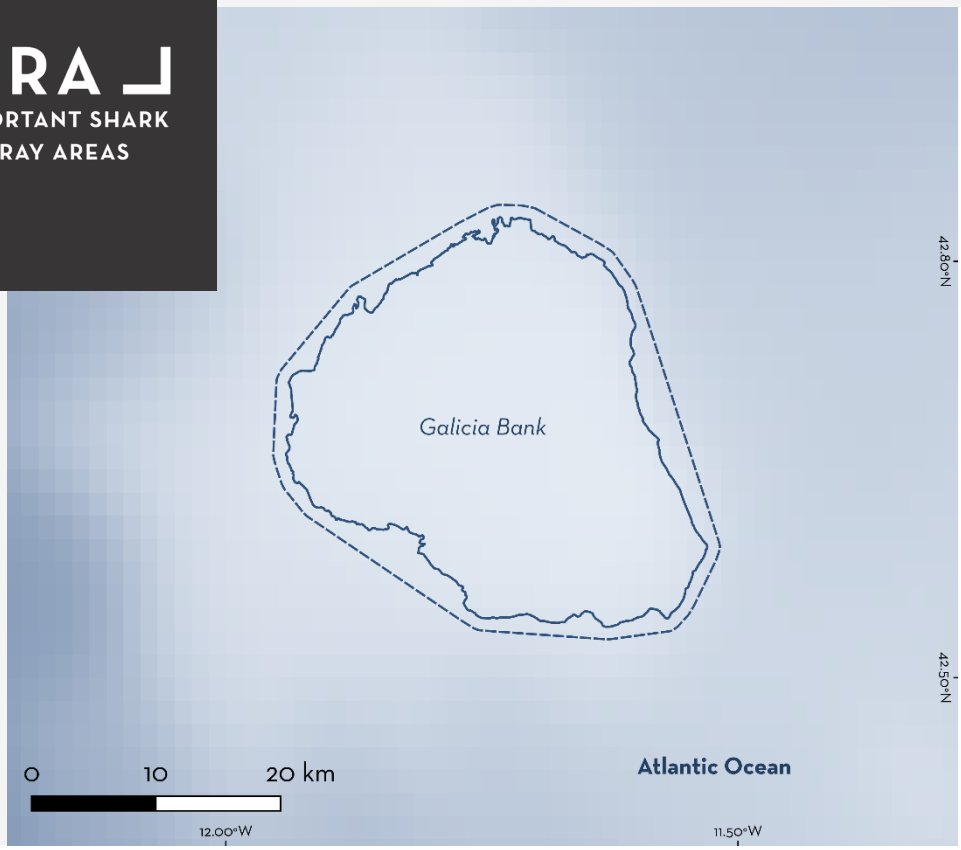
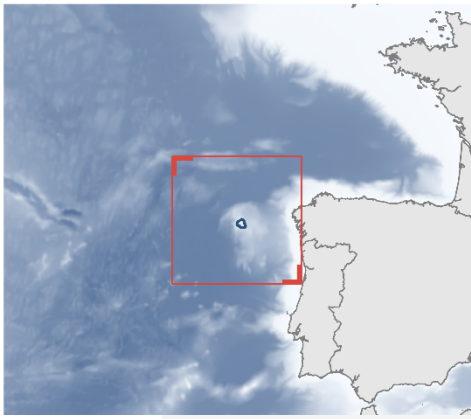
ISRA
IMPORTANT SHARK AND RAY AREAS





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

GALICIA BANK ISRA

European Atlantic Region

SPAIN

625–900 metres

714.9 km²

SUMMARY

Galicia Bank is located off the west coast of Galicia, Spain. It encompasses an isolated seamount rising to 625 m depth. The area is characterised by rocky substrates of basaltic lava origin. It is influenced by several distinct water masses which contribute to high primary productivity. This area overlaps with the West Iberian Canyons and Banks Ecologically or Biologically Significant Marine Area and the Banco de Galicia Key Biodiversity Area. Within this area there are: **threatened species** and **feeding areas** (Velvet Belly Lanternshark *Etmopterus spinax*).

CRITERIA

Criterion A – Vulnerability; Sub-criterion C2 – Feeding Areas

DESCRIPTION OF HABITAT

Galicia Bank is located off the west coast of Galicia, Spain. It encompasses an isolated seamount rising to 625 m depth. The bank is ~50 km long along its east-west axis and 90 km along its north-south axis. The area is characterised by rocky substrates of basaltic lava origin (Ercilla et al. 2011; Lourido et al. 2024). The slope on the eastern side is very steep with rocky substrates, while on the western side, there is a sandy platform at ~800 m depth (Duineveld et al. 2004).

