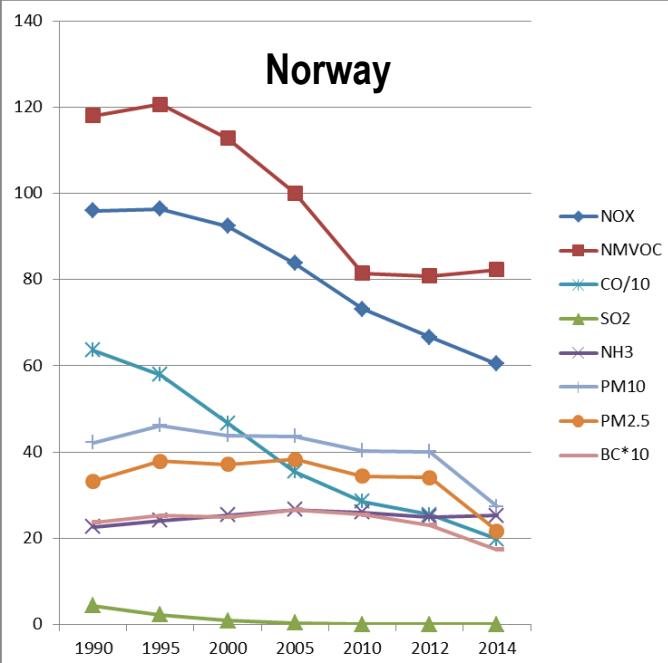
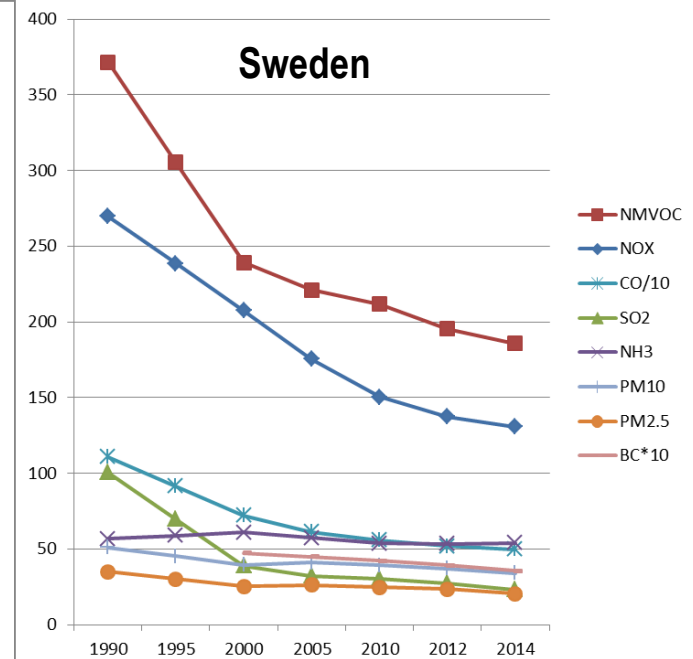
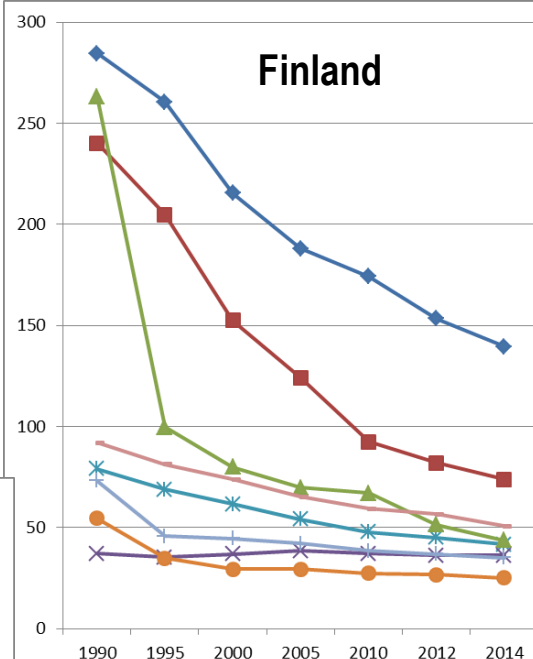
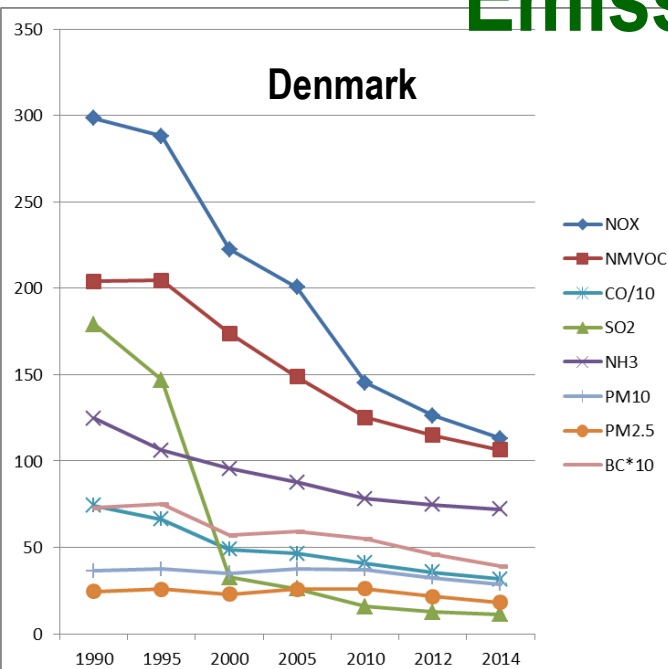


WP1: Development of high resolution emissions inventories for the Nordic countries

Country emissions

Emissions - trend analysis

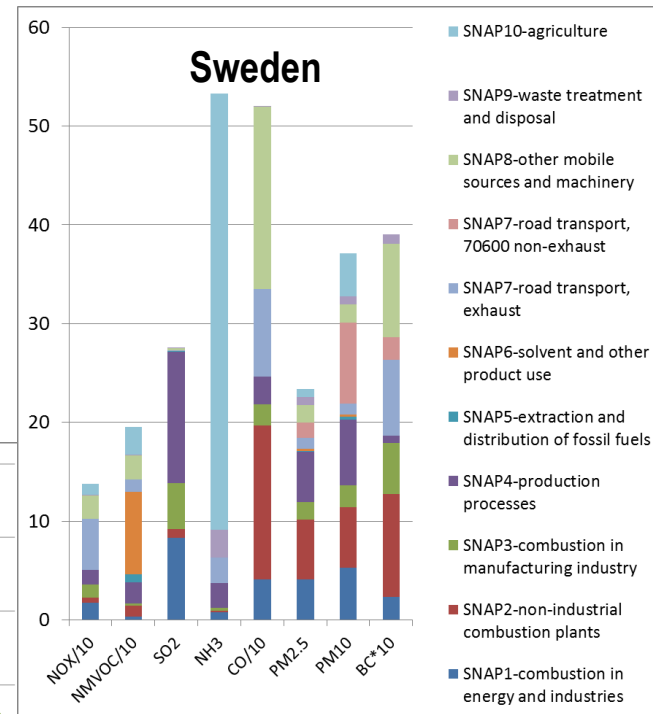
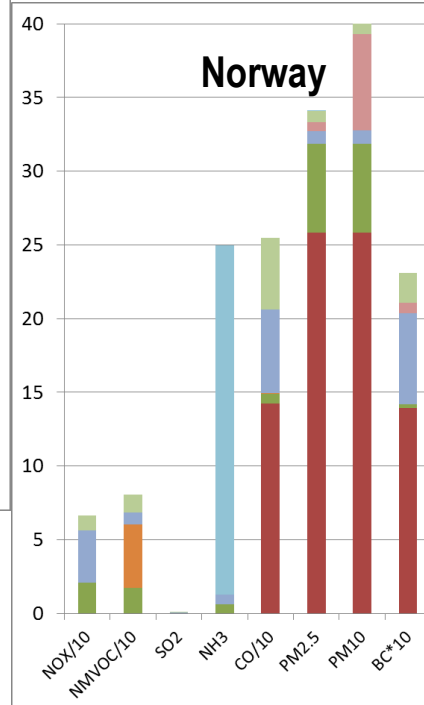
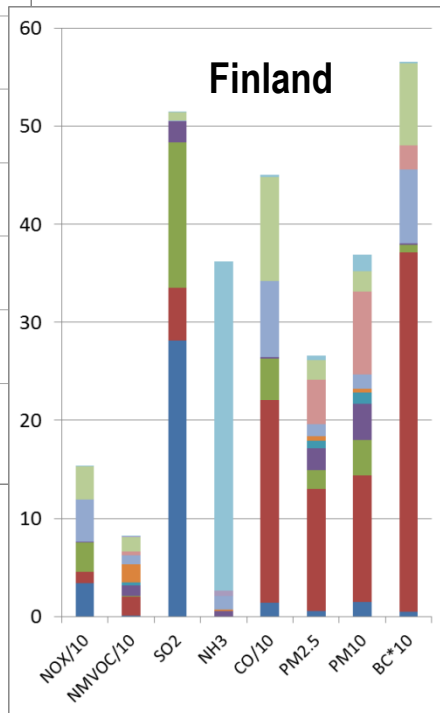
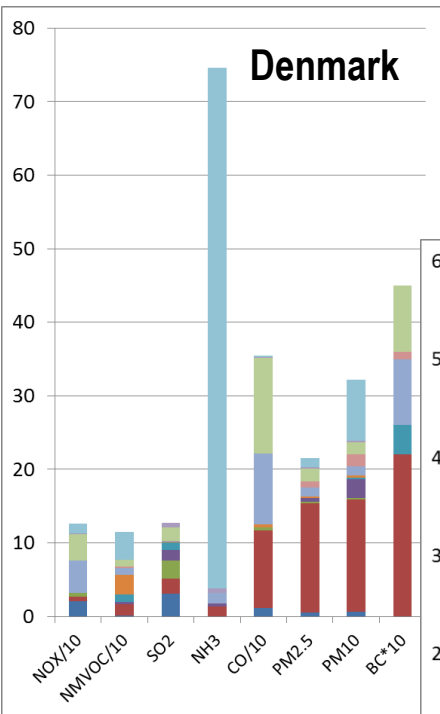
Emissions in DK, FI, SE, NO 1990-2014 (kilotons / year)



- Large reductions of 94-50% in SO2, NOX, NMVOC and CO
- Reductions up to 50% in PM2.5, PM10 and BC
- No reductions in NH3, except DK

Emissions – sector analysis

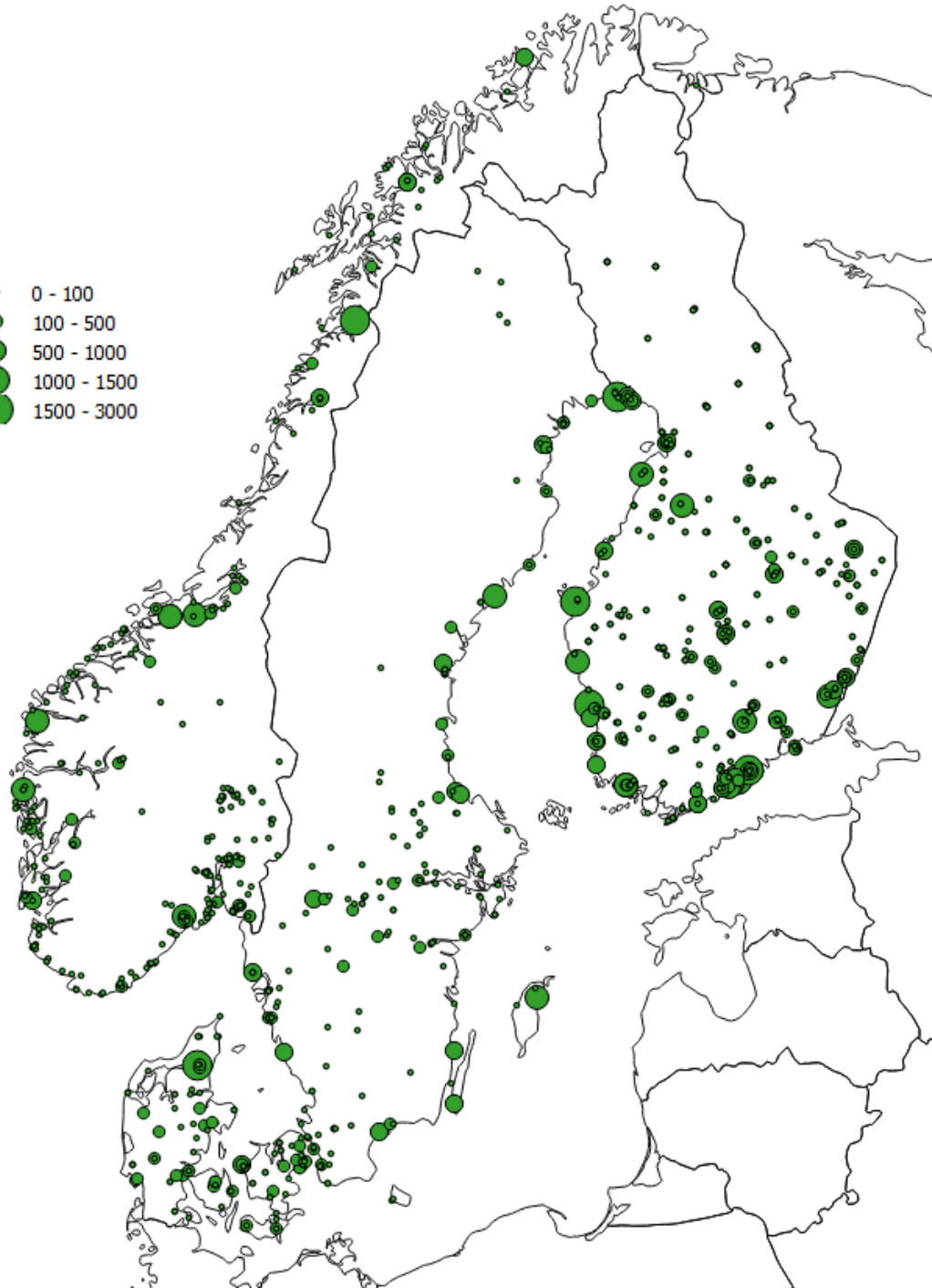
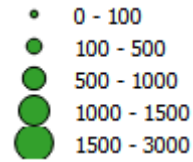
Emissions by sector in Denmark, Finland, Norway and Sweden 2012 (kilotons / year)



