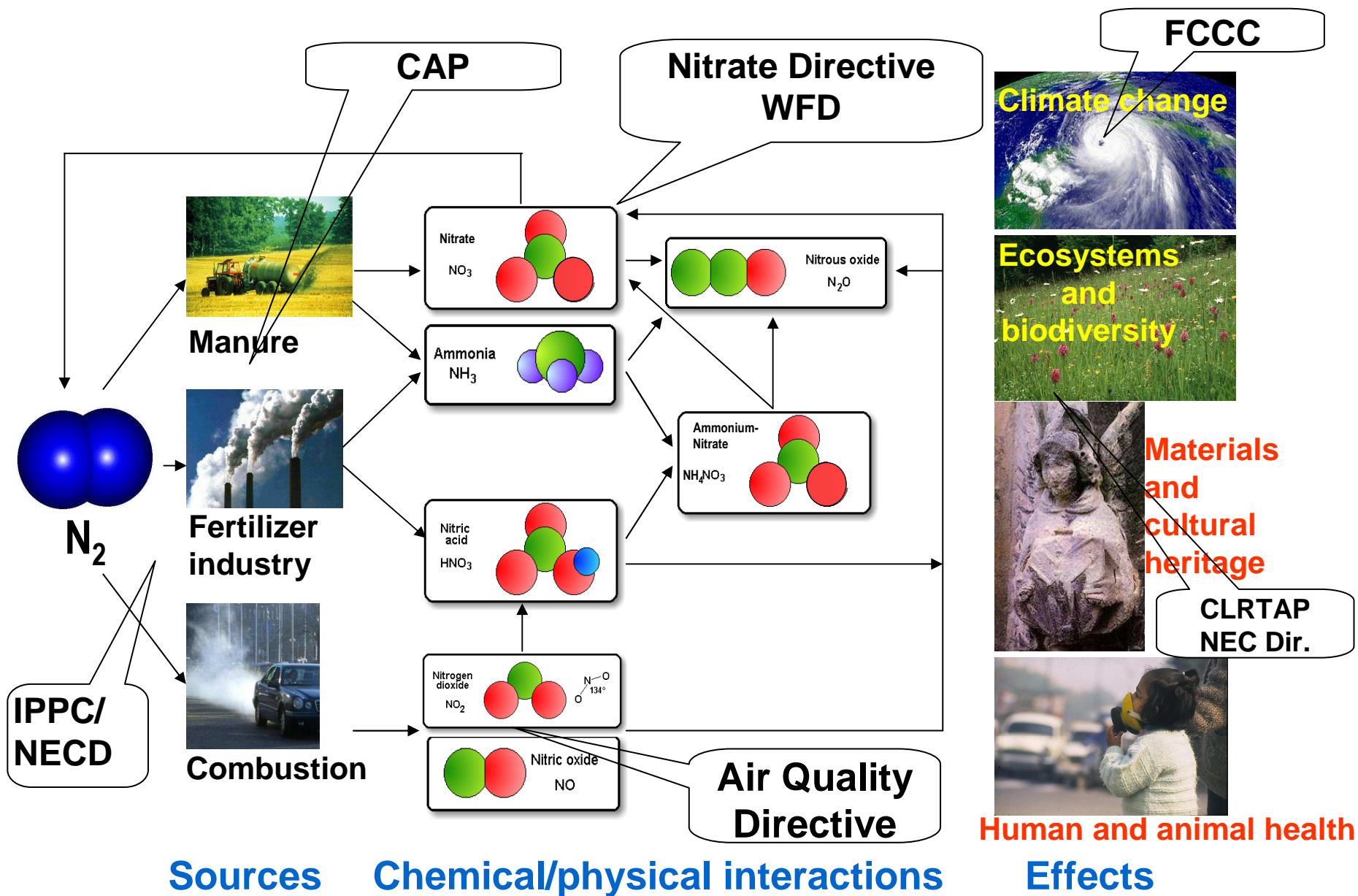




# Workshop on Integrated Nitrogen Modelling (28-30 nov 2007)

1. TFRN should identify information requirements of policy processes dealing with nitrogen
2. TFRN should make full use of existing work under the convention
3. TFRN should advice how various policy targets for nitrogen could be met in a cost-effective way

