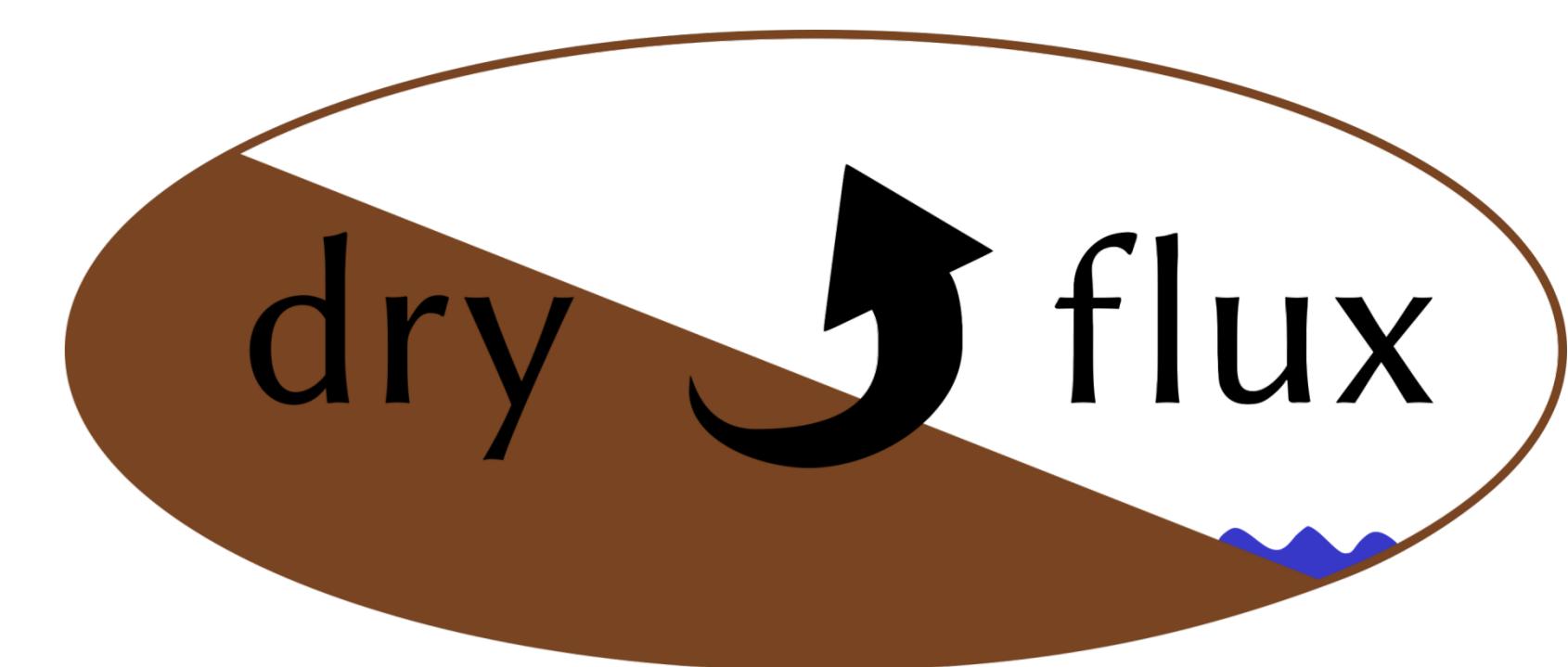


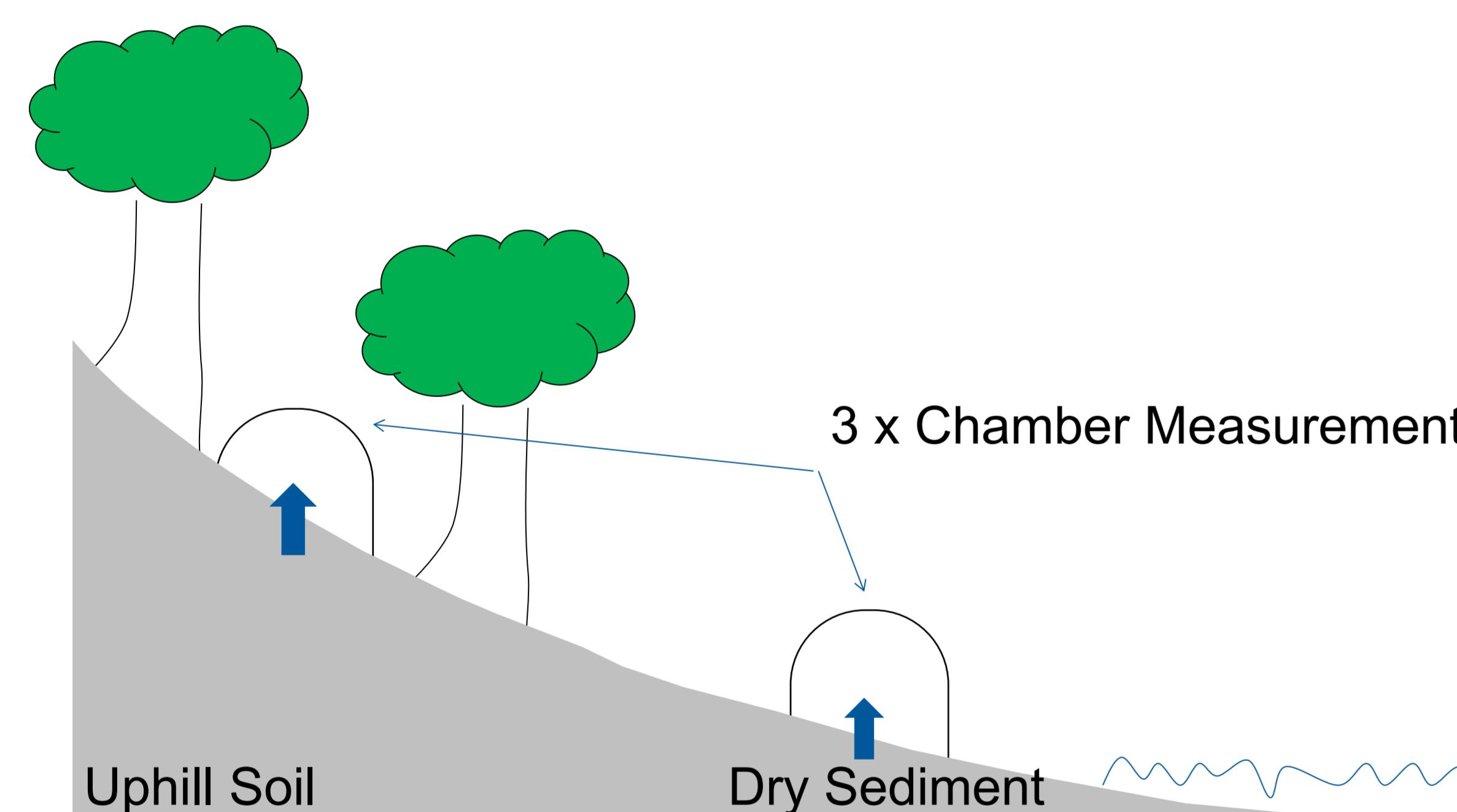
dryflux – Quantifying CO₂ emissions from dry sediments

Philipp S. Keller, Maria I. Arce, Nathan Barros, Ruben del Campo González, Nuria Catalan, Thibault Datry, Arturo Elosegi, Claudia Feijoó, Giovanna Flaim, Marieke Frassl, Rosa Gómez, Luis Gómez-Gener, Nusret Karakaya, Matthias Koschorreck, Sarian Kosten, Alo Laas, Clara Mendoza-Lera, Ulrike Obertegger, Biel Obrador, Ada Pastor Oliveras, Gabriela Onandia, Florian Reverey, Tenna Riis, Eva-Ingrid Rööm, Maria Mar Sánchez-Montoya, Daniel von Schiller, Qi Zhang and Rafael Marcé

