

Sicily Med Island Pilot Fact Sheet

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Ecosystem type

Marine habitat

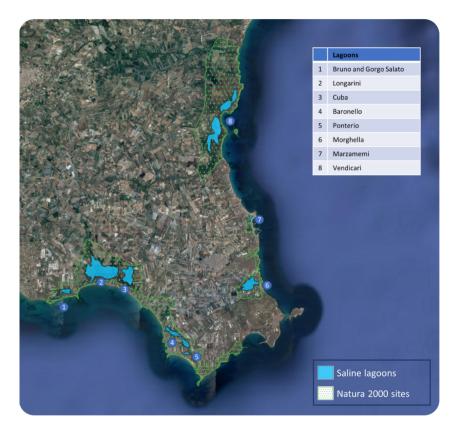
Key habitats

Saline lagoons, sand beach driftlines, shifting coastal dunes, Coastal saltmarshes and saline reedbeds, perennial calcareous grassland and basic steppes

Key species

Ruppietea maritimae, Juncetalia maritimi, Lythrum tribracteatum, Limonium pachynensis, Sarcorcornitea fruticose, Phragmites australis, Salicornia perennans, Nerio-Tamaricetea, Althenia filiformis, Aeluropus lagopoides, Triglochin bulbosum, Cressa cretica, Marmaronetta angustirostris,

Country: Italy Area (ha/km²): 3559 ha/35.6 km² Geographic coordinates of the site centroid point: 15.05326,36.75450



Athyoca nyroca, Porphyrio porphyrio, Phoenicotterus roseus, Botaurus stellaris, plus different species of waders (5 species in Annex 1 of Birds Directive), herons (7 species in Annex 1 of Birds Directive), sternidae and Laridae (6 species in Annex 1 of Birds Directive)

Organisation responsible for the pilot

University of Catania



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Pressures, threats and issues

- In the last decades, the area suffered a growing anthropic pressure due to the increase of intensive agriculture and touristic activities. Excessive water withdrawal for irrigation exerts pressure on the lagoons and touristic facilities impacted the existing dune strip.
- The reduction of hydraulic connectivity between lagoons and the sea induced the fragmentation of habitats, while pollution determined the establishment of invasive species. Moreover, illegal hunting threatens migratory bird species that nest in the wetlands close to the lagoons.
- Absence of continuous and effective monitoring and historical data on wetland ecological status and consequent lack of knowledge on relationships between water/sediment/ecological fluxes.
- Scarce data-driven knowledge of the stakeholders on the value of coastal restoration and limited expertise on NBS measures.



Marmaronetta Angustirostris



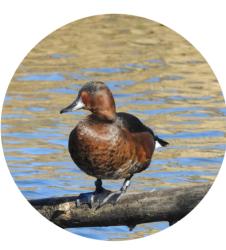
Botaurus stellaris



Plegadis falcinellus



Porphyrio porphyrio (Courtesy of Stiftung Pro Artenvielfalt – Life Marbled Duck PSSO)



Athyoca nyroca



Phoenicopterus roseus

Expected impact of the project

- Extension of wetland surface area to improve water storage and water quality, accommodate nesting, breeding and feeding for migratory bird species.
- Use of autoctone species to fight invasive species, obtain wave dissipation, reduce coastal erosion.
- Dune stabilization to reduce coastal erosion risk.
- Habitat monitoring, including water, sediments and biota .
- Hydraulics solutions to ensure regulation of water levels and improve hydraulic connectivity between sea and lagoons.

Stakeholders

Public bodies: Water District Authority, Regional Dept of Water, Energy, Waste, Agriculture, Rural Development and Fishing Department, Civil Protection, Local Municipalities.

- Site managers: Stiftung Pro Artenvielfalt, Nature Reserve "Oasi Faunistica di Vendicari".
- Local organizations: Environmental and nature conservation grass-root associations, farmers, tourist operators.

Key variables of relevance to REST-COAST

- Met-ocean forcings (precipitation, wind, wave climate, mean sea level) and lagoon and beach parameters (lagoon water levels, temperature, sediments, etc) to model scenarios of coastal flooding and erosion under climate change conditions and different combinations of NBS building blocks.
- Chemical and biochemical characteristics of the lagoon water (pH, conducibility, temperature, nitrites, nitrates, dissolved oxigen).
- Habitat mapping (e.g. Shannon index, Simpson index, floristic richness, number of individuals of target species, etc.) to measure biodiversity and to assess ESS loss/gain.





Cuba-Longarini lagoons





Baronello lagoon



Vendicari lagoon



Ponterio lagoon



Banquettes of Posidonia Oceanica on the beach



Prairies of Salicornia perennas at Morghella Lagoon



Maritime rupia at Morghella Lagoon



