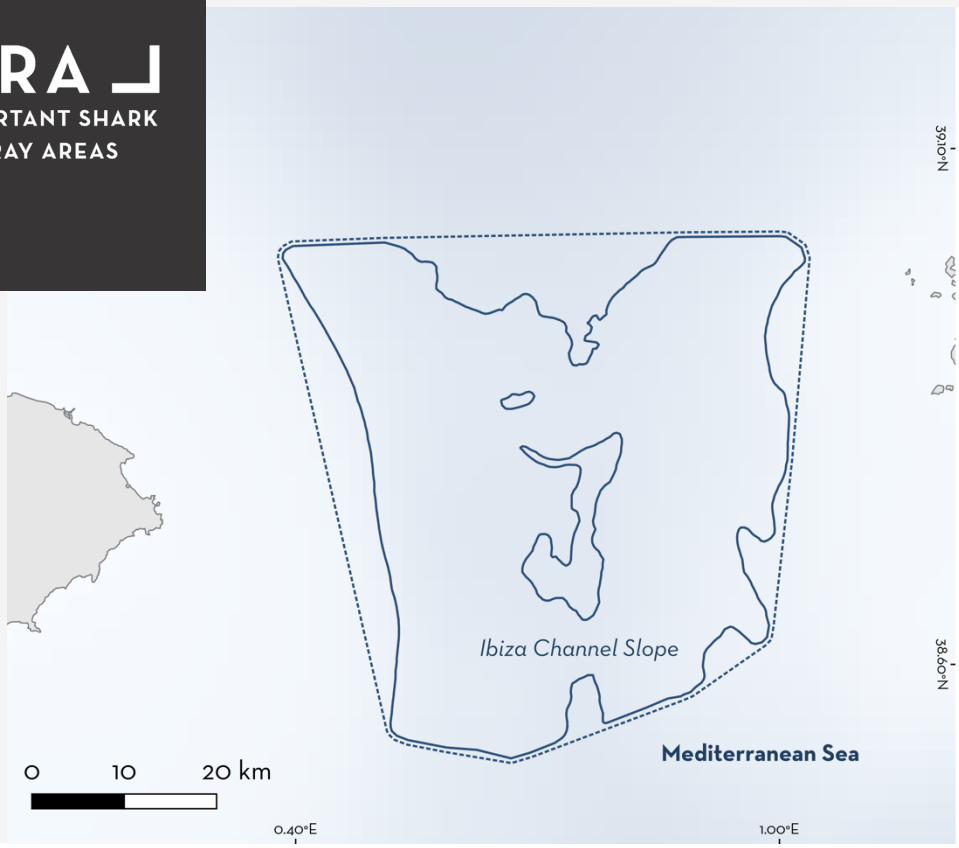
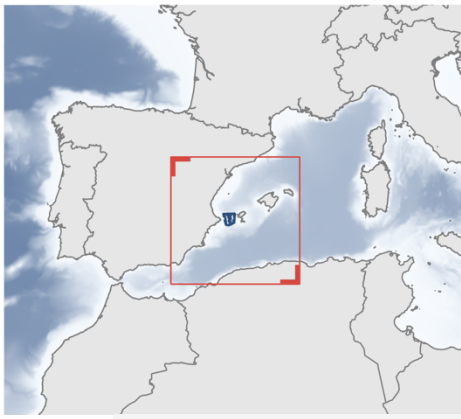
ISRA
IMPORTANT SHARK AND RAY AREAS





Blue lines indicate the area meeting the ISRA Criteria; dashed lines indicate the suggested buffer for use in the development of appropriate place-based conservation measures

IBIZA CHANNEL SLOPE ISRA

Mediterranean and Black Seas Region

SPAIN

400–850 metres

1,975 km²

SUMMARY

Ibiza Channel Slope is a deep channel connecting the Iberian Peninsula and the Balearic Islands promontory in Spain. The channel plays an important role in water exchange between the Balearic Basin and the Algerian Basin and thus promotes productivity. The dominant habitats are mud substrates with patches of rock and sand, with geological features such as the Xabia-Ibiza Seamount and pockmark fields. Within this area there are: **reproductive areas** (e.g., Bluntnose Sixgill Shark *Hexanchus griseus*).

