



EVREST Project Report: Preparatory Fieldwork in Ria Formosa

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Report Title	Preparatory Fieldwork in Ria Formosa
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Related Task	Task 1: Data collection and GIS integration
Objective	Prospective fieldwork to define possible study areas of EVREST project
Participants	Ana Matias, A. Rita Carrasco
Other Information	Location: Culatra Island, Barreta Island, Tavira Island, Cabanas Island, Ancão/Barreta Spit

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BRIEF DESCRIPTION:

Description of fieldwork activities during day 1

During 11/07/2016, the first potential study site that was visited was Culatra Island (Fig. 1). The first and second stops were on the landward margin of the island. The tidal flats and salt marsh areas were observed and photographed (Fig. 2). Salt marsh maturation level and accessibility were evaluated. Throughout the island hike (stops 3 to 4) it was observed a significant dune development over the path visible on the google earth image (Fig. 2), so that it is nowadays not recognisable from the ground. The field visit did not reach stop 5.



Figure 1: Culatra Island, with path followed and main stops.



Figure 2: Culatra Island. Top: Tidal flats near stop 1. Bottom: Channel and salt-marsh near stop 2; and dune development near stop 3.

On 11/07/2016, the second potential study site that was visited was Barreta Island (Fig. 3). The hike followed a wood path built following the inner margin of the island, and then crossing the dune field until the oceanic beach. Dune morphology (several dune ridges) and vegetation cover were observed. At last stop, the beach/dune transition was observed, as well as the beach morphology (Fig. 4).



Figure 3: Barreta Island, with path followed and main stops.



Figure 4: Barreta Island. Back-dune and foredune.

Description of fieldwork activities during day 2

During the morning of 12/07/2016, the first visited potential study site was Tavira Island (Fig. 5). The hike followed a concrete walking path built from the tidal channel across the salt-marsh area, across the dune field until the oceanic beach (fig. 6). During fieldwork an observation was made of the degree of maturation of salt marsh, back-dune morphology and vegetation, and foredune evidences of erosion/accretion. The path has about 1.6 km length.



Figure 5: Tavira Island, with path followed and main stops.



Figure 6. Tavira Island. Top: Salt-marsh and small dune ridges/mounds. Bottom: Back-dune vegetation and foredune.

On the 12/07/2016 afternoon, Cabanas Island was visited (fig. 7). The hike was made along the beach/dune transition. The dune morphology was observed, both the naturally built on the inner parts and the dune development inside and on top of the fences (Fig. 8). The vegetation was observed as the recent development of salt-marsh on the inner barrier margin.

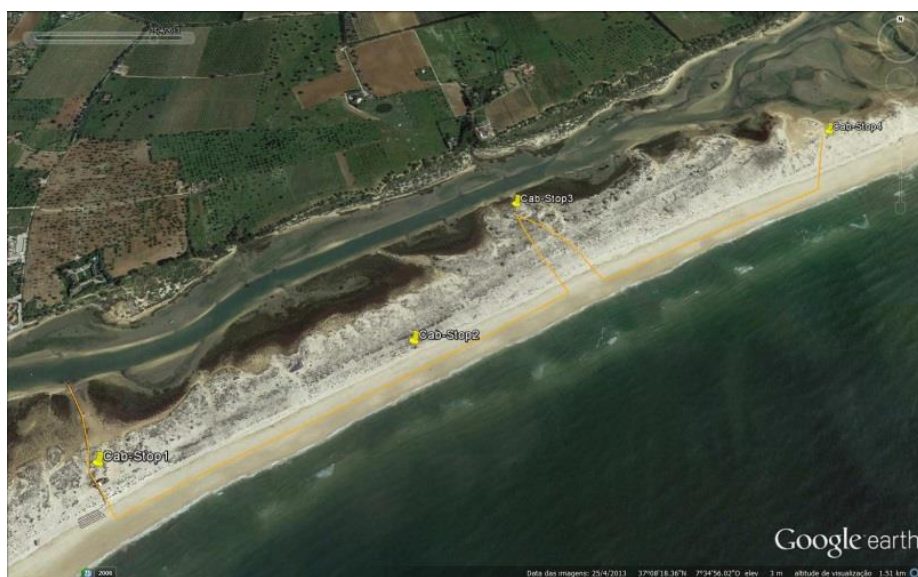


Figure 7: Cabanas Island, with path followed and main stops.



Figure 8. Cabanas Island. Top: Dune vegetation close to stop 1. Bottom: Dune vegetation close to stop 2.

On the 12/07/2016 afternoon, a visit was made to Cacela Velha to have an overview of the Cacela/Cabanas barrier system (Fig. 9), which will be probably another study site of EVREST project. The location of the artificially opened Cacela Inlet was noted and photographed.



Figure 9: Cabanas/Cacela barrier system, with Cacela Inlet to the right of the image.

Description of fieldwork activities during day 3

During 13/07/2016, a visit was made to a barrier stretch that has been part of both Ancão Peninsula and Barreta Island, as it is on the eastern end of the inlet migration path. Because recent engineering interventions were made in this area, the morphology was deeply altered (Fig. 10). Notes and photographs were made of the island present configuration.

