



Paper and the Forest

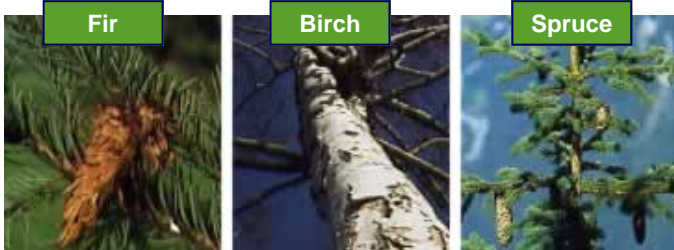
Forests:

- Enable the world to breathe by absorbing carbon dioxide and emitting oxygen;
- Help to control climatic extremes;
- Provide habitats for a wide variety of wildlife;
- Sustain plants, and foods such as berries and mushrooms;
- Provide employment and income opportunities for rural communities;
- Provide recreational facilities for robust activities or solitude;
- Provide breathtaking and awe-inspiring vistas.

The European pulp and paper industry depends on the forest for woodpulp – its primary raw material.

Papermakers produce a multitude of paper and board grades, from a variety of woodpulp that each contribute their own particular characteristics to the end product.

These characteristics are determined by a number of factors such as tree species, climatic conditions and geographic location. Coniferous softwoods such as spruce, pine, fir and cedar provide long (average 3mm), strong fibres and are used to make papers



requiring the greatest strength. Birch, aspen and other hardwoods produce short (average 1mm) fibres that add bulk. These are used to make fluting (the middle layer in corrugated boxes) and printing and writing papers.

Forests provide raw materials for a number of industries, not just for paper and board. Large dimension timber from mature trees is used for construction and furniture making. The papermaker uses small dimension timber, although forest thinnings (immature trees extracted from the forest to enable those remaining to grow to healthy maturity), and sawmill waste are increasingly being used. Trees grow slowly in cold climates and as a result are very strong. Fast growing species such as eucalyptus and acacia grow successfully in Southern Europe and can have

an 8-year cycle. They provide high quality fibres that are ideal for papermaking but, because of their short growing cycle, do not have the strength that many other industrial applications require.

There is a diverse range of forest types with a variety of growth patterns. Each forest has a unique ecosystem. There has to be a balance between maintaining the eco-system and meeting the management objectives for individual forests, therefore the intensity of forest management will vary. The same level of bio-diversity cannot be maintained on every hectare. Some forests will be managed mainly for their timber yield, others will be preserved for their unique eco-systems. An increasing number are fulfilling a wide range of requirements such as raw material provision, and facilities for leisure pursuits such as hiking, riding and hunting. All forests have a valuable role to play.

Forest managers have to make the appropriate choices for a complex and interdependent range of values and requirements. Priorities will vary and will be dictated by location, forest type and age patterns, government policy, social, economic and environmental requirements and ownership structures.

In Europe, there are estimated to be 77,000 publicly owned (municipalities and communes) forestry holdings with an average size of 1,200 hectares. The average size of private holdings (of which there are 10.7 million) is 10.6 hectares, although several million private owners have holdings of less than 3 hectares whereas in Canada, which houses 10% of the world's forests, 94% of the land is publicly owned. Under the Canadian Constitution the provinces have ownership over most publicly owned forest land and are legally responsible for it.

Most of the indigenous forests in Western and Central Europe disappeared a very long time ago. In western Europe only 1% of the forested area can claim to be original. Deforestation occurred at an alarming rate to meet agricultural and industrial demands and, by the 19th century, forests that once covered 80% of the land area had been reduced to less than 25%.

Britain also saw a serious decline in its forested land early in the 20th century. This trend has been reversed, as it has elsewhere in Europe where now more than one third (215 million hectares) is classified as

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forest and other wooded land. Although the UK enjoys more favourable growing conditions than many other European countries, only 12% (DEFRA, 2004) of its land is forested compared with 68% in Sweden, 27% in France and 31% in Germany. There are 3 domestic integrated papermills, ie mills that make paper directly from wood, in the UK and between them they produce and use 6% of the UK paper industry's raw material requirements.

