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Second Report of the European Community to the Conference of the Parties of the Convention on Biological Diversity

THEMATIC REPORT ON FORESTS AND BIODIVERSITY

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ACRONYMS

ACP	Africa-Caribbean-Pacific
ALA	Asia-Latin America
BEAR	Indicators for Forest Biodiversity in Europe
BET	Biodiversity Evaluation Tool
BP	Before Present
CAP	Common Agricultural Policy
CBD	Convention for Biological Diversity
CEC	European Commission
CHM	Clearing House Mechanism
COD	Council Decision
COM	Commission
COP	Conference of the Parties
COST	Co-operation in the field of Scientific and Technical research
DFID	Department for International Development
EAGGF	European Agriculture Guidance and Guarantee Fund
EC	European Community
ECOFAC	Ecology of Central African Forests Programme
ECCP2	European Climate Change Programme, phase 2
EDF	European Development Fund
EEA	European Environmental Agency
EFI	European Forestry Institute
EFICS	European Forest Information and Communication System
EIA	Environmental Impact Analysis
ETFAG	European Tropical Forestry Advisory Group
EU	European Union
FAO	United Nations Food and Agriculture Organisation
FIRE	Fire Monitoring and Mapping
FIRS	Forest Information Remote Sensing
FLEGT	Forest Law Enforcement, Governance and Trade
FSC	Forest Stewardship Council
FTBA	Forest Types for Biodiversity Assessment
GDP	Gross Domestic Product
IDT	International Development Target
INCO-DEV	International Co-operation for Development
ISPA	Introduction to pre-Accession Strategy
IUCN	World Conservation Union
LCIE	Large Carnivore Initiative for Europe
Mai	Mean Annual Increment
MCPFE	Ministerial Conference for the Protection of Forests in Europe
MEDA	European Mediterranean Programme
MS	Member States
NFP	National Forest Programme
PA	Protected Area
PROFOR	UNDP Programme on Forests
PROSEA	Plant Resources of South-East Asia
PPG7	G7 Pilot Programme to Conserve the Brazilian Rainforest
SAPARD	Special Accession Programme for Agriculture and Rural Development
SEAs	Strategic Environmental Assessments
SFM	Sustainable Forest Management
SPWPs	Secondary Processed Wood Products
TACIS	Technical Assistance to the Commonwealth of Independent States (Central Asia)
TFAP	Tropical Forestry Action Programme

TFBL	Tropical Forestry Budget Line
TFIS	Tropical Forest Information System
TREES	Tropical Ecosystem Environmental Observation by Satellite
UN	United Nations
UNCED	United Nations Conference on Environment and Development
UNECE	United National Economic Commission for Europe
UNFF	United Nations Forum on Forests
UNFCCC	United Nations Framework Convention on Climate Change

1 Forests and Biodiversity

1.1 Introduction

1. This report examines the activities of the European Community (EC) in respect of forest biodiversity from two perspectives. The first is that related to biodiversity within the EU, the second concerns the influence of the EC on forest biodiversity in countries outside the EU, both regionally within Europe, and globally, particularly in developing countries. The linkage between the two is the substantial trade in forest products into the European Union from third countries. The interest in and support for biodiversity issues outside the European Union is given major force by the volume of trade in forest products, especially where that trade has its origin in tropical and developing countries and countries in transition.

2. Unlike the Agriculture or Fisheries sectors, the Treaty establishing the European Community does not explicitly mention forestry as a sector for which the Community has competence. Hence forestry issues are mainly dealt with by the EU Member States (MS). However, Community policies in areas such as agriculture and rural development, research, regional and industrial policy, the environment, development co-operation and trade can have an important impact on forests; thus it nevertheless has an important role to play and an influence on forest biodiversity. Furthermore, as the EU increasingly speaks with one voice at UN and other international forest related fora, Community co-ordination related to international forest policy is also more and more required. The European Community has therefore its specific role to play in implementing internationally agreed actions related to forests such as the CBD Work Programme on Forest Biological Diversity.

2 Forests and Biodiversity in the EU

2.1 Historical Background

3. Forest biodiversity in Europe was profoundly influenced by glaciation, the last ice age having finished only some 10 000 years ago. During the ice age, most of northern Europe was covered by, or strongly influenced by, glaciers. Following the retreat of the ice sheet, land was recolonised by forest but the species range was limited. In Southern Europe, refugia were created occupied by plants and animals moving south, away from the ice. As the ice retreated, some of these species moved upwards to higher elevation areas rather than northwards and thus the flora are inherently richer than in the North.

4. Grubb (1987)[1] gives a figure of 50 indigenous tree species for Europe north of the Alps and west of Russia, of which 5 are conifers. Harris[2] calculates 200 indigenous tree species for Europe as a whole (defining Europe as north of the Mediterranean and west of the Urals, excluding Turkey – the coverage of *Flora Europaea*). Both authorities exclude micro-species of e.g. *Sorbus spp,* since the total would otherwise be at least 600. These numbers are of course much lower than the species richness of tropical forests. Whitmore, (1998)[3] quotes 307 tree species per hectare at Cuyabeno in the Ecuadorian Amazon. The more limited biodiversity of European forest means that even relatively small areas may contain a full range of species for that location. This has significant implications for conservation of forest biodiversity, as habitat fragmentation tends to be less of a problem for forest biodiversity conservation than in more complex forest ecosystems.

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1 Grubb, P J (1987) – Global trends in species-richness in terrestrial vegetation: a view from the Northern Hemisphere. In *Organisation of Communities, past and present*. Eds J H R Gee and P S Gillies, Blackwell, Oxford

2 Stephen Harris, the Herbarium Oxford Forestry Institute, personal communication. This numerical assessment was originally made at the request of the New York Botanic Garden.

3 Whitmore, T C (1998) -- *An Introduction to Tropical Rain Forests* (2 ed) OUP, Oxford

5. The second major influence on European forests has been the impact of human activity. It is generally agreed that there is little if any primary forest existing within the EU. The majority opinion is that there is none and a figure of less than 2% finds no dissenters. The EEA 2002 Environmental Assessment for Forests[4] records around 4% of the Swedish forests as being largely unaffected by human activity and a somewhat smaller proportion in Finland. In both cases, these areas are boreal forests in the far north.

6. As well as reducing overall forest cover, human impact has altered species balance and forest age-class structures (Klose, 1985 [5]; Rackham, 1994 [6]for details). One example is the temperate broadleaved forest that originally spread across lowland England, France, Germany and the Low Countries. Small-leaved lime, *Tilia cordata*, was the most common tree in this woodland according to pollen analysis. It is now a relatively rare species, in part because it had limited uses. By contrast, hornbeam, *Carpinus betulus*, naturally an uncommon species was widely encouraged as a first-class fuel and charcoal species. There remain large areas of hornbeam coppice in northern France, although the demand for fuel from them has long since disappeared. Parts of Europe such as France and Italy still have very large forest areas classed as coppice - showing how the influence of history remains strongly present today. Spain had substantial areas of *dehesa* savanna, used for silvo-pastoralism. Nineteenth and twentieth century interventions aimed at conversion of these savannas to more "productive" plantations, a trend that has now been halted.

7. Europe underwent severe deforestation between the ninth and nineteenth centuries. The earliest primary causes of deforestation were clearance for agricultural settlement, followed by degradation due to extensive grazing and the collection of fuelwood, and leaf litter collection for bedding and as fertiliser for arable land.

8. However, deforestation was not a continuous process. There were several forest recolonisations, notably that following catastrophic human mortality from a succession of plagues in the fourteenth century that affected nearly all of Europe and led to the abandonment of settlements and croplands.

9. As urbanisation and industrialisation intensified, cutting for fuelwood to supply mining, smelting and glass making, as well as domestic demand, became more widespread. Fuelwood and charcoal were exported, especially down rivers such as the Rhine, meaning that the influence of industrial demand was widespread. Denmark's forests were heavily cut for both national use and exports. Shipbuilding was an important use of timber in Italy, Netherlands, Portugal, Spain and UK leading to both specific plantings and imports, from Sweden and the Baltic States and later from the tropics.

10. The reasons for the reversal of deforestation are complex but perhaps the most important is the use of coal as an alternative to wood fuel, particularly valuable in industrial cities and made possible by improved mining technologies in the eighteenth and nineteenth centuries and by the expansion of railways. At the same time, intensified agriculture – including the use of chemical fertilisers – led to reduced cropping areas and increased residues being available for feeding livestock. In the late nineteenth century, both the importation of agricultural products from overseas and emigration of the population, especially from rural areas reinforced this trend. Forestland thus became available, free from grazing and other uses, and the planting of trees was seen as both economically and environmentally valuable.

11. In much of the higher but not mountainous, regions of Europe from the Atlantic forests of Spain to the Caucasus and north to southern Sweden, beech – *Fagus sylvatica* – would be the climax forest cover. Replanting of cleared areas was often, however, with quick growing

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4 Environmental Signals 2002, Chapter 14, Forest

5 Klose, F (1985) – *A brief history of the German forest – achievements and mistakes down the ages*. GTZ, Eschborn

6 Rackham, O (1997) – *The Illustrated History of the Countryside*. Phoenix, London

spruce or pine, both being cheap and easy to establish. Thus although the forest may have been replaced, like was not always replaced with like.

12. From the late eighteenth century onwards, the discipline of scientific forestry was developed in Central Europe, especially in Germany. This was very much rooted in closely following nature, and drew upon the accumulated knowledge of centuries of “managing” forests and woods and utilising different species although in application the requirements of the dominant stakeholders were reflected strongly in choice of species and management system. In the lowlands, coppice with standards provides both construction timber and fuelwood. At higher elevations, selection systems provide protective functions and a range of different sized material from a narrow species base. Each of the “systems” integrates ecological potential and stakeholder needs, the underlying principle being to cut only the increment i.e. sustained timber yield.

13. Formal forest management systems spread throughout continental Europe (although in Southern Europe it proved difficult to apply Central European forest concepts to the drier oak and cork woodlands). The same concepts arrived in UK and Ireland through the appointment of German foresters to India and thence through the forestry education system.

14. Nineteenth century Europe was also characterised by huge changes in land ownership, the church and much of the aristocracy losing forest land to individuals and communities. But there are also strong communal forests in, for instance, Netherlands and Italy, whose ownership dates back more than 1000 years. Large private forests still exist in some MS although much of the church, royal and aristocratic land in Central and Southern Europe was allocated to small private owners. In Finland and Sweden, where the population pressure was lower, individual holdings are generally larger and can be traced back to direct land colonisation by farmers.

15. This has considerable implications for present day interventions, especially with securing service values such as biodiversity, which generate benefits to wider society although the direct and opportunity costs fall on the owners. Perhaps the greatest challenge is where the ownership pattern is very fragmented and especially so when landholdings are extremely small.

16. In the past decade, the productivity of agriculture in Europe has led once again to land use changes with reductions in both arable and pasture land usage. Conversion of land to forest is an obvious choice but even where no interventions are carried out, natural processes lead to recolonisation by trees. This may have significant effects on landscape and tourism values, for example skiing and other winter sports rely on there being upland pastures and clear runs within an area that would naturally be predominantly forest covered.

17. Overall, forest biodiversity issues within the EU must be seen against the following background:

- Comparatively simple and generally robust forest ecosystems;
- Major human influences on all forest ecosystems, “natural” forests may only exist in the far north of Sweden and Finland, and even here there is diversity of opinion;
- Much of the current “forest” area is the result of relatively recent interventions and not natural in the sense that it is not the original forest that existed prior to human colonisation, even though regenerated naturally and delivering many service values.

Box 1 – The forces shaping European forests

1. After the last ice age (ending 10,000 years ago) Northern Europe has been recolonised by only a limited range of tree species so far. Southern Europe has a richer range, since refugia were created occupied by plants and animals moving south. Mediterranean species have remained diverse.
2. The second major impact has been human activity. Species balance has been altered as humans have encouraged species of value to them and discouraged others, and age balance has been disturbed by the value of coppice woodland.
3. Deforestation occurred initially as a result of land clearance for agriculture and pasture, and later to supply fuelwood and charcoal in huge quantities for towns and industries. Shipbuilding demands also created deforestation.
4. Reforestation also occurred during the plague in the fourteenth century, once coal became important as a substitute for woodfuel, and as rural populations began to leave the land for cities and to emigrate to other parts of the world.
5. In the 19th century huge changes in land ownership passed much forest land from church and aristocracy to communities and individuals.

The situation today

Opportunities for biodiversity include: secure forest ownership, revenues to local owners, good governance, well developed and applied legislation, increasing forest cover, many forests protected, the development of nature-oriented forest management and certification.

Threats for biodiversity include: few undisturbed natural forests left and very limited remaining areas of some forest ecotypes, forest fragmentation, establishment of large-scale exotic plantations, low incomes from forests and therefore pressure for short- term economic benefits from the land. Finally, the predominance of small private forests in Europe may present challenges for biodiversity planning.

2.2 Forest Resources of EU

18. There are substantial differences in forest type, forest cover and ownership structure within the EU. In brief:

- Austria, Finland and Sweden are heavily forested and have substantial forest products industries based predominantly on coniferous forest;
- France, Greece, Italy, Spain and Portugal have Mediterranean woodland, managed primarily for protection and within which fire is potentially a serious threat. France, Italy and Spain in particular also have large areas of temperate forest and mountain forests, including coppice areas, farm woodlots and community forests;
- Belgium/Luxembourg, France and Germany have a mixed ownership structure and a range of forest types with production being significant but not normally the primary aim, specifically in state and community owned forests;
- Denmark, Ireland Netherlands and UK have a very low forest cover and predominantly artificial forest based on plantations although the objectives of management have been widened in the last decade to encompass service values;
- SW France, N Spain and parts of Portugal have large areas of industrial wood plantations, mainly destined for pulping.

Table 1 – Forest Area Details

Member State	Forest Area				Forest Cover	Forest per cap	Annual Change 1990 – 2000
	2000	Mgmt Plans	Certified (FSC and PEFC)	Protected			
	000 ha	%	%	%	%	ha	%
Austria	3886	100%	100%	20%	47.0%	0.48	0.2%
Belgium	646	100%	1%	25%	21.3%	0.06	-0.2%
Denmark	455	100%	0%	20%	10.7%	0.09	0.2%
Finland	21935	100%	100%	11%	72.0%	4.25	0.0%
France	15341	100%	2%	18%	27.9%	0.26	0.4%
Germany	10740	100%	59%	67%	30.7%	0.13	0.0%
Greece	3599	56%	0%	29%	27.9%	0.34	0.9%
Ireland	659	84%	66%	1%	9.6%	0.18	3.0%
Italy	10003	11%	0%	19%	34.0%	0.17	0.3%
Luxembourg	86	100%	0%	1%	33.3%	0.20	0.0%
Netherlands	375	100%	27%	24%	11.1%	0.02	0.3%
Portugal	3666	33%	0%	17%	40.1%	0.37	1.7%
Spain	14370	81%	1%	24%	28.8%	0.36	0.6%
Sweden	27134	100%	45%	0%	65.9%	3.05	0.0%
UK	2794	83%	38%	32%	11.6%	0.05	0.6%
EU	**115685**	**86%**	**40%**	**18%**	36.9%	0.31	**0.3%**

Source – FAO 2001[7], PEFC 2002[8], FSC, 2002[9]

19. Table 1 shows the differences between MS in planted as opposed to natural forest, bearing in mind that the natural forest is not, of course, virgin forest. They also show that in the decade between 1990 and 2000, the forest area of the current EU MS (not all were members of the EU in 1990) increased by 3 million ha, equivalent to an annual forest cover growth of 0.3%.

20. Attention is also drawn to the high proportion of forest under Management Plans, 86% overall. The MS with significant areas not under plans are correlated with either highly fragmented ownership (e.g. Portugal) or large areas of coppice and non-commercial scrub woodland (e.g. Italy).

21. Some 40% of the EU MS forests are certified (46 million hectares), in area terms mostly under the Pan-European Forest Certification system (34 million hectares in 2002), although FSC is also widely used (12 million hectares in 2002). Countries having more than 25% of their forests certified are Austria, Finland, Germany, Ireland, Netherlands, Sweden and UK.

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7 State of the World's Forests 2001, FAO, Rome 2001 – also available at www.fao.org

8 Pan-European Forest Certification Council Information Register, Statistic figures on PEFC certification, Information updated on 04/10/2002 http://www.pefc.cz/i_register/statistics.asp,

9 Forests Certified by FSC-Accredited Certification Bodies, DOC. 5.3.3 September 30th, 2002 under http://www.fscoax.org/principal.htm

The greatest difficulty encountered with certification, as noted in country statements to UNFF for example, is for small private owners. It is generally acknowledged that the problem is largely the cost of the process rather than an inability to meet the required standards.

22. EU MS also demonstrate a positive commitment to the creation of protected areas, with 18% overall having protected area status. This figure includes all six IUCN protected area categories, including so-called "protection forests" which protect landscape and water, or protect against avalanches, rather than being set-aside expressly for biodiversity conservation. The Ministerial Conference on the Protection of Forests in Europe (MCPFE, also known as the 'Pan-European Forest Process) has acknowledged that there is a PA definition problem and a specific group is developing a new European definition[10].

Box 2 – Impact of Accession on the Forest Resources of EU

Greece, Portugal and Spain's joining brought in substantial areas of Mediterranean woodland as well as forest areas with strong protection function where fire is a major influence. These three countries have 22 million ha of forest between them, an average of 0.36 ha/cap

Austria, Finland and Sweden's accession changed the EU forest resource hugely. These three countries are heavily forested and all have important forest industries. Together they contribute 53 million ha, 45% of the EU's forest area, much of which is coniferous. This massive forest resource is reflected in the contribution of 50% of the EU production of fuelwood and industrial roundwood.

