ICP Waters

International Cooperative Programme on Assessment and Monitoring Effects of Air Pollution on Rivers and Lakes

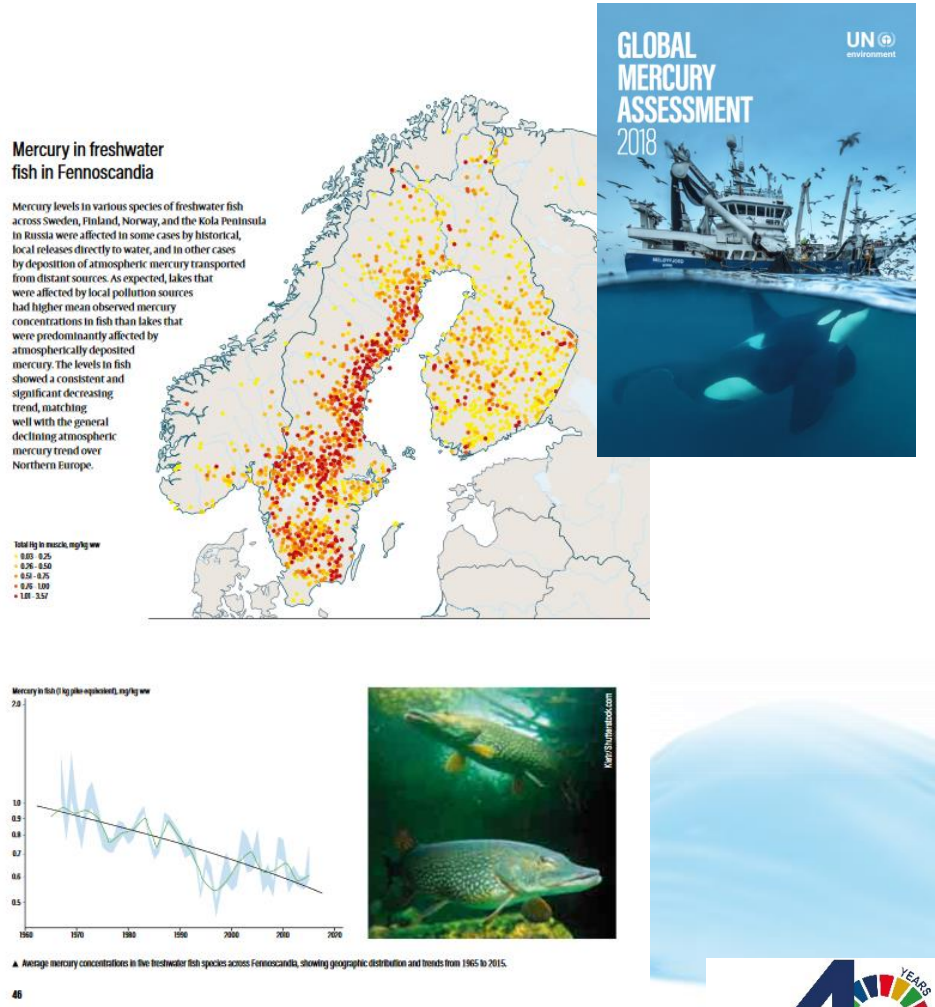
Future plans

Regular activities - mandate

- Task force meetings
- NEC Directive
- Collaboration with EECCA countries
- Collaboration outside the LRTAP Convention
- Chemical/biological intercalibration
- Manual
- Databases

Mercury

- Hans Fredrik Braaten represented ICP Waters at Minamata COP-2
- Contributed to discussions on monitoring (*Effectiveness Evaluation)* under Minamata Convention
- Output from ICP W report used in Global Mercury Assessment: https://www.unenvironment.org/resources/publication/global-mercury-assessment-2018



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Water chemistry database

- Regular data calls
- More catchment information?
  - Land cover, soil, geology
  - Average temp, precipitation
  - Human impacts (roads, forestry..)
  - Useful for reports – differentiation, interpretation
  - Increases potential for collaboration with ICP IM?

