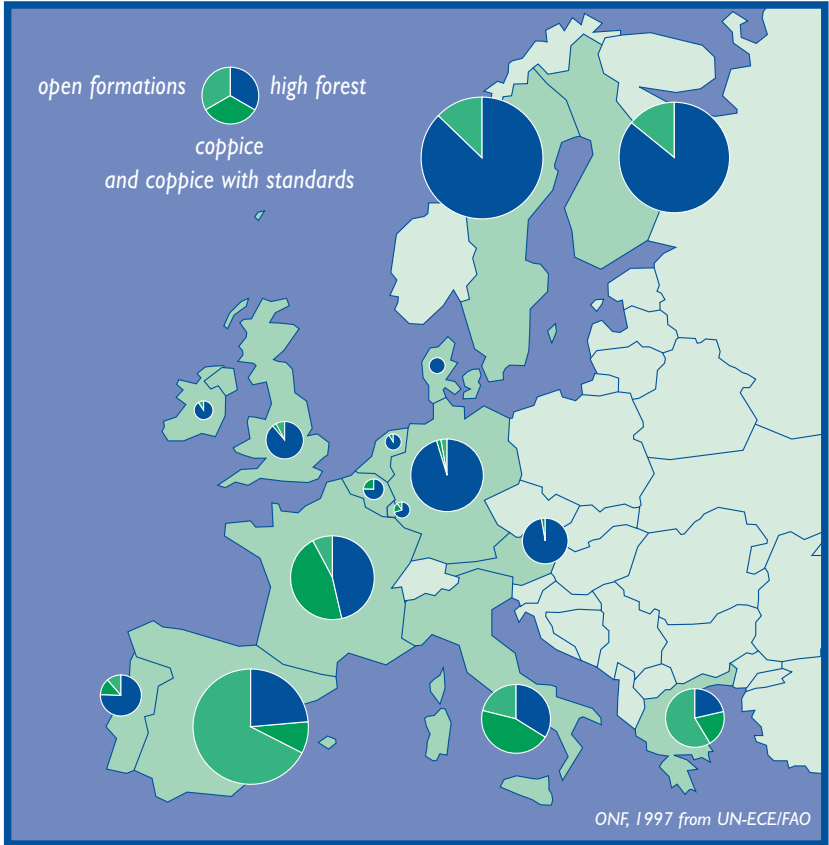
Coniferous and non-coniferous species



The simple division between the coniferous and non-coniferous species indicates the variety of ecological conditions with a gradient depending on the latitude and altitude. Under the influence of the last Ice Age, the biological diversity has been increasing from the North to the South of Europe. The vast stretches of the essentially boreal coniferous forests are dominant on the surface whilst the Mediterranean forest formations are host to numerous, and often extraordinary, species and habitats.

# Composition of forests in the EU

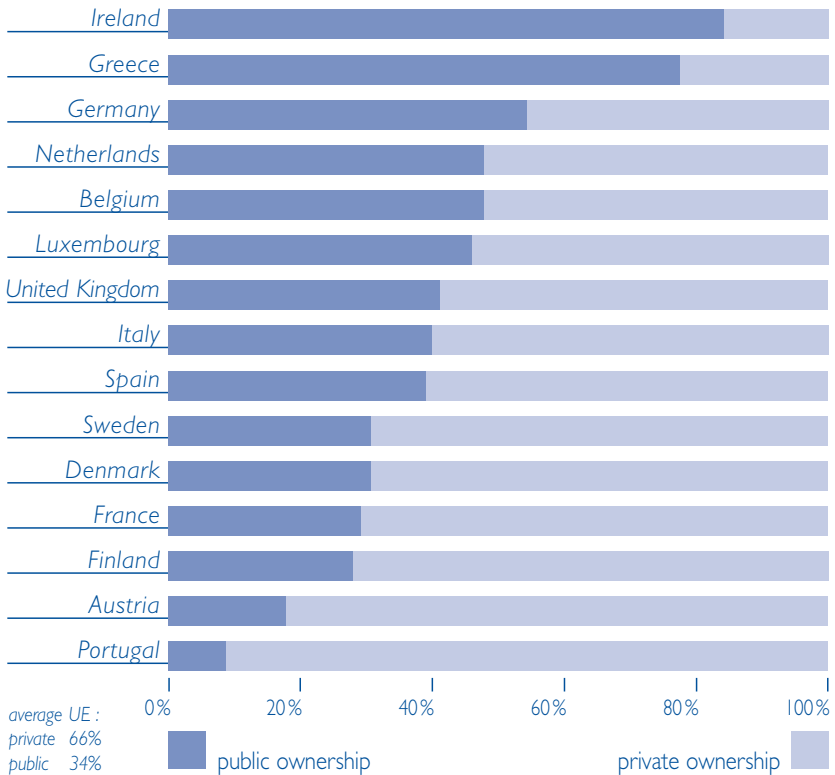
## Structures



Reflecting natural conditions, silvicultural practices and social pressures, the structure of forest stands and their place in the landscape indicates the changing social demands and needs. Most European forests are thus shaped by Man and their diversity testifies to the historic and cultural richness of the EU.

