

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

LAMPUNG BAY ISRA

Asia Region

SUMMARY

Lampung Bay is situated in the southern part of Sumatra Island, Indonesia. It is adjacent to the Sunda Strait which connects the eastern Indian Ocean and the Java Sea. The area is characterised by seagrass beds, mangroves, and sandy and muddy substrates. Within this area there are: **threatened species** and **reproductive areas** (Scalloped Hammerhead *Sphyrna lewini*).

CRITERIA

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

— —
INDONESIA

— —
0-50 metres

— —
213.32 km²





DESCRIPTION OF HABITAT

Lampung Bay is situated in the southern part of Sumatra Island adjacent to the Sunda Strait, Indonesia. The strait connects the eastern Indian Ocean and the Java Sea, making this area important for sea mass transport and pelagic fish migration (Koropitan et al. 2004; Amri 2008; Widhi et al. 2013; Rahmawati et al. 2016; Tarigan et al. 2021). The key coastal habitats in the area are seagrass beds and mangroves with sandy and muddy substrates in the middle of the bay, where the depth varies between 8-50 m, with an average temperature and salinity of ~29°C and 32 PSU, respectively (Samusamu et al. unpubl. data 2021).

This Important Shark and Ray Area is benthopelagic and is delineated from inshore and surface waters (0 m) to 50 m based on the depth range of Qualifying Species in the area.

ISRA CRITERIA

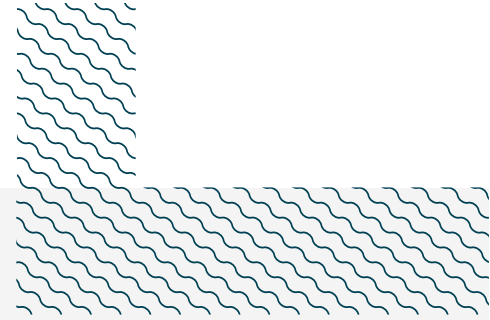
CRITERION A – VULNERABILITY

The one Qualifying Species within the area is considered threatened with extinction according to the IUCN Red List of Threatened Species. The Scalloped Hammerhead is assessed as Critically Endangered (Rigby et al. 2019).

SUB-CRITERION C₁ – REPRODUCTIVE AREAS

Lampung Bay is an important reproductive area for one shark species.

Scalloped Hammerhead neonates were recorded in surveys in 2013, 2020, and 2021. A total of 227 neonate and young-of-the-year (YOY) Scalloped Hammerheads measuring between 39–68 cm total length (TL) were observed landed in 2013 from fisheries operating in the area (Parluhutan & Imaniar 2015). These fisheries were also observed landing 301 Scalloped Hammerheads in 2020 (Nugraha et al. 2023), and 472 in 2021 (Samusamu et al. unpubl. data 2021), at sizes between 37.5–70.6 cm TL. These were determined to be neonates and YOY based on a size-at-birth from Indonesian waters of 31–57 cm TL (White et al. 2008) and the presence of open umbilical scars. Young Scalloped Hammerheads were captured mostly in areas characterised by sandy and muddy substrates. Results from these surveys demonstrate the regular and predictable use of this area and how it sustains Scalloped Hammerheads at early life-cycle stages.



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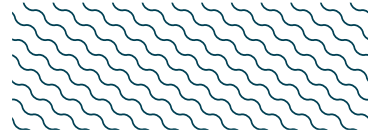
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QUALIFYING SPECIES

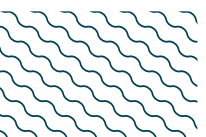
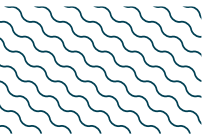
Scientific Name	Common Name	IUCN Red List Category	Global Depth Range (m)	ISRA Criteria/Sub-criteria Met									
				A	B	C1	C2	C3	C4	C5	D1	D2	
SHARKS													
<i>Sphyrna lewini</i>	Scalloped Hammerhead	CR	0-1,043	X		X							

SUPPORTING SPECIES



Scientific Name	Common Name	IUCN Red List Category
SHARKS		
<i>Carcharhinus falciformis</i>	Silky Shark	VU
<i>Carcharhinus tjtjt</i>	Indonesian Whaler Shark	VU
<i>Carcharhinus limbatus</i>	Blacktip Shark	VU
<i>Chiloscyllium punctatum</i>	Grey Carpetshark	NT
<i>Galeocerdo cuvier</i>	Tiger Shark	NT

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.





REFERENCES

- Amri K. 2008.** Analisis hubungan kondisi oseanografi dengan fluktuasi hasil tangkapan ikan pelagis di Selat Sunda. *Jurnal Penelitian Perikanan Indonesia* 14(1): 55-65. <https://doi.org/10.15578/jppi.14.1.2008.55-65>
- Koropitan AF, Hadi S, Radjawane IM, Damar A. 2004.** A study on the dynamic of aquatic ecosystem in Lampung Bay: A coupled hydrodynamic-ecosystem modeling. *Jurnal Ilmu-ilmu Perairan dan Perikanan Indonesia* 11(1): 29-38.
- Nugraha B, Samusamu AS, Puspasari R, Oktaviani D, Rachmawati R, Rachmawati PF, Sulaeman PS, Hartati ST, Wiadnyana NN. 2023.** Biological aspects, exploitation rates, and spawning potential ratio of scalloped hammerhead shark (*Sphyrna lewini* Griffith & Smith, 1834) in Lampung Bay waters, Indonesia. *IOP Conference Series: Earth and Environmental Science* 1148(1): 012026. <https://doi.org/10.1088/1755-1315/1148/1/012026>
- Parluhutan D, Imaniar K. 2015.** Diversity of shark species landed in TPI bom kalianda, South Lampung. In: Dharmadi, Fahmi, eds. *Prosiding Simposium Hiu dan Pari di Indonesia*. Kerjasama Kementerian Kelautan dan Perikanan, Lembaga Ilmu Pengetahuan Indonesia, and WWF Indonesia, 15-21.
- Rahmawati R, Atmadipoera AS, Sukoharjo SS. 2016.** Pola sirkulasi dan variabilitas arus di perairan Selat Sunda. *Jurnal Kelautan Nasional* 11(3): 141-158. <https://doi.org/10.15578/jkn.v11i3.6115>
- Rigby CL, Dulvy NK, Barreto R, Carlson J, Fernando D, Fordham S, Francis MP, Herman K, Jabado RW, Liu KM, et al. 2019.** *Sphyrna lewini*. *The IUCN Red List of Threatened Species* 2019: e.T39385A2918526.
- Tarigan DJ, Sasongko AS, Rahayu BD, Anwar Y. 2021.** Potential fishing zones assesment on *Euthynnus affinis* in Sunda Strait. *Jurnal Teknologi Perikanan dan Kelautan* 12(1): 73-84.
- White WT, Bartron C, Potter IC. 2008.** Catch composition and reproductive biology of *Sphyrna lewini* (Griffith & Smith) (Carcharhiniformes, Sphyrnidae) in Indonesian waters. *Journal of Fish Biology* 72: 1675-1689. <https://doi.org/10.1111/j.1095-8649.2008.01843.x>
- Widhi KB, Indrayanti E, Prasetyawan IB. 2013.** Kajian pola arus di perairan teluk lampung menggunakan pendekatan model hidrodinamika 2-dimensi DELFT3D. *Journal of Oceanography* 1(2): 169-177