Maps – by sector

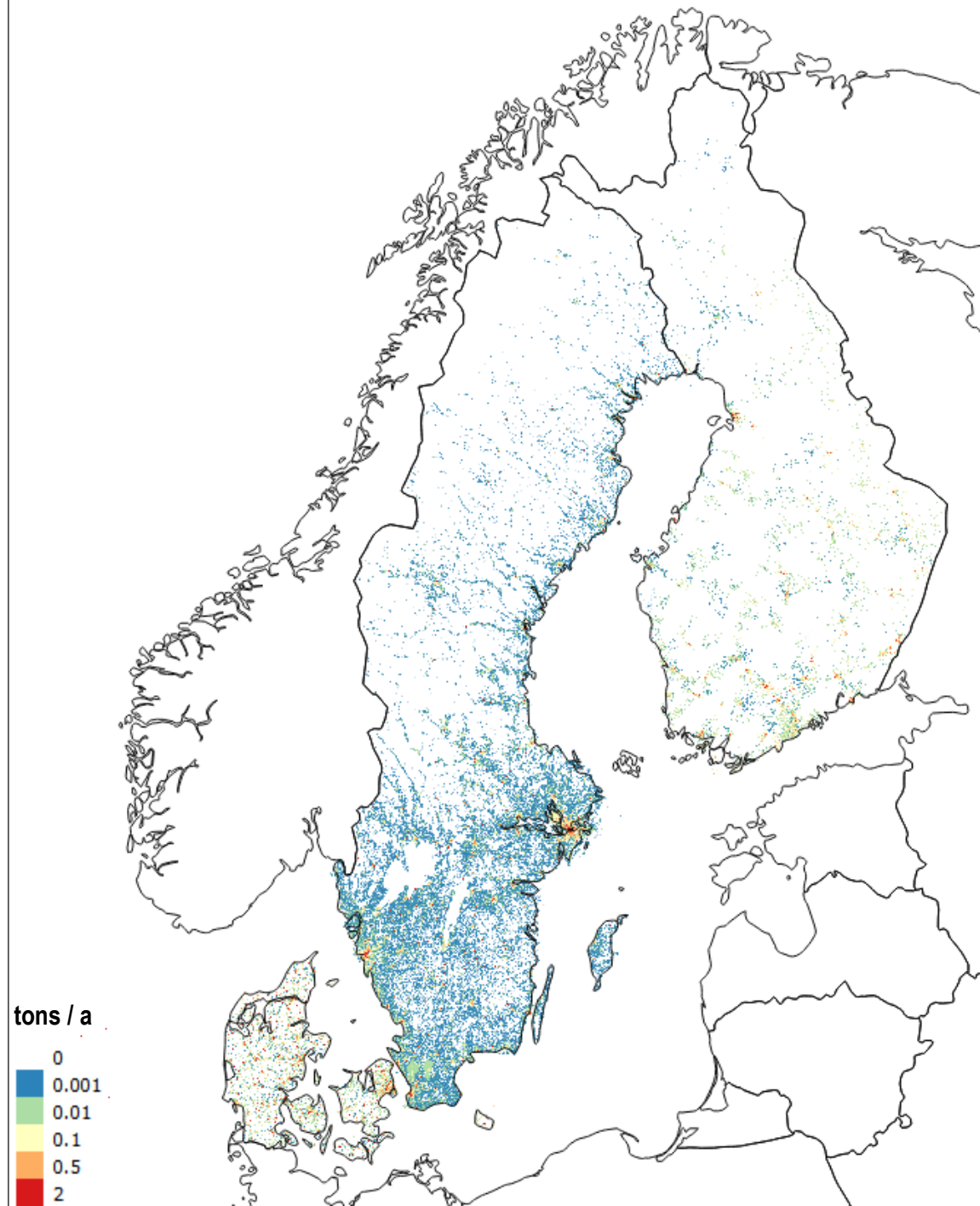


SNAP 1, 3, 4 – Point sources, NO_x

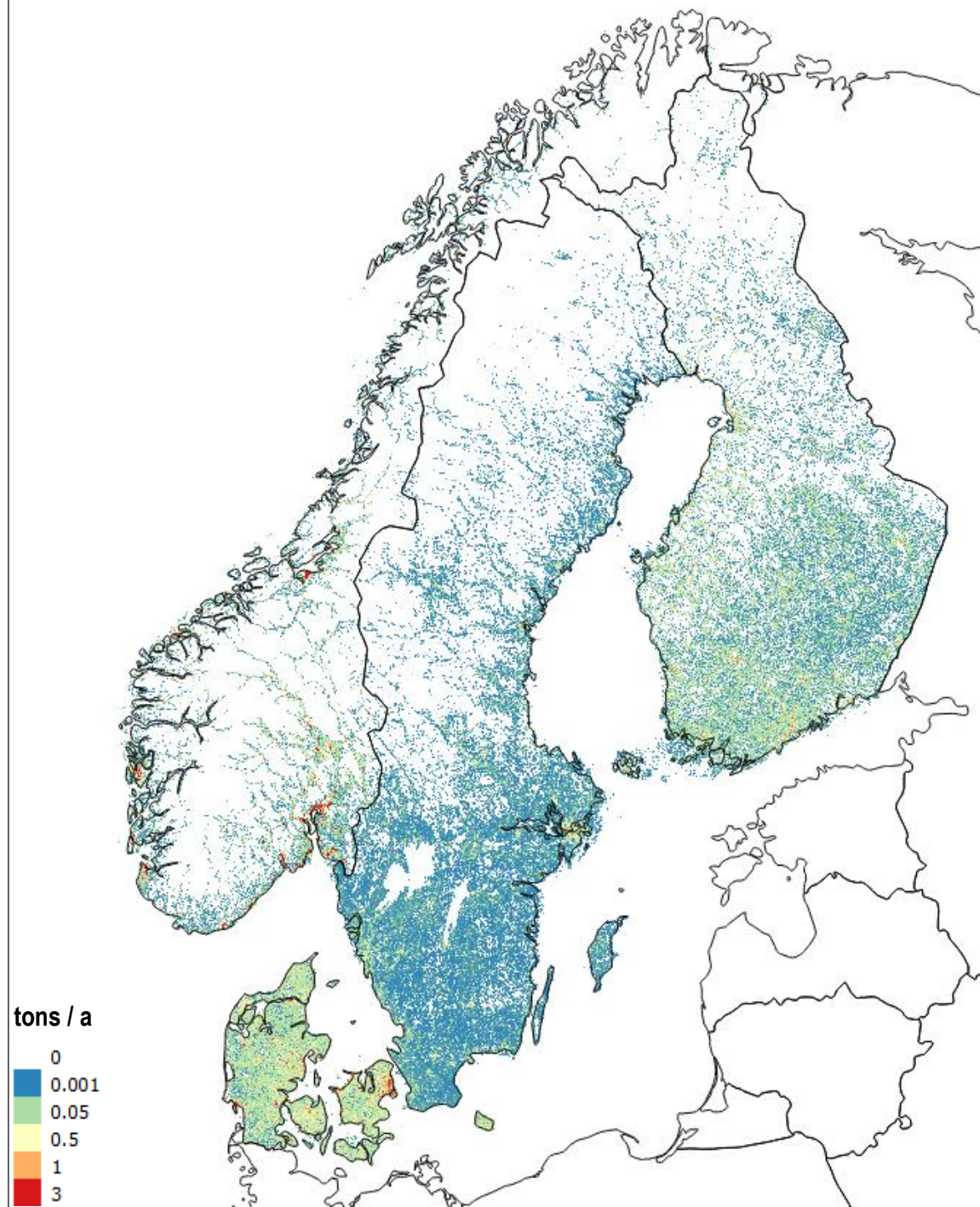


SNAP 1, 3, 4 – Area sources, NO_x

- What can not / is not practical to be represented as point sources, are gridded as area sources

