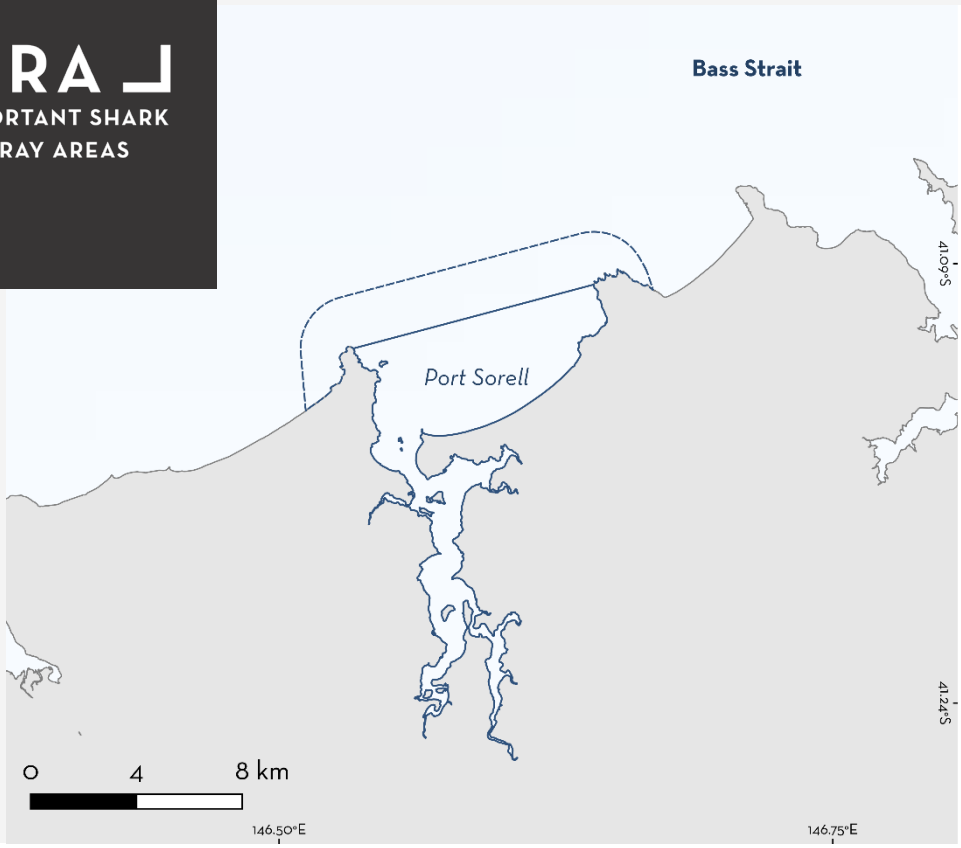
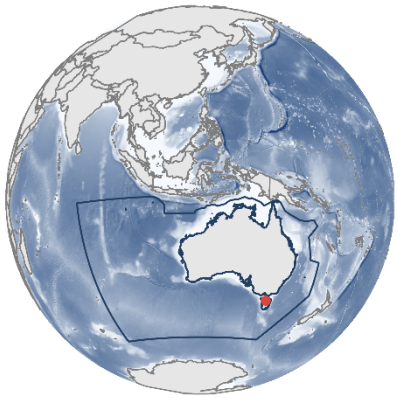
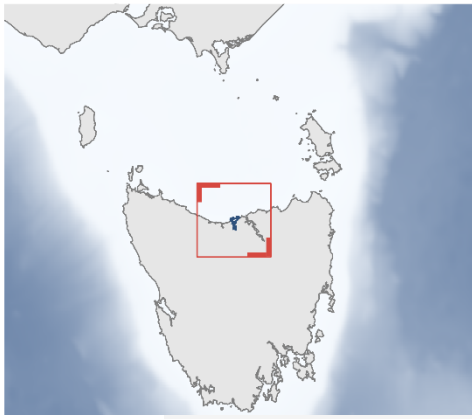
ISRA
IMPORTANT SHARK AND RAY AREAS







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

PORT SORELL ISRA

Australia and Southeast Indian Ocean Region

AUSTRALIA

0–30 metres

49.48 km²

SUMMARY

Port Sorell is located in northern central Tasmania, Australia. This estuary is characterised by intertidal flats with seagrass beds and muddy substrates. This area overlaps with the Rubicon Estuary Key Biodiversity Area, Narawntapu National Park, and Port Sorell Shark Refugee Area. Within this area there are: **threatened species** (Tope *Galeorhinus galeus*); and **reproductive areas** (e.g., Gummy Shark *Mustelus antarcticus*).

CRITERIA

Criterion A – Vulnerability; Sub-criterion C1 – Reproductive Areas

DESCRIPTION OF HABITAT

Port Sorell is located in northern central Tasmania, Australia. This area connects to Bass Strait and includes the Rubicon Estuary. The area is characterised by intertidal flats with seagrass beds and muddy substrates (Beasy & Ellison 2013). It receives freshwater input from multiple streams (e.g., Franklin Rivulet and Rubicon River). Mean surface temperature is ~16°C (range 13–22°C) with maximum precipitation occurring in the austral winter.

