



CANELONES-MALDONADO ISRA

South American Atlantic Region

SUMMARY

Canelones-Maldonado is located off the coast of Canelones and Maldonado departments in Uruguay. The area is situated in the Joint Regime Area of Argentina and Uruguay and sits on the continental shelf around the La Plata River. It is characterised by turbid waters and sandy substrates with mud patches. The area is influenced by vertical stratification in salinity due to the Rio de la Plata plume. Within this area there are: threatened species and rangerestricted species (Angular Angelshark Squatina guggenheim).

URUGUAY **ARGENTINA**

-	_
0-50	metres

1,452.5 km²

CRITERIA

Criterion A - Vulnerability; Criterion B - Range Restricted

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DESCRIPTION OF HABITAT

Canelones-Maldonado is located off the coast of Canelones and Maldonado departments in Uruguay. The area is situated in the Joint Regime Area of Argentina and Uruguay (Flanders Marine Institute 2023). It sits on the continental shelf around La Plata River. It is characterised by turbid waters and sandy substrates with mud patches. The area is influenced by a vertical stratification in salinity, which can vary from 15-30 ppt depending on wind force and freshwater discharge (Jaureguizar et al. 2003). Mean bottom water temperature is 20°C during the warm period (December-March) and 10-12°C during the cold period (June-September). During each period, estuarine waters are almost fully thermally homogeneous both vertically and horizontally (Guerrero et al. 1997). Other environmental conditions, such as salinity and turbidity are highly influenced by neighbouring surface marine currents (Brazil Current and Patagonic Coastal Current) (Jaureguizar et al. 2016). The location of the Rio de la Plata plume (i.e., freshwater with high turbidity) across the South Atlantic Coastal System exhibits important and significant seasonal and inter-annual variation. This variation is associated not only with the interaction between the shelf water masses and the discharge pattern of the plume but is also highly influenced by wind seasonality (Jaureguizar et al. 2023).

This Important Shark and Ray Area is benthic and pelagic and is delineated from inshore and surface waters (0 m) to 50 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 Endangered Angular Angelshark (Oddone et al. 2019).

CRITERION B - RANGE RESTRICTED

Canelones-Maldonado holds the regular and predictable presence of the Angular Angelshark as a resident range-restricted species. This species is reported from the area in research fisheries surveys and commercial fisheries monitoring (CTMFM 2018; Elisio et al. 2021). Records of Angular Angelshark from this area are highest compared to other areas along the Uruguayan coast highlighting its importance. The Angular Angelshark is distributed across the Patagonian Shelf and the South Brazil Shelf Large Marine Ecosystems.

Between 2011-2016, recurrent high abundances of Angular Angelshark were captured in the Uruguayan fishing fleet operating in the area. Captures of more than 200 kg of individuals per fishing set (equivalent to 88 adults, with an average weight of 2.26 kg per individual; R Vögler unpubl. data 2025) were recorded in the commercial trawl fishery (CTMFM 2018). Additionally, in November-December 2019, 95 bottom trawl hauls were conducted along the northern coast of Argentina (northward from El Rincon) and Uruguay (Elisio et al. 2021). Trawls lasted 15 min at a speed of four knots. The net had a stretched mesh size of 120 mm. Relative abundance was estimated as the number of individuals per nautical mile (ind/nm²). During this survey, this area has the highest estimated abundance of Angular Angelsharks across all life stages (456-1,563 ind/nm²), encompassing five of the ten hauls with these abundances along the coast of Uruguay (Elisio et al. 2021).

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QUALIFYING SPECIES

Scientific Name	Common Name	IUCN Red List Category	Global Depth Range (m)	ISRA Criteria/Sub-criteria Met								
				Α	В	C1	C2	C3	C4	C5	Dı	D2
SHARKS												
Squatina guggenheim	Angular Angelshark	EN	7-150	Х	Х							



SUPPORTING SPECIES

Scientific Name	Common Name	IUCN Red List Category		
SHARKS				
Carcharhinus brachyurus	Copper Shark	VU		
Galeorhinus galeus	Торе	CR		
Mustelus schmitti	Narrownose Smoothhound	CR		
Notorynchus cepedianus	Broadnose Sevengill Shark	VU		

IUCN Red List of Threatened Species Categories are available by searching species names at <u>www.iucnredlist.org</u> 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 Canelones-Maldonado is an important reproductive area for one shark species.

Between March 2000-December 2003 and November-December 2019, the Instituto Nacional de Investigación y Desarrollo Pesquero (INIDEP) conducted 184 (2000-2003) and 95 (2019) bottom trawl hauls along the northern coast of Argentina (northward from El Rincon) and Uruguay (Colonello et al. 2007; Elisio et al. 2021). Trawls lasted 15 min at a speed of four knots. The net had a stretched mesh size of 120 mm. Angular Angelsharks were measured, and their maturity stages were determined based on size and development of reproductive organs (Colonello et al. 2007; Elisio et al. 2021). Neonates and young-of-the-year (YOY) were identified as individuals measuring <30 cm total length (TL) during sampling in 2000-2003, and <40 cm TL in 2019 (Colonello et al. 2007; Elisio et al. 2021). In this region, size-at-birth for the species ranges from 20-26.5 cm TL, while size-atmaturity is 70 cm TL (Colonello 2005). Relative abundance was estimated as the number of individuals per nautical mile (ind/nm²) (Colonello et al. 2007; Elisio et al. 2021).

Between 2000-2003, Angular Angelshark neonates/YOY measuring 27-30 cm TL were captured in nine hauls during December-February (Colonello et al. 2007), with four hauls occurring within the area. Across the sampled years in May, neonates/YOY were captured in three hauls, one of which was within the area. They were absent in austral winter. In the area and adjacent waters, the birthing season is in spring and early summer (Colonello et al. 2007). Further, the presence of Angular Angelsharks in the area and adjacent waters peaked in spring and summer, suggesting a seasonal movement perpendicular to the shore during the birthing season (Colonello et al. 2007). In 2019, the highest relative abundance of neonates/YOY were observed within the area compared to adjacent waters, including two of the three hauls with similarly high densities between 351-853 ind/nm², and one haul (of the two) with 197-351 ind/nm² (Elisio et al. 2021). Pregnant females (based on the presence of embryos inside the uterus) were only captured in the area with a relative abundance of 145-290 ind/nm² (Elisio et al. 2021). Further information is required to determine the importance of the area for the reproduction of the species.

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