Thirteen applicant countries are presently engaged in the enlargement process: Estonia, Latvia, Lithuania, Poland, the Czech Republic, Slovakia, Hungary, Slovenia, Romania, Bulgaria, Malta, Cyprus and Turkey. Accession negotiations are under way with the first twelve and the objective affirmed by the European Council in Sevilla is to complete them by the end of 2002 with those countries that are ready to join, so that they can accede in 2004.

Apart from Malta, all applicant countries have significant forest areas. The applicant countries have a total of 34 million hectares of forest. Thus enlargement will increase the amount of forest and other wooded land in the EU from 136 million hectares to 170 million hectares[11].

2.3 Biodiversity in Forest Management

23. The ecological basis of Central European classical forestry has always meant that biodiversity was considered as part of silviculture and forest management, even if not in the intense way that it is now monitored and seen as an objective. The creation of a typology of sites for species selection and silviculture has been a major element in the Central European forestry tradition. In parallel with this is the approach to forest protection and pest control where forest management practices were geared towards the maintenance of a base population of pest predators, if necessary with specific interventions to encourage the predators themselves. Forest hygiene, however, is generally quite rigorously maintained, to prevent undue pest build up and this can have negative impact on organisms that require dead and dying trees as a substrate.

24. Physical protection values, soil and water conservation and protection from avalanches are maintained by active removal of ageing trees, single tree selection systems having been developed specially for this. In Austria, one-third of the forest is primarily for protection, as

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[10] The 'IUCN Guidelines for Protected Area Management Categories' Germany: EUROPARC Federation with the assistance of the WCMC for the IUCN World Commission on Protected Areas, 1999, highlighted the problem of consistency. The MCPFE is currently developing 'Assessment Guidelines for Protected and Protective Forests and Other Wooded Land in Europe' to be adopted at the next Ministerial Conference in April 2003, see also at http://www.mcpfe.org

[11] see also OPINION of the Economic and Social Committee on the Eastward enlargement of the European Union and the forestry sector, document CES 523/2002, available at http://www.ces.eu.int/pages/en/acs/events/forestry_030402/ces523-2002/ces523-2002_ac_en.pdf

are substantial forest areas in parts of Spain, Italy, Greece and France. Active management is required to maintain effective protection functions, which may be negative for biodiversity.

25. In the main, new forests are established with ecological pioneer species that are adapted to non-forest environments. Once forest cover is created, the later succession species can be brought in, or may arrive spontaneously. Pioneer species (spruce, pine and birch for example) are quick growing, adapted to uniform stands, usually grow well together (gregarious) and have relatively light, non-durable timber. The species used have generally been conifers and, in Southern Europe, *Eucalyptus*. Often they may be totally exotic or they may be nationally native but locally non-native, especially when considering provenance.

Biodiversity considerations have gradually been given more space as economic considerations have been modified. In many places, the predominant economic focus of forest policy was reduced in the late 1980s, biodiversity began to appear as an issue to be considered in forestry practices. In most EU MS, efforts have increased in promoting environmentally friendly forest management methods, mimicking natural disturbance regimes, reducing clear cut areas, setting aside valuable forest types, increasing natural regeneration, retaining trees beyond their “economic rotation”, increasing species and stand structure diversity, promoting native species, increasing dead wood, reducing the use of pesticides and forest harvesting damages, regulating game, etc…

2.4 Forest Ownership Patterns

26. Forest ownership patterns vary widely across EU MS, the precise pattern reflecting varying political histories. In essence there are three basic classes: 20% of the forests in the EU are in state ownership, 15% communal and 65% private. The highest levels of state ownership (over 70%) are to be found in Greece and Ireland, while the MS with the highest levels of private ownership are Portugal (85%) and Austria (82%). The forest in private ownership is divided into a large numbers (around 12 million) of mostly very small private forests.

Table 2 Forest ownership in Europe

Country	Private	State	Communal
Austria	82%	15%	3%
Belgium	57%	10%	33%
Denmark	69%	26%	5%
Finland	68%	29%	3%
France	75%	10%	15%
Germany	46%	34%	20%
Greece	15%	73%	12%
Ireland	27%	71%	2%
Italy	66%	7%	27%
Luxembourg	53%	11%	36%
Netherlands	52%	31%	17%
Portugal	85%	3%	12%
Spain	67%	5%	28%
Sweden	70%	19%	11%
UK	57%	37%	6%

Source: EUROSTAT

27. Fragmentation of ownership need not mean fragmentation of the forest physically. There are plenty of examples right across Europe where a continuous forest has different owners and/or types of ownership, thus enabling ecosystem integrity to be maintained.

28. A reduced dependence on local forest products such as fuelwood, together with demographic changes in Europe, often mean significant changes to the weighting of priorities in communal forests. Economic objectives have generally become less prominent than service values in communal forests of Central Europe, although there remain communities where forest revenues form a significant proportion of the local budget (e.g. Vaucouleurs in France where the forest contributes about one-third of the annual local budget). City forests in particular have increasingly been managed for conservation, recreation and landscape.

29. Ownership is important for the implementation of actions related to forest biodiversity. Publicly owned forests can in principle be readily accorded protection status with zero production if required, although public authorities increasingly are required to enhance economic benefits from forest management. Communally owned forests are increasingly moving towards “biodiversity friendly” options although recreation use is becoming an important area of potential conflict. Private owners may require systems of support to modify practices and alter economically rational decisions to favour wider beneficiaries. Mechanisms have been established to do this in all MS but forest biodiversity will require continuous support over decades for some owners.

2.5 Economics and instruments of policy

30. The diversity of ownership and the requirements of different owners lead to a variety of demands being placed on the forest.

31. Each of the MS has forest legislation and a range of fiscal and monetary instruments to try and encourage the type of forest desired. Such mechanisms are nearly always tied to a wide range of silvicultural and environmental parameters, of which biodiversity is an increasingly important one. Support must be linked to encouraging the type of forestry required and not simply based on, for example, areas afforested. In the main, calculation of the economic value of biodiversity conservation has been rare. Most grant systems have been assessed simply by monitoring the rate of uptake, their effectiveness being largely judged in quantitative rather than qualitative terms. Within the EU the securing of forest management practice conducive to improved biodiversity values is through well developed and enforced forest policy and legislation, controlled by a system of approval, such as management plans and encouragement of less profitable but desirable practices through grants and other mechanisms. Given the fact that most forest in the EU is privately owned, such approaches are inevitable. The type and level of grants varies both between and within countries.

32. The EU Forest-based Industries constitutes an important industrial sector in the EU. In 1998, it had a production value of 319 Billion Euro (B€), a value added of 112 B€ and directly employed 2,4 million people. It represented 10% of production, added value and employment of the EU manufacturing industries (Source : EUROSTAT). The sector accounted for around 63.000 companies (excluding ten of thousands of companies of less than 20 persons) ranging from a considerable number of SME’s to a small number of large corporations in the pulp, paper and publishing sector). Details on the Forest-based and related Industries in the EU are in Table A.4.6. in Annex 4.

33. Furthermore – and here European forests differ markedly from the situation of many in some developing countries - there is generally no conflict over land ownership since boundaries are well-defined and recorded. There may be disputes but these are settled through the legal system (some conflicts over land use rights remain, such as over Sami land use rights in Northern Sweden).

34. Indigenous local knowledge has been continuously embedded in the practices of forest management for centuries in Europe. It has also been documented and made available through both the scientific and popular press for more than a century across Europe.

35. Some of the earliest legal protection for forests was to provide sport and venison for monarchs. Today, wildlife and forestry remain closely linked, not only in respect of biodiversity as Box 3 shows.

Box 3 – Forest and wildlife conflicts

Wildlife is an important component of biodiversity and as with the flora, has been greatly influenced by human activity. Given the concern with bushmeat trade and biodiversity conservation in Africa, it is relevant to note what is happening in EU where hunting is subjected to stringent controls.

The most significant link between forests and wildlife comes with deer, especially Roe deer *Capreolus capreolus* and Red deer *Cervus elaphus*. Their natural predators – wolves and lynx – have long been extinct over most of the EU and replaced by humans. Hunting fees can provide significant revenue for forest owners; in certain localities it may well exceed income from timber.

The movement away from large-scale planting to regenerate forests, towards increased use of broadleaves, mixtures and irregular forests, means that not only is the regeneration more vulnerable to damage, as it occurs all over the forest, but that fencing becomes either ineffective or prohibitively expensive. Deer browse selectively and it is difficult to hunt successfully in irregular forests because young crops give too much cover. Very high stocking rates lead to damage to regeneration and, at certain times of year, to bark stripping. Deer control may lead to conflict of two kinds. Firstly, a proportion of the population in Europe is opposed to shooting deer. Secondly, those who hunt for recreation prefer high stocking rates of deer. Foresters may thus be caught between two opposing lobbies, neither of which is supportive of their aim of reducing deer numbers in order to enhance forest structure.

Overall, the change from planting to natural regeneration and to irregular systems based on native species leads to more stable forests and to improved biodiversity values. It becomes possible to mimic natural tree distribution and disturbance regimes, provide variety in species and stand structures, leave more dead wood, etc. However, the effective control of deer numbers is an essential pre-requisite to the success of such systems.

2.6 Atmospheric Pollution

36. The impact of atmospheric pollution on forests significantly advanced both concern for biodiversity and international co-operation on forests within Europe. Although forest dieback proved to have complex causes, of which chemical pollutants was only one, it had two major impacts that are relevant to the CBD. Firstly, it led to substantial funding being made available, from European Community and MS sources, to encourage and support forest scientists to co-operate more actively and fully than was previously possible. The importance attached to the understanding and monitoring of forest decline led to co-operation over much of Europe, involving EU MS and others that are not members of the EU. It was an important precursor to the establishment of the MCPFE.

37. Secondly, in terms of biodiversity, the scientific studies of forest decline provided much more comprehensive information than had been available previously. This had two unforeseen benefits:

- Firstly, the gathering of information on forest ecosystems at a far more intensive level than had ever been done before on such a scale provided greatly increase awareness and knowledge of biodiversity and tree physiology;
- Secondly, the realisation that forests based on trees planted “off-site” – such as conifers on natural beech sites – were very vulnerable to losses from damaging influences, including gales, and furthermore, conifers made soil and water acidification worse.

Box 4 – Forest decline and atmospheric pollution

Forest decline was first observed in the 1970s with the realisation that many forests were suffering severe crown loss and in some cases substantial mortality. Although the processes are complex, atmospheric pollutants – especially nitrogen and sulphur oxides – were seen as main culpable.

Conifers are particularly efficient at scrubbing pollutant from the atmosphere, which can lead to acidification of the soil profile and thence to impoverished nutrition and acidified run-off. Parallel research identified acidification of lakes in Scandinavia from similar causes.

Since that time, research has shown that drought and stand stocking are also important parameters as is the planting of trees on sites to which they are not well suited.

The main European Commission instrument has been Council Regulation (EEC) No 3528/86 on the protection of the Community's forests against atmospheric pollution, recently extended through 2002. This regulation has facilitated substantial, cross-border research and information exchange, including the development of standardised systems of damage assessment.

The EEA Environmental Signals 2002 report notes that, although damage levels have stabilised from 1995 onwards almost one-quarter of Europe's trees suffer damage from atmospheric pollution.

The median value for nitrogen deposition (14 Kg/ha/an) both stimulates production and raises susceptibility to damage.

Although there has been progress in halting forest damage, there is still much to be achieved in further reduction of pollutants and in modifying forest composition and structure so as to make forests more resilient and more diverse.

www.icp-forests.org

38. Damage from storms, such as those of 1990, 1999 and 2000, which affected Denmark and the Saar valley, Lorraine, Vosges and Black Forest areas in France and Germany, as well as the Landes region of France added impetus to the changes in silvicultural practice. Thus switches from coniferous to broadleaved species and to irregular as opposed to uniform stands continue to take place, especially in France and Germany. The UK, which concentrated on plantations and monocultures, is also moving rapidly in similar directions where conditions allow.

39. The rise of green political issues in Europe was given a specific forestry focus by concern over acid rain and forest dieback from the late 1970s onwards. The political attention following this and the growing concern over tropical deforestation was part of the groundswell of international opinion that led to the Rio Summit and thence to both CBD and UNFCCC as well as to the MCPFE and the UNFF.

2.7 Cross-border Initiatives

40. In addition to bilateral and regional research and information initiatives on atmospheric pollution and forests, the most significant development was probably the Ministerial Conference on the Protection of Forests in Europe (MCPFE). Started in 1990, this Pan-European initiative to provide a co-operative forest policy forum brings together 41 countries in Europe, and includes the European Commission. It also has 13 observer countries and 26 observer organisations. Through a joint initiative with the pan-Ministerial Process *Environment for Europe*, a work programme on *Conservation and Enhancement of Biological and Landscape Diversity in Ecosystems 1997 – 2000* was developed. MCPFE utilises Expert Meetings and Working Groups to take forward its initiatives.

41. MCPFE has catalysed important policy agreements related to forest biodiversity. An important starting point was the definition of Sustainable Forest Management:

> *"Sustainable management means the stewardship and use of forests and forest lands in a way, and at a rate, that maintains their biodiversity, productivity, regeneration capacity, vitality and their potential to fulfil now and in the future,*

relevant ecological, economic and social functions, at local, national and global levels and that does not cause damage to other ecosystems."

42. This definition paved the way for actions to develop criteria and indicators for sustainable management, including relevant biodiversity indicators, and appropriate guidelines for forest management consistent with these. MCPFE operates through co-ordinated national programmes and in this regard, the European Community has greatly strengthened national initiatives, particularly through its funding of joint research and information programmes. MCPFE also operates in close concert with wider international initiatives such as UNFF.

43. The 1997 – 2000 work programme focused on enhancing biodiversity indicators and improving knowledge of the impact of forest management practices on biodiversity as pre-requisites for the development of guidelines. It also provided a mechanism for improving conservation value through optimising synergy of ecological networks established across national borders, thus contributing to the NATURA 2000 protected area programme.

44. In addition, the 1997-2000 programme included actions to explore the place of forest ecosystems within land use planning and the cross-impacts with other sectors. This element is of particular importance if the aim of sustainability is to be achieved.

45. National Forest Programmes have been identified as a major vehicle for advancing forest biodiversity by MCPFE, and by UNFF, and will be key tools for the MS and the EU as a whole. This is strongly recognised within the EC Forestry Strategy. The diversity of ecology and ownership within the EU makes the need for close co-operation on information essential to ensure it is consistently interpreted, if wider synergy is to be successfully achieved in both conservation networks and in actions to enhance forest biodiversity generally. The supporting role of the Commission and the use of community wide instruments are also embedded firmly in the EC Forestry Strategy.

Box 5 – Certification

Certification is a voluntary tool that allows consumers of forest products to have confidence that the material labelled has come from a sustainably managed source and, through the chain-of-custody procedures, that it has been legally supplied. The requirements of properly conducted certification schemes include adequate measures of biodiversity conservation.

The 1998 EC Forest Strategy states that European forest-certification schemes and related labelling should be based on criteria and performance indicators comparable and compatible with internationally agreed principles. In addition, they should respect the following general principles: voluntary nature, credibility, transparency; cost effectiveness participation of all related interested parties, open access and non-discrimination with respect of forest types and owners. One essential element providing credibility is the independent audit of forest management and chain of custody.

The 2002 6th Environmental Action Programme Common Position includes the activity to "stimulating the increase of the market share for sustainably produced wood products inter alia through encouraging certification for sustainable forest management and encouraging labelling of related products."

EU member states have made rapid progress with certification of their forests although there remains a difficulty of encouraging the smaller owners to have their forest certified. The main problem lies with the fixed costs of securing certification - this is an area that is under discussion as a global issue.

Two schemes have mainly been applied within the EU, the Forest Stewardship Council and the Pan European Forest Certification Scheme. The debate on which system is the more credible is still going on and views vary considerably among the various stakeholders.

Globally, certification is in a process of rapid development, for temperate and tropical forests, and there are likely to be considerable changes to the current position in the next few years. The area of forests certified for sustainable management has expanded rapidly to over 90 million hectares world-wide, with around 95 % being in the UN Economic Commission for Europe (UNECE) region.

Box 6 – MCPFE Actions and Related EC Activities

The first meeting in Strasbourg (1990) concentrated on forest degradation and adopted 6 resolutions

S1 – European network of permanent sample plots for monitoring forest ecosystems

S2 – Conservation of forest genetic resources

S3 – Decentralised European databank on forest fires

S4 – Adapting the management of mountain forests to new environmental conditions

S5 – Expansion of the EUROSILVA (Franco-German) network of research on tree physiology

S6 – European network for research into forest ecosystems

The Commission's support for work on atmospheric pollution and fire relate closely to S1 and S3, while its support for cross border research links to S6

The Helsinki meeting in 1993, following UNCED, brought civil society into MCPFE. This facilitated the development of regional approaches to the outcome of UNCED. Four resolutions were adopted, on:

H1 – General guidelines for sustainable management of forests in Europe

H2 – General guidelines for the conservation of the biodiversity of European forests

H3 – Forestry co-operation with countries with economies in transition

H4 – Strategies for a process of long-term adaptation of forests in Europe to climate change

Resolutions H1 and H2 have clarified the common understanding of SFM in Europe. The Commission has supported this work, e.g. through the BEAR initiative. The LIFE instrument is especially relevant to resolution H3, as is EC general economic co-operation. Commission supported research through the Framework programmes and COST is very supportive of the research needs identified at both Strasbourg and Helsinki

In 1998, the Lisbon meeting adopted two resolutions:

L1 – People, forests and forestry – enhancement of the socio-economic aspects of sustainable forest management

L2 – Pan-European Criteria, Indicators and Operational Level Guidelines for sustainable forest management

Resolution L2 represents the formal adoption of the work prepared under Helsinki Decisions H1 and H2, which provide the basis for SFM within Europe generally and the EU in particular.

