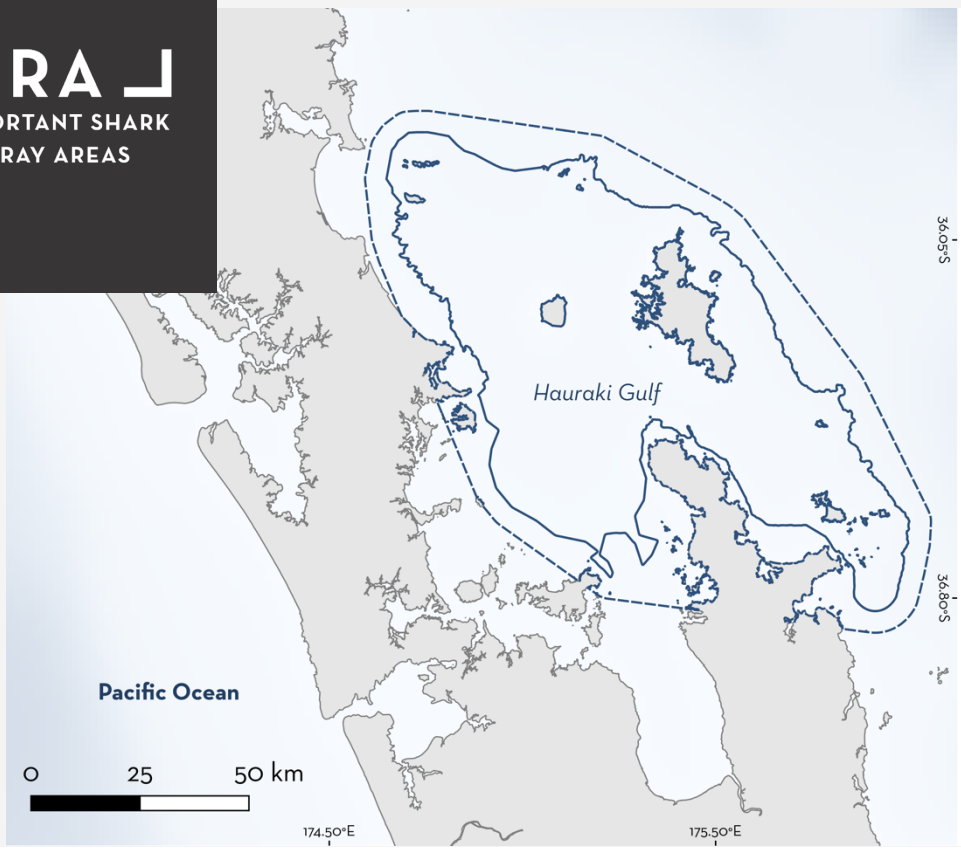
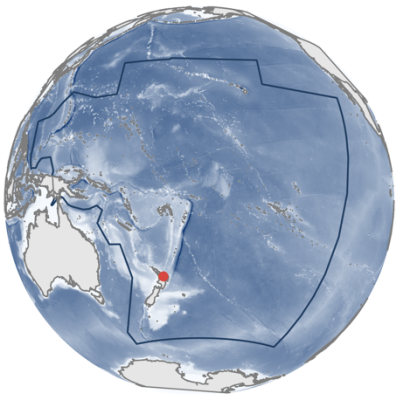
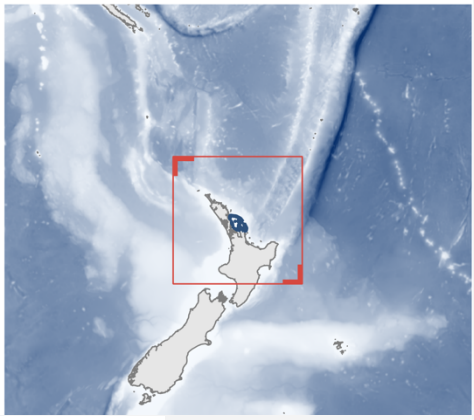
ISRA
IMPORTANT SHARK AND RAY AREAS







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

HAURAKI GULF ISRA

New Zealand & Pacific Islands Region

NEW ZEALAND

0–120 metres

6,046.7 km²

SUMMARY

Hauraki Gulf is located on the northeast coast of the North Island of New Zealand. The area comprises a shallow semi-enclosed embayment, inner and outer shelfs, and 12 offshore islands. The narrow continental shelf (<40 km wide) promotes upwelling, making this region among the country's most productive waters. Within this area there are: **threatened species** and **feeding areas** (Oceanic Manta Ray *Mobula birostris*).

