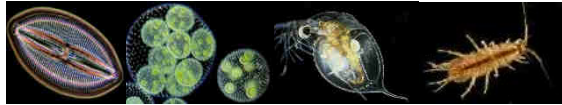




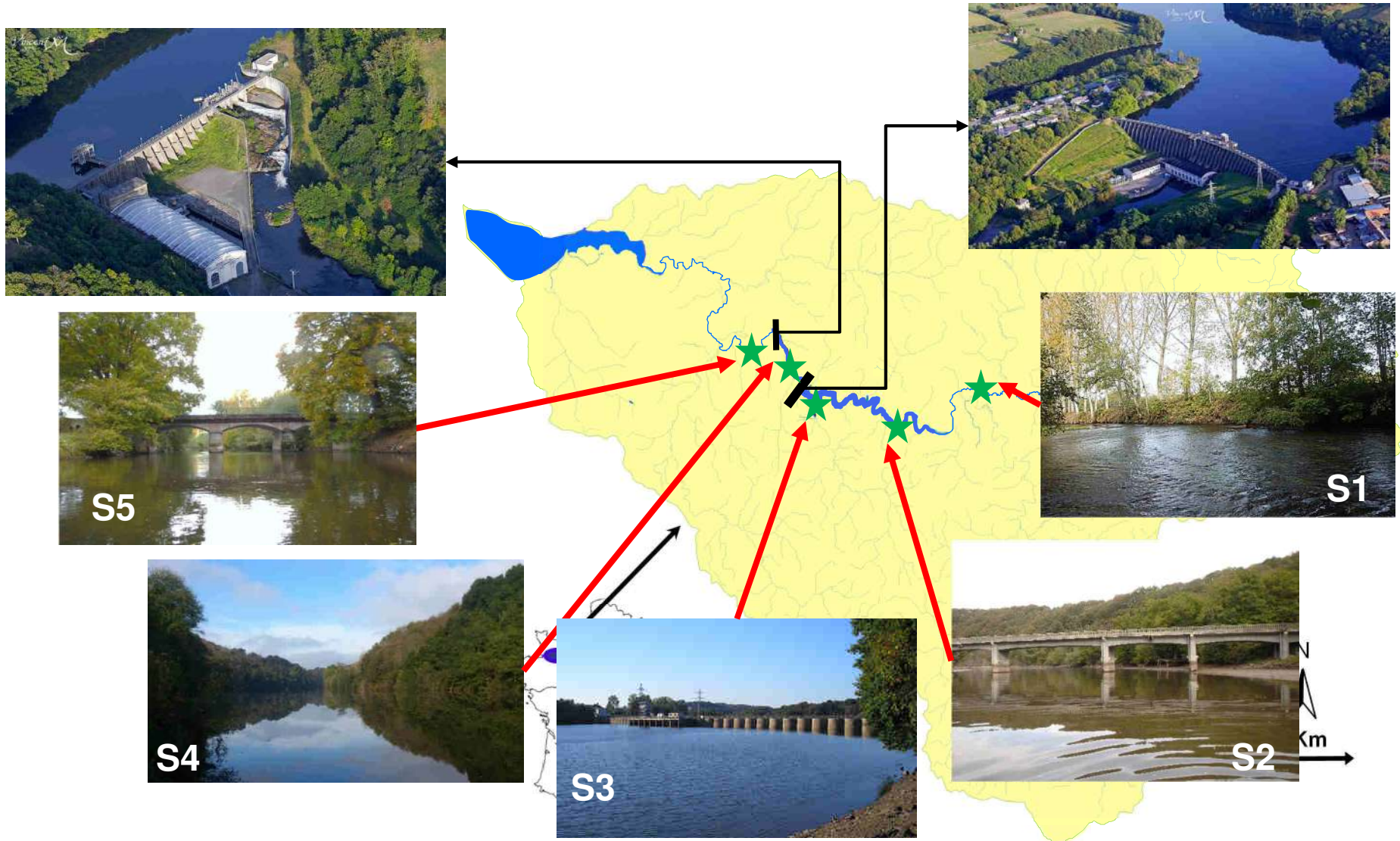
Impacts of dams on the biodiversity of the Sélune River: a summary of the monitoring before removal