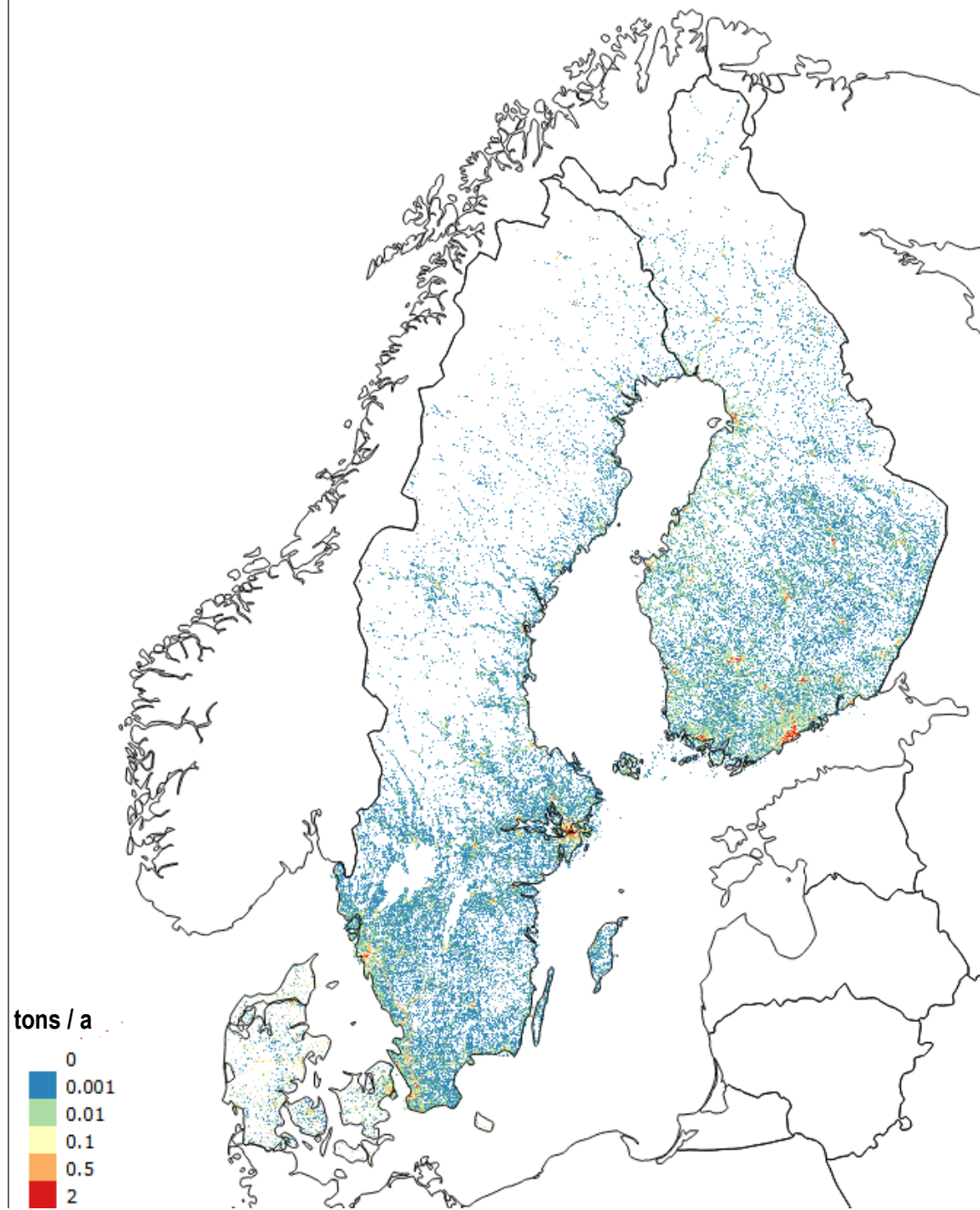


SNAP 4 – Residential wood comb., PM2.5



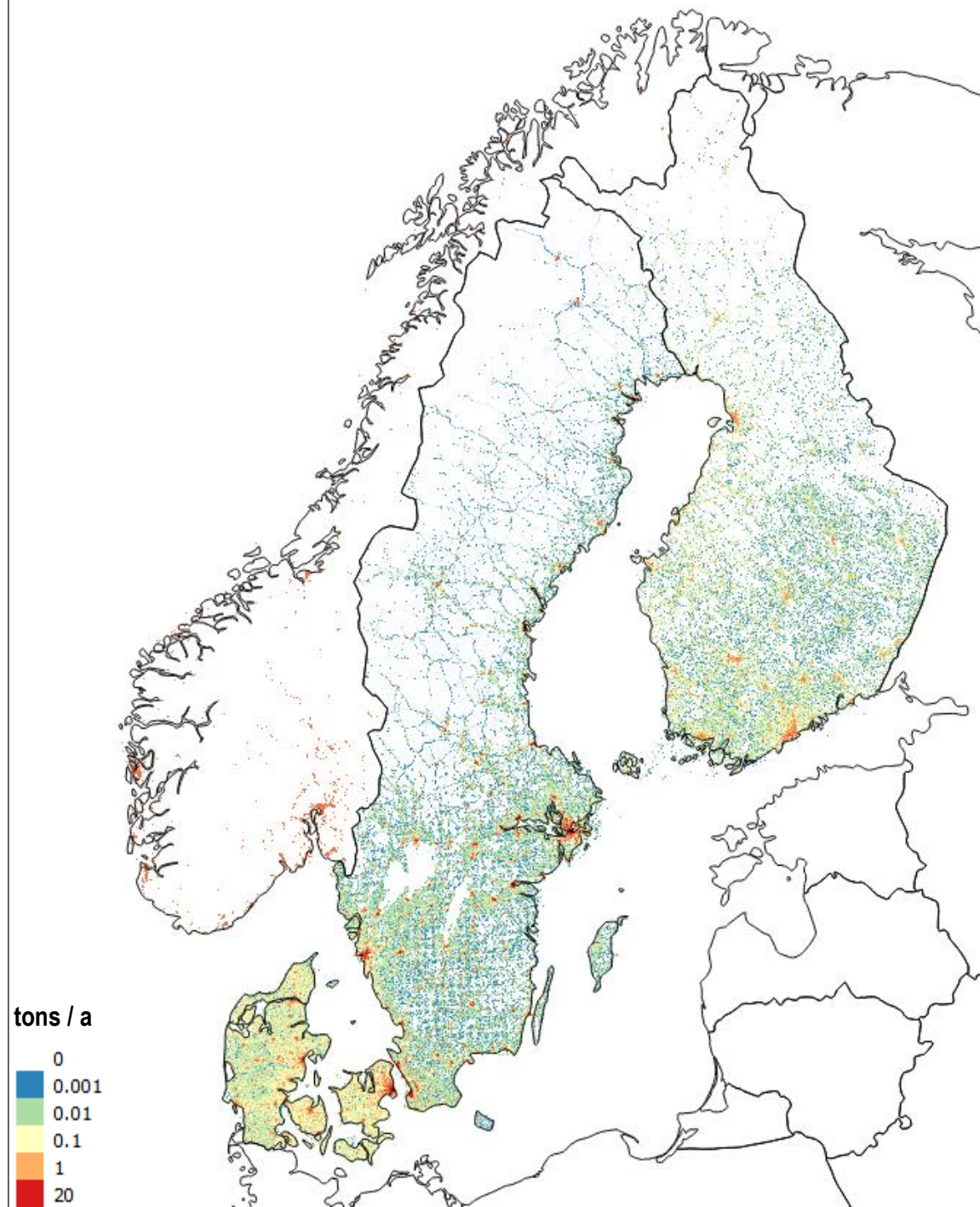
SNAP 5 – Extr. And distribution of fuels, NMVOC

- NO SNAP 5 emissions not included



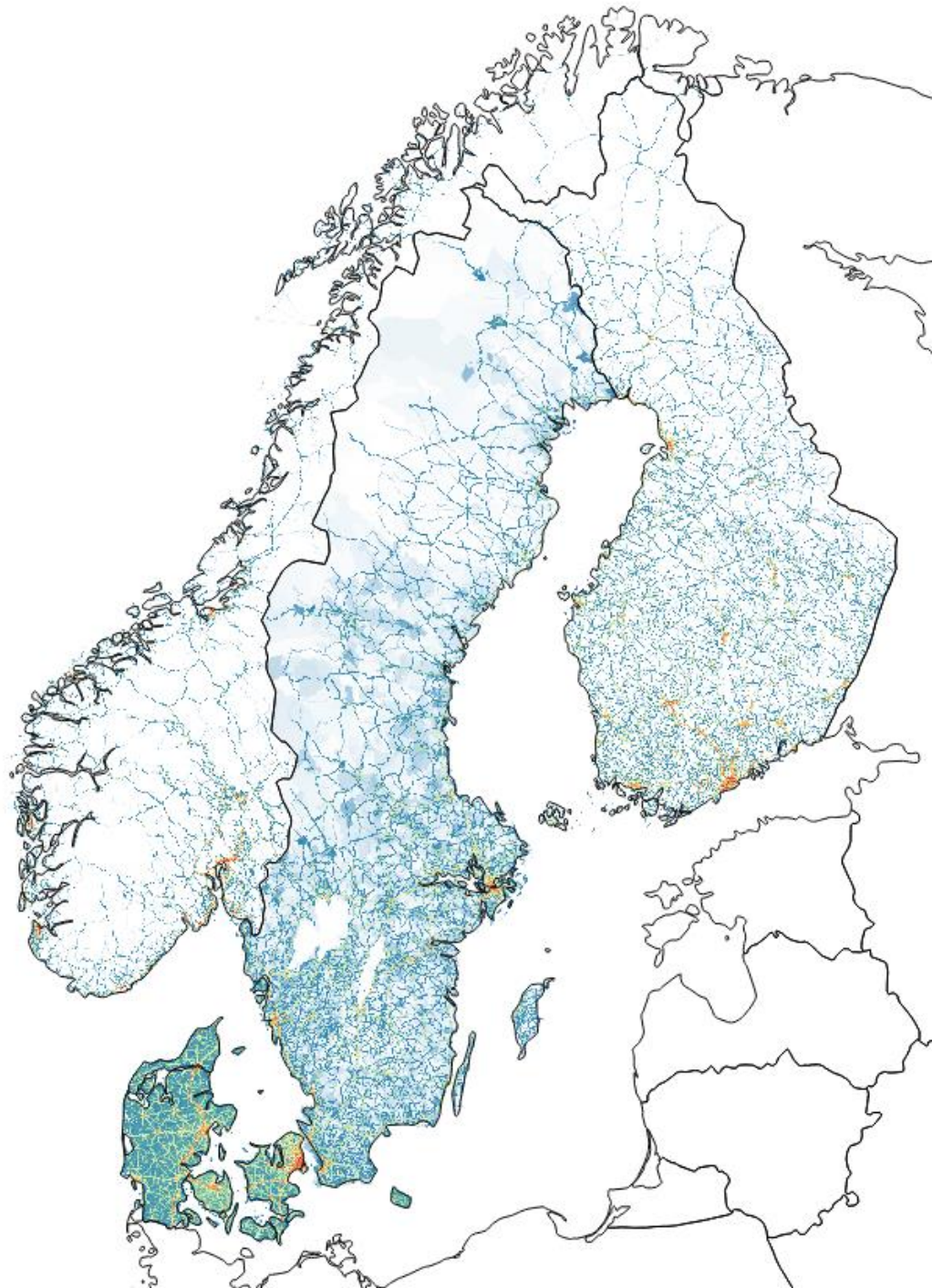
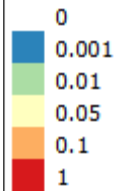
SNAP 6 – Solvent and product use, NMVOC

- Different method for gridding (NO)

