

## **PST02 - Hydrology of coastal ponds and associated zooplankton and macrophyte communities**

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The hydrological regime of freshwater systems plays a crucial role in shaping the dynamics of the different biological communities that lie in them. In the case of temporary ponds, which shift from aquatic to terrestrial phases during the course of a year, species are often highly specialized to the temporal balance between wet and dry conditions, and some require these transitions to complete their life cycle.

In this work, we explore the ecohydrological processes at play, across a suite of temporary ponds located in the coastal dunes of County Donegal, northwest Ireland. The research explores the controls on Cladocera species and aquatic vegetation relative to pond water level regime and water chemistry. The physical context is captured as a series of geomorphological, topographic and hydrological metrics that are used to form the basis of the physical typology of ponds. This classification is then examined in terms of the variation in the biological groups represented across the coastal dune pond landscape.