**Christophe Piscart,
Caroline Gorzerino,
Hector Rodriguez Perez,
Guillaume Bouger,
Laura Pellan,
Alexandrine Pannard**

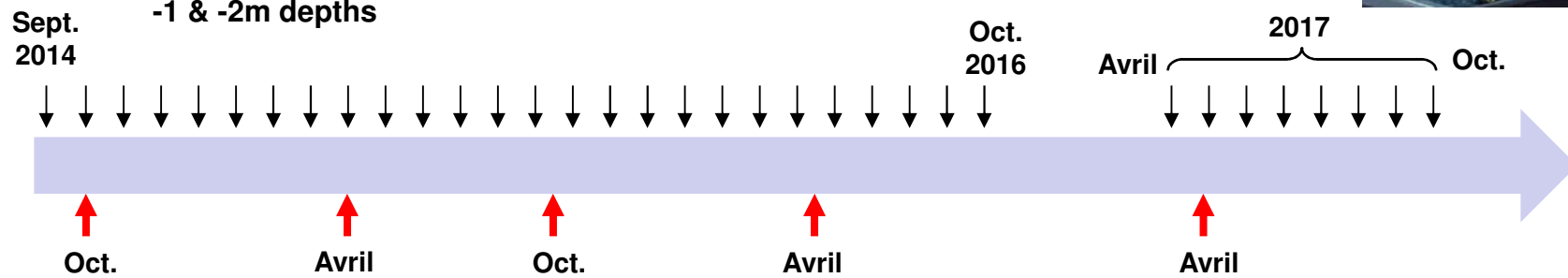
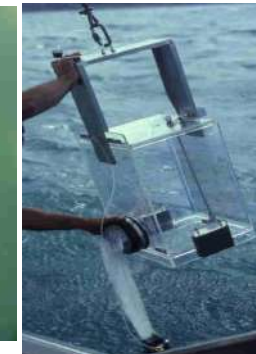
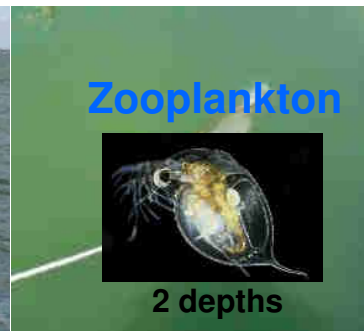
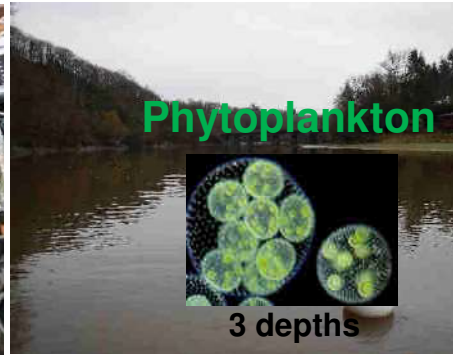




A system with 2 successive dams



Sampling protocols

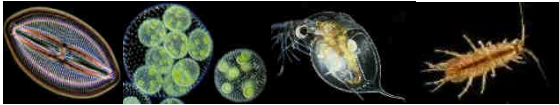


12 samples (≈ IBG-DCE)