# A large share of private forest ownership

## Forest ownership patterns



Source: UN-ECE/FAO

The often denounced parcellisation of the European forests needs to be played down. It only concerns a small fraction of private forests and is moderated by the unicity of public forest management.

Being a reflection of a long history of relationship between nature, the local inhabitants and the socio-economic environment, the variety in ownership patterns, from international industrial groups to small forest farmers, allows a large range of management and silvicultural options.

# Timber industry in European economy

## A PROMISING SECTOR

With Austria, Finland and Sweden joining the EU, the commercial timber deficit has fallen from 21 to 7 billion ECU.

## Key figures for the wood sector

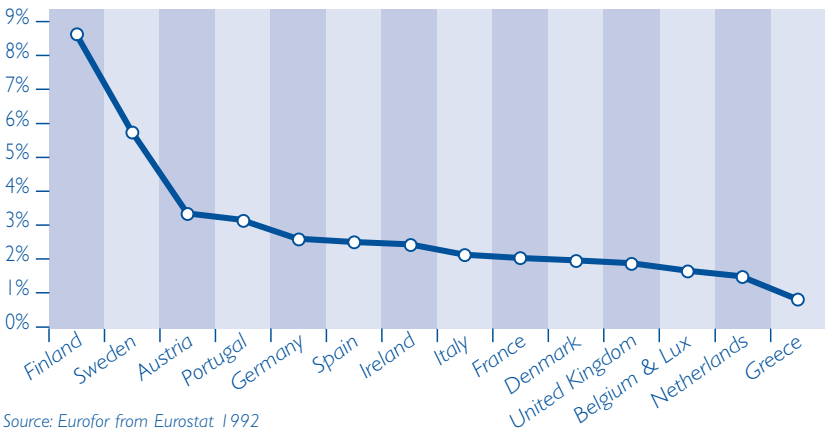
Industrial sector (excluding forest activities)	Wood and wooden furniture	Paper
Employment (10 <sup>6</sup> )	2.1	0.9
Number of firms	270,000	10,000
Turnover (10 <sup>9</sup> ECU)	150	80

Source: Eurofor from Eurostat 1992

## FOREST-WOOD SECTOR AND EMPLOYMENT

The forest-wood sector accounts for 2.5% of the total EU labour force (the equivalent of the main industrial sectors- chemical, mechanical, construction, transport, etc), which are often located in rural areas. This factor plays a key role in preserving their vitality.

## Percentage of forest-wood sector in total employment



Source: Eurofor from Eurostat 1992

# Towards self-sufficiency in roundwood supply

## Production and consumption of roundwood in the EU

(1993-95 average)

