State of the Gulf of Finland improves - albeit slowly

Water protection measures carried out in the Gulf of Finland area have reduced the land-based nutrient load.

Phosphorus load into the Gulf has reduced markedly while management of nitrogen load has been challenging.

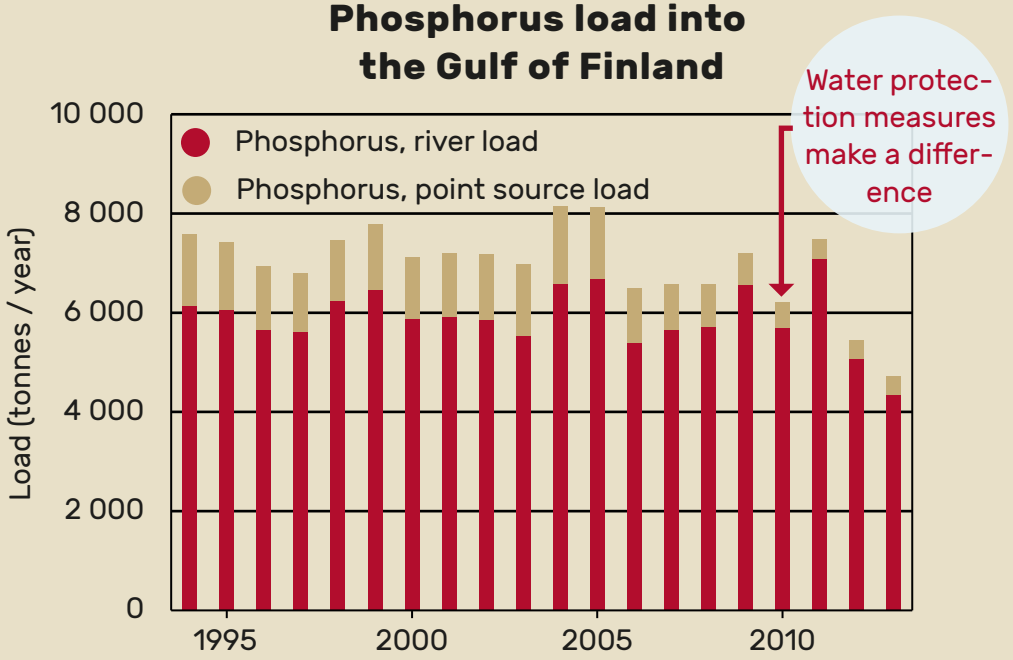
Rivers bring much nutrients into the Gulf. This scattered load is difficult to control.