CRITERIA

Sub-criterion C1 – Reproductive Areas

DESCRIPTION OF HABITAT

Ibiza Channel Slope is located between the Iberian Peninsula and the Balearic Islands in Spain. The area is an ~90 km wide deep (~700 m) channel that connects the Balearic Sea and Gulf of Lion with the Algerian Basin (García-Lafuente et al. 1995). It plays an important role in the dynamic water exchange between the northern basin (cooler and more saline with a mean sea surface temperature [SST] of 13.46ºC and salinity of 38.0 parts per thousand [ppt] in the boreal winter; and mean SST of 23.2ºC and salinity of 37.9 ppt in summer) and the Algerian Basin (warmer and less saline [mean SST of 14.1ºC and salinity of 37.81 ppt in winter and mean SST of 24.9ºC and salinity of 37.5 ppt in summer). This is a highly dynamic area where the dominating southward current through this channel interacts with intrusions of recent Atlantic waters impulsed by the Alboran and Algerian Basin mesoscale structures flowing northward in the eastern part of the channel (Lana et al. 2016; Vargas-Yañez et al. 2017; Pinot et al. 2022). This interaction produces important oceanic fronts and upwellings, enhancing productivity in the area especially in the vicinity of the continental shelf and slope. The substrate is dominated by mud with patches of rock and sand (EEA 2021). The area is also characterised by distinct geological features such as the Xabia-Ibiza Seamount (Gomez-Ballestero et al. 2015) and pockmark fields (Acosta et al. 2001).

Ibiza Channel Slope overlaps in the North-western Mediterranean Pelagic Ecosystems Ecologically and Biologically Significant Marine Area (CBD 2016), and partially overlaps with the Plataforma-talud Marinos del Cabo de la Nao Key Biodiversity Area (KBA 2023), and one Natura 2000 area (EEA 2021).

This Important Shark and Ray Area is delineated from a depth of 400 m to 850 m based on the bathymetry of the area and the fisheries data supporting the Qualifying Species.

ISRA CRITERIA

SUB-CRITERION C1 – REPRODUCTIVE AREAS

Ibiza Channel Slope is an important reproductive area for two shark species.

Pregnant Little Sleeper Sharks represents most of the population of this species in the area. Overall, 32 Little Sleeper Shark specimens have been captured in benthic trawls targeting Red Shrimp (*Aristeus antennatus*) at depths between 500–800 m (captures by year: 1989–2003, n = 4; March 2013 – July 2016, n = 25; 2020, n = 1). All animals recorded were adult females. Laboratory analysis showed that 18 individuals (56.25%) where pregnant with macroscopically visible embryos, and the rest had recently ovulated with fertilised eggs (except one that was at the last ovulation stages) (Guallart et al. 2013, 2016; Guallart & García-Salinas 2015; Guallart & Ellis in prep.). Data highlight the high abundance of pregnant females as well as the unusual abundance of this species in Ibiza Channel, since worldwide there are only 62 reported records of Little Sleeper Shark up to 2023 (Guallart & Ellis in prep.).

The presence of neonate Bluntnose Sixgill Shark is regular and predictable in this area. A benthic trawling vessel based in Xàbia harbour that operates in the area at depths between 400–800 m was tasked with supplying 17 Bluntnose Sixgill Shark specimens for a genetic study. This fishing operation was able to achieve this in under two months. All the specimens captured measured 40–65 cm total length (TL) (J. Guallard pers. obs. 2013), corresponding to the size-at-birth for the species in the northwest Mediterranean Sea (55.6–68 cm TL; Capapé et al. 2004).

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Javier Guallart (Independent Researcher), Gabriel Morey (Save the Med Foundation), and Amanda Batlle Morera (IUCN SSC Shark Specialist Group - ISRA Project) contributed and consolidated information included in this factsheet. We thank all participants of the 2023 ISRA Region 3 – Mediterranean and Black Seas workshop for their contributions to this process.

