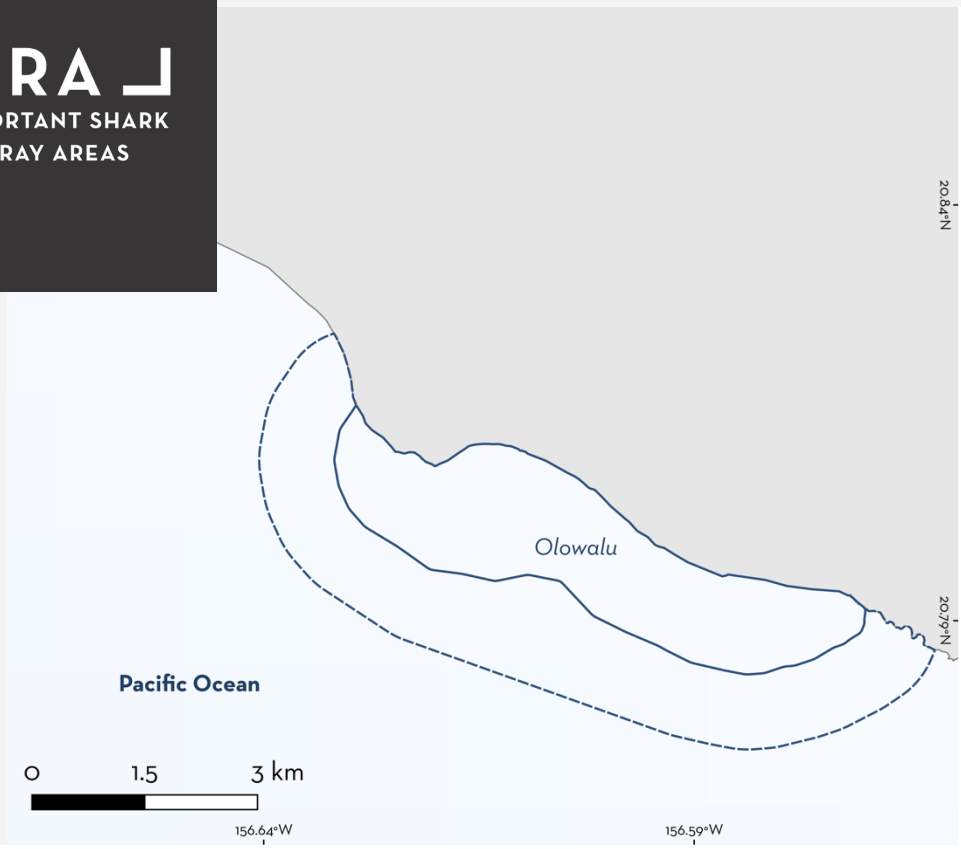
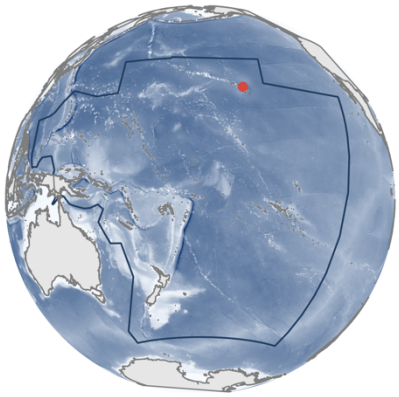
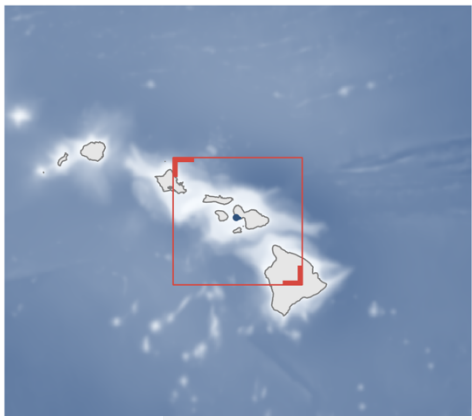
ISRA
IMPORTANT SHARK AND RAY AREAS