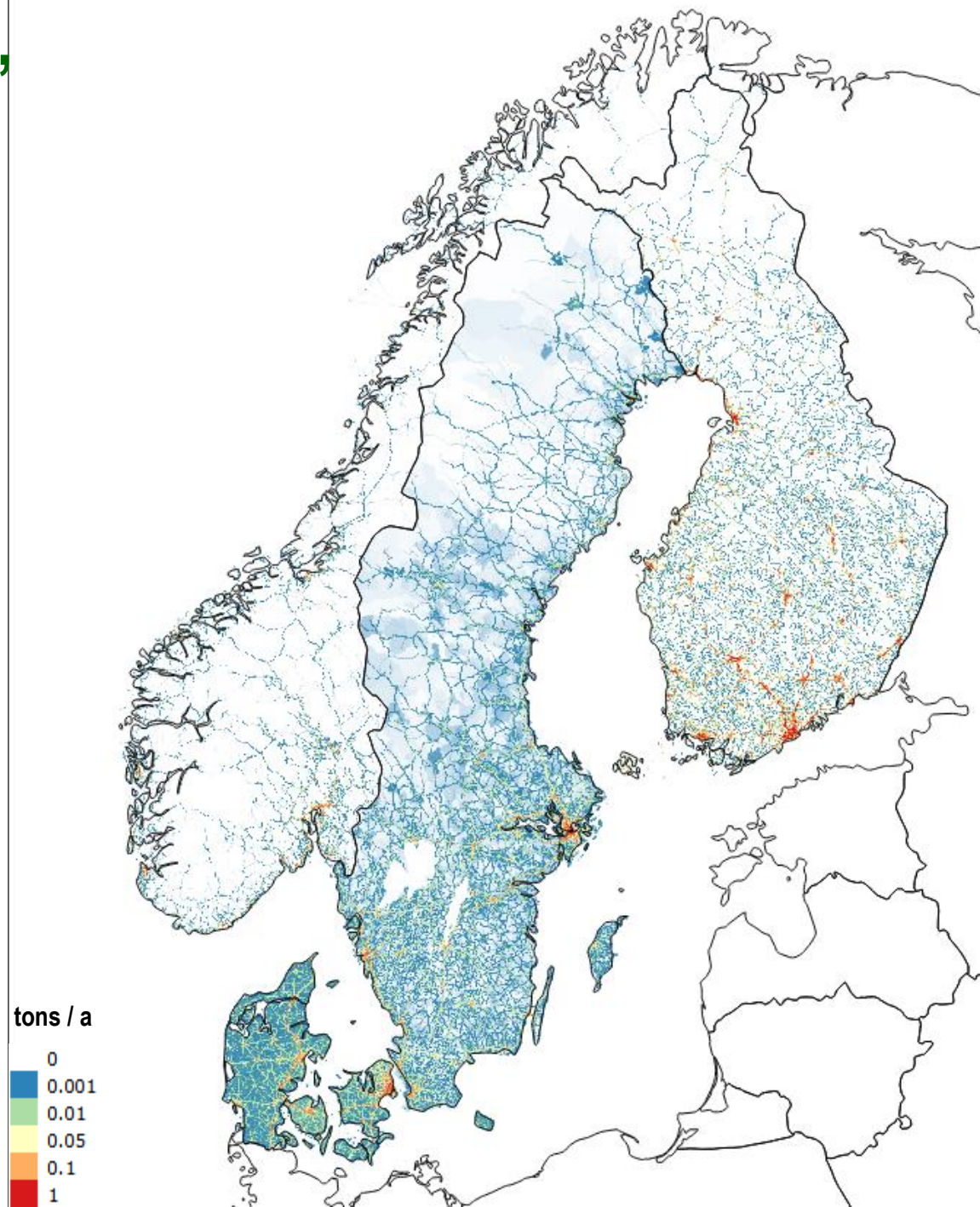


SNAP 7 – Road traffic, exhaust, PM2.5

tons / a

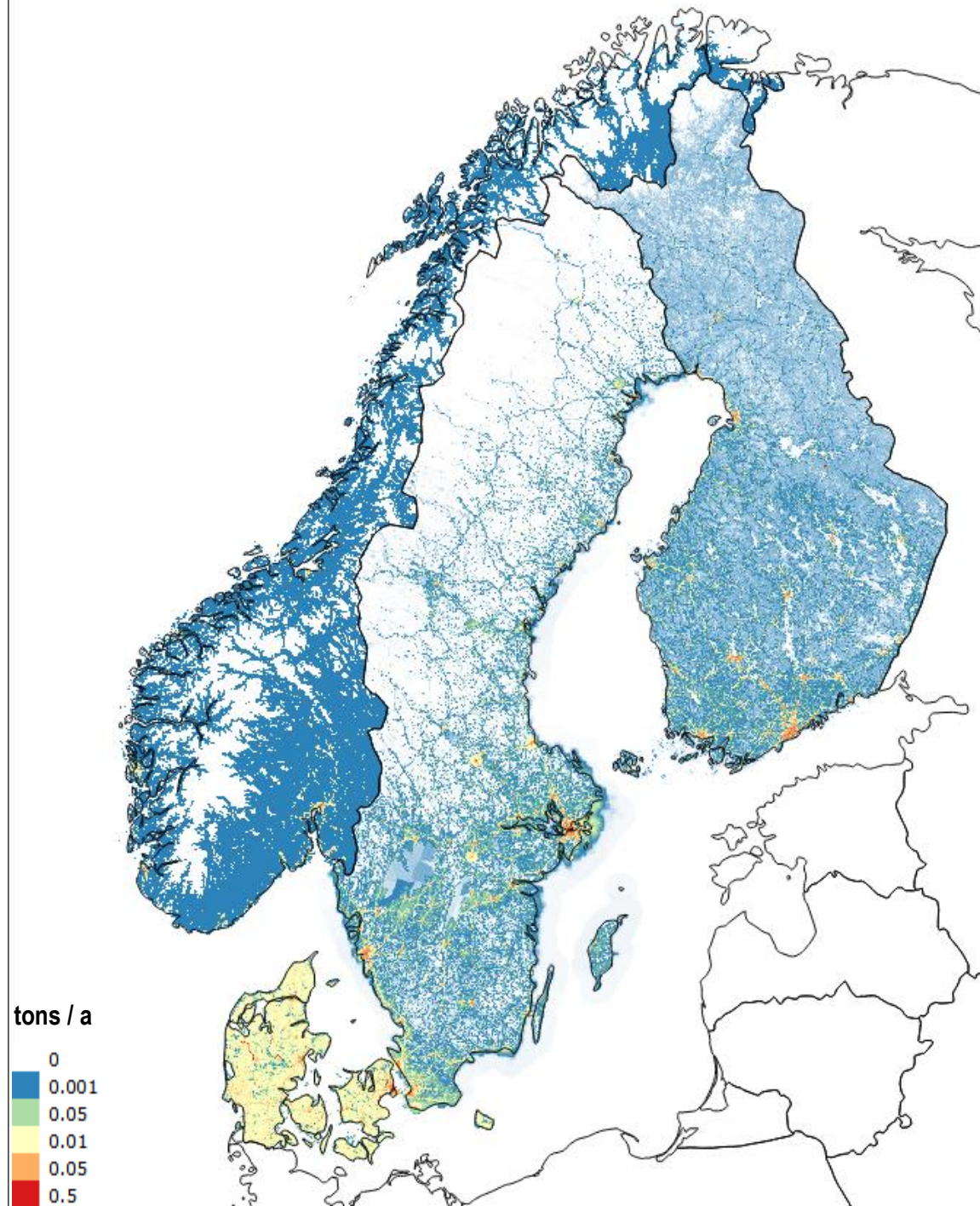


SNAP 7 – Road traffic, non-exhaust, PM2.5



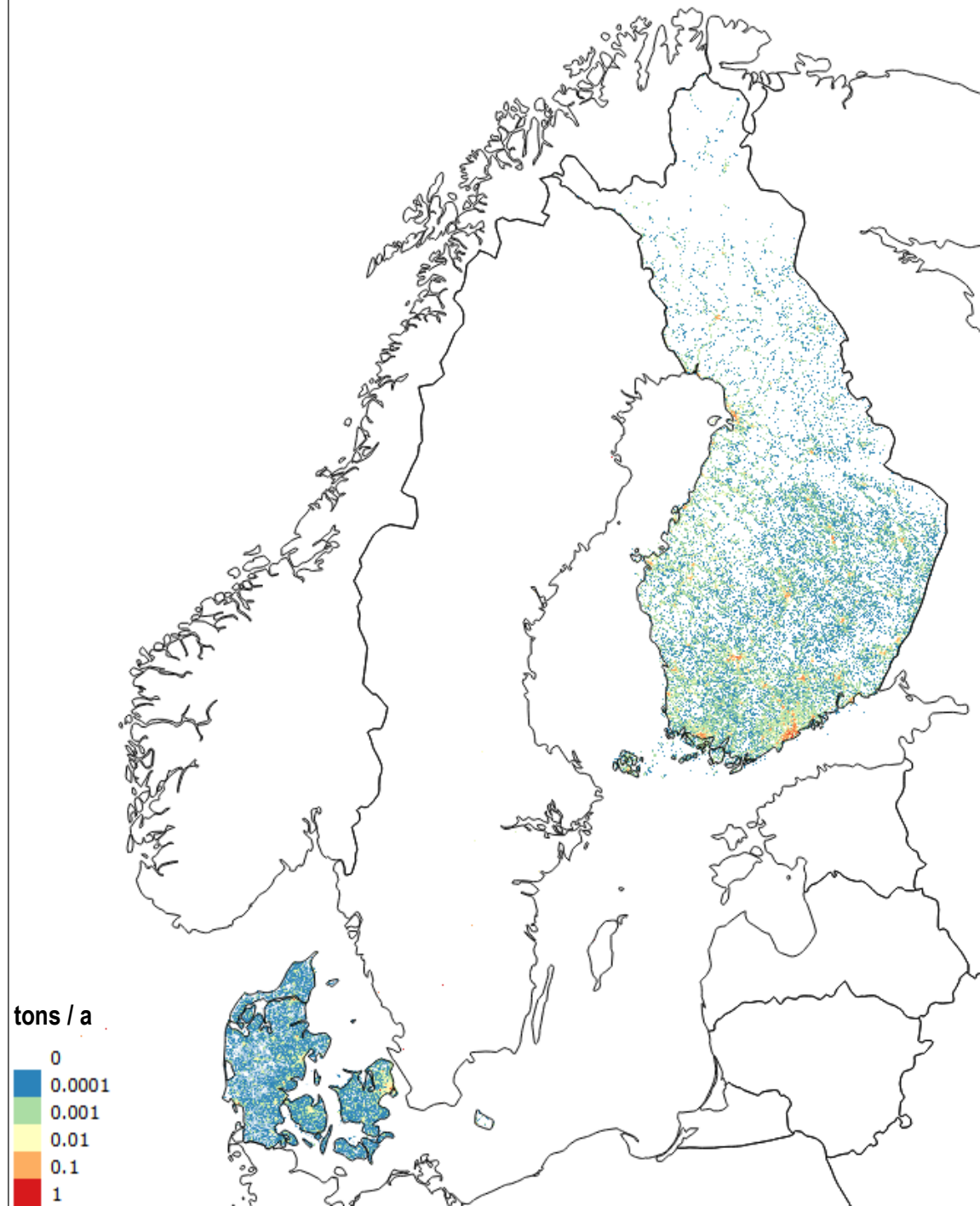
SNAP 8 – Off-road and machinery , BC

- Different methods for gridding



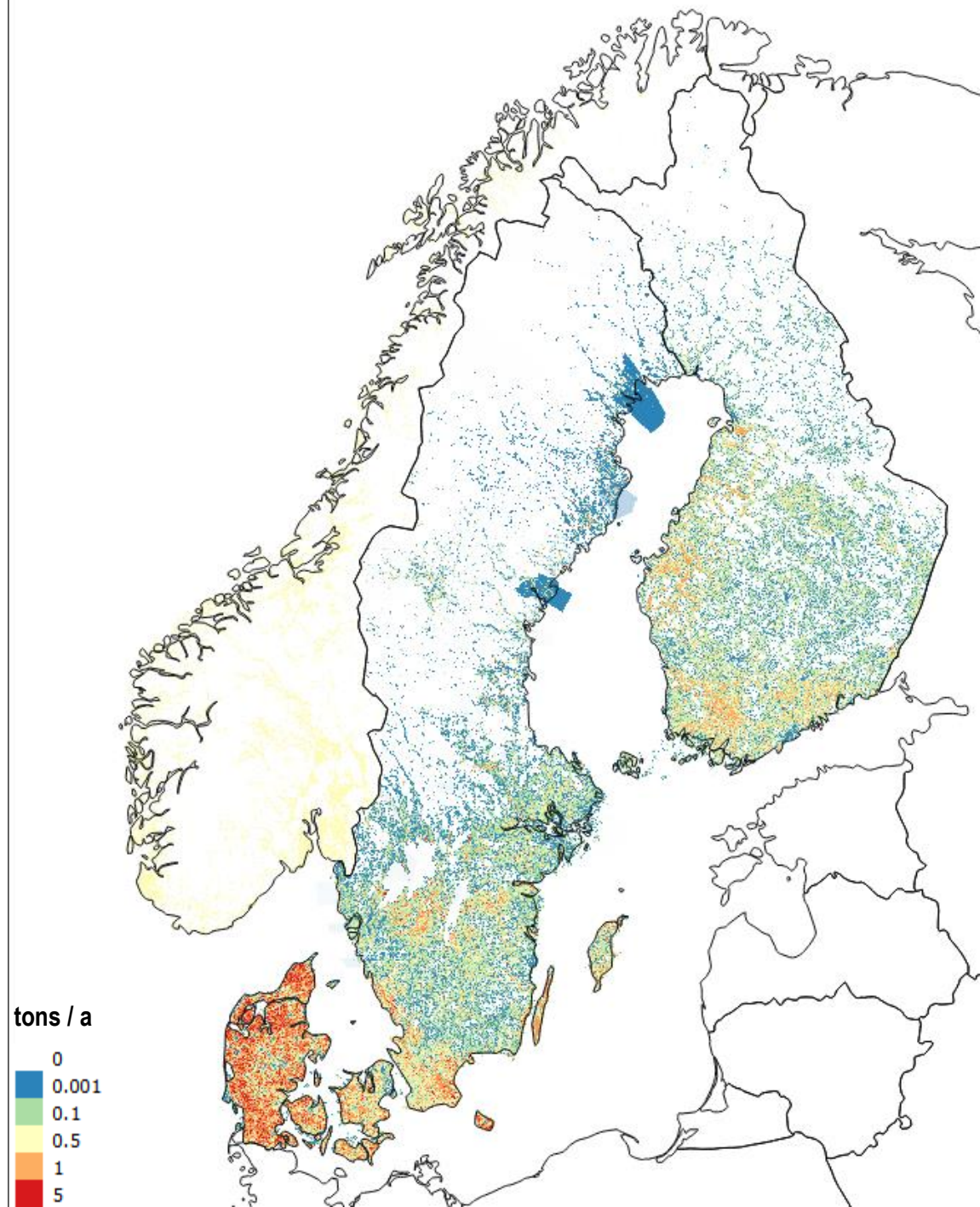
SNAP 9 – Waste tr. and disposal, NOx

- NO SNAP 9 emissions not included
- SE actual combustion plant locations
- FI and DK gridded



