



for a living planet



Feeding the algae with tax money

EUTRO-FARMING AND EU-TROPHICATION

The Baltic Sea – a fer

The Baltic Sea is the largest brackish-water sea in the world. It is also the youngest sea on the planet which makes it one of the world's most unique ecosystems. Over the past 100 years however the Baltic Sea has changed from a clear-water ecosystem to a eutrophic – nutrient rich – marine environment.

The main reason for this is the release of large amounts of nutrients, mainly nitrogen and phosphorus, into its waters. Most of these come from agriculture in the region, but also from traffic, industry, waste-water, and shipping. Each year an estimated one million tonnes of nitrogen and 35,000 tons of phosphorus are deposited in the Baltic Sea.

EFFECTS

The constant flow of nutrients has dramatically altered the composition of the Baltic Sea, so it now contains four times as much nitrogen and eight times as much phosphorus as it did in the early 1900s. This has led to a process of eutrophication, with highly visible effects. The sight depth of the water has been reduced by three meters over the last 100 years because of an abundance of plankton which thrives on the nutrients. The composition of plant-species in the Baltic Sea has changed dramatically which, in some cases, can even be seen from the surface.

The most obvious effect, however, is the yearly occurrence of algal blooms. In the summer vast areas of the Baltic Sea are covered by a greenish toxic slime which even makes it impossible to swim in many places. Sometimes the stench this gives out is so strong that it prevents people getting too close to the water.

What can be seen on the surface, however, is only the tip of the iceberg.

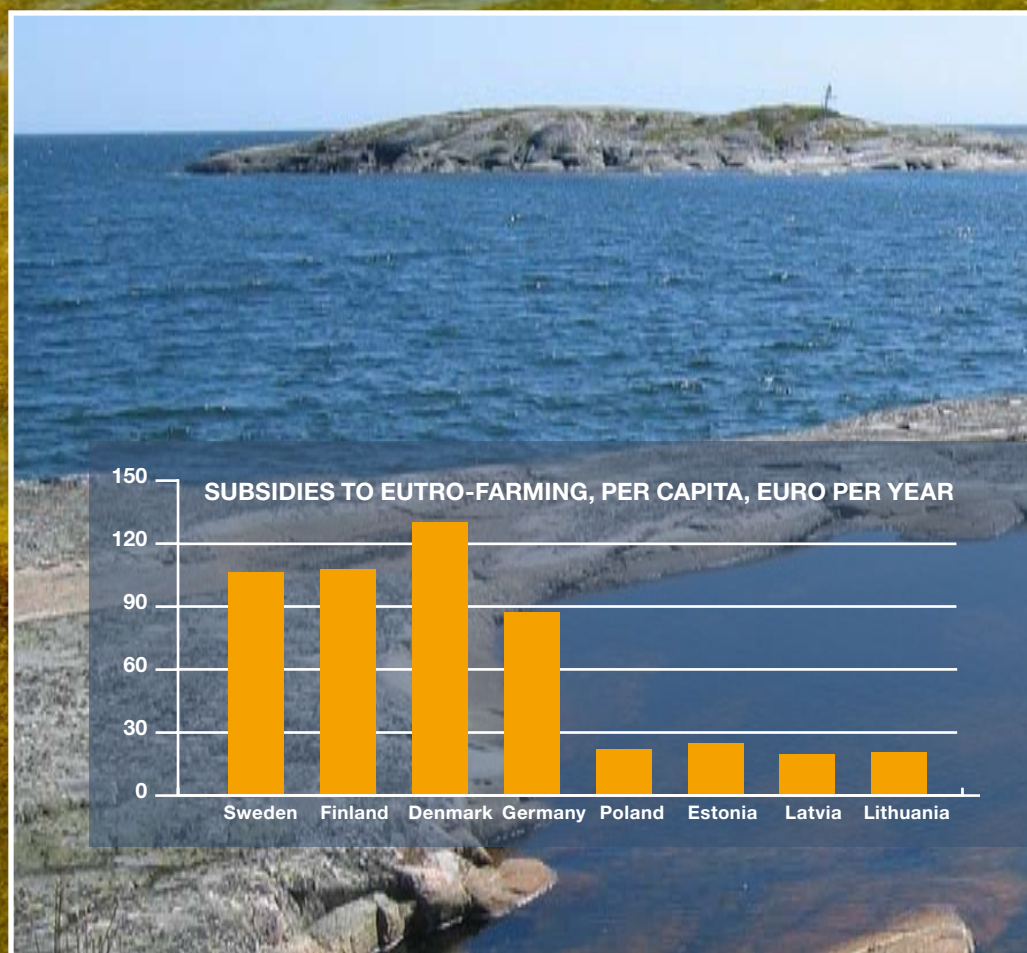
Underneath, immense damage is taking place. A staggering 70 000 km² of the Baltic sea-beds are dead marine wastelands because of dead algae which sink to the sea-floor where they decompose and consume the oxygen needed by other marine organisms. As a result fish, marine mammals and other living organisms find it difficult to breed and even to survive.