This area overlaps with the Rubicon Estuary Key Biodiversity Area (KBA 2025), Narawntapu National Park (TPWS 2025), and Port Sorell Shark Refuge Area (Tasmanian Government 2025).

This Important Shark and Ray Area is benthic and pelagic and is delineated from inshore and surface waters (0 m) to 30 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 Critically Endangered Tope (School Shark; Walker et al. 2020).

SUB-CRITERION C1 – REPRODUCTIVE AREAS

Port Sorell is an important reproductive area for two shark species.

Fishing surveys and catch data have revealed the regular presence of neonate and young-of-the-year (YOY) Tope in the area since the 1940s (Olsen 1954, 1959; Stevens & West 1997; Walker et al. 2008). In southern Australia, this area was recognised as one of the six major nursery areas across Victoria and Tasmania for the species (Olsen 1954; Stevens & West 1997; Walker 2005; Walker et al. 2008, 2020).

Between 1947–1953, 11 areas across Victoria and Tasmania were surveyed with handlines and gillnets to look for potential nursery areas for Tope (Olsen 1954). In Port Sorrel, 1,003 Tope measuring 28–52 cm total length (TL) were caught by handline. These individuals were classified as neonate/YOY. Reported size-at-birth for the species is 30–40 cm TL (Ebert et al. 2021) and YOY size in this region was set at 55 cm TL (Olsen 1954; Moulton et al. 1992). Port Sorell was the area with the largest number of neonate/YOY Tope recorded across all areas. Subsequently, between 1992–1996, 25 areas were also surveyed in Tasmania to explore nursery areas for this species (Stevens & West 1997). In Port Sorell, 38 sets (75 m long gillnet) were deployed in the area and 12 Tope were recorded. Of these, nine (75%) were classified as YOY based on their size (Stevens & West 1997). Port Sorell had the third largest number of individuals and catch-per-unit-effort (CPUE) of these life-stages in Tasmania after the Pittwater/Storm Bay Estuary and Great Oyster Bay. Neonate/YOY Tope were recorded mostly in the austral summer, between November–January (Stevens & West 1997).

Population declines of Tope have been recorded since the 1950s across Australia (Walker 1999; Braccini et al. 2009). Port Sorell has been a Shark Refuge Area since the 1960s which means that any catch of shark or ray species is prohibited. The lack of reports and surveys focused on monitoring neonate/YOY Tope are related to this prohibition. However, records from recreational fishing forums since 2021 have revealed that these life-stages are still incidentally caught in the area during the same months when they were reported to occur in the area during the 1990s (Fishbrain 2025).

These records confirm the contemporary importance of this area for reproductive purposes of this species. Despite the records of neonates and YOY, no pregnant females were recorded across all studies conducted in the area.

In the same monitoring from 1992–1996, 83 Gummy Sharks were caught in the area (Stevens & West 1997). Of these, 10 (12.4%) were classified as neonate/YOY and 11 (13.25%) as one year old sharks. These individuals measured <45 cm TL which is close to the reported size-at-birth of 30–35 cm TL (Ebert et al. 2021) and to the size set for YOY (50 cm TL) in Tasmania (Moulton et al. 1992; Stevens & West 1997). Port Sorell had the largest number of neonate/YOY and the second largest CPUE across all sites monitored in Tasmania. Records from recreational fishing forums since 2020 have revealed that these life-stages are still regularly incidentally caught in the area (Fishbrain 2025), confirming the contemporary importance of this location for reproductive purposes of this species. Pregnant females were not recorded across all studies conducted in the area.

Acknowledgments

Terence I Walker (Monash University) 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 08 – Australia and Southeast Indian Ocean workshop for their contributions to this process.

We acknowledge the Traditional Owners of Country throughout Australia and recognise the continuing connection to land, waters, and culture. We pay our respects to Elders past, present, and emerging.

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QUALIFYING SPECIES

Scientific Name	Common Name	IUCN Red List Category/ EPBC Act	Global Depth Range (m)	ISRA Criteria/Sub-criteria Met								
				A	B	C1	C2	C3	C4	C5	D1	D2
SHARKS												
Galeorhinus galeus	Tope (School Shark)	CR/CD	0–826	X		X						
Mustelus antarcticus	Gummy Shark	LC	0–350			X						

SUPPORTING SPECIES

Scientific Name	Common Name	IUCN Red List Category
SHARKS		
Cephaloscyllium laticeps	Australian Swellshark	LC
RAYS		
Trygonorrhina dumerilii	Southern Fiddler Ray	LC
Spiniraja whitleyi	Melbourne Skate	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.

Australian Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) categories are available at: https://www.dcceew.gov.au/environment/epbc/our-role/approved-lists Abbreviations refer to: CR, Critically Endangered; EN, Endangered; VU, Vulnerable; CD, Conservation Dependent.

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