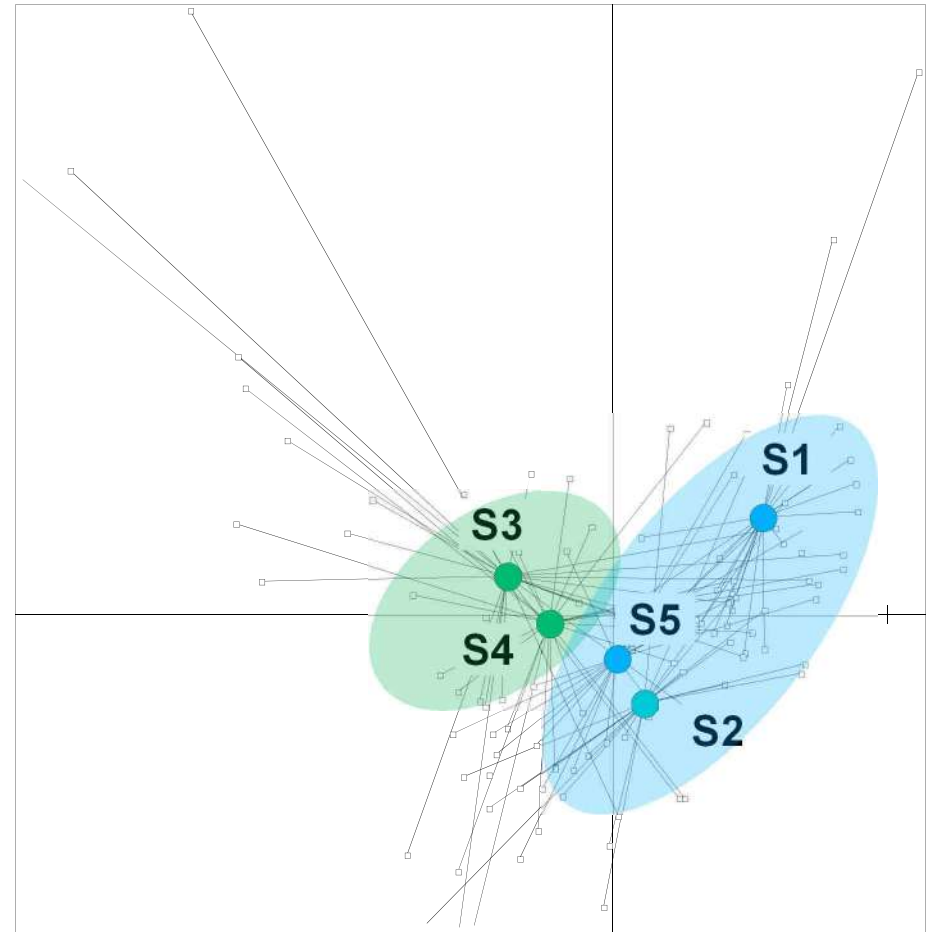
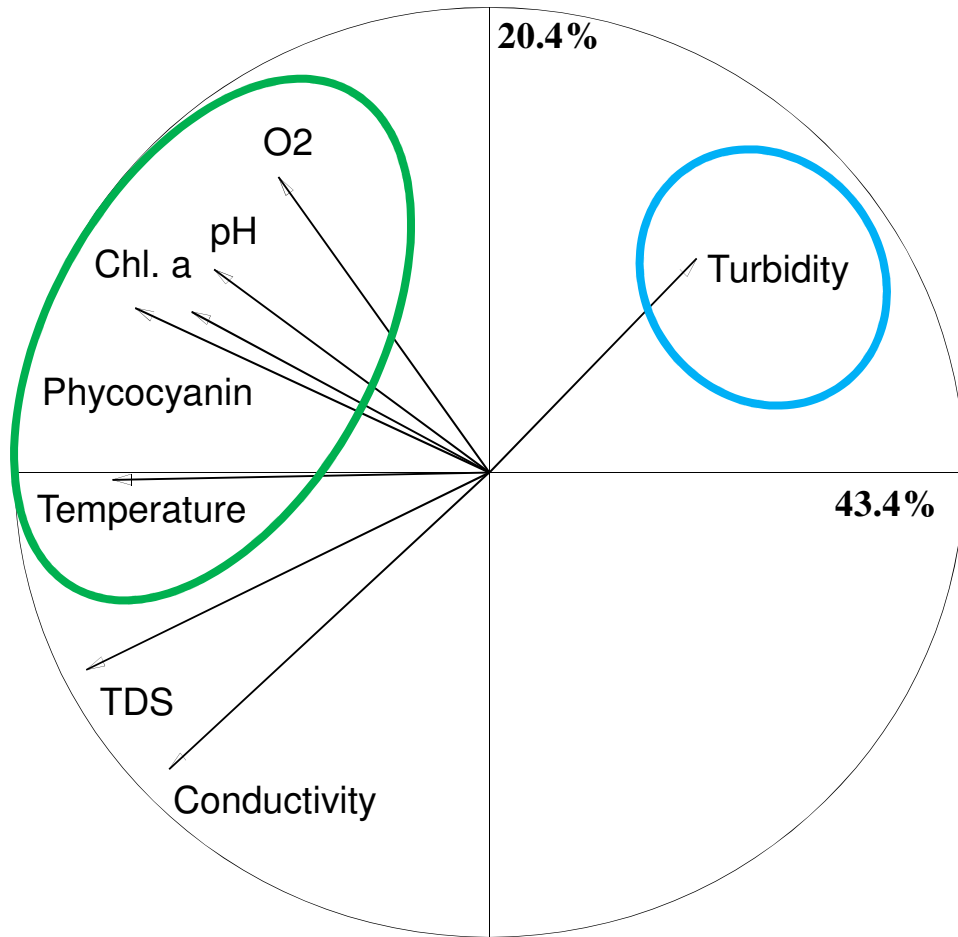
Macroinvertebrates

