

Southern Leyte Coral Reef Conservation Project (LRCP)



Monthly Project Update

December 2017

Location: Napantao Dive Resort, Napantao, San Francisco, Southern Leyte

Project Scientist: Chelsea Waters
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LRCP Project Aim

The Southern Leyte Coral Reef Conservation Project (LRCP) is a collaborative project to protect the coral reefs of Sogod Bay, providing training and conservation education opportunities for local Filipinos, as part of an integrated programme to develop local capacity and ensure the long-term protection and sustainable use of marine resources throughout the region. Coral Cay Conservation (CCC) is working at the invitation of and in partnership with the Provincial Government of Southern Leyte (PGSL). CCC provides the resources to help sustain livelihoods and alleviate poverty through the protection, restoration and management of coral reefs and tropical forests.

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Latest News

CCC welcomes our new Project Scientist (PS), Chelsea Waters!



After completing a Bachelor in Marine Biology from the University of Queensland, Chelsea travelled to the Caribbean to volunteer on a local project whose aim was to monitor ecosystem changes in the reef due to socio-economic impacts from the associated small island community. It was here that she saw exploitation of the reef for the first time– rubbish lined the beaches, fish were an overfished commodity and now a rarity on the reef, and algae was beginning to dominate the reef due to poor waste management and the lionfish invasion. She soon returned to Australia to continue studying the problems facing coral reefs, and completed her thesis with the Global Change Institute on the Great Barrier Reef. Since completing her thesis, she has worked in Australia, Madagascar and Honduras as a coral reef ecology lecturer

and dive instructor studying the effects of local and global threats to reefs around the world. She firmly believes that science and community outreach go hand in hand, and is very excited to work for CCC and the Filipino community.

Stories of the Month

'Chasing Coral' Movie Night

December 8th saw Friday night movie come back into fruition, with CCC's Napantao neighbours invited onto site to view the new Exposure Labs Production *Chasing Coral*. With popcorn in hand, the children followed carefully and with shock as a team of divers, photographers and scientists set out on a journey to capture visual evidence of coral bleaching.

"It's not too late for coral reefs... indeed, for many other ecosystems that are facing challenges from climate change. It's still possible to reduce the rate at which the climate is changing, and that's within our power today."

– Dr. Ove Hoegh-Guldberg, Global Change Institute.

For the majority of our viewers, they had never witnessed coral bleaching as a phenomenon that occurred on their reef before, nor understand how a change so beautiful could be so fatal. Due to the intensity of the symbiotic relationship between a coral and its symbiotic algae, mortality can be seen in a coral as early as four degree heating weeks (1°C above the corals thermal threshold for four weeks) without their symbiotic algae, and in their exposed white skeletal state.

Following the screening the CCC team held a discussion session, targeting subjects like *"How would the loss of coral, and their associated structure, affect fish communities"*, and *"What are some ways to take action that can help protect our reefs and secure a clean energy future?"*.

Here's what we came up with...

- Turn our lights and fans off when not using them to reduce energy consumption and carbon emissions.
- Protect our coral reefs from other local activities that threaten them (overfishing, dredging, dynamite fishing).
- Walk to school instead of going by car or motorbike to reduce the burning of oil.
- Tell our friends and families about what you have learnt so we can keep spreading the message!

If you would like to hold a screening night of *'Chasing Coral'* in your community, please contact CCC at lrcp@coralcay.org and we'll show you how!



Snacks and drinks in hand – we're ready for the viewing!

- Photo by Jesse Tinapay (CLO)

Education and Community Projects

Snorkel Guide and Reef Ranger Training

December 13th was the beginning of the three day Snorkel Guide and Reef Ranger Training conducted by CCC's field team, which aimed to train locals within the Liloan municipality to adopt alternative livelihoods, one which doesn't take from the reef but encourages the protection of it. Seven men with no previous training in snorkelling took on the challenge of becoming "zero to hero" within these three days. Day one started off with morning lectures by Science Officer Maisy Fuller, who guided them through an *Introduction to Coral Reefs, Seagrass and Mangroves*, as well as our *Dangerous Creatures* lecture; allowing trainees to become aware of hazardous marine life, how to avoid envenomation from marine life, as well as how to treat it. This helped them prepare for a day out on the water with their guests, in terms of what to bring, and that guests should be briefed with the "No Touching" rule when it comes to marine life. The afternoon saw our local staff members Jesse and Dudong begin snorkelling lessons, which the men picked up very quickly – they are snorkelling naturals!

Day two saw the return of Habagat, therefore we followed the protocol that if tourists shouldn't be taken out in these conditions, then neither should we. So whilst snorkelling was cancelled for the day, the classrooms sessions continued as Maisy provided interactive species identification lectures, from coral morphology to fish and invertebrates. This became a lot of fun as the men became more and more confident in their identification abilities.