Phosphorus concentration in the Gulf of Finland water is

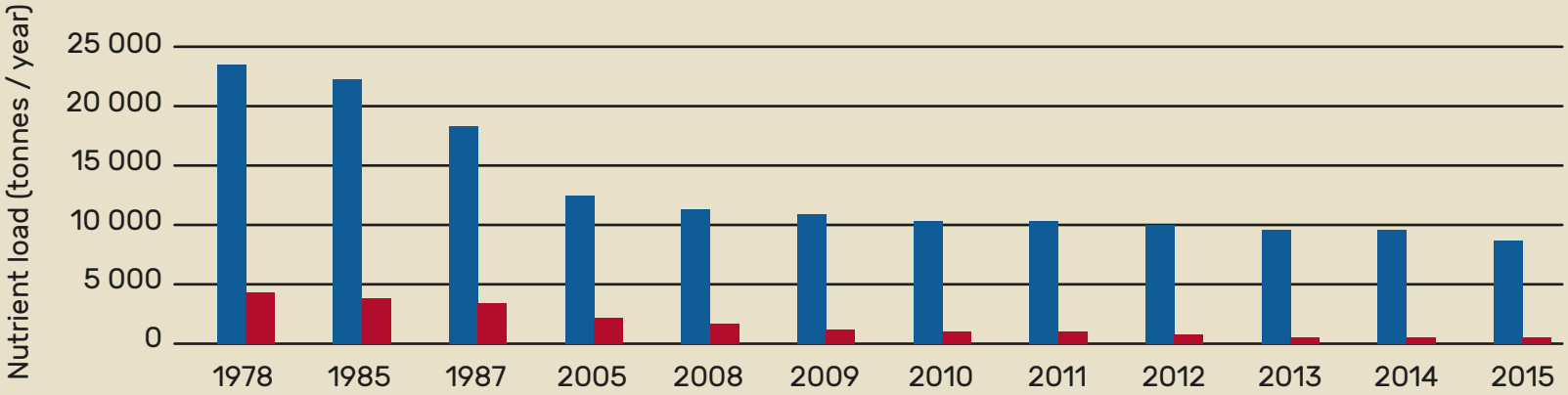
40%

higher than the target level but gradually declining

Phosphorus load into the Gulf of Finland



Nitrogen and phosphorus load from St. Petersburg into the Gulf of Finland



Source: SYKE, SUE Vodokanal of St.Petersburg (2016)

SYKE

Finnish Environment Institute
www.syke.fi/en-US

State of the Gulf of Finland improves markedly only after the state of the Baltic Proper has improved.

Although the land-based phosphorus load into the Gulf has reduced, phosphorus coming from the Baltic Proper slows down the improvement of the state of the Gulf.

Do like this:

Phosphorus stored in the Baltic Proper will be introduced in the Gulf for years to come regard-less of our actions. We need to focus on the reduction of our own nutrient load into the Gulf.

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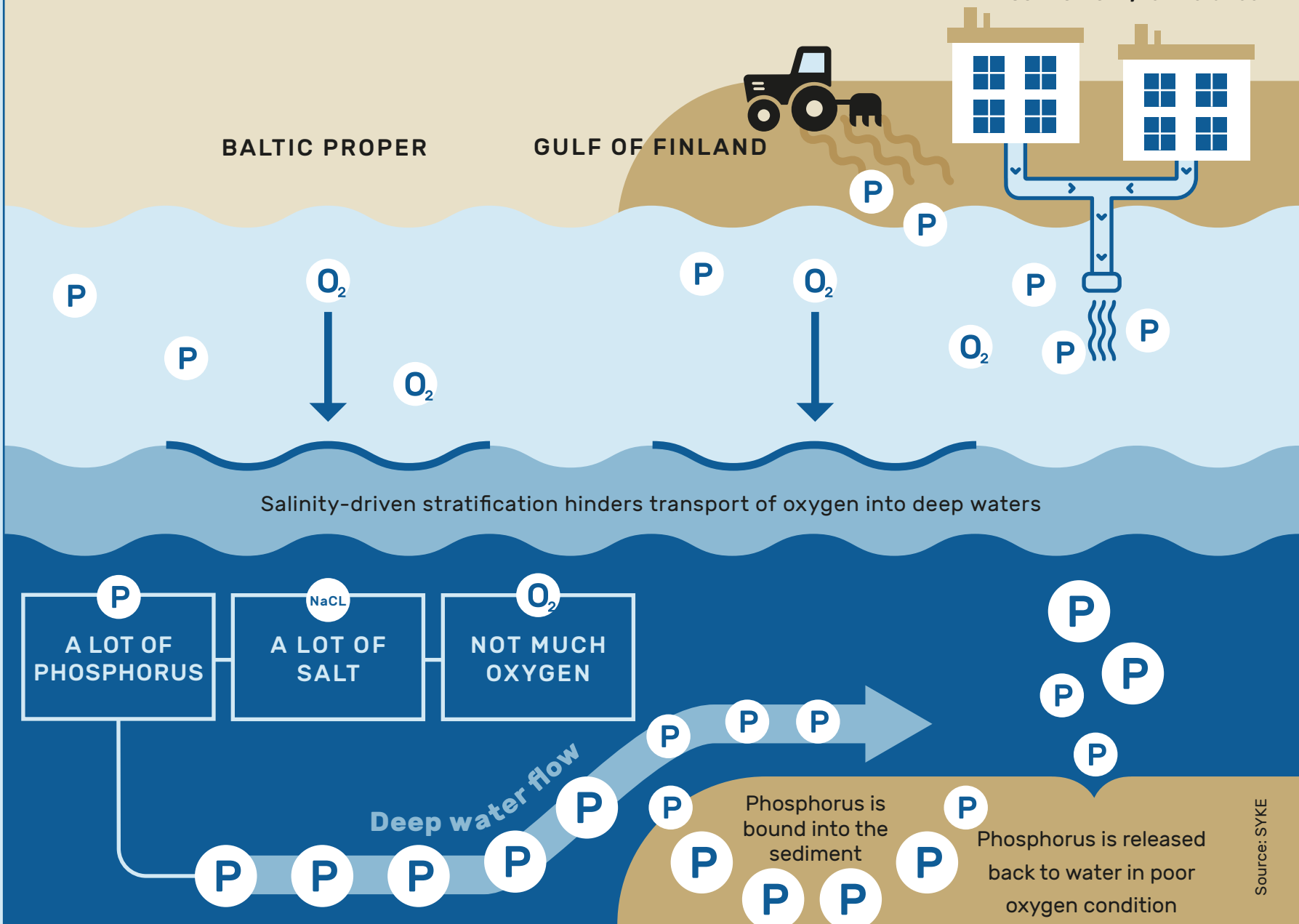
Phosphorus has various sources

