

Sources of eutrophication of the Baltic Sea
or
who is to blame?

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p. 12: *More than half of the total waterborne phosphorus load and nearly one third of the total waterborne nitrogen load originated from Poland.*

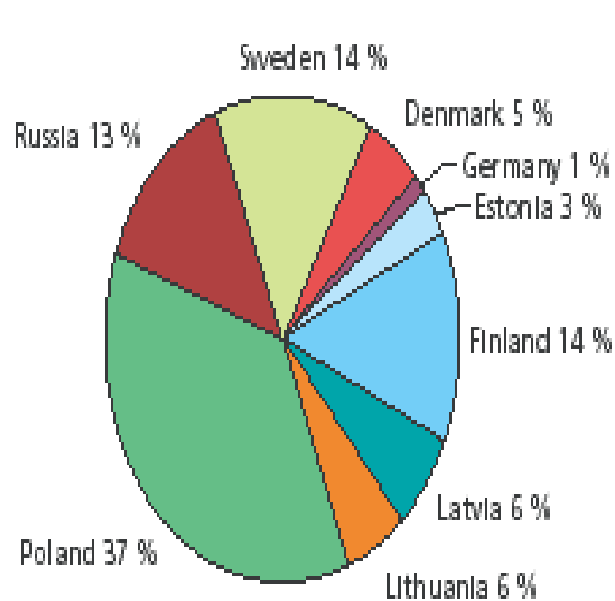
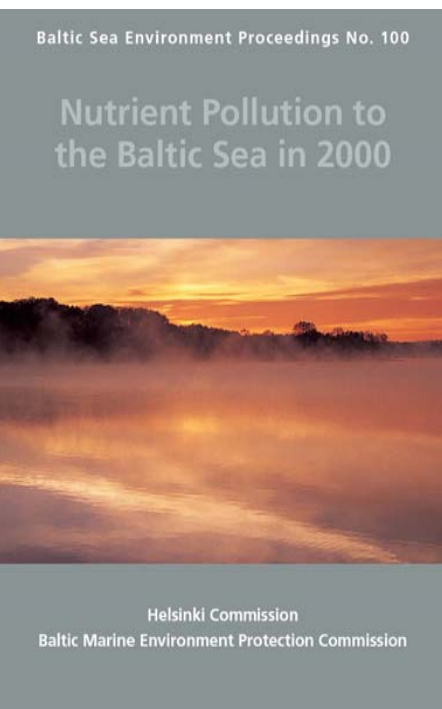


Figure 12. Proportion of waterborne inputs of phosphorus into the Baltic Sea by HELCOM countries in 2000. These inputs include inputs from natural background sources as well as anthropogenic sources¹⁵

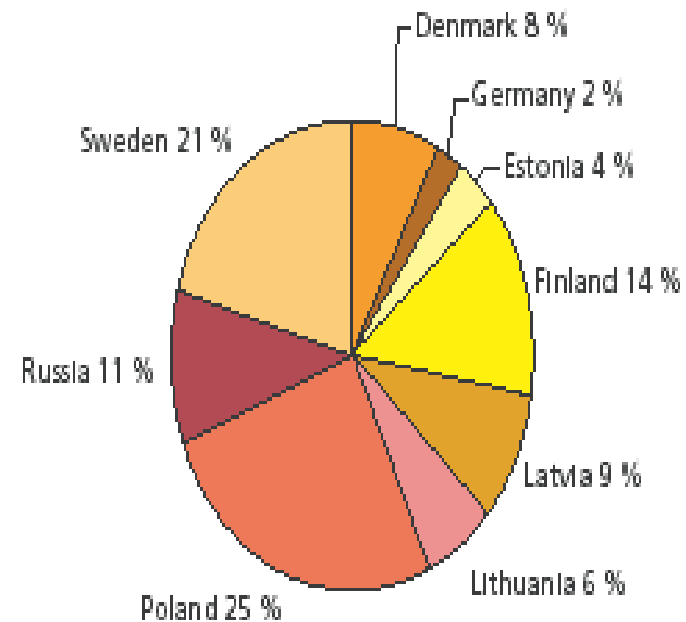


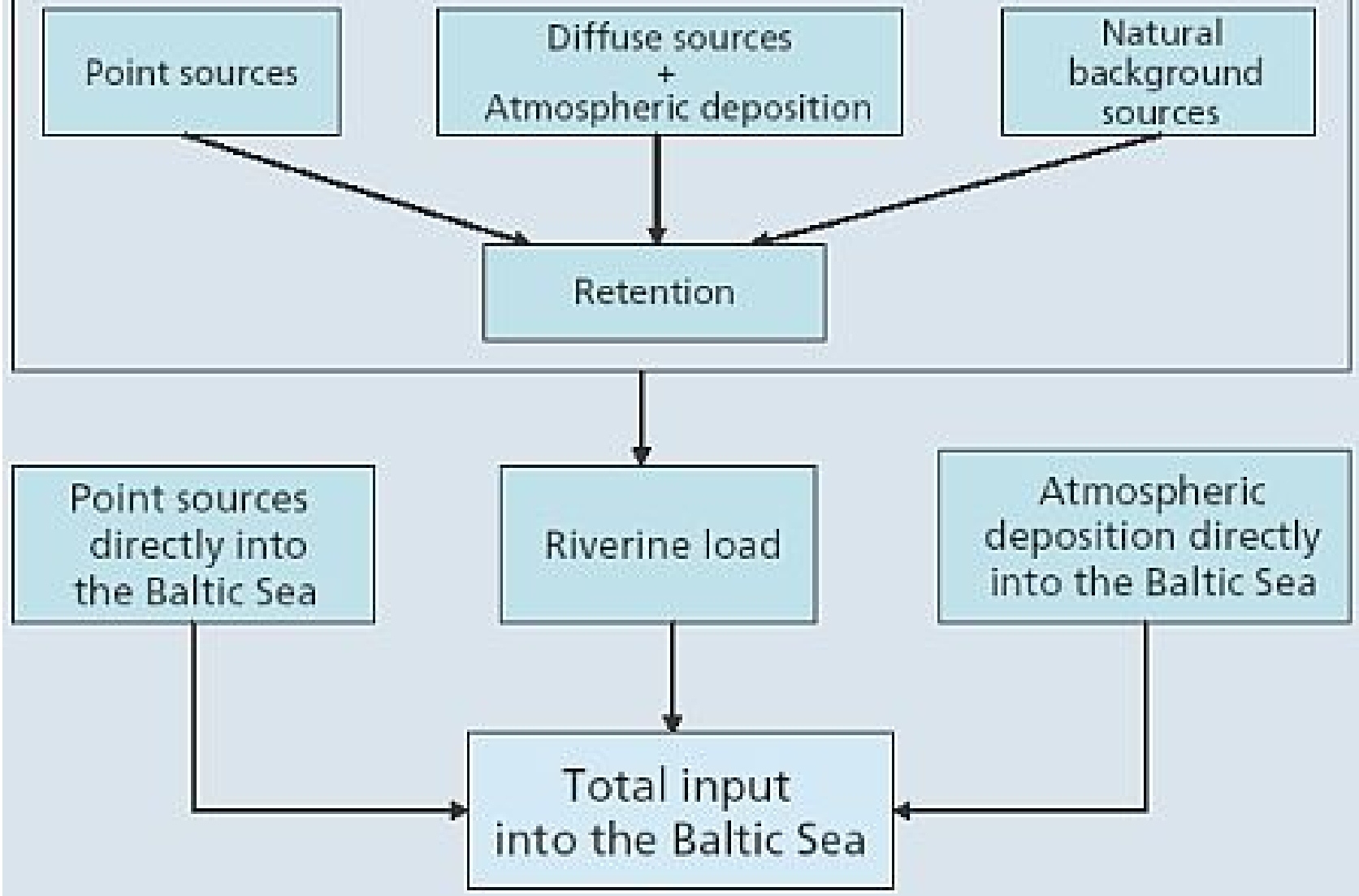
Figure 7. Proportion of waterborne inputs of nitrogen into the Baltic Sea by HELCOM countries in 2000. These inputs include inputs from natural background sources as well as anthropogenic sources⁹