Imported woodpulp now represents 25% of the raw material used to produce paper and board in the UK. At 1.4 million tonnes it is the same amount as in 1983, but production of paper over the same period has risen from 3.3 million tonnes to 6.2 million tonnes.

Although the UK is under-forested it is highly populated consequently, recovered paper from the "urban forest" represents over 68% of the fibre used by the UK paper and board industry. However, paper cannot be recycled indefinitely as the fibres get weaker with every cycle and need to be constantly replenished, therefore the recycling ability of the UK paper industry depends on a constant injection of high quality woodpulp fibres.

While the forests in Europe are growing, the same cannot be said for the rest of the world. The reasons for this are varied and complex. Illegal logging is a major problem in some countries. The European Commission has started work on a communication on combating illegal logging which would involve a legal verification system based on the voluntary commitment of exporting countries to become 'forest partners'. The Confederation of European Paper

Industries (CEPI) is also producing a Code of Practice.

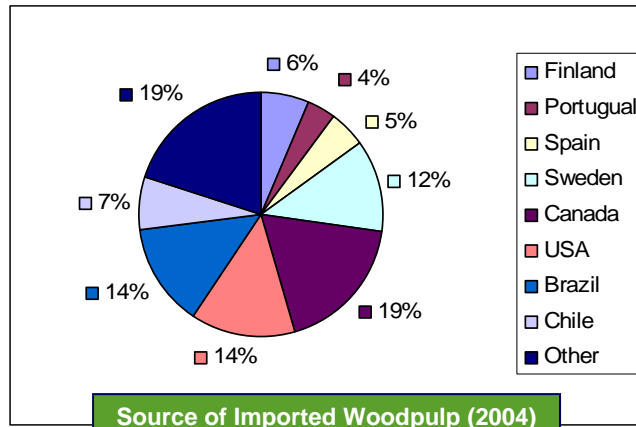
The use of bio-energy in the EU has increased during the past few years and now 3% of energy consumption is based on use of wood based fuels. The EU, recognising that the use of renewable energy sources instead of fossil fuels can help to reduce greenhouse gas emissions, has set a target to triple the use of bioenergy by 2010. Forest resources will need to grow to accommodate the additional demand.

Changing objectives and practices

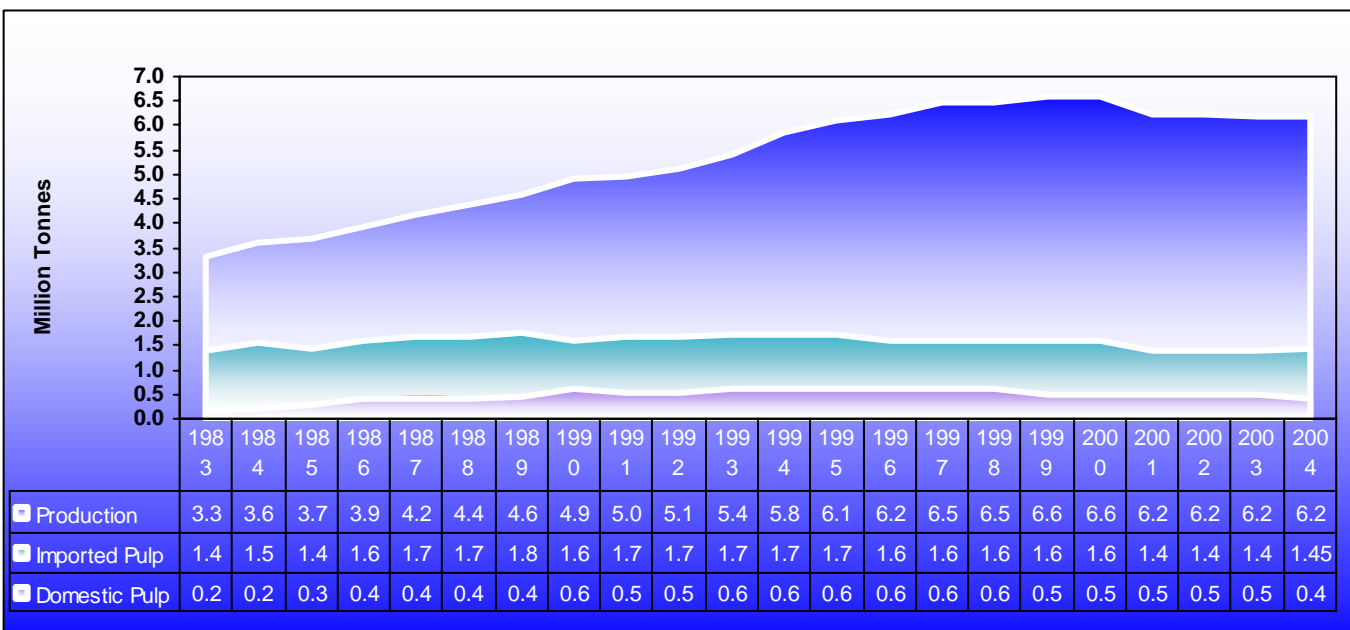
Forest management objectives have changed considerably in recent times from the traditional concept of sustainable yield towards the goal of sustainable management. Forest