# Nitrogen - integrated approach



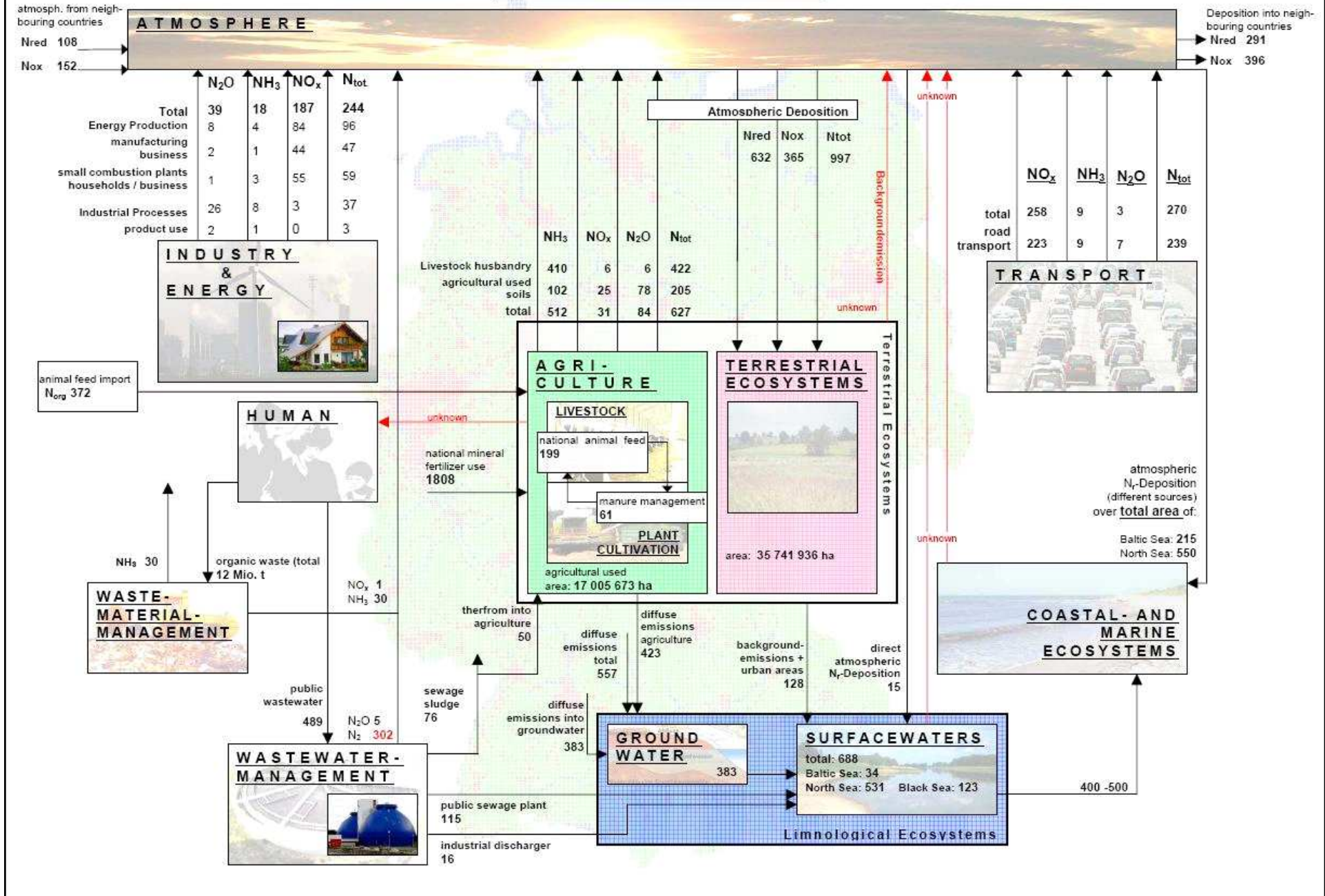


4. Consistency of N-data can be improved via N-budget calculations (Parties)
5. Existing models for land use, agriculture, air pollution, water pollution and biodiversity can be linked to assess nitrogen 'swapping' (IAM/TFRN)
6. Persuasive nitrogen relevant biodiversity indicators are needed to assess the impacts on natural and semi natural land (WGE)
7. It is possible to add restrictions for N<sub>2</sub>O emissions and N-leaching to GAINS to optimize Clean air policy given other policies

