Location: Tyrella Beach, Murlough Bay, NI
Lead Organisation: The Mourne Gullion Strangford AONB and Geopark team, part of Newry Mourne and Down District Council
Collaborating Organisations: Lecale Conservation Association, True Harvest Seeds, Local Volunteers,
Funders: NIEA Environment Fund, DFI/National Lottery 'Living Places and Spaces' Fund, in-house council funding
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Contact: Anna Murtagh (anna.murtagh@nmandd.org), Gavin Grant-Mulligan (gavin.grant@nmandd.org)

Tyrella Beach: Dune Planting

KEYWORDS: Restoration, Adaptation, Conservation, Dunes, Habitat, Coast, Ecosystems

This case study focuses on restoration of eroded dunes at Tyrella Beach, improving ecosystem conservation and resilience to climate change impacts

Introduction

- Tyrella Beach is designated part of the **Tyrella and Minerstown ASSI (Area of Special Scientific Interest)** and the Strangford and Lecale AONB (Area of Outstanding Natural Beauty).
- In **Phase 1 (2023-2024)**, the focus was to minimise erosion along the front dunes through fencing, posts and, signage for limiting visitor access. Followed by planting of local native dune grasses.
- In **Phase 2 (2025)** the old visitor centre was demolished and the dune restoration continued to fill the gap left in the foredunes.

Aims

- **Restore dunes** and reduce coastal erosion.
- **Reinforce natural coastal protection** by implementing nature-based solutions based on dune vegetation and fencing.
- **Protect coastal ecosystem** and relative species.
- Support long-term **environmental recovery.**
- **Engage local communities** in environmental restoration.

Progress So Far

- By the end of Phase 2, 1,530 pots were used and 4,284 plugs were planted.
- ‘Blown-out’ areas now have 8ft high dunes, and the previous site of the visitors building is now filling naturally with sand and multiple pioneer plants.
- Further works planned in collaboration with Lecale Conservation Association and True Harvest Seeds, among others.
- Newry, Mourne and Down District Council AONB and Geopark Team have also commissioned a lizard survey, biodiversity surveys, and conservation grazing.

The Challenge Ahead

Several challenges remain for the continued success of this project, including:

- **Increasing Coastal Pressures**: Coastal erosion, storms, sea-level rise, and intensive coastal visits and activities can degrade the ecosystem, with severe negative impacts for both the flora and the fauna of the area.
- **Tourism/Conservation Balance:** Restricting public beach access for the needs of the environment and sensitive habitats can be difficult. However, engaging local communities through education sessions and key signage explaining conservation actions can help the public better understand the measures taken.

Why This Matters

The restoration of the dunes is vital in supporting the local ecosystem and enhance the climate adaptation of the coastal area. Ropes and fences preventing visitors from wandering through the dunes has noticeably decreased dune front fragmentation, while educational signs and community engagement has raised awareness on the importance of nature-based solutions for the long term conservation of the coastal area.

These measures resulted in **an observed increase of numbers and diversity of native dune flowers and plants**, and associated invertebrates by ecologists, staff and volunteers as part of monitoring the effects of the conservation grazing regime. These observations underline the effective impact that nature-based solutions have on the local flora and fauna.