

## Making the most of material resources

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*Stora Enso strives to use raw materials as efficiently as possible in production. This eliminates waste as well as cuts costs.*

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Every effort is made to find productive uses for any residual materials. Biomass is increasingly being used to generate heat and electricity, for instance; while other ways to use residuals, such as for soil improvement in farmland and as protective covering for landfill sites, take advantage of their material properties. Such improvements in the utilisation of raw materials can greatly reduce the need for landfill.

During 2002, several projects and investments have involved turning various residuals and by-products into useful raw materials.

- Oulu Mill's new EKO plant started operation in March 2002. The EUR 3 million plant reduces the consumption of the filler used in papermaking

by up to 50%, and cuts landfill by approximately 40%. Calcium carbonate is recovered from waste water sludge and returned to the paper-making process. The remaining sludge consists mainly of pulp fibres and a small amount of calcium carbonate. When calcium carbonate is burned, it absorbs the sulphur dioxide generated in the combustion of the plant's peat fuel, reducing sulphur emissions.

- Stora Enso has become a partner in Finncao, a company which investigates ways to reuse residuals such as sludge and ash in order to reduce the amount of waste sent to landfill.

- Fors, Nymölla, Skutskär, Grycksbo and Kvarnsveden Mills are using combinations of residuals and by-products

as covering materials for municipal landfills and their own landfills.

- The Water Renewal Center, the joint waste water treatment plant for the Stevens Point and Whiting Mills, has started to spread waste water treatment residuals on farmland as fertilisers and for soil amendment. Since the programme began, the quantities of waste water treatment residuals going to landfill have been reduced by 80%. ■