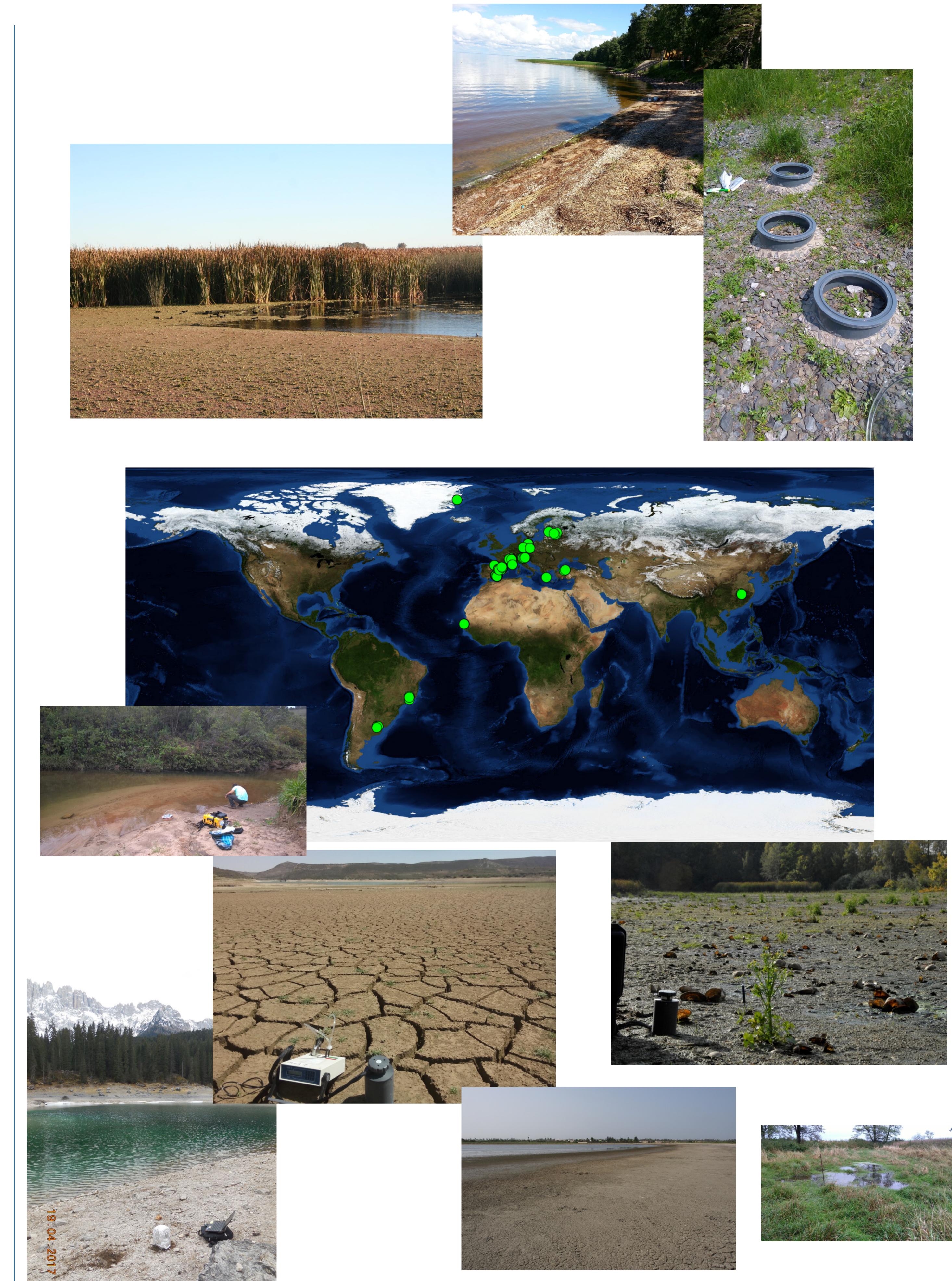


Objectives & study design

- Quantify CO₂ fluxes from dry sediments at four different kinds of inland freshwater ecosystems spread through four different climate zones worldwide
- Compare these fluxes to those from adjacent uphill soils and inundated systems
- Identify the driving forces
- 117 sites – 17 teams – 4 climate zones
- 2 habitats per site – 3 plots per habitat