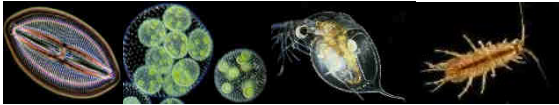


4 replicates

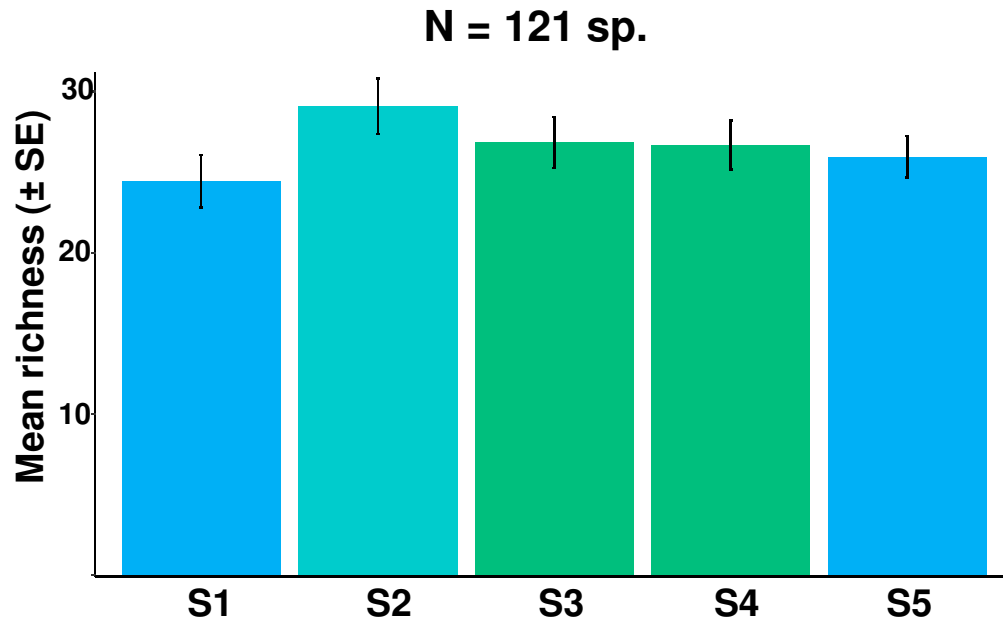


Physico-chemical parameters

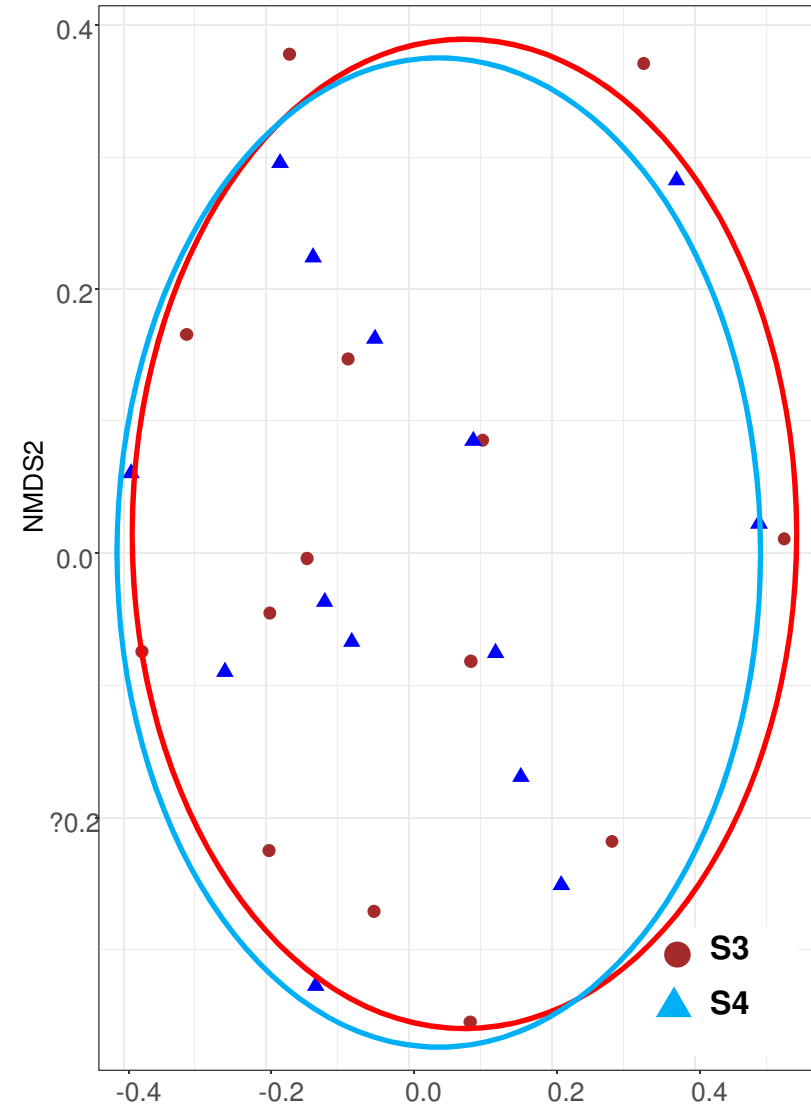