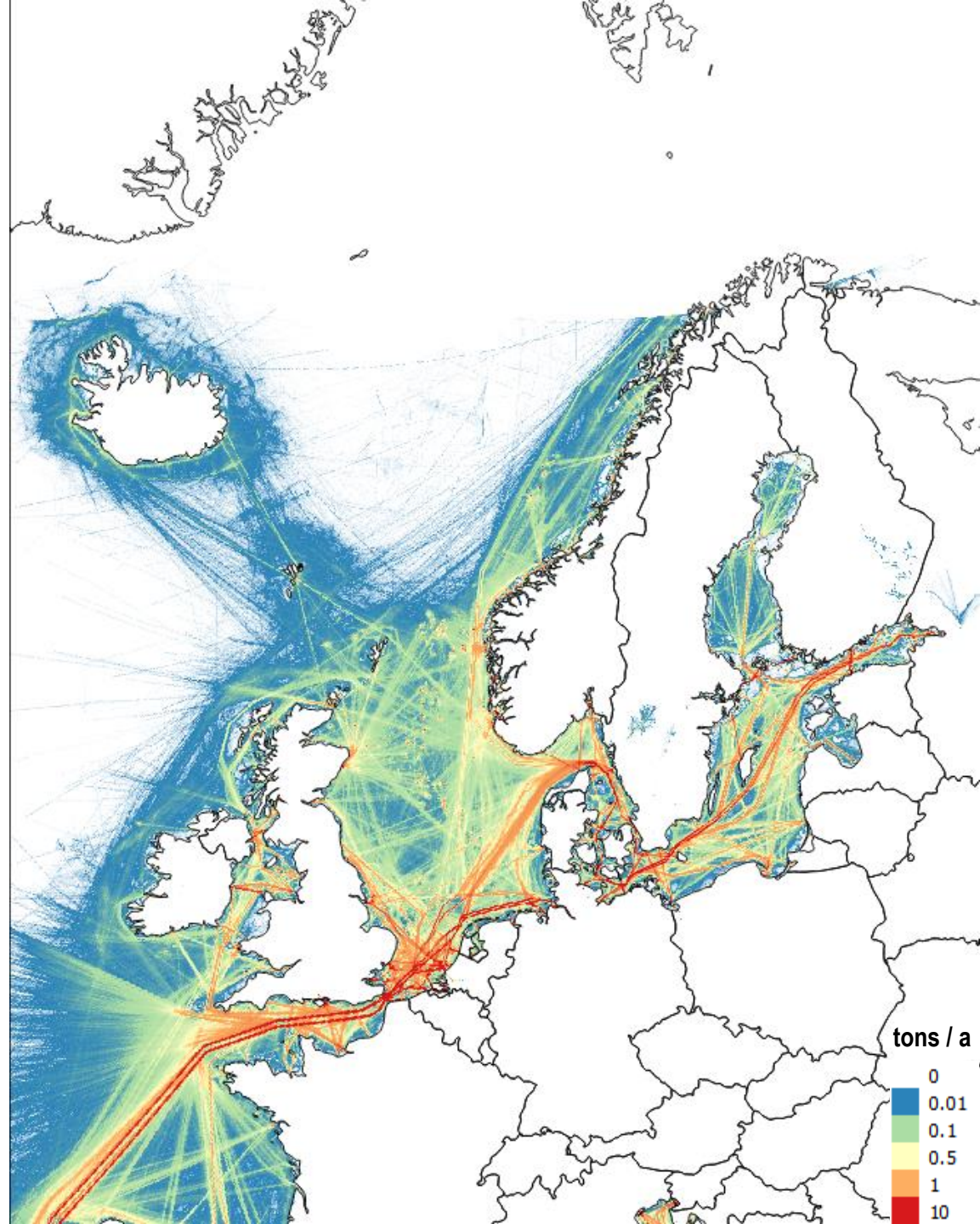
SNAP 10 – Agriculture, NH₃

- NO emissions evenly distributed to the grid cells with agriculture



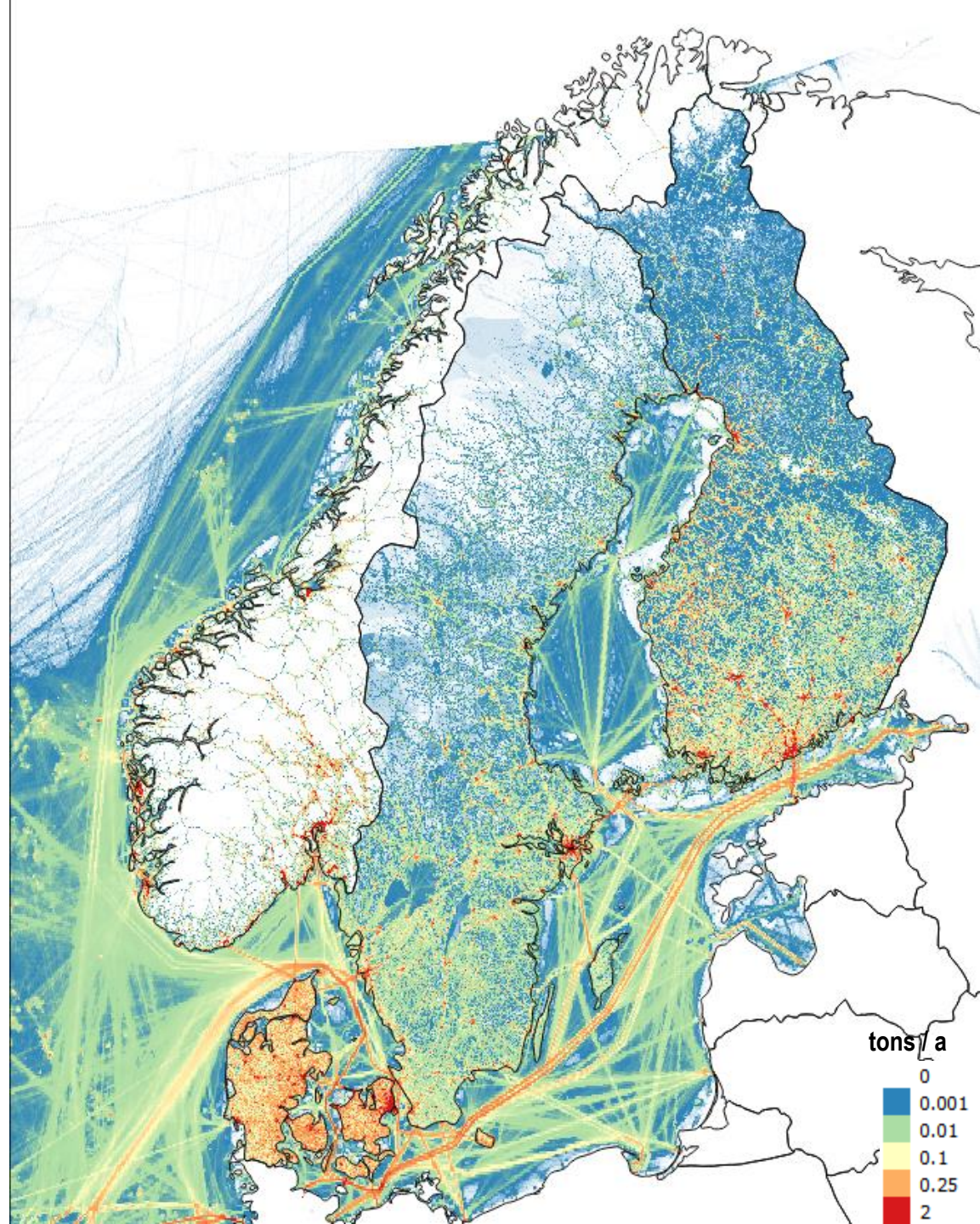
Shipping 2010, NOx

- Based on STEAM data

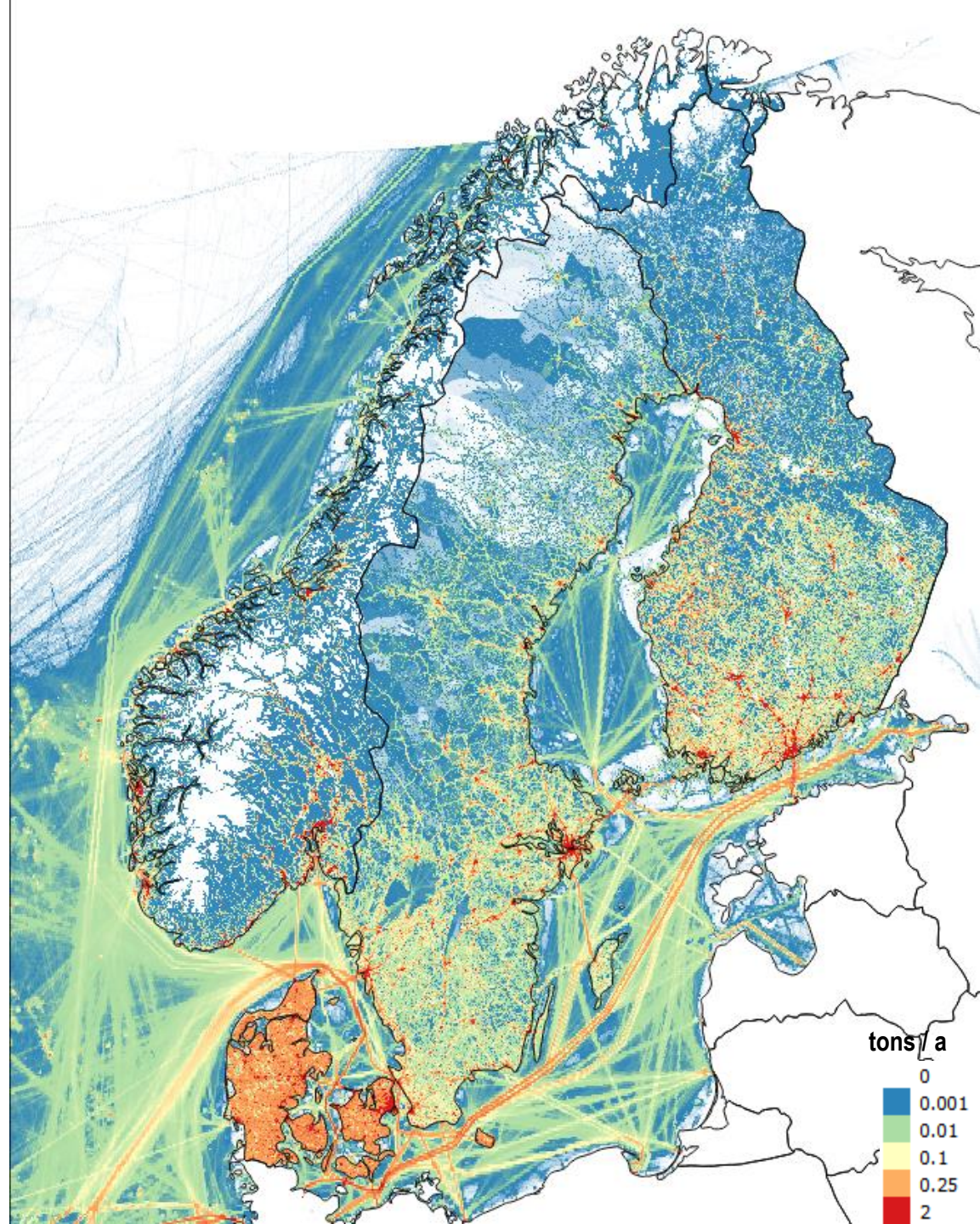


Maps – by pollutant