**IMPORT**

**NITROGEN-FLUXES IN GERMANY**

**EXPORT**

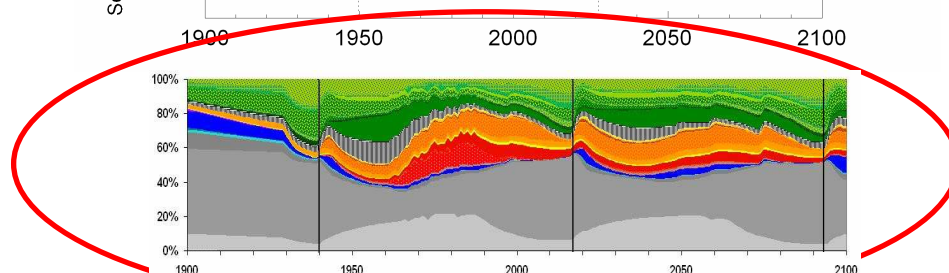
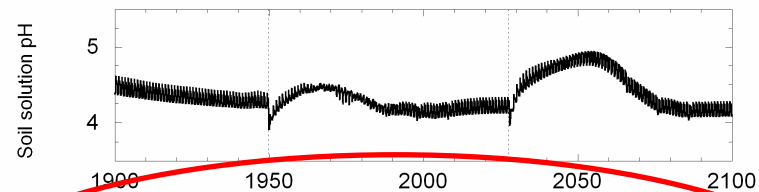
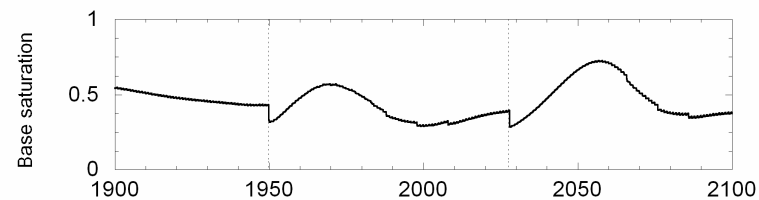
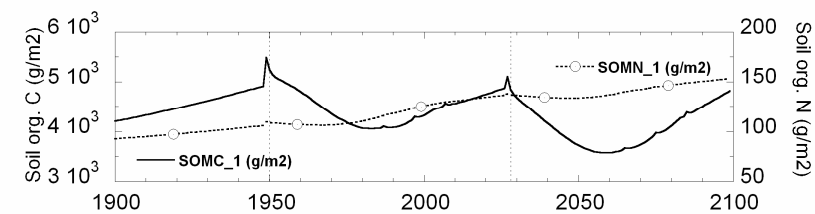
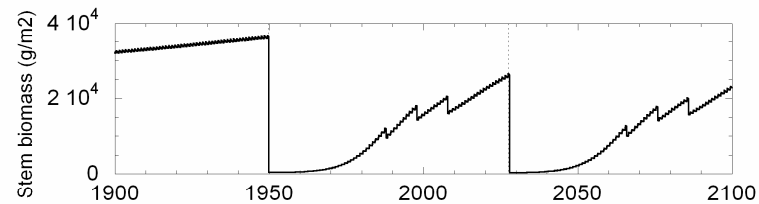
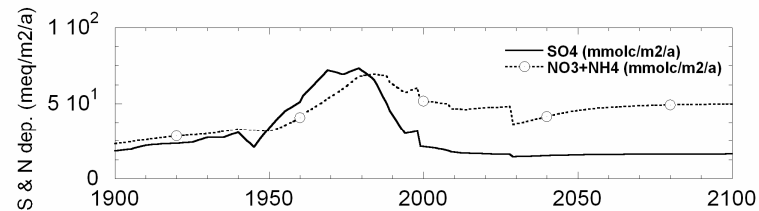




