GLEONites,

The Zooplankton as Indicators group (ZIG) is looking for existing zooplankton and water quality data from GLEON members and colleagues. Our goal is to develop a global zooplankton dataset to test which aspects of zooplankton community structure are the most sensitive, and widely applicable, indicators of environmental change. In addition to the main synthesis question, we anticipate that the assembled dataset will be amenable to addressing already identified ZIG questions and future research ideas.

ZIG is looking for data from lakes and/or reservoirs* with at least two years of consecutive data, with no requirements on the number of sites per lake/reservoir or sampling frequency. There are also no specific sampling methodology requirements, so as long as the methods are well documented (mesh size, sampling type, tow depth, net diameter) and internally consistent for the duration of the coverage provided. The required* parameters are:

- Lake characteristics: Lake maximum and average depth, dominant surrounding land use, trophic state, and mixing regime
- Crustacean zooplankton community composition and abundances by major groups (e.g. calanoids), genera, and/or species
- Chlorophyll-*a* concentrations
- Surface temperature (i.e., subsurface at $\leq$ 1 m depth)
- Surface limiting nutrient concentrations (total phosphorus, nitrogen, and/or silica)
- Secchi depth and/or light attenuation

*Please contact us if you would like to include your dataset, but do not have all of these variables or have data from mesocosm experiments that may be helpful.

If the data are available, we are also interested in:

- Zooplankton biomass and measured length
- Temperature: thermocline depth and/or hypolimnetic temperature from sampling dates
- Dissolved oxygen: epilimnetic and hypolimnetic from sampling dates
- Other water chemistry variables (e.g. chloride)
- Rotifer composition and abundances

Please contact the co-champions if you are interested in joining, contributing data, or have any questions on this project! The co-champions will respond with more specifics on formatting and the data that are requested. This project is still in the “green” phase and additional members and ideas for follow-up questions on zooplankton as indicators are welcomed.

Additionally, data from ZIG could support a second project called ZooST: Zooplankton over Space and Time. ZooST aims to evaluate the robustness of the Space-for-Time-Substitution survey design using existing zooplankton datasets. More information can be found on the

GLEON website's project descriptions. If your dataset fits ZooST's data requirements, ZooST project champions will email you about your interest in contributing to and participating in ZooST.

ZIG co-champions:
Steph Figary (sef92@cornell.edu)
Michael Meyer (michael.f.meyer@wsu.edu)
Warren Currie
(warren.currie@dfo-mpo.gc.ca)

ZooST co-champions:
Lia Ivanick (Lia.Ivanick@uvm.edu)
Ariana Chiapella
(Ariana.Chiapella@uvm.edu)
Jason Stockwell
(Jason.Stockwell@uvm.edu)

ZIG Participants: Rita Adrian, Orlane Anneville, Carmen Archambault, Lauren Barth, Stella Berger, Kelly Bowen, Matthew Brousil, Maria Caldero, Elvira de Eyto, Jonathan Doubek, Heidrun Feuchtmayr, Gideon Gal, Hans-Peter Grossart, Dave Hambright, Meredith Holgerson, Bas Ibelings, Stephan Jacquet, Silke Langenheder, Brian Lanouette, Eleanor Mackay, Marina Manca, Samuel Motitsoe, Veronica Nava, Jens Nejstgaard, Ziga Ogorelec, Martina Patelli, Roberta Piscia, Serena Rasconi, Ashley Rawhouser, Lars Rudstam, James Rusak, Elizabeth Ryder, Kim Schulz, Anne Scofield, Jason Stockwell, Dietmar Straile, Celia Symons, Andrew Tanentzap, Stephen Thackeray, Jim Watkins, Sabine Wollrab, and Horacio Zagarese