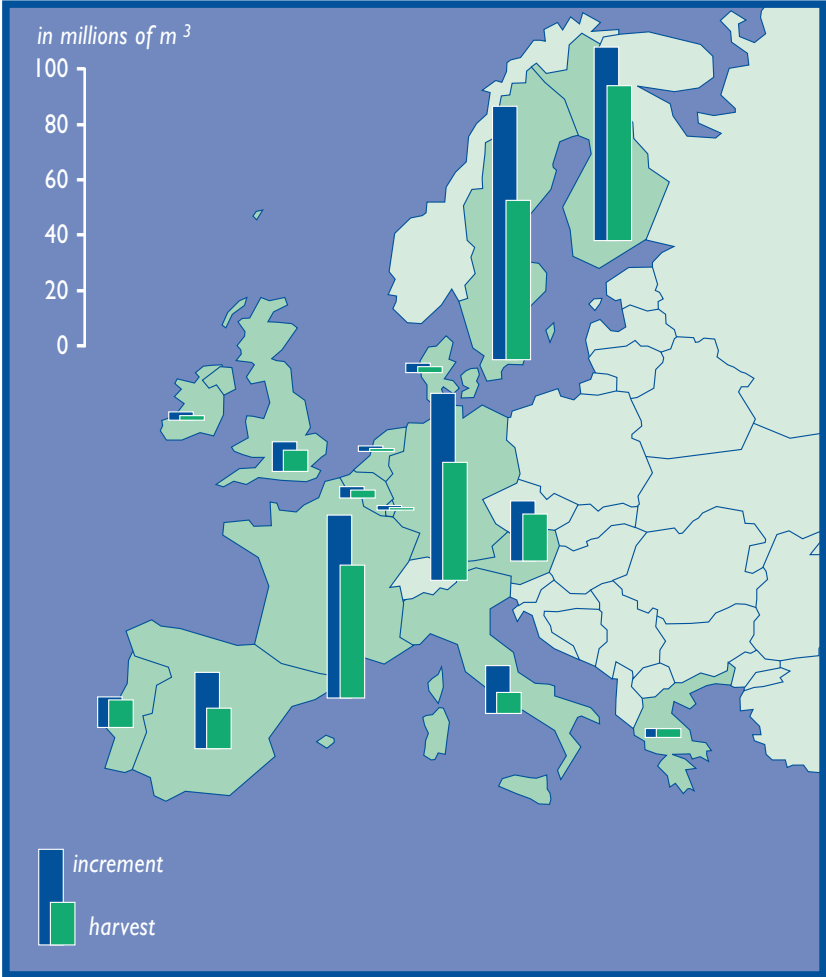
	Area of exploitable forests (in millions of ha)	Roundwood production (in millions of m <sup>3</sup> )	Roundwood consumption (in millions of m <sup>3</sup> )
Austria	3.33	14.07	19.81
Belgium & Luxembourg	0.71	4.26	6.57
Denmark	0.42	2.28	2.49
Finland	18.84	46.80	53.44
France	13.92	42.85	42.47
Germany	10.23	36.38	32.29
Greece	3.36	2.63	2.64
Ireland	0.46	2.01	1.63
Italy	6.01	9.36	15.96
Netherlands	0.28	1.08	1.17
Portugal	2.44	9.99	10.39
Spain	6.51	14.25	15.71
Sweden	21.84	56.81	62.27
United Kingdom	2.39	7.94	8.55
<b>15 EU Total</b>	<b>88.1</b>	<b>250.7</b>	<b>275.4</b>

\* 1990 values

source: UN-ECE/FAO

# Wood harvest and increment in the EU

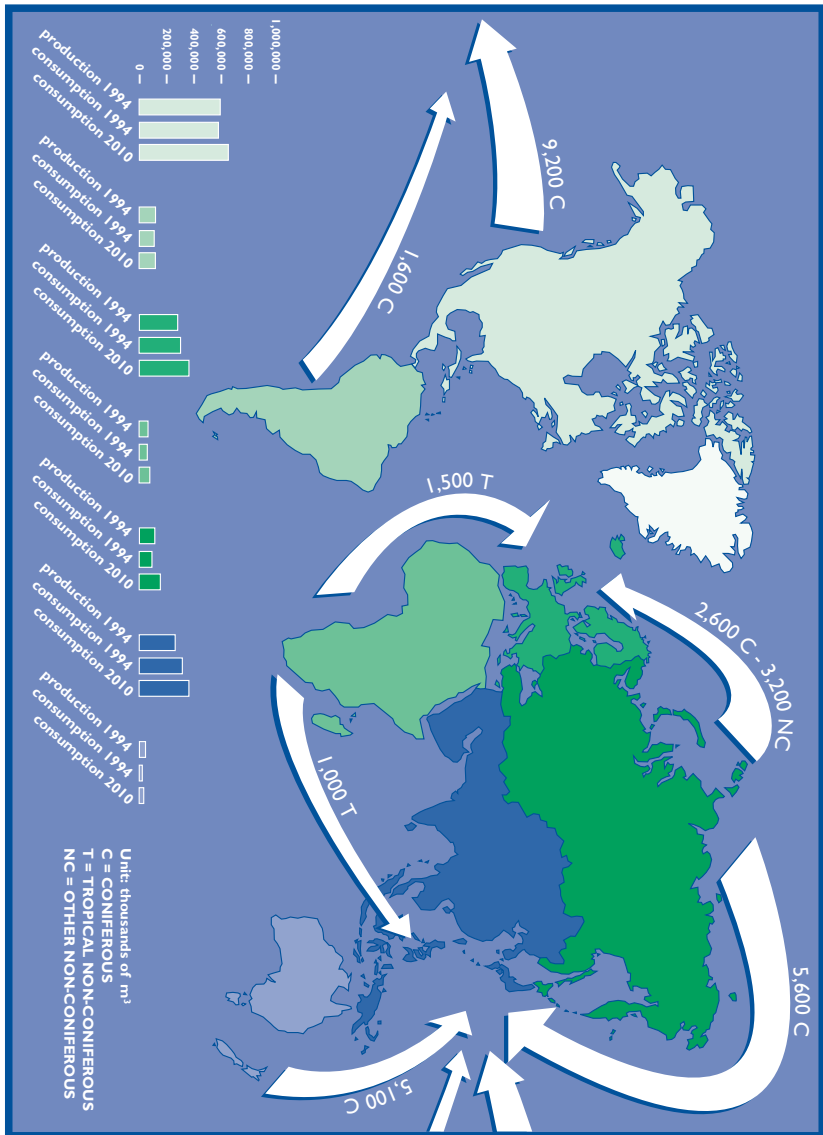
(1990)



