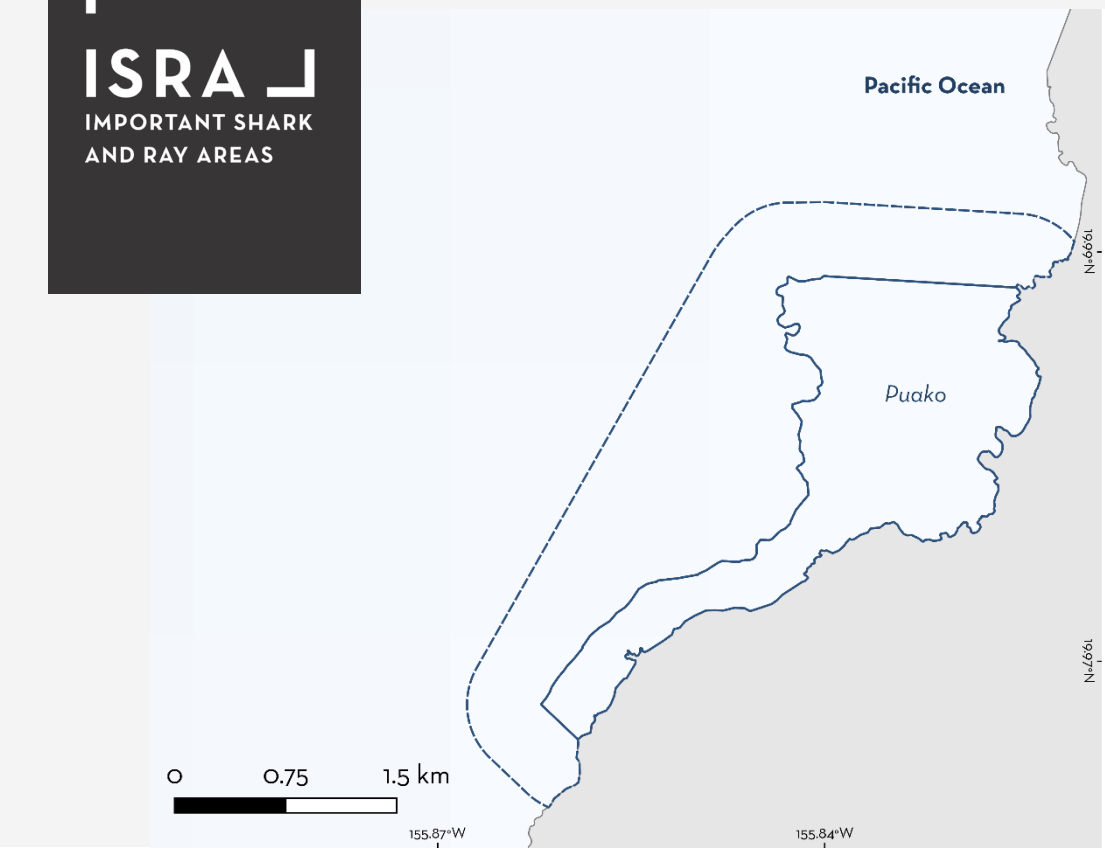
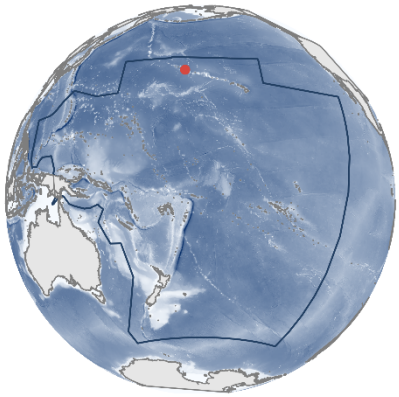
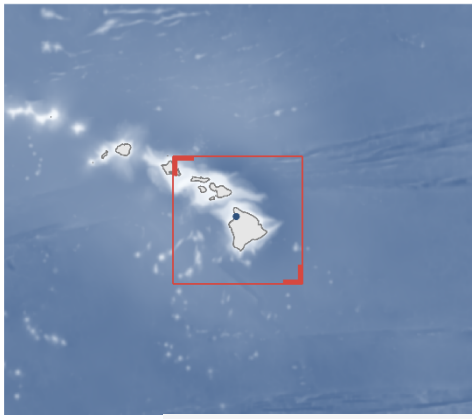
ISRA
IMPORTANT SHARK AND RAY AREAS