# Some results

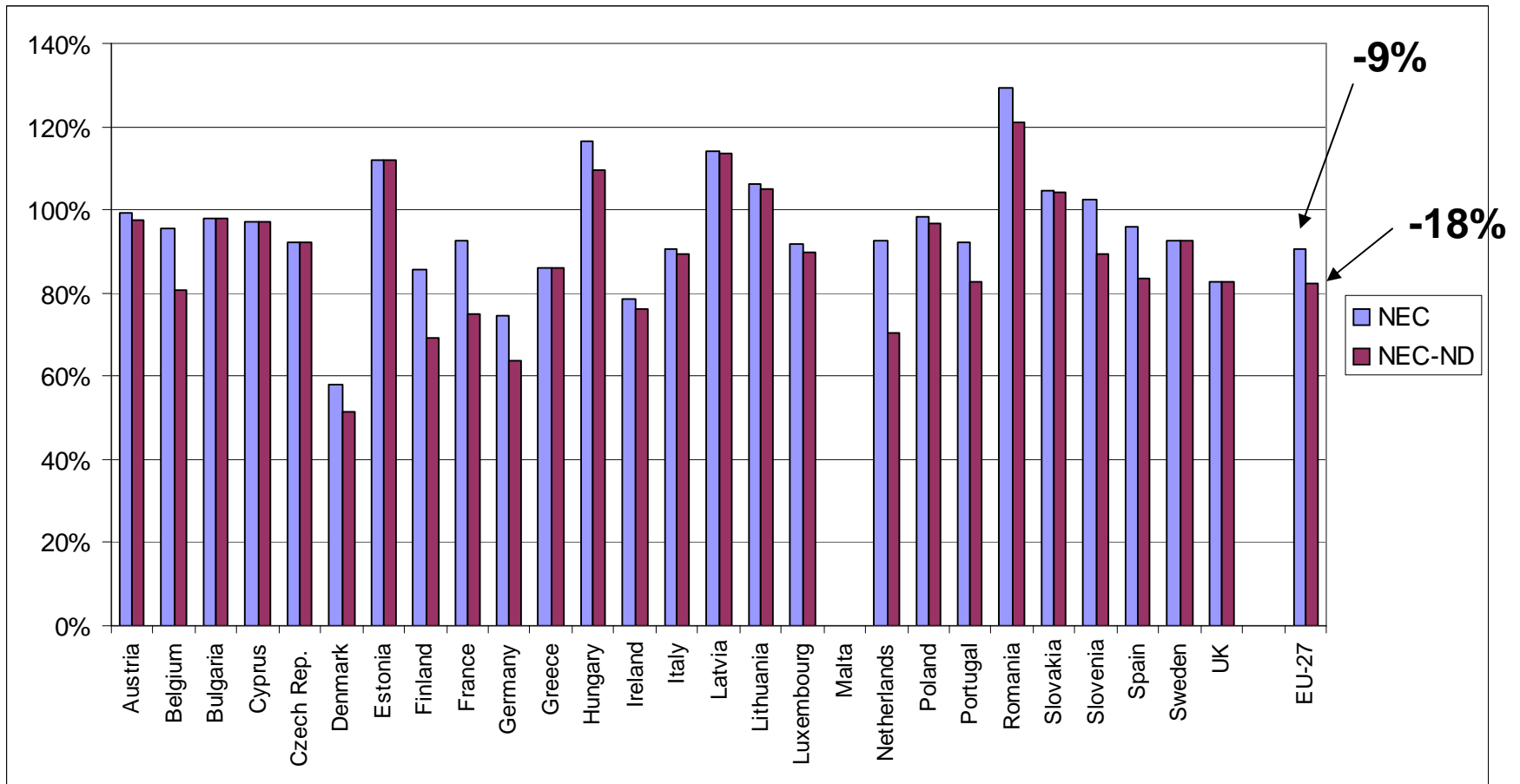
- 1.900 Gg N<sub>r</sub> Emissions
- 63 % atmospheric pathway
  - 50 % ammonia
  - 40 % nitrogen oxides
- 37 % terrestrial/aquatic pathways
- 56 % agriculture emissions
- 14 % Transport
- 14% Industry / Energy
- 14% Wastewater treatment
- **BALANCE NOT CLOSED!**

Looking for a **synthesizing indicator of effects**, but still **keeping the drivers separate**



# Comparing baselines for 2020

## Change in NH<sub>3</sub> emissions compared to the year 2000



# Comparing baselines for 2020

## Change in N<sub>2</sub>O emissions compared to the year 2000