source: ONF 1997 from UN-ECE/FAO

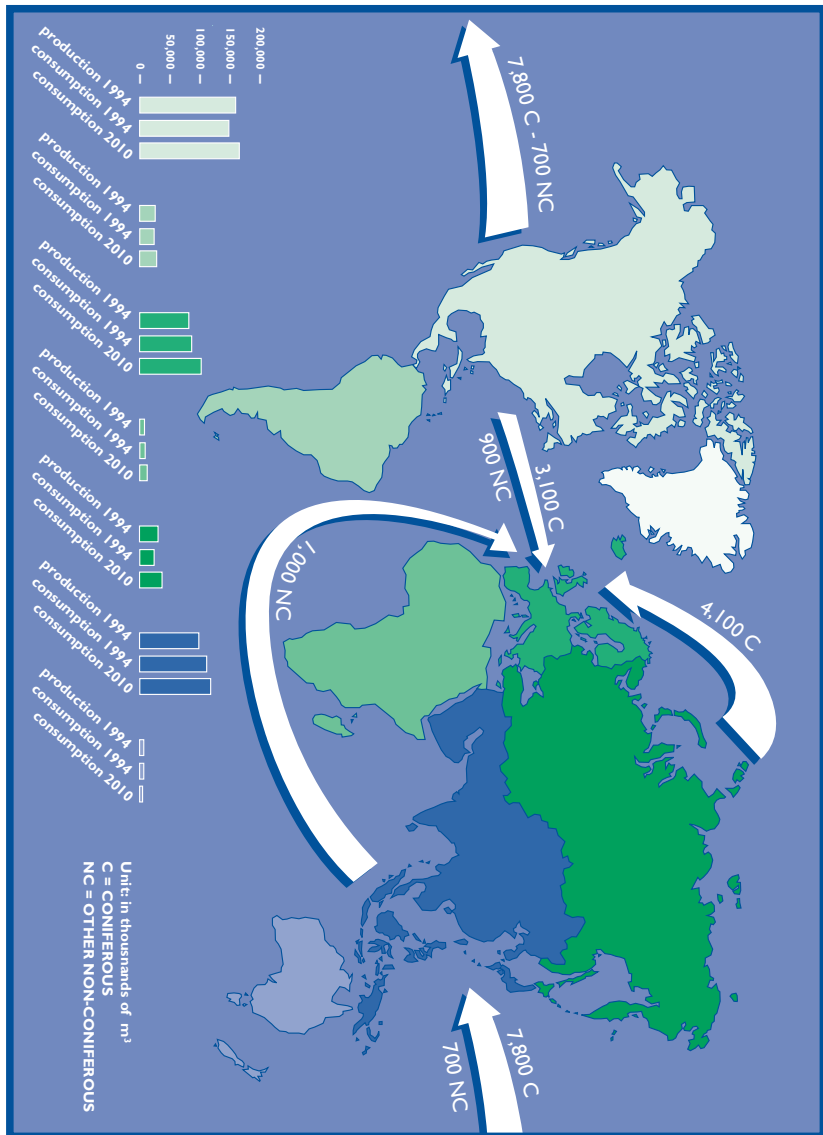


# Industrial roundwood: production, consumption, and trade in 1994, and consumption forecasts for 2010



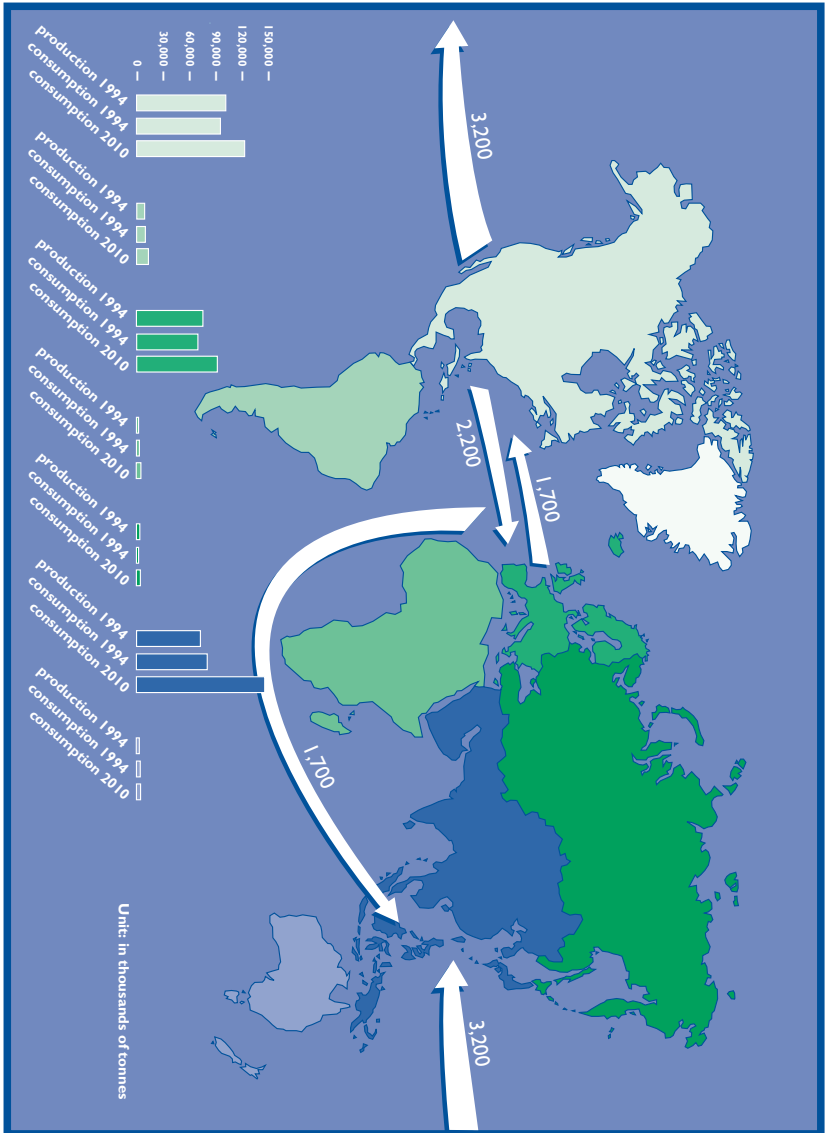
source: Eurofor, 1997 from FAO

# Sawnwood: production, consumption, and trade in 1994, and consumption forecasts for 2010



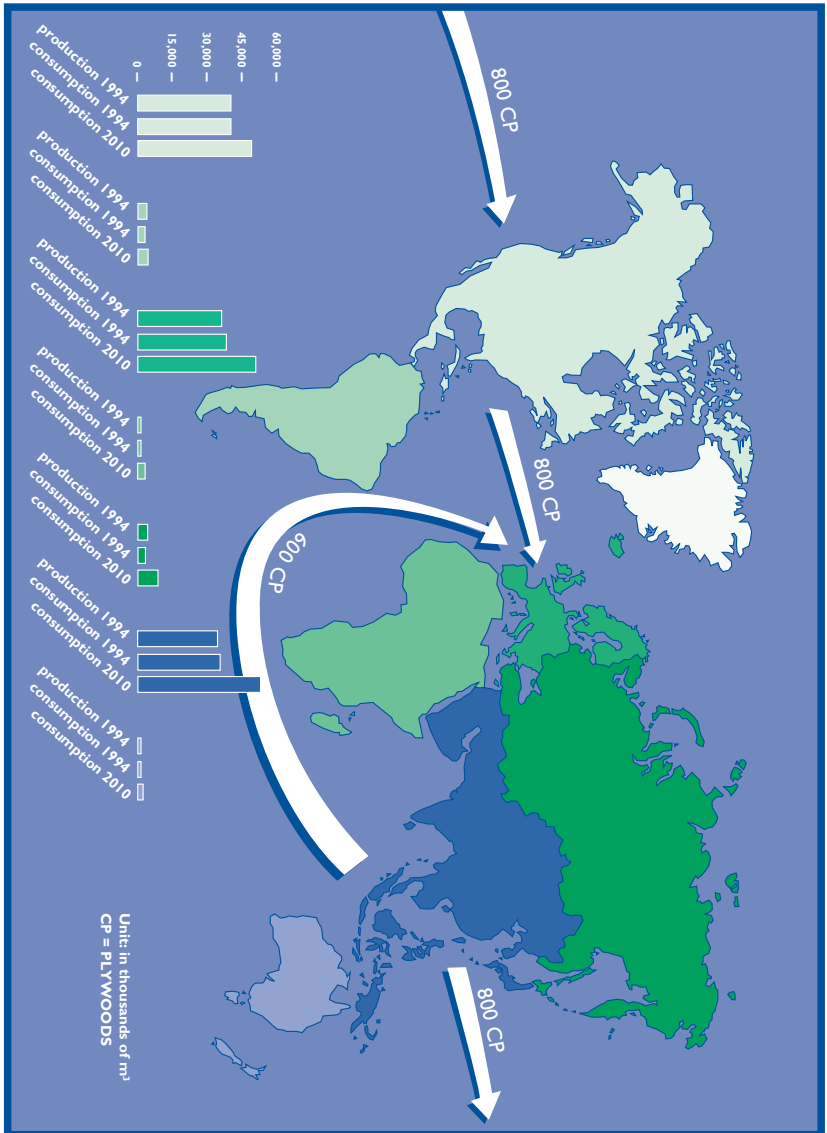
source: Eurofor, 1997 from FAO

# Paper & paperboard: production, consumption, and trade in 1994, and consumption forecasts for 2010



source: Eurofor, 1997 from FAO

# Wood-based panels: production, consumption, and trade in 1994, and consumption forecasts for 2010



source: Eurofor, 1997 from FAO

# Production and trade of roundwood

## Roundwood

(1993-95 average)

(in millions of m<sup>3</sup>)

	FUELWOOD Production	INDUSTRIAL ROUNDWOOD				
		Production total	Production round timber	Production pulpwood	Imports	Exports
Austria	3.16	10.92	7.85	2.47	7.41	1.99
Belgium & Lux.	0.55	3.71	2.63	0.87	3.56	1.33
Denmark	0.48	1.80	0.88	0.57	0.48	0.35
Finland	4.12	42.68	21.24	21.12	7.86	1.26
France	10.02	32.83	21.07	11.20	2.87	2.98