Unless Polish farmers switch to ecological ways of farming Poland will kill the Baltic Sea

Lasse Gustavsson, secretary general World Wildlife Fund Sweden

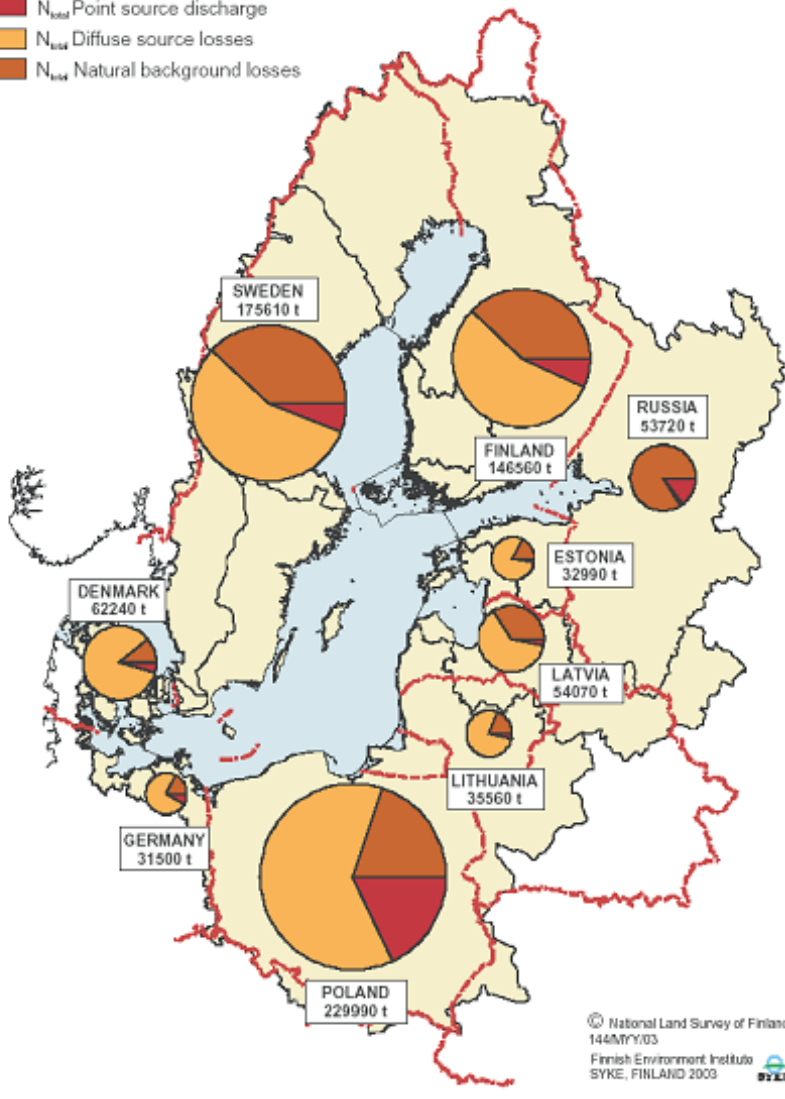
After Novye Izvestiya

Sources of nutrients within the Baltic Sea catchment area

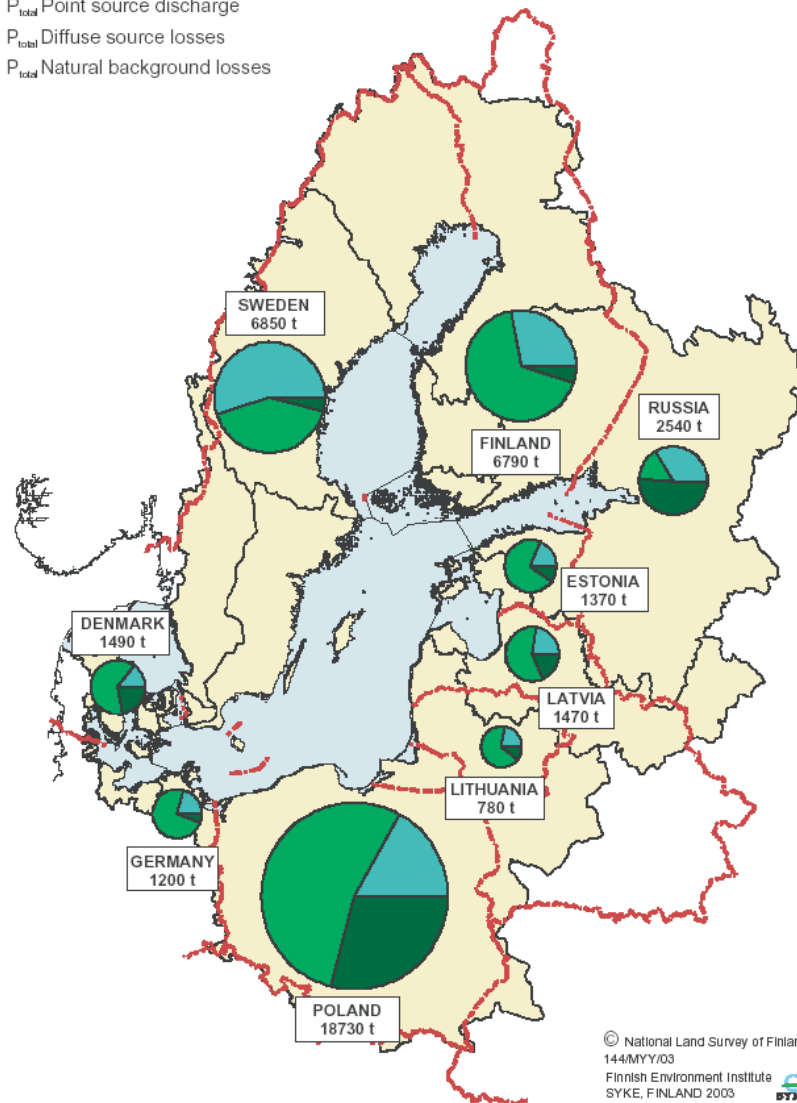


Total nutrient loads into inland surface waters within the Baltic Sea catchment area

