

# Cleaner water around Hylte Mill

*Hylte Mill was the setting for the year's most significant waste water treatment project.*



A new waste water treatment plant has dramatically reduced discharges into the River Nissan from Hylte Mill.

Thanks to Hylte's new waste water treatment plant, discharges of oxygen-demanding substances (COD) into the River Nissan fell by approximately 20% during 2002. Surveys have revealed that the mill does not have any significant impact on oxygen levels downstream.

Unpleasant odours have sometimes bothered the mill's neighbours, but the adoption of the latest treatment methods has helped solve this problem. Sludge is now treated separately, before it is finally incinerated in a boiler to provide energy for the mill's pulp and newsprint machines.

Hylte Mill has invested EUR 22 million in the new waste water treatment plant. The cleaning process now consists of one mechanical stage, two biological stages and a chemical treatment stage.

## Marine symbiosis

The Maretarium aquarium centre stands beside Stora Enso's Kotka Mill on the shores of the Baltic Sea. The 50 Finnish fish species kept at Maretarium all depend on the high quality of the water in their tanks, which is taken from the sea just a short distance away from Stora Enso's Kotka Mill.

Maretarium provides facilities for researchers from the University of Helsinki and the Finnish Game and Fisheries Research Institute. A special classroom can be reserved by local schools and kindergartens for lessons

about aquatic ecosystems and the role of water in paper production.

Maretarium was opened in May 2002 and has already welcomed almost 100 000 visitors. Stora Enso is one of Maretarium's main sponsors.

## Mermaid to help the Baltic Sea

One of the main aims of the WWF (the World Wide Fund for Nature) concerning the Baltic Sea is to reduce environmental loads, particularly the excess nutrient loads that lead to eutrophication – a major problem in the Baltic.

The WWF is currently conducting

a special Baltic campaign – “Operation Mermaid” – in co-operation with various universities, research institutes, and Stora Enso as one of the major corporate sponsors.

In addition to curbing eutrophication, the campaign aims to reduce the risk of oil accidents and increase awareness of environmental issues around the Baltic Sea, in order to protect endangered species and their habitats. ■

[Read more in the Web report](#)

## Steps taken in 2002

- The upgrading of **Varkaus Mill's** effluent treatment plant was completed. The main target of reducing phosphorous loads entering Lake Haukivesi was successfully achieved. Two-stage mechanical sludge dewatering and pneumatic transportation started up in May, allowing sludge to be used as bio-fuel by the mill, instead of going to landfill. The total cost of this project was EUR 9 million.

- At **Sachsen Mill**, the rebuilding of the waste water treatment plant was completed, and new process steps were put into operation. Thanks to a new cooling system, waste water temperature limits can be met all year round. Since the new anaerobic step is a closed system, odorous emissions can be avoided as well. The resultant biogas is utilised in the mill's sludge incinerator to

replace natural gas. These investments involved a total sum of about EUR 3 million.

- New pulp washing equipment at **Enocell Oy** has reduced effluent emissions, with Chemical Oxygen Demand loads cut by 8%, in spite of a 9% increase in production.

- At **Heinola Fluting Mill** a tertiary flotation plant was incorporated in the waste water treatment process to ensure that permit conditions are consistently met, particularly where Phosphorus and suspended solids are concerned. The new flotation plant has been in use since November.

- Waste water from **Tainionkoski Mill's** board and paper machines has been directed through chemical treatment in the Kaukopää Mill area, as well

as undergoing mechanical clarification. Thanks to this arrangement, Phosphorus, COD and BOD loads have decreased.

- **Veitsiluoto Mill** completed the enlargement of a biological treatment plant by building another secondary clarifier, and also improved the cooling of waste water before biological treatment. These measures help control total suspended solids.

- A new project aims to reduce COD loads in treated waste water from **Maxau Mill** before it is discharged into the River Rhine. This project should be completed in spring 2003.

- Evaporation capacity has been increased at **Kemijärvi Mill**, and waste water loads from the evaporation plant will be reduced.