

Metabolism Group Synopsis

Break out group topics:

- uncertainties/methods/improving approach
- comparing lake metabolism using GLEON data
- outreach
- external perturbations
- drivers of R within days

Group 1: Improving approach

- Things we talked about
 - -Spatial heterogeneity - horizontal and vertical
 - Influence of bottom sediments
 - -Atmospheric flux
 - -Gas exchange between layers
 - -Respiration rate - assumption that it is constant (but maybe can't do much about that right now)
 - -Does moonlight or light pollution result in GPP?

Group 1: Improving approach

- Where we're going
 - Question: How different are whole-lake metabolism estimates when you consider multiple layers and the fluxes between them?
 - Ryan Batt to lead with help from others
 - An organized sensitivity analysis about assumptions/unknowns in models
 - Steve will lead effort / solicit interest

Group 2: Lakes and reservoirs response to disturbance

- What we talked about
 - Comparing reservoirs, rivers, alpine lakes – responses to disturbances in these different systems

Group 2: Lakes and reservoirs response to disturbance

- Where we're going
 - A couple big picture ideas:
 - Resistance and resilience - more productive systems recover faster?
 - Ecosystem subsidies , effects on production, how this is dependent on level at which subsidy enters

Group 3: Outreach

- What we talked about
 - How to come up with presentations that engage audience – include data from their lake?
 - Outreach for lake associations, analogues in different countries, K12 education, ...
 - Recruiting tool? Getting lake associations involved in the network

Group 3: Outreach

- Where we're going
 - Darren, Dave, Jen to lead “Volkswagen” effort
 - Check for existing materials, put together dynamic presentation
 - Make available on GLEON web page
 - Involve students from IGERT, others interested

Group 5: Sub-diel variation in metabolism

- What we talked about
 - Nighttime respiration – does it decline and if so why?
 - Combine free-water approach with classical algal physiology ideas e.g. PI curves

Group 5: Sub-diel variation in metabolism

- Where we're going
 - Lots of interest in this. Some preliminary field work and re-analysis beginning; group will communicate and think about ways to move forward collaboratively

Wrap up

- Keep thinking about big picture ideas / proposals / money
- A possible focus for group at GLEON 10: focus on big questions and proposals?
 - Possibly assign “homework” before meeting?