

**The Swedish Meteorological and Hydrological Institute (SMHI), the Finnish Environment Institute (SYKE) and the shipping company TransAtlantic launch a joint venture:**

## Real-time monitoring commences in the Baltic Sea and the Kattegat

Now SMHI and SYKE are increasing their joint monitoring of the state of the environment in the Gulf of Bothnia, the Baltic Proper and the Kattegat. A TransAtlantic merchant vessel that plies the seas non-stop has been equipped with a "FerryBox". Every 20 seconds, automatic measurements of the water and air are taken and the results are sent by satellite once an hour. Water samples – to indicate, for example, algal bloom – are taken automatically at up to 24 locations.

"We obtain quick and important information about everything from algal bloom and eutrophication to freeze-ups and climate monitoring. A bit further on, the results will be made available to everyone via our websites", says Henrik Lindh at SMHI.

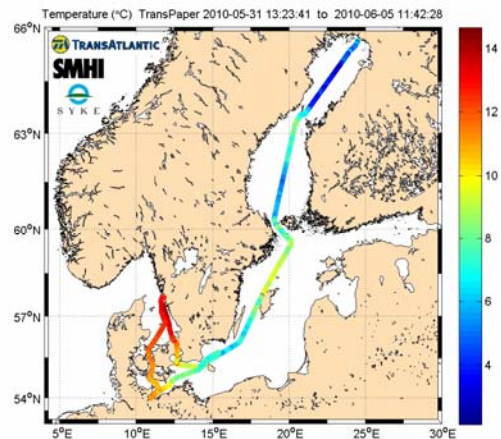
"Frequent measurements are important, as many processes in the sea occur with short time-scales that are like the weather's, from a few days to a week or so. The FerryBox now provides us with more and quicker information about sea and air temperatures, the oxygen and salt content of the surface water, the occurrence of different algae and other environmental data associated with the climate and eutrophication. It is a very good complement to our research ships, satellites and measurement buoys", says Bengt Karlson, a researcher at SMHI.

### From tourists to nature conservation

"This information is important for many groups, including shipping, fishing, tourism, pleasure boat owners and national and international nature conservation institutes", says Seppo Kaitala at SYKE.

"This monitoring will be long term and is planned to continue for the next 10 years or more", says Annelie Rusth Jensen at TransAtlantic, who are contributing ships and personnel on board.

The measurement system, FerryBox, was put into operation in May on the TransPaper, which operates on the Gothenburg-Kemi-Oulu-Lübeck-Gothenburg route every week. Every twenty seconds, automatic measurements of the temperature and salinity of the surface water are taken and data is sent via satellite to SMHI and SYKE. Water samples for plankton analysis etc. are taken at up to 24 locations and analysed at SMHI's oceanographic laboratory in Gothenburg.



### Systems and data shared between the Baltic countries

The FerryBox on the TransPaper is an important complement to our monitoring of the seas and now connects the Gulf of Bothnia and the Kattegat to a similar monitoring system, Alg@line, in the Gulf of Finland and central Baltic. It is being operated in cooperation with Finland, Estonia and Germany.

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“The new FerryBox and this extended cooperation mean that all our seas in the Baltic countries are now monitored more intensely in near real time. The countries also share data among themselves in the joint oceanographic system [BOOS](#)”, says Henrik Lindh at SMHI.

The measurement system is financed by the three parties and the Swedish Environmental Protection Agency.

**Photos:**

Photos of the ship's route are attached.

[Photo of the ship TransPaper](#)

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