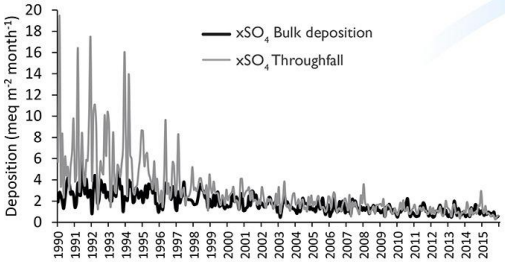
Work plan 2020-21

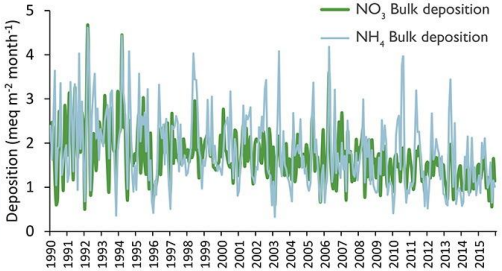
- Contribution to WGE/EMEP activities
  - WGE portal
  - Joint reports?
  - Input to work on critical loads for water
  - LifeWatch
  - Etc
- Some suggested topics for thematic reports
  - To be discussed at the separate TF meeting
  - Potential for collaboration with ICP IM

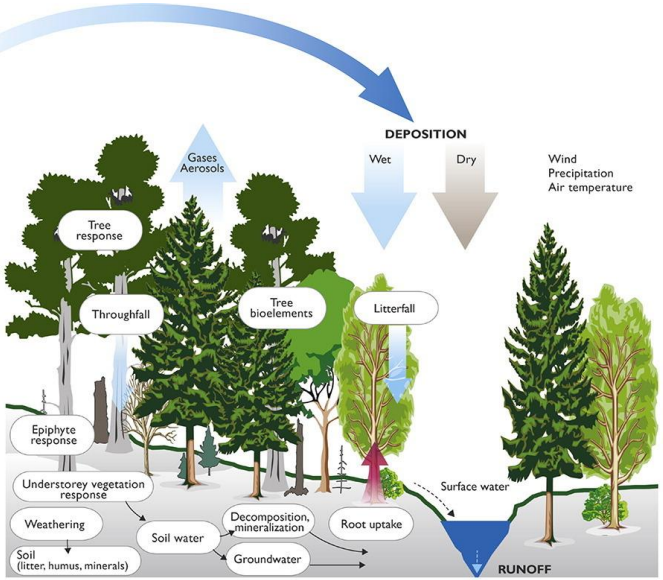
2020 report: Nitrogen?

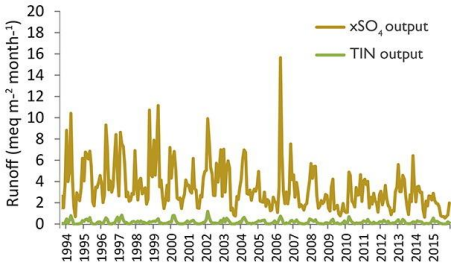
- N and biodiversity focus of the Convention
- Special topic at the EMEP/WGE meeting in September
- ICP M&M has decided to revise the empirical critical loads for nitrogen
  - Includes critical loads for surface waters
- ICP W review
  - Shift the focus of activity from acidification to more comprehensively assess the impacts of nitrogen, heavy metals and POPs