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

PUAKO ISRA

New Zealand & Pacific Islands Region

HAWAII

0–50 metres

3.19 km²

SUMMARY

Puako is located off the Kohala Coast of the Big Island of the Hawaiian Islands of the United States of America. The area is characterised by a fringe reef that runs parallel to the shore. The area is reported to sustain one of Hawaii's healthiest coral reefs. The area is influenced by strong currents in boreal winter, and milder currents in summer. Within this area there are: **threatened species** (e.g., Reef Manta Ray *Mobula alfredi*) and **feeding areas** (e.g., Spotted Eagle Ray *Aetobatus ocellatus*).

CRITERIA

Criterion A – Vulnerability; Sub-criterion C2 – Feeding Areas

DESCRIPTION OF HABITAT

Puako is located off the northwest coast of Big Island, Hawaii, an island state of the United States of America. Puako is situated off the Kohala Coast and is characterised by a fringe reef that runs parallel to the shore (The Right Blue 2007). The area is reported to sustain one of Hawaii's healthiest coral reefs (Yoshioka et al. 2016) which are comprised mostly of Finger Coral *Porites compressa* (The Right Blue 2007). The area is influenced by strong currents in winter, and milder currents in summer (Hawaiian Planner 2024).

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

ISRA CRITERIA

CRITERION A – VULNERABILITY

Two Qualifying Species considered threatened with extinction according to the IUCN Red List of Threatened Species regularly occur in the area. These are the Endangered Spotted Eagle Ray (Finucci et al. 2024) and the Vulnerable Reef Manta Ray (Marshall et al. 2022).

SUB-CRITERION C2 – FEEDING AREAS

Puako is an important feeding area for two ray species.

Spotted Eagle Rays are regularly and predictably observed feeding in this area, sometimes in aggregations. Between 2019–2024, Spotted Eagle Rays were regularly observed by recreational divers who undertake ~100 dives per year (J Glazner pers. obs. 2024). During these dives, there were 50 sightings per year of up to five Spotted Eagle Rays at one time. Of these sightings, Spotted Eagle Rays were observed feeding on ~50% of dives undertaken in this area. Spotted Eagle Rays are seen digging through sand and rubble in this area year-round (J Glazner pers. obs. 2024). This species is observed elsewhere in this region, but this location appears to be important for feeding purposes.

Reef Manta Rays regularly and predictably feed on zooplankton in this area, sometimes in aggregations. Between 2019–2024, Reef Manta Rays were observed seasonally by recreational divers who undertake ~100 dives per year, year-round (J Glazner pers. obs. 2024). During this period, there have been 30 sightings per year while diving, of up to five Reef Manta Rays at one time (average = 1–2 individuals). Of these sightings, Reef Manta Rays were observed feeding at the surface, over the reef, on ~33% of dives undertaken in this area. Almost all Reef Manta Rays are observed feeding during the summer months (from June–October) (J Glazner pers. obs. 2024). Further, this area is particularly important as there are fewer records of Reef Manta Rays (of which are not observed feeding) from dives undertaken in adjacent areas (J Glazner pers. obs. 2024). While the exact environmental conditions and oceanographic features driving local plankton abundances in this area remain unknown, the resulting abundance of Reef Manta Rays has been regularly documented across multiple years.

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Jessica Glazner (Liquid Cosmos Divers), Asia O Armstrong (IUCN SSC Shark Specialist Group – ISRA Project), and Ryan Charles (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												
Aetobatus ocellatus	Spotted Eagle Ray	EN	0–40	X			X					
Mobula alfredi	Reef Manta Ray	VU	0–711	X			X					

SUPPORTING SPECIES

Scientific Name	Common Name	IUCN Red List Category
SHARKS		
Triaenodon obesus	Whitetip 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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