



PONDERFUL: Pond Ecosystems for Resilient FUture Landscapes in changing climate

Presented By Alex Lopez

Speed presentations – ARC Platform Meeting – 22nd May –
Santander, Spain

Objectives

- **PONDERFUL:**
 - Understanding **interactions** between **pond** biodiversity, ecosystem services and climate change.
 - Provide data to make more, and better, use of ponds and pondscares as **NbS**
- **Amphibian conservation:**
 - Assessing the contribution of multiple pond characteristics to **amphibian species richness** across Europe

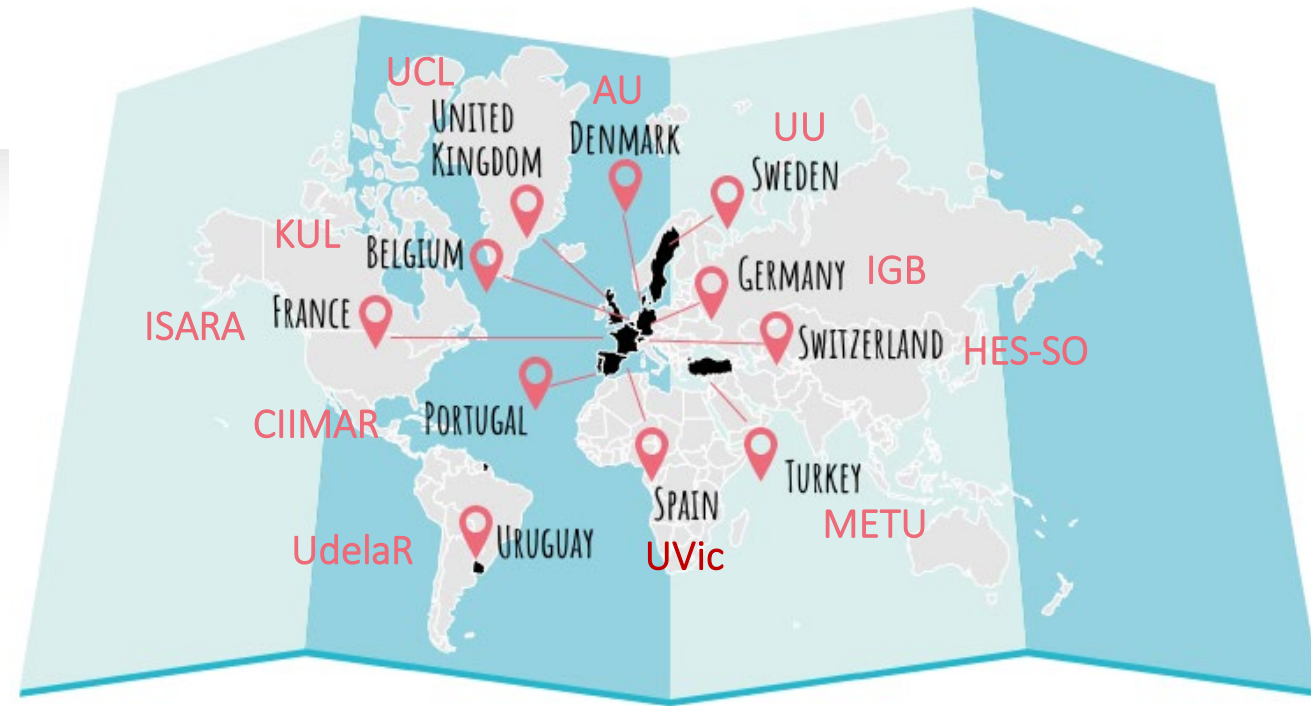


Fig.1: Ponderful participating members

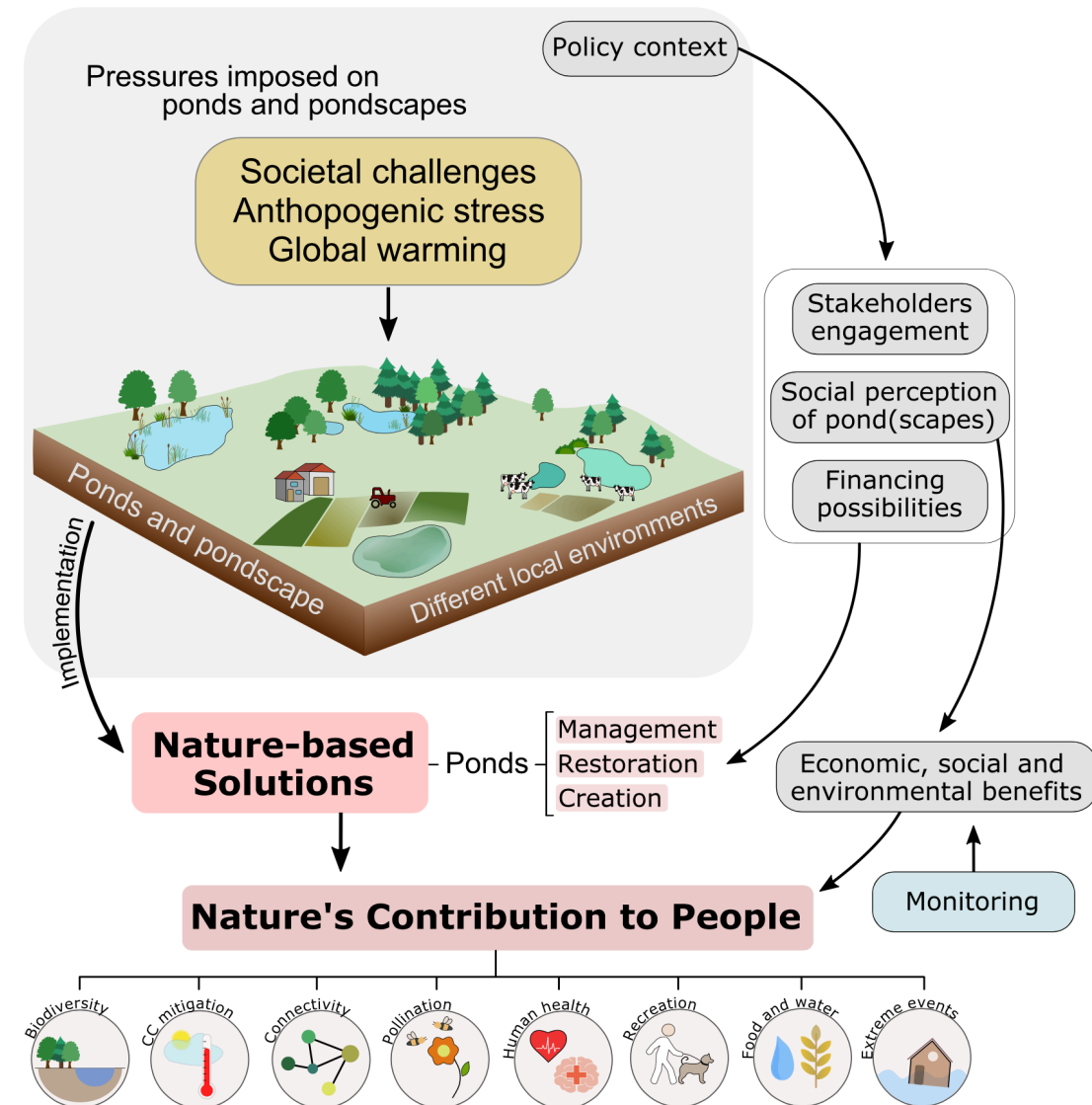
III. ARC and Land Management

Ponderful

1. Ponds are important but highly threatened
2. Adapt *pondscapes* to multiple climate, land use, and policy contexts.
3. Using ponds as Nature based Solutions (**NbS**) to benefit both biodiversity and people

Highlights / Issues / Lessons Learnt

- Need to co-develop international pond management scenarios
- Provide management tools to local practitioners and decision makers to implement ponds as NbS



III. ARC and Land Management

Amphibian conservation

1. Agriculture is one of the main amphibian threats
1. Lack of understanding about pond characteristics contribution to amphibian biodiversity.