The final day saw Susan (FBM) and Chelsea (PS) appear for First Aid, CPR and Critical Incident Management Planning (CIMP) for potential situations that could occur when taking guests out to snorkelling sites. The men had a lot of fun with Primary and Secondary Assessment, as they finally got comfortable talking to our doll 'Anne'. We finished off the session with CIMP training, as we discussed some very real life situations that could potentially happen, how to plan for it, and a series of steps that we would follow if the event takes place. Just like that, we had seven new snorkel guides ready to follow safe snorkelling practices, and show their guests a good time!



Introducing our newest Snorkel Guides and Reef Rangers!

- Photo by Jesse Tinapay (CLO)



Chelsea (PS) guiding the trainees through secondary assessment during the First Aid and CPR component of their training.

- Photo by Jesse Tinapay (CLO)

Survey Monthly Update

Survey background: Since January 2013, survey efforts have been focused on assessing potential and existing Marine Protected Areas in Sogod Bay to provide appropriate management recommendations. To do this CCC uses an expanded version of the Reef Check protocol, which has been customised to perfectly fit our work in Sogod Bay. Prior to this a baseline appraisal of marine resources in Sogod Bay was carried out. If you would like more information about our surveying please contact our Project Scientist, Chelsea Waters.

As December draws to a close, we can happily announce that all maintenance and modifications have been made to CCC's survey vessel 'Nudi Hunter' in time for the return of the volunteer season which will begin in January, and the kick start of a big surveying year that are in the works for 2018. In 2017, we surveyed seven proposed MPA sites by our project partners, and surveyed the effectiveness of four of our existing MPA sites throughout Sogod Bay. Stay tuned for reports and what 2018 will bring!



Photo of Napantao Reef by Project Scientist, Chelsea Waters.

Scientific reports from all of CCC's sites around the world are available on our website at
<http://www.coralcay.org/science-research/scientific-reports>

Marine Scholarship News

Each month CCC offers Filipino nationals who display an ambition to study and protect the vital marine ecosystems of the Philippines an opportunity to take part in our Marine Conservation Scholarship. The programme lasts for one month and involves training in SCUBA diving to the level of PADI Advanced Open Water. Scholars then take part in an intensive Skills Development Programme giving them the knowledge and expertise to conduct sub-marine surveys of the coastline.

December saw the return of past scholar Jerome Napala from Malitbog. Jerome has brought a lot to CCC since completing his Skills Development Programme in September of 2011, with his biggest project being the implementation of the coral nursery to CCC's home reef (Napantao Fish Sanctuary), with more rehabilitation projects in the works throughout Sogod Bay. Jerome used his time to revisit the coral nursery that was sadly damaged during Habagat. Jerome has been using various methodologies in the design of his coral nurseries throughout the Bay, allowing him to understand the most resilient design for Habagat seasons. His findings will assist us in creating a new an improved coral nursery within Napantao Fish Sanctuary. We look forward to working with Jerome throughout 2018!

"The experience gives me a wider perspective of Sogod Bay, its dire need for rehabilitation and conservation on its terrestrial and marine resources – not in the future, not tomorrow, but today!"

- Jerome September 2011



Jerome diving Napantao Fish Sanctuary in 2011.
- Photo by Jesse Tinapay (CLO)

If you would like to apply for the CCC Marine Conservation Scholarship programme or read more about it, please visit: <http://www.coralcay.org/volunteer/scholarship-opportunities/>

Marine Creature of the Month!

CCC's *Creature of the Month* goes to *Fungia spp.* (Mushroom Coral)! This creature of the month is dedicated to CCC's new Project Scientist, Chelsea Waters, who completed her thesis studying this particular coral in 2015.

Fungia spp. is a hard coral from the order Scleractinia. Rather than forming colonies like most other corals, *Fungia spp.* corals are solitary (contains only one coral polyp) and free-living (that is, they are not attached to the substrate) during their adult stage. Young *Fungia spp.* bear little resemblance to the adult form; being flattened discs that are attached to the substrate via a stalk. This resemblance to mushrooms in their juvenile stage gives these corals their common name.

Disparities in resistance and resilience between Scleractinian corals to the effects of ocean acidification (OA) and increases in sea surface temperatures (SST), are becoming increasingly evident over geographical ranges, with the sensitivity of many species resulting in their taxonomic decline, whilst others are increasing their relative abundance. The ability for *Fungia spp.* to absorb water into their tissue, becoming neutrally buoyant, allows them to relocate to different areas of the reef. This gives them the ability to 'self-shade' when exposed to intense UV rays and above normal SST, and relocate to areas with higher levels of primary production allowing them to receive a larger than usual percentage of energy uptake from feeding. The ability to feed when bleached is important for corals in order to avoid resource limitation and starvation, allowing them to maintain growth rates necessary for reproduction.



Fungia spp. in the foreground resting on a colonial colony within Napantao Reef.
- Photo by Chelsea Waters (PS)

Learn More!

To learn more about the CCC Philippines project, to join the expedition, or to find out about local marine scholarships, visit www.coralcay.org