



Propagation and predictability of regime shifts in lakes

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Research question

Can we detect, explain, and predict abrupt shifts in lake plankton communities?

1 Detect

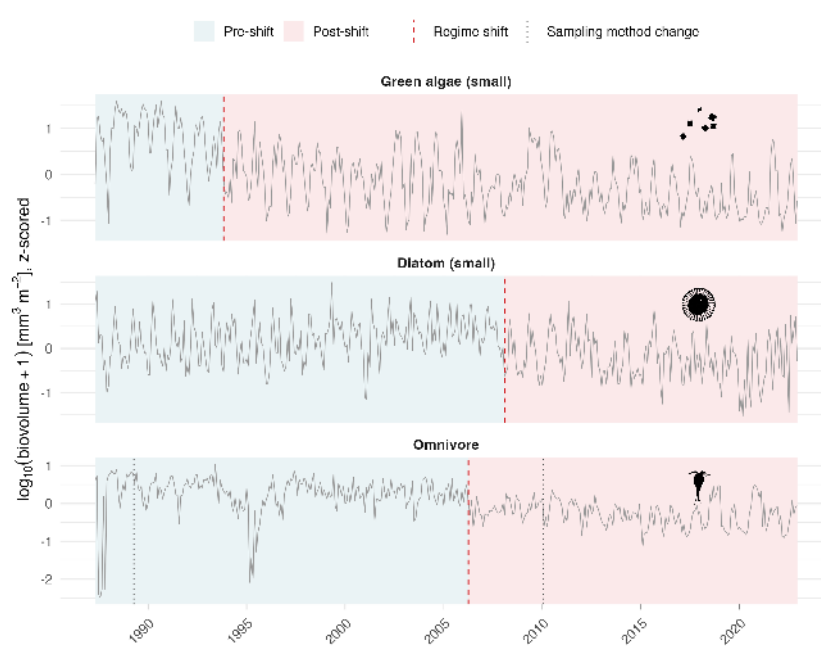
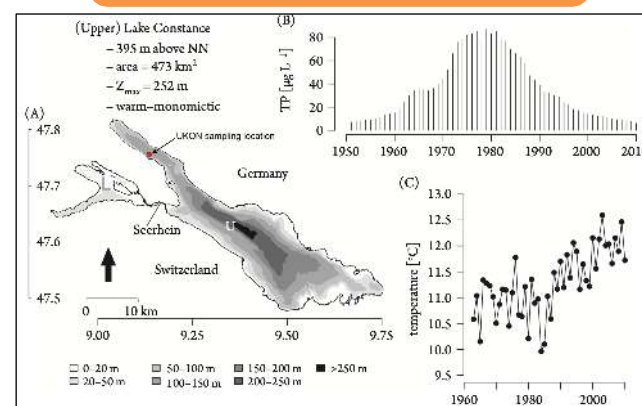
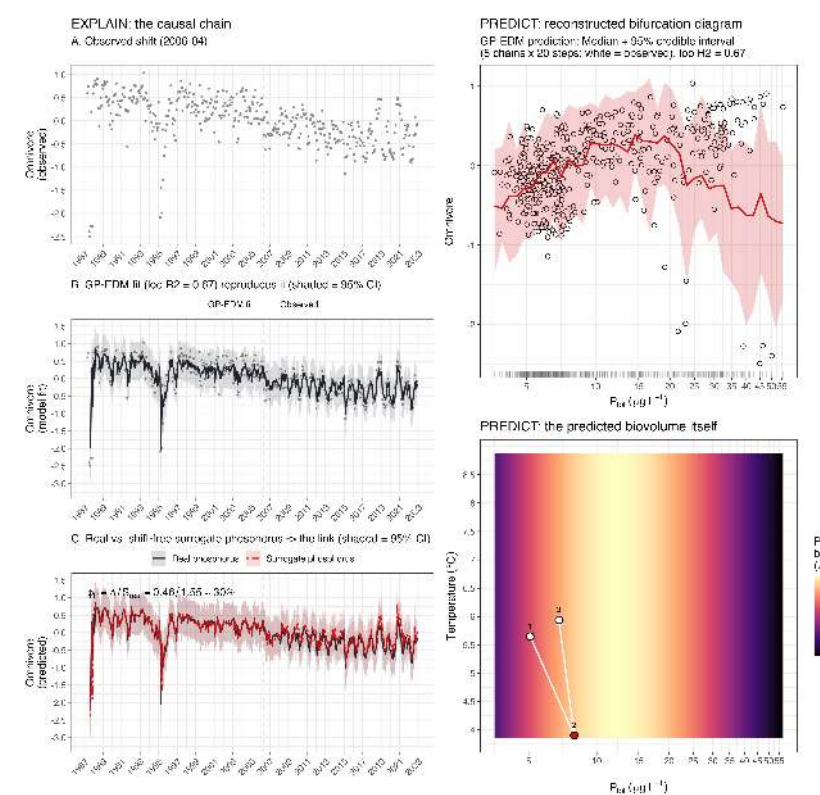


Figure 1. Confirmed regime shifts in three Lake Constance plankton guilds. Lines show the monthly biovolume record [$\log_{10}(\text{mm}^3 \text{m}^{-2} + 1)$], z-scored. Shaded bands denote the pre- and post-shift periods; dashed vertical lines mark confirmed regime shifts; dotted vertical lines mark documented changes in sampling method (net or taxonomist).