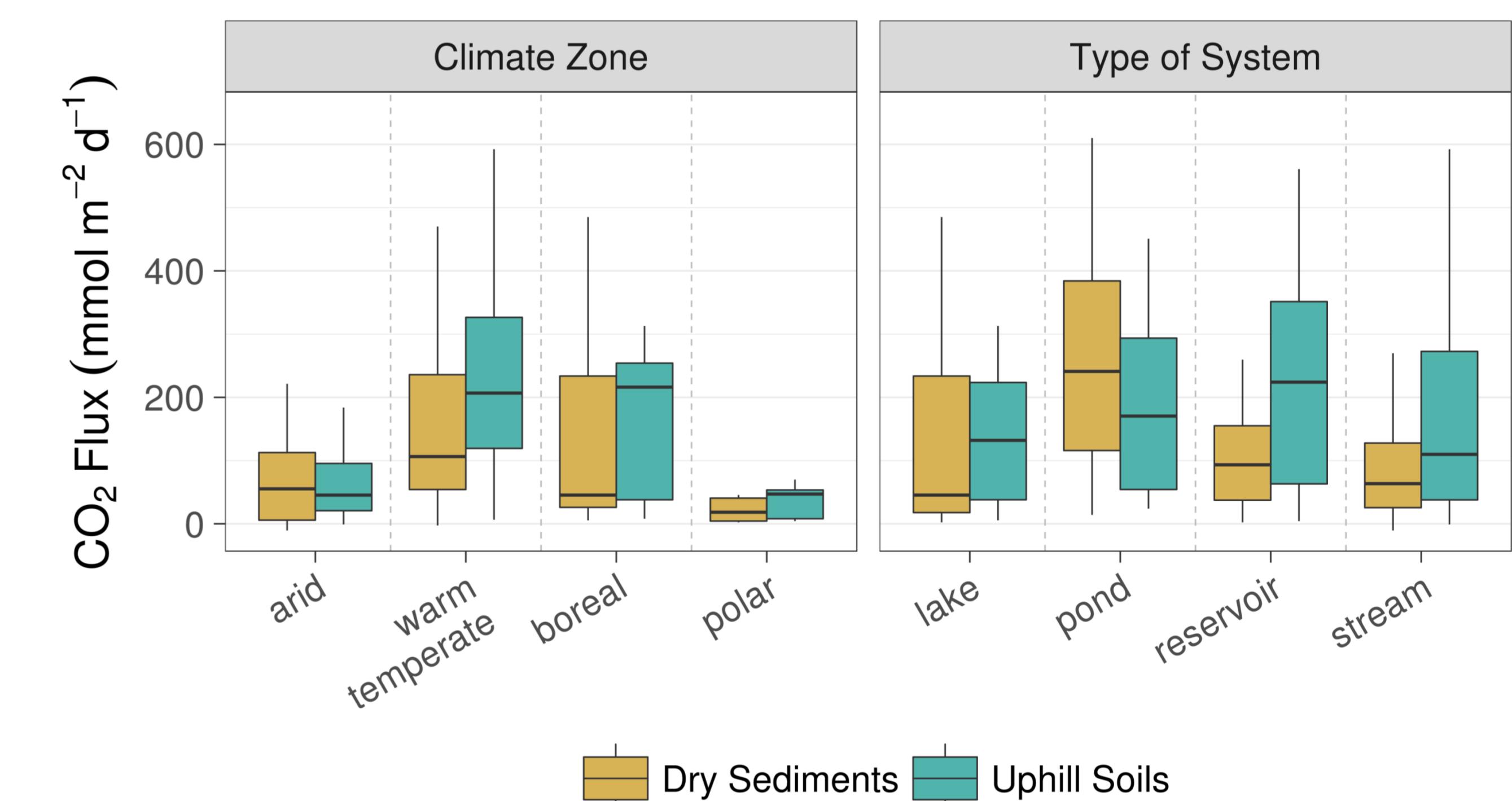


- On site: CO₂ flux, sediment & air temperature, sediment texture
- In the lab: pH, conductivity, water content, organic matter (LOI)



Results

System Type	CO ₂ Flux (mmol m ⁻² d ⁻¹)	Reference
Dry Sediments	145 ± 270	This Study
Uphill Soils	220 ± 310	This Study
Lakes	5	Raymond et al., (2013)
Ponds	10	Holgerson et al., (2016)
Reservoirs	21	Deemer et al., (2016)
Streams	181	Raymond et al., (2013)



Conclusion

- CO₂ emissions from dry sediments were higher than those from inundated systems
- CO₂ emissions from dry sediments were similar to those from uphill soils
- Neither a regional phenomenon nor a specific one for individual ecosystems

Contact

Philipp Keller
philipp.keller@ufz.de
Department of Lake Research



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