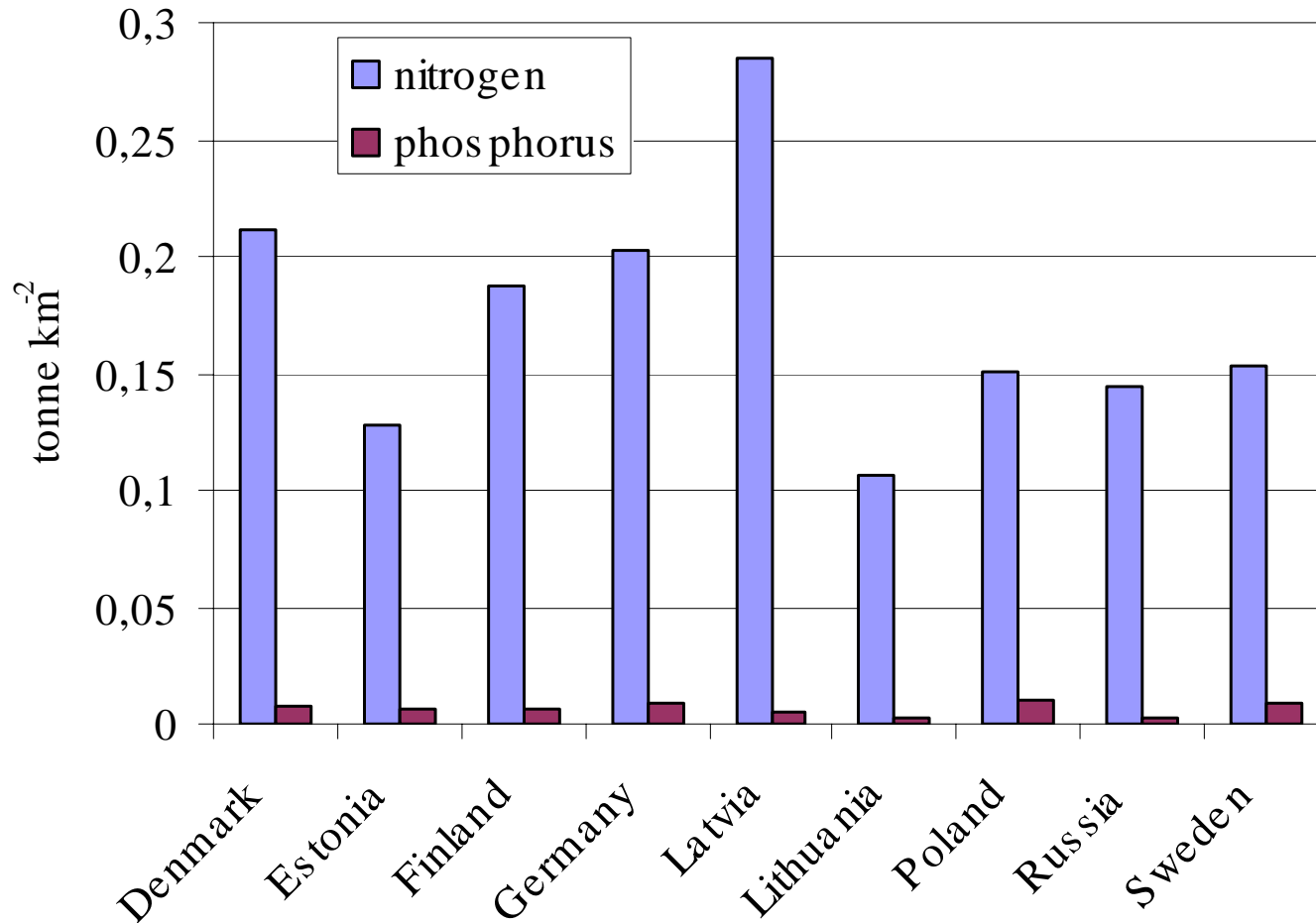
■ N_{total} Point source discharge
■ N_{total} Diffuse source losses
■ N_{total} Natural background losses



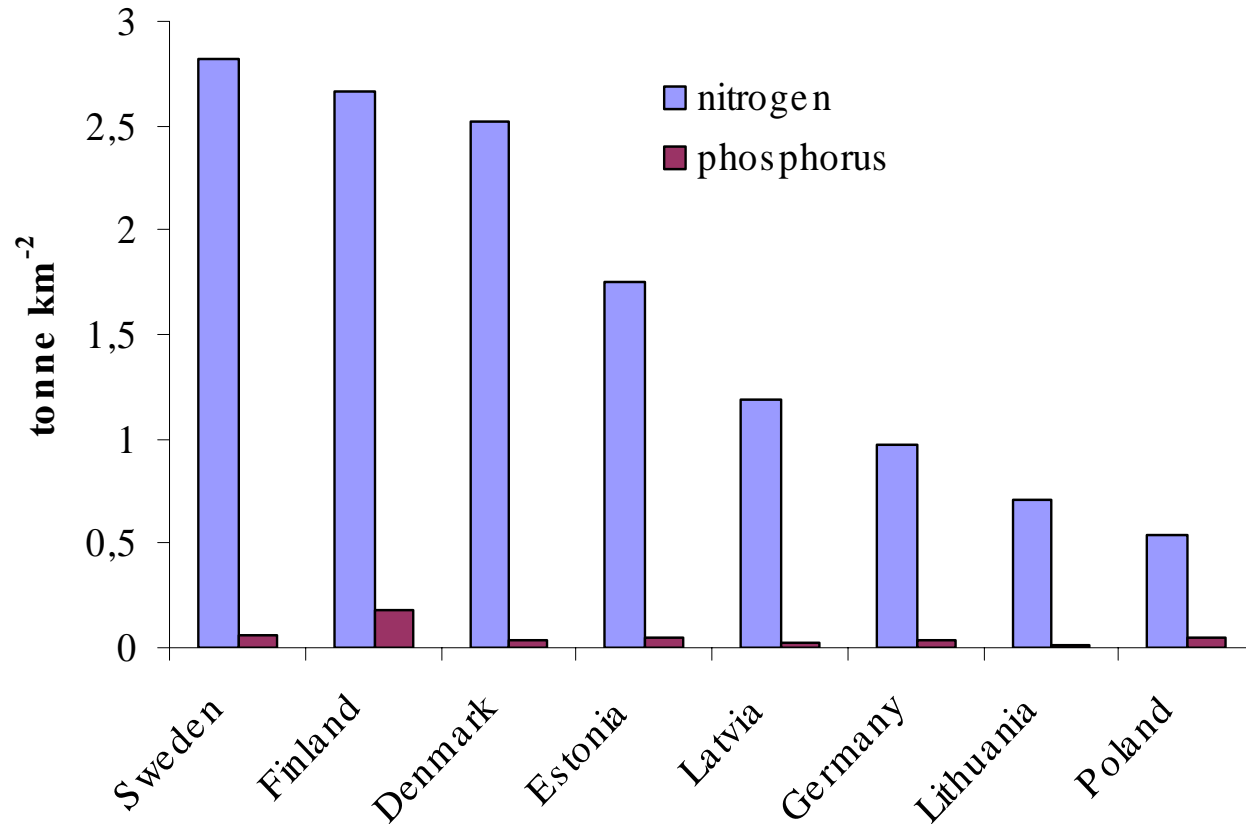
■ P_{total} Point source discharge
■ P_{total} Diffuse source losses
■ P_{total} Natural background losses



