

# Arctic Freshwater Biodiversity Monitoring Plan Sweden 2015-16 Implementation



The [Arctic Freshwater Biodiversity Monitoring Plan](#) outlines the framework for improving circumpolar monitoring efforts in Arctic freshwaters, including ponds, lakes, rivers, and their associated tributaries and wetlands. The [Freshwater Plan](#) provides Arctic countries, monitoring professionals and volunteers with a set of guidelines for common approaches and indicators in future monitoring activities, and for collecting existing data. The Freshwater Plan will facilitate information collection and analysis, identify and fill knowledge gaps, and provide better information for use in policy and decision-making.

The [Freshwater Plan](#) is the second of four long-term, integrated biodiversity monitoring plans produced by the [Circumpolar Biodiversity Monitoring Program \(CBMP\)](#) of the [Conservation of Arctic Flora and Fauna \(CAFF\)](#), the biodiversity working group of the Arctic Council, and was approved in 2013.

Canada and Sweden co-led the [Freshwater Plan's](#) development, which involved the work of experts from Arctic nations, Permanent Participants and other Arctic Council working groups. These experts identified focal ecosystem components, key drivers and indicators, and designed optimal sampling schemes, common parameters and standardized monitoring protocols for application across circumpolar Arctic freshwaters.



## Top CBMP Freshwater Priorities in 2017

- Finalize the strategy to manage differences in sampling and processing methodologies among data sources, to facilitate circumpolar comparisons of data (Project 4)
- Assess regional and circumpolar spatial and temporal trends in Arctic freshwaters using aggregated circumpolar dataset (Projects 5 and 6)
- Develop first draft of State of Arctic Freshwater Biodiversity Report and first drafts of papers for an accompanying special issue of a scientific journal (Projects 5 and 6)
- Secure funding for Freshwater Expert Network activities (data assessment and report writing)
- Secure funding for Freshwater Steering Group Science Coordinator (to facilitate writing and completion of State of Arctic Freshwater Biodiversity Report)

## Links with National Priorities

The Swedish Freshwater Expert Network (FEN) has put a large effort in identifying and compiling contemporary monitoring data and historical data that can be used for the first State of the Arctic Freshwater Biodiversity Report.

In addition to FEN-members, data technicians have been involved in the extraction of data from databases and adapting these to the data templates provided by [CBMP-Freshwater Steering Group](#). During 2016 a list of methods used for the monitoring of freshwater biota and their chemical/physical habitat has been compiled.

FEN-members are also engaged in a Fennoscandian writing workshop in Uppsala in December 2016 where the FENs of Norway, Finland and Sweden will gather to analyze data and draft scientific articles for a planned Freshwater Special issue journal that will be released shortly after the State of the Arctic Freshwater Biodiversity Report.

## National authorities

- [Swedish Agency for Marine and Water Management](#)
- [Swedish Environmental Protection Agency](#)
- [Swedish University of Agricultural Sciences](#)

# Freshwater Expert Network Summary of 2015-16 Achievements

**Tobias Vrede** Associate professor at the Department of Aquatic Sciences and Assessment, Swedish University of Agricultural Sciences (SLU). Expertise in zooplankton ecology and lake food web dynamics. **Contact:** [Tobias Vrede](#)

**Johan Östergren** Research Associate at the Department of Aquatic Resources, SLU and an expert in fish ecology, in particular diadromous salmonids. **Contact:** [Johan Östergren](#)

**Jan Karlsson** Professor at Umeå University with specific expertise in in-lake processes and nutrient and carbon cycling in arctic/alpine lakes. **Contact:** [Jan Karlsson](#)

**Maria Kahlert** Associate professor at the Department of Aquatic Sciences and Assessment (SLU) and an expert in benthic diatom ecology, in particular their use as indicators of ecological quality. **Contact:** [Maria Kahlert](#)

**Kerstin Holmgren** Associate Professor in biology with specialisation in limnology, researcher at the Department of Aquatic Resources, SLU, and invertebrate specialist. **Contact:** [Kerstin Holmgren](#)

**Danny Lau** Assistant Professor in the Department Ecology and Environment Science, Umeå University, who's research focuses on food-web ecology in freshwater ecosystems. **Contact:** [Danny Lau](#)

**Willem Goedkoop** Professor at the Department of Aquatic Sciences and Assessment, SLU, who has expertise in benthic ecology, food web dynamics, and ecotoxicology. He is the Swedish representative to the CBMP's Freshwater Steering Group. **Contact:** [Willem Goedkoop](#)

## Funding

Swedish participation in the FSG and FEN-work is funded annually by the Swedish Agency for Marine and Water Management (SWaM), the national authority that also funds and coordinates the national monitoring program for lakes and streams. Additional financial support comes from the so called 'authority support' that the Department of Aquatic Sciences and Assessment at the Swedish University of Agricultural Sciences supplies to the Swedish EPA and SWaM and from travel support by the Swedish EPA. The freshwater FSG and CAFF have jointly applied for funding for a science writer for the production of the State of the Freshwater Biodiversity Report (SAFBR) at the Nordic Council of Ministers. Unfortunately this application was not funded and the FSG is currently searching for alternative sources of funding.

## Communication

Annual progress reports of Swedish FEN-work are delivered to Swedish national authorities and to the Swedish CAFF-representative. Annual meetings are held with representatives from the Swedish EPA and SWaM to inform about the status of work and plan for the coming year. At the CAFF meeting in Longyearbyen (Svalbard) in early September 2016, the Swedish co-lead gave a presentation on the progress of work of the CBMP-freshwater group and addressed the challenges that the group is facing.

## Data

Compilation of contemporary and historical data to the data base compiled by CBMP-Freshwater has been the main focus of work in 2016. Data have been entered and delivered to the Freshwater Steering Group.

## For more information

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