



Finnish Forest Industries



Newsletter

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Paper and wood

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Finnish forest industry makes efficient use of its by-products and waste materials

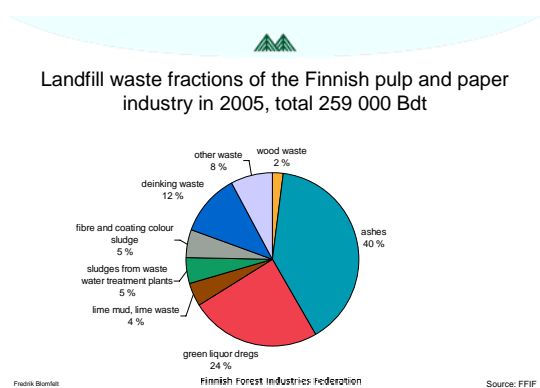
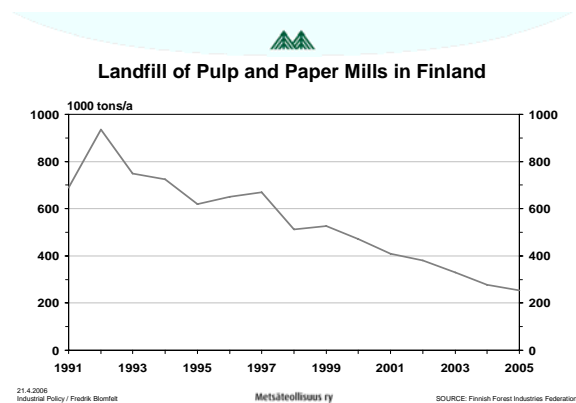
The Finnish forest industry is developing the utilisation of its by-products and waste materials strongly. The amount of waste sent to landfills has been reduced to a third over fifteen years. Over the same period, the volume of pulp and paper production has increased by about 50%.

By-products and waste are valuable raw materials

The forest industry is one of the best manufacturing branches in the utilisation of various waste types and continues to invest significantly into making its processes more material efficient. The aim is to manufacture products from a lesser amount of resources.

The Finnish pulp and paper industry - one of the biggest pulp and paper producers in the world - creates some 259,000 tonnes of landfill waste annually. Of this, 40% are ashes and 24% green liquor dregs, which are created in the chemical cycles of pulp mills. The forest industry already recycles 85% of its fibre and coating colour sludge, 96% of its wastewater treatment plant sludge and 76% of the deinking waste, which is created in the processing of recovered paper. These are utilised as raw material or in the generation of energy.

Productising waste and enhancing the efficiency of its utilisation are being studied broadly by the forest industry. Research topics include utilising ash in the construction industry and land construction. Ash is a significant raw material for the concrete industry in Central Europe. New treatment and utilisation methods for green liquor dregs are also being studied. At present, green



liquor dregs are used in, for example, the surface structures of landfills and to neutralise wastewater.

The utilisation of by-products and waste materials is still a fairly new endeavour and needs to be studied further. In order to reduce the amount of final disposal, it is essential that new possible uses for waste types created in production are examined and that legislation is in place to enable utilisation. In addition, cooperation between different actors in the utilisation chain is required.

The forest industry produces about 80% of Finland's bioenergy

The cooking chemicals recovered from the black liquor created in pulp manufacturing are reused in the production process. Bioenergy facilities burn wood residues to generate electricity and heat – about a fifth of the energy used in Finland is generated from wood. This is five times more than the EU average, making Finland the clear leader in using wood for energy in industrialised countries.

Is it waste or a by-product? Revision of the waste framework directive

The EU is revising its waste framework directive, which has the aim of reducing waste by preventing its generation. Reusing waste has been classified as the next-best alternative, recycling as third-best, energy recovery as fourth-best and landfills as the least desirable option.

The forest industry is concerned especially about the flexibility of interpreting the classification. "If it is followed exactly, the sludge created in pulp and paper manufacturing should be composted because recycling has been determined as more favourable than energy use, making it the primary means of use of sludge. From a broader environmental perspective, however, it is better to burn the sludge, which contains wood fibres, to generate bioenergy and reduce the need for fossil fuels. On the other hand, using recovered paper as a raw material for paper to as great an extent as possible most often makes more sense than burning," says **Fredrik Blomfelt**, Senior Advisor on environment affairs with the Finnish Forest Industries Federation.

"Through revising the waste framework directive, the EU is attempting to cut down on the generation of waste and to promote the recycling of waste materials and by-products. From the forest industry's point of view, it would be important that the definition of what constitutes a waste is clarified with respect to, for example, recovered paper and that the prerequisites for productising different waste types, such as ash, are improved. For the forest industry, recovered paper is a vital raw material and not a waste," **Blomfelt** points out.

The proposed revision of the waste framework directive will be deliberated in a codecision procedure of the European Parliament and the Council of Europe. Its first reading at a plenary session of the European Parliament is scheduled for February 2007.

Recycling and utilisation of fibre packaging working well

In its directive on packaging and packaging waste, the EU has set minimum targets for the recycling of wood and fibre packaging waste that must be attained by the end of 2008. Finland decided to set a more stringent 75% recovery target for fibre packaging, placing these products at an unequal position in relation to other packaging materials which do not have corresponding recovery targets. In addition to recycling, energy use also counts as recovery.

According to the directive, 60% of fibre packaging waste must be recycled. In Finland, clearly more of this waste, 70%, is already recycled. However, Finland decided to set a more demanding 75% recovery target than required by the EU; this places fibre materials at a clear disadvantage to other packaging alternatives which do not have similar recovery targets. Fibre packaging includes corrugated cardboards, liquid containers (e.g. milk and juice cartons) and paperboard packaging (e.g. for biscuits and breakfast cereals).

In 2008, 15% of wood packaging waste must be recycled – this is a demanding objective because, at present, only about 7% of wood packaging is recycled in Finland. In addition, some 80% of wood packaging is burnt to generate energy, but this does not count as recycling. Utilising wood packaging in the generation of energy works well in Finland, but, as it is not considered at all in legislation, it does not count in the industry's favour. Wood packaging can be recycled acceptably as, for example, raw material for the panel products industry, in the manufacture of new packaging and in the building of green areas or it can be composted. Wood packaging includes transport pallets, mountings, boxes, packaging frameworks and support structures as well as cable reels.

Four producer organisations promote the utilisation and recycling of fibre packaging in Finland. The company Puupakkausten Kierrätys PPK Oy, which commenced operations in 2005, acts as the producer organisation for wood packaging and handles the recycling for the sector. The Finnish Forest Industries Federation is a stakeholder in the company.

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The Finnish Forest Industries Federation represents companies in the forest-based and related industries in Finland. Its task is to promote the competitiveness and profitability of the paper and wood products industries by strengthening their operating conditions and positive image in Finland and abroad. The organization's membership covers the entire pulp, paper and paperboard industries and about 80% of the wood products industry in Finland.

The sustainable use of renewable natural resources supports growth, employment, welfare and sustainable development in Europe. The forest-based sector is a significant European branch with a key role in promoting sustainable development. The sector wants to make the sustainable use of renewable natural resources one of the themes of the Finnish Presidency of the EU.