

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

## HONDA BAY ISRA

### Asia Region

### SUMMARY

Honda Bay is located in the eastern side of mainland Palawan, in the northwestern Sulu Sea, southwestern Philippines. This area is relatively shallow and characterised by extensive shallow coral reef platforms, and surrounded by seagrass beds, sand cays, and mangrove swamps. Eight rivers drain into the bay. This area overlaps with the Sulu-Sulawesi Marine Ecoregion Ecologically or Biologically Significant Marine Area. Within this area there are: **threatened species** (e.g., Whale Shark *Rhincodon typus*) and **feeding areas** (e.g., Oceanic Manta Ray *Mobula birostris*).

### CRITERIA

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

PHILIPPINES

0-50 metres

328.6 km<sup>2</sup>





## DESCRIPTION OF HABITAT

Honda Bay is located in the eastern side of mainland Palawan and lies in the northwestern Sulu Sea, a deep basin (>4,000 m), in southwestern Philippines. The area is relatively shallow and presents extensive shallow coral reef platforms, and is surrounded by seagrass beds, sand cays, and mangrove swamps, forming part of the nearshore ecological system of the larger Sulu Sea marine ecosystem (Sandalo 1994). Eight rivers drain into the bay: Babuyan, Bacungan, Langogan, Magarwak, Tanabag, Tandayak, Tarabana, and Ulangan.

The Sulu Sea has a tropical monsoon climate with two seasons each year: the dry (boreal winter) season that prevails from November to April, and the rainy (summer) season, extending from May to October (Wang et al. 2006). During the rainy season, the rivers discharge nutrients into Honda Bay, thereby increasing productivity.

This area overlaps with the Sulu-Sulawesi Marine Ecoregion Ecologically or Biologically Significant Marine Area (EBSA; CBD 2024).

This Important Shark and Ray Area is pelagic and is delineated from surface waters (0 m) to 50 m based on the depth range of the Qualifying Species in the area and 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 Whale Shark (Pierce & Norman 2016) and Oceanic Manta Ray (Marshall et al. 2022).

### SUB-CRITERION C2 – FEEDING AREAS

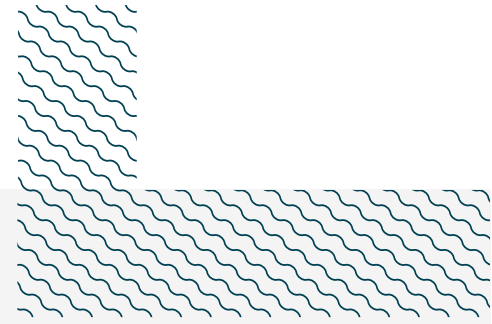
Honda Bay is an important feeding area for one shark and one ray species.

From 2018 to 2023, Whale Sharks were recorded from April to October feeding on zooplankton, primarily sergestid shrimps (family Sergestidae), and small schooling fishes such as Philippine Anchovy *Encrasicholina oligobranchus* (Araujo et al. 2019; LAMAVE unpubl. data 2023). Feeding observations were often made in association with tuna feeding on baitfishes (Araujo et al. 2019). Surface feeding behaviour such as active ram filter feeding and vertical feeding have been observed by fishers, marine wildlife tour operators, and researchers (LAMAVE unpubl. data 2023). Sub-surface feeding behaviour such as passive feeding has also been observed by researchers and Whale Shark tour operator guests (LAMAVE unpubl. data 2023).

Honda Bay has been identified among the 25 largest aggregation sites for Whale Sharks globally (Araujo et al. 2022). This area is one of three known naturally occurring feeding sites for Whale Sharks in the Philippines, hosting a predominantly juvenile, male-dominated aggregation (Araujo et al. 2019, 2022; LAMAVE unpubl. data 2023). A total of ~428 individuals have been identified since 2018 from a combination of dedicated boat-based surveys and citizen science contributions (LAMAVE unpubl. data 2023). In a single season between April and October 2018, 117 individuals were identified from 507 shark encounters. Overall, 34% of individuals have been resighted in this area (Araujo et al. 2022). A mean of  $\sim 41 \pm 13.5$  Whale Sharks have been estimated to be present at any one time during the season within this area (Araujo et al. 2022).

Since 2018, Oceanic Manta Rays have been regularly and predictably observed in the area from April to October (Rambahinarison et al. 2023; LAMAVE unpubl. data 2023). Individuals are seen feeding on zooplankton, primarily sergestid shrimps (Rambahinarison et al. 2023; LAMAVE unpubl. data 2023). The main feeding strategy exhibited in this area is dominated by somersault or barrel roll feeding, followed by surface, straight, and sideways feeding (LAMAVE unpubl. data 2023).

Across the Philippines, sightings of devil rays were collated into a national database between 2004-2020, using in-water photographs and videos gathered from citizen science and dedicated research efforts (Rambahinarison et al. 2023). This database includes 16 sites in which 205 sightings and 107 individual Oceanic Manta Rays have been recorded. Honda Bay is the site with the highest number of individuals recorded in the Philippines (68%, n = 73) (Rambahinarison et al. 2023), with ~100 individuals identified to-date (LAMAVE unpubl. data 2023). Mostly females (n = 51) are seen with a total of 83 sightings in which 8 individuals have been resighted in this area (Rambahinarison et al. 2023). Individual rays at this area have not been observed in other areas as no international match has been documented (LAMAVE unpubl. data 2023).