The next ministerial Conference will be held in April 2003 in Vienna.

3 Review of European Community Actions in respect of Forests and Biodiversity

3.1 Main Policy Measures

46. As a field in which the Community does not have exclusive competence the Community's activities in forestry must follow the principle of subsidiarity (in accordance with Article 5 of the Treaty). The subsidiarity principle is intended to ensure that decisions are taken as closely as possible to the citizen and that constant checks are made as to whether action at Community level is justified in the light of the possibilities available at national, regional or local level. Specifically, it is the principle whereby the Union does not take action (except in the areas which fall within its exclusive competence) unless it is more effective than action taken at national, regional or local level. It is closely bound up with the principles of proportionality and necessity, which require that any action by the Union should not go beyond what is necessary to achieve the objectives of the Treaty. Thus location-specific activities such as forest management are undertaken at member state level, while activities

related to EU policies (rural development, environment monitoring, habitat protection, research, …) may be undertaken through Community action.

47. The Belgian Presidency in the second half of 2001 prepared a comprehensive document entitled *Forest Biological Diversity – Inventory of EU Policy and EU Positions in multilateral agreements*. This is a most useful document, last updated in April 2002, and available on the Belgian CHM website. [12]

3.1.1 European Union Forestry Strategy

48. As noted in the Introduction, there is no overall EU Forestry Policy and MS largely determine their forest policy at national level. There is, nevertheless, an agreed Forestry Strategy for the EU[13] (see Annex 1) and there are a number of EC regulatory and enabling instruments, which have been developed and applied which are relevant to forest biodiversity. The EU Forestry Strategy notes the diversity of forests in Europe, the importance of the forests and the trade derived from them and that the EU is a major trader in forest products. It also emphasises the importance of Sustainable Forest Management and, from this, forest biodiversity.

49. The Forestry Strategy focuses on how the Community can support forestry and forest biodiversity in MS. It recognises a number of key issues, including

- endorsing sustainable forest management as defined by the 1993 Helsinki Ministerial Conference on the Protection of Forests in Europe and the multifunctional role of forests as an overall principle for action in the EU

-the principles of subsidiarity and shared responsibility and the need for specific approaches for the different forest types, recognising the wide range of natural, social, economic and cultural forest conditions in the EU

- the implementation of international commitments, principles and recommendations and the active participation in all international processes related to the forest sector

- the need to improve co-ordination; communication and so-operation within the EU and to better integrate forests and forest products in other sectoral common policies

- the importance of SFM for the conservation and enhancement of biological diversity and as one of many measures to combat climate change

- importance of promoting forestry as part of the socio-economic development of rural areas whilst maintaining and enhancing both ecological and socio-economic values

- the need to encourage participation and transparency with all stakeholders.

50. The Community's Standing Committee on Forestry[14] provides expert advice and co-ordination on planned measures within MS and EU wide, and has particular interest in high quality information to assist in this. There are also two Consultative Committees, on Forestry and Cork and on Forestry-based and related Industry,[15] where representatives from private and public forest owners organisations, environmental NGOs, industry sectors, and trade unions sit.

51. Reform of the Common Agricultural Policy under Agenda 2000 forms an integral part of the EU Forestry Strategy. Perhaps the most important aspect of this is its component for

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[12] www.bch-cbd.naturalsciences.be//homepage.htm

[13] Communication from the Commission on a Forest Strategy for the European Union. COM(1998)649, 3rd November 1998

[14] Established by Decision Dec 89/367/EEC

[15] Established by Decision Dec 98/235/EC and Dec 97/837/EC respectively

afforestation of agricultural land. Other rural development instruments are also relevant, for forest biodiversity, these are aimed at stimulating employment and improving the quality of the natural environment and general quality of life in rural areas. These are discussed in more detail in Section 3.2.1. below.

52. The EU Forestry Strategy also has implications for accession countries. In particular, support is identified to assist with improved forest health, especially in relation to atmospheric pollution, to the application of high standards for both Sustainable Forest Management and forest industries and to support enhanced forest sector functioning, especially in relation to high quality, harmonised statistics.

3.1.2 European Community Biodiversity Strategy and Action Plans

53. An EC Biodiversity Strategy was adopted in 1998. This contained a number of elements of relevance to forest biodiversity, which are presented in Box 7 below.

Box 7 – Forestry Objectives within the European Community Biodiversity Strategy

To promote the conservation and appropriate enhancement of biodiversity as an essential element of sustainable forest management at the national, regional and global levels

To further develop Council Regulation 2080/92 (Rural Development) to enhance its benefits to biodiversity.

To ensure that, while promoting a net increase in forest extension as a means of maximising their carbon sink function to combat climate change, afforestation is conducted in a manner that does not negatively affect ecologically interesting or noteworthy sites and ecosystems.

To promote sustainable management of forests which respects the ecological characteristics of the areas affected and to promote the restoration and regeneration of areas that have suffered deforestation.

Native species and local provenances should be preferred where appropriate. Wherever introduced species are used to replace local ecosystems, sufficient action should be taken at the same time to conserve native flora and fauna.

To promote the development of specific, practical, cost effective and efficient biodiversity appraisal systems and methods for evaluating the impact on biodiversity of chosen forest development and management techniques.

To promote international research into the impact of possible climate change on forest ecosystems, the possible adaptation of forest ecosystems to climate change and the mitigation of adverse effects of climate change by forest ecosystems as detailed in Resolution n°4 of the Helsinki MCPFE.

To promote the implementation of the general guidelines for the conservation of the biodiversity of European forests (Resolution H2 of the Helsinki Conference) and the recommendations of the IPF in relation to the conservation of biodiversity.

54. The 1998 Biodiversity Strategy was followed up in 2001 by detailed Biodiversity Action Plans[16] for four sectors: agriculture, conservation of natural resources, fisheries and development and economic co-operation. The Biodiversity Action Plan (BAP) for Agriculture mentions possibilities for financing actions for forest biodiversity conservation and sustainable use under the Rural Development Regulation (Regulation 1257/99). The BAP for Nature Conservation stresses the need for full integration of forest biodiversity in the

[16] Communication from the Commission, Biodiversity Action Plans in the areas of Conservation of Natural Resources, Agriculture, Fisheries, and Development and Economic Co-operation. COM(2001)162

Rural Development Plans developed under the Rural Development Regulation. It also mentions the need to support credible forest certification systems.

3.1.3 Sixth EC Environmental Action Programme (6EAP)

55. Overall EC environmental policy making is guided by multi-annual Action Programmes. The latest programme covering the period 2001-2010 has been adopted by the Council and European Parliament in July 2002[17]. This contains a section on forests, with objectives to:

- improve existing Community measures which protect forests and implementing sustainable forest management inter alia through national forest programmes, in connection with rural development plans, with increased emphasis on the monitoring of the multiple roles of forests in line with recommendations adopted by the Ministerial Conference on the Protection of Forests in Europe and the United Nations Forum on Forests and the Convention on Biodiversity and other fora;
- encourage the effective co-ordination between all policy sectors involved in forestry, including the private sector, as well as the co-ordination of all stakeholders involved in forestry issues;
- stimulate the increase of the market share for sustainably produced wood inter alia through encouraging certification for sustainable forest management and encouraging labelling of related products;
- continue the active participation of the Community and of Member States in the implementation of global and regional resolutions and in discussions and negotiations on forest-related issues;
- examine the possibilities to take active measures to prevent and combat trade of illegally harvested wood;
- encourage consideration of climate change effects in forestry;

3.2 Legislative Measures and EC Financial Instruments

3.2.1 Forestry in the Common Agricultural Policy

The major instrument for supporting forest biodiversity under the Common Agricultural Policy is the Rural Development Regulation 1257/99. Approaches encouraged include: forest protection (fire is the major one); enhanced ecological value and restoration of damaged forests (both highly relevant to forest biodiversity); joint management of small woodlands through owner associations (valuable for increasing wider values from small, individually owned forest parcels); improving the socio-economic potential of forests; promoting wood as a material; and the education of forest owners.

56. The Court of Auditors Special Report No 14/2000 on 'Greening the CAP'[18] refers to three regulations that came into force in 1992 aimed at taking advantage of changes to the CAP to achieve environmental benefits including forest biodiversity. Council Regulations (EEC) No

[17] Decision No 1600/2002/EC of the European Parliament and of the Council of 22 July 2002 laying down the Sixth Community Environment Action Programme, OJ L 242 of 10/9/2002.

[18] The Report, together with the Commission's replies, pursuant to Article 248(4), second subparagraph of the EC Treaty, (2000/C 353/01) reference OJ C353, 8.12.2000, Bull.7/8-2000 can be found at http://www.eca.eu.int/EN/rs/2000/rs1400en.pdf

2078/92, (EEC) No 2079/92 and (EEC) No 2080 /92 of 3 June 1992, (under the Forestry Activities under European Agricultural Guidance and Guarantee Fund, which preceded Regulation 1257/99) introduced aid for 'adoption of environment-friendly farming practices', 'early retirement of farmers' and 'afforestation of agricultural land' respectively. The 'early retirement' measures allowed the creation of ecological reserves on land taken out of production but were only used on one occasion for an area of 54 ha and are not further considered. The report particularly notes the following topics.

57. **Afforestation** There is no doubt that the physical achievements made with EC support have been impressive, with over 1 million ha of afforestation carried out and some 100 000 ha of existing woodlands improved.

58. **Roads and firebreaks**. In addition to the afforestation itself, almost 50 000 km of forest roads were created overall, permitting improved access, while 4000 km of firebreaks were established together with over 20 000 water points in the Mediterranean region where fire is a serious hazard.

59. **Forest reproductive material.** Council Directive 1999/105/EC on the marketing of forest reproductive material within the EU is an important aid to securing sound material. It has in fact proved difficult to locate the right genetic material in the required quantity: since many broadleaved trees only produce adequate quantities of viable seed every 4 to 7 years, especially in more marginal localities, additional actions may be needed to secure adequate seed supplies of local provenances of broadleaved trees.

60. **The afforestation of agricultural land.** Concern is expressed over afforestation of pastureland that has high landscape value and is important for biodiversity, especially through the biodiversity rich forest/pasture edges. Articles 26 and 31 of Regulation 1257/99 allow afforestation to be supported on land to be specified by the Member State "including in particular arable land, grassland, permanent pastures and land used for perennial crops, where farming takes place on a regular basis."

61. It would appear that greater prescription by the European Commission on the use of Community funds might be valuable in order to optimise the positive impact on biodiversity. As part of the monitoring procedures and to facilitate later evaluation, it may be useful to include specific biodiversity indicators for the current Regulation 1257/99.

3.2.2 The 1992 Habitats and 1979 Birds Directives

62. These two Directives[19] are at the core of European Community nature conservation policy. They aim to promote the maintenance of biodiversity in the EU by defining a common framework for the conservation of wild flora and fauna and habitats of Community interest.

63. Under the Directives, Member States are required to identify sites important for the conservation of threatened ecosystems (as defined in Annexes to the Directives), and to submit lists of such sites to the Commission. Those species or ecosystems which are chiefly represented within the territory of the EU, and for which therefore the Community bears special responsibility, are classified as priority sites. After consideration by the Commission, and possible requests to Member States for modifications or additions to the sites listed so as to ensure that the species or ecosystems will be adequately represented, a list of sites of Community importance is adopted. These sites form the Natura 2000 network and are to be protected under Community law, with support from Community funds also foreseen. Similarly, Action Plans for the protection of priority species are drawn up and implemented under the Directives.

[19] Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora, amended by Council Directive 97/62/EC of 27 October 1997; Council Directive 79/409 on the Conservation of Wild Birds

64. Forests are important reservoirs of biodiversity within Europe and forest ecosystems therefore constitute a major component of the Natura 2000 network. Forests account for:

65 of the 181 bird species listed in Annex 1 of the Birds Directive, of which 7 are priority species;

25 of 41 mammals listed on Annex 2 of the Habitats Directive, of which 8 are priority species; all major carnivores primarily inhabit forest ecosystems.

59 of the 198 habitat types listed in the Habitats Directive, of which 21 are priority habitats.

65. The number of sites proposed for one or more of the 59 specific forest habitat types listed in Annex I of the Habitat Directive is around 7,800, of which around 5,300 include priority forest habitat types. The EC's Biodiversity Action Plan for Conservation of Natural Resources (COM (2001) 162) has as one of its objectives that all forest ecosystem types from Annex I of the Habitats directive be assessed as "sufficiently represented" in the Natura 2000 network by 2002. Currently, the total area of proposed Natura 2000 sites exceeds 15% of the EU territory.

3.2.3 Regulation 1655/2000 concerning the financial instrument for the environment (LIFE).

Objective

66. To contribute to the development, implementation and updating of Community environment policy and environmental legislation, especially as regards the integration of the environment into other policies, and to sustainable development in the Community. The Life-Nature component in particular contributes directly to the implementation of the Natura 2000 network referred to above.

Overview

67. LIFE co-finances environmental activities in the Community and in certain non-Community countries bordering on the Mediterranean and the Baltic Sea and the countries of central and eastern Europe which have applied to join the European Union. It has three themes and operates through partially funding projects proposed by government agencies or NGOs.

Life-Nature

68. The specific objective of Life-Nature is to contribute to the implementation of the Birds and Habitats Directives, in particular the "NATURA 2000" network through nature conservation projects and the exchange of experience, including monitoring and evaluation.

69. Examples of recent projects under this instrument include:

- Two projects relating to Taiga and Boreal groves in Finland. Landowners and the public are involved to provide guidance for improved future management and protection;
- Two projects in Italy related to highly threatened ecosystems. One concerns relict populations of *Abies alba* in Central and South Italy, an interesting reversal of the norm in that beech is being cut back to allow the fir to be retained. These isolated populations could be very valuable genetic resources for the species. The second project aims to secure highly disturbed remnants of *Alnus* in the industrial outskirts of Milan, providing both public involvement and conservation;
- A project in Greece is undertaking basic preparatory work for the conservation and management of Mainalo Mountain, where *Pinus nigra* is threatened by overgrazing and

tourism. The work plans to address both these issues through preliminary education and management planning.

70. All 5 examples show innovation in that they are addressing problems in a more fine-tuned way than was previously possible.

Life-Environment

71. The specific objective of Life-Environment is to contribute to the development of innovative methods and techniques and to the further development of Community environment policy. Examples are demonstration projects and those that assist with the refinement of new initiatives and instruments to further environmental values.

72. Some recent and current projects include:

- Promotion and extension work with forest owners in France and Belgium to make them aware of biodiversity in the management of forest ecosystems;
- Two projects, in Portugal and Sweden, on air pollution. One in Portugal concentrating on detailed CO_2 budgets and the impact of various management systems on these, the second, in Sweden, on research into the value of liming on a whole catchment scale to prevent acidification and to aid recovery;
- In Sweden, a project to utilise urban woodlands for increased recreational benefit as a means of passing across concepts of forest and biodiversity conservation to owners and the wider public;
- An unusual project in Spain, which seeks to develop sustainable management for mushroom producing systems and includes detailed assessment of biodiversity values, offtake levels and the potential for rural development from such an approach;
- A joint Sweden-UK project investigating the use of satellite imagery and the web to monitor and help prevent natural and human negative influences on sustainable forest management.

73. These examples, again, show a good use of funding to encourage useful research and development ideas that can improve sustainable forest management.

Life-Third countries

74. The objective of Life-Third countries is to contribute to the establishment of capacities and administrative structures needed in the environmental sector and to the development of environment policy and action programmes in third countries bordering on the Mediterranean and the Baltic Sea, other than the countries of central and eastern Europe. It is not for accession countries.

Current Status

75. This is an ongoing important source of funds for NATURA 2000 and the application of its principles in countries outside the present borders of the EU. Life – Environment and Life – Nature are already available for accession states. This is a valuable complement to the effective progress of NATURA 2000 within the EU though funds are relatively limited.

3.2.4 Regulation 2158/92 – protection of the Community's forests against fires.

Extended by Council Decision 2001/0268 (COD) in November 2001

Objective

76. To enhance fire prevention in fire-risk areas identified by the Member States. Fire is a major cause of biodiversity loss in the Mediterranean region of the EU.

Overview

77. Each Member State has sent the Commission a list of areas classified according to the degree of risk of forest fire (Article 2 of Regulation (EEC) No 2158/92). High-risk areas are those where the permanent or cyclical risk of forest fire presents a serious threat to the ecological balance and the safety of persons or goods. Medium-risk areas are those where the forest-fire risk is not permanent or cyclical, but presents a significant threat to forest ecosystems. The other areas of the Community are classified as Low-risk areas.

78. Relevant Member States provide the Commission with their forest-fire protection plans, an account of fires that have occurred, an analysis of the causes of fire and the means of combating them, objectives to be attained, and the particulars of the partners associated with the protection of forests against fire.

Current Status

79. In 2000, there were 48 plans for high-risk areas, 27 for medium-risk areas and nine for forests straddling high and medium risk areas. These plans ensure that there are coherent protection strategies in place and also include valuable material on assessing interaction between the common agricultural policy (in particular afforestation of agricultural land) and regional planning, local farming practices and the Member States' approach to forestry management.

80. Analyses show the practices of setting fire to pasture to renew the grass cover, or of burning agricultural waste and stubble after harvesting, as the most frequent cause in cases where the cause has been clearly identified. Other frequent causes are unauthorised dumping of waste, forestry work, electricity lines and trains, hunting and shooting, and miscellaneous accidents (cigarettes, barbecues, etc.). Often, in fact, (particularly when the formal cause has not been identified), the actual cause is criminal arson, because of land speculation or other economic reasons, such as the promotion of fast growing species for pulp and paper production.