Methods

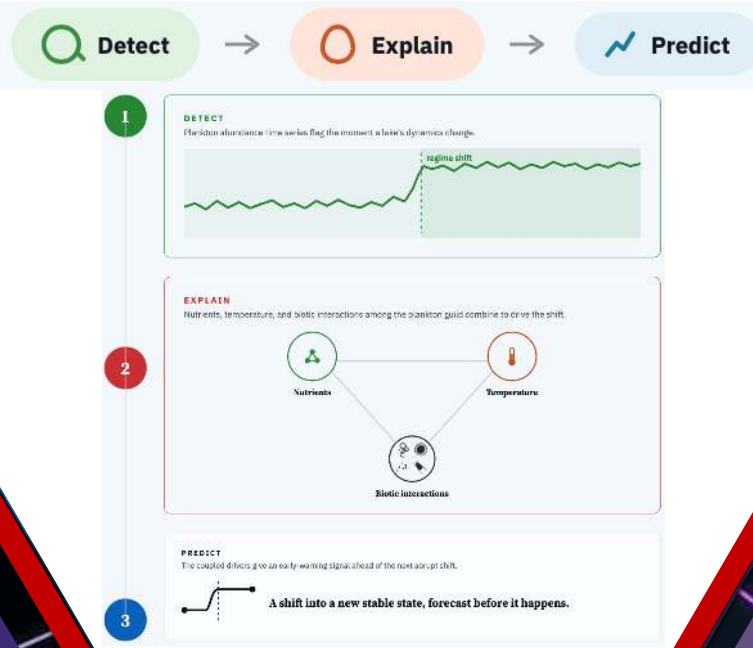


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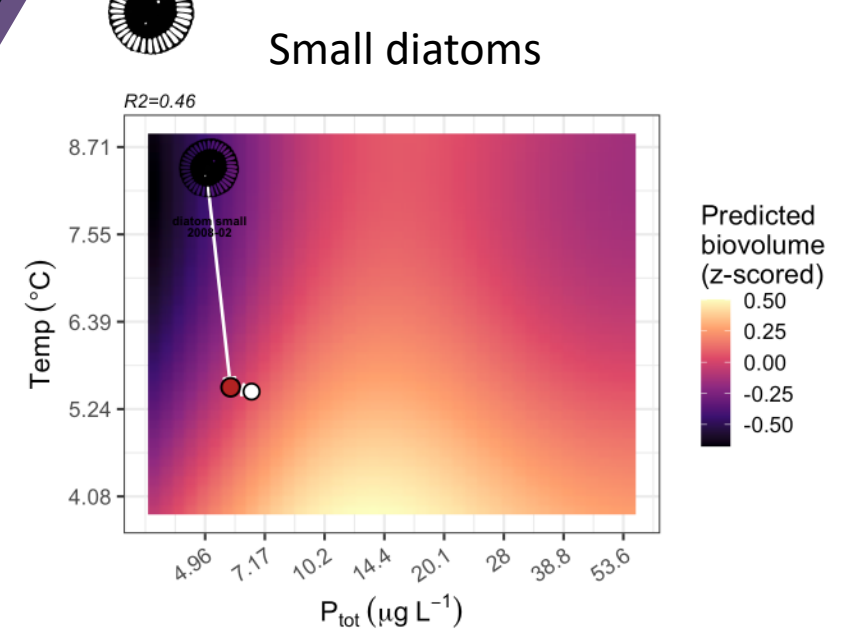
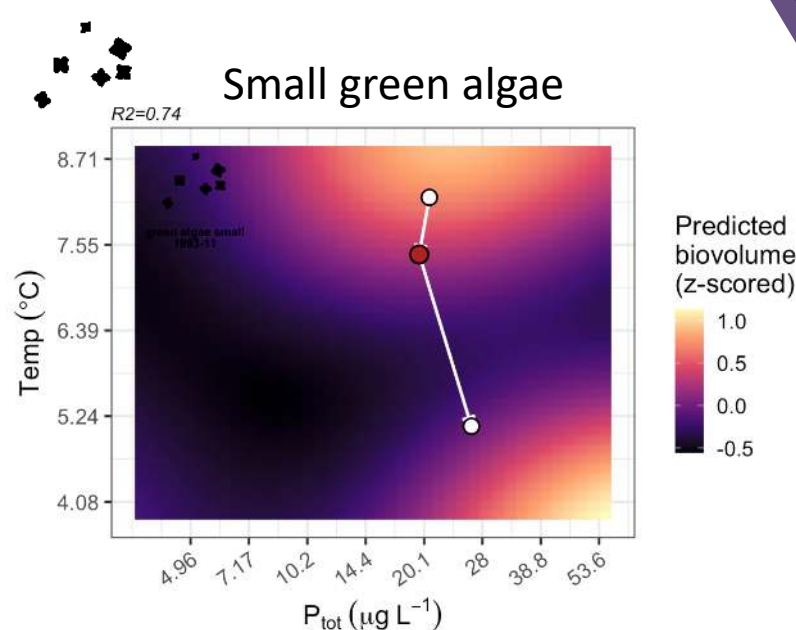


Take home

Yes, we can !



Results



Next steps

- Analysis of Lake Zurich, Lake Geneva, etc...
- Forecast with Alplakes
- Add fish dynamics