management techniques intensified after World War II, increasing the pressure on eco-systems, but throughout the 1970s public concern for the environment grew and a number of international initiatives aimed at increasing awareness of the need to protect forests emerged. Society's values underwent a major change as environmental pressure groups successfully courted the media to draw attention to, and raise concern about, the growing pressure on the Earth's diminishing natural resources.

The change in forestry management techniques over the past 30 years has been immense. Harvesting machinery has been designed to minimise its footprint, the size of areas earmarked for logging has been drastically reduced, log debris, which at one time would have been removed, is left to rot to provide sustenance for wildlife. Certain species of trees and 'snags' are now



Source of Imported Woodpulp (2004)



left standing to provide habitats for particular species of insects and birds. Areas are set aside for wildlife habitats and access corridors are created. Sound forest management isn't always pretty, but a tidy forest is not necessarily a healthy forest. Roads are constructed carefully and as unobtrusively as possible. Maintaining biodiversity means taking care of all the living elements within the forest ecosystem. Climate, elevation, soil and rock formations, tree species, wildlife habitats, water tables, and disease resistance all feature in the equation.

Sustainable Forest Management

The concept of sustainable forest management was given a major boost by the 1992 United Nations Global Conference on Environment & Development. It determined that social and environmental objectives had to be met at the same level as economic criteria. The subsequent Pan European process on the protection of forests developed the widely accepted Helsinki criteria for sustainable forest management and, at the 1998 follow-up Ministerial Conference held in Lisbon, socio-economic criteria were added. At the second World Summit in Johannesburg in 2002 the dilemma of combining the aims economic development with environmental protection was explored and the concept of corporate responsibility and accountability for environmental and social impacts was incorporated in the conference text.

The importance of forests was reinforced when their role in balancing atmospheric carbon dioxide levels was acknowledged in article 3.3 of the Kyoto Protocol. It was agreed that forests should be used to help meet the commitment industrialised nations had made to reduce their greenhouse gas emissions between 2008-12 to their 1990 levels (the European Union committed itself to a reduction of minus 8%). Recognising that young growing trees are particularly adept at absorbing carbon dioxide, the potential crediting of carbon dioxide take up was restricted to forests planted after 1990.

Independent Assurance

Recognising the growing consumer interest in forests the industry is increasingly making use of forest certification as a way of providing assurance of sound forest management practices. Forest certification involves an independent third party audit against a forest management standard. This concept has been embraced by the European pulp and paper industry and forest owners are being encouraged by the Confederation of European Paper Industries to have their forests certified. More forested land has been independently certified in Europe than anywhere else in the world.

There are a number of certification schemes in operation and the Confederation of European Paper Industries (CEPI) has published a Comparative Matrix

of Forest Certification Schemes. The Matrix is a tool that enables customers to compare fully operational and emerging schemes against a list of credibility criteria. It is available from CEPI, 250 Avenue Louise, B1050 Brussels. Tel ++ 32 2 627 4911 Fax ++ 32 2 646 8137 Website www.cepi.org



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