Germany	3.80	32.58	19.77	11.42	2.15	6.69
Greece	1.46	1.17	0.68	0.32	0.04	0.03
Ireland	0.06	1.95	1.31	0.64	0.07	0.45
Italy	5.17	4.19	2.32	0.77	6.25	0.01
Netherlands	0.18	0.90	0.49	0.33	0.76	0.73
Portugal	0.70	9.29	4.10	5.01	1.08	0.66
Spain	2.46	11.79	5.84	5.09	1.68	0.24
Sweden	3.81	53.0	28.73	23.77	6.84	1.46
United Kingdom	0.24	7.70	3.79	3.90	0.48	0.07
<b>15 EU Total</b>	<b>36.2</b>	<b>214.5</b>	<b>120.7</b>	<b>87.5</b>	<b>41.5</b>	<b>18.3</b>

source: FAO

# Production and trade of forest products

## Wood pulp and recovered paper

(1993-95 average)

(in millions of m<sup>3</sup>)

	WOOD PULP			RECOVERED PAPER		
	Production	Imports	Exports	Production	Imports	Exports
Austria	1.58	0.53	0.23	0.69	0.44	0.07
Belgium & Lux.	0.36	0.59	0.13	0.69	0.11	0.62
Denmark	0.14	0.06	0.06	0.47	0.11	0.28
Finland	9.89	0.13	1.34	0.47	0.10	0.04
France	2.72	2.04	0.44	3.17	1.13	0.62
Germany	1.99	3.75	0.22	9.60	0.78	2.44
Greece	0.03	0.09	0.01	0.18	0.01	0.01
Ireland	0.00	0.02	0.00	0.17	0.01	0.04
Italy	0.46	2.71	0.03	2.89	0.95	0.04
Netherlands	0.13	0.83	0.15	2.18	1.15	1.24
Portugal	1.56	0.07	0.98	0.27	0.02	0.03
Spain	1.47	0.46	0.65	1.86	0.58	0.04
