

Coral Cay Conservation Visual Assessment Report



Barangay Anislagon 2018

Municipality of San Francisco, Southern Leyte, Philippines

Report by:

Anik Levac, Project Scientist ¹

Jasmine Corbett, Science Officer and appointed RVA Photographer ²

Tom Dallison, Head of Science ³

^{1,2} Coral Cay Conservation, Napantao Dive Resort, 6613, San Francisco, Southern Leyte, Philippines; lrcp@coralcay.org

³ Coral Cay Conservation, The Kiln, Grange Road, Tongham, Surrey, UK; headofscience@coralcay.org

In partnership with:



The Provincial Government of Southern Leyte

With thanks to:



Municipal Government of San Francisco

All photographs throughout this report are credited to Jasmine Corbett, Science Officer for Coral Cay Conservation 2018.

No photograph within this report may be used in other pieces of work without written permission from the photographer or Coral Cay Conservation.

This report and any information within must be cited in accordance with the recommended citation below or where appropriate, the original source reference.

To view an online copy of this report, visit <http://www.coralcay.org/science-research/scientific-reports/>

Recommended Citation: Levac, A., Dallison, T. & Corbett, J. (2018). Coral Cay Conservation Proposed MPA Rapid Visual Assessment Report: Barangay Anislagon 2018. Coral Cay Conservation: Philippines.



Copyright 2018 Coral Cay Conservation

www.coralcay.org



Coral Cay Conservation is a division of the Lifesigns Group

www.lifesignsgroup.co.uk

Barangay Anislagon

Initial Assessment for Anislagon, San Francisco Proposed MPA

In 2015, the assessment of the Anislagon proposed MPA site was requested by Sanguniang Bayan Secretary Servando Tiu. After consulting with the Barangay Captain, CCC surveyed the southern end of the bay of Anislagon for the purpose of a proposed MPA. This initial assessment was conducted between February 10th and March 3rd 2015 by trained volunteer survey teams, following Underwater Visual Census (UVC) protocols. Assessment of the proposed MPA site was conducted using an enhanced Reef Check methodology which is widely recognised and used to survey coral reefs around the world. The concluding recommended MPA site is depicted in Fig. 1, in addition to the MPA coordinates in table 1. For a full report on the methodology and results of this assessment, please refer to Ferguson *et al.* (2016).

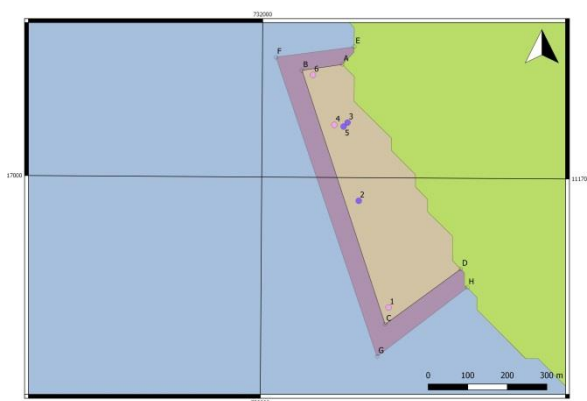


Figure 1. Original proposed boundary location for Barangay Anislagon Marine Protected Area. Purple area = Marine Reserve (MR), orange/yellow area = No-Take Area (NTA).

approach to fisheries (EAF) and community-based management (CBM), empowering the local user group level and conferring high levels of transparency in a triangulated consortium, CCC aims to facilitate the local Barangay Anislagon in achieving measurable levels of effectiveness from their designated MPA.

Table 1. Recommended boundary coordinates for establishment of Marine Protected Area in Barangay Anislagon, 2015, given in Universal Transverse Mercator (UTM) coordinates. The boundary points indicate the corners of each zoned and should be understood further following map referral. MPA = Marine Protected Area; NTA = No-Take Area; MR = Marine Reserve.

Boundary Point	Easting (UTM)	Northing (UTM)	MPA component
A	732199	1117284	NTA
B	732098	1117267	NTA
C	732309	1116633	NTA
D	732497	1116772	NTA
E	732228	1117328	MR
F	732033	1117328	MR
G	732290	1116552	MR
H	732514	1116726	MR
Total MPA area (ha)		16.10	
NTA (ha)		10.55	
MR (ha)		5.56	

All recommendations are flexible and the final designation is a result of the collaboration of CCC with the Municipality of San Francisco and the local community of Anislagon, in particular the local fisherfolk. CCC provide suggestions on what is the ecological ideal, but understand that there are other factors to consider during the decision making process. Combining an ecosystem

Reconsideration of Placement for Anislagon, San Francisco MPA

After discussions between Government officials, Barangay officials and the local community, the decision was made to relocate the originally proposed MPA site North, to the newly defined coordinates noted in Table 2 (Fig. 2). Consequently, an additional assessment of the relocated proposed MPA site for Anislagon was requested by Armando Gaviola of PENMRO. Although an RVA cannot form the basis of scientific recommendations for relocation, it is adequate in providing basic preliminary data, in the form of qualitative and multimedia data, which will guide further surveying if requested. With the permission of the Barangay Captain, CCC conducted a Rapid Visual Assessment (RVA) in the newly proposed area on July 22nd, 2018.

