

Academi-Community Initiatives in Mindanao, Philippines To Conserve Water Resources

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Mindanao, the second largest island in the Philippines is blessed with rich water resources. However, increasing population and increased water usage has increased the demand for water resources and water supply. This paper presents stories on how the academe like the Mindanao State University-Iligan Institute of Technology (MSU-IIT) and other universities in Mindanao link with the communities and other stakeholders to address concerns on water quality and water resources.

The Biodiversity Research Program (BRP): Focus on Mt. Malindang is a collaborative, participatory research for development. Researchers in the natural and social sciences from MSU-IIT and different universities in Mindanao grouped together to undertake this project with the participation of the Subanens, the indigenous people in Mt. Malindang, as local researchers. BRP focuses on biodiversity in an upland-lowland-coastal landscape gradient. The assumption is that whatever is done in the uplands could have eventual impact on the lowlands, the aquatic habitats, and the coastal areas.

One study under the BRP is the participatory biodiversity inventory and assessment of Lake Duminagat conducted by Hansel et al. (2004). Mt. Malindang's Lake Duminagat, river systems, and springs provide the water needs of the population. To the Subanens, Lake Duminagat is sacred and serves as a religious icon, and as a source of drinking water, and for other household purposes. In this study, the local communities surrounding Lake Duminagat were described in terms of their cultural and socioeconomic profile, perceptions, beliefs and practices about the lake and utilization of the lake and its resources. The lake's biodiversity and that of its parameter were inventoried and assessed. The involvement of local researchers in this study enhanced the awareness of the community on the natural and social factors that affect the Lake Duminagat ecosystem. Through the results of the study, the community may come up with strategies to conserve the water quality and biodiversity of the lake.

Bacaltos and de Ruyter (2004) , also under the BRP conducted participatory biodiversity assessment in the coastal areas of Northern Mt. Malindang. Developing the capability and empowering the local community by making them research partners was an innovative feature of the project. The involvement and participation of representatives from various sectors such as the LGUs, nongovernment organizations (NGOS), government agencies (GAs), and people's organizations (POs) in community validation and consultation process highlighted the participatory nature of the project. Results of the study indicate a poor state of fish stock. Environmental pollution from the coastal population centers also contributes to low water quality. Most of the reefs within the two-kilometer radius from the river mouths in the BRP's two research sites are generally in poor to fair conditions. The poor condition of the coral reefs and the seagrass beds can also be attributed to the water quality of the rivers that impact on fish habitats.

The beauty of the BRP is that it forced researchers to become adaptive and creative and to focus on creating impact. The researchers were faced with the challenge that research in the BRP was not simply about collecting and analyzing data, writing reports, and making presentations. They realized that BRP was about people relations issue in dealing with multiple stakeholders, particularly the local government and local communities; management issues in dealing with other researchers, how to do their research better, and how to make wise use of the time available; and administrative issues in dealing with the financial aspects of the program. For the Mindanao researchers, the BRP was an opportunity to be involved in a world-class research program and get their capacity developed further. For the local government units, the BRP was an opportunity to have its development needs addressed through the research it was conducting and to demonstrate the LGU's commitment to conservation. For the local communities, the BRP was an opportunity to address their livelihood concerns and to better understand how their environment could be better managed (Ong, 2005).

Another initiative in Mindanao is the study on water quality and conservation of two river systems of Mt. Diwata Range. This on-going study is part of big project on biodiversity assessment and conservation of critical resources in Agusan del Sur implemented by MSU-IIT in collaboration with other universities in Mindanao. This is another participatory project where the Manobos, the indigenous people in the area take part in the research as local researchers. This study aims to formulate specific recommendations for the sustainable use and management of the river systems and train the local community to monitor water quality using bioindicators.

A research on heavy metal concentration in water, sediment and oysters from the coastal areas in Iligan and environs was conducted by Nuñez and Dimalen (2003) of MSU-IIT in cooperation with the local government units in the area. Results indicate that although water quality in Iligan Bay and environs are within the standards of the Dept. of Environment and Natural Resources, the detection of metal contamination in the marine waters, sediments, and oysters, which could be attributed to anthropogenic sources should be given prompt attention. Information, Education, and Communication (IEC) campaigns in coordination with the LGUs concerned are being planned out to address this concern.

Senior educators from different colleges and universities in the Philippines which are members of the Philippine Association of Tertiary Level Educational Institutions in Environmental Protection and Management (PATLEPAM) convened in the 11th National Senior Educators' Assembly held in Baguio City last Sept. 28-29 to discuss water resources management problems, trends and issues. Discussed in the assembly were water resources concerns such as: The Philippine Clean Water Act and the Challenges for the Academe, Watershed Management in the Country: Problems and Prospects, Combating the Health Effects of Water Pollutants in our Drinking Water, Operationalization of a Market-based instrument for Water Resources Management, and others.

The initiatives mentioned above are just some of the current efforts done to address water concerns. Results indicate that scientific knowledge and data generated through the participatory, collaborative approach are effective especially when communities are trained and empowered to monitor and manage their water resources.

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