

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

## SARDINA ISRA

### European Atlantic Region

## SUMMARY

Sardina is located on the northern coast of Gran Canaria, one of the eight main islands of the Canary Islands archipelago, Spain. This sheltered bay is characterised by benthic habitats composed of sand, rocky substrates, and patches of seagrass. The area overlaps with an Ecologically or Biologically Significant Marine Area. Within this area there are: **threatened species** (e.g., Duckbill Eagle Ray *Aetomylaeus bovinus*); **undefined aggregations** (e.g., Bentfin Devil Ray *Mobula thurstoni*); and the area sustains a **high diversity of sharks** (16 species).

## CRITERIA

**Criterion A - Vulnerability; Sub-criterion C5 - Undefined Aggregations; Sub-criterion D2 - Diversity**

—	—
<b>SPAIN</b>	—
—	—
<b>0-100 metres</b>	—
—	—
<b>63.15 km<sup>2</sup></b>	—
—	—





## DESCRIPTION OF HABITAT

Sardina is located on the northern coast of Gran Canaria, Canary Islands archipelago, Spain. The Canary Islands are in the northeast Atlantic and consist of eight main islands and five islets, situated ~100 km from the northwest African coastline. The area is on the insular shelf and encompasses sandbanks, rocky reefs, patches of seagrass, submerged caves, arches, and rocky walls with reef structures (EEA 2025).

These oceanic islands are strongly influenced by the complex and unique meteorological and oceanographic dynamics of the region, including the Eastern Boundary Upwelling System, Canary Current, and Calima events (Sahara Desert dust; Vázquez et al. 2024).

The area overlaps with the Oceanic Islands and Seamounts of the Canary Region Ecologically or Biologically Significant Marine Area (EBSA; CBD 2025).

This Important Shark and Ray Area is benthic and pelagic and is delineated from inshore and surface waters (0 m) to 100 m based on the bathymetry of the area.

## ISRA CRITERIA

### CRITERION A - VULNERABILITY

Sixteen Qualifying Species considered threatened with extinction according to the IUCN Red List of Threatened Species regularly occur in the area. Threatened sharks comprise two Critically Endangered species, three Endangered species, and one Vulnerable species; threatened rays comprise two Critically Endangered species, six Endangered species, and two Vulnerable species (IUCN 2025).

### SUB-CRITERION C5 - UNDEFINED AGGREGATIONS

Sardina is an important site for undefined aggregations for one shark and one ray species.

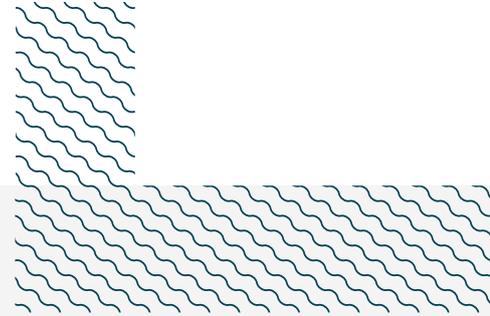
Since 2015, the Angel Shark Project has conducted a combination of underwater visual census (UVC) surveys, tagging, and citizen science data collection in the area. Visual transects and tagging surveys were conducted across the Canary Islands in high suitability areas (Meyers et al. 2017), potential nursery areas (Jiménez-Alvarado et al. 2020), and locations where Angelsharks are commonly observed. Ten annual survey campaigns (two or three days each) were conducted between 2015–2024. Aggregations of 3–18 individuals were regularly recorded and tagged in the area across multiple years (2015, 2021, 2024, 2025) during UVC surveys that are conducted in one single dive spot in a ~400 m radius (Angel Shark Project unpubl. data 2025). Aggregations of 3–6 individuals were also recorded in single dives conducted by local dive centres between 2021–2024 (Angel Shark Project unpubl. data 2025). Angelsharks are regularly seen individually and scattered year-round, but aggregations have been recorded during the reported mating season in boreal winter (November–March) and occasionally during other periods of the year (Meyers et al. 2017; Mead et al. 2023). Of the 36 adult Angelsharks recorded in UVC surveys, 81% were females (n = 29) and there have been records of pregnancy. Additionally, three neonates were recorded in 2015 during UVC surveys and 11 were recorded by dive centres suggesting that this area may be important for reproductive purposes. Sardina was highlighted as one of four sites across the archipelago with a high frequency of Angelshark sightings per grid cell (Meyers et al. 2017). It has also been described as a moderate to highly suitable area during winter and spring particularly adult females (Noviello et al. 2021).

