

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

SOUTHERN SUMBAWA ISRA

Asia Region

SUMMARY

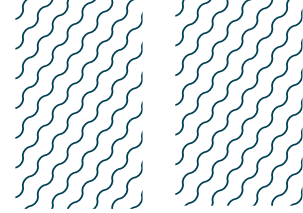
Southern Sumbawa is located in West Nusa Tenggara Province, Indonesia. The area includes a narrow shelf characterised by sandy, muddy and rocky substrates, and rivers flowing into the area. The area overlaps with the Lunyuk Tatar Sepang marine protected area. Within the area there are: **threatened species** (e.g., Jimbaran Guitarfish *Rhinobatos jimbaranensis*); **range-restricted species** (e.g., Bali Numbfish *Narcine baliensis*); and **reproductive areas** (e.g., Bottlenose Wedgefish *Rhynchobatus australiae*).

CRITERIA

Criterion A - Vulnerability; Criterion B - Range Restricted; Sub-criterion C1 - Reproductive Areas

—	—
INDONESIA	—
—	—
0-100 metres	—
—	—
238.2 km²	—
—	—





DESCRIPTION OF HABITAT

Southern Sumbawa is located on the southern side of Sumbawa Island in West Nusa Tenggara Province, Indonesia. The area includes a narrow shelf characterised by sandy, muddy, and rocky substrates. Several rivers flow into the area, discharging nutrients that increases the productivity of the area (Taufikurahman & Hidayat 2017).

The area is influenced by monsoon winds. The northwest monsoon (December to February) brings low-speed winds and high rainfall while the southeast monsoon (June to August) brings high-speed winds and lower precipitation (Wirasatriya et al. 2021). These winds induce coastal upwelling in the area that causes phytoplankton and zooplankton blooms, especially during the southeast monsoon season (Taufikurahman 2016; Simanjuntak & Lin 2022). In addition, in the southern part of the area, upwellings are produced by the El Nino-Southern Oscillation (Simanjuntak & Lin 2022).

The area overlaps with the Lunyuk Tatar Sepang marine protected area.

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 depth range of Qualifying Species in the area.

ISRA CRITERIA

CRITERION A - VULNERABILITY

Four Qualifying Species considered threatened with extinction according to the IUCN Red List of Threatened Species regularly occur in the area. These are the Critically Endangered Scalloped Hammerhead (Rigby et al. 2019), Bottlenose Wedgefish (Kyne et al. 2019), and Jimbaran Guitarfish (Dulvy et al. 2021), and the Endangered Indonesian Houndshark (Sherman et al. 2021).

CRITERION B - RANGE RESTRICTED

This area holds the regular presence of the Indonesian Houndshark, Bali Numbfish, and Jimbaran Guitarfish as resident range-restricted species. These species occur year-round in the area and were regularly recorded in landings from fisheries operating in the area (BM Simeon unpubl. data 2023). Based on landing monitoring near Lunyuk Bay between 2014-2023 (once every three days on average), 197 Indonesian Houndshark, 13 Bali Numbfish, and 68 Jimbaran Guitarfish were recorded (BM Simeon unpubl. data 2023). The number of individuals recorded in the area is higher than in other sites from Indonesia (White & Dharmadi 2007; Dharmadi & Fahmi 2008; Oktaviyani et al. 2020). Jimbaran Guitarfish and Bali Numbfish were previously only known from areas in Bali, where both species were described (Last et al. 2006; de Carvalho & White 2016) and Bali Numbfish was reported as a very rare species. Indonesian Houndshark and Jimbaran Guitarfish occur primarily in the Indonesian Sea Large Marine Ecosystem (LME) and marginally into the Bay of Bengal LME. Bali Numbfish are endemic to the Indonesian Sea LME.

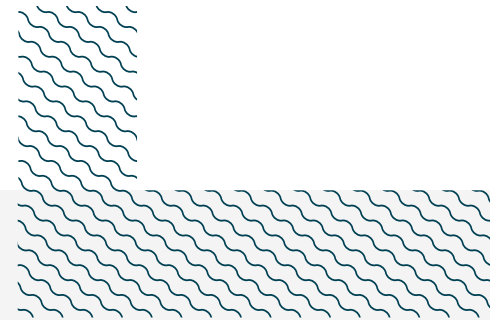
SUB-CRITERION C₁ - REPRODUCTIVE AREAS

Southern Sumbawa is an important reproductive area for one shark and one ray species.

Based on monitoring of demersal longline fisheries operating in the area between 2014-2023, neonate and young-of-the-year (YOY) Scalloped Hammerhead and Bottlenose Wedgefish were regularly recorded (BM Simeon et al. unpubl. data 2024).