EUTRO-FARMING

Eutrophication is predominantly caused by the dramatic growth in the use of nutrients in agriculture in the region. Fifty years ago farms literally ploughed back the nutrients they produced, for example, from manure, into the soil. However, the extensive

industrialisation of farming in Western Europe during the 1960s and 1970s has led to farms using artificial fertilisers which hugely increase the amount of nutrients put into the system. From 1950 to 1980, the inputs of nitrogen and phosphorus in farming increased disproportionately in relation to the outputs (in the form of foodstuffs produced). This has created a nutrient surplus that leaks into the environment and subsequently into the Baltic Sea. In 2002–2004, the eight Baltic Sea countries had an average total surplus of nitrogen and phosphorus of 56 kg and 11 kg per hectare respectively per year.

It would be grossly unfair to blame the farmers for this situation. It is not





Fertilised sea

their intent to cause eutrophication through releases of nutrients. They operate in a system which forces them to compete and increase their revenues and yields in order to survive, but which does not set stringent demands on their environmental performance. In this subsidy-driven market, there is little room for concern over the eco-system of the Baltic Sea.

Only action at the political level will solve the problem of eutrophication. It is today's agricultural policies which promote the intensification and concentration of agricultural production which generates an enormous surplus of nutrients. Such practices inevitably lead to excess run-off, particularly in the absence of effective regulation

to prevent large-scale leakage to the environment and to the Baltic Sea: Eutro-farming.

SUBSIDIES FOR EUTROPHICATION

The nub of the issue lies with one of the most environmentally harmful subsidy programmes in the world: the European Common Agriculture Policy or 'CAP' as it is more commonly known. In 2005, the European Union gave a massive €10.4 billion, to Eutro-farming in the eight Baltic member states, equivalent to €65 per citizen from this region. By providing these subsidies without setting and enforcing strict environmental policies and measures to guard against nutrient overload, the authorities are in effect supporting and causing the eutrophication.

The situation is even more serious when one looks into the future. While the use of artificial fertilisers is slowly decreasing in the old EU countries, thanks to better fertilising regimes, the situation is the opposite in the new member states. Pushed by massive EU subsidies, the intensification and industrialisation of agriculture will be inevitable in new EU member states, and will result in a dramatic increase in the use of mineral fertilisers. The European Fertilizer Manufacturers Association estimates that the use of artificial fertilisers will increase by 20-35% in these countries over the next ten years.