81. The Community information system on forest fires has been created with a view to monitoring and evaluating the effectiveness of the measures undertaken. It now covers 319 administrative areas in the six Member States of the Union at risk from forest fires. The system contains data on over 650 000 fires covering over 6 million hectares from 1985 to 1999. This mass of information not only provides a very detailed description of forest fire at Community, national and regional level, but is also an operational tool for monitoring and assessing the measures taken by the Member States and the Commission.

3.2.5 Regulation 3528/86 on the Protection of the Community's Forests Against Atmospheric Pollution

82. This Regulation was referred to in Box 4. It provides resources to enable a Europe-wide system of monitoring of the effects of atmospheric pollution on forests. It has also led to a better understanding of ecological factors affecting the vitality of trees and forests. The transboundary nature of atmospheric pollution means that a regional approach is particularly appropriate.

3.2.6 Regulation 1615/89 establishing a European Forestry Information and Communication System (EFICS).

Extended by Council Regulation (EC) No 400/94 of 21 February 1994.

Amended by Council Regulation (EC) No 1100/98 of 25 May 1998.

Objective

83. To set up a system to collect, co-ordinate, standardise, process and disseminate information concerning the forestry sector and its development, through forest inventories and forest databases

Overview

84. The aim of the Regulation is to collect and provide objective, reliable, comparable and pertinent information from Community and MS sources on the structure and operation of the forestry sector in the Community, and thus to:

- improve consideration of the interests of the forest sector in international discussions;
- facilitate the implementation of measures in favour of the forest sector under existing Community policies;
- facilitate implementation of Member States' policies relating to forestry or having an impact on the forest sector; and
- permit access by the general public to information on the European forest sector.

85. In 1995-97 the European Forest institute (EFI) led a consortium which performed a major study on the user requirements for forest information and for the need for harmonisation of European forest statistics. The results of this study constitute an important basis for the future development of the EFICS. The FIRS Project was established in 1994 to assist EFICS in analysing the possibility to use remote sensing (satellite and air-borne) techniques for providing geo-referenced data and information on the forest and other wooded lands of Europe. Within the FIRS framework emphasis will also be placed on the development of remote sensing-based methods for collecting data on criteria and indicators on biodiversity and sustainable development.

86. EFICS seeks to improve the quality and comparability of national inventories, based on pan-European criteria and indicators for sustainability.

Current Status

87. This programme still seeks to address the lack of harmonised data, which remains a constraint. The most recent extension of EFICS (to 2002) aims to remedy this for the following areas, all of which are relevant to forest biodiversity: forestry resources; forest ownership structures; non-commercial forest values; Community forestry measures; and forest products.

3.2.7 Pending Legislation

In 2002 the Commission made a Proposal (COM(2002)404) for a new Regulation to replace the Regulations on the Protection of the Community's forests against fire and against atmospheric pollution (referred to above). The proposed Regulation concerning monitoring of forests and environmental interactions in the Community (Forest Focus) while continuing actions on monitoring of forest fires and atmospheric pollution, would also provide support for monitoring of forest biodiversity, soils, climate change and carbon sequestration. The Commission further intends to make in the beginning of 2003 a proposal for a new regulation on EFICS (European Forestry Information and Communication System) which will cover the period 2003-2006.

3.3 EU Research Activities

3.3.1 EU Framework Programmes

88. The European Community's main instruments for funding research are the 4-year framework programmes. These programmes, with an evolving set of priorities set every 4 years, are highly competitive. Less than 20% of proposals have been accepted in the current round, and require co-operation between institutions in MS and also parallel funding. In Key Area 'Quality of Life' of the 5th Framework Programme (1998 - 2002) 220 projects have been approved with a Community budget contribution of Euro 340 million out of a total cost of 520 million. Of these proposals, 25 are in the category of "Multifunctional management of forests". In contrast to the work funded under LIFE, research projects tend to be highly scientific, rather than development and the demonstration of ideas and approaches. The two are soundly complementary. Another Key Area of the 5th FP relevant to forest biodiversity has been area Energy, Environment and sustainable Development (see below).

89. Specific biodiversity related projects in the EU 4th Framework Research and Technological Development Programme (1994 to 1998) included:

- European network for research into forest ecosystems – MCPFE resolution S6;
- Indicators for the monitoring and evaluation of forest biodiversity in Europe – related to MCPFE resolutions L2 and H2 (see Box 7);
- Regeneration of native forest stands for timber production and environmental value – related to MCPFE resolutions S2 and H1;
- Genetic diversity in the river populations of the European black poplar for evaluation of biodiversity, conservation strategies, nature development and genetic improvement - related to MCPFE resolutions S2 and H2.

90. Specifically relevant projects in the EU "Quality of Life" 5th Framework Programme (1998-2002) included:

- Effects of silvicultural regimes on dynamics of genetic and ecological diversity of European forests - related to MCPFE resolution S2;
- Nature based management of beech in Europe: a multifunctional approach to forestry – related MCPFE resolution L1
- Ecological, biological, silvicultural and economical management for optimisation of chestnut wood and alimentary production within a sustainable development frame – related to MCPFE resolution L1;
- Monitoring forests at the management unit level for fire prevention and control.

91. Specifically relevant projects in the EU "Energy, Environment and sustainable Development" 5th Framework Programme (1998-2002) included:

- Securing gene conservation, adaptive, breeding potential and utilisation of a model multipurpose tree species (Castanea sativa Mill.) in a dynamic environment (CASCADE)
- Dynamics of forest trees biodiversity: linking genetic, paleogenetic and plant historical approaches (FOSSILVA)
- Ash for the future: defining European Ash populations for conservation and regeneration (FRAXIGEN)
- Extinction risks and the re-introduction of plant species in a fragmented Europe (TRANSPLANT)

92. The EU 6th Framework Programme, currently being finalised, does not specifically include forest biodiversity in its priorities. However, forest biodiversity projects might be eligible under several wider priority elements, such as:

- Impact and mechanisms of greenhouse gas emissions and atmospheric pollutants on climate, ozone depletion and carbon sinks (oceans, forests and soil);
- Biodiversity and ecosystems;
- Strategies for sustainable land management, including coastal zones, agricultural lands and forests.

Box 8 – EU BEAR Project

Objective

To provide updated information of relevance to all interested in European forest biodiversity: forest managers, forestry and conservation organisations, local, regional and national authorities and scientists.

Overview

The project is a pan-European concerted action, bringing together expertise from 27 European research organisations to build a framework for the development of forest biodiversity indicators at various scales. It involves experts from 26 research organisations, representing 18 European countries and EFI.

Current Status

The main achievements of BEAR in the two-year period were:

- Agreement on a common scheme of key factors of biodiversity applicable to European forests.
- Identifying European-level Forest Types for Biodiversity Assessment (FTBAs).
- Indicators of forest biodiversity.
- Recommendations for elaborating Biodiversity Evaluation Tools (BETs) and establishing schemes of biodiversity indicators for assessment of forest biodiversity on a European level.
- Recommendations for elaborating Biodiversity Evaluation Tools (BETs) and establishing schemes of biodiversity indicators for assessment of forest biodiversity on the operational unit level.
- Highlighting the state of the art of knowledge to present biodiversity indicators and the need for future research.

Web-site: www.algonet.se/~bear

3.3.2 COST Co-operation in the field of Scientific and Technical Research

93. Founded in 1971, this is an intergovernmental framework allowing co-ordination of nationally funded research on a European level. Actions relevant to forestry and biodiversity include a programme on Forest reserves (protected areas), research into forests and carbon fixing and the establishment of European network for long term research into forest ecosystems.

3.3.3 General observations

94. The substantial funding provided through the European Commission for research relevant to forest biodiversity in Europe has been largely coherent with the actions identified and agreed within the MCPFE. It is thus a tangible contribution to the processes identified as required in that forum. By facilitating research that involves scientists outside the

geographical borders of the EU, as with its approach to atmospheric pollution and forests, the Commission has demonstrated a commitment to supporting forest biodiversity in wider Europe.

3.4 Summary of Actions Related to Forests and Biodiversity

95. The European Community has undertaken a number of initiatives to further forest biodiversity within the Member States. These include:

- The Birds (79/409/CEE) and Habitats Directives (92/43/EEC) which have led to the NATURA 2000 network of protected areas and required active conservation measures by the MS;
- Actions under the Common Agricultural Policy EAGGF to support MS in creating forest areas on surplus agricultural land and to improve forest health and stability;
- Improved fire control measures to protect vulnerable ecosystems;
- Research and information to improve knowledge of biodiversity and further conservation efforts, including research on forests and atmospheric pollution;
- Actions to enhance forest biodiversity in Europe generally and especially within those countries negotiating membership of EU.
- Collaborative forestry research and forest research networks

4 Institutional Arrangements

96. The institutional responsibility for forestry varies between MS and indeed in some cases within them. Forestry may be part of Agriculture/Consumer Protection, Environment or Industry. In some cases, the Forestry service may be quasi independent and the allocation of responsibility for state, communal and private forests differs from MS to MS.

97. Biodiversity is a particularly difficult issue to place. It has important linkages with other land uses, especially agriculture, and also with wider environmental issues.

98. Within the European Commission, forest biodiversity issues relating to the Member States have been divided between DGs dealing with Agriculture, Research and Environment. This results in close co-ordination between these DGs in order to favour a coherent approach.

99. A 1999 ruling from the European Court of Justice relating to Council Regulation (EEC) No 2158/92 on protection of the Community's forests found that the legal basis for the Regulation was erroneously taken to be the article of the EC Treaty establishing a Common Agricultural Policy. In fact the Court considered that it should have been based on the article establishing a Community environment policy. This will require the Council to work with the European Parliament as co-decision makers on these issues and has prompted some adjustments within the Commission.

5 Production and Consumption of Forest Products within EU

5.1 Forest Production within EU MS

100. The EU is both a major producer and a major consumer of forest products. As with any system, the more concurrent objectives that are defined, the lower will be the achievement of any single one. In the case of forests, the Community and individual MS have imposed requirements at some level to meet service values of biodiversity, soil and water

conservation, landscape and recreation. As well as incurring additional costs, these additional requirements reduce the productive capacity of the forest in respect of wood. The most widely used parameter for wood production is mean annual increment (mai), expressed as cubic metres per hectare per year. Taking figures for gross production and gross forest area in each MS, the overall average for the EU is 2.25 m^3/ha/an. Details by MS are in Annex 4, Table A4.1

101. Some would argue that, even allowing for areas set aside for non-production services and the fact that in Southern Europe there are substantial areas of low productivity Mediterranean woodland, an overall mai of 2.25 m^3/ha/an for the EU implies that the forest is not being used to its full sustainable capacity. Figures for forest production in terms of sustainable timber production suggest that only around 60% of potential sustainable increment is actually harvested. FAO (1997) give a figure of 50% for the 12 EU MS in 1995 and 70% for the Nordic region and EEA Environmental Signals 2002 provides a similar view. [see also Figure 1]

102. However, others would argue that some of the service values derived from Europe's forests (such as landscape, recreation, conservation and protection) are best achieved by not optimising production.

103. As noted in Table 1, EU is a region where forest area has increased over the past decade, a trend which continues although in some upland areas, the forest/pasture area is maintained artificially for landscape and recreation value. This increases biodiversity value, too, although the natural vegetation would be forest.

104. Although overall, the EU is largely self-sufficient, it is not entirely so and small percentages represent very large volumes. Finland and Sweden both have massive forest industries based on nationally produced material. Table A4.2 and Figures 2 and 3 show the relative self-sufficiency for two broad categories of products – fuelwood, industrial roundwood and pulp and sawnwood, veneer and plywood.

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5.2 EU MS as Consumers of Tropical Forest Products

105. It is also useful to examine the EU MS's consumption of tropical timber in respect of both primary and secondary processed wood products (SPWPs e.g. joinery, mouldings and furniture). The data used for the tables A4.3 and A4.4 presented in Annex 3 has been adjusted to reflect net consumption, thus removing the substantial internal trade within the MS in tropical forest products. All data is from ITTO Annual Review and Assessment of the World Timber Situation for 2000 and 2001.

106. Imports to Europe of tropical primary produce and logs, sawn timber and plywood are falling, but imports of value-added secondary processed material, such as furniture, are on the rise. Globally, the EU is a significant importer of tropical veneer and plywood. Individual MS have different dependencies on tropical wood for primary products such as logs, and sawnwood. In broad terms, for the EU, Africa is the main source of tropical logs and sawnwood, Asia the main source of plywood while Asia and Latin America are the sources of SPWP. The current total value of international trade in primary processed tropical forest products is between US$ 8 and 9 billion. International trade in SPWP is valued at over US$ 5 billion, and growing rapidly, thus fast approaching the value of the trade in primary tropical forest products. In 2000, one third of this trade came to the EU (Table A4.5). The longer chain of custody for such secondary processed material compared to primary produce means that it becomes even more difficult to establish whether the wood used is from sustainably or even legally managed sources.

107. These figures exclude re-exports of tropical products and there is a substantial trade in SPWP manufactured from tropical timber intra EU and from EU to elsewhere. The import of US$ 1.7 billion worth of SPWP accounted for 11% of the total EU imports of SPWP in 2000. In terms of economic activity within the EU, this trade is very significant.

108. Imports from Eastern Europe are also increasing - both logs, sawn and ply, but particularly of secondary processed material such as joinery and furniture. Much is hardwood, particularly beech and some oak. Despite the relatively poor data on Eastern European hardwood exports and production, the figures available indicate that there is little doubt about the growing influence of Eastern Europe on the European Union hardwood marketplace.

109. According to UNECE's October 2001 report, 'Accelerating Influence of Globalisation on Forest Products Markets: Uncertainty in Short-Term Market Outlook', globalisation trends are accelerating, driven by the free movement of capital, growing concentration of forest products companies and better access to forest resources.

110. The EU is a major importer of forest products and, notably, of tropical timber and timber products. Such trade is, of course, economically beneficial to both importers and exporters. Potentially, limitations on domestic forest production to favour forest biodiversity within the EU could lead to a gap in supply which could be met through imports, and this could have potential negative consequences for forest biodiversity outside the EU if obtained from unsustainably managed sources. Further work would be justified to clarify these linkages. Nevertheless there is a strong case for the EC to more explicitly support, through development co-operation, capacity building for sustainable forest management and conservation of biodiversity in those developing countries that export large amounts of forest products to the EU[20].

111. It is through support and assistance to those countries producing the timber that is consumed within EU, that the European Community can demonstrate its commitment to forest biodiversity conservation on a global scale. The following section deals in detail with international aspects of Community involvement in forest biodiversity.

[20] Information for this section comes from the two following websites: www.unece.org/trade/timber/mis.mis.htm and www.hardwoodmarkets.com

6 Review of European Commission involvement with tropical forests

112. The European Commission has been active in its commitments to tropical forests for some time. Its interest began in the mid 1980s when a chapter on drought and desertification was included in the Lomé III Convention, and led to significant European Commission involvement in the fight against desertification.

113. In 1989 the Commission's Communication on the conservation of tropical forests (COM (89) 410 final), 'The Conservation of tropical forests: the role of the Community' set out a strategy. It was the first that recognised the Commission's readiness to take on a direct role in the protection of tropical forests, in addition to that of the Member States.

114. In 1990, a Development Council Resolution (Press release 6618/90 of 29 May 1990[21]) on tropical forests established the basis for European Commission development assistance to tropical forest conservation. The resolution mentions social concerns, indigenous people's rights and forest valuation, but the main accent is still on conservation.

115. In 1991, the budget line dedicated to Actions in Favour of Tropical Forests (B7-5041,now B7-6201) was established. It was followed by the Commission Communication of 1993, 'Proposal for a Council Regulation on Operations to promote Tropical Forests', and the Regulation itself (Regulation no 362/95) was adopted in 1995. It gave European Commission tropical forest policy a definite sectoral focus, stressing trade, certification and sustainable management as well as conservation.

116. The Commission has also maintained and extended its research programmes focussing on forests and biodiversity outside the EU. Some of this was undertaken through DG Research, which has an international co-operation section for research in developing countries called INCO, under the fifth framework programme, for a total budget of € 475 million. Under INCO, more than 30 projects, in tropical forestry, agroforestry and biodiversity have already been funded for at least € 20 million. Some, more applied and directly development-related, was funded through the TFBL and ALA budget lines, and through EDF funds. The Part of the 6th Framework Programme "Specific measures in support of International Co-operation" included the priority "Rational use of natural resources including forests".

[21] http://europa.eu.int/comm/development/lex/en/1999/com_99_0554_10.htm

Box 9 – Research focussing on forests and biodiversity outside the EU

The range of topics being researched include the following

- Sustainable use, conservation and restoration of native forests in Mexico and Chile (INCO)
- NR functions, biodiversity and sustainable management of tropical peatlands Indonesia (INCO)
- Sustainable development of the Pechora region (NE Russia) in a changing environment (INCO2)
- Developing methods and models for assessing the impact of trees on farm productivity and regional biodiversity in fragmented landscapes in Costa Rica and Nicaragua INCO2
- Biodiversity conservation, restoration and sustainable use in fragmented forest landscapes in Chile, Argentina, and Mexico (INCO2)
- Conservation, genetic improvement and silviculture of rattan species in South East Asia (STD3)
- Structure and dynamics of lowland dipterocarp rain forest in Sabah, Borneo: role of the understorey and drought in primary and logged forests (STD3)
- Ecosystems of the 9th region of Chile: influence of land use on sustainability (STD3)

Two networks to pull together the findings from research and from field experience have also been funded. The European Tropical Forest Research Network (ETFRN) was established in 1991 and until now receives support from DG Research. ETFRN provides a forum for multidisciplinary research between European and developing country institutions or individuals working in the field of tropical forestry (see *http://www.etfrn.org/etfrn*). It was complemented from 1992-1999 by funding (from the Tropical Forestry Budget Line) for the Rural Development Forestry Network which focussed on lessons from development projects, and brought together senior field practitioners and national and international policy makers and donors.

