

**Beyond Adaptation:
Restoring ecosystems and livelihoods in post climate-related events in the Philippines¹
(Case Study on Financing Loss and Damage submitted to the Transitional Committee)**

The small islands of Northern Iloilo sit in an area with high fish biodiversity, the Visayan Sea in the Philippines. As one of the traditional fishing grounds of the country, it contributes substantially to the Philippines' fisheries production. The Visayan sea covers about 12,520 square kilometers and spans through 33 coastal municipalities and cities. The small islands of Concepcion, Iloilo are nestled in the waters of Iloilo Province and have been known to be among the top producers of fisheries products.

The marine and coastal waters of Concepcion were no strangers to human induced hazards such as bottom trawling and cyanide fishing². As a result, it rendered the marine and coastal ecosystem vulnerable, particularly the marine reef bottom cover³. The combined impact of human-induced events and the challenges of characterizing the sea and extreme weather events have made fishing as a livelihood challenging for fishing households. To survive and thrive, fishing villages worked with government to establish marine protected areas as risk management mechanisms.

In 2013, Super Typhoon Haiyan crossed the Visayan Islands and impacted many small islands by its destructive winds and waves. Many communities were unprepared as Haiyan was no ordinary typhoon. It was the fourth strongest typhoon recorded in history with a wind speed that reached 195 miles per hour.⁴ No one foresaw the extent of loss and damage Typhoon Haiyan would wreak havoc upon the waters of Concepcion, Iloilo. Coral rubbles surfaced in some islands that could be mistaken as man-made ocean barrier. In five islands surveyed by the municipal government of Concepcion, Iloilo and the National Fisheries Reform (NFR), two islands lost all its coral cover while the rest 40-90% coral cover.⁵ In the post Haiyan study by OceanBio, it was observed that "the live hard coral cover declined after the typhoon" (footnote 3).

The significant loss in coral cover have devastating impacts on the local economy of fishing villages who are dependent on the fishery products that result from robust coral reef system. Such ecosystem loss will mean a decline in fishery production, loss of livelihoods, erosion of an economy dependent on the fishing industry, and loss of an entire sub-culture dependent on fisheries. The threat of more marine and coastal hazards resulting from climate change will challenge the recovery of fishing households and villages and their respective local economies. In this given context, the immediate funding need is the

¹ This a specific real-life case study to illustrate the immediate needs to restore damaged ecosystem and livelihoods, but only one of the many needs to address or to minimize losses and damage due to climate and weather-related events in the Philippines.

² David Lozada, 2016, Guardians of the sea': The fisherfolk of northern Iloilo, <https://www.rappler.com/environment/disasters/143679-guardians-sea-fisherfolk-north-iloilo/>

³ Guarte, Donna, Paraboles, Liezel, Burgos, Lorelie, Felix, Lucas, Malingin Mary Ann, Piloton, Ryan, Campos, Wilfredo, 2014, Coral Reef Assessment of Marine Protected Areas in Concepcion, Iloilo: 6 months after typhoon Yolanda(Haiyan), Miag-ao, Iloilo: University of the Philippines in the Visayas (OceanBio)

⁴ NOAA SciJinks, How Big Was Typhoon Haiyan, <https://scijinks.gov/haiyan/>

⁵ In Dator-Bercilla, J. et al, 2017, Facing the Challenges of Ecosystems Loss: Science-Community Practice Collaboration in Post Haiyan Recovery and Resilience Building presented during the 2017 International Training Workshop on Natural Disaster Reduction, in Taipei , Taiwan <https://www.ncdr.nat.gov.tw/Message/FileMultiDownload/8561>

immediate revival and recovery of marine and coastal habitats through evidence-based approaches to ecosystems restoration, investment in integrated ecosystems for reef restoration, the community participation in the restoration, rehabilitation, protection and monitoring of reefs, among others. It is important to enable local capacities in resilience-building of marine ecosystems, to encourage science and technology applications in resource management, and the use of systems dynamics approach that factors in natural, social, and economic recovery (such as provision of alternative source of livelihood).

Concepcion was able to stop the cascading loss and damage arising from coral reef destructions from Typhoon Haiyan because it received humanitarian support from international aid channeled through international development or humanitarian organizations and from local stakeholders. Together they supported an overall ecosystem restoration intervention which included the preparation of artificial reef modules, coral transplantation, restoration of beach forests and mangrove zones, capacity building for coastal and marine resource protection, coastal, and fishery laws enforcement, the provision of patrol boats, and the floating guard houses for the Guardians of the Seas or locally known as Bantay Dagat (footnote 5). Three years following Haiyan, the bottom/substrate bottom cover showed signs of restoration such as in live hard corals, dead corals with algae, and other reef fish parameters.⁶

The current international humanitarian system allows support to be determined by needs assessments (e.g. rapid disaster needs assessment or post-disaster needs assessment). In the case of the Concepcion initiative, the support provides access mechanisms for local support organizations working with international non-governmental organizations (INGOs) in areas affected by Haiyan. The protocols for accountability are pre-agreed between the INGO managing the international humanitarian aid and their respective local partners, including the Monitoring, Evaluation, Accountability and Learning (MEAL) System. In this particular case, UK Aid provided the support through Christian Aid which partnered with Iloilo Code NGO. The latter also worked with institutions such as Ocean Bio and the Municipality of Concepcion for the undertaking.

Timeliness and type of interventions are essential in ecosystems restoration and early recovery following post-climate extreme events. Science and evidence-based interventions will allow for appropriate actions. A set of loss and damage funding mechanisms that also provide financial management and reporting standards that local organizations can work with, allow for efficient implementation of interventions. Given the need for a loss and damage financing system, a lot can be learned from the common protocols of current humanitarian funding landscape, comprehensive climate and disaster risk management, and resilience building concerns.

In the context of loss and damages, providing direct-access windows for local action allows for efficient response, restoration, and recovery work that can avert cascading losses and damages. However, it is important to note that such local actions must benefit from trans-disciplinary dialogues, and science and technology inputs between the science-policy-practice communities working in climate emergencies, particularly valuation of ecosystem losses. The biggest obstacle for immediate local work is the failure of local actors to meet the fiduciary requirements set by climate finance institutions. To mitigate the situation, NGOs or INGOs normally act as intermediaries or conduits to manage financial reporting requirements.

⁶ Campos, Wilfredo, Guarte, Donna, Felis, Lucas Jr; Malingin, Mary Ann, Nunez Kim, Paraboles, Liezel, Bagarinao, Alexandra, Piloton, ryan, Burgos, Lorelie, Cadenas, Melsie, 2016 in Dator-Bercilla, et al in <https://www.ncdr.nat.gov.tw/Message/FileMultiDownload/8561>