ICP Waters status

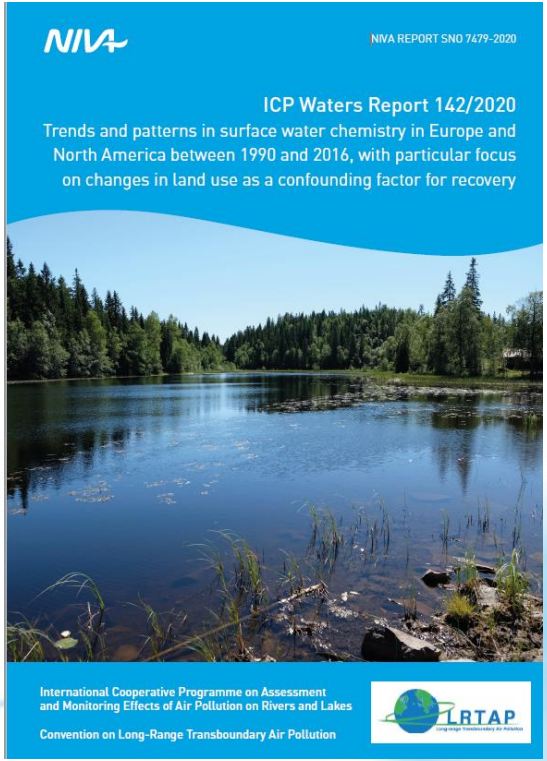
International Cooperative Programme on Assessment and Monitoring Effects of Air Pollution on Rivers and Lakes

Chair: Heleen de Wit. Head of programme centre: Kari Austnes

TF ICP M&M online 21-23 April 2020

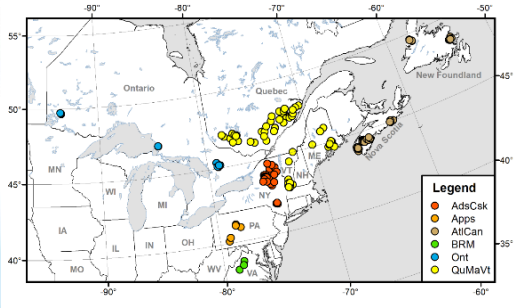
New reports

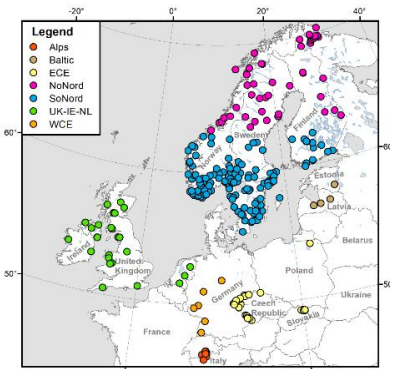
- Report on trends in water chemistry
- Regular annual reports
  - Task Force Meeting proceedings
  - Chemical intercomparison
  - Biological intercalibration
- All can be downloaded at www.icp-waters.no

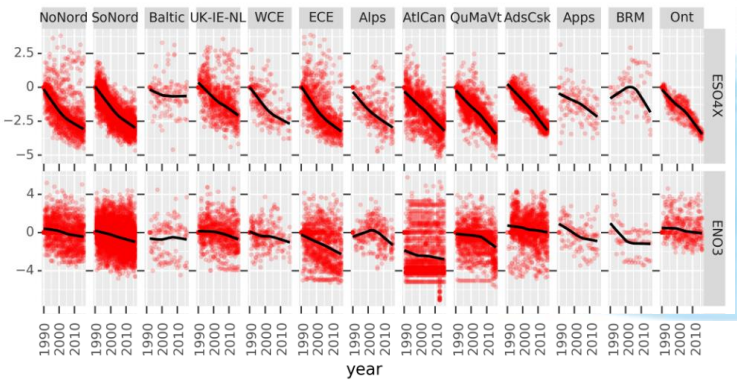


Trend report

- 500 sites in Europe and North America with water chemical records from 1990 to 2016
  - Decline in sulphate at most sites (by 40-60%)
  - Nitrate mainly declining, but by less, and fewer significant trends
  - Chloride also declining many places
  - Declining base cations, but still increasing ANC
  - Increasing TOC, partially replacing mineral acidity, so limiting the pH increase







Trend report

- Contrasts between Europe and North America
  - Improvements are levelling off in Europe and accelerating in North America when comparing the 2000s with the 1990s
  - Can be linked to different timing of abatement policies/economic recession
- Acidic episodes have become less severe in line with the recovery of average chemistry
- Land use/land cover change can affect recovery

Variable	Europe	N. America
sulfate	-	-
chloride	-	-
acid-neutralizing capacity	+	+
acidity (H)	-	-

Blue: Less negative or more positive trends (Sen slope) 2002-2016 than 1990-2004
Red: Opposite

2020 report on nitrogen

- Basic questions
  - Nitrate is declining to a lesser extent - why? Are there regional differences or differences related to catchment properties?
  - What happens to organic nitrogen as organic carbon is increasing?
  - Can we understand more about nitrogen saturation from studying the water chemistry trends?
- Approach
  - Trend analysis and spatial analysis
  - Relate concentrations and concentration ratios to nitrogen deposition, land cover and climatic factors
  - Potentially a chapter on contribution of nitrogen deposition to marine eutrophication

Task Force meeting 2019

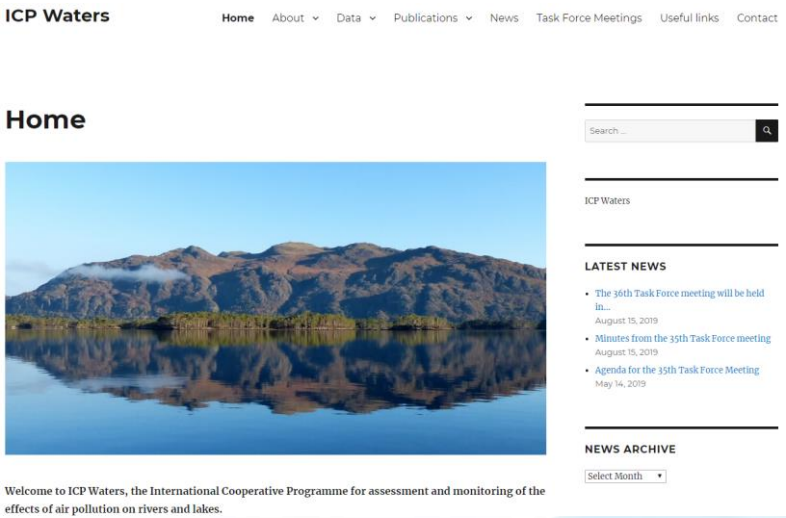
- Fourth joint meeting with ICP Integrated Monitoring in Helsinki, June 4-6
- 55 experts from 20 Parties to the Convention
- Topics covered
  - Acidification and recovery
  - Climate change and land use
  - Heavy metals and POPs
  - NEC Directive
  - Critical loads and modelling
  - Nitrogen and element budgets
  - CLRTAP and ICP specific topics

Task Force meeting 2020

- Replaced by online meeting 11-12 May
- Separate meetings for ICP W and ICP IM
- Topics
  - Trends (chemical and biological)
  - Nitrogen
  - Other (modelling, biodiversity, heavy metals, critical loads, NEC directive, other)
- Late comers are still welcome (but be quick)

Homepage ICP Waters

- Publications
- Data exploration
- Minutes Task Force meetings
- News
- Focal Centres
- ..



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