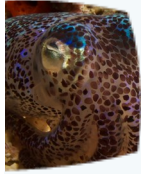




● CCC CARRIED OUT AN ASSESSMENT OF THE REEFS IN THE COASTAL WATERS OF BARANGAY SANTA PAZ NORTE DURING APRIL AND MAY 2019.



● FISH ABUNDANCE WAS GENERALLY LOWER IN COMPARISON TO OTHER SITES IN SOGOD BAY AND WAS FOUND TO VARY ACROSS THE TRANSECTS IN STRONG CORRELATION TO SUBSTRATE TYPE (WHICH WAS DOMINATED BY SAND FOLLOWED BY HARD CORAL). PARROT FISH WAS THE MOST COMMON COMMERCIALY IMPORTANT SPECIES RECORDED.



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

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Barangay Santa Paz Norte MPA Assessment

The assessment found that the coral reefs of Santa Paz Norte are viable for protection if an appropriate location is chosen and if there is education and collaboration with local stakeholders.

The Current Status of the Santa Paz Norte

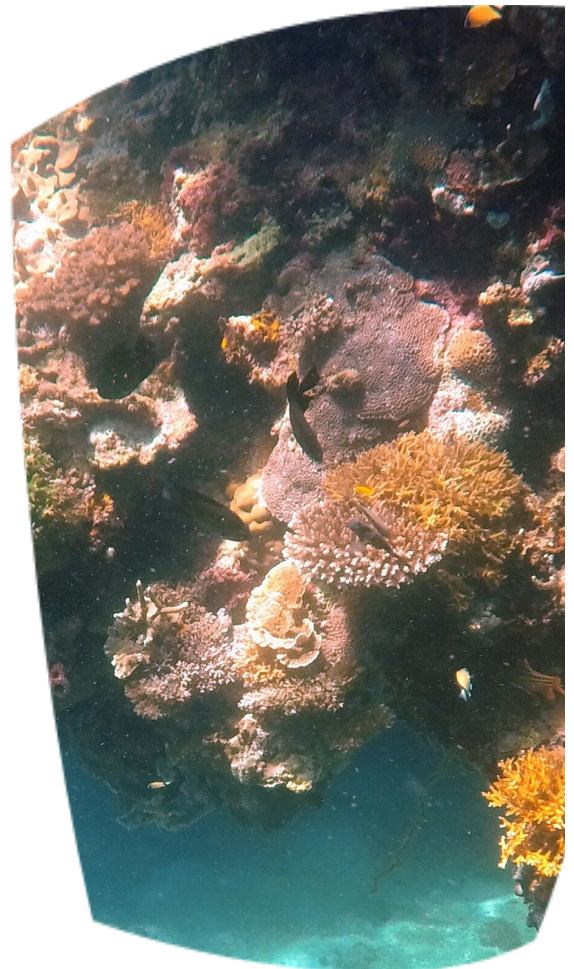
Following CCC surveys, it was found that the dominant substrate of Santa Paz Norte reef was sand (35 %); followed by hard coral (28 %) and rubble (13 %). This indicates an area that is partially covered with an already existing reef that could bring a greater diversity of associated fish species to the area should it expand.

The average fish abundance was lower when compared to other sites in Sogod Bay (63.13 ± 6.72 per 500m^3). Transects within the proposed no take area (NTA) showed higher fish abundance compared to those transects that were on the boundary of the proposed Marine Reserve (MR) area. The report suggest that the substrate composition influences fish

abundance within the surveyed area.

Invertebrate populations displayed a average abundance of 163.13 ± 18.10 100m^2 , with the majority of target species being of little commercial interest but beneficial in maintaining a healthy reef system.

The survey showed no signs of anthropogenic reef damage in terms of boat, anchor or dynamite damage. However, there was indirect reef damage from trash. General waste was found at medium (2-4 pieces) levels on 41% of the transects and a medium level of trash from fishing was found on 19% of the transects surveyed.



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 Santa Paz Nortes's Coral Reef

The survey results show signs that Santa Paz Norte's coral reef is viable for protection. CCC encourage consultation with local stakeholders along with further education to recognise the importance of an MPA.

The survey shows a variety in coral and fish abundance between the areas of the proposed MPA, with suggest an influence of substrate composition and fish abundance. Furthermore, due to the abundance and size classes (<50cm) the commercially important fish species are suspected to be depleted. If there is no protection from fishing pressure, many of the young individuals present will not be able to reach sexual maturity and reproduce.

The high level of discarded or lost fishing gear suggests a heavy fishing effort within the study area. The implementation of an MPA could potentially alleviate fishing pressure on the juvenile fish stock. The high quantities of general trash should be addressed via region-wide effort of stakeholders through responsible waste management.

Transects 1-6 showed the highest level of diversity and would provide the community the greatest benefit if protected through an MPA. This is a continuum of previous recommendations, with additional remarks that the implementation should be conducted in

consultation with the barangay officials and community members.

Should an agreement not be possible regarding the original ordinance it is recommended to uphold transect 1-4 in a no take area (NTA) encapsulated by a 50m buffer zone with only selective types of fishing gear permitted.

Lastly, a clear demarcation is recommended as visual aid for the ordinance. Without visual markings, reprimands for illegal fishing will be difficult. Further, as the area is already a known interest site among divers, a fee could be charged for any diving within the area to support the enforcement of the MPA.

Key Recommendations:

- Whole of the surveyed area, or the area with greatest complexity of substrate and fish abundance, is included in a future marine protected area.
- In relation with the ordinance, consultations should be established between key stakeholders to include all interests.
- The protected area is created in consultation with the barangay officials and community to ensure viability and support.
- Educate, to understand the importance of protection to benefit now and future generations.

understanding of aims for the MPA.

Coral structural complexity



According to previous studies show a positive correlation between coral reef structural complexity and fish density and biomass. This is likely due to density-dependent competition and refuge from predation. More specifically, an increase in habitat complexity provides more niche space to facilitate a higher abundance of fish, provide further create a refuge for predators which in relation attracts further predators.

Previous research found, in general, currently all studied fish families displayed a certain level of abundance and the available substrate complexity. However, Parrot- and Damselfish in particular showed a strong correlation between abundance and coral reef complexity.

Further, a highly complex reef can provide two ecosystem services; tourism and coastal shoreline protection. Thus, whenever possible, supporting a complex coral reef structure through proper monitoring and management could convey favourable effects.



Coral Cay Conservation

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Expeditions

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