SOLUTIONS

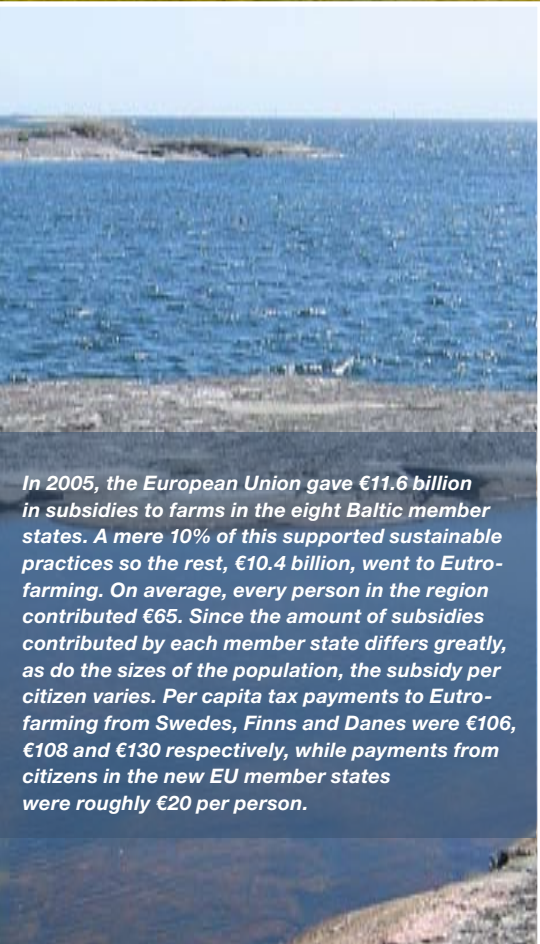
WWF believes that action must be taken at the highest level of government around the Baltic Sea. For years environmental agencies and ministries have been making promises and pouring large amounts of money into projects intended to fight eutrophication. Meanwhile, agricultural agencies and

ministries in the same countries have been promoting the problem instead of the solution.

To overcome this, WWF is advocating for heads of state to take charge of the problem. Over the next few years, subsidies paid through the CAP must become subject to stringent regulation and monitoring, designed to prevent excessive leakage of nutrients from farming. Although to some extent this is formally the case today through the system of cross-compliance, the demands are too low, performance is not monitored and transgressions are not sanctioned. The system of cross-compliance must be strengthened, monitored and enforced. The European Commission's Directorate-General for Agriculture is carrying out a 'health check', a mid-term review of the CAP. WWF calls on governments to use this opportunity for political action.

WWF believes other measures are also needed, most importantly a substantial tax on the use of mineral fertiliser in the Baltic region. Several countries in the region already have such a tax, where the income from the tax is returned to the farmers for improvements in farming practices and environmental performance, but it is too small to be effective. Good farming practices also need to be developed and shared around the region, and their implementation strictly enforced.

However not all of the problems can be solved at the farm level. WWF also calls for governments to take responsibility for implementing solutions at the landscape level. This could include the restoration and creation of wetlands, freshwater ecosystems and other types of buffer zones.



In 2005, the European Union gave €11.6 billion in subsidies to farms in the eight Baltic member states. A mere 10% of this supported sustainable practices so the rest, €10.4 billion, went to Eutro-farming. On average, every person in the region contributed €65. Since the amount of subsidies contributed by each member state differs greatly, as do the sizes of the population, the subsidy per citizen varies. Per capita tax payments to Eutro-farming from Swedes, Finns and Danes were €106, €108 and €130 respectively, while payments from citizens in the new EU member states were roughly €20 per person.



In the summer vast areas of the Baltic Sea are covered by a greenish toxic slime. This satellite photo from NASA shows the algal bloom in the Baltic Sea on July 11, 2005.

Production: Odeilius #4025, 2007. Photos: Page 1: Anders Modig (sea view and lower left); Askö, Sweden (upper left); WWF / Johanna Lampi and Royal Helsingfors (upper right); Veijo Jormalainen (lower right); Page 2: Anders Modig (sea view); WWF Palm Rosqvist (rock and sea); Page 4: NASA / SMHI.

WWF is one of the world's largest and most experienced independent conservation organisations, with almost 5 million members and supporters and a global network active in some 100 countries.

WWF's mission is to stop the degradation of the planet's natural environment to build a future in which humans live in harmony with nature, by:

- conserving the world's biological diversity
- ensuring that the use of renewable natural resources is sustainable
- promoting the reduction of pollution and wasteful consumption.



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Please contact us for more information!

WWF Baltic Marine Rescue

Ulriksdals Slott
SE-170 81 Solna
Sweden

Tel +46 8 624 74 00

Fax +46 8 85 13 29

www.panda.org/balticmarinerescue