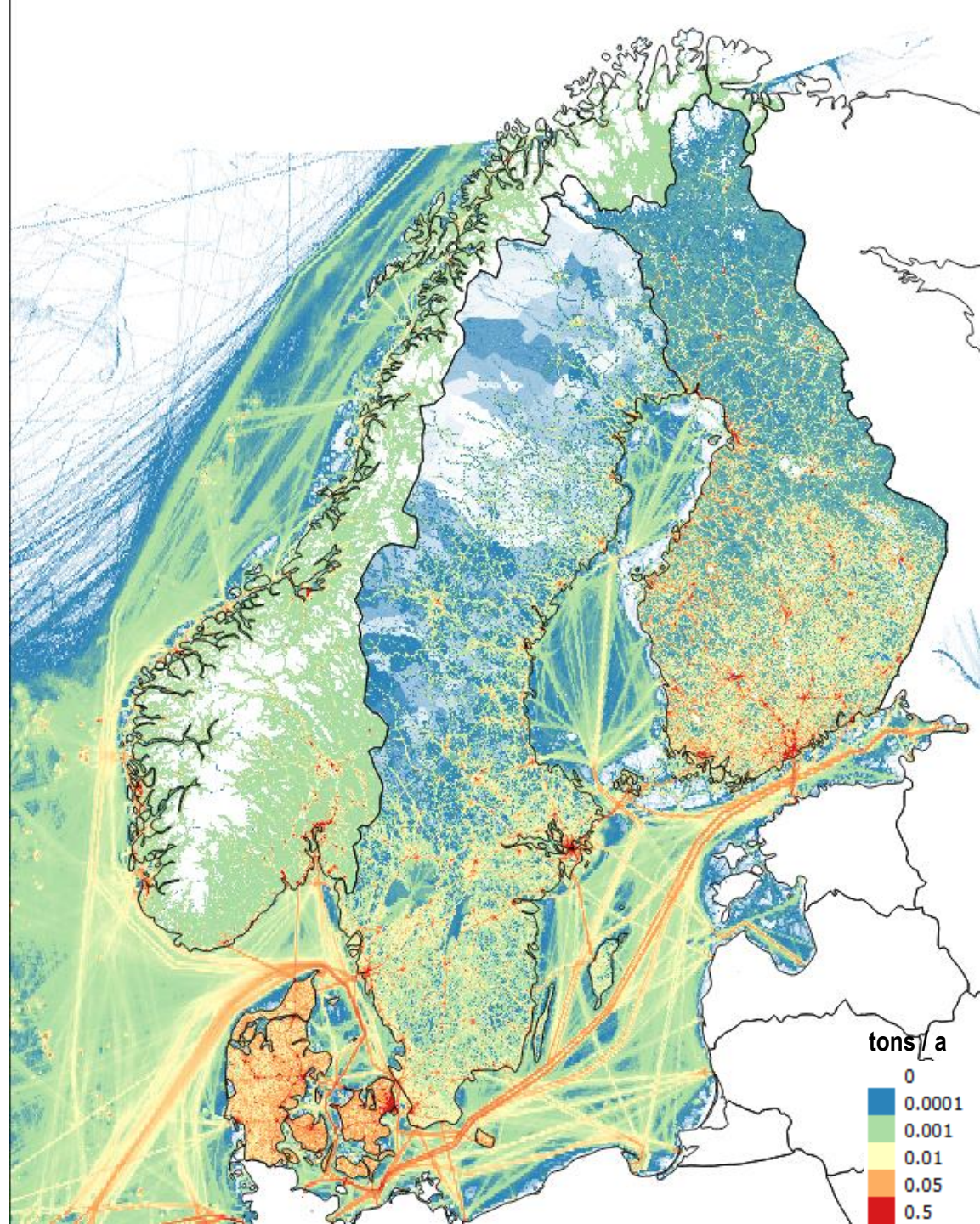
All sectors, PM2.5



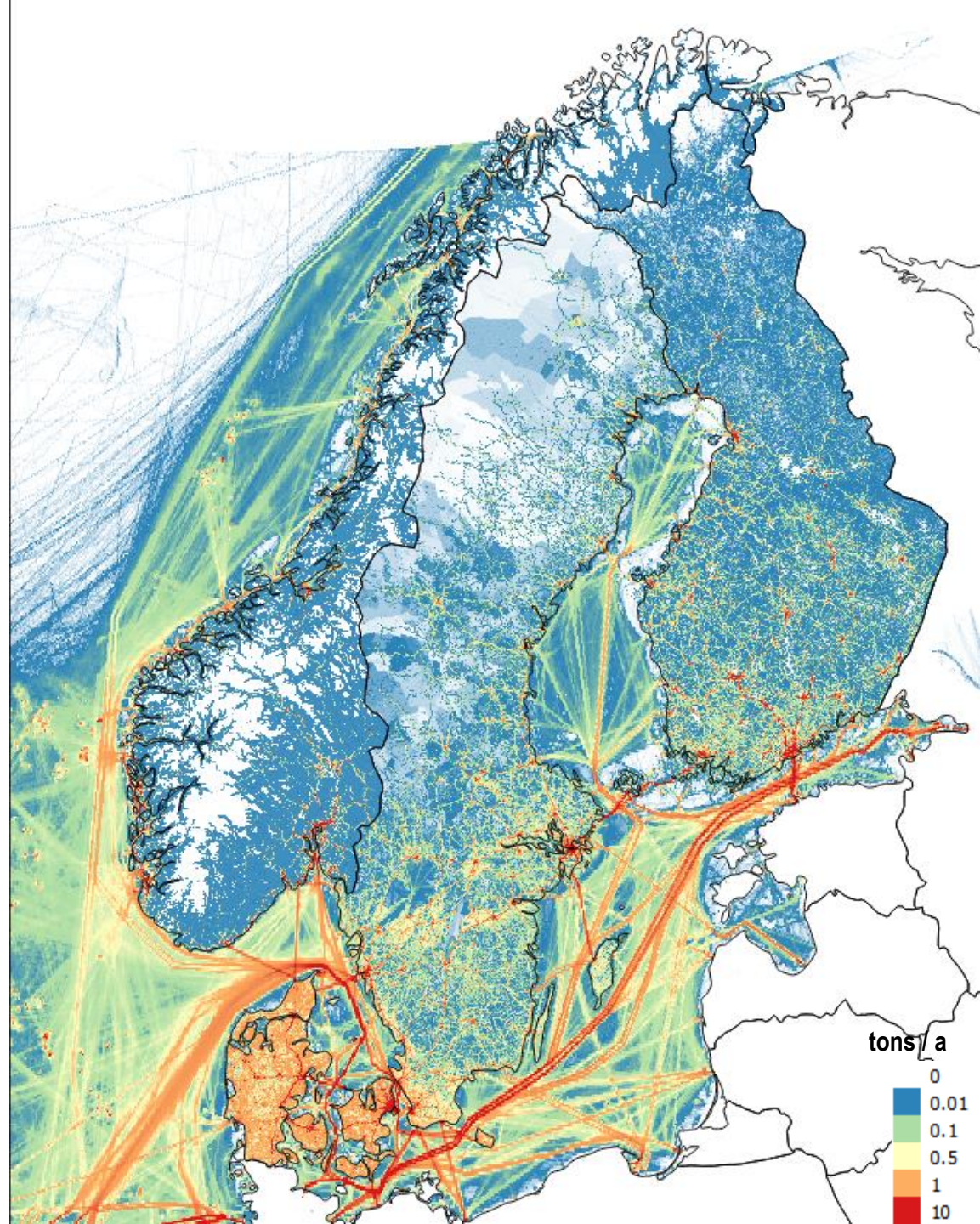
All sectors, PM10



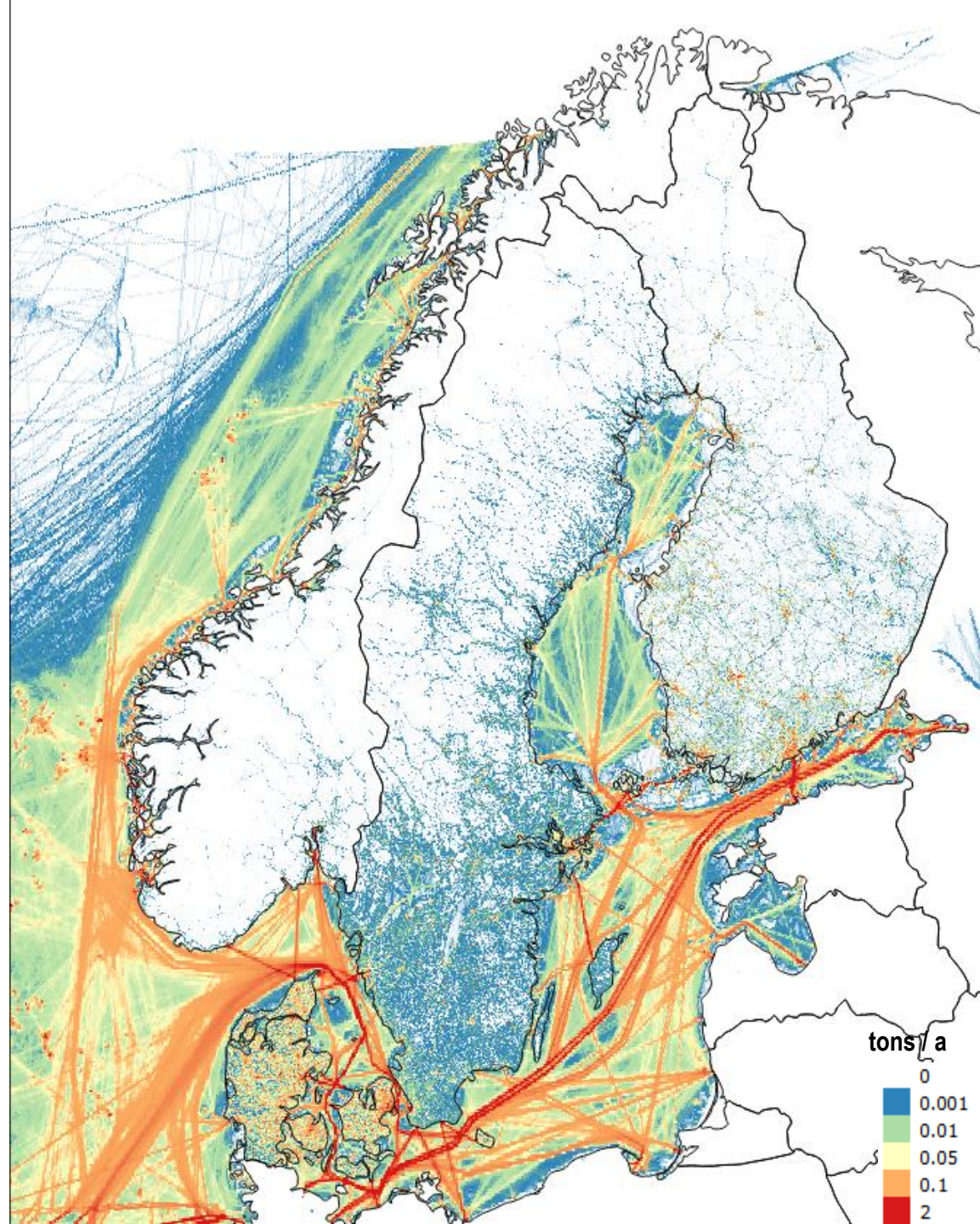
All sectors, BC



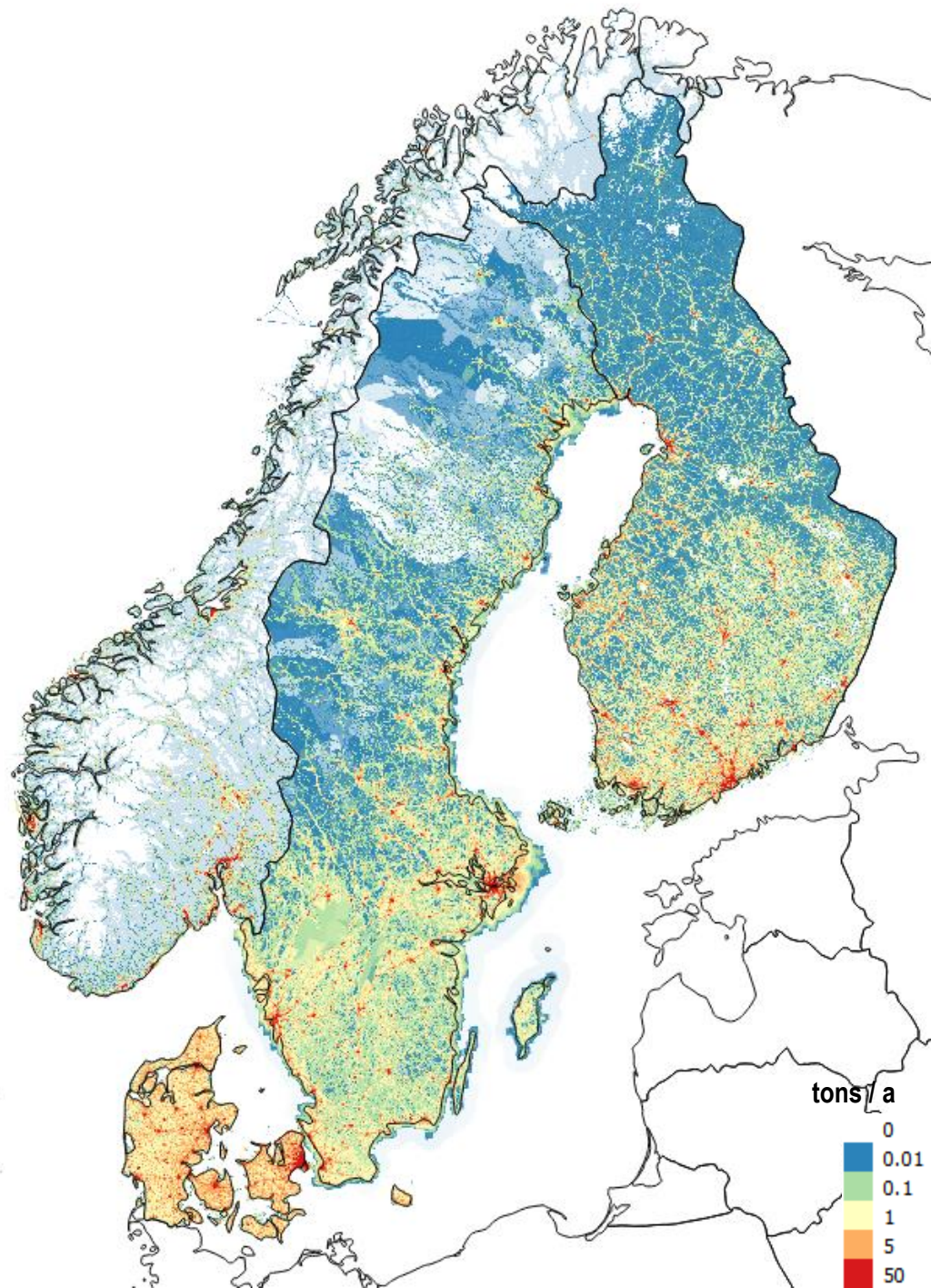
All sectors, NOx



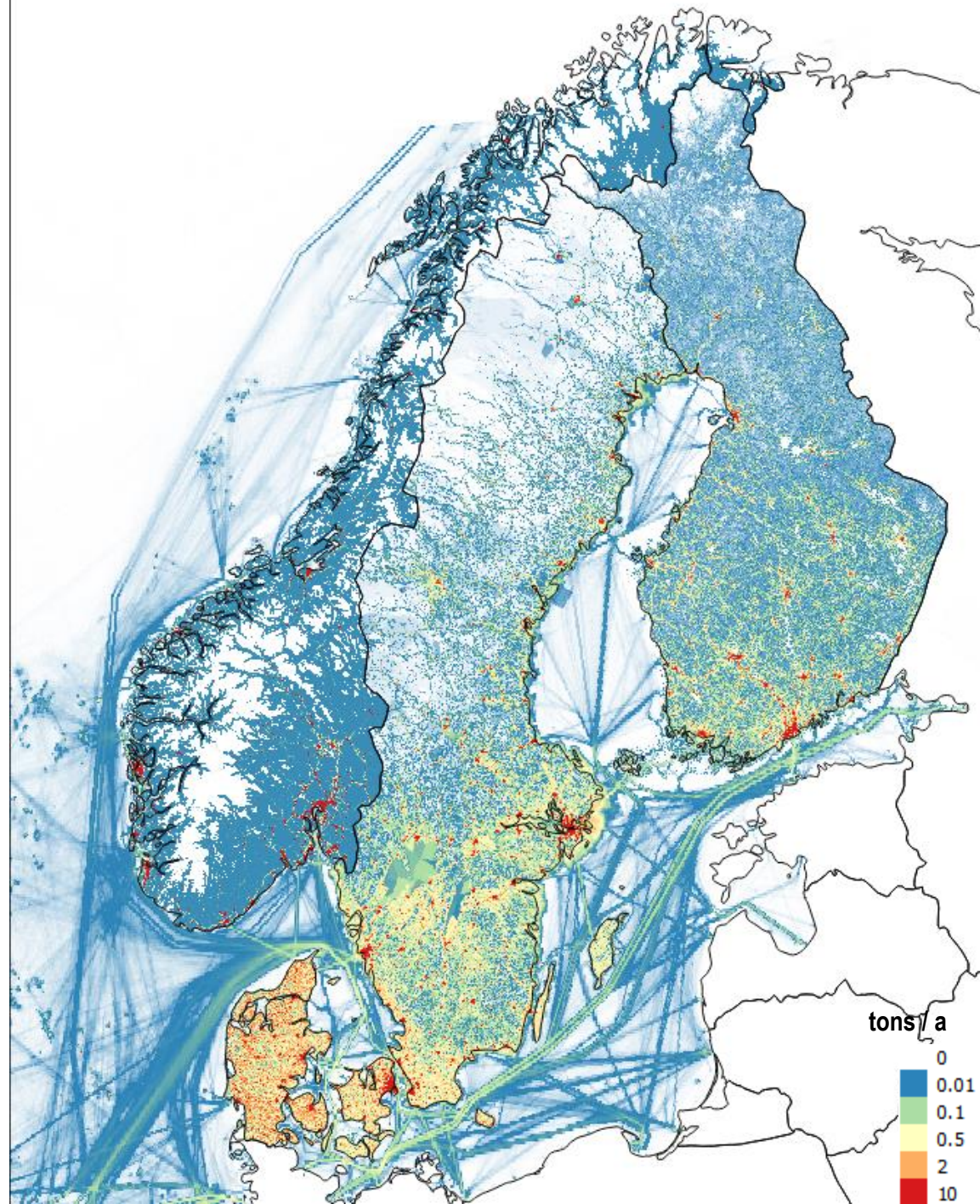