Impacts of N deposition on surface waters









Vuorenmaa et al. 2018 Stoten

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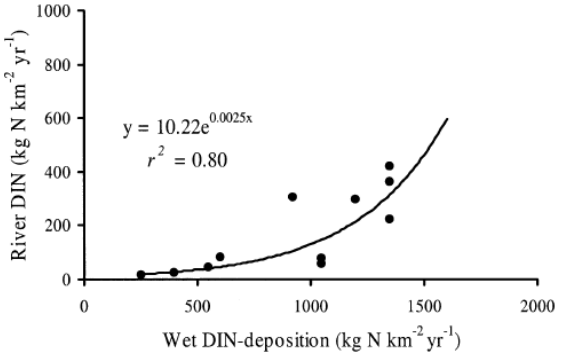
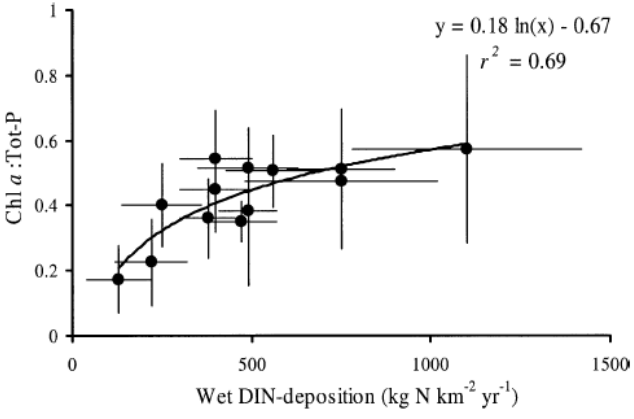
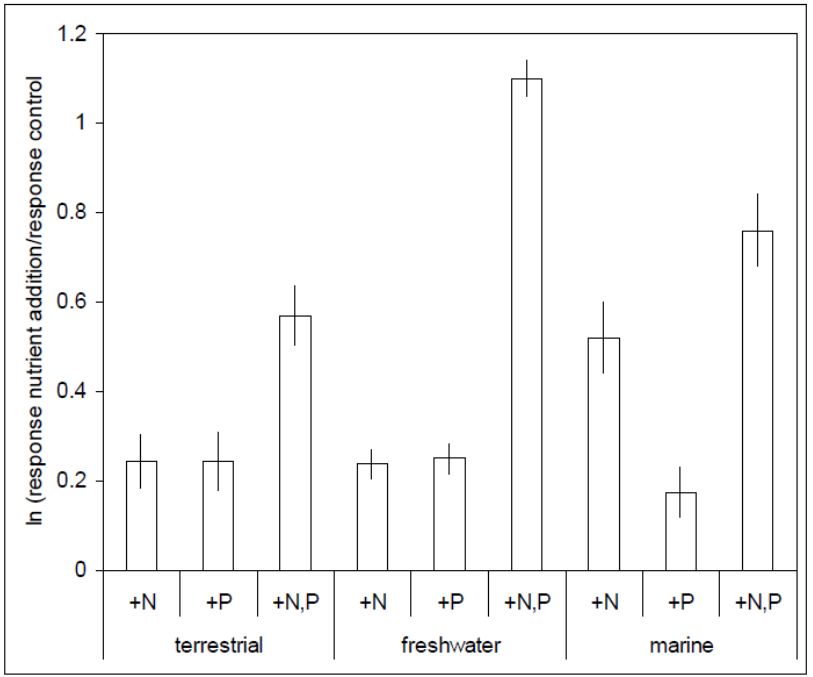


Fig. 3. The relationship between mean river transport of inorganic nitrogen (river DIN) and mean wet inorganic nitrogen deposition (wet DIN deposition) for different river catchments in Sweden (mean values from 1995–2001).



Bergström et al., 2005

ICP Waters Report 101/2010
Nutrient enrichment effects of atmospheric N deposition on biology in oligotrophic surface waters
- a review



Redrawn from Elser et al., 2007

Clean Air 40 YEARS

Potential focus

- N trends – deposition and water chemistry
- Nutrient N – freshwater effects
- Contribution of N dep to marine waters via rivers
- Input to revision of empirical critical loads

- Collaboration with ICP IM?

Topics for the 2021 report

- Ca limitation
  - Ca key structural component for invertebrates with calcified exoskeleton
  - Ca trends
  - Ecosystem implications of reduced Ca concentration
  - Relevant data from ICP IM sites?
- Fish and recovery
  - Fish death from acid deposition starting point for CLRTAP
  - Current state and recovery
  - Critical limits at different life stages