Highlights / Issues / Lessons Learnt

- Local pond characteristics are key for pond amphibians
- Eutrophication is specially threatening. Management should focus on reducing the influx of nutrient load
- Intermediate-sized ponds present the highest amphibian richness
- Maintaining pond vegetation also promotes amphibian richness
- eDNA is a useful tool for amphibian monitoring

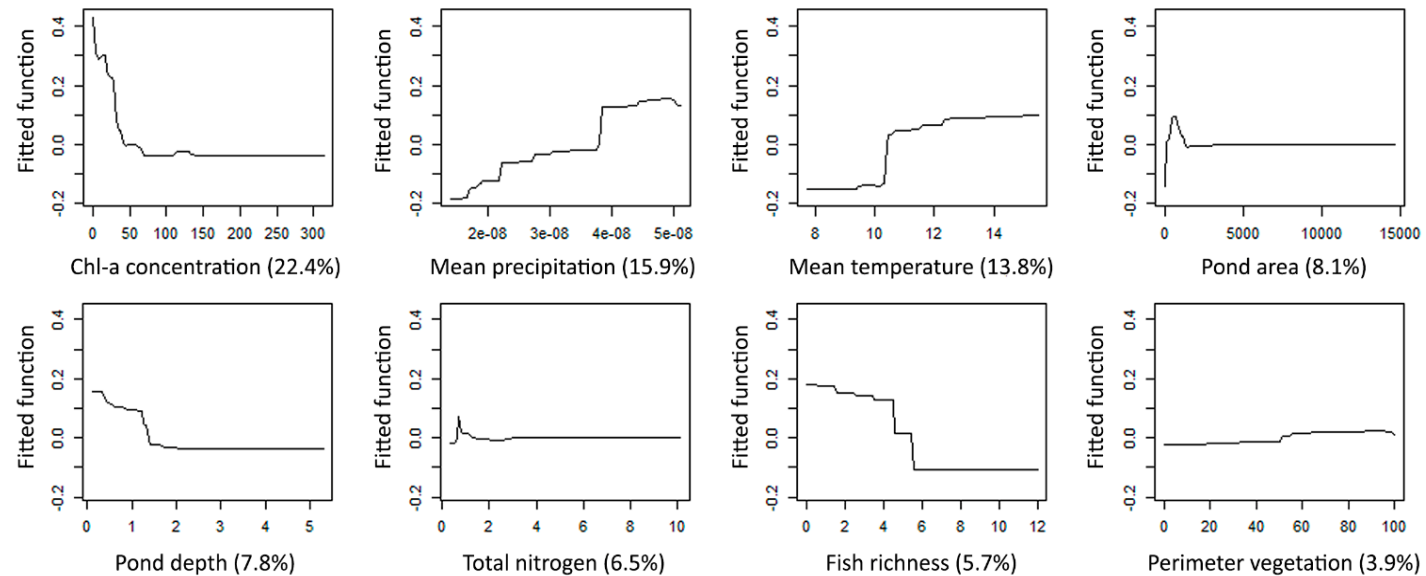


Fig. 3: Relative influence of pond characteristics in the BRT model of amphibian species richness in the 201 study ponds

López-de Sancha, A., Benejam, L., Boix, D., Briggs, L., Cuenca-Cambronero, M., Davidson, T.A., De Meester, L., Fahy, J.C., Lemmens, P., Martin, B., Mehner, T., Oertli, B., Rasmussen, M., Greaves, H.M.¹, Sayer, C.D., Beklioğlu, M., Brys, R. & Brucet, S. (2024). **Drivers of amphibian species richness in European ponds.** Submitted to *Ecography*. Under review.

Key Messages to Share

Top tip(s) for amphibian and reptile conservation

- Ponds are **NbS** with huge potential for global change mitigation
- Management of **local pond characteristics** is key for **amphibian conservation** at the European scale
- Reducing nutrient load and maintaining ponds intermediate-sized, fishless, and with vegetation, are key **management** actions for amphibian **conservation**
- Follow also **Biodiversa+ TRANSPONDER**: develop standardized protocols to monitor amphibians (2021-2026)



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