Compared to the surrounding areas monitored in Gran Canaria Island, Sardinia shows a clear pattern of regular and predictable aggregations of Angelsharks over the long-term as only single individuals were recorded in other locations. Further, genetic markers revealed that Gran Canaria is a distinct genetic unit for the species (Meyers et al. 2024). Additional information is needed to confirm the nature and function of these aggregations.

Citizen science data from divers recorded between 2006-2023 revealed the presence of aggregations of Bentfin Devil Rays in the area. Five distinct aggregation events were recorded at Caleta Baja with group sizes ranging from 3-16 individuals (A Rodríguez Juncá unpubl. data 2025). Some of the largest aggregations of Bentfin Devil Ray across the Canary Islands have been recorded in this area (A Rodríguez Juncá unpubl. data 2025). These aggregations are larger than what was previously reported for this species (Notarbartolo-di-Sciara 1988; Ehemann et al. 2022), highlighting the importance of the area (A Rodríguez-Juncá et al. unpubl. data 2025). Additional information is needed to confirm the nature and function of these aggregations.

## SUB-CRITERION D2 – DIVERSITY

Sardinia sustains a high diversity of Qualifying Species (16 species). This exceeds the regional diversity threshold (13 species) for the European Atlantic region. The regular presence of Qualifying Species has been documented through UVC surveys, citizen science, and catch data recorded between 2006-2025 (Meyers et al. 2017; RedPROMAR Gobierno de Canarias 2025; A Rodríguez-Juncá et al. unpubl. data 2025; Angel Shark Project unpubl. data 2025; L Moro, P Monagas, R Herrero, & R Herrera-Pérez pers. comm. 2025).



---

### **Acknowledgments**

Eva KM Meyers (Angel Shark Project; Leibniz Institute for the Analysis of Biodiversity Change), Héctor Toledo-Padilla (Angel Shark Project), Tomás Bañeras (Angel Shark Project), David Jiménez-Alvarado (Angel Shark Project; Universidad Las Palmas de Gran Canaria), Alicia Rodríguez-Juncá (Universidad de la Laguna; Manta Catalog Canarias), and Emiliano García-Rodríguez (IUCN SSC Shark Specialist Group - ISRA Project) contributed and consolidated information included in this factsheet. We thank all participants of the 2025 ISRA Region 02 - European Atlantic workshop for their contributions to this process.

This factsheet has undergone review by the ISRA Independent Review Panel prior to its publication.

This project was funded by the Shark Conservation Fund, a philanthropic collaborative pooling expertise and resources to meet the threats facing the world's sharks and rays. The Shark Conservation Fund is a project of Rockefeller Philanthropy Advisors.

### **Suggested citation**

**IUCN SSC Shark Specialist Group. 2025.** Sardina ISRA Factsheet. Dubai: IUCN SSC Shark Specialist Group.

## 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	
<b>SHARKS</b>													
<i>Centrophorus granulosus</i>	Gulper Shark	EN	98-1,500	X									X
<i>Galeorhinus galeus</i>	Tope	CR	0-826	X									
<i>Isurus oxyrinchus</i>	Shortfin Mako	EN	0-1,888	X									
<i>Mustelus mustelus</i>	Common Smoothhound	EN	0-800	X									
<i>Squatina squatina</i>	Angelshark	CR	0-150	X						X			
<i>Torpedo marmorata</i>	Marbled Torpedo Ray	VU	0-1,480	X									
<b>RAYS</b>													
<i>Aetomylaeus bovinus</i>	Duckbill Eagle Ray	CR	0-150	X									X
<i>Bathytoshia lata</i>	Brown Stingray	VU	0-800	X									
<i>Dasyatis pastinaca</i>	Common Stingray	VU	0-200	X									
<i>Gymnura altavela</i>	Spiny Butterfly Ray	EN	0-150	X									