Phosphorus discharges from **agriculture** and **settlement,** for instance



EUTROPHICATION

Algae - sign of eutrophication

Blue-green algae have become the icon of the eutrophication of the Baltic Sea.

They may form dense surface accumulations, being a nuisance for boating and people at summer gottages. They can also be toxic.

Do like this:

Always consider greenish / brownish matter floating on the water to be possibly toxic algae.

Do not swim in the water in which there is much algae, and do not let your pet swim there either. Do not use that water in your garden or sauna.

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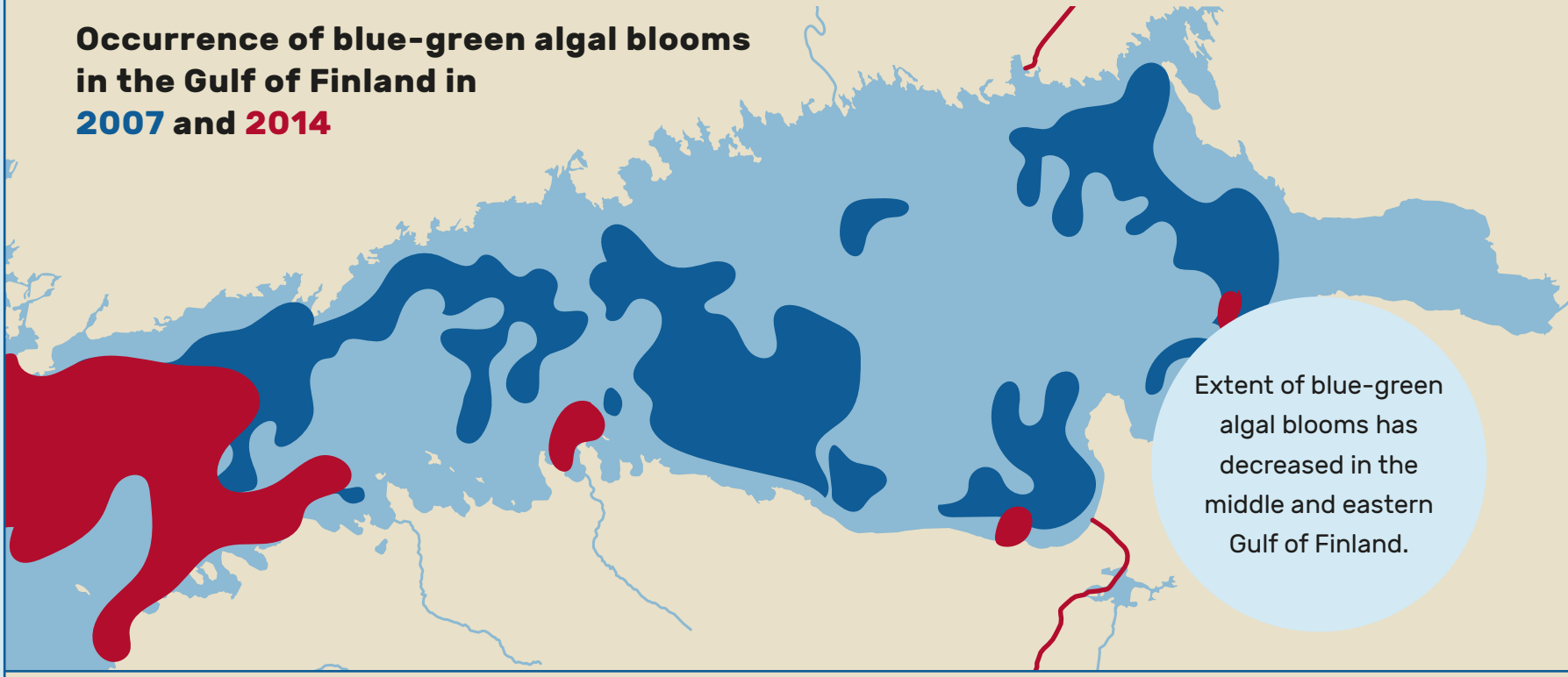
Occurrence of blue-green algal blooms in the Gulf of Finland in 2007 and 2014