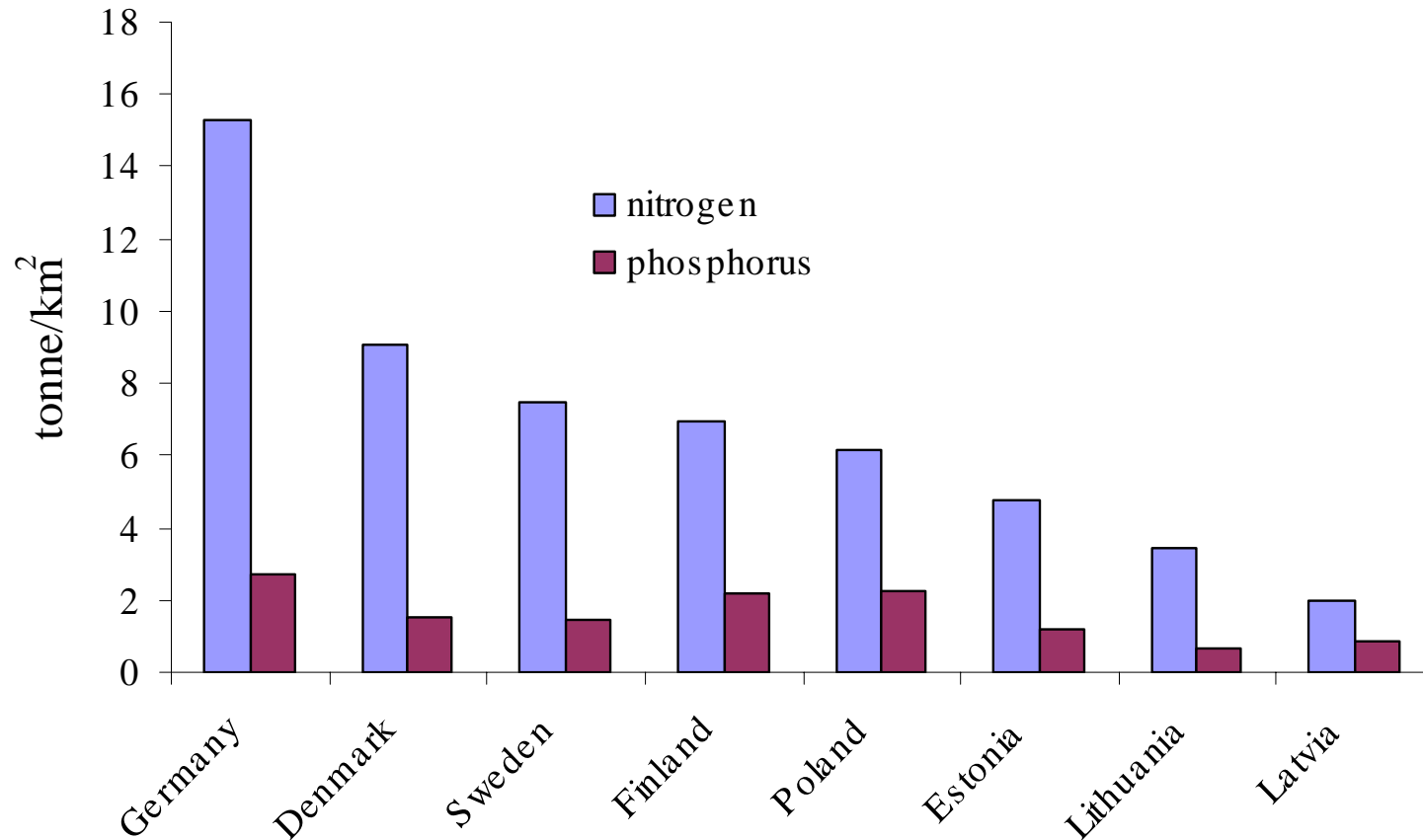
Area-specific natural background losses of nitrogen and phosphorus within the Baltic Sea catchment area



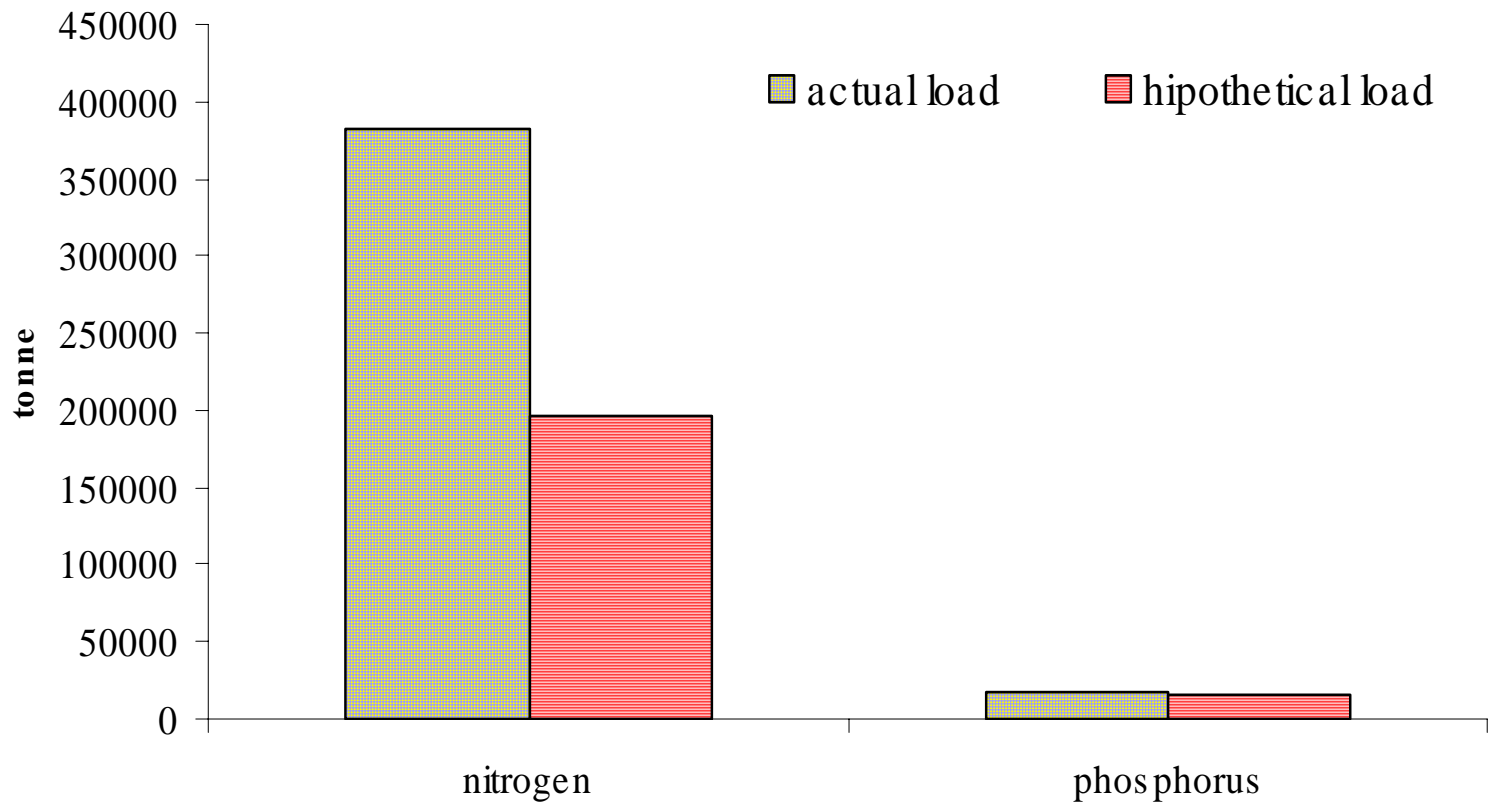
Area-specific nutrients input from agriculture and managed forestry within the Baltic Sea catchment area