Table 2. Actual boundary coordinates for establishment of Marine Protected Area in Barangay Anislagon, 2018, given in Universal Transverse Mercator (UTM) coordinates. The boundary points indicate the corners of each zoned and should be understood further following map referral. Area; NTA = No-Take Area.

Boundary Point	Easting (UTM)	Northing (UTM)	MPA component
A	732047	1118406	NTA
B	731816	1118376	NTA
C	732153	1117666	NTA
D	731914	1117622	NTA
Total MPA area (ha)		15.9	



Figure 2. Original (purple/orange/yellow) and newly proposed (red) boundary locations for Barangay Anislagon Marine Protected Area.

Methodology

Rapid Visual Assessment (RVA)

The RVA is a preliminary protocol that is utilized by a survey team to collect anecdotal and qualitative data of the site. The data are used to support subsequent scientific reports and supplement recommendations and future survey efforts.

The RVA is broad in concept and looks at the site in general with no defined quantitative data being collected (due to During scientific and dive training with CCC participants undertake a series of training presentations and skill assessments. This is in order to obtain certification in survey methodologies to undertake biophysical assessments. An augmented REEF Check methodology is followed including target fish and invertebrate species, in addition to coral species and other substrates included in the REEF check methodology, in addition to species specific to the Philippines which can be used as good indicators of environmental health (for the full target species list, please refer to Ferguson *et al.* 2016). Trained divers including the Project Scientist (PS), Science Officer (SO) and volunteers participated in the RVA survey. Divers also recorded impacts on the reef including sightings of bleached coral colonies, coral diseases, and damage in three categories: boat/anchor, dynamite and other, in addition to trash being recorded into general and fishing nets/traps. All media and species observation data are collated by the Science Officer.

varying survey team numbers and the resulting area (m²) covered). As a result, it enables a large area to be visually assessed within a short period of time. The RVA in design takes basic logistical elements of a Roving Diver Transect (RDT) without the defined methods and species counts and takes reference from exploratory dive procedures. Survey teams are encouraged to explore the area, collecting as many notes as possible to describe the survey site.



Results of Visual Assessment

Overall observations described a patchy reef, mostly dominated by rock and sandy substrates. Results were compiled from all surveyors assessing the reef at varying depths; shallow ($\pm 4\text{m}$), Intermediate ($\pm 6\text{m}$) and at depth ($\pm 10\text{m}$).

In the shallow reef, species of non-*Acropora* branching corals, including large colonies of *Porites* were accompanied by a high density of rock. At intermediate depth the reef consisted of a seemingly more diverse benthic community including soft corals, tabulate *Acropora* spp., *Turbinaria*, tube and encrusting sponges. At depth ($\pm 10\text{m}$), reef composition degraded to a high percentage of sandy substrate, with some rubble and patches of reef.

The presence of target fish species, including commercially important and corallivorous species, was also noted. Juvenile ($<10\text{cm}$ length) Parrotfish and Snapper were frequently noted, in addition to a few larger individuals ($11\text{-}20\text{cm}$ length). A high number of Eastern Triangle Butterflyfish, in addition to sightings Redfin and Vagabond Butterflyfish were noted.

Invertebrates were numerous, especially the Long-spined sea urchin. 2 Crown-of-Thorns Seastars (CoTS) were sighted, without signs of predation, in addition to a small number of *Drupella* with some signs of predation (Appendix A). A number of nudibranchs were also seen on site.

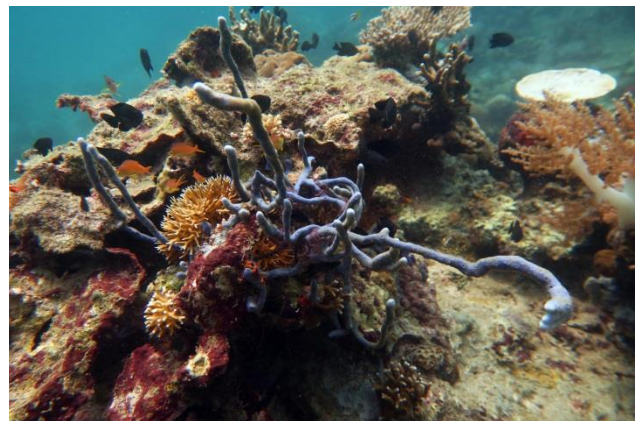
Anthropogenic impacts were high in the area, with numerous pieces of discarded fishing line and other fishing trash observed (Appendix B). A few pieces of other trash pieces were also seen on site (Appendix C).