Sources of phosphorus into the Gulf of Finland (tonnes / year)

Scattered load (e.g. agriculture) 2 000

Natural load (irrespective of human actions) 1 400

Internal load (phosphorus released from sediments) 0 - 10 000

Point source load (e.g. households) 600

Transboundary load (atmospheric deposition) 200

Source: SYKE

Do you consider the environment when you make choices in your everyday life?

Nutrient load from industry and agriculture is the main polluter of the Baltic Sea. Still, households' everyday consumer habits do count.

Build-up of people's - including yours - environmental consciousness is the prerequisite for a better environment.

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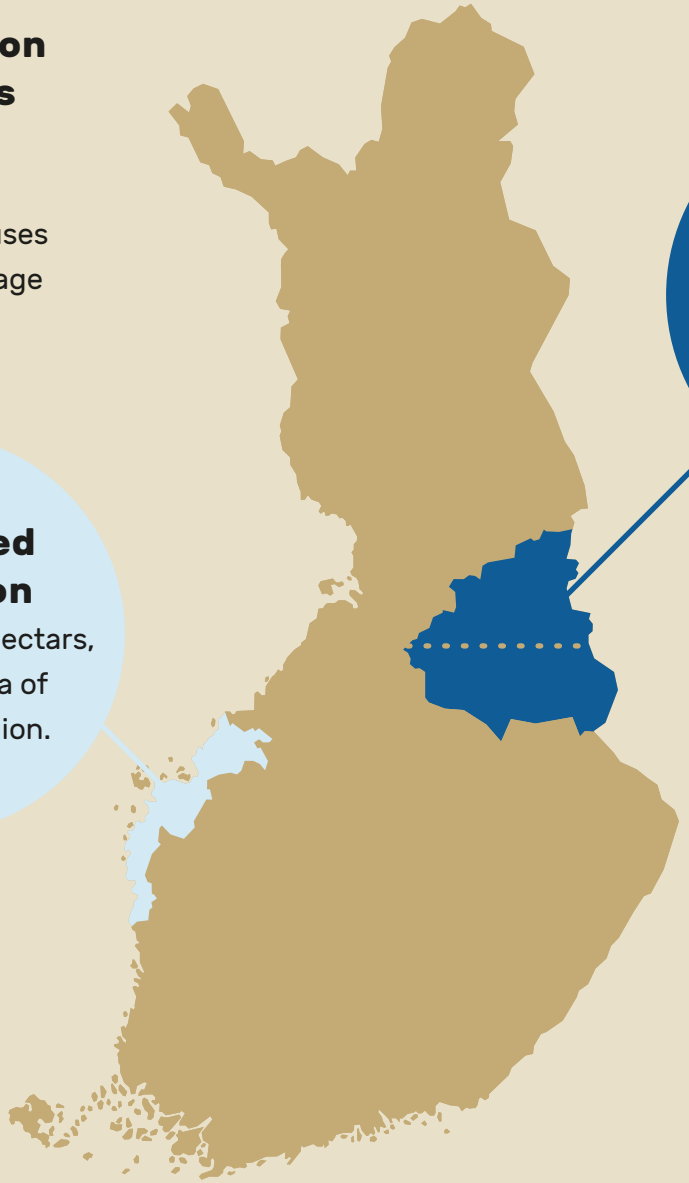
Biggest polluter of the Baltic Sea is us, that is, what we eat

Lighten your fingerprint on the environment: eat less food of animal origin.

A diet consisting mainly of meat causes twice the nutrient load into the sewage than a diet consisting mainly of vegetables.