All sectors, SO₂



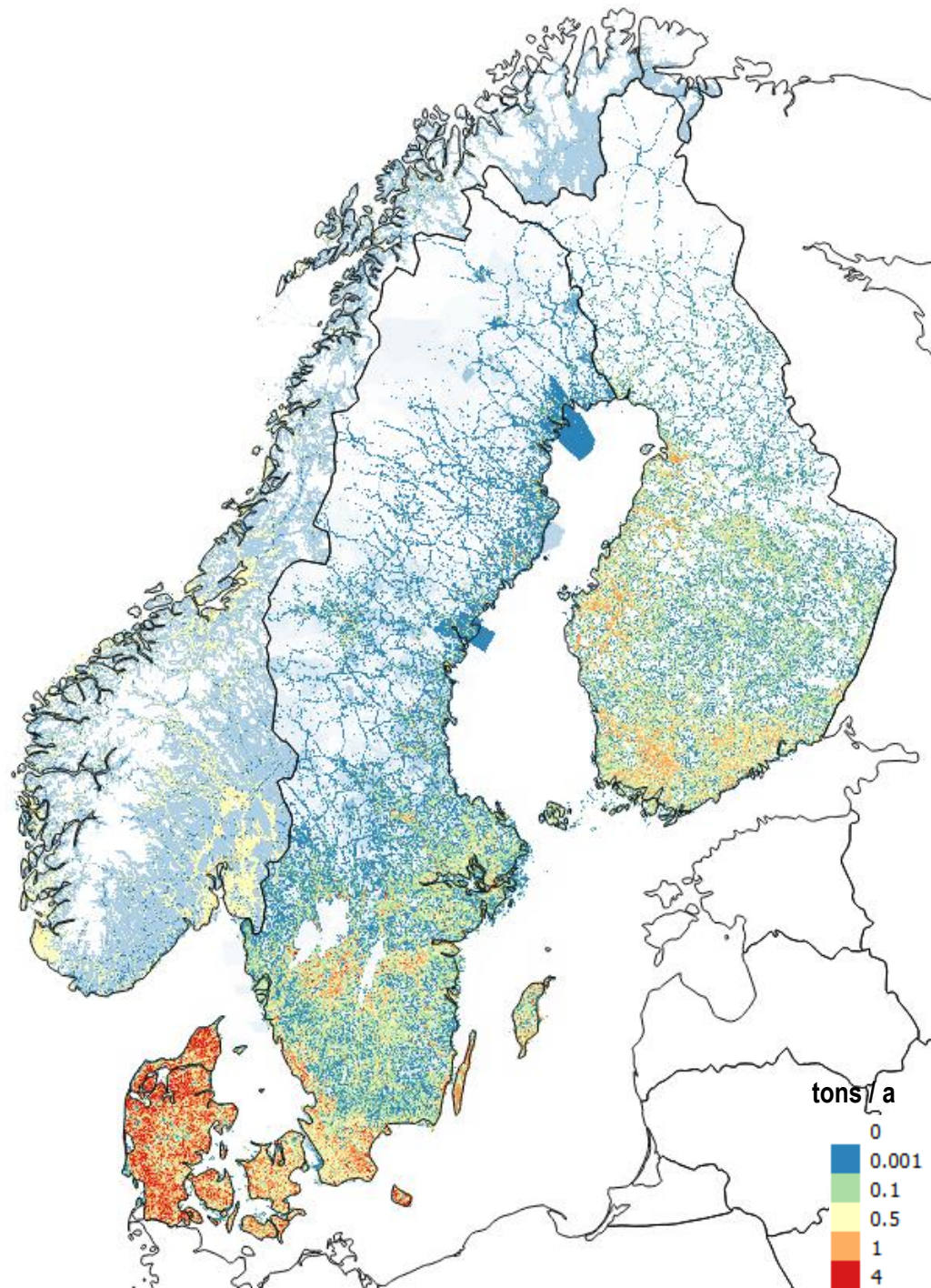
All sectors, CO



All sectors, NMVOC

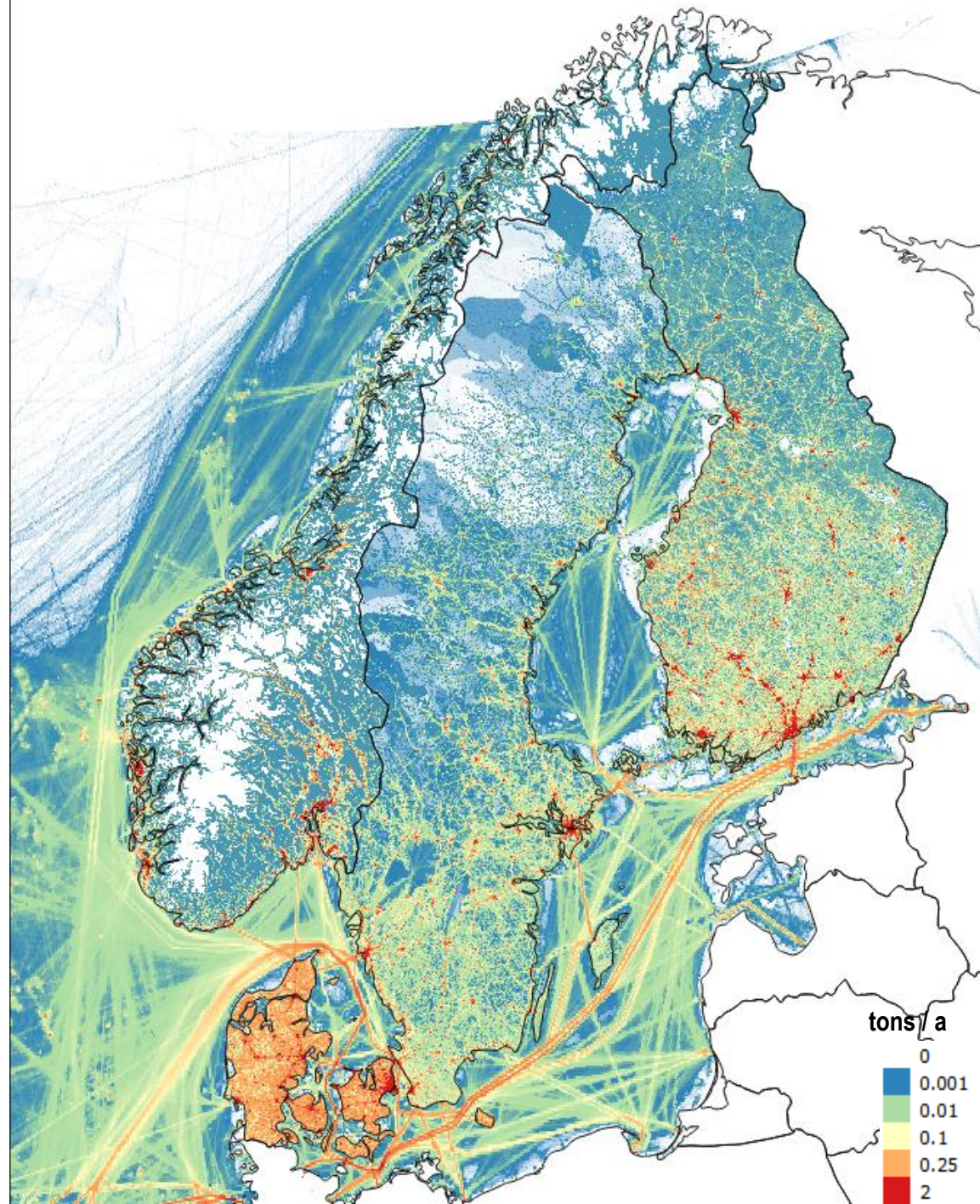


All sectors, NH3

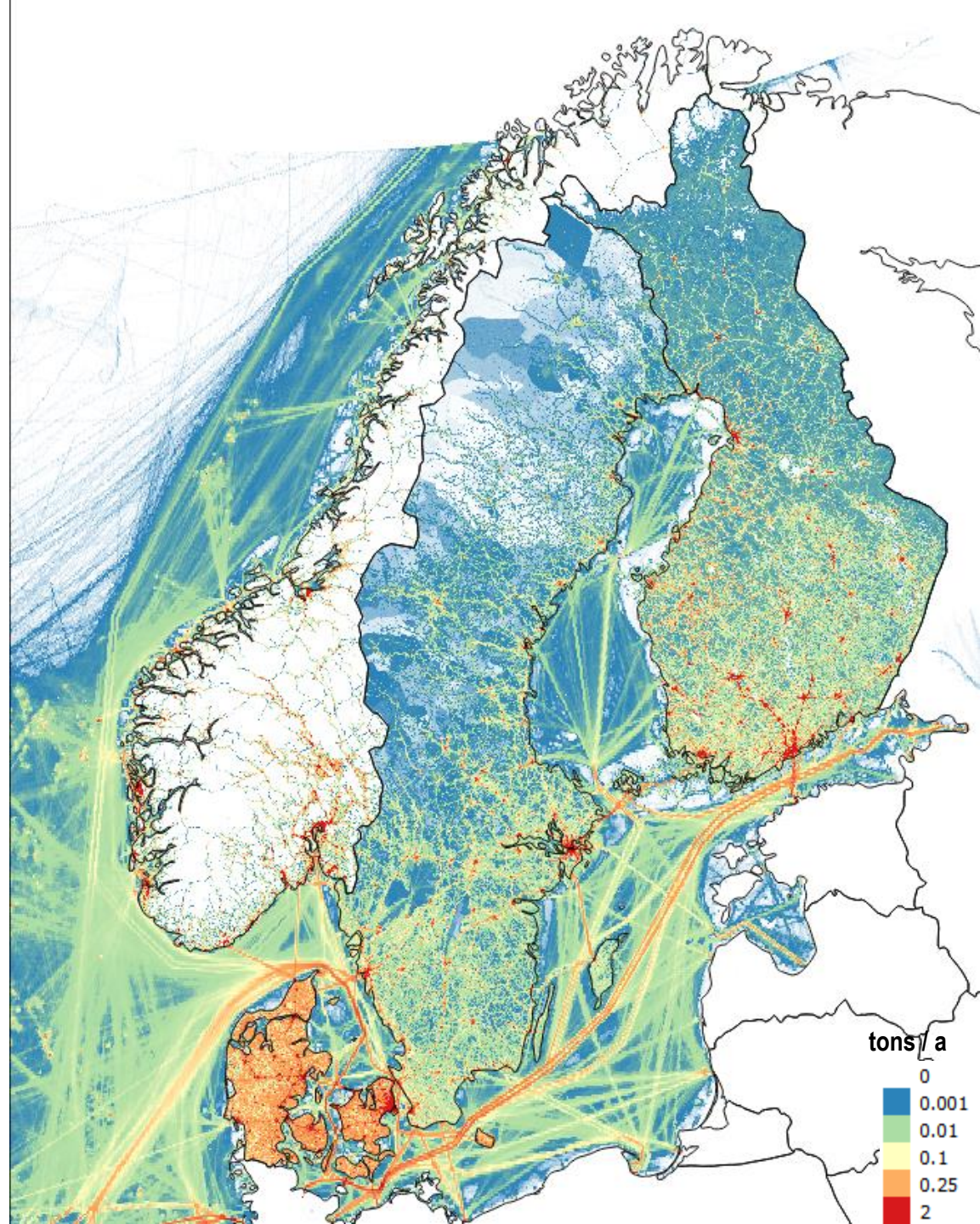


Maps – by year

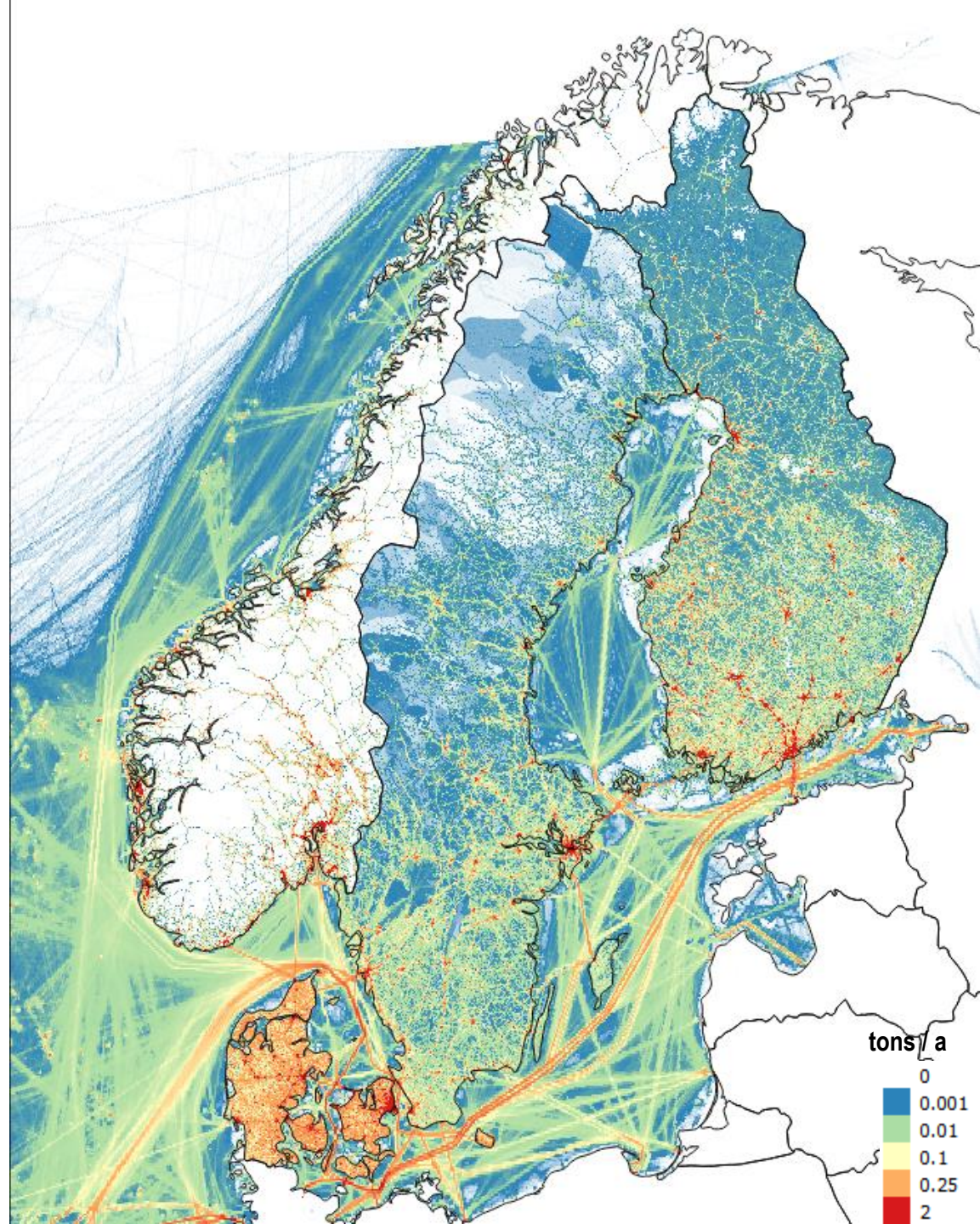
All sectors, PM2.5 1990