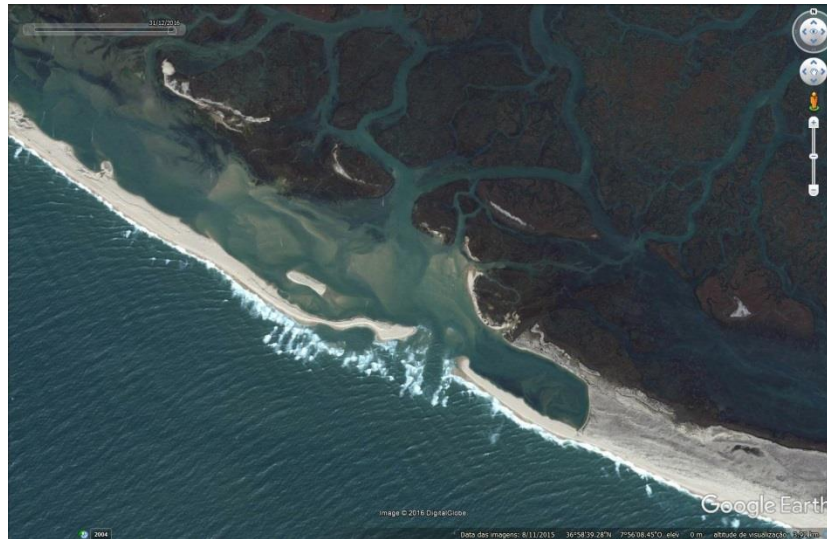


Figure 10: Ancão Inlet. This was not the configuration found at the date of fieldwork since the inlet NW margin was artificially connected to the sandy spit found adjacent to the northern salt-marsh, enclosing a bay.

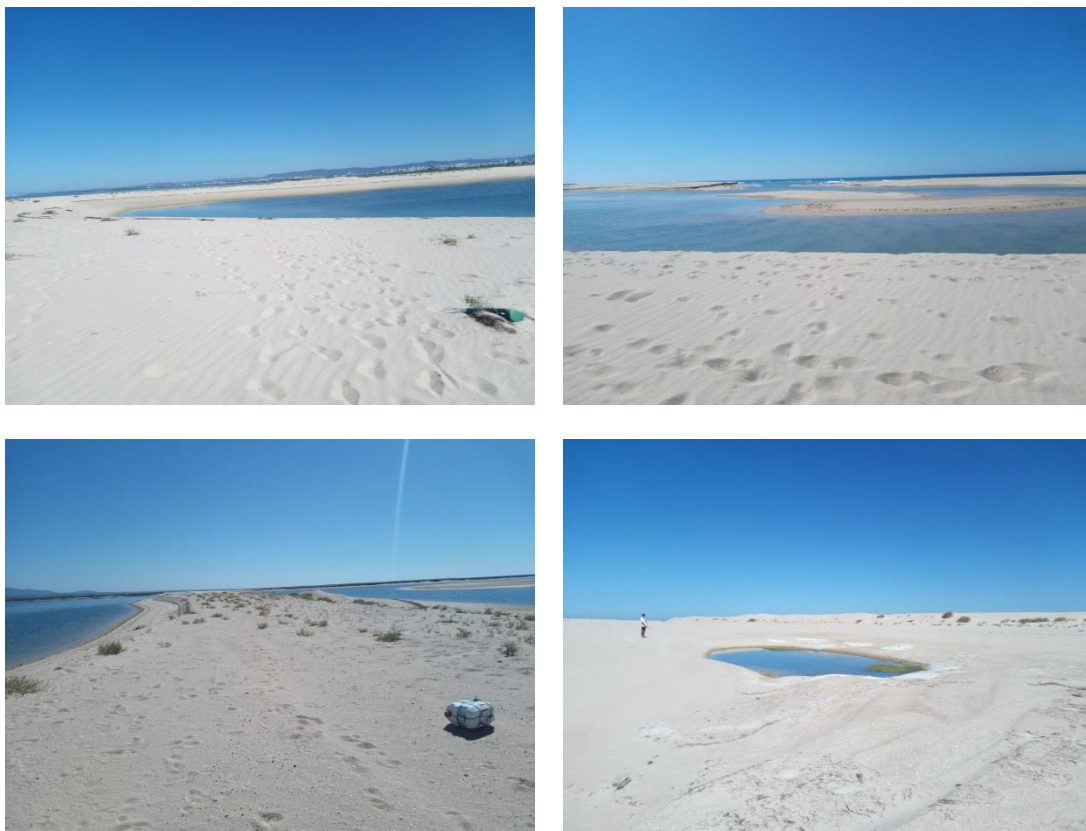


Figure 11: Barreta Island. Nourishment placed in the area of Ancão Inlet migration path. The inlet is still open (Top Right). The nourishment isolated ponds on the beach berm seawards (Bottom Right) and on the inner beach (Top Left).