Cultivated area
about 2.2 million hectars, that is, the area of Kainuu region.

Cattle feed cultivation
about 0.7 million hectars, that is, the area of Pohjanmaa region.

Meat consumption
has doubled since 1970
2x

What else can I do?

- ✓ Use eco-friendly detergents
- ✓ Do not wash carpets on the shore or on the pier
- ✓ Manage properly your cottage's sauna and toilet waters
- ✓ Be a responsible boater

Source: SYKE

Nutrient load into the sea should be reduced by any possible mean.

It is no longer topical whether we should reduce nitrogen or phosphorus load, or scattered or point source load. The more reduction the better.

Only international environmental conventions enable truly target-oriented environmental conservation.

You can show example in your own everyday life.

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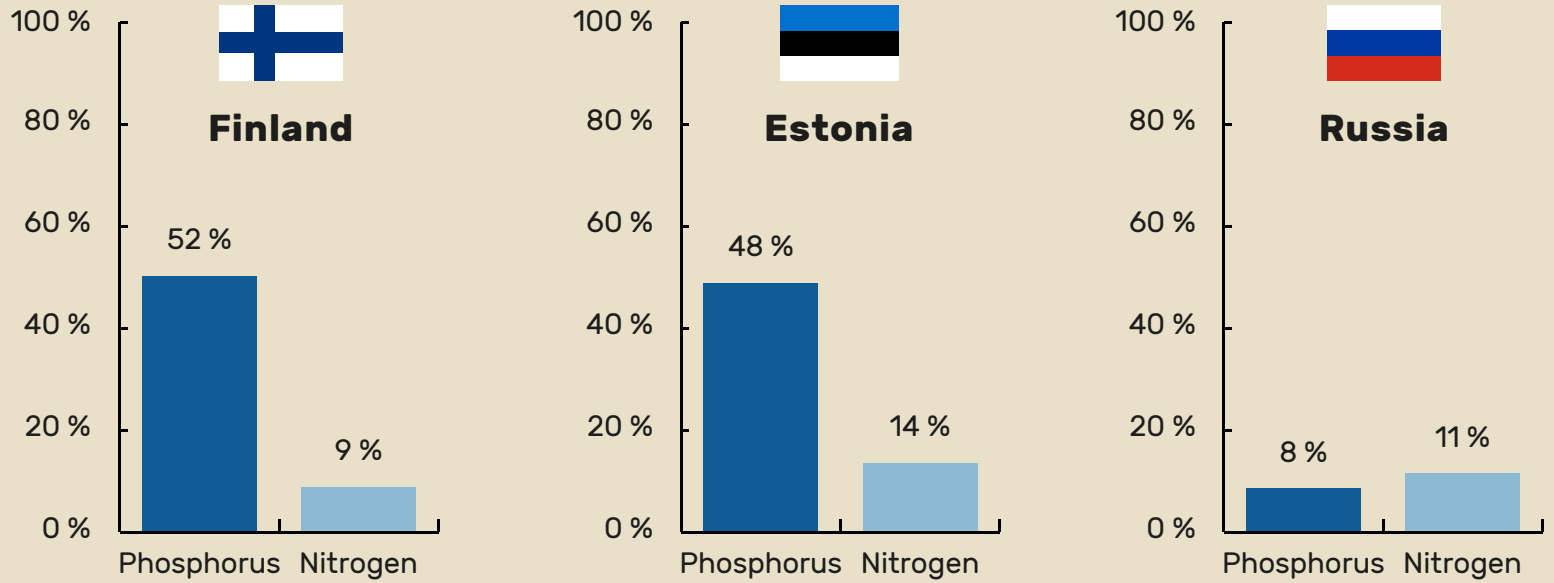
Gulf of Finland countries still have got plenty to do

How much the countries need to reduce their current nutrient load into the Baltic Sea so that they reach the agreed reduction targets?



Still to do:

Settlements: improvements in nitrogen reduction rate.

Agriculture: more efficient nutrient recycling, fertilisation according to the needs of the crop, utilisation of manure in the fertilisation process, use of gypsum to reduce phosphorus losses from the fields.

Still to do:

Improvements in nitrogen reduction rate from settlements' waste waters.

Still to do:

Improvements in nitrogen and phosphorus reduction rate from small settlements' waste waters.

Source: SYKE