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
<b>RAYS</b>												
<i>Mobula birostris</i>	Oceanic Manta Ray	EN	0-1,246	X								X
<i>Mobula mobular</i>	Spinetail Devil Ray	EN	0-1,112	X								
<i>Mobula tarapacana</i>	Sicklefin Devil Ray	EN	0-1,896	X								
<i>Mobula thurstoni</i>	Bentfin Devil Ray	EN	0-100	X					X			
<i>Myliobatis aquila</i>	Common Eagle Ray	CR	0-537	X								
<i>Rostroraja alba</i>	White Skate	EN	0-750	X								

## SUPPORTING SPECIES

Scientific Name	Common Name	IUCN Red List Category
RAYS		
<i>Taeniuroops grabatus</i>	Round Fantail Stingray	NT

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





## REFERENCES

**Convention on Biological Diversity (CBD). 2025.** Oceanic Islands and Seamounts of the Canary Region. Ecologically or Biologically Significant Areas (EBSAs). Available at: <https://chm.cbd.int/database/record?documentID=263484> Accessed May 2025.

**Ehemann N, Acosta-Rodríguez E, Tagliafico A, Pelletier N, Stevens G. 2022.** Manta and devil ray species occurrence and distribution in Venezuela, assessed through fishery landings and citizen science data. *Journal of Fish Biology* 101: 213–225. <https://doi.org/10.1111/jfb.15088>

**European Environmental Agency (EEA). 2025.** Natura 2000–Santandard Data Form, Costa de Sardina del Norte (ES7010066–SCI). Available at: <https://natura2000.eea.europa.eu/Natura2000/sdf/#/sdf?site=ES7010066&release=55> Accessed May 2025.

**Jiménez-Alvarado D, Meyers EKM, Caro MB, Sealey MJ, Barker J. 2020.** Investigation of juvenile angelshark (*Squatina squatina*) habitat in the Canary Islands with recommended measures for protection and management. *Aquatic Conservation: Marine and Freshwater Ecosystems* 30: 2019–2025. <https://doi.org/10.1002/aqc.3337>

**IUCN. 2025.** The IUCN Red List of Threatened Species. Version 2025-1. Available at: <https://www.iucnredlist.org> Accessed May 2025.

**Mead LR, Jiménez Alvarado D, Meyers E, Barker J, Sealey M, Belén Caro M, Toledo H, Pike C, Gollock M, Piper A, et al. 2023.** Spatiotemporal distribution and sexual segregation in the Critically Endangered Angelshark *Squatina squatina* in Spain's largest marine reserve. *Endangered Species Research* 51: 233–248. <https://doi.org/10.3354/esr01255>

**Meyers EKM, Tuya F, Barker J, Jiménez-Alvarado D, Castro-Hernández JJ, Haroun R, Rödder D. 2017.** Population structure, distribution and habitat use of the Critically Endangered angelshark, *Squatina squatina*, in the Canary Islands. *Aquatic Conservation: Marine and Freshwater Ecosystems* 27: 1133–1144. <https://doi.org/10.1002/aqc.2769>

**Meyers EKM, Faure N, Jiménez-Alvarado D, Barker J, Toledo-Padilla H, Tuya F, Pike C, Mead LR, Sealey MJ, Caro MB et al. 2024.** Distinct management units for the Critically Endangered angelshark (*Squatina squatina*) revealed in the Canary Islands. *Conservation Genetics* 26: 103–116. <https://doi.org/10.1007/s10592-024-01655-1>

**Notarbartolo-di-Sciara G. 1988.** Natural history of the rays of the genus *Mobula* in the Gulf of California. *Fishery Bulletin* 86: 45–66.

**Noviello N, McGonigle C, Jacoby DMP, Meyers EKM, Jiménez-Alvarado D, Barker J. 2021.** Modelling Critically Endangered marine species: bias-corrected citizen science data inform habitat suitability for the angelshark (*Squatina squatina*). *Aquatic Conservation: Marine and Freshwater Ecosystems* 31: 3451–3465. <https://doi.org/10.1002/aqc.3711>

**RedPROMAR Gobierno de Canarias. 2025.** Red de Observadores del Medio Marino en Canarias. Available at: <https://redpromar.org/home> Accessed June 2025.

**Vázquez R, Parras-Berrocal IM, Cabos W, Sein D, Mañanes R, Bolado-Penagos M, Izquierdo A. 2024.** Climate change in the Canary/Iberia upwelling region: the role of ocean stratification and wind. *Environmental Research Letters* 19: 074064. <https://doi.org/10.1088/1748-9326/ad5ab4>