

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

DONGSHA ATOLL ISRA

Asia Region

SUMMARY

Dongsha Atoll is located in Kaohsiung, Chinese Taipei. The atoll includes one islet and is characterised by the presence of extensive seagrass beds, mangroves, and coral reefs. The area overlaps with one protected area, the Dongsha Atoll National Park. Within this area there are: **threatened species** and **reproductive areas** (Sharptooth Lemon Shark *Negaprion acutidens*).

CRITERIA

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

— CHINESE TAIPEI —

— 0-90 metres —

— 412.8 km² —





DESCRIPTION OF HABITAT

Dongsha Atoll is located in Kaohsiung in Chinese Taipei. The area lies ~450 km southwest from the Taiwan Island. The atoll is in the northern South China Sea and includes one islet on its western side, Dongsha Island (Chou 2016). A single inlet on the western part of the island allows seawater exchange between the inner lagoon and the open ocean, which is dependent on tidal changes. The area is characterised by the presence of extensive seagrass beds (20 times larger than all seagrass beds from Taiwan), mangroves, and coral reefs (Chang et al. 2012). Maximum sea surface temperatures average ~28°C. Minimum temperatures are ~19°C between October-March, during northeast monsoons (Lee et al. 2021).

The area overlaps with the Dongsha Atoll National Park.

This Important Shark and Ray Area is benthopelagic and is delineated from inshore and surface waters (0 m) to 90 m based on the depth range of the Qualifying Species.

ISRA CRITERIA

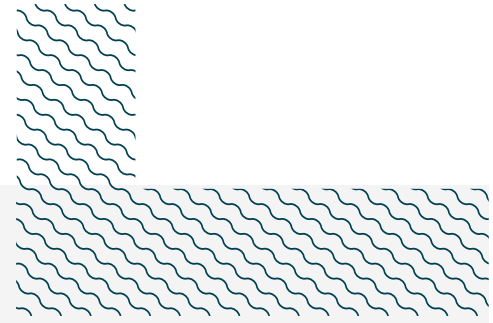
CRITERION A – VULNERABILITY

The one Qualifying Species within the area is considered threatened with extinction according to the IUCN Red List of Threatened Species. The Sharptooth Lemon Shark is assessed as Endangered (Simpfendorfer et al. 2021).

SUB-CRITERION C1 – REPRODUCTIVE AREAS

Dongsha Atoll is an important reproductive area for one shark species.

Sharptooth Lemon Shark is the most abundant shark species at Dongsha Atoll (Lee et al. 2014, 2021). It regularly and predictably aggregates in the lagoon on seagrass beds (Wang & Chen 2014; Chen et al. 2016, 2020). Between 2009-2012, individuals measuring 60-200 cm total length (TL) were observed during an underwater visual census around the island, on seagrass beds and in the intertidal zone (Lee et al. 2014, 2021). Between 2013-2017, 246 neonates with open or recently closed umbilical scars were caught with traps in the lagoon and on seagrass beds (Liu et al. 2023). Individuals were caught in April and May and measured 61.5-88 cm TL, which is close to the known size-at-birth of the species (45-80 cm TL; Ebert et al. 2021). The 246 individuals were tagged either with conventional tags or acoustic transmitters and 55 were recaptured from 47 to 640 days after the first observation, confirming high residency to the area for much of the individuals (Liu et al. 2023). According to acoustic telemetry, individuals <3 years old spend most of the time near the lagoon mouth and their presence is highly influenced by tidal changes (Wang & Chen 2013; Chen et al. 2016, 2020).



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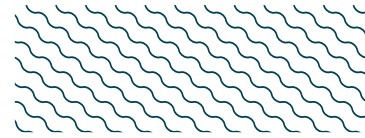
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QUALIFYING SPECIES

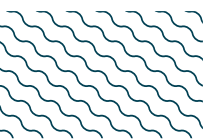
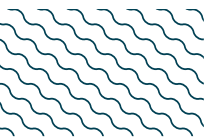
Scientific Name	Common Name	IUCN Red List Category	Global Depth Range (m)	ISRA Criteria/Sub-criteria Met									
				A	B	C1	C2	C3	C4	C5	D1	D2	
SHARKS													
<i>Negaprion acutidens</i>	Sharptooth Lemon Shark	EN	0-90	X		X							

SUPPORTING SPECIES

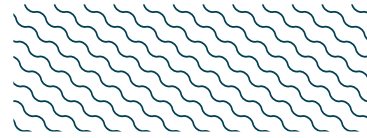


Scientific Name	Common Name	IUCN Red List Category
SHARKS		
<i>Carcharhinus limbatus</i>	Blacktip Shark	VU
<i>Galeocerdo cuvier</i>	Tiger Shark	NT
RAYS		
<i>Aetobatus ocellatus</i>	Spotted Eagle Ray	EN
<i>Taeniurops meyeri</i>	Blotched Fantail Ray	VU
<i>Pateobatis fai</i>	Pink Whipray	VU

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.

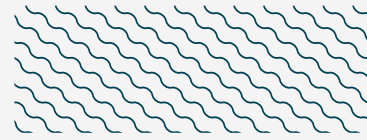


SUPPORTING INFORMATION



There are additional indications that this area is important for feeding for Sharptooth Lemon Shark.

Foraging behaviours of immature Sharptooth Lemon Sharks around the lagoon area and near seagrass beds of the Dongsha Island have been regularly observed between 2012–2017 (Wang & Chen 2014; Chen et al. 2016, 2020). Dongsha Atoll is the only place within 300 km with seagrass beds, confirming that this is the only suitable habitat where early life stages of this species can feed. More evidence is needed to confirm that this area is more important than others in the region.



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