CRITERIA

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

DESCRIPTION OF HABITAT

Hauraki Gulf is located on the northeast coast of the North Island of New Zealand. It covers a large area of continental shelf, comprised of a shallow semi-enclosed embayment, inner and outer shelfs and 12 offshore islands or island groups. The area is characterised by diverse habitats, ranging from shallow bays and estuaries to rocky reefs, and oceanic waters (Ozaki 2023). The inner Hauraki Gulf is semi-enclosed except in the north and northeast where its seaward boundaries are marked by offshore islands (Haututru/Little Barrier and Aotea/Great Barrier) through to the Mokohinau Islands, and Hen and Chicken Islands to the north. Reef systems exist in the middle of the channels with steep gradients exhibited from depths ranging between 20 to 60 m, with high nutrient levels in surface waters (Sharples 1997).

Hauraki Gulf and its adjacent waters are highly productive, supporting diverse year-round marine communities (Stephenson et al. 2023). The regions' waters exhibit low salinity and nutrient-rich coastal waters, bordered seaward by the warm, nutrient-poor East Auckland Current flowing southeast from the East Australian Current and the Tasman Front, driving hydrodynamics in this region (Zeldis et al. 2004). Significant upwelling occurs along the entire 100 m depth contour, to the seaward side of the various offshore islands and rocky outcrops (Zeldis et al. 2004). Dense surface swarming krill *Nyctiphanes australis* is observed in the area. The key behavioural characteristic of this species is that it forms dense swarms at or just below the surface during the daytime (Kozmian-Ledward et al. 2021).

This Important Shark and Ray Area is benthic and pelagic and is delineated from inshore and surface waters (0 m) to 120 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 Endangered Oceanic Manta Ray (Marshall et al. 2022).

SUB-CRITERION C2 – FEEDING AREAS

Hauraki Gulf is an important feeding area for one ray species.

This area predictably attracts Oceanic Manta Rays annually from the austral spring to autumn (November–April) (Duffy et al. 2018; Ozaki et al. 2024). Between 1994–2024, there were 1,146 verified sightings in the area compiled through citizen science submissions and dedicated research efforts (L Green unpubl. data 2024). This represents 90% of the sightings of Oceanic Manta Rays throughout New Zealand's waters (n = 1,276), supporting the importance of this area for this species. Through photo identification, researchers have confirmed 206 individuals since 2001 (males n = 53; females n = 145, unknown sex = 8) (L Green unpubl. data 2024).

Oceanic Manta Rays were observed feeding during 75% (n = 861) of sightings in the area (L Green unpubl. data 2024). Feeding aggregations range in size between 5–30 individuals during the peak season (December–February), with mass feeding aggregations (>50 individuals) observed several times a season (e.g., three in 2021, six in 2022, four in 2023, and seven to August 2024). Feeding aggregations can span several kilometres and coincide with dense surface swarming krill (L Green

pers. obs. 2024). The narrow continental shelf (<40 km wide) promotes upwelling, making this region among the country's most productive waters (Bradford-Grieve et al. 2006; Gaskin 2021). Between 2021–2024, aerial surveys using drones and boat-based encounters indicate that Oceanic Manta Rays are often engaged in somersault feeding behaviours when at the surface (L Green pers. obs 2024), indicating a densely concentrated prey environment (Stevens 2016).

Between 2021 and 2023, fine-scale satellite tracking of seven Oceanic Manta Rays (durations ranging 9–83 days) has also confirmed site fidelity to the Hauraki Gulf (Cooper 2024), supporting the importance of this area to this species.

Acknowledgments

Lydia Green (Manta Watch New Zealand Charitable Trust), Rikako Ozaki (University of Auckland), Tamsin Cooper (University of Auckland), Mark V Erdmann (Conservation International Aotearoa), Edy Setyawan (Conservation International), Clinton AJ Duffy (Auckland Museum), 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.

This factsheet has undergone review by the ISRA Independent Review Panel prior to its publication.

This project was funded by the Shark Conservation Fund, a philanthropic collaborative pooling expertise and resources to meet the threats facing the world's sharks and rays. The Shark Conservation Fund is a project of Rockefeller Philanthropy Advisors.

Suggested citation

IUCN SSC Shark Specialist Group. 2024. Hauraki Gulf ISRA Factsheet. Dubai: IUCN SSC Shark Specialist Group.

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 birostris	Oceanic Manta Ray	EN	0–1,246	X			X					

SUPPORTING SPECIES

Scientific Name	Common Name	IUCN Red List Category
SHARKS		
Galeorhinus galeus	Tope	CR
Isurus oxyrinchus	Shortfin Mako	EN
Rhincodon typus	Whale Shark	EN
Sphyrna zygaena	Smooth Hammerhead	VU
RAYS		
Mobula mobular	Spinetail Devil Ray	EN

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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