117. Two 4th Framework Programmes, TREES and FIRE, monitored world-wide tree-cover and fire activity respectively, using satellite imagery. A Tropical Forest Information System allowed aggregation, analysis and distribution of comprehensive tropical forest cover throughout the tropics.

Box 10 - TREES, FIRE and TFIS

Tropical Ecosystem Environment observations by Satellites - The TREES (Tropical Ecosystem Environment Observations by Satellites) Project was established in 1991 by the European Commission's Joint Research Centre to collect accurate and up-to-date data of the Earth's tropical forest resources, pin-pointing where and why forests are disappearing.

The result was the first map of the Earth's humid tropical forest. Covering the 1992-1994 period, this provided a unique tool in that it assessed the entire tropical zone in exactly the same manner. Previous maps relied on data from a wide variety of sources, making comparisons impossible. The total area of closed tropical forest was estimated from the project at 1,165 million hectares with the following continental distribution: 202 million hectares in Africa, 260 million hectares in Asia and 704 million hectares in Latin America. Monitoring Tropical Forests from Space (TREES II) - a second phase (1996-1999) was funded by the Directorate General for Environment of the European Commission, to develop a reliable method for forest change assessment in the humid tropics using Earth Observation techniques.

In addition to the global maps and derived products, all the detailed multi-annual data collected by TREES have been integrated into the so-called Tropical Forest Information System (TFIS). TFIS is ideal for analysing zones of rapid deforestation.

At the same time, acknowledging the part played by fire in deforestation processes, in 1994 the JRC also launched the FIRE project. This seeks to process all the images provided by the NOAA satellites for the entire globe in order to reliably detect and analyse fires and their effects. The FIRE data have now been integrated into TFIS, adding an extra tier of information to the system's basic reference map, highlighting areas of intense human activity where forest fires contribute significantly to deforestation. This tool enables a better understanding of the complex relationships between forest, deforestation and human populations.
http://www.gvm.sai.jrc.it/forest/defaultForest.htm
http://www.gvm.sai.jrc.it/fire/indexFire.htm
http://www.gvm.sai.jrc.it/forest/tfis.htm

118. In the ACP context, the 1995 Lomé IV-bis Convention contained a Protocol on the Sustainable Management of Forest Resources, which focussed especially on combating the destruction of forests.

119. As far as development co-operation in Asia and Latin America (ALA region) is concerned, Regulation 443/92 covering ALA co-operation in general stresses the importance of environmental and forestry issues by allocating 10% of Community Aid to the environment, especially for the protection and conservation of tropical forests and their biodiversity.

120. In 1996 The European Commission, in close collaboration with ETFAG, the European Tropical Forests Advisory Group, commissioned and approved a set of Guidelines for Forest Sector Development Co-operation. The guidelines help to put the European Commission regulatory framework for development co-operation for tropical forests into practice. They contain general principles, themes, and practical tools addressed to forest task managers in developing country forest departments as well as donor administrations. These guidelines stress the importance of biodiversity among other factors

121. From 1992-1996 the European Commission provided funding totalling Euro 466 million to 510 projects concerning tropical forests, i.e. around € 100 million per year. Most of this came from the Tropical Forestry Budget Line (52%) and from the ALA budget lines (27%). While not all address biodiversity explicitly, most address environmental and social as well as narrower forestry concerns, and there is a notably increased commitment to conservation over the period. Indications are that more recently the level of financial commitments has not been maintained at the same level, but comprehensive information across all financial instruments was not available at the time of writing.

7 Recent EC forest and biodiversity-relevant Policy initiatives concerning non-EU forests

7.1 The 1999 Forest Communication

122. In 1999 the European Commission published its Communication on the EC approach to forests and development COM (1999) 554 final[22].

123. Its aim was to define the objectives of the European Community with regard to co-operation on the development of forestry, to identify areas where dialogue and assistance are required and set out the action planned to realise the objectives, taking into account the experience gained in recent years.

124. The main topics addressed by the Communication were as follows:

1. Forests and trees are vital assets for developing countries offering economic, social and environmental benefits, preserving biodiversity and protecting agricultural land.
2. Efforts to preserve biodiversity have intensified and the areas being planted with forest have increased. In spite of these initiatives, the area of land covered with forest continues to decline in most countries.
3. Sustainable forest management (SFM) is the principal objective of forestry development. This concept covers the whole range of environmental, economic and social benefits of forests. Obstacles to the effective implementation of SFM in natural forests are the lack of criteria and indicators for SFM, applicable management systems and relevant experience. Alternatives to SFM, such as plantations, are being used increasingly often as a means of providing wood and fibres for domestic and international markets. The certification of forests and labelling of forest products from certified sources could be a useful marketing instrument, giving consumers an opportunity to contribute to sustainable forest management.

125. The Communication analyses the environmental, economic, social and institutional functions of forests, and notes the international commitments made since 1992 which concern them. It sets out a Community Strategy in response to these givens, concentrating on the following objectives to be achieved via EU aid programmes:

- reducing uncontrolled deforestation and forest degradation;
- increasing the areas under sustainable forest management
- increasing the revenue from forest products and make its distribution more equitable;
- maintaining genetic resources and biodiversity; and
- developing research to improve forest-related knowledge.

126. The Communication and corresponding Council Resolution of 15th November 1999 emphasise the importance of EU donor co-ordination. A good foundation for this was provided by the EU Forestry Sourcebook[23], which reviewed the policies of the EC and of the main Member States involved in development co-operation in support of tropical forests.

[22] http://europa.eu.int/comm/development/lex/en/1999/com_99_0554_00.htm

[23] 'The EU Tropical Forestry Sourcebook Gill Shepherd et al London, ODI 1998.

7.2 The European Community's Development Policy (COM (2000) 212)

127. The policy, adopted in 2002, identifies six priority areas for EC development co-operation: Trade and development; Regional integration and co-operation; Macroeconomic policies linked to social sector programmes (especially health and education); Transport and infrastructure; Rural development and food security; Institutional capacity building, good governance and the Rule of Law.

128. The Policy states that environmental issues are crosscutting and must be integrated to ensure sustainable development for poverty reduction. EC development co-operation sectoral polices for transport and rural development have also noted the importance of integrating environment / biodiversity.

7.3 The *EC Policy and Approach to Rural Development* (June 2000)

129. This Summary Document of DG Development Rural Development and Food Security identified six pillars of the EC policy addressing rural poverty, based on the principles of the Amsterdam Treaty. These are: progress towards more peaceful, equitable, open and democratic rural societies; more effective and accountable rural institutions; economic policies which enable rural growth and enhance the individual assets of rural dwellers; promotion of more sustainable natural resources management, and improving the coherence between EC development policy and other related EU polices such as agriculture, trade, fisheries, environment and immigration.

130. Four of these pillars address underlying causes of biodiversity loss, in particular the lack of coherence between EC development and other EU polices. The "promotion of sustainable natural resources management" focuses on direct causes of biodiversity loss, as well as on a key cause of poverty.

7.4 Biodiversity Action Plan for Economic and Development Co-operation 2001

131. This states that continued funding is necessary through the Environment and Tropical Forest Budget Lines to support the integration of environmental / biodiversity issues into economic and development co-operation.

132. Mention should be made in this context of the 'Biodiversity in Development project', co-funded with IUCN and DFID to help Member States to increase the coherence with which they approach biodiversity issues within development. The project especially addresses ways in which the Millennium social, economic and environmental International Development Targets for 2015 can work with the objectives of the CBD. The project has produced various Biodiversity Briefs, and a document entitled *Strategic approach for integrating biodiversity in development Co-operation.* As far as forests are concerned, the *Strategic Approach* works systematically through the role of perverse and positive incentives, through the need for national integration of all biodiversity-related plans, including forest plans such as TFAP/NFPs, and recommends ecosystem approaches for the integration of rural development and biodiversity concerns. The report is available to download at: http://wcpa.iucn.org/wcpainfo/news/biodiversity.html

133. Finally, the *EC Environmental Integration Manual* was produced in 2001, and will be field-tested in 2003. It stresses the need for the integration of all policy to improve environmental quality (including biodiversity) at local, national and Community levels.

8 Main instruments for development co-operation

134. The framework within which the EC approaches tropical forests is shaped both by European Commission's own development co-operation instruments, and by its international forest commitments. The general development co-operation instruments are first examined, followed by international forest commitments in the succeeding section.

8.1 The Tropical Forest Regulation of 2000

Regulation (EC) No 2494/2000 of the European Parliament and of the Council of 7 November 2000 on measures to promote the conservation and sustainable management of tropical forests and other forests in developing countries. (Official Journal L 288, 15.11.2000)

135. The regulation's goal is to contribute to the conservation and sustainable management of forests in all developing countries (not only tropical ones), in order that the latter may meet the economic, social and environmental demands placed upon forests. Its contents may be summarised as follows:

136. The conservation and sustainable management of forests are critical for a healthy environment and sustainable development at a global level. This has been acknowledged in a number of international instruments on the environment (Convention on Biological Diversity, Convention to Combat Desertification, etc.). As a party to these Conventions, the Community is committed to take account of the common but differentiated responsibilities of developed countries and developing countries on these subjects.

137. The Regulation lays down the rules whereby operations to promote the conservation and sustainable management of tropical and other forests in developing countries could be provided with financial assistance and/or technical expertise by the Community. These include: the development of appropriate national and international forest policy frameworks; the conservation of forests of high ecological value and the restoration of degraded forest areas; sustainable forest management and utilisation; the economic viability of sustainable forest management; knowledge and information generation and management concerning forest services and products.

138. It provides for total funding of EUR 249 million for the period 2000-2006, through the Tropical Forest Budget Line. The Tropical Forest Budget Line, (in existence since 1991) has given long term funding to some important initiatives. Examples of these are given in Box 11.

Box 11 –Examples of Tropical Forest Budget Line contributions in support of Forest Biodiversity

The EC has been one of the main supporters of the **Pilot Programme to Conserve the Brazilian Rainforest** (PPG7), with commitments of about 70 M Euro. Projects include support for the sustainable use of biodiversity in Extractive Reserves and funding of a wide range of basic and applied research on Amazonian biodiversity. Additional projects funding NGO activities have included support to research into native fish species, marketing of non-timber forest products, mapping of protected and indigenous areas. Website: www.mct.gov.br/prog/ppg7

PROSEA (Plant Resources of South-East Asia) is a Foundation under Indonesia law based in Bogor, Java, with six regional offices and a publications office in Wageningen Netherlands. The programme documents and disseminates the wealth of information on plant resources in South East Asia through a databank and an illustrated multi-volume series of publications. Information covers the fields of agriculture, forestry, horticulture and botany. Prosea is dedicated to the conservation of biodiversity and to the promotion of plant resources for sustainable tropical land-use systems. Website: www.prosea.nl

Iwokrama International Centre in Guyana is supported by a variety of donors. The EU has especially supported conservation and sustainable use of biodiversity at the Centre. Iwokrama aims to provided ecological, economic and social benefits to both Guyana and to the world by undertaking research, training, ecotourism and technology dissemination. EU funds have supported management plans and a model planning process; sustainable extraction studies, a bio-prospecting initiative and tools for managing and protecting forest biodiversity. Website: www.iwokrama.org

PROFOR was a programme located at UNDP in New York, and co-funded by the EU with DFID UK and Finland, in support of the development of National Forest Programme processes at national level. PROFOR went through an NFP process with national partners in five countries (Cameroon, Malawi, Guyana, Costa Rica, Vietnam), and drew lessons from the experience to be applied in Phase two (located in the World Bank) in a wider selection of countries. It also supported international initiatives important for NFPs, such as work on innovative financing. The need to find forest conservation and sustainable use coherence in the way in which national forest programmes are conducted was an important part of the exercise. This will become even more important following the CBD's COP6 adoption of the Expanded Work Programme on Forest Biological Diversity, which encouraged Parties to seek more synergies and ways of pooling knowledge and strategies between and within NFPs and National Biodiversity Strategies and Action Plans. Website: www.profor.info

8.2 The European Development Fund (EDF) – Africa, Caribbean and Pacific

139. Funds were allocated to the European Development Fund (EDF) under each successive Lomé Agreement – the major multilateral co-operation agreement between the EU and the developing countries of the Africa, Caribbean and Pacific (ACP) regions until 2000.

140. Each Lomé Agreement had particular thematic and sectoral emphases, the 1995-2000 agreement focussing on protection of the environment. This agreement also carried the requirement that all subsequent projects should be subject to an environmental assessment, and contained an important new Protocol (Protocol 10) on the sustainable management of forests.

141. From the year 2000 Lomé was replaced by the Cotonou Agreement (2000/483/EC, 23/06/2000), and the EDF now serves that Agreement. The Agreement seeks to build a partnership for poverty alleviation and the promotion of social, environmental and economic sustainability. Forest related measures aim to promote the prevention of desertification, drought and deforestation, and to encourage sustainable tourism. Forest biodiversity and genetic resources are to be conserved or regenerated, forest related knowledge spread and revenue from forest products shared in an equitable manner. The Cotonou Agreement mentions environmental sustainability and biodiversity in Articles 20 and 32. It has a Compendium attached to the Agreement, which has a specific section on forests and forest biodiversity and sets out co-operation approaches that support them.

142. EDF funds vary in the way in which countries and EC Delegations use them. Sometimes forest and biodiversity issues come low on the list at country level. However, an example of the creative use of EDF funds for forest and biodiversity goals is given in Box 12 below.

Box 12 – ECOFAC : forest conservation and development in the Congo Basin

The governments of several States in the forested region of Central Africa originally proposed that a substantial portion of regional funds under the 6th EDF were allocated to the conservation of forest ecosystems, and their reconciliation with development. ECOFAC began in 1992 and some 40 million Euro have since been allocated to it under the 6th and 7th EDF. The project has supported biodiversity conservation and sustainable management in six national parks in Cameroon (Dja), Gabon (Lopé), C.A.R (Ngotto), Congo (Odzala), Equatorial Guinea (Monte Alen), and Sao Tome (Obo). It has amassed a tremendous amount of new knowledge about animal and plant dynamics in these areas, and succeeded in working closely with those who live in or near the forest to diversify their economic opportunities.

While the project began by focussing on discrete protected areas, it has gradually sought to draw out regional themes through workshops, and to bring regional forces to bear on constituent member states to encourage them in the sustainable management of their forest biodiversity. The ultimate goal is the generation of better technical understanding of forest use throughout the region.

Website: www.ecofac.org

8.3 Asia and Latin America (ALA) Regulation 443/92

143. As mentioned previously 10% of the funds allocated under this Regulation should be for environmental activities. Support to forest biodiversity under this Regulation has been limited in Latin America, the actions in the region mostly having been funded from the Tropical Forest budget line.

144. However in Asia a number of initiatives have been financed under the ALA Regulation, the biggest EC programme relevant to forest biodiversity being the EU-Indonesia forest programme. This diverse programme has funded forest conservation, work on forest fires, sustainable logging, and has worked closely and co-operatively with the other forest and biodiversity donors in the country. An example from this programme is given in Box 13. Other relevant activities in the region include support to national parks in the Philippines, and natural forest management in China.

Box 13 - The Leuser Ecosystem Development Programme

Leuser is a partnership project between the Government of Indonesia and the EC in North Sumatra, funded from the ALA budget line. It protects 2.5 million ha of tropical rainforest in niches from coastal to mountain forest, and contains orang-utans, Sumatran tigers and elephants, fauna, which are not found together in any other part of Asia. Leuser will eventually be an independent Foundation, and to that end its current management team is providing training for this transition.

Because the ecosystem extends well beyond the protected area, staff are involved in making inputs to ecosystem road and land-use planning which impact on the park, and in support for primary education in the ecosystem (not just environmental education). Leuser is widely regarded internationally as a successful and important model for the future. Web address: www.eu-ldp.co.id

145. Funding priorities for most ALA countries for 2002-2006 have been established through Country Strategy Programmes (CSPs), details of which can be downloaded from the Europa website. Around 15% of the funds programmed under the CSPs are dedicated to the environment.

146. Apart from national programmes, the main horizontal (regional) programmes potentially relevant to forests and biodiversity include:

- the Asia-Link Programme, promoting networking and exchanges among universities in the region and the EU;
- the Asia-EcoBest Programme, promoting technology exchanges in the field of environmental best practices;
- the Asia IT&C Programme, promoting co-operation in the field of information and communications technology.

8.4 MEDA EU-Mediterranean Programme

147. The MEDA Programme is the principal financial instrument for the European Union for the implementation of the Euro-Mediterranean Partnership. For the period 1995-1999, financial commitments went mainly to four types of operations: support to structural adjustment: 15 % of total commitments; support to economic transition and private sector development: 30 % of total; development projects (mainly education, health, the environment, rural development): 41 % of total; Regional projects: 14 % of total.

148. The Programme includes a Short and Medium-Term Priority Environmental Action Programme – SMAP 4 priorities include :

- Integrated Water Management;
- Hot Spots - including the establishment of emergency environmental plans for the integrated management of highly polluted Mediterranean urban areas; the management of energy and transport systems; the development and implementation of specific programmes to reduce air pollution; and the protection of green areas – the hot spots concept also apparently includes biological diversity hot spots.
- Integrated Coastal Zone Management, including - development and implementation of national and sub-regional emergency plans to prevent and combat forest fires, using early detection systems; identifying user needs and promoting further development of existing know-how and techniques; satellite monitoring of forest fires.
- Combating Desertification - including protecting existing forest ecosystems and encouraging appropriate reforestation.