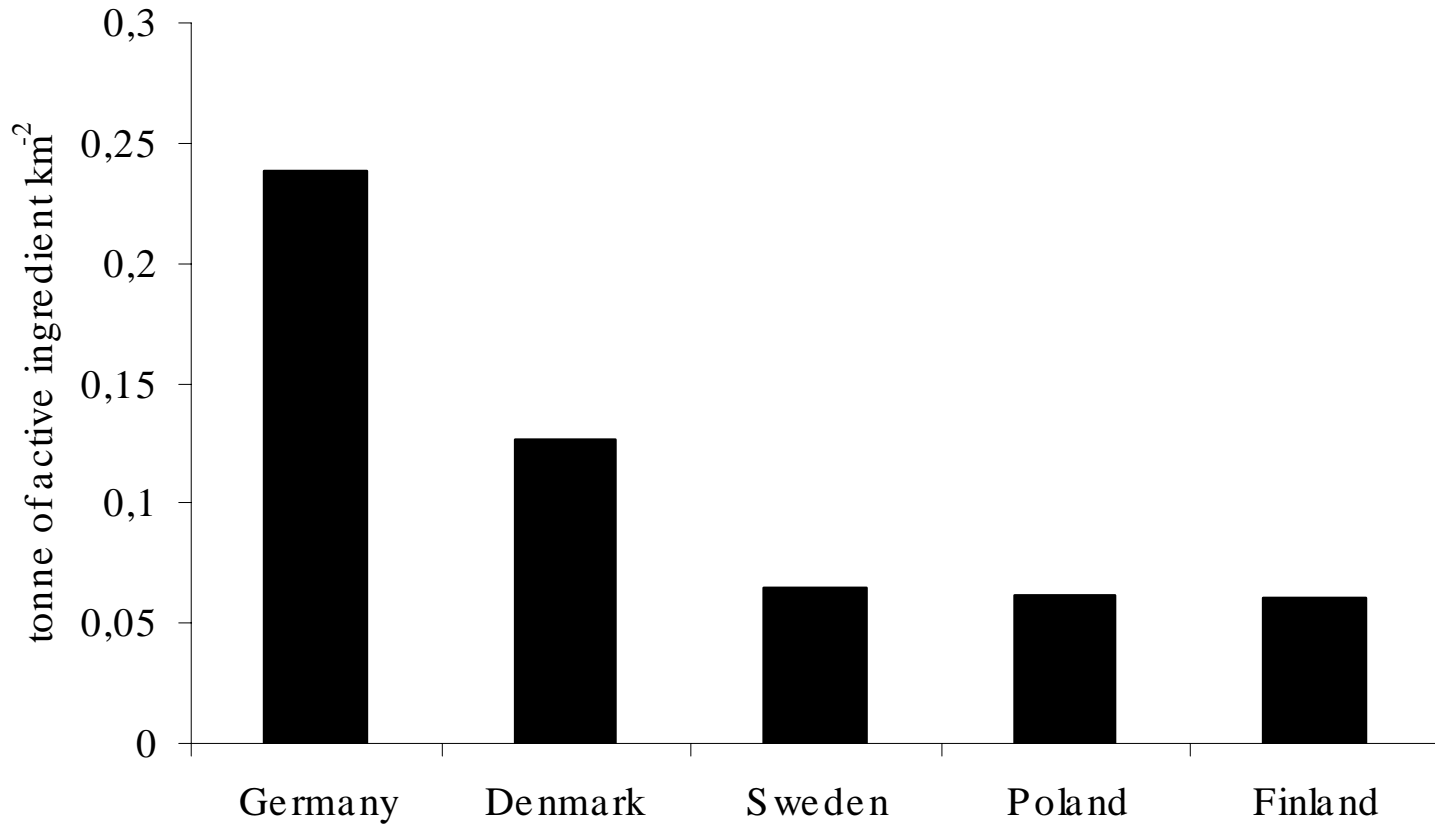
Artificial fertilizers use (per arable land unit)



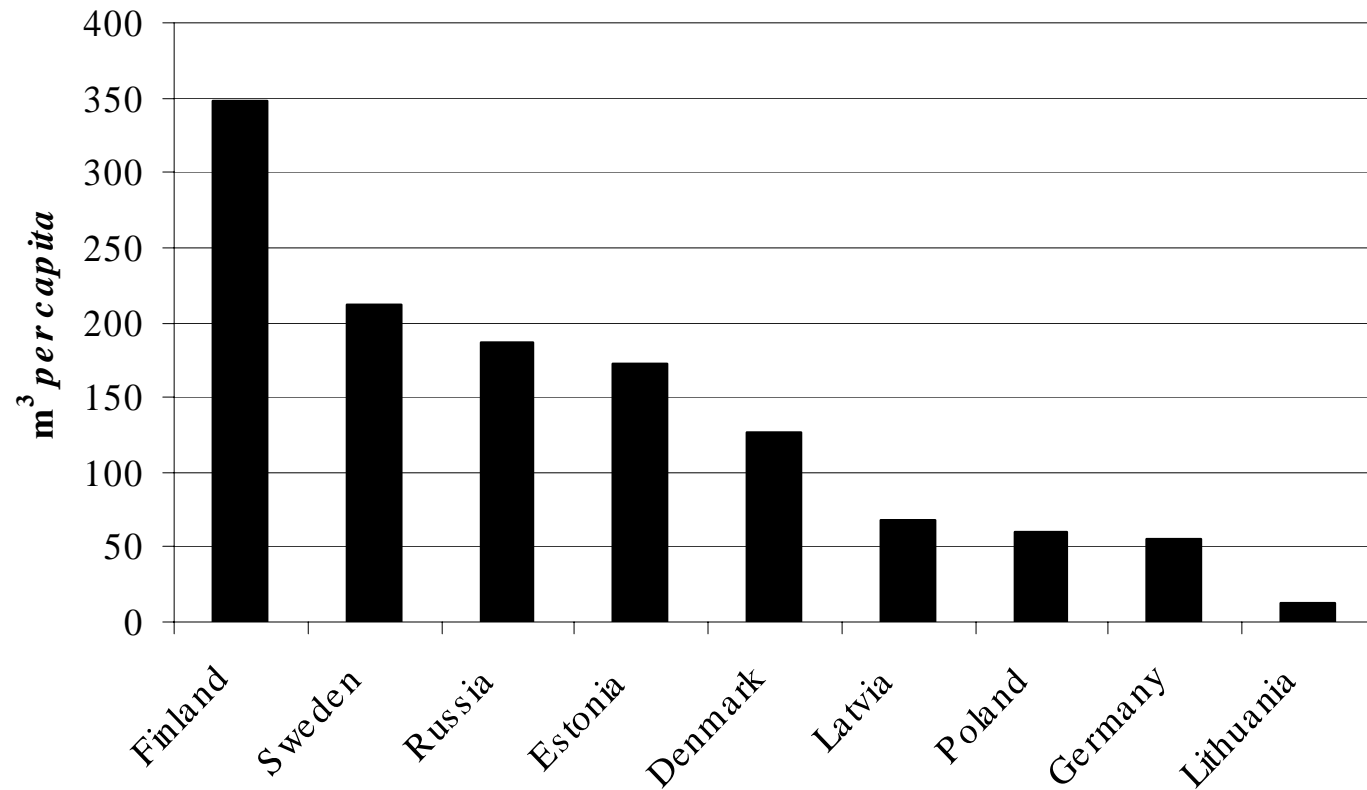
Hypothetical impact of imposing „the Polish way” of farming on nutrient loads into inland surface waters within the Baltic Sea catchment area



