

**P2.29****Un-muddying the waters: assessing intertidal mudflats conditions in Irish Sea marine protected areas to inform management strategies.**

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**Abstract**

Intertidal mudflats and saltmarshes are highly productive coastal habitats, serving as a transition zone between terrestrial and marine ecosystems and providing a wealth of ecosystem services, including providing nursery and feeding grounds for many species of conservation and commercial importance, such as plaice, cod, and sea bass. These habitats are important for overwintering and wading birds, which depend on them for food, nesting, and migration. Their importance was formally recognised in 1971 following the Ramsar Convention on Wetlands of International Importance, yet their conservation status remains largely uncertain, particularly for mudflats, as they are difficult to survey, and a complete understanding of their complex biophysical processes has yet to be established. While intertidal mudflats and saltmarshes are found all around the UK coastline, there are few routine field surveys of intertidal mudflats, making effective conservation of these habitats in the face of rising anthropogenic and climate pressures challenging. Marine protected areas (MPAs) across the UK list *mudflats and sandflats not covered by seawater at low tide* as a designation feature separate from saltmarshes, but they are often managed together – where management exists. A lack of resources has resulted in a number of paper parks around the UK, where MPAs are designated but not adequately managed. This study will use remote sensing through satellite imagery (i.e., Landsat and Sentinel-2) and population data of key species (such as shorebirds) to explore the changes in mudflat – and, to an extent, saltmarsh – conditions on a spatiotemporal scale in two Irish Sea MPAs. It will also assess strategies for management in achieving or maintaining favourable conditions for these habitats.

**Keywords**

marine protected area, mudflat, intertidal, remote sensing