8.5 TACIS

149. TACIS provides grant-financed technical assistance to thirteen countries in Eastern Europe and Central Asia, and aims to enhance the transition process in these countries. A new Regulation, for 2000-2006 (EC, Euratom no 99/2000), focuses on institutional reform, economic development, societal change, environmental protection, the rural economy and nuclear safety. There is enhanced potential here for a more direct addressing of forest and biodiversity concerns under the environmental protection heading.

8.6 Financial Instruments for candidate countries (PHARE, SAPARD, ISPA)

150. PHARE, SAPARD and ISPA (see below) are pre-Accession Instruments to prepare candidate countries from Central and Eastern Europe for EU membership. While PHARE's focus is on institution building and aquis related investment, SAPARD deals specifically with agriculture and rural development, and ISPA finances investment in the environment and transport sector.

8.6.1 PHARE (Strengthening Preparations for Enlargement)

151. The PHARE programme assists candidate countries of Central and Eastern Europe in preparation for EU membership. Its main priorities are based on the 'Accession Partnerships' with the candidate countries and on the annual 'Regular Reports'. Its main instruments are institution building and aquis related investment, including agriculture and environment.

152. As part of the accession process, the applicants will have to adopt EU environmental legislation. These stricter environmental rules and standards will improve the quality of air and water and have a positive effect on public health in the candidate countries. They will render the management of waste more efficient and protect areas of special natural value.

8.6.2 SAPARD – Special Accession Programme for Agriculture and Rural Development

153. The SAPARD programme came into effect in January 2000 and ends in 2006. SAPARD finances agricultural and rural development projects, and has an annual budget of EURO 520 million, coming under the responsibility of DG Agriculture. Of the three instruments, it has the strongest potential for positive biodiversity and forests impact.

154. Of the 15 measures, the relevant ones for forests include: developing agricultural production methods designed to protect the environment and maintain the country-side; the development and improvement of rural infrastructure; agricultural water resources management; improving the structures for quality, veterinary and plant-health controls; renovating and developing villages and protecting, conserving rural heritage; and forestry. Measure 14 - Forestry is included in the SAPARD programmes approved for six countries: Bulgaria, Estonia, Latvia, Lithuania, Poland, Romania and the Slovak Republic. In global terms it is foreseen that € 167 million, representing 5% of the Community contribution, will be used to support forest activities under this measure. The main activities to be supported under this measure are: afforestation of agricultural areas, improvement of existing forest areas, investments to improve and rationalise the harvesting, processing, and marketing of forestry products and support to forest infrastructure. Other countries have included forest-related activities under other measures.

8.6.3 ISPA – Introduction to Pre-Accession Strategy

155. ISPA, another of the three financial instruments will disburse a total of EUR 1 040 million a year (at 1999 prices) over the period from 2000 to 2006. These funds will be made available for infrastructure projects in the field of environment and transport. One of ISPA's main priorities is to help applicant countries catching up with EU environmental standards.

9 International Agreements relevant to tropical forests and biodiversity to which the European Community is a Party

156. The Community is a party to several Multilateral Environmental Agreements related to forests: the Convention on Biological Diversity, the UN Framework Convention on Climate Change, the UN Convention to Combat Desertification and Drought, the International Tropical Timber Agreement, the Convention on Migratory Species and the Bern Convention. These are all 'mixed treaties' in that neither the European Community, nor the Member States are exclusively competent for their conclusion or implementation. Given its competence on agricultural and fisheries policy, the Community is a full member of the FAO, which carries out many activities relevant to the biological diversity of forests.

157. The Community is not a signatory to the Ramsar Convention, or the Convention for the Protection of World Cultural and Natural Heritage, but it follows their processes and implements their treaties. Similarly the Community has fully implemented the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) since 1984 but is not yet a full member as there was no provision in the original Convention for regional economic integration organisations. This has been remedied through the Gabarone amendment to the Convention, but the Amendment has not yet been ratified by a sufficient number of Parties for it to enter into force.

158. The European Community actively participates in the CBD, including in issues such as traditional knowledge, and has actively participated in the development of the CBD COP6 Expanded Work Programme on Forests.

159. The EC and the EU Member States, participated actively in and supported the UN Intergovernmental Panel on Forests (IPF), the UN Intergovernmental Forum on Forests (IFF) and the UN Forum on Forests (UNFF) meetings and the intersessionals, thus positively contributing to the process and the consensus reached in these fora.

160. The European Community has exclusive competence for international trade in goods, cross-border services and for some specific aspects of intellectual property rights and is a full member of the WTO. The EC has argued for a clarification of the mutually supportive roles of the WTO and the multilateral environmental conventions such as the CBD and would consider preferential tariffs for goods produced under environmentally sustainable conditions. Indeed provision is already made in its Generalised System of Preferences Regulation to reduce tariffs for forest products produced under such conditions. There is potential for further work in this area, to encourage trade in sustainably produced forest products, while also considering measures to discourage trade in forest produce originating from unauthorised harvesting operations. The European Commission is currently developing a draft EU Action Plan on Forest Law Enforcement, Governance and Trade aimed at combating illegal logging and related international trade, which will be presented to the European Parliament and the Council end 2002 or beginning 2003.

10 Conclusions

10.1 Forest Biodiversity in the EU

161. The forest resources of the EU are extensive, well researched and protected and contain good infrastructure. Apart from a few local exceptions, forest ownership and land tenure are well established and undisputed. Good governance principles are generally respected and forest laws are well enforced. The EU forest resource is increasing in area each year, through planting and natural recolonisation. It also increases in volume as less than two-thirds of the increment is removed as timber. These resources are managed by well-trained and educated staff and, compared to other regions, financial or human resource shortages are small. European forest ecosystems are relatively simple and robust though they have been heavily influenced by human activity. Compared with many parts of the world, Europe thus faces much less of a technical challenge in securing sound forest biodiversity values. However, Europe has its own specificities and factors which contribute to a decline in forest biodiversity, such as high population densities, habitat loss and fragmentation, fires, pollution, mainly resulting from policies outside the forests sector. Maintaining the economic viability of SFM remains a challenge for many forest owners.

10.2 Complementarity within Europe

162. There are good opportunities for complementarity on forest biodiversity issues between the MS level, the Community level and the Pan-European (MCPFE) level. The MS are well-placed to undertake the conservation, protection and restoration of their own forests, and the biodiversity which they contain, since forests vary enormously – in terms of ecology, ownership and function - not only over Europe as a whole, but within each MS.

163. However, cross-border forest initiatives (e.g. NATURA 2000, research, monitoring, statistics) and issues related to Community policies (rural development, trade, internal market, environment, development cooperation,…) and biodiversity issues such as pollution, fires, control of alien invaders, etc, are eminently topics for the Community as a whole, as well as other wider Pan-European fora. Here, the European Commission provides an essential mechanism complementing Member State and Pan-European activities.

164. The European Commission has made commitments to ensure that the impact on biodiversity of any relevant Community instruments (not only those in the forest sector, but those that impact upon forests, such as the CAP, roads programmes, etc) is identified and assessed prior to any interventions. The Commission has been pro-active here, and there are opportunities for leadership by example.

10.3 Research and Information

165. The scientific actions, such as developing information systems, atmospheric pollution research, development of Criteria and Indicators have all progressed usefully and the co-ordination between MS and with those outside EU but within MCPFE has developed good synergy. Cross–border and regional initiatives are particularly valuable. EFICS is an important instrument given the most recent decisions from COP 6, but it may require adjustment if it is to deliver fully what is required. Good statistical data is essential for good policy, and this is an area where Eurostat and the European Environment Agency (EEA) can make important contributions.

166. Although some work has been undertaken using the Ecosystem Approach to monitor and manage biodiversity, and the MS will continue this, it remains an area that could require specific intervention at Community and regional level, for which the EU is ideally suited.

10.4 Protected Areas

167. The work on Birds and Habitats directives and NATURA 2000 has provided useful impetus for cross-border initiatives and access to additional funding for MS to draw upon. LIFE funding has also been made available to states currently outside the EU to improve forest biodiversity regionally. Information to date suggests that the goal of securing sufficient representation of forest habitats within the NATURA 2000 network, especially those on Annex 1, will be achieved by the end of 2002.

10.5 Reforestation and Sustainable Forest Management

168. Three Regulations (2078, 2079 and 2080/92) were aimed to link reform of the CAP to reforestation and one million ha of new plantations were created by 1999 while 100 000 ha were improved. The key strategies were to use broadleaved native species and generous funding was made available through MS. These regulations were continued by 1257/99, which followed a similar strategy.

169. Given the complex range of conditions pertaining within the MS, only very general guidance was given, mainly to favour broadleaves, slower growing species and to

concentrate on native seed origins. Despite the physical achievements, the initiative was not as effective as it could have been in terms of biodiversity conservation. The main reason would appear to be a lack of consensus as to the place of biodiversity within these schemes and a lack of realistic monitoring of biodiversity specified at the outset. Even the latest Regulation is somewhat unclear as to precisely what is required.

170. The choice of species, objects of management and the specification of roads and tracks constructed under the forestry component of the EC's Rural Development Regulation 1257/99 appear to require more specific definition if the goals set are to be fully achieved. Simply noting that "protective and ecological roles" is inadequate guidance to MS. Similarly, the wide range of farmland that can be given support for afforestation fails to note the problems identified in some MS with loss of upland pasture in Southern Europe and loss of the small remaining pasture and glade areas in the more heavily forested North.

171. The issue of fragmented ownership is very important, as the bulk of the EU forest resource is in the hands of small private owners. It is vital to have good information on physical and ownership fragmentation to properly plan biodiversity conservation.

172. Although native species are not normally seen as "alien", they can be so genetically if the wrong seed source is used. Experience to date suggests that more attention may be required to ensure correct seed sources are available and used.

173. Good progress has been made with physical fire prevention and control infrastructure and with fire information. One area that may have to be further addressed is the importance of limited fire as a natural disturbance mechanism maintaining biodiversity values in fire prone ecosystems, as well as forest management to reduce vulnerability to fire (software approach as opposed to hardware).

174. In general, public information on forest biodiversity is readily available, clear and comprehensive for those who know where to look for it. But there could be a much greater role for the Commission in the provision of information to the general public and in the building of further consensus on biodiversity-friendly approaches to forest management, both inside the EU and in dealings with third countries.

10.6 The role of the EU vis a vis tropical forests and their biodiversity

175. The Community potentially has a very strong role to play in its guardianship of and support for tropical forests and their biodiversity.

- It has strong ties with a series of developing countries through such mechanisms as the Lomé conventions, and the 6th Research Framework Programme
- It has committed itself to support for tropical forests over the past 12 and upcoming 4 years, at least. By earmarking funds, it has maintained a capacity to support tropical forests despite the issue having dropped down somewhat on the international agenda
- It is a heavy consumer of timber and other forest products and has committed itself to promote sustainable consumption and production patterns.

176. Because its financial support for tropical forests is informed by its understanding of forests and biodiversity in the context of both conservation and sustainable use within Europe, it is in a position to argue effectively for such approaches in the tropics, and to offer a middle way between purely commercial concerns, and purely conservation NGOs. Europe has a long history of managing forests for very diverse stakeholders, for instance. (Of course the forest resource itself is not directly comparable to the much greater biodiversity of tropical forests).

177. The Community together with some of the European Member States are currently the main voices for this approach. As such, the Community has a vital role to play in its inputs to international multilateral environmental processes, through its capacity to strengthen the

voices of individual MS and enhance leverage. Its voice also comes from its being a big political and economic player, a large consumer and a large donor. Such fora as UNFF and ITTO have already benefited from its 'strength through unity' approach. There are plenty of new challenges ahead where this potential convening role may be further enhanced, as the CBD expands its forest work programme, and seeks to complement UNFF on forest matters. The Community could make key inputs here, since it already participates in the UNFF and is very actively involved in CBD-related activities, as this report has made clear

178. Finally, the Community can support tropical biodiversity through trade policies and through other more general influences on the international timber trade, by ensuring that all wood imports in all forms are from sustainably managed sources. It will thus demonstrate a more coherent approach towards the conservation and sustainable use of forest biodiversity not only within but also outside the EU.

10.7 The CBD Expanded Work programme on Forest Biological Diversity

The Council of the European Union urged the European Commission and the Member States to incorporate inter alia the relevant aspects of the Expanded Work Programme on Forest Biological Diversity when implementing their respective policies, programmes, strategies and action plans. While some of the actions required to implement the work programme are best undertaken by MS, there is also an ample role for the EC. The Commission will now undertake a thorough analysis of the COP6 Work Programme in order to identify those priority elements for implementation by the European Community.

Annex 1

COUNCIL CONCLUSIONS ON THE FORESTRY STRATEGY FOR THE EUROPEAN UNION - COUNCIL RESOLUTION (1999/C 56/01) of 15 December 1998

1. agreeing the benefits of a Forestry Strategy for the European Union as set out in this Resolution based primarily on the general analysis and guidelines of the Commission communication to the Council and the European Parliament;

2. with regard to the existing legislation of the Council concerning the forest sector as well as the proposals on the support of forestry measures in the Member States made within the framework of Agenda 2000;

3. based on the activities and commitments made by the European Union and its Member States in all relevant international processes related to forests, in particular the UN - Conference for Environment and Development in 1992 in Rio de Janeiro and its follow-up (), as well as the Ministerial Conferences on the Protection of Forests in Europe and its principles and recommendations for the forest sector;

4. emphasises the importance of the multifunctional role of forests and sustainable forest management based on their social, economic, environmental, ecological and cultural functions for the development of society and in particular rural areas and the contribution forests and forestry can make to existing Community policies;

5. identifies as substantial elements of this common forestry strategy:

(a) sustainable forest management as defined by the Ministerial Conference on the Protection of Forests in Europe in Helsinki 1993, and the multifunctional role of forests as an overall principle for action;

(b) the principle of subsidiarity, in view of the fact that the Treaty makes no provision for a specific common forestry policy and that the responsibility for forestry policy lies with the Member States; nevertheless, taking into account that, pursuant to the principle of subsidiarity and the concept of shared responsibility, the Community can contribute positively to the implementation of sustainable forest management and the multifunctional role of forests;

(c) the contribution of existing and future measures at Community level for the implementation of a Forestry Strategy and for the support of the Member States in regard to sustainable forest management and the multifunctional role of forests, protection of forests, development and maintenance of rural areas, forest heritage, biological diversity, climate change, use of wood as a renewable source of energy etc., while avoiding market distorting measures;

(d) the implementation of international commitments, principles and recommendations through national or sub-national forest programmes or appropriate instruments developed by the Member States;

(e) the active participation in all international processes related to the forest sector;

(f) the need to improve co-ordination, communication and co-operation in all policy areas with relevance to the forest sector within the Commission, between the Commission and the Member States, as well as between the Member States;

(g) the importance of sustainable forest management for the conservation and enhancement of biological diversity and for the living conditions for animals and plants, as well as one of many measures to combat climate change;

(h) the promotion of the use of wood and non-wood forest products from sustainably managed forests as environmentally friendly products in line with the rules of the open market;

(i) the contribution of forestry and forest based industries to income, employment and other elements affecting the quality of life and the close connection between these two areas, influencing their competitiveness and economic viability;

(j) the necessity better to integrate forests and forest products in all sectoral common policies, like the CAP, the Environment, Energy, Trade, Industry, Research, Internal Market and Development Co-operation policies, in order to take into account both the contribution of forests and forest products to other policies and the impact of other policies on forests and forest products, with the aim of guaranteeing the consistency needed for a holistic approach towards sustainable forest management;

(k) the need to encourage a participatory and transparent approach, with all stake-holders recognising the wide variety of ownership regimes within the Community which necessitates the involvement of forest owners;

(l) the need for specific approaches and actions for the different types of forests, recognising the wide range of natural, social, economic and cultural conditions of forests in the Community;

(m) the fact that this strategy is a dynamic process which implies further discussions and activities as described above;

COMMUNITY ACTIONS CONCERNING FORESTS AND FORESTRY

6. EMPHASISES the contribution forests can make to the promotion of employment, well-being, and of the environment, which fits with the concept of sustainable forest management, based on the economic, ecological, social and cultural functions of the forests;

7. RECOMMENDS that the Community should take part actively in the implementation of the resolutions of the Ministerial Conferences on the Protection of Forests in Europe and participate proactively in international discussion and negotiations on forestry-related issues, in particular in the United Nations Intergovernmental Forum on Forests;

8. CALLS on the Commission to undertake a review of the measures in the Council Regulation on the Protection of Forests against atmospheric pollution (), in order to evaluate and continuously improve the effectiveness of the European monitoring system of forest health, taking into account all the potential impacts on forest ecosystems;

9. ADVOCATES the continuation, evaluation and consideration of a possible improvement of the Community scheme for the protection of forests against fire () in view of the positive impact it has had on the effectiveness of prevention measures and of the importance of coherent arrangements to protect forests, and INVITES the Commission to pay special attention on the development of the Community forest-fire information system, which enables the effectiveness of the protection measures against fires to be better assessed;

10. EMPHASISES the importance of continued development of a European Forestry Information and Communication System (EFICS) () by improving the quality and reliability of data on forests and underlines the co-operation with the relevant national and international institutions;

11. CONSIDERS that Community measures in the framework of co-operation with Central and Eastern Europe as well as in the framework of the Ministerial Conferences on the Protection of Forests in Europe should promote sustainable management, conservation and sustainable development of forests; NOTES that the Commission has presented a proposal for a Council Regulation on Community support for pre-accession measures for agriculture and rural development in the applicant countries of Central and Eastern Europe in the pre-accession period () and that support for agricultural and rural development may cover forestry inter alia; CONSIDERS that this proposal may contribute to management, conservation and sustainable development of forests in Central and Eastern Europe;

12. NOTES that research activities on forestry in Community RTD programmes contribute to promoting the sustainable management and multifunctional role of forests and the

sustainable and multipurpose utilisation of forest resources as well as to improving research potential and encouraging innovation;