Phytoplankton

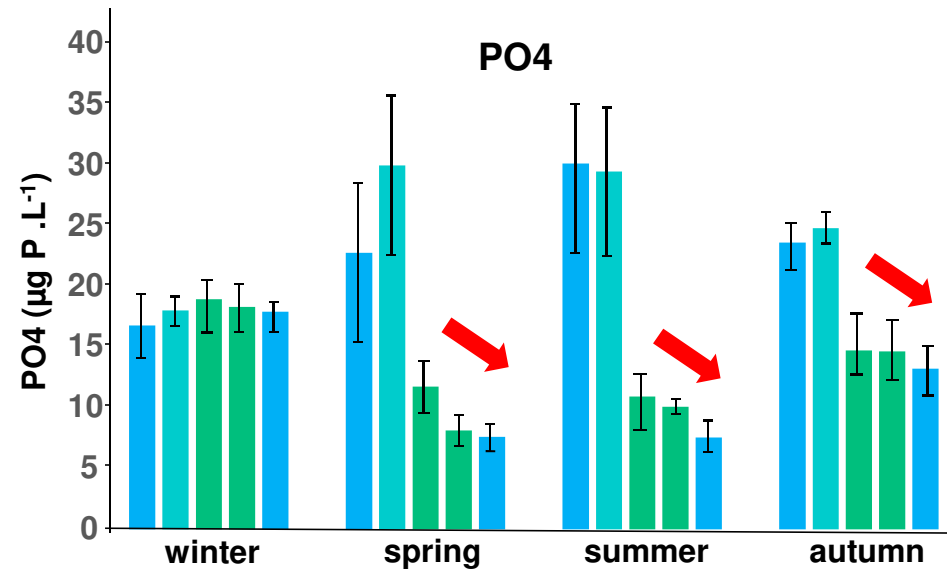
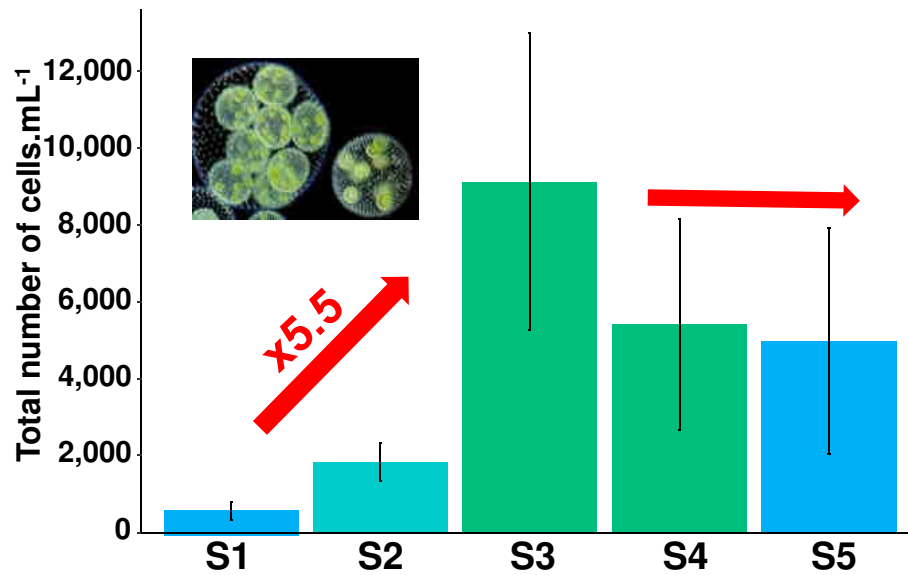
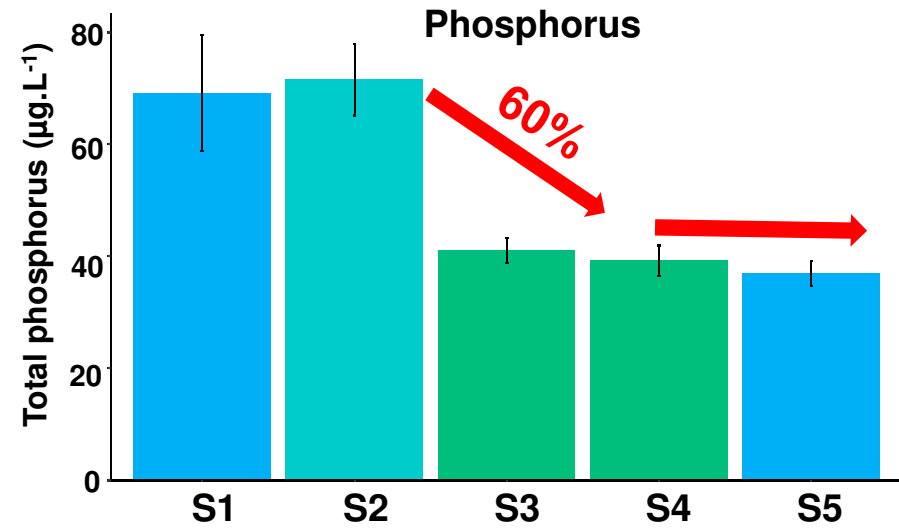
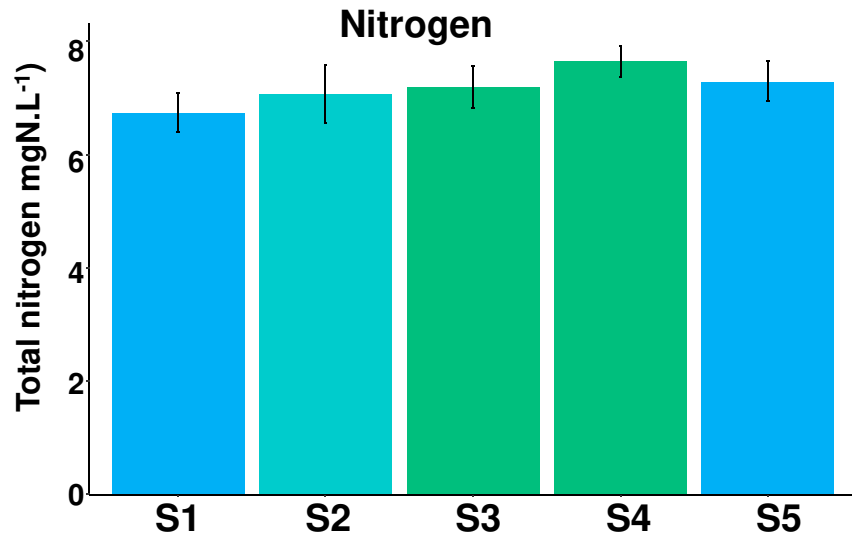