Magnificent chromodoris (*Chromodoris magnifica*)



Long-spined Sea Urchin (*Diadema* spp.)



Recommendations

Due to the observed low number of large commercial fish, in addition to the high count of fishing trash, specifically fishing gears, noted on site, the new Anislagon MPA site exhibits signs of being overfished, although further scientific protocols (Underwater Visual Census) would be required for results to be conclusive. There appeared to be a high level of structural complexity, especially at the intermediate reef depth, which could allow much potential with the establishment of an MPA site. A high grading of structural complexity is capable of supporting a large diversity of reef fish and invertebrate species. By maintaining this level of structural complexity, the associated herbivorous and grazing reef fish and invertebrates can both be protected, whilst promoting a coral dominant reef ecosystem.

The location would also assist in creating a connective network between other established MPAs within Sogod Bay, such as those in Barangays Bahay and Catig. This would allow the protection of species with large dispersal and geographic ranges, such as commercially important Groupers who leave their feeding grounds to access their spawning location, possibly existing outside of MPA boundaries and hence exposing themselves to exploitation.

The success of a protected area is entirely dependent upon the cooperation of, and engagement with, local stakeholders. Research has shown that the involvement of resource users in the planning, implementation and management of their own MPA increases their sense of ownership and pride. Only when local stakeholders feel they are adequately considered and regularly consulted on their MPA's

management, will it be possible for the full potential of the MPA to be attained (Green *et al.*, 2009, Human and Davies 2010). By establishing clear, community driven objectives and goals during the formation of the Anislagon MPA, CCC hopes to address the key challenge to successful MPAs by ensuring that the MPA's by-laws, policies and restrictions fit into the greater ecological, social and economic context, contextualising not only the needs for the fauna and flora present within its boundaries but the needs of the local stakeholders and that of the municipality under the Republic Act No. 8550.

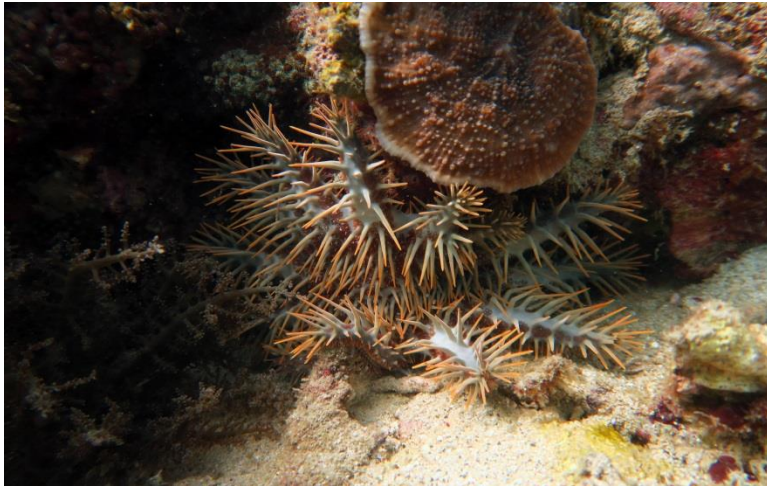
The newly proposed area surveyed under the RVA methodology highlighted areas that are demonstrative of a healthy ecosystem. However, due to the methodology utilised, these preliminary data cannot be relied upon to provide scientifically sound marine spatial planning recommendations, but do formulate a basis for further assessment. As such, CCC recommends that a complete Biophysical assessment be undertaken within the newly recommended area discussed in this summary report, situated north of the previously recommended protected area. Whilst the area shows promise, until a spatial ecological assessment can be undertaken, CCC cannot recommend an MPA at this stage but will establish meetings with Barangay Anislagon's captain to discuss opportunities for returning and assessing the area in higher resolution.

References

- Ferguson, A., Dallison, T. & Lancaster, D. (2016). Coral Cay Conservation Proposed Marine Protected Area Report: Barangay Anislagon, 2015. *Coral Cay Conservation*: Philippines.
- Green, A., Smith, S., Lipsett-Moore, G., Groves, C., Peterson, N., Sheppard, S., Lokani, P., Hamilton, R., Almany, J., Aitsi, J. and Bualia, L. (2009). Designing a resilient network of marine protected areas for Kimbe Bay, Papua New Guinea. *Oryx* **43**, pp. 488-498.
- Human, B. and Davies, A. (2010). Stakeholder consultation during the planning phase of scientific programmes. *Marine Policy* , **34**, pp. 645-654.

Appendices

Appendix A – Coral Predators and Other Damage



Crown-of-Thorns Seastar (*Acanthaster planci*)



Appendix B – Fishing Trash



Appendix C – General Trash