Sweden	10.40	0.20	2.75	1.09	0.58	0.16
United Kingdom	0.61	1.94	0.12	3.53	0.14	0.34
<b>15 EU Total</b>	<b>31.3</b>	<b>13.4</b>	<b>7.1</b>	<b>27.2</b>	<b>6.1</b>	<b>6.0</b>

source: FAO

# Production and trade of forest products

## Sawnwood

(1993-95 average)

(in millions of m<sup>3</sup>)

	SAWNWOOD NON-CONIFEROUS			SAWNWOOD CONIFEROUS		
	Production	Imports	Exports	Production	Imports	Exports
Austria	0.23	0.15	0.10	7.11	0.76	4.29
Belgium & Lux.	0.28	0.70	0.14	0.92	1.25	0.35
Denmark	0.25	0.05	0.05	0.34	1.94	0.06
Finland	0.07	0.07	0.04	9.14	0.13	6.90
France	3.31	0.45	0.60	6.63	1.52	0.38
Germany	1.18	0.67	0.33	11.86	4.73	1.33
Greece	0.13	0.02	0.01	0.21	0.37	0.00
Ireland	0.01	0.08	0.01	0.67	0.30	0.24
Italy	0.98	1.72	0.07	0.80	4.59	0.04
Netherlands	0.21	0.71	0.16	0.19	2.82	0.27
Portugal	0.37	0.11	0.03	1.27	0.03	0.50
Spain	0.64	0.61	0.01	2.12	1.04	0.05
Sweden	0.20	0.11	0.04	13.57	0.13	10.43
United Kingdom	0.18	0.49	0.01	2.02	6.66	0.07
<b>15 EU Total</b>	<b>8.0</b>	<b>5.9</b>	<b>1.6</b>	<b>56.8</b>	<b>26.3</b>	<b>24.9</b>

source: FAO

## Wood-based panels and paper/paperboard

(1993-95 average)