The area is influenced by several distinct water masses: the North Atlantic Central Water at depths ~540 m, the Mediterranean Outflow Water at ~1,490 m, the Labrador Sea Water at ~2,155 m, the Lower North Atlantic Deep Water at ~3,450 m, and the Lower Deep Water below this depth (Rey et al. 2008). These water masses contribute to high primary productivity in the region (Rey et al. 2008).

This area overlaps with the West Iberian Canyons and Banks Ecologically or Biologically Significant Marine Area (EBSA; CBD 2025) and the Banco de Galicia Key Biodiversity Area (KBA 2025).

This Important Shark and Ray Area is benthic, pelagic, and subsurface from 625 m to 900 m based on the bathymetry of the area.

ISRA CRITERIA

CRITERION A – VULNERABILITY

One Qualifying Species considered threatened with extinction according to the IUCN Red List of Threatened Species regularly occurs in the area. This is the Vulnerable Velvet Belly Lanternshark (Finucci et al. 2021).

SUB-CRITERION C2 – FEEDING AREAS

Galicia Bank is an important feeding area for one shark species.

Between 2009–2011, shark and ray surveys were conducted in the area and surrounding areas using a benthic (20 mm mesh size at cod-end, 30-minute hauls) and a beam (3.5 m width, 10 mm mesh size, 15-minute hauls) trawl (Rodríguez-Cabello et al. 2012; Isbert et al. 2015; Preciado et al. 2017). A total of 22 hauls were undertaken (2009, n = 3; 2010, n = 10; 2011, n = 9) at depths of 700–1,800 m (Rodríguez-Cabello et al. 2012; Preciado et al. 2017). Data on species, total length (TL), and stomach wet mass were recorded, and prey items were separated and identified to the lowest possible taxonomic level, and the percent by number of prey (%N) was calculated (Isbert et al. 2015; C Rodríguez-Cabello unpubl. data 2025). Muscle tissue samples were also collected for stable isotopic analysis (Rodríguez-Cabello et al. 2014; Isbert et al. 2015; Preciado et al. 2017).

Between 2009–2011, a total of 175 Velvet Belly Lanternsharks were captured with 75 individuals analysed for stomach contents and 45 for isotopic analysis (Rodríguez-Cabello et al. 2014; C Rodríguez-Cabello unpubl. data 2025). Of these stomachs, 40% (n = 30) were full, with isotopic values of δ13C -18.55 ± 0.45 (mean ± standard deviation [SD]) and δ15N 10.80 ± 0.49 (Rodríguez-Cabello et al. 2014; Preciado et al. 2017). This δ13C isotopic value suggest that Velvet Belly Lanternsharks are mainly feeding on pelagic food sources at the base of the food chain, while the δ15N value suggest this species is a secondary or tertiary consumer, with a low variability in its diet due to the small SD (Preciado et al. 2017). Individuals ranged in size from 17–44 cm TL and were sampled at depths of 750–870 m (Preciado et al. 2017). In 2010 only, 56.7% (n = 17 out of 30) of Velvet Belly Lanternshark

stomachs analysed were full with these sharks ranging in size from 15.3–45.9 cm TL (Isbert et al. 2015). Crustaceans (%N = 61.5%; mainly carideans *Pasiphaea* spp and euphausiids) and fishes (%N = 30.8%) were the main prey items, while molluscs and echinoderms played a minor role indicating a benthopelagic feeding behaviour (Isbert et al. 2015; Preciado et al. 2017). No significant dietary differences were observed between the boreal spring and summer, as suggested by the similarity between stomach content data collected in summer and isotopic values, which likely reflect spring diets due to tissue turnover rates (Preciado et al. 2017).

Although haul surveys were conducted in surrounding areas and the depth range of the species goes to 2,000 m depth, Velvet Belly Lanternshark, were only captured from the summit of the Galica Bank down to 900 m (Rodríguez-Cabello et al. 2012). The summit of the Galicia Bank hosts dense populations of caridean shrimps like *Pasiphaea sivado*, as well as euphausiids such as *Meganyctiphanes norvegica* (Cartes et al. 2014), which are some of the main prey for Velvet Belly Lanternshark in the area (Preciado et al. 2017). These species are highly abundant at these depths in the area due to the influence of the Mediterranean Outflow Water, which may reach velocities of 5–10 cm/s and contribute to maintain suspension feeder communities (Preciado et al. 2017), combined with the entrapment during their dawn descent of the vertically migrating zooplankton, a pattern commonly observed on deep seamounts (Clark et al. 2010). The higher productivity found at the summit of Galicia Bank compared to adjacent waters and the presence of large aggregations of euphausiids, and up to five species of *Pasiphaea* shrimps (Cartes et al. 2014), highlights the importance of the area for the feeding habits of Velvet Belly Lanternshark.