For Scalloped Hammerhead, 1,011 individuals between 30–60 cm total length (TL) were recorded (BM Simeon et al. unpubl. data 2024). These sizes are similar to the known size-at-birth for the species (31–57 cm TL; Ebert et al. 2021), confirming that these individuals were neonates or YOY. Most of these small individuals were caught between November and January (BM Simeon et al. unpubl. data 2024), suggesting a seasonality to their reproductive activity in the area.

For Bottlenose Wedgefish, 68 individuals measuring 48–60 cm TL were recorded (BM Simeon et al. unpubl. data 2024). These sizes are similar to the known size-at-birth for the species (46–50 cm TL; Last & Stevens 2009), confirming that these individuals were neonates or YOY.



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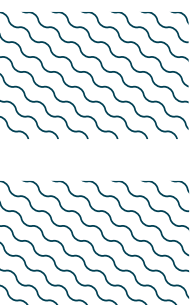
QUALIFYING SPECIES

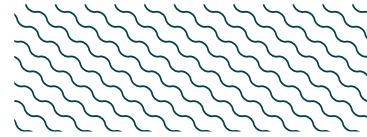
Scientific Name	Common Name	IUCN Red List Category	Global Depth Range (m)	ISRA Criteria/Sub-criteria Met								
				A	B	C1	C2	C3	C4	C5	D1	D2
SHARKS												
<i>Hemitriakis indroyonoi</i>	Indonesian Houndshark	EN	60-100	X	X							
<i>Sphyrna lewini</i>	Scalloped Hammerhead	CR	0-1,043	X		X						
RAYS												
<i>Narcine baliensis</i>	Bali Numbfish	NT	15-62		X							
<i>Rhinobatos jimbaranensis</i>	Jimbaran Guitarfish	CR	1-60	X	X							
<i>Rhynchobatus australiae</i>	Bottlenose Wedgefish	CR	0-60	X		X						

SUPPORTING SPECIES

Scientific Name	Common Name	IUCN Red List Category
SHARKS		
<i>Alopias pelagicus</i>	Pelagic Thresher	EN
<i>Alopias superciliosus</i>	Bigeye Thresher	VU
<i>Atelomycterus marmoratus</i>	Coral Catshark	NT
<i>Carcharhinus albimarginatus</i>	Silvertip Shark	VU
<i>Carcharhinus brevipinna</i>	Spinner Shark	VU
<i>Carcharhinus limbatus</i>	Blacktip Shark	VU
<i>Carcharhinus sorrah</i>	Spottail Shark	NT
<i>Loxodon macrorhinus</i>	Sliteye Shark	NT
<i>Mustelus stevensi</i>	Western Spotted Gummy Shark	LC
<i>Mustelus widodoi</i>	Whitfin Smoothound	VU
<i>Orectolobus leptolineatus</i>	Indonesian Wobbegong	NT
<i>Rhizoprionodon acutus</i>	Milk Shark	VU
<i>Triacodon obesus</i>	Whitetip Reef Shark	VU
RAYS		
<i>Aetobatus ocellatus</i>	Spotted Eagle Ray	EN
<i>Himantura australis</i>	Australian Whipray	NT
<i>Mobula mobular</i>	Spinetail Devil Ray	EN
<i>Myliobatis hamlyni</i>	Purple Eagle Ray	NT
<i>Neotrygon orientalis</i>	Oriental Bluespotted Maskray	LC
<i>Pteroplatytrygon violacea</i>	Pelagic Stingray	LC
<i>Rhina ancylostomus</i>	Bowmouth Guitarfish	CR

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.



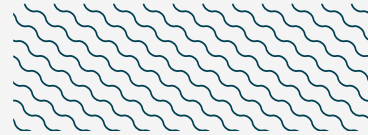


SUPPORTING INFORMATION

There are additional indications that this area may be important for a range restricted shark and an important reproductive area for three shark and three ray species.

Monitoring in the area recorded 90 Indonesian Wobbegong between 2014-2023 (BM Simeon unpubl. data 2023). The Indonesian Wobbegong occurs in the Indonesian Sea LME and the South China Sea LME. More information is needed to confirm the importance of the area compared to others in the region.

Spinner Shark and Blacktip Shark neonates with open umbilical scars have been recorded from landing monitoring in the area. These individuals are caught close to estuaries in Southern Sumbawa. In addition, pregnant and neonate Pelagic Thresher (n = 14), Australian Whipray (n = 17), Oriental Bluespotted Maskray (n = 23), and Pelagic Stingray (n = 3) have been recorded (BM Simeon unpubl. data 2024). More information is needed to confirm the regular presence of these life stages and the reproductive importance of the area.



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