(in millions of m<sup>3</sup>)

	WOOD-BASED PANELS			PAPER/PAPERBOARD		
	Production	Imports	Exports.	Production	Imports	Exports
Austria	1.93	0.30	1.10	3.50	0.72	2.55
Belgium & Lux.	2.56	0.71	1.82	1.11	2.15	1.19
Denmark	0.43	0.54	0.12	0.34	0.92	0.20
Finland	1.33	0.10	0.91	10.61	0.20	9;11
France	3.70	1.21	1.36	8.36	4.23	3.22
Germany	10.14	3.33	1.70	14.11	7.32	5.51
Greece	0.36	0.12	0.03	0.75	0.33	0.02
Ireland	0.28	0.15	0.15	0.04	0.38	0.03
Italy	3.42	1.01	0.63	6.51	3.23	1.60
Netherlands	0.11	1.55	0.28	2;94	2.44	2.17
Portugal	1.13	0.13	0.66	0;94	0.44	0.55
Spain	2.52	0.52	0.63	3.51	2.21	0.73
Sweden	0.89	0.45	0.28	9.08	0.38	7.25
United Kingdom	2.28	2.76	0.28	5.78	6.10	1.22
<b>15 EU Total</b>	<b>31.1</b>	<b>12.9</b>	<b>9.9</b>	<b>67.6</b>	<b>31.0</b>	<b>35.3</b>

source: FAO



# A generally healthy forest

## ECOSYSTEM MONITORING NETWORK

Faced with the growing damage caused by atmospheric pollution or decay, a large network has been set up under the aegis of the UN-ECE and the EU to monitor the forest ecosystems. At present it covers 35 countries and includes the following two monitoring levels:

- a yearly account of the state of the tree crowns, over more than 20,000 sample plots and 435,000 sample trees (of which 9,490 and 148,900 respectively are in the EU).
- closer monitoring of the ecosystem functioning parameters - soil, chemical composition of leaves, growth, climate, atmospheric deposits, etc. - of the 858 permanent observation sample plots (of which 501 are in the EU).

## FORESTS AND FIRE

Most fires are confined to the Mediterranean region. Although their number is constantly increasing, the area annually destroyed by fire has not changed and testifies to the progress made in fire-fighting measures.

Fire hazard can be reduced by careful preventive and monitoring measures, but for it to be effective, action will have to be taken at the forest, but also the land use planning, levels.

## Area of forest and other wooded land destroyed by fire annually

(1992-94 average)

	Area
Spain	109,000
France	19,000
Greece	46,000
Italy	61,000
Portugal	49,000
Other countries	7,000
<b>15 EU Total</b>	<b>290,000</b>

source: UN-ECE/FAO

## PHENOMENA OF DAMAGE

Widespread atmospheric pollution has been held responsible for the recent general forest decay observed in some regions of Europe. Initially concentrating on sulphur compounds whose emission has dropped sharply over the last twenty years, the focus today is on atmospheric pollution (ozone, nitrogen compounds, etc.). Damage to forests tends to be on the rise without a direct cause-effect link being clearly established. Besides pollution, decay is also caused by other factors - natural, biotic (insects, disease) or climatic (drought). The fragile stands, unsuitable to the site conditions, are particularly vulnerable.

### Defoliation in 1996

(in % of sample trees, including all species)

Defoliation category	0	1	2+3+4	number of trees
Austria	65.7	26.4	7.9	7,682
Belgium	40.9	37.9	21.2	3,235
Denmark	40.0	32.0	28.0	1,248
Finland	60.6	26.2	13.2	8,732
France	53.3	28.9	17.8	10,800
Germany	42.8	36.9	20.3	62,421
Greece	42.2	33.9	23.9	1,864
Ireland	55.3	31.7	13.0	441
Italy	35.8	34.3	29.9	5,778
Luxembourg	30.6	31.9	37.5	1,170
Netherlands	38.7	27.2	34.1	4,975
Portugal	58.4	34.3	7.3	4,260
Spain	29.1	51.5	19.4	11,016
Sweden	53.6	29.0	17.4	16,337
United Kingdom	43.3	42.4	14.3	8,952

