

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

YONAGUNI ISLAND

Asia Region

SUMMARY

Yonaguni Island, located in the Ryukyu Arc, is part of the Yaeyama Islands, and is the westernmost island of Japan. The area is characterised by rocky coasts and is under the influence of the Kuroshio Current. This area overlaps with the Southwest Islands Ecologically or Biologically Significant Marine Area (EBSA) and the Yonaguni Island EBSA. Within this area there are: **threatened species** and **undefined aggregations** (Scalloped Hammerhead *Sphyrna lewini*).

CRITERIA

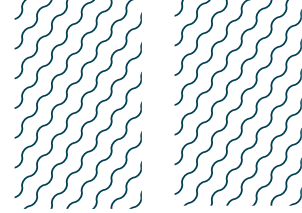
Criterion A - Vulnerability; Sub-criterion C5 - Undefined Aggregations

JAPAN

0-90 metres

10.35 km²





DESCRIPTION OF HABITAT

Yonaguni Island, located in the Ryukyu Arc, is part of the Yaeyama Islands, and is the westernmost island of Japan (Koeda et al. 2016). It is an elliptical island of 28 km² with a coastline composed of rocky cliffs (Koeda et al. 2016). Cape Irizaki is the westernmost part of the island.

Yonaguni Island is located on the pathway of the Kuroshio Current (Koeda et al. 2016). The Kuroshio Current is one of the western boundary currents of the subtropical North Pacific and is the dominating current in the East China Sea. It originates in the eastern Philippines, flows northward along the west boundary of the Pacific Ocean, and enters the East China Sea between Taiwan and Ishigaki (Zhang et al. 2012). This current is one of the most important routes for poleward heat transport, and contributes greatly to the productivity of marine ecosystems along in the coastal regions of its route. The Kuroshio Current undergoes a significant spatial and temporal variability along its route, influencing greatly the biological resources availability off southwest Japan (Andres et al. 2015; Lizarbe Barreto et al. 2021).

Yonaguni Island sits within the Southwest Islands Ecologically or Biologically Significant Marine Area (EBSA; CBD 2024) and the Yonaguni Island EBSA (Ministry of the Environment, Government of Japan 2024).

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 in the area.

ISRA CRITERIA

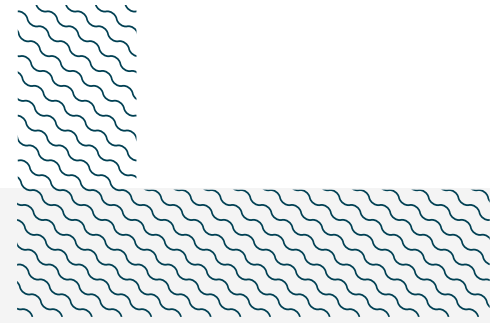
CRITERION A - VULNERABILITY

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 C5 - UNDEFINED AGGREGATIONS

Yonaguni Island is an important aggregation area for one shark species.

Based on local ecological knowledge (LEK) from dive centres operating in Yonaguni, aggregations of up to 200 Scalloped Hammerheads are regularly and predictably recorded around Cape Irizaki (A Ramos pers. obs. 2015-2023). Aggregations are seasonal between December and March and are mostly comprised of large-bodied females (estimated sizes between 200-400 cm total length [TL]; size-at-maturity 200-250 cm TL; Ebert et al. 2021). Aggregations are observed in the water column at depths of 20-50 m (where the bathymetry is 30-90 m), occurring with a higher probability when current flows in a westward direction (YDS 2023; A Ramos pers. obs. 2015-2023). These aggregations could potentially be related to reproduction, as a place for pregnant females to rest, since large females suspected to be pregnant (presence of extended abdomens) are observed regularly in the area (A Ramos pers. obs. 2015-2023). Additional information is needed to understand the nature and function of these aggregations.



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Mareike C Dornhege-Lazaroff (Churamura Conservation), Andrea Ramos (Aloha Divers Okinawa), and Amanda Batlle-Morera (IUCN SSC Shark Specialist Group - ISRA Project) contributed and consolidated information included in this factsheet. We thank all participants of the 2024 ISRA Region 9 - Asia workshop for their contributions to this process.

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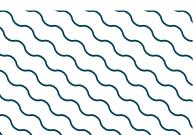
QUALIFYING SPECIES

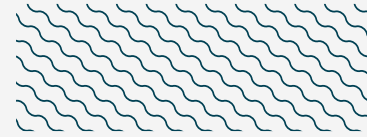
| Scientific Name | Common Name | IUCN Red List Category | Global Depth Range (m) | ISRA Criteria/Sub-criteria Met | | | | | | | | | |
|-----------------------|----------------------|------------------------|------------------------|--------------------------------|---|----|----|----|----|----|----|----|--|
| | | | | 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 brevipinna</i> | Spinner Shark | VU |
| <i>Carcharhinus falciformis</i> | Silky Shark | VU |
| <i>Carcharodon carcharias</i> | White Shark | VU |
| <i>Chiloscyllium punctatum</i> | Grey Carpetshark | NT |
| <i>Rhincodon typus</i> | Whale Shark | EN |
| <i>Pristiophorus japonicus</i> | Japanese Sawshark | LC |
| <i>Triaenodon obesus</i> | Whitetip Reef Shark | VU |
| RAYS | | |
| <i>Mobula birostris</i> | Oceanic Manta Ray | EN |
| <i>Neotrygon orientalis</i> | Oriental Bluespotted Maskray | LC |
| <i>Taeniurops meyeri</i> | Blotched Fantail Ray | 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.





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