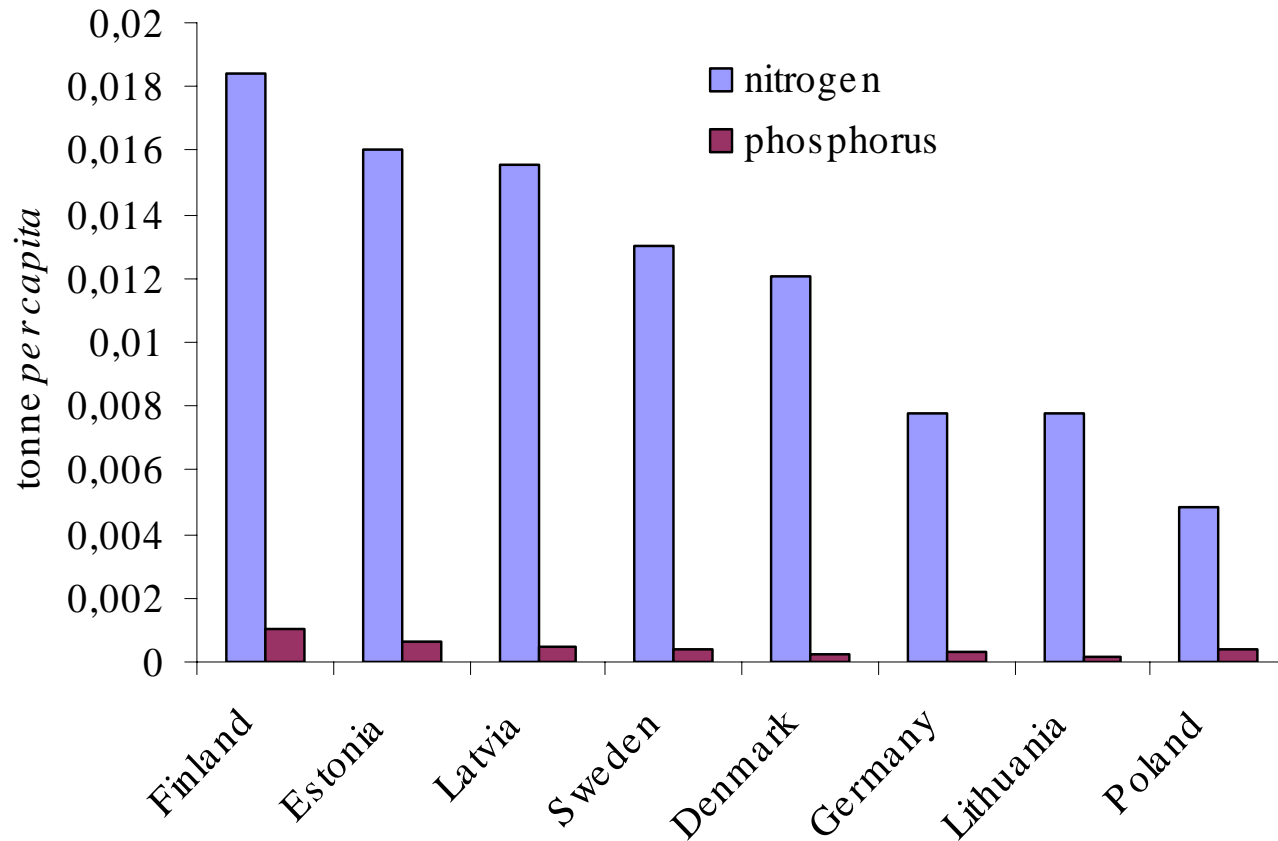
Area-specific sales of pesticides in 2001 (per arable land unit)



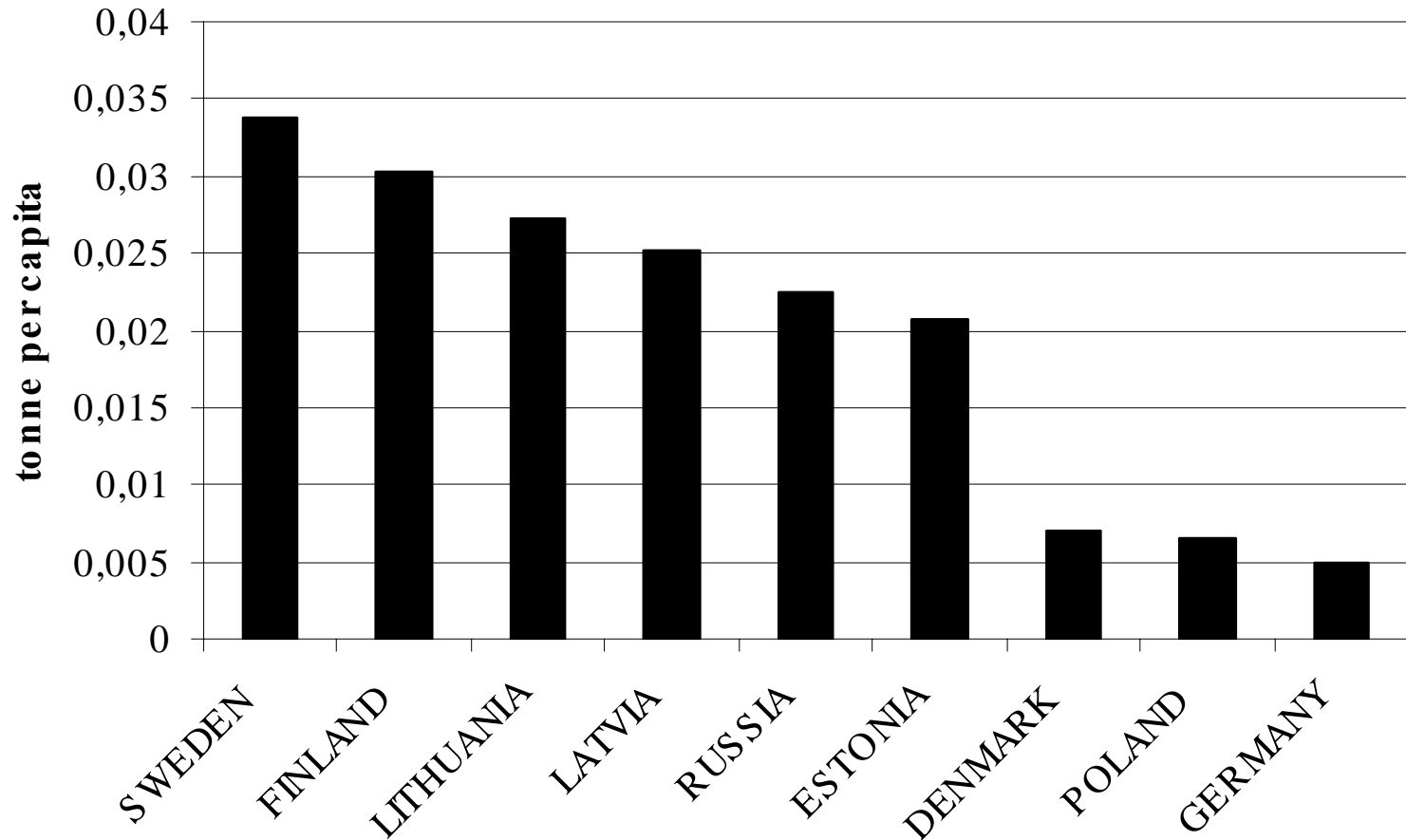
Wastewater discharged into inland surface waters per inhabitant of the catchment area