13. EMPHASISES the benefits of effective co-ordination between different policy sectors which have an influence on forestry, and of co-ordination at Community level through, inter alia, the Standing Forestry Committee (), the Consultative Committee on Forests () and the Consultative Committee on Forestry and Forestry based industry (), making use of these committees as ad-hoc consultation fora providing expertise for all forestry-related activities in the framework of existing Community policies such as CAP and Rural Development, Environment, Trade, Research, Internal Market, Research, Industry, Development Co-operation and Energy policies; and CALLS on the Commission to make a report to the Council as soon as possible on how to improve co-ordination;

14. CONSIDERS that the conservation and enhancement of biodiversity in forests is essential to their sustainable management and that appropriate measures should be integrated in the forest programmes or equivalent instruments of the Member States in line with the pan-European "Work-Programme on the Conservation and Enhancement of Biological and Landscape Diversity in Forest Ecosystems 1997 - 2000"; NOTES the added value that the Community's actions can provide through forestry measures inside rural development and forest protection measures as well as by specific actions such as research, conservation of genetic resources () and support for the application of the pan-European criteria and indicators for sustainable forest management; CONSIDERS that these activities and this added value contribute to the response to the requested action frame of the Community Biodiversity Strategy;

15. RECOGNISES additionally the need for the conservation and protection of areas representative of all types of forest ecosystems and of specific ecological interest; NOTES the Community contribution to the establishment, through the Natura 2000 ecological network, of protected areas consisting of "Special Protection Areas" and "Special Conservation Areas" set up under the Birds Directive () and the Habitats Directive (), taking into account economic, social and cultural requirements, regional and local characteristics and the involvement of forest owners;

16. HOLDS that the role of forests as carbon sinks and reservoirs within the Union can be best ensured through sustainable forest management and that the contribution to the EU and the Member States' climate change strategies is in accordance with the Kyoto Protocol () and can be achieved through protection and enhancement of existing carbon stocks, establishment of new carbon stocks and encouraging the use of biomass and wood-based products;

17. CONSIDERS that forestry and forest-based commercial activities fall within an open sector of the economy and that their commercial functions should be guided primarily by market forces; NOTES that the Community has established a number of instruments to ensure that competition functions effectively;

18. EMPHASISES that priority must be given to the improvement of public and consumer opinion about forestry and forest products, assuring them that forests are managed sustainably; NOTING that forest certification schemes are market-based instruments which aim to seek to improve consumer awareness of the environmental qualities of sustainable forest management and to promote the use of wood and forest products as environmentally friendly and renewable raw materials, and that forest certification schemes should be comparable and the performance indicators should be compatible with internationally agreed principles of sustainable forest management and furthermore should comply with conditions regarding their voluntary nature, credibility, transparency, cost efficiency, open access and non-discriminatory character with respect to forest types and owners; one essential point in ensuring credibility should be the independent audit of forest management; INVITES the Commission to consider the possibility for further action at EU level;

19. RECOGNISES that the existing forestry measures as well as a chapter specially dedicated to forestry in the proposed regulation on rural development in Agenda 2000 () could provide a basis for implementing the guidelines of this Resolution; AGREES that all

common measures affecting forests and forest products should be in line with the aims and recommendations of this Strategy;

20. NOTES that the Commission intends to present

- a communication to the Council and the European Parliament on the competitiveness of forest-based industries;

- a proposal revising the Directive on the marketing of forest reproductive material ();

- a specific communication to the Council and European Parliament shortly on forestry development co-operation.

21. INVITES the Commission to report to the Council on the implementation of the strategy within five years."

Annex 2

COUNCIL RESOLUTION OF 11 NOVEMBER 1999 on FORESTS AND DEVELOPMENT

"The Council of the European Union

Reaffirms that policies which promote sustainable forest management have the potential to contribute significantly to the Community's broader development objectives, including the campaign against poverty. They take into account the multifunctional roles of forests while promoting efficient utilisation, processing and trade of wood and non-wood forest products. Sustainable management, conservation and protection of forest resources contributes to the conservation of biodiversity and fragile ecosystems. Forests and in particular tropical forests play an important role in the mitigation of climate change.

Recalls the Conclusions of the Cardiff and the Vienna European Councils on environment and sustainable development and reiterates the request to integrate environmental issues into all community policies, of which sustainable use of forests offers a concrete example.

Recalls the main international commitments related to forests, notably the United Nations Conference on Environment and Development (UNCED), the Framework Convention on Climate Change (FCCC), the Convention on Biological Diversity (CBD) and the Convention to Combat Desertification (CCD) as well as the work of the Intergovernmental Panel on Forests (IPF) and its successor the Intergovernmental Forum on Forests (IFF).

Welcomes the Commission Communication on *Forests and Development: the EC approach*. It endorses the commitment of the Community and the Member States to sustainable development in the forest sector spelled out in the Council Resolution on Tropical Forests (1990).

Notes that the Communication offers a basis for updating the EC approach to development cooperation on forests and emphasises that strategic action is needed to support sustainable forest management in developing countries within the context of possible arrangements and mechanisms currently under consideration in the IFF process.

I. PRINCIPLES

1. The Council recognises the primary role of the partner countries in planning and execution of forest development policies and activities.

2. The Council stresses the importance of national forest programmes as a central coordinating instrument for all stake holders involved in the process.

3. In sustainable forest management, forest conservation with a special emphasis on primary forests and biodiversity protection play an important role.

4. The interlinkages between forestry and other sectors of the economy are important and there is a need for coherence between activities undertaken in all relevant sectors and financed under the different instruments of the Community. In this context the Council attaches special importance to EC development policies regarding environment, poverty, private sector and gender.

5. Sustainable use of forests resources requires the development of trade policies and market based instruments based on sustainable forest management. The Commission is invited to contribute to the development of these policies and instruments.

6. The role of the local communities including women and indigenous peoples is vital in forest management. They along with other stakeholders must be involved in all decision making processes concerning sustainable use of forest resources.

7. The Council reaffirms that the principle of good governance is a fundamental element of national policy frameworks.

8. The Council stresses the need for coordination, coherence and complementarity of forest related interventions by the international community in general and in particular in the formulation and implementation of national forest programmes. In this context the Council recalls the Conclusions on the Evaluation of EC Development Instruments and Programmes as well as the Resolution on Complementarity between EC and Member States Development Cooperation adopted in 1999.

II. PRIORITIES FOR ACTION

The Council recommends the Community and the Member States to:

9. Contribute to the partnership for action between the Community, its Member States, partner countries, international organisations and the civil society for efficient implementation of global forest related priorities. These include:

- reduction of deforestation and forest degradation

- increase of the areas under sustainable forest management

- promotion of equitable distribution of forestry-based benefits

- maintenance of genetic resources and biodiversity

- support to development of institutional mechanisms in partner countries capable of meeting conflicting demands on forests involving all stakeholders

- support to transfer of technology, forestry research and reinforcement of research capacities in partner countries

- exploration of new and innovative financing mechanisms to pay for the

environmental benefits provided by forests

- promotion of transparency and compatibility in forest certification and other market based instruments in order to clarify the relationship between sustainable forest management, trade and environment.

10. Support the formulation or updating as well as implementation of national forest programmes in developing countries through institutional strengthening and capacity building, forest partnership arrangements, provision of sector programme support and other assistance taking into account national development priorities.

11. Strengthen the capacity of the partner countries, both in the public and private sector, to enable them to assume ownership of the execution of the national forest programmes.

III. FOLLOW-UP

12. The Council calls on the Commission to work together with the Member States in order to mobilise the necessary expertise within the EU. In this context, the Council calls on the Commission together with the Member States to identify their comparative advantages in the forestry sector and to prepare a proposal on how best to share responsibilities and work programmes. In addition, coordination with other international partners should be strengthened.

13. On the basis of its Communication the Commission is called on to submit a proposal for a strategy on forest development cooperation taking into account geographical and regional characteristics. Special efforts need to be made to integrate environmental concerns into African, Carribean and Pacific as well as Asian, Latin American and Mediterranean programmes. Strategy formulation must fully recognise the lead role of the partner countries and should take account of the need for integrating environmental and social concerns into all Community development policies and activities.

14. The Commission is furthermore called upon to consider its development policies and activities in light of the conclusions of the CSD-8 session, in year 2000, particularly in relation to the outcome of the IFF process.

15. The Council urges the Commission and the Member States to follow up the implementation of the resolution in coordination with national governments and other donors involved in the forest sector.

16. The Council urges the Commission to regularly monitor activities, evaluate results and annually report on the progress made."

Annex 3

List of Forest Types within EU listed in the Annexes of the Habitats Directive

Forest Ecosystems of Temperate Europe

(Sub)natural woodland vegetation comprising native species forming forests of tall trees, with typical undergrowth, and meeting the following criteria: rare or residual, and/or hosting species of Community interest

Forests of temperate Europe

41.11 Luzulo-Fagetum beech forests

41.12 Beech forests with Ilex and Taxus, rich in epiphytes (Ilici-Fagion)

41.13 Asperulo-Fagetum beech forests

41.15 Subalpine beech woods with Acer and Rumex arifolius

41.16 Calcareous beech forest (Cephalanthero-Fagion)

41.24 Stellario-Carpinetum oak-hornbeam forests

41.26 Galio-Carpinetum oak-hornbeam forests

41.4 *Tilio-Acerion ravine forests

41.51 Old acidophilous oak woods with Quercus robur on sandy plains

41.53 Old oak woods with Ilex and Blechnum in the British Isles

41.86 Fraxinus angustifolia woods

42.51 *Caledonian forest

44.A1 to 44.A4*Bog woodland

44.3 *Residual alluvial forests (Alnion glutinoso-incanae)

44.4 Mixed oak-elm-ash forests of great rivers

Mediterranean deciduous forests

41.181 *Apennine beech forests with Taxus and Ilex

41.184 *Apennine beech forests with Abies alba and beech forests with Abies nebrodensis

41.6 Galicio-Portuguese oak woods with Quercus robur and Quercus pyrenaica

41.77 Quercus faginea woods (Iberian Peninsula)

41.85 Quercus trojana woods (Italy and Greece)

41.9 Chestnut woods

41.1A - 42.17 Hellenic beech forests with Abies borisii-regis

41.1B Quercus frainetto woods

42.A1 Cypress forests (Acero-Cupression)

44.17 Salix alba and Populus alba galleries

44.52 Riparian formations on intermittent Mediterranean water courses with

Rhododendron ponticum, Salix and others

44.7 Oriental plane woods (Platanion orientalis)

44.8 Thermo-Mediterranean riparian galleries (Nerio-Tamariceteae) and south-west Iberian Peninsula riparian galleries (Securinegion tinctoriae)

Mediterranean sclerophyllous forests

41.7C Cretan Quercus brachyphylla forests

45.1 Olea and Ceratonia forests

45.2 Quercus suber forests

45.3 Quercus ilex forests

45.5 Quercus macrolepis forests

45.61 to 45.63 *Macaronesian laurel forests (Laurus, Ocotea)

45.7 *Palm groves of Phoenix

45.8 Forests of Ilex aquifolium

Alpine and subalpine coniferous forests

42.21 to 42.23 Acidophilous forests (Vaccinio-Piceetea)

42.31 and 42.32 Alpine forests with larch and Pinus cembra

42.4 Pinus uncinata forests (* on gypsum or limestone)

Mediterranean mountainous coniferous forests

42.14 *Appenine Abies alba and Picea excelsa forests

42.19 Abies pinsapo forests

42.61 to 42.66 *Mediterranean pine forests with endemic black pines

42.8 Mediterranean pine forests with endemic Mesogean pines, including Pinus mugo and Pinus leucodermis

42.9 Macaronesian pine forests (endemic)

42.A2 to 42.A5 *and 42.A8 Endemic Mediterranean forests with Juniperus spp.

42.A6 *Tetraclinis articulata forests (Andalusia)

42.A71 to 42.A73 *Taxus baccata woods

Annex 4

Tables on Forest Products Trade

Table A 4.1 – Forest area by MS and Annual Production of Wood

Member State	Production of Fuelwood and Industrial Roundwood (000 m³)	Area (000 ha)	MAI m³/ha/an
Austria	14033	3886	3.61
Belgium	4315	728	5.93
Denmark	2129	455	4.68
Finland	53670	21935	2.45
France	42770	15341	2.79
Germany	39052	10740	3.64
Greece	1692	3599	0.47
Ireland	2266	659	3.44
Italy	9550	10003	0.95
Netherlands	1023	375	2.73
Portugal	8978	3666	2.45
Spain	15631	14370	1.09
Sweden	58100	27134	2.14
UK	7635	2794	2.73
EU overall	**260844**	**115685**	**2.25**

Source: ITTO 2001 and FAO 2001

Table A 4.2 – Production as a % of Consumption

Member State	Fuelwood	Ind Rdwd	Sawnwood	Panels	Pulp	Paper
Austria	97%	72%	181%	208%	82%	202%
Belgium	98%	67%	39%	245%	52%	58%
Denmark	91%	76%	21%	44%	87%	30%
Finland	97%	85%	348%	260%	116%	587%
France	104%	103%	86%	118%	62%	86%
Germany	99%	106%	81%	96%	36%	97%
Greece	100%	64%	15%	53%	0%	48%
Ireland	100%	113%	60%	117%	0%	0%
Italy	96%	46%	18%	85%	15%	86%
Netherlands	88%	83%	10%	7%	12%	82%
Portugal	102%	85%	109%	214%	228%	109%
Spain	102%	87%	57%	89%	106%	68%
Sweden	98%	88%	345%	99%	131%	523%
UK	219%	95%	26%	50%	27%	55%
EU	**100%**	**89%**	**91%**	**96%**	**83%**	**109%**

Source ITTO

Table A 4.3 – Volume Imported as % of all ITTO Consumers

Consumers	Tropical				
	Logs	**Sawn**	**Veneer**	**Plywood**	**Overall**
Austria	0.0%	0.1%	0.1%	0.1%	0.1%
Belgium/Lux.	0.3%	4.6%	1.6%	2.1%	2.1%
Denmark	0.1%	0.8%	3.2%	0.6%	0.6%
Finland	0.0%	0.2%	0.0%	0.0%	0.0%
France	6.9%	5.1%	3.2%	1.3%	3.6%
Germany	1.1%	3.0%	5.7%	1.9%	2.1%
Greece	0.7%	0.5%	0.2%	0.1%	0.3%
Ireland	0.1%	1.5%	0.1%	0.4%	0.5%
Italy	4.1%	7.5%	6.3%	1.0%	3.4%
Netherlands	0.7%	7.0%	0.8%	2.6%	2.9%
Portugal	3.0%	1.9%	0.3%	0.1%	1.2%
Spain	2.5%	7.1%	3.7%	0.1%	2.3%
Sweden	0.0%	0.2%	0.2%	0.1%	0.1%
United Kingdom	0.1%	5.6%	0.5%	6.2%	4.3%
Total EU	**19.6%**	**45.0%**	**26.0%**	**16.4%**	**23.7%**
Australia	0.0%	1.7%	0.5%	0.6%	0.7%
Canada	0.0%	0.6%	1.1%	0.8%	0.6%
China	45.0%	28.2%	42.3%	9.2%	23.8%
Egypt	0.0%	0.0%	0.1%	1.0%	0.5%
Japan	26.7%	13.0%	4.8%	46.7%	32.8%
Nepal	0.0%	0.0%	0.0%	0.0%	0.0%
New Zealand	0.0%	0.1%	0.0%	0.0%	0.0%
Norway	0.0%	0.3%	0.3%	0.1%	0.1%
Rep. of Korea	8.5%	5.6%	19.0%	7.7%	7.9%
Switzerland	0.1%	0.2%	0.0%	0.0%	0.1%
USA	0.0%	5.4%	5.8%	17.4%	9.9%
Non-EU	**80.4%**	**55.0%**	**74.0%**	**83.6%**	**76.3%**
Overall	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Note that many tropical “Producer” countries are large importers of sawnwood

Table A 4.4 – Tropical as % of Overall Consumption

Consumer	Logs	Sawn	Veneer	Plywood	Overall
Austria	0.0%	0.1%	4.5%	9.6%	0.1%
Belgium/Lux.	0.5%	10.1%	20.5%	114.3%	8.6%
Denmark	1.2%	1.1%	38.5%	32.0%	3.0%
Finland	0.0%	0.2%	0.0%	0.4%	0.0%
France	2.2%	2.0%	16.8%	23.4%	2.7%
Germany	0.4%	0.8%	12.8%	15.7%	1.2%
Greece	7.2%	2.7%	13.3%	18.8%	4.9%
Ireland	0.5%	7.0%	16.7%	29.9%	4.7%
Italy	5.3%	4.4%	13.3%	14.3%	5.6%
Netherlands	7.8%	10.5%	26.7%	48.7%	15.4%
Portugal	3.9%	7.2%	2.9%	10.2%	4.7%
Spain	1.9%	3.5%	22.7%	3.8%	2.9%
Sweden	0.0%	0.2%	2.9%	3.3%	0.0%
United Kingdom	0.1%	3.1%	13.2%	63.2%	6.8%
Total EU	**0.9%**	**2.6%**	**14.9%**	**30.4%**	**2.4%**
Australia	0.0%	2.1%	21.7%	28.7%	1.1%
Canada	0.0%	0.1%	45.5%	6.3%	0.1%
China	8.5%	7.8%	86.0%	11.4%	9.4%
Egypt	0.0%	0.0%	1.9%	36.7%	3.8%
Japan	9.1%	2.5%	19.9%	55.2%	14.3%
Nepal	0.0%	0.0%	0.0%	0.0%	0.0%
New Zealand	0.0%	0.1%	0.0%	2.5%	0.1%
Norway	0.0%	0.5%	37.5%	7.1%	0.3%
Rep. of Korea	11.9%	6.0%	20.1%	52.3%	16.1%
Switzerland	0.3%	0.5%	0.0%	0.0%	0.4%
USA	0.0%	0.2%	56.7%	9.7%	0.6%
Non-EU	**1.2%**	**1.2%**	**32.3%**	**21.9%**	**2.7%**
Overall	**1.1%**	**1.6%**	**24.8%**	**22.9%**	**2.6%**