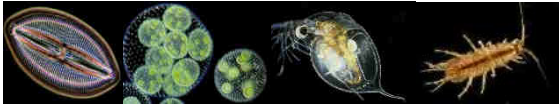
- ➔ Richness remains stable
- ➔ Species composition did not change between the two reservoirs



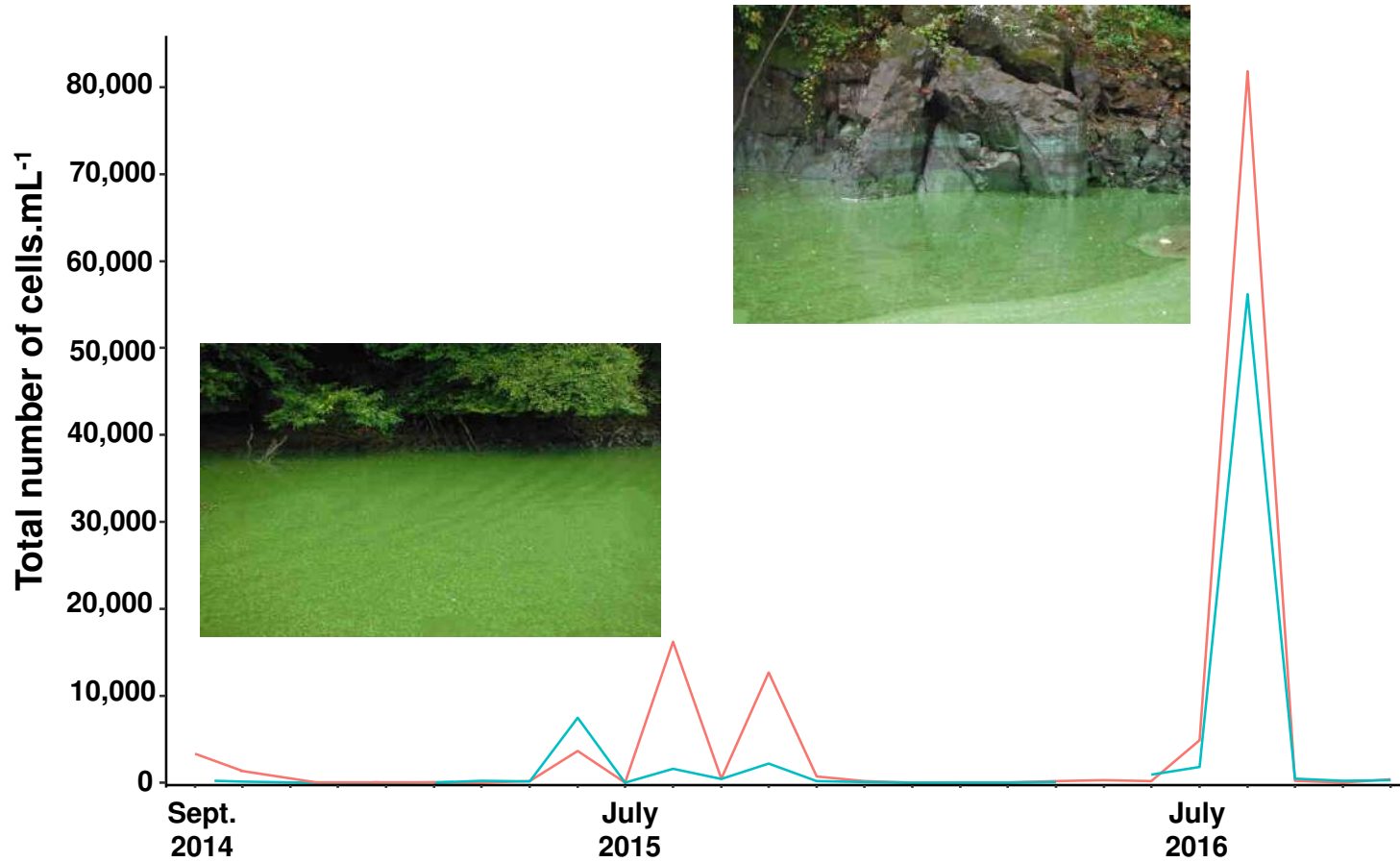


Nutrient concentrations

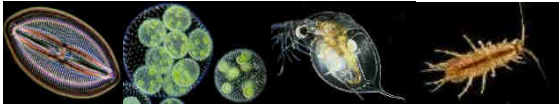




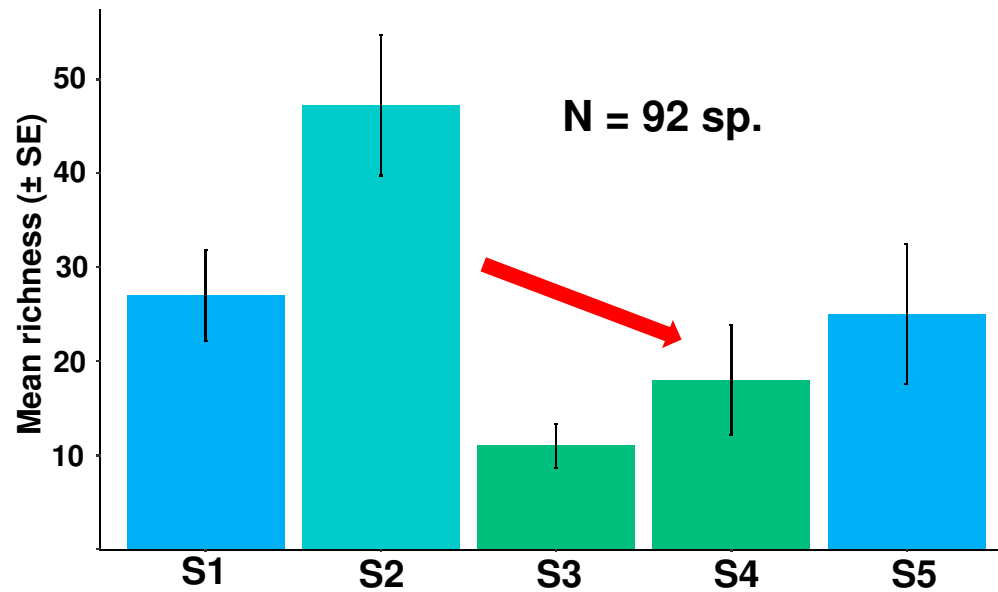
Cyanobacteria blooms



➔ Regular Cyanobacteria blooms

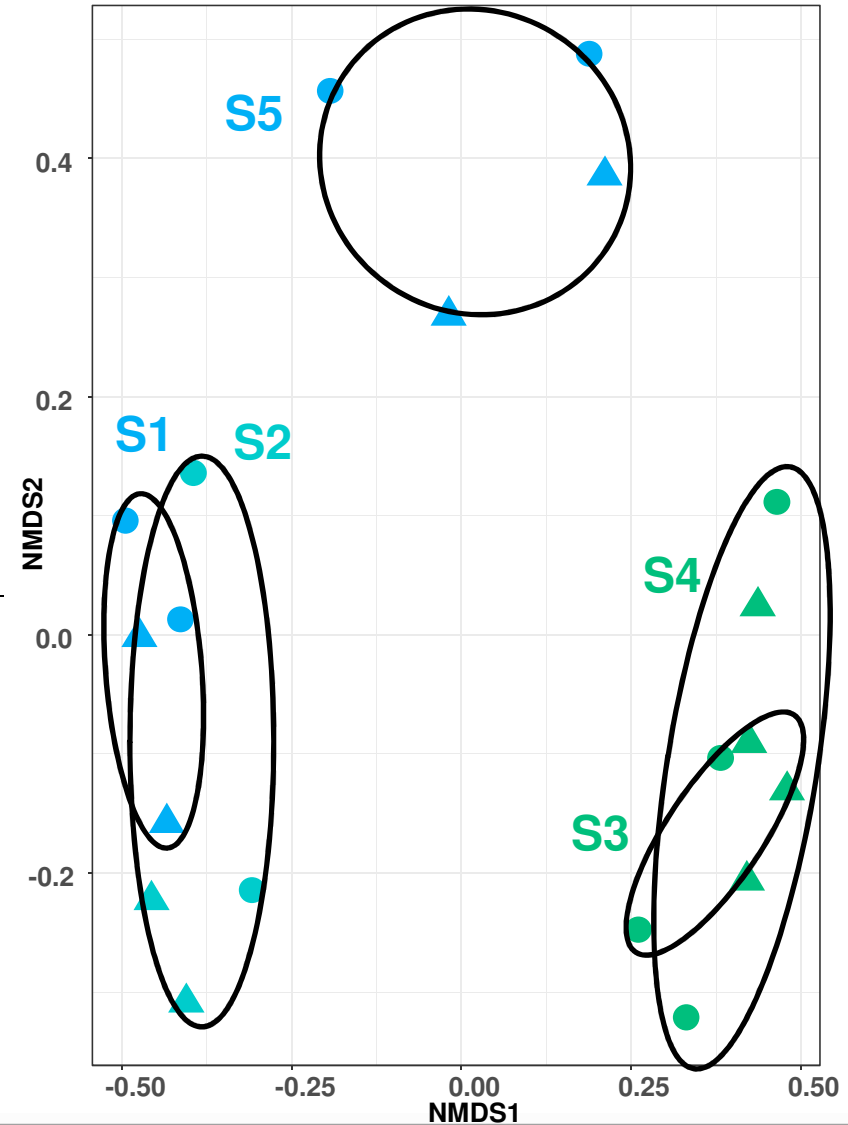


Diversity of diatoms



