In focus: Mabitac River Rehabilitation

The Philippines, geographically located in the busiest typhoon belt in the world- the Pacific - is one of the most disaster prone countries in the planet. A study by R.T Perez on 2003 reported that an average of 20 typhoons pass the country each year bringing with it heavy rains that cause flooding in low-lying areas. This then lead to major economic and social setbacks in the community, and emotional and financial problems for those affected (Pati et al. 2014)[1].

Mabitac River and Flooding

Mabitac River is one of the many rivers draining into Laguna de Bay- the Philippines' largest lake. Part of the Pasig-Laguna- Marikina River Basin, it traverses the municipality of Mabitac in Laguna- a community of about 20,530[2].

With the River crossing the municipality, the Mines and Geosciences Bureau classified Mabitac as having a moderate to high susceptibility to flooding. Adding to this is the municipality's proximity to Laguna de Bay such that most barangays are flooded during heavy rains.

But while geography contributes to the municipality's vulnerability to disaster, the Municipal Disaster Risk Reduction and Management Office (MDRRMO) recognizes that this could be reduced if the waterways are managed well.

Solid Waste and Sedimentation

As with water bodies around the world, solid waste and sedimentation is a problem in the management of the Mabitac River. Mr. Manny Artichea of the MDRRMO said during an interview that solid wastes have been clogging the flow of the water body, and sedimentation has been persistent in making the depth of the river shallower. These then lead to reducing the ability of the river to hold and channel raging waters especially in times of rain and typhoons.

Rehabilitation of Mabitac River

Acknowledging the problems on solid waste and sedimentation, the MDRRMO started programs to rehabilitate the river by employing new ordinances, capacity building and training of the local population, coupled with some infrastructure development.

Solid Waste Management

To solve the solid waste problem, the MDRRMO of Mabitac started de-clogging, clean-ups and IEC drives on solid waste management. Incentives were given for the first three months of the program to residents who can collect 60 kg of plastic waste. Segregation at source was also encouraged while awards were given to Barangays with the Best Sanitation Project from 2013-2015. Meanwhile, through the support of the United Nations - World Food Programme (WFP), the improvement of the Materials Recovery Facility (MRF) was initiated. This was to promote waste segregation, proper disposal and recycling. Through the assistance of the WFP, Mr. Artichea said that their municipality also obtained a shredding machine for making plastic bricks/hollow blocks that they can sell as construction material.

Other measures

Another Disaster Risk Reduction (DRR) measure that Mabitac employed is capacity building and training through a sectoral approach. Here, even farmers, and the youth are trained. Mr. Artichea shared that they sought the help of the Society for the Conservation of Philippine Wetlands, Inc. for their yearly Youth Eco Camp on DRR to engage the youth in DRR and Disaster Preparedness and Response activities. For the sedimentation of the river, MDRRMO has limited dredging activities. They also constructed a concrete wall in heavily eroded portion of the river to prevent erosion in its banks.

Less Flooding

The measures employed by the Local Government Unit (LGU) of Mabitac are now paying off as there was a reduction in flood occurrences and flooding time. What was then 3-5 days of flood is just 2-3 hours according to a report by the WFP. Because of their efforts on DRR, Mabitac LGU is continually being recognized. From 2014-2016, they bagged the Kalasag Award of the NDRRMC- the country's premiere award in DRR category. MDRRMO personnel now also serve as resource speaker to other nearby LGUs on the topic[3].

Note: (1) Vulnerability to Flooding of the Towns of Mabitac and Santa Maria, Laguna, Philippines (Pati et.al.,2014)https://journals.uplb.edu.ph/ index.php/ JESAM/article/viewFile/1270/pdf_17
(2) (2015 census http://citypopulation.info/php/philippines-luzon-admin.php?adm1id=0434)
(3) Resource book on DPR-CCA Users Review Workshop with WFP Partners(2017)

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Mapping Wetland Priorities for Ecosystem - based Disaster Risk Reduction (Eco-DRR) and Climate Change Adaptation (EbA) in the Philippines

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