0 = zero • 1 = slight • 2 = average • 3 = high • 4 = dead trees

source: ECJUN-ECE, 1997

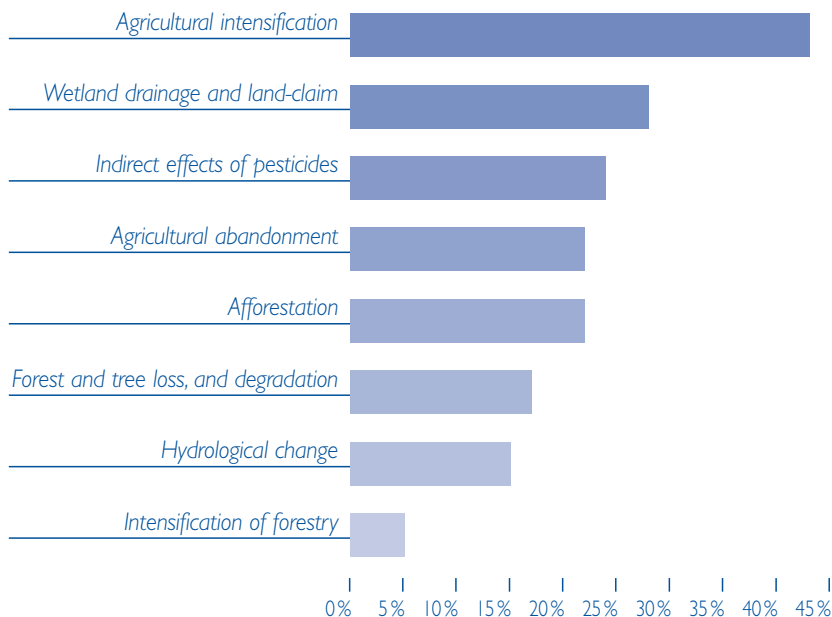
# Overview

## of avifauna in European forests

More than 130 European species of birds live in a forest at some stage of their life cycle. The existence of some of these species is threatened:

- endemic species in a restricted geographic habitat: the Canary Islands, Madeira, Corsica, Scotland.
- or species with special ecological requirements, such as the redstart, the white-collared flycatcher, and the smew, which nest in hollow trees.

### Percentage of threatened species affected by different phenomena



Note: The percentages do not all add up to 100. Several phenomena can affect the same species and not all the non-forest phenomena are shown on this graph.

source: Birdlife international

Amongst the species found in the European Union but threatened elsewhere in the world, only three, though less than 1/5th of the threatened species (essentially sea and wetlands birds), have been mentioned.

Rated as vulnerable, they are the following:

- the Greater Spotted Eagle (*Aquila clanga*), a bird of prey. Nesting in the forests of East Europe, it migrates and winters in the Union, but only breeds in Finland.
- two pigeons, the *Columba boillii* and *Columba junoniae*, endemic species of the Canary Islands, Spain.

Changes in forest habitats is not the principal cause for the decline of avifauna. Through careful forest management (preserving hollow trees, setting up borders, maintaining diversity of tree species and stand structures, etc), forests can continue to play a major role for the avifauna.

**EUROPEAN PARLIAMENT** • Directorate General for Research / Agriculture, Fisheries, Forest and Rural development Division, Bâtiment Schuman, L-2929 Luxembourg  
tel : + 352 43 001 • fax : + 352 43 002 7719 • <http://www.europarl.eu.int/> • e. mail: [pducci@europarl.eu.int](mailto:pducci@europarl.eu.int)

**EUROFOR** • Office national des forêts • 2 avenue de Saint-Mandé, F-75570 Paris Cedex 12  
tel : + 33 1 40 19 59 04 • fax : + 33 1 40 19 78 03 • <http://www.onf.fr> • e. mail: [dtconf@calva.net](mailto:dtconf@calva.net)

**EUROPEAN COMMISSION** • DG I - IA & IB External Relations / DG III Industry / DG VI Agriculture DG VIII Development / DG XI Environment / DG XII Research  
Rue de la Loi 200, B-1049 Brussels  
tel : + 32 2 299 11 11 • fax : + 32 2 295 01 38 • <http://europa.eu.int/en/comm.html>

**EUROSTAT** • Statistical Office of the European Communities  
Bâtiment Jean Monnet, rue Alcide de Gasperi, L-2920 Luxembourg  
tel : + 352 43 013 3454 • fax : + 352 43 013 2594 • <http://europa.eu.int/en/comm/eurostat/>

**UNITED NATIONS- UN-ECE** • Trade Division, Timber Section, Palais des Nations, CH-1211 Geneva 10  
tel : + 41 22 917 2874 • fax + 41 22 917 0041 • <http://www.unece.org/trade/timber/>

**UNITED NATIONS- FAO** • Forestry Department  
Viale delle terme di Caracalla, I-00100 Rome  
tel : + 39 6 570 54 778 • fax : + 39 6 570 53 024 • <http://www.fao.org>

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