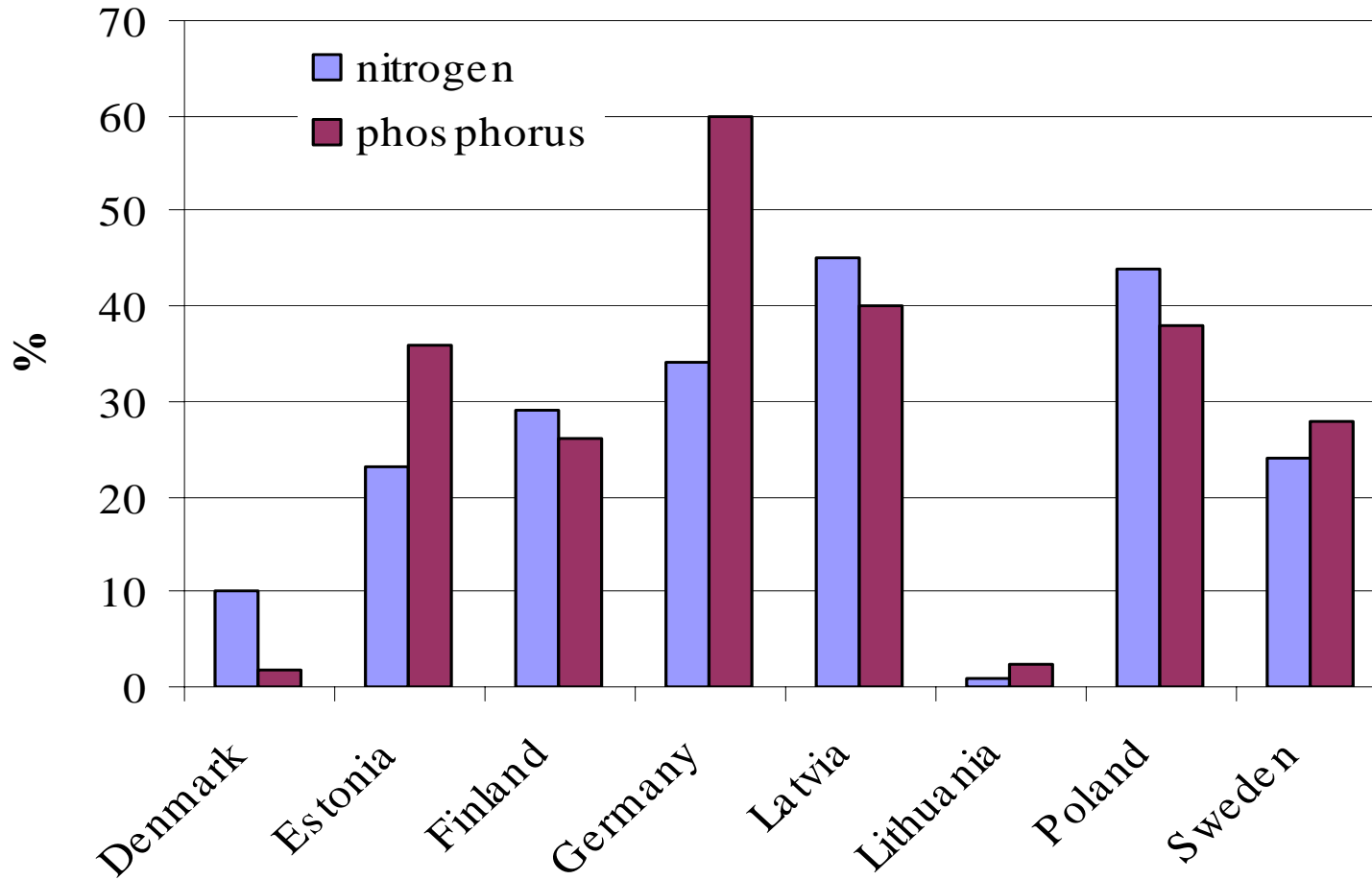
Nutrient loads discharged into inland surface waters per inhabitant of the catchment area



Load of organic matter (BOD7) discharged into the Baltic Sea per inhabitant of the catchment area

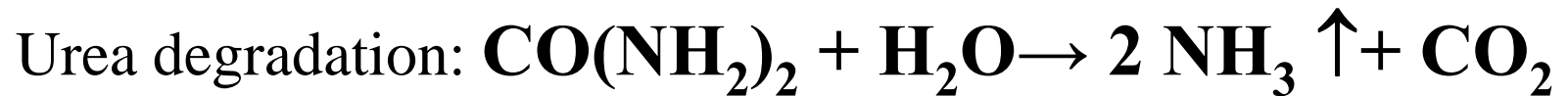
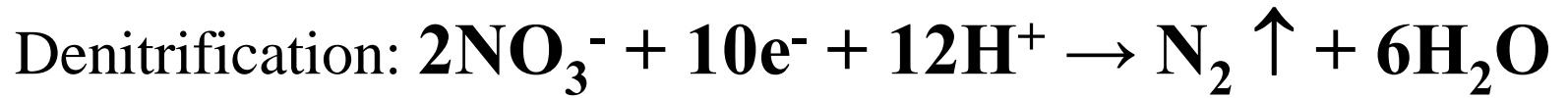


Nutrients retention and loss within the catchment area



Mechanisms of nutrients retention and loss

Nutrients conversion into biomass



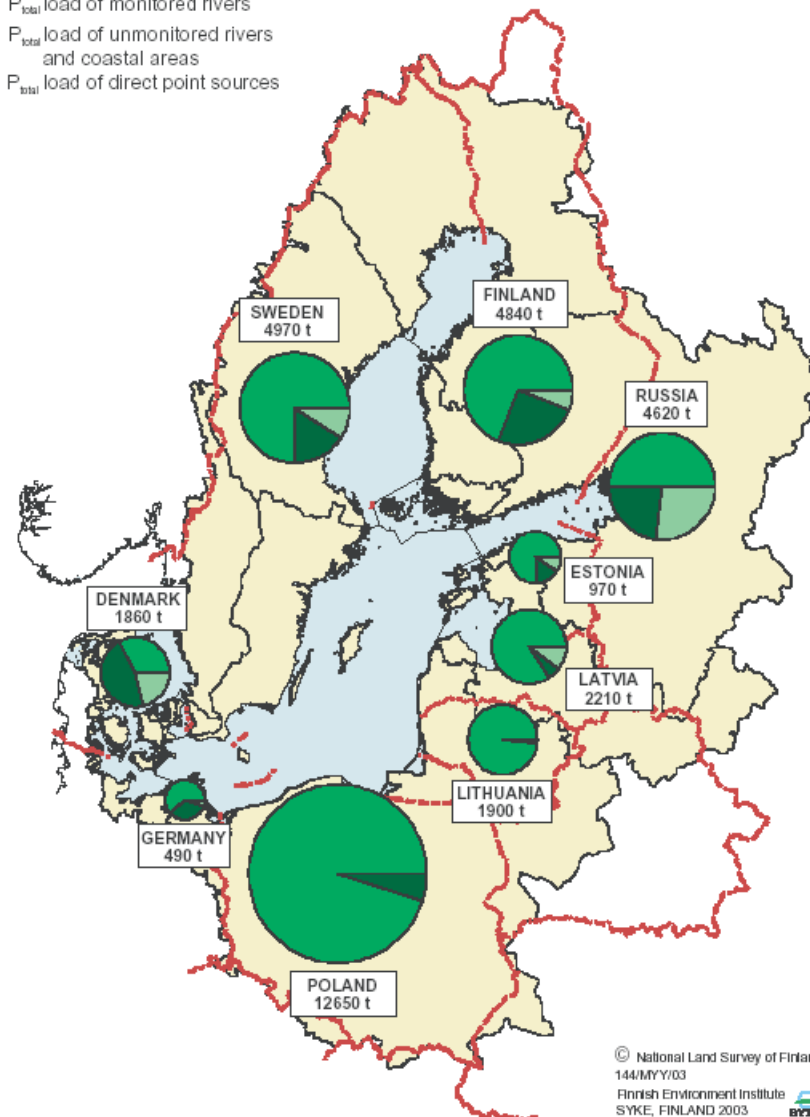
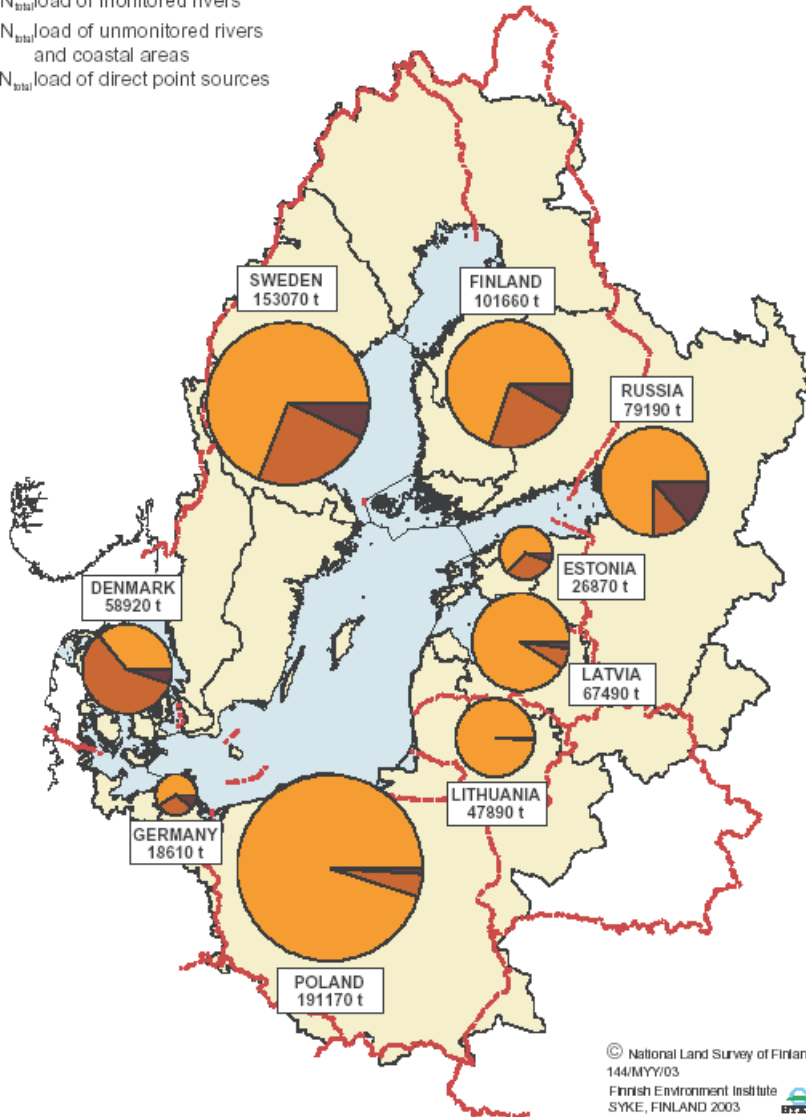
Ammonia (NH_4^+) sorption on clay minerals



