

Vulnerable Marine Ecosystems found in a bathyal zone off the SE Iberian Peninsula (Western Mediterranean)

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The Spanish Intemares LIFE IP project contemplates the creation of Special Areas of Conservation within the Natura 2000 Network. During its August 2019 cruise, a series of towed sledge transects were conducted on two seamounts (“Planazo” and “Plis Plas”) and a muddy field of pockmarks, both located in areas off the SE Iberian Peninsula (Western Mediterranean), between 220 and 694m depth. The prospected area has a significant pressure from bottom trawl (directed towards *Aristeus antennatus*, *Nephrops norvegicus*, *Plesionika* spp.) and, to a smaller extent, of bottom longline fisheries (focused on *Merluccius merluccius*, *Pagellus bogaraveo*). Some of the observed bathyal habitats fall into the category of Vulnerable Marine Ecosystems (VME), according to FAO (2009, 2016), since they present at least one of the following characteristics: i) uniqueness or rarity; ii) functional significance of habitat; iii) fragility; iv) life history traits of component species that make recovery difficult; and/or v) structural complexity. Among them, “gorgonian gardens” (*Paramuricea hirsuta*, *Callogorgia verticillata*, *Bebryce mollis*, *Swiftia pallida*, *Ellisella flagellum*) and the yellow tree coral (*Dendrophyllia cornigera*) highlight rocky bottoms; while on muddy substrates, sea-pen fields (*Funiculina quadrangularis* and *Kophobelemnon stelliferum*) and “bamboo coral gardens” (*Isidella elongata*) do so. These habitats, along with fields of the crinoid *Leptometra phalangium*, are also considered Essential Habitats for target species of fishing interest. The location, mapping and characterization of these habitats are necessary to establish “no-take” zones within the future management plan for the area studied.

Keywords: vulnerable marine ecosystems, bathyal zone, underwater towed sledge, mega benthos.

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