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QUALIFYING SPECIES

Scientific Name	Common Name	IUCN Red List Category	Global Depth Range (m)	ISRA Criteria/Sub-criteria Met								
				A	B	C1	C2	C3	C4	C5	D1	D2
SHARKS												
Hexanchus griseus	Bluntnose Sixgill Shark	NT	0–2,490			X						
Somniosus rostratus	Little Sleeper Shark	LC	180–2,734			X						

SUPPORTING SPECIES

Scientific Name	Common Name	IUCN Red List Category
SHARKS		
Centrophorus uyato	Little Gulper Shark	EN
Dalatias licha	Kitefin Shark	VU
Etmopterus spinax	Velvet Belly Lanternshark	VU
Galeus melastomus	Blackmouth Catshark	LC
Heptranchias perlo	Sharpnose Sevengill Shark	NT
Hexanchus griseus	Bluntnose Sixgill Shark	NT
Mustelus mustelus	Common Smoothhound	EN
Oxynotus centrina	Angular Roughshark	EN
Scyliorhinus canicula	Smallspotted Catshark	LC
RAYS		
Dipturus oxyrinchus	Longnosed Skate	NT
Raja clavata	Thornback Skate	NT
Torpedo marmorata	Marbled Torpedo Ray	VU
Tetronarce nobiliana	Great Torpedo Ray	LC
CHIMAERAS		
Chimaera monstrosa	Rabbitfish	VU

IUCN Red List of Threatened Species Categories are available by searching species names at www.iucnredlist.org Abbreviations refer to: CR, Critically Endangered; EN, Endangered; VU, Vulnerable; NT, Near Threatened; LC, Least Concern; DD, Data Deficient.

SUPPORTING INFORMATION

There are additional indications that Ibiza Channel Slope is an important area for the reproductive purposes of one chimaera species and for the aggregation and feeding of one shark species.

During 35 fishing observations aboard benthic trawling commercial vessels between 2000–2022, Rabbitfish adults where regularly caught in hauls from 200–800 m depth. Amongst the catches, two small specimens of Rabbitfish were captured (~ 10 to 12 cm pre-supra caudal fin length [PSCFL]) (J. Guallart pers. obs. 2000–2022), with sizes close to size-at-birth for this species (~11 cm PSCFL; Calis et al. 2005). These specimens were caught in hauls at 250–400 m depth between the months of April and June. Additional information on the abundance of neonates is required to consider the area of reproductive importance for Rabbitfish.

A potential aggregation site for Little Gulper Shark has been recorded near Xabia-Ibiza Seamount (peak depth 650 m, base depth 800 m; Gomez-Ballestero et al. 2015). A trammel fishing trial performed during spring 2014 captured ~19 individuals in a 500 m long net (J Guallart pers. obs 2014).

There are indications that Ibiza Channel Slope could potentially be an important feeding area for Little Sleeper Shark. Most of the animals studied in the area (>75%) have identifiable remains in the stomach, with practically all belonging to the mesopelagic cephalopods Umbrella Squid *Histioteuthis bonnellii* and Reverse Jewel Squid *H. reversa* (Guallart et al. 2013, 2016; Guallart & García-Salinas 2015; Guallart & Ellis in prep.). These cephalopods are caught regularly in the area by trawlers fishing the middle slope at 500–700 m (Quetglas et al. 2010). Although the literature describes the Little Sleeper Shark as demersal, this evidence suggests benthopelagic habits and occurrence in the mesopelagic zone. This mesopelagic behaviour can be inferred from one individual captured in the area by benthic trawling that had a hook used for mesopelagic longliners to catch Swordfish *Xiphias gladius* attached to its mouth, a fishing method that is deployed at 500 m over areas with a bathymetry of >1,000 m (Guallart et al. 2016). More evidence demonstrating how this area is more important for prey availability or feeding than any other surrounding areas is needed.

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