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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												
Etmopterus spinax	Velvet Belly Lanternshark	VU	70–2,000	X			X					

SUPPORTING SPECIES

Scientific Name	Common Name	IUCN Red List Category
SHARKS		
Centrophorus granulosus	Gulper Shark	EN
Centrophorus squamosus	Leafscale Gulper Shark	EN
Centroscymnus coelolepis	Portuguese Dogfish	NT
Cetorhinus maximus	Basking Shark	EN
Dalatias licha	Kitefin Shark	VU
Deania calceus	Birdbeak Dogfish	NT
Deania profundorum	Arrowhead Dogfish	NT
Etmopterus pusillus	Smooth Lanternshark	LC
Hexanchus griseus	Bluntnose Sixgill Shark	NT
Prionace glauca	Blue Shark	NT
Pseudotriakis microdon	False Catshark	LC
Scymnodon ringens	Knifetooth Dogfish	VU
Somniosus rostratus	Little Sleeper Shark	LC
RAYS		
Dipturus batis	Common Blue Skate	CR
CHIMAERAS		
Chimaera opalescens	Opal Chimaera	LC

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 Galicia Bank is a potential feeding area for one shark species and important for undefined aggregations of two shark species.

Between 2009–2011, during the same survey effort previously described, a total of 44 Knifetooth Dogfish were captured with nine analysed for stomach contents and isotopic analysis (Rodríguez-Cabello et al. 2012; Preciado et al. 2017; C Rodríguez-Cabello unpubl. data 2025). Over half (55.5%; n = 5) of the Knifetooth Dogfish stomachs were full, with isotopic values of δ13C -17.72 ± 0.43 (mean ± SD) and δ15N 12.91 ± 0.59 (mean ± SD) (Preciado et al. 2017). This δ13C isotopic values suggest that Knifetooth Dogfish are feeding mainly on pelagic food sources, while δ15N values suggest this species is a secondary or tertiary consumer (Preciado et al. 2017). Individuals ranged in size from 34–102 cm TL and were sampled at depths of 760–860 m (Preciado et al. 2017). Crustaceans (%N = 57%; hyperids, the shrimp *Pasiphaea sivado*, and the euphausiid *Meganictyphanes norvegica*) and fish (%N = 43%; Kaup's Arrowtooth Eel *Synaphobranchus kaupii*) were the main prey (C Rodríguez-Cabello unpubl. data 2025). Further information is required to determine the importance of the area for the feeding of the species.

Between 2009–2011, during the same survey effort previously described, a total of 175 Velvet Belly Lanternshark were captured in the area. Aggregations (three or more individuals captured in a single haul; n = 11) were recorded and ranged between 3–72 individuals (mean = 10.9) and were collected in 2009 (n = 3), 2010 (n = 7), 2011 (n = 1) (C Rodríguez-Cabello unpubl. data 2025). Individuals were captured between 700–900 m depth (Rodríguez-Cabello et al. 2012). Although haul surveys were conducted in surrounding areas, aggregations were only found at the summit of Galicia Bank, likely due to the high prey abundance in the area (Preciado et al. 2017). This species has been observed forming aggregations in other regions (Duchatelet et al. 2020), and other species within the same genus, Blackbelly Lanternshark *Etmopterus lucifer*, Brown Lanternshark *E. unicolor*, and Southern Lanternshark *E. granulosus*, have also been shown to form aggregations, either related to feeding (Hallett & Daley 2011) or based on size and sex (Finucci et al. 2018). At Galicia Bank, individuals ranged from 15.3 to 45.9 cm in TL, encompassing neonates (size at birth: 8–14 cm TL; Ebert et al. 2021) to mature individuals (24–41 cm TL; Ebert et al. 2021). However, further information is required to determine the importance of the area for the aggregations of the species.

Between 2009–2011, during the same survey effort previously described, 83 Arrowhead Dogfish were captured. Aggregations (n = 9) for the species were also recorded and ranged between 3–19 individuals (mean = 6) and were collected in 2009 (n = 2), 2010 (n = 6), 2011 (n = 1) (C Rodríguez-Cabello unpubl. data 2025). Individuals were captured between 700–900 m depth (Rodríguez-Cabello et al. 2012). Although haul surveys were conducted in surrounding areas, aggregations were only found at the summit of the Galicia Bank. Aggregations for this genus have been reported in other regions (i.e., New Zealand for Birdbeak Dogfish *Deania calceus*) (Finucci et al. 2018). Further information is required to determine the importance of the area for the aggregations of the species.

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