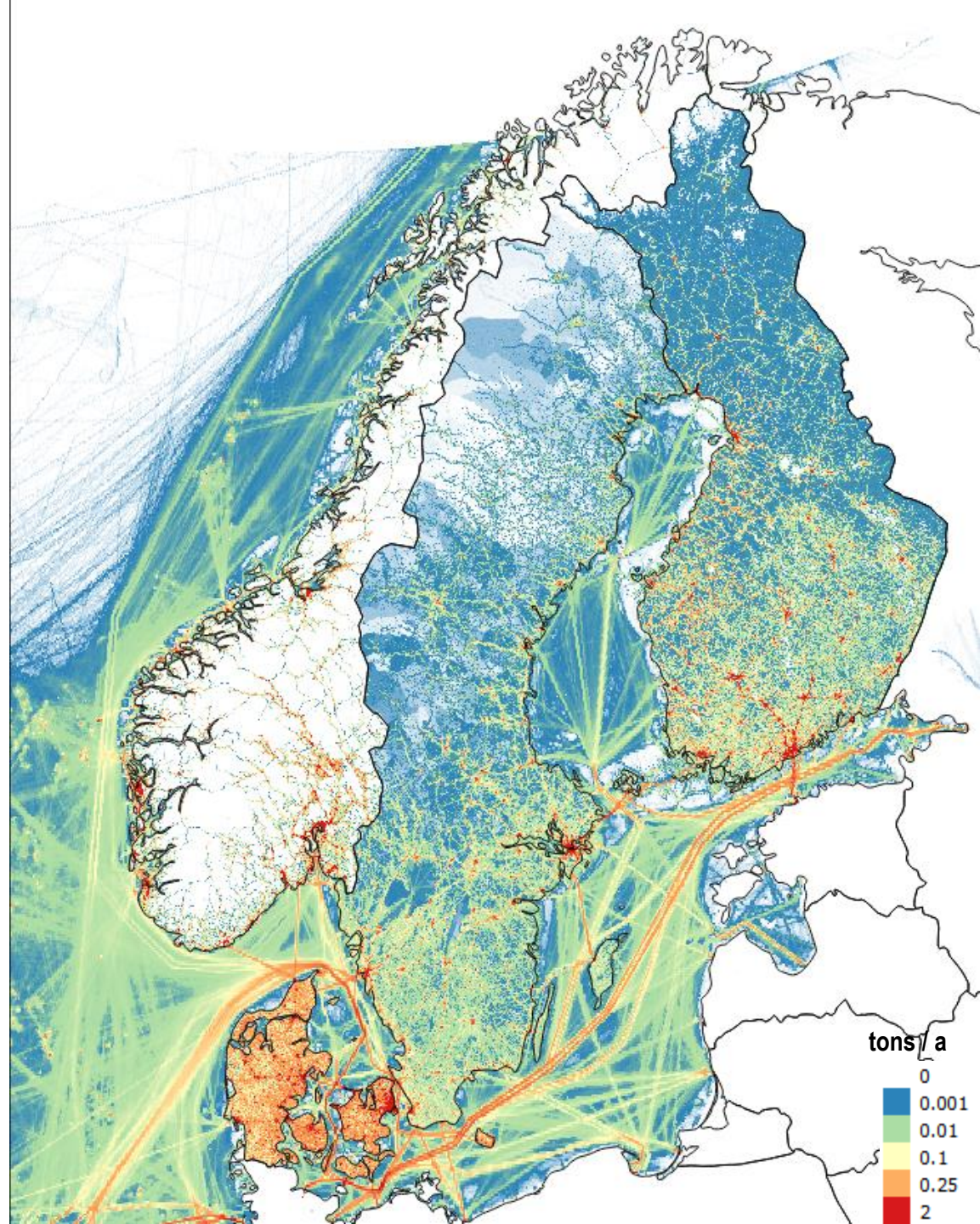
All sectors, PM2.5 1995



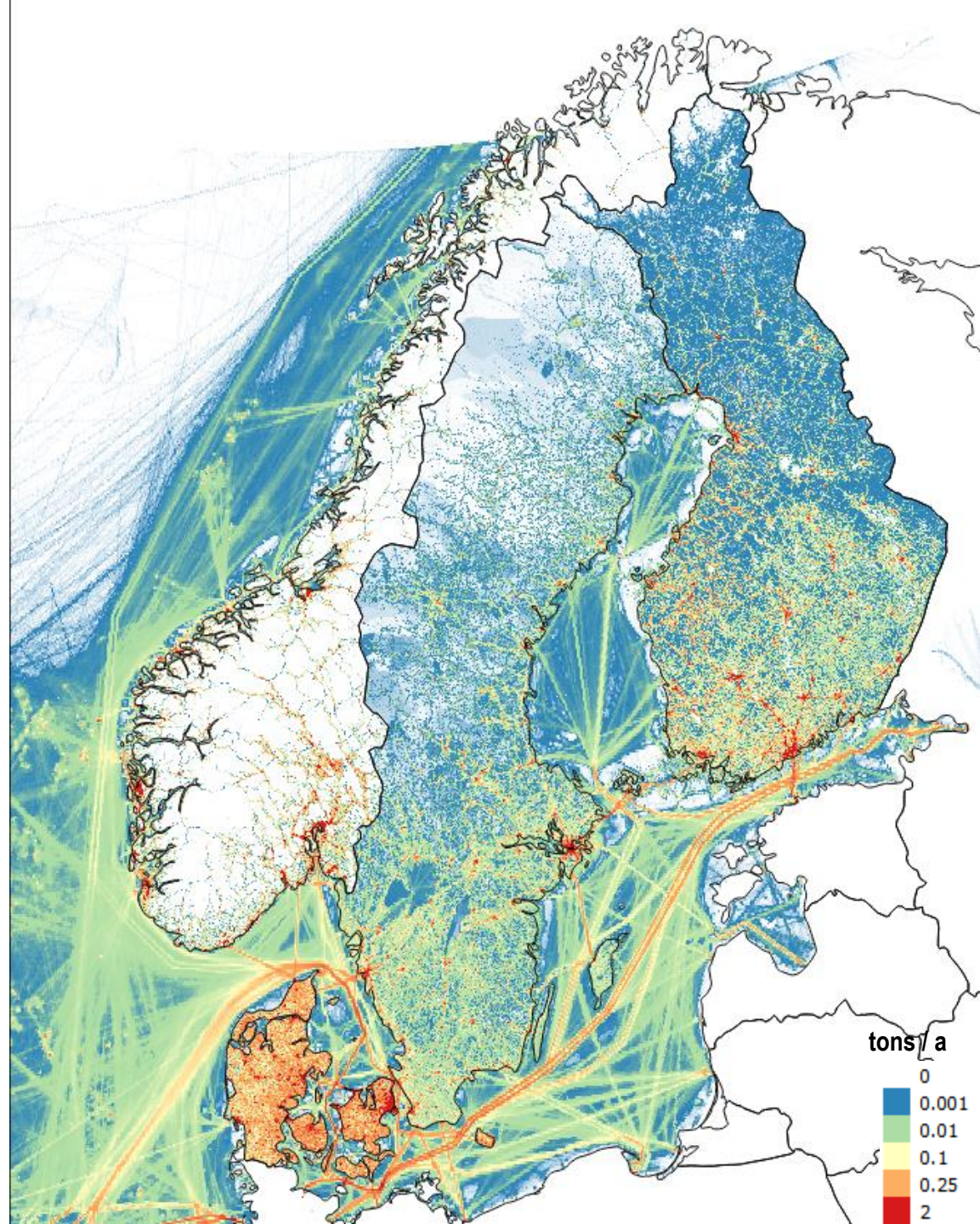
All sectors, PM2.5 2000



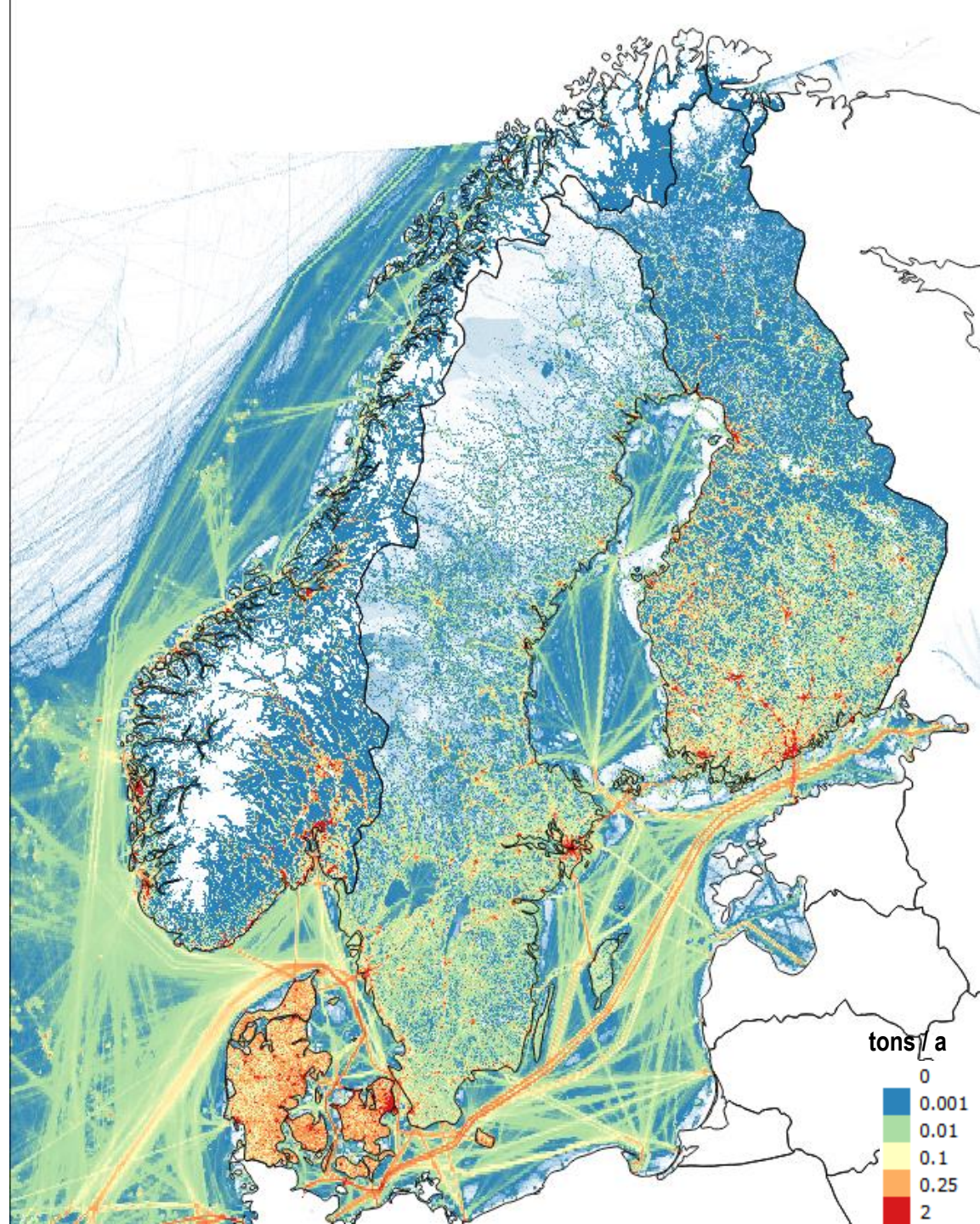
All sectors, PM2.5 2005



All sectors, PM2.5 2010



All sectors, PM2.5 2012



All sectors, PM2.5 2014