---

### **Acknowledgments**

Ariana Agustines (Large Marine Vertebrates Research Institute Philippines), Andrew Chin (James Cook University), Jessica Labaja (Large Marine Vertebrates Research Institute Philippines), Alessandro Ponso (Large Marine Vertebrates Research Institute Philippines), and Adriana Gonzalez Pestana (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.

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.** Honda Bay ISRA Factsheet. Dubai: IUCN SSC Shark Specialist Group.

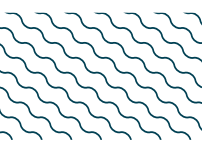
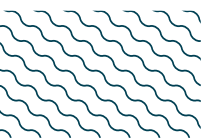
## QUALIFYING SPECIES

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	
<b>SHARKS</b>													
<i>Rhincodon typus</i>	Whale Shark	EN	0-1,928	X			X						
<b>RAYs</b>													
<i>Mobula birostris</i>	Oceanic Manta Ray	EN	0-1,246	X			X						

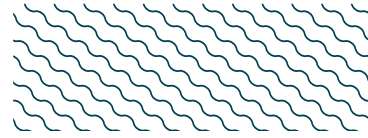
## SUPPORTING SPECIES

Scientific Name	Common Name	IUCN Red List Category
<b>SHARKS</b>		
<i>Alopias pelagicus</i>	Pelagic Thresher	EN
<i>Sphyrna lewini</i>	Scalloped Hammerhead	CR
<b>RAYS</b>		
<i>Mobula kuhlii</i>	Shorthorned Pygmy Devil Ray	EN
<i>Mobula mobular</i>	Spinetail Devil Ray	EN

*IUCN Red List of Threatened Species Categories are available by searching species names at [www.iucnredlist.org](http://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 Honda Bay might be an important feeding area for two ray species. Spinetail Devil Rays and Shorthorned Pygmy Devil Rays have been observed in the area during April-October monitoring surveys (Araujo et al. 2019). It is difficult to definitively conclude if this area is an important feeding ground for these species, as sightings of both these species are opportunistic with no dedicated surveys for devil rays. When sighted, individuals of both species can be seen solo or in groups and display a range of behaviours that include feeding (i.e., somersault or barrel roll feeding for Spinetail Devil Ray, and straight feeding for Spinetail Devil Ray and Shorthorned Pygmy Devil Ray), as well as those that are not directly linked to feeding (i.e., swimming with no visible plankton present for both species). Further information is required to understand the importance of this area for these species.



## REFERENCES

- Araujo G, Agustines A, Tracey B, Snow S, Labaja J, Ponzo A. 2019.** Photo-ID and telemetry highlight a global whale shark hotspot in Palawan, Philippines. *Scientific Reports* 9(1): 17209. <https://doi.org/10.1038/s41598-019-53718-w>
- Araujo G, Agustines A, Bach SS, Cochran JEM, Parra-Galván Edl, Parra-Venegas Rdl, Diamant S, Dove A, Fox S, Graham RT, et al. 2022.** Improving sightings derived residency estimation for whale shark aggregations: A novel metric applied to a global data set. *Frontiers in Marine Science* 9: 775691. <https://doi.org/10.3389/fmars.2022.775691>
- Convention on Biological Diversity (CBD). 2024.** Sulu-Sulawesi Marine Ecoregion. Ecologically or Biologically Significant Areas (EBSAs). Available at: <https://chm.cbd.int/database/record?documentID=237880> Accessed January 2024.
- Marshall A, Barreto R, Carlson J, Fernando D, Fordham S, Francis MP, Derrick D, Herman K, Jabado RW, Liu KM, et al. 2022.** *Mobula birostris* (amended version of 2020 assessment). *The IUCN Red List of Threatened Species* 2022: e.T198921A214397182. <https://dx.doi.org/10.2305/IUCN.UK.2022-1.RLTS.T198921A214397182.en>
- Pierce SJ, Norman B. 2016.** *Rhincodon typus*. *The IUCN Red List of Threatened Species* 2016: e.T19488A2365291. <https://dx.doi.org/10.2305/IUCN.UK.2016-1.RLTS.T19488A2365291.en>
- Rambahiniarison J, Agustines A, Alexopoulos K, Araujo G, Armstrong AO, Arnold S, Barruga A, Cañete T, Conales S Jr, Delijero K, et al. 2023.** Distribution of the reef manta ray *Mobula alfredi* and the oceanic manta ray *Mobula birostris* in the Philippines: a collaborative effort for conservation. *Journal of Fish Biology* 102(2): 492–503. <https://doi.org/10.1111/jfb.15283>
- Sandalo RM. 1994.** Community-based coastal resources management: The Palawan experience. In: Pomery RS, ed. *Community management and common property of coastal fisheries*. ICLARM Conference Proceeding, 189.
- Torres DS, Lim IA, Reyes CT, Narida E. 2000.** Notes on the characteristics of whale sharks (*Rhincodon typus*) in Honda Bay (Palawan, Philippines). La Paz: American Elasmobranch Society Annual Meeting.
- Wang J, Qi Y, Jones IS. 2006.** An analysis of the characteristics of chlorophyll in the Sulu Sea. *Journal of Marine Systems* 59(1-2): 111-119. <http://doi.org/10.1016/j.jmarsys.2005.09.004>