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

OLOWALU ISRA

New Zealand & Pacific Islands Region

HAWAII

0–30 metres

9.47 km²

SUMMARY

Olowalu is located off the west coast of Maui in the Hawaiian Islands of the United States of America. The area begins just offshore of Olowalu town to the north and Papalaua Beach to the south. It is characterised by a fringing reef system and lies south of the Au'au Channel that runs between the islands of Maui and Lana'i. This area overlaps the Molokai Island marine Key Biodiversity Area. Within this area there are: **threatened species, reproductive areas**, and **undefined aggregations** (Reef Manta Ray *Mobula alfredi*).

CRITERIA

Criterion A – Vulnerability; Sub-criterion C1 – Reproductive Areas; Sub-criterion C5 – Undefined Aggregations

DESCRIPTION OF HABITAT

Olowalu is located off the western coast of the island of Maui within the Hawaiian Islands of the United States of America. The name of the reef is referred to in ancient Hawaiian history as a *Pu'uhonua* or a place of refuge (Kamakau 1992). The area is characterised by a fringing reef that begins just offshore of Olowalu town to the north and Papalaua Beach to the south. The Olowalu reef is home to a variety of coral species, including some of the oldest and largest coral formations in Hawaii (Jokiel 2008).

This area overlaps the Molokai Island marine Key Biodiversity Area (KBA 2024).

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 Vulnerable Reef Manta Ray (Marshall et al. 2022).

SUB-CRITERION C1 – REPRODUCTIVE AREAS

Olowalu is an important reproductive area for one ray species.

Between 2005–2010, 286 dive surveys were conducted in the area (Deakos 2012). From these surveys, 309 individual Reef Manta Rays were identified via photo identification. Courtship trains were observed on 32 (11%) of these surveys and group size ranged from 3–18 individuals (mean = 7.2). Courtship trains consist of a single female being pursued by one or more males. Courtship trains were observed during 10 months of the year, with more courtship trains (24% of the surveys) occurring during the boreal winter (December–April) compared with summer months where they were only observed during 10% of surveys (Deakos et al. 2011). Pregnant females were more likely to be observed during winter, with at least one pregnant female observed on 51 (18%) surveys (comprising 20 individuals). Pregnancy was determined based on the distension of the ray's abdomen (Deakos 2012). This habitat supports the largest known population of Reef Manta Rays with over 600 unique individuals identified to date (MH Deakos pers. obs. 2024).

SUB-CRITERION C5 – UNDEFINED AGGREGATIONS

Olowalu is an important area for undefined aggregations of one ray species.

During dive surveys between 2005–2009, a total of 1,494 Reef Manta Ray encounters were recorded and photo identification confirmed 290 unique individuals in the area (Deakos et al. 2011). Aggregations ranged between 2–31 individuals (mean = 6.21), and sightings were higher during winter. There was a diurnal trend to the encounters, with sightings more common in the afternoon, so surveys were carried out more frequently in the afternoon (82%) to maximise data collection. The area is primarily used as a cleaning station where predominantly Saddle Wrasse *Thalassoma duperrey* remove parasitic copepods from the ray's body surface and Hawaiian Cleaner Wrasse

Labroides phthirophagus clean the interior regions of the mouth and gills (Deakos 2010a). This area was chosen for paired-laser photogrammetry studies due to the reliability of encountering Reef Manta Rays visiting the cleaning stations (Deakos 2010b).

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Mark H Deakos (Hawaii Association for Marine Education and Research [HAMER]) and Asia O Armstrong (IUCN SSC Shark Specialist Group – ISRA Project) contributed and consolidated information included in this factsheet. We thank all participants of the 2024 ISRA Region 10 – New Zealand and Pacific Islands 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
RAYS												
Mobula alfredi	Reef Manta Ray	VU	0–711	X		X				X		

SUPPORTING SPECIES

Scientific Name	Common Name	IUCN Red List Category
SHARKS		
Carcharhinus melanopterus	Blacktip Reef Shark	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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