## Air pollution from shipping

Source: BONUS SHEBA and EnviSuM projects



Ships emit gases and particles, such as carbon dioxide (CO2), nitrogen oxides (NOx), sulphur oxides (SOx) and particulate matter (PM) into the atmosphere.



International shipping is responsible for about 2.2 % of the global CO2 emissions, 15 % of the NOx and 13 % of the SOx emissions.

SOx

## Impacts of emissions to air

- **Acidification and eutrophication of marine** and land ecosystems
- Degradation of air quality





Negative health effects



Changes in climate 🍎 💥 🧁 🧨











Air quality directives and emission control areas are used to set limits for air pollution from shipping. For example, the Baltic Sea is a Sulphur Emissions Control Area (SECA) with stricter emission restrictions in place.