Table A 4.5 – Import of SPWP from ITTO Producers (US$ millions) – Source ITTO

Year ∏	1998	1999	2000
EU	1646	1824	1742
USA	1696	2106	2103
Japan	645	784	924
Other Consumers	421	489	476
Total	**4408**	**5203**	**5245**

Table A.4.6: Socio-economic impact of Forest-based and Related Industries in the EU in 1998

	Production value	**%**	**Value added at factory cost**	**Number of enterprises (1995)**	**Number of persons employed**
	Million EURO		Million EURO		
Mechanical woodworking excl. furniture	60.158,6	19	18.760,7	29.113	526.679
Pulp, paper and board manufacturing	55.223,5	17	16.066,2	930	217.175
Paper and board converting	55.738,4	18	18.070,0	5.009	381.582
Printing	61.184,1	19	26.429,8	20.606	626.098
Publishing	86.362,4	27	32.258,6	7.488	627.409
Total FB-IND	**318.667,0**	**100**	**111.585,3**	**63.146**	**2.378.943**
Furniture	68.598,6		23.731,3	19.409	675.793
Machinery, equipment, chemical	64.624,0		24.841,8	6.761	617.149
Total FB-IND cluster	**451.889,6**		**160.158,3**	**89.316**	**3.671.885**

Source: EUROSTAT Enterprises with less than 20 employees not included

October 2002

SECOND REPORT OF THE EUROPEAN COMMUNITY TO THE CONVENTION ON BIOLOGICAL DIVERSITY

THEMATIC REPORT ON FOREST BIODIVERSITY

(based on the Questionnaire provided by the CBD Secretariat)

Please provide to following details on the origin of this report

Contracting Party	European Community
National Focal Point	
Full name of the institution:	*European Commission*
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Submission	
Signature of officer responsible for submitting national report:	*C. Bail*
Date of submission:	*4 November 2002*

Please provide summary information on the process by which this report has been prepared, including information on the types of stakeholders who have been actively involved in its preparation and on material which was used as a basis for the report

A draft of this report was produced through a consultancy contract, together with a fuller narrative report on forest biodiversity. Organisations outside the Community institutions consulted either directly or through their websites included the International Tropical Timber Organisation (ITTO), FAO, UN Economic Commission for Europe, the Ministerial Conference for the Protection of Forests in Europe, European Forestry Institute (EFI), IUCN, FERN (NGO).

The European Community's Europa website (http://europa.eu.int) is an entry point to a vast amount of information on EC policies and programmes, including forest biodiversity. Another important source of information is the European Community Biodiversity Clearing House: http://biodiversity-chm.eea.eu.int , as is the site of the European Environment Agency (www.eea.eu.int). The major European process relevant to forest biodiversity is the Ministerial Conference for the Protection of Forests in Europe, whose website is: www.mcpfe.org

Decision IV/7 on Forest biological Diversity

1. What is the relative priority afforded to implementation of this decision by your country?					
a) High		b) Medium	X	c) Low	
2. To what extent are the resources available adequate for meeting the obligations and recommendations made?					
a) Good		b) Adequate	X	c) Limiting		d) Severely limiting	

3. Has your country assessed the status and trends of its forest biological diversity and identified options for its conservation and sustainable use? (Decision IV/7, paragraph 12)	
a) no	
b) assessment underway (please give details below)	X
c) assessment completed (please give details below)	
d) not relevant	
If a developing country Party or a Party with economy in transition -	
4. Has your country requested assistance through the financial mechanism for projects that promote the implementation of the focused work programme an forest biological diversity? (Decision IV/7, paragraph 7)	
a) no	
b) yes (please give details below)	

Q1.Although forestry issues are mainly dealt with by the EU Member States, the Community's involvement in areas such as agriculture and rural development, the environment, trade, research, regional and industrial policy and development cooperation means that it nevertheless has an important role to play and an influence on policy relating to forest biodiversity.

Q2. Adequate. Funds are available through the LIFE-Nature programme for forest areas designated as special conservation areas, for sustainable forest management approaches through the LIFE-Environment programme, for afforestation and management of forests in an agricultural context through the Rural Development Regulation 1257/99, for research through the Fifth Framework Programme. Further funding is available for monitoring the effects of atmospheric pollution on forests and for prevention and monitoring of forest fires.

Outside the EU, the European Commission is an important donor for projects dealing with forest biological diversity, though this must be balanced against an increasing emphasis on poverty reduction and sectoral approaches, which may not favour projects in remote forest areas with low populations and high biodiversity.

Q3. Assessment underway by EU Member States and other European countries in the framework of the Ministerial Conference for the Protection of Forests in Europe (MCPFE) (Annex 2 of Resolution 2 of Lisbon Conference). The MCPFE is not a Community but an intergovernmental European process.

The European Environment Agency's report "Environmental signals 2002" includes a section which presents an indicator-based assessment of certain aspects of forest biodiversity in EU. Available at http://www.eea.eu.int

Programme element 1: Holistic and inter-sectoral ecosystem approaches that integrate the conservation and sustainable use of biological diversity, taking account of social and cultural and economic considerations

5. Has your country identified methodologies for enhancing the integration of forest biological diversity conservation and sustainable use into an holistic approach to sustainable forest management at the national level? (Work Programme, paragraph 13)	
a) no	
b) yes – limited extent (please give details below)	
c) yes – significant extent (please give details below)	X
d) not applicable	
6. Has your country developed methodologies to advance the integration of traditional forest-related knowledge into sustainable forest management, in accordance with Article 8(j)? (Work Programme, paragraph 14)	
a) no	
b) yes – limited extent (please give details below)	
c) yes – significant extent (please give details below)	
d) not applicable	X
7. Has your country promoted cooperation on the conservation and sustainable use of forest biological resources at all levels in accordance with Articles 5 and 16 of the Convention? (Work Programme, paragraph 15)	
a) no	
b) yes – limited extent (please give details below)	
c) yes – significant extent (please give details below)	X
d) not applicable	
8. Has your country promoted the sharing of relevant technical and scientific information on networks at all levels of protected forest areas and networking modalities in all types of forest ecosystems? (Work Programme, paragraph 17)	
a) no	
b) yes – limited extent (please give details below)	X
c) yes – significant extent (please give details below)	
d) not applicable	

Programme element 2: Comprehensive analysis of the ways in which human activities, in particular forest-management practices, influence biological diversity and assessment of ways to minimize or mitigate negative influences

9. Has your country promoted activities for an enhanced understanding of positive and negative human influences on forest ecosystems by land-use managers, policy makers, scientists and other relevant stakeholders) (Work Programme, paragraph 29)	
a) minimal activity	
b) yes – limited extent (please give details below)	
c) yes – significant extent (please give details below)	X
d) not relevant	
10. Has your country promoted activities to assemble management experiences and scientific, indigenous and local information at the national and local levels to provide for the sharing of approaches and tools that lead to improved forest practices with regard to forest biological diversity? (Work Programme, paragraph 30)	
a) minimal activity	

b) yes – limited extent (please give details below)	
c) yes – significant extent (please give details below)	X
d) not relevant	
11. Has your country promoted activities with the aim of providing options to minimize or mitigate negative and to promote positive human influences on forest biological diversity? (Work Programme, paragraph 31)	
a) minimal activity	
b) yes – limited extent (please give details below)	X
c) yes – significant extent (please give details below)	
d) not relevant	
12. Has your country promoted activities to minimize the impact of harmful alien species on forest biological diversity? (Work Programme, paragraph 32)	
a) minimal activity	X
b) yes – limited extent (please give details below)	
c) yes – significant extent (please give details below)	
d) not relevant	
13. Has your country identified means and mechanisms to improve the identification and prioritisation of research activities related to influences of human activities, in particular forest management practices, on forest biological diversity? (Work Programme, paragraph 33)	
a) minimal activity	
b) yes – limited extent (please give details below)	X
c) yes – significant extent (please give details below)	
d) not relevant	
14. Does your country hold research results and syntheses of reports of relevant scientific and traditional knowledge on key forest biological diversity issues and, if so, have these been disseminated as widely as possible? (Work Programme, paragraph 34)	
a) not relevant	
b) some relevant material, but not widely disseminated	
c) significant material that could be more widely disseminated (please give details below)	X
d) yes - already widely disseminated (please give details)	
15. Has your country prepared case-studies on assessing impacts of fires and alien species on forest biological diversity and their influences on the management of forest ecosystems and savannahs? (Work Programme, paragraph 35)	
a) no – please indicate below whether this is due to a lack of available case-studies or for other reasons	
b) yes – please give below any views you may have on the usefulness of the preparation of case-studies for developing a better biological understanding of the problem and/or better management responses.	X

Programme element 3: Methodologies necessary to advance the elaboration and implementation of criteria and indicators for forest biological diversity

16. Has your country assessed experiences gained in national and regional processes, identifying common elements and gaps in existing initiatives and improving indicators for forest biological diversity? (Work Programme, paragraph 43)	
a) minimal activity	
b) yes – limited assessment made (please give details below)	X

c) yes – significant assessment made (please give details below)	
d) not relevant	
17. Has your country carried out taxonomic studies and inventories at the national level which provide for a basic assessment of forest biological diversity? (Work Programme, paragraph 43)	
a) minimal activity	
b) yes – limited assessment made (please give details below)	
c) yes – significant assessment made (please give details below)	X
d) not relevant	

If you have ticked any of the boxes in questions 5 to 17 above which invite you to provide further details, please do so here.

(Information can include descriptions of methodologies and of activities undertaken, reasons for success or failure, outcomes and lessons learned)

Q5. The Lisbon Conference of the MCPFE adopted Pan-European Operational Level Guidelines for Sustainable Forest Management, which include provisions for the integration of biological diversity into sustainable forest management.

The integration of biological diversity into sustainable forest management is also central to the EC Forestry Strategy of November 1998 COM(1998)649

Q6. Not directly applicable within EU. Traditional knowledge is documented and has been extensively studied and recorded over many years.

Q7. The participation of the EC in MCPFE helps promote co-operation in the sense of co-ordinating action, the exchange of ideas and development of linked and co-ordinated actions.

There are substantial cross-border initiatives within the EU relating to the prevention and monitoring of forest fires, atmospheric pollution and the establishment of protected areas under the NATURA 2000 programme.

Through its development cooperation programme with developing countries the EC has provided significant funding for biodiversity conservation, both directly and through sustainable use. EC support is based on its manual "Forests in Sustainable Development" (1996) with, e.g. Principles 10 and 11 ensuring that biodiversity issues are correctly handled within all development activities. Biodiversity issues are well covered in the detailed checklists in Part II of this manual.

An overview of EU positions on forest biodiversity in relevant international processes was published by Belgium in 2001, in its capacity as Presidency of the EU, and is available on the Belgian CHM website.

Q8. The EU Clearing-House Mechanism, http://biodiversity-chm.eea.eu.int/ established in 1999, provides a facility for information sharing. At present there is limited information of the kind asked for.

However the approaches used for research, development, information and co-ordination by the EC already require this for all sectors of intervention.

The EC has provided funds for some years for the European Tropical Forest Research Network (ETFRN) which aims to link up EU researchers with those based in the tropics and promotes networking on specific topics including biodiversity (www.etfrn.org).

Q9. Most EU forests have been influenced by human activity for many centuries. Work on Criteria and Indicators for sustainable forest management, as recommended in Resolution L2 of the 1998 Lisbon Conference of the MCPFE, is useful in providing a holistic framework in which to assess human influence on forest ecosystems, including economic factors. The EC 6th Environmental Action Programme (2002) recognises the need for continued research on Criteria and Indicators. Furthermore the European Council of Ministers Conclusions on the Common Agricultural Policy (2001) and the Fifth Research Framework Programme (Dec 1998) both refer indirectly to improved Criteria and Indicators as a mechanism to aid greater understanding of impacts by practitioners and stakeholders.

The EC Forestry Strategy and Pan-European Guidelines address this issue. It is recognised in these decisions that there is much work still to do.

Externally, similar themes are covered in Forests in Sustainable Development Manual. There are good examples of funded work, e.g. through CIFOR which relate directly to the development of criteria and indicators of sustainable forest management.

Q10. The mechanisms described in Q9 also apply here.

Q11. Again, Q9 is relevant. As there is substantial work still to be carried out, progress is limited.

Q13. In 1995 the EU Commission within the Environment and Climate RTD Programme established A European Working Group on Research and Biodiversity. A proposed Research Agenda was in 1998 the basis for an Electronic Conference (one session was devoted to forest), http://www.gencat.es/mediamb/biodiv/proceed.htm As a follow-up in 5th Framework RTD Programme (Global change, climate and biodiversity key action), a European Platform for Biodiversity Research Strategy, http://www.bioplatform.info/ was established.

Forest research prioritisation in the present Quality of Life EC Research Programme is based on a number of elements, of which biological diversity is only one.

Q13. Below is a summary of relevant EC research priorities in the various major programmes, as well as details of relevant projects funded or coordinated.

EU 4th Framework Research and Technological Development Programme – FAIR – 1994-1998

- Area 4 covers agriculture, forestry and rural development – budget Euro 157m
- Forestry related research contributed to overall global objectives concerning the protection and long term development of forests and better utilisation of forest production – largely through sub area 4.5 –

multifunctional management of forests.

Specific biodiversity related projects included:

- FAIR-CT95-0883 - European network for research into forest ecosystems – resolution S6
- FAIR-CT97-3575 – Indicators for the monitoring and evaluation of forest biodiversity in Europe
- FAIR-CT95-0420 – Regeneration of native forest stands for timber production and environmental value
- FAIR-CT97-3386 – Genetic diversity in the river populations of the European black poplar for evaluation of biodiversity, conservation strategies, nature development and genetic improvement

EU "Quality of Life" 5th Framework Programme – 1998-2002

- Key Action 5 – KA5 – Sustainability of European agriculture, forestry and fisheries - Budget Euro 520m
- Forestry specific area – 5.3 – projects dealt with wood quality, pest control, eco-efficient forestry operations, eco-efficient processing, recycling technologies, finished quality improvement of wood products and paper

Specifically relevant projects included:

- QLK5-CT-1999-01210 – Effects of silvicultural regimes on dynamics of genetic and ecological diversity of European forests
- QLK5-CT-1999-01349 – Nature based management of beech in Europe: a multifunctional approach to forestry
- QLK5-CT-2000-00029 – Ecological, biological, silvicultural and economical management for optimisation of chestnut wood and alimentary production within a sustainable development frame
- QLK5-CT-2000-00784 – Monitoring forests at the management unit level for fire prevention and control

EC "Environment and Sustainable Development" 5th Framework Programme – 1998-2002, Key Action 2 – Global change, Climate and Biodiversity– Budget Euro 170m

Forest related issues are covered by several research priorities, e.g. assessing and conserving biodiversity, Reconciling the conservation of biodiversity with economic development etc.

Forest biodiversity is addressed, to a varying extent in

the following projects:

- EVK2-1999-00041 Biodiversity Assessment Tools
- The European Biodiversity Forum
- EVK2-1999-00006 Securing gene conservation, adaptive breeding potential and utilisation of a model multipurpose tree species (Castanea sativa) in a dynamic environment
- EVK2-1999-00036 Dynamics of forest trees biodiversity: linking genetic, palaeogenetic and plant historical approaches

EU 6th Framework Programme – beyond 2002 (as proposed by EC)

- Relevant thematic area – 1.1.6 – Sustainable development, global change and ecosystems - 1.1.6.3 – Global Change and Ecosystems
- Second objective – to preserve ecosystems and protect biodiversity that would contribute to sustainable use of land and marine resources – integrated sustainable management of agricultural and forest ecosystems of particular importance in context of global change.
-
- Research priorities include:
-

- Impact and mechanisms of greenhouse gas emissions and atmospheric pollutants on climate, ozone depletion and carbon sinks (oceans, forests and soil)
- Biodiversity and ecosystems
- Strategies for sustainable land management, including coastal zones, agricultural land and forests

COST – Cooperation in the field of Scientific and Technical Research

Founded in 1971 – intergovernmental framework allowing coordination of nationally funded research on a European level. Now has almost 200 Actions that normally last for 4 yrs and cover non-member countries as well as member.

Forestry covers 1 of 17 domains, with 31 Actions – Specifically relevant ones include:

- E4 – Forest reserves research network – completed 11/99
- E25 – European network for a long term forest ecosystem and landscape research programme – running to 12/04

Q14. The EU Clearing-House Mechanism provides a facility for this, cf. answer to Q8. In the EU “Environment and

Sustainable Development" 5th Framework Programme – 1998-2002, Key Action 2 – Global change, Climate and Biodiversity" e.g. the following structures/projects have in their objectives, to varying extent, to disseminate synthesised scientific knowledge (cf answer to Q.13):

- European Platform for Biodiversity Research Strategy/The BioPlatform Thematic Network http://www.bioplatform.info/
- The European Forum for Biodiversity http://www.nbu.ac.uk/bioforum/

Q16. Most detailed documentation is held by institutions within MS, where it is widely accessible and well disseminated.. Reports and research results are abstracted and made accessible as part of day-to-day management.

Q17. Taxonomic studies and inventories are carried out at Member State level. The EC has supplemented these by funding various EU-wide initiatives, such as land use cover mapping led by the Joint Research Centre and European-level taxonomy meta-databases eg. Fauna Europaea, Euro-Med plantbase.