

Network of Small - Scale Sanctuaries in Masinloc, Philippines

Project Summary

Masinloc, in Zambales Province is accorded high priority among the Philippine biodiversity conservation priorities particularly with respect to benthic molluscs, and corals; and pelagic cetaceans, turtles, and whale sharks. It is imperative therefore that the Local Government Unit and all other stakeholders play a proactive role in ensuring sustainable use for the long term benefit of both the artisanal fishing community and larger private sector enterprises.



Sign for the network of four MPAs

The Masinloc Coral Reef Demonstration Site was designed to establish a network of small-scale sanctuaries under adaptive co-management and to demonstrate the benefits of this approach. The objective was to establish three new sanctuaries to replicate the oldest marine sanctuary in Luzon, the San Salvador Marine Sanctuary. These four sanctuaries are being managed individually by management bodies composed of representatives of fishers, women's groups, youth organisations, *barangay* council chairman on environment, advised by representatives of the national line agencies and the local government unit (municipal level). The provision of assistance both by the UNEP-GEF South China Sea Project and the Local Government Unit of Masinloc and other stakeholders such as the power plant, fish cage operators and resort owners, has paved the way to the establishment of a management system that facilitates enforcement, monitoring, and financial sustainability.

Issues and Challenges

The issues and challenges facing coral reef conservation and sustainable use in the area include illegal fishing, poaching in the marine protected areas, and marine and coastal pollution. In terms of the legal and institutional frameworks available to address these issues, there is a need to integrate the efforts of all the stakeholders and to create opportunities for leveraging complementary interventions. Financial sustainability needs to be addressed to ensure that successful management interventions can be sustained over the long-term.

Experiences in Institutional and Financial Arrangements

The experience of the Masinloc Coral Reef Demonstration Site provides a springboard for future efforts to sustainably manage the coastal waters and resources of Masinloc. The coastal waters have many users and managers, each with their own interests and objectives in using and benefiting from the coastal waters. Hence, there is a need to synchronise and synergise efforts to enhance resource management.



Artisanal fishers are key stakeholders in Masinloc

The Masinloc Coral Reef Demonstration Site provided an opportunity for the stakeholders, both users (fishers, aquaculture operators, resort owners, power plant managers, mining firms, and the Port Authority) and managers (Local Government Units, Department of Environment and Natural Resources, and Bureau of Fisheries and Aquatic Resources) to meet together as the Coastal Resources Management Board. This Board

was given responsibility for the overall administration, management, policy formulation and implementation of actions relating to the sustainable use of coastal waters. The board is chaired by the Municipal Mayor and representatives of all the stakeholders are members. Regular quarterly meetings are convened to update members on the interventions and initiatives in managing the coastal waters of Masinloc.



Aquaculture operators are also involved stakeholders

Responsibility for fund raising has been left to the management councils of the individual MPAs for special projects that they deem a priority, such as fencing of the guardhouse in Bani. Entrance and visitor's fees, for snorkelers and divers are also collected and proceeds from the sale of products at the livelihood centre and other donations have been deposited in a Coastal Resource Management Trust Fund. Although these amounts are minimal to date the financial system is now in place in advance of the anticipated boom in ecotourism. Fines and penalties for violations of the MPAs and CRM Code are also deposited in the trust fund. In addition an annual budget of PHP500,000 from the 20% Development Fund of the Local Government of Masinloc, and 10% of the revenues from the operation of the Power Plant are deposited in the Coastal Resource Management Trust Fund.

Experiences with Law Enforcement and Monitoring

Four guardhouses have been installed adjacent to the MPAs which are strategically located in the north, south, east and west of San Salvador Island. Consequently the *Bantay Dagat* do not need to conduct

frequent boat patrols, hence saving on the costs of gasoline. Each guardhouse is manned by a team of four law enforcement members who guard the MPA and adjacent coastal areas against illegal fishing. Blast fishing has been eliminated following the apprehension of one of the blast fishers in late 2007. The Coastal Law Enforcement Team led by the Chief of Police in Masinloc, supported by the Special Action Force of the Philippine Army conducts regular patrols and makes arrests in support of the *Bantay Dagat* Federation.



Guardhouse for the use of the *Bantay Dagat* patrols

Two fishers from each MPA Council have been trained in identification, listing and counting fish using local names seen along a 10 metre wide transect. Another two fishers were trained to estimate coral cover using the benthic life-forms and all individuals were trained in simple data analysis and presentation of results. Twice yearly monitoring will be undertaken and the results posted in the *Barangay* Hall for public information.

Stakeholder Involvement

Stakeholder involvement has been fostered since the inception of the project and the initial proposal was developed with full participation of the local government, the Department of Environment and Natural Resources and the Bureau of Fisheries and Aquatic Resources. The Management Board was formally established through Executive Order of the Mayor and an ordinance by the *Sangguniang Bayan*, and has been working on: the formulation of the Coastal Resources Management and Zoning Plan; establishment of new marine protected areas and their networking; monitoring; law enforcement; information

campaigns; stock enhancement; coral transplantation; and other capacity building activities.

To reduce stress from fishing pressure, some 199 hectares of the Masinloc coral reef or about 9% of the 2,200 hectares is designated as a strict protection zone, as a Marine Protected Area legitimized by *Barangay* Ordinance and *Sangguniang Bayan* Resolutions. In addition to this, 80 hectares have been designated as reserved areas where regulated and traditional fishing methods are permitted. As a direct result of the strengthening of the *Bantay Dagat* and formation of Coastal Law Enforcement Team, a significant reduction in the incidence of illegal fishing has been recorded by the *Bantay Dagat* Federation.



Community consultations in Masinloc

Rationale for the Approach Taken

The co-management approach was adopted in order to ensure sustainability of the management system through mainstreaming of the coastal and marine environmental programme into both local and national government regular programs thus becoming part of government basic services to the constituents. The involvement of the stakeholders not only as participants in the activities but in setting the directions and in strategising for the smooth implementation of activities has enhanced the probability of sustainability and replication.

The advantage of the co-management approach is the increased involvement of the stakeholders in project implementation, monitoring and evaluation. This project provided an opportunity for all stakeholders to share in

decision making with respect to collective action directed towards ecological enhancement and environmental protection and management. Whilst such an approach yields benefits in the longer term it must be recognised that deliberations on issues and concerns takes much time.

Potential for Replication

The establishment of small-sized MPAs and their networking through an adaptive co-management approach has a very high potential for replication. It is a good practice to involve all stakeholders in the management and protection of the coastal and marine environment. Other bays in the Philippines could replicate this strategy which provides for sustainable utilisation and at the same time sets aside areas for strict protection for both natural and induced coral reef rehabilitation and enhancement.

The potential benefits of the small-sized MPAs may in theory not be as significant as one large site. The experience at Masinloc suggests however, that the small sites are easier to manage and have been more effective in terms of local community participation in management. It has been noted that larger MPAs have mainly been established at the central government level and their total area have rarely been managed effectively. Small MPAs offer a possible solution to this.

Future development of the MPA network will focus on improving the understanding of links between the life-cycles of economically important fish species and management areas at Masinloc. It is envisaged that this will facilitate enhanced dialogue between the fisheries and environment sectors for coral reef management in the Philippines.

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