

Metabolism: Catchment Lake Connections

G16 Final Report Back

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...and maybe a few more

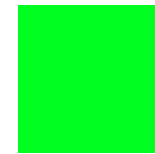
Lake Metabolism: Catchment-Lake Connections

3 work areas emerged:

- (1) Studying a range of lake and catchment data influencing of stream nutrient fluxes on lake metabolism (**Empirical** subgroup)
- (2) Large-scale geospatial/statistical approach identifying lake chemistry-land use connections (**Geospatial** subgroup)
- (3) “Age of carbon” approach to assessing critical sources, flows and transport pathways in catchment-lake systems (surface, streams, groundwater) (**Theory** subgroup)

Lake metabolism: influences of stream nutrient fluxes (Empirical Subgroup)

- Participants: Belen Alfonso, Denise Bruesewitz*, Jessica Corman, Alex Gerling, Huaxia Yao, Jake Zwart*
- We will assemble existing data from multiple lakes (formalizing meta-data request) with varying tributary numbers, sizes, and catchment land cover to examine variation in lake metabolic processes over these gradients
 - And/Or other variables, with feedback from Theory subgroup)
- Submitted to **Project Tracker!**
- Contact us if you are interested



A global analysis linking catchment properties to lake conditions

Lake condition variables

1. Clarity (Secchi)
2. Trophic state (TP, chl_a, TN)
3. Metabolism
4. DO

Catchment properties

1. Landuse regime
2. Climate regime
3. Hydrologic regime
4. Topographic regimes
5. Catchment morphometry

Timeline

1. Literature review and gap analysis (January 2015)
2. Survey of lake datasets (February 2015)
3. GLEON check in (March 2015)
4. Discussion of tractable questions (April 2015)
5. Develop a game plan (May 2015)



Group members

Alicia Caruso, Lyubov Bragina, Beverley Wemple, Kathie Weathers, Amina Pollard, Facundo Scordo, Emi Fergus, Zofia Taranu, Stephanie Melles, Peter Staehr, Pat Soranno, Kendra Cheruvellil.

Theory/Age of Carbon sub(sub)group

- Task 0.1 Develop Conceptual Model [Tom, Paul, Gopal]
- Translation: AoW to rAoW (ruh' ow!) [Stuart, Sam, Hilary, Gopal]
 - Paul and Gopal reach out for AoW code
 - Lit. review targeting carbon transformation rates [Roxanna, Yang]
- Define model space [Sam, Jake--Emp Group]
- Lit. review of prospective study gradients [Roxanna, Kevin]
- Gradient Sensitivity Analysis (TBD at later date)
- MONTHLY Skypes starting November
- STATUS: Not yet on Project Tracker but soon

