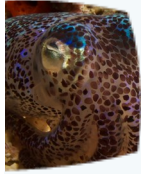




- CCC CARRIED OUT AN ASSESSMENT OF THE REEFS IN THE COASTAL WATERS OF BARANGAY HIMBANGAN CORAL REEF FROM SEPTEMBER 2017.



- SILT WAS THE DOMINATING SUBSTRATE IN THE SURVEYED AREA, FOLLOWED BY HARD CORAL, THE LATTER HAD A SIGNIFICANTLY HIGHER ABUNDANCE INSIDE THE MPA. PARROTFISH AND GROUPER WERE SIGNIFICANTLY HIGHER IN ABUNDANCE INSIDE THE MPA. FOR BOTH INSIDE AND OUTSIDE THE MPA, NO COMMERCIALLY IMPORTANT FISH EXCEEDED 50CM IN SIZE.



- ELECTRONIC AND HARD COPIES OF THE FULL TECHNICAL REPORT ARE AVAILABLE FROM OUR PROJECT SCIENTIST: LRCP@CORALCAY.ORG

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CORAL CAY
CONSERVATION



Barangay Himbangan MPA Assessment

The substrate community assemblage of Himbangan's reef showed indicators of what could provide the correct substrate for a future healthy reef to settle on. These signs would suggest that the area is viable for continued marine protection efforts under the correct circumstances.

The Current Status of the Himbangan Reef

Surveys found that the dominating substrate of Himbangan reef was silt (47%); followed by hard coral (24%) and rock (9%). The high level of silt could potentially smother new coral recruits, otherwise a good substrate for coral larvae to settle.

The average of fish abundance throughout the surveyed area was $107.58 \pm 16.86 \text{ } 500\text{m}^3^{-1}$, with higher average fish abundance within the MPA ($130.30 \pm 23.18 \text{ } 500\text{m}^3^{-1}$), compared to outside the MPA ($79.19 \pm 23.32 \text{ } 500\text{m}^3^{-1}$). 3% of all species recorded within the MPA were considered commercially important, compared to <0.5% outside.

Invertebrate populations displayed an average abundance of $106.35 \pm 21.01 \text{ } 100\text{m}^2$ within the MPA.

Majority of target species being of little commercial interest, perhaps highlighting intensive historic harvesting.

Anthropogenic reef damage was absent across the transects with no signs of boat, anchor or dynamite damage found. General waste was found at medium levels (2-4 pieces) on 45.00% of the transects. Medium levels of discarded or lost fishing gear was found on 30.00% of transects surveyed.

If properly managed the surveyed reef could support a diverse community. It is recommended that marine protection efforts are continued. Another measure could be to increase the existing MPA to limit impact on the area that is currently outside the MPA.



Why Are MPAs Important?

Marine Protected Areas (MPAs) protect areas of reef from human impacts. Within an MPA, fish are protected and can grow larger, producing more offspring. This leads to 'overspill', increasing fish numbers outside the MPA. In the Philippines many very successful MPAs have been created including the famous Apo Island MPA. Not only do these well managed MPAs help to enhance fish stocks, they also provide income from tourism and other benefits such as protection of coastal habitats and communities from storms.

CCC's assessment of Himbangan's Coral Reef

Based on the surveys of Himbangan's reefs, CCC recommends continued correct protection, with further enforcement to support the area that show signs of a healthy reef substrate and fish abundance.

Fishing along the boundaries of an MPA may directly impair its benefits. A lack of notable benefits could lead to a weakened level of confidence in the MPA system and a subsequent lack of compliance for the regulations. Thus, a 50m buffer zone around the periphery of the MPA is recommended.

The continued support from the local community is vital for the future success of this MPA. Understanding the aims and the potential of the ordinance by the whole community is crucial. This can be done in conjunction with CCC.

The amount of trash in the area could be reduced through increased efficiency of waste management in the barangay or local beach cleans. Further, the potential reduction of fishing around the MPA, by the implementation of a buffer zone, would reduce the amount of discarded or lost fishing gear in the MPA.

It is recommended that the MPA area is increased to provide further protection for ecologically important species. Generally, commercially important species such as Parrotfish, Snapper and

Grouper are mobile individuals, and would accordingly benefit from a larger area of protection. Although, this option needs careful consideration due to the presence of fishermen within the barangay which solely rely on marine resources for income.

It is also important to consider that due to the high level of silt within the area, visible improvement will take years and maximum improvement depends on numerous variables, including compliance and enforcement standards. In the meantime, alternative resources should be considered to minimise the need for individuals to fish the waters.

Key Recommendations:

- Increase the area of the MPA to provide further protection for larger commercial important fish species
- To implement a 50m buffer zone around the MPA to decrease pressure of fishery, to potentially decrease the level of fishery trash within the MPA.
- The level of trash should be addressed and reduced, possibly through a waste management program in the barangay.
- Encourage community engagement through community days to increase the understanding of aims the for the MPA.

Ghost Fishing



'Ghost fishing' is an umbrella term that includes all abandoned, deserted or lost fishing gear within the marine environment. It includes nets, long lines, fish traps and most other types of fishing gear that is used.

The unattended fishing gear continues to trap, entangle and potentially kill marine life, some of which may be of economic value for the local community.

Ghost nets may also smother and damage marine habitats, or even damage boats. Ghost fishing only depletes already exhausted commercial fish stocks and disrupts the ecosystem, with no one to benefit from it.

In some area's "ghostbusters" are now patrolling coastlines and waters to collect abandoned fishing gear, with the intention to conserve coral reefs and its inhabitants. This can be done by a simple walk along the coastline or a snorkel, by individuals, groups or communities.



Coral Cay Conservation

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