Load of nutrients entering the Baltic Sea

- N_{total} load of monitored rivers
- N_{total} load of unmonitored rivers and coastal areas
- N_{total} load of direct point sources

- P_{total} load of monitored rivers
- P_{total} load of unmonitored rivers and coastal areas
- P_{total} load of direct point sources



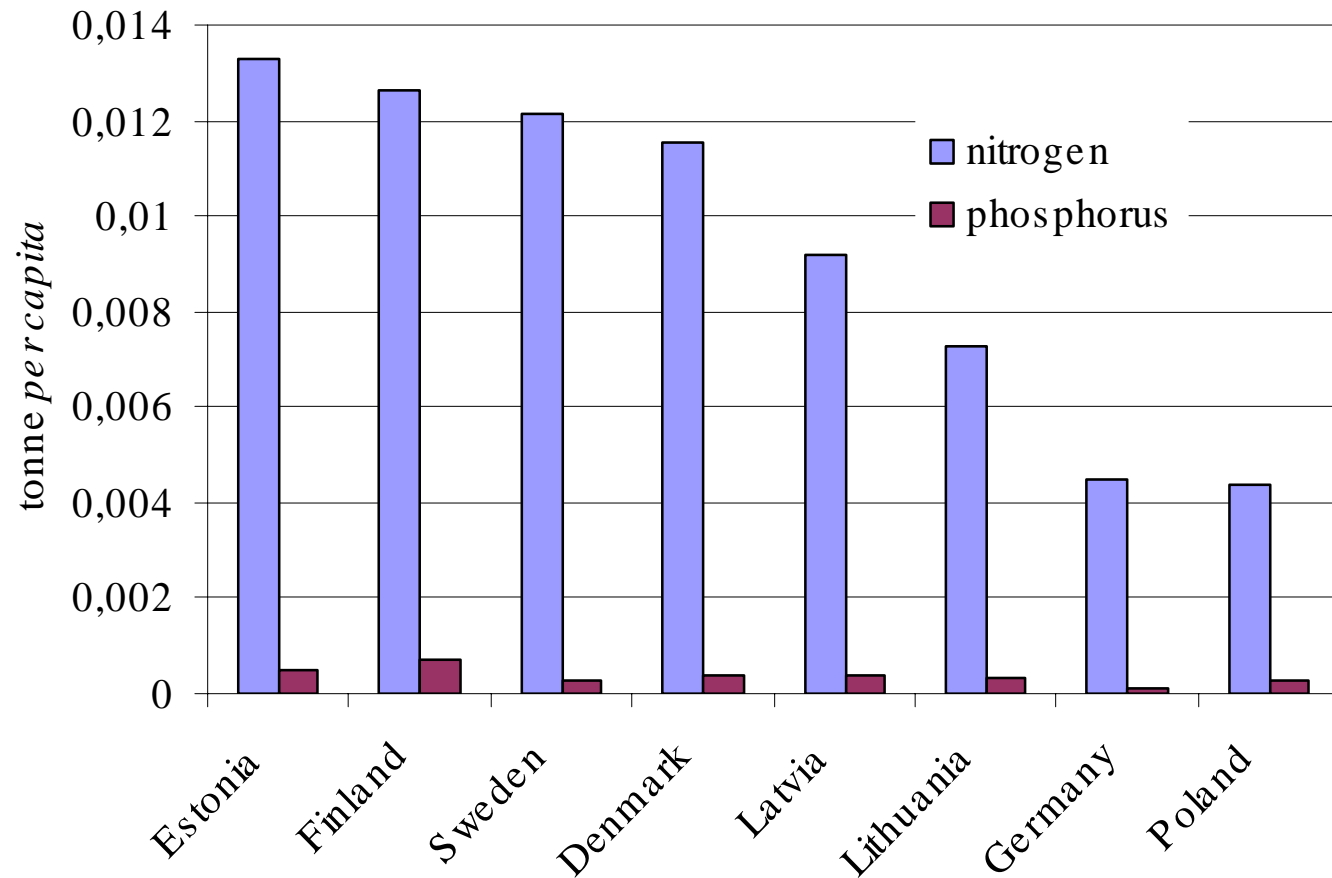
Estimation of the anthropogenic load entering the Baltic Sea:

(total inland load – natural natural background losses) * retention [%]

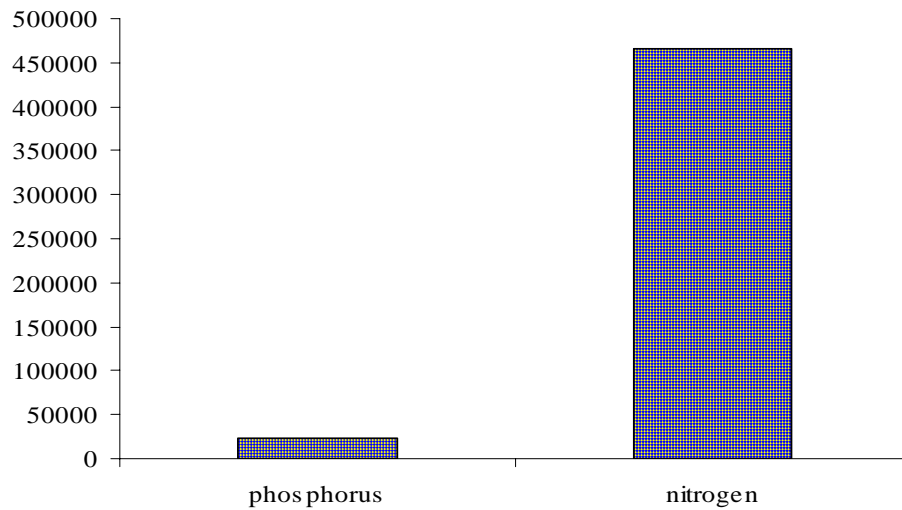
+

direct point sources

Nutrient loads discharged into the Baltic Sea per inhabitant of the catchment area



Anthropogenic nutrient input entering the Baltic Sea in 2000



Anthropogenic nutrient load entering the Baltic Sea after hypothetical reduction of the environmental load („the Polish way”)