➔ Decrease of richness in reservoirs

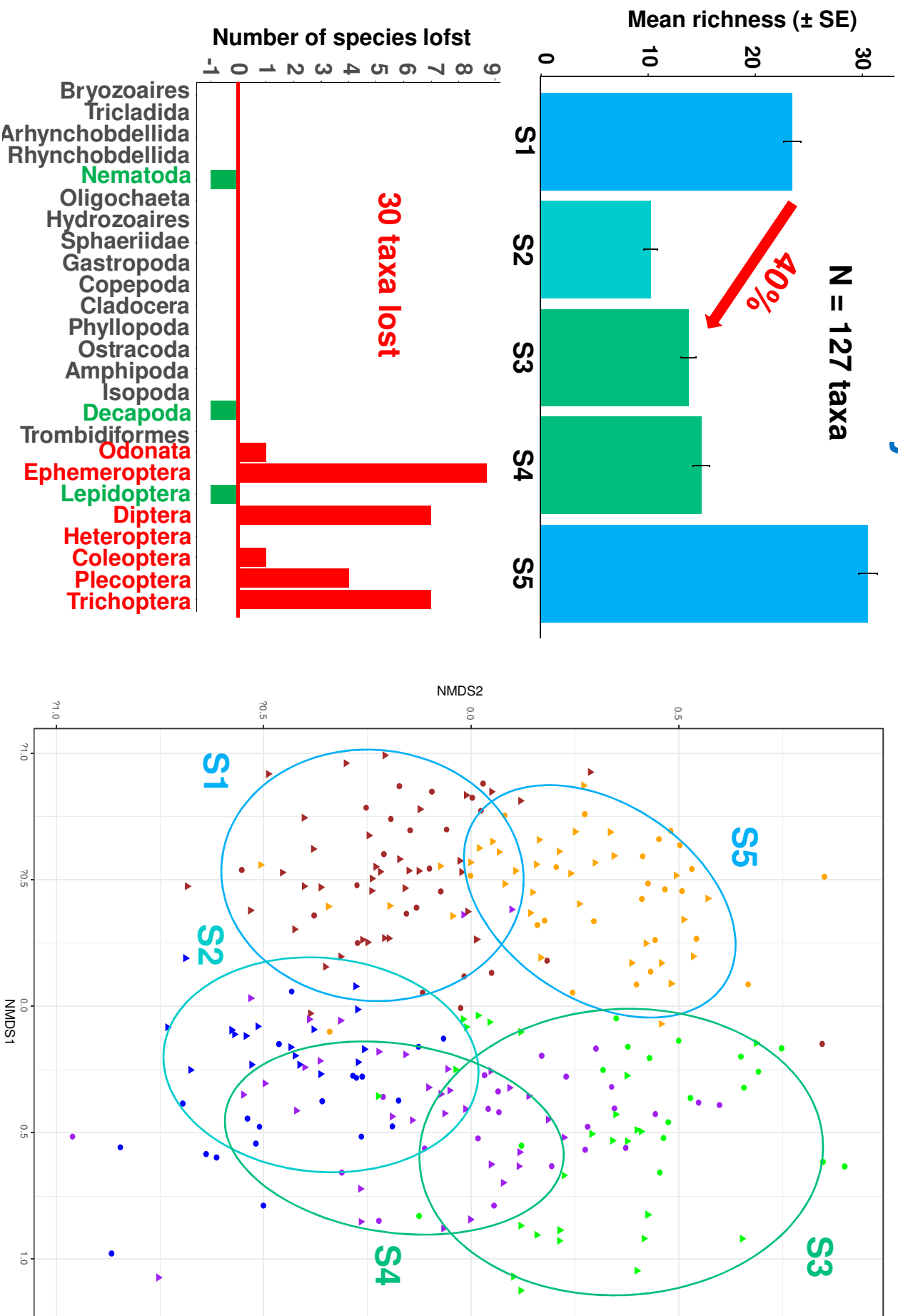
➔ Species composition is highly impacted by dams

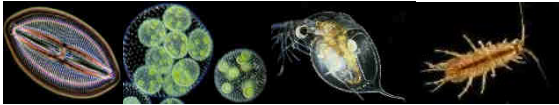




Diversity of benthic macroinvertebrates

Results





Summary

- ➔ **Except for phytoplankton, the Sélune River dams have a strong effects of freshwater biodiversity (30-40% decline)**
- ➔ **Dams also impacted physico-chemical parameters:**
 - > increase in temperature
 - > decrease in phosphorus
 - > no effect on nitrogen
- ➔ **The increase in summer temperature and phosphorus in reservoirs led to cyanobacteria blooms**
- ➔ **The second reservoirs is neutral and did not increased the impact of the first one**
- ➔ **The downstream site is impacted by dams (low turbidity and high amount of phytoplankton) both promoting scrapers invertebrates such as mayflies**



Thank you

