

IMPACT EVALUATION OF THE CAMIGUIN COASTAL RESOURCE MANAGEMENT PROJECT

Executive Summary

This study endeavored to determine the impact of the Camiguin Coastal Resource Management Project (CCRMP) three years after its conclusion in September 2014. The impact evaluation determined whether the target outcomes on coastal resource management and alternative livelihood of the CCRMP were achieved. To determine the impact and effects of the CCRMP, the evaluation focused on two interrelated aspects, namely: 1) Outcome 1 on the increase in productivity and any enhancement in the integrity of the coastal and marine resources, and 2) Outcome 2 on the increase in the income of fisherfolk.

The impact evaluation examined the changes that occurred over time in these two components. The period of interest covers the two phases of the project that ran from 2008-2014 up to 2017, which is about three years after the project conclusion. The National Evaluation Policy Framework (NEDADBM Joint Memorandum Circular No. 2015-01) was applied: (a) Relevance (i.e., alignment and consistency with national priorities and policies, responsiveness to stakeholder needs, complementation with other programs/ projects, and programmatic alternatives); (b) Effectiveness (i.e., achievement of objectives, intended results, and timeliness); (c) Efficiency (i.e., delivery of outputs vis-à-vis inputs and operational alternatives); and (d) Sustainability (i.e., continued profitability of ecotourism livelihood projects and complementary services in the declared Marine Protected Areas). Based on available resources, time, and documents, the study was able to evaluate sample areas and select enrolled and not-enrolled sample respondents who are representative of the project sites. The enrolled respondents were fisherfolk and stakeholders directly involved in the implementation of the CCRMP. While fisherfolk in Camiguin who did not take part in the project represented the not-enrolled respondents.

In terms of Outcome 1, the CCRMP has made significant contributions to biodiversity conservation in Camiguin. By laying down the foundation for longer-term initiatives in collaboration with the local government units (LGU), and other stakeholders, marked improvement in the MPAs covered was realized. The value of stakeholder involvement is further underscored by one of the lessons gained from the evaluation: institutional changes and broader policies introduced by the CCRMP translated to better biodiversity conservation outcomes.

Overall health of reef, fish, sea grass, and mangrove has shown improvement, as indicated by the significant increase in live coral cover, increase in fish density and fish size inside the MPAs, xv and increased basal area of mangroves over baseline.

Baseline values for all Outcome 1 indicators were collected during the initial biological assessment conducted by the CCRMP in 2008 in Mantigue Is. in Mahinog, White Island in Mambajao, and Pasil reef in Catarman. Baseline for Alangilan in Sagay and Liong in Guinsiliban were conducted in 2012.

The goal of the CCRMP to improve the overall water quality was achieved, as evidenced by the increase in water clarity and improvement in selected water parameters over baseline values. All water quality indicators evaluated within the MPAs showed better water quality readings - i.e. decrease in total suspended solids, lower oil, grease and fecal coliform contaminants - with all MPAs meeting the DENR standards for SB waters (for recreation and aquaculture).

The stakeholders regarded the development of coastal resource management plans as highly relevant in institutionalizing Coastal Resource Management towards increasing natural productivity and enhancing the integrity of the coastal and marine resources of Camiguin. Following the economic valuation of Philippine coral reefs by Samonte-Tan and Armedilla (UNEP, 2004), the 20-year economic value of the entire Camiguin near shore coastal habitat was estimated and the return on investment (ROI) of the CCRMP Phase 1 was computed at 22 percent.

The established MPAs showed biological and ecological effects both inside and outside their boundaries. Inside the MPAs, the coral cover registered “fair” to “good” with a mean coverage of 45.26 percent. Data collected also show a positive increasing trend of coral cover in the MPAs, for example, Mantigue Is. MPA shows a 39 percent increase net change between the 2008 baseline and the latest 2017 assessment. Positive changes in fish diversity, density and biomass also indicate that the protection measures installed are translated to better conservation outcomes inside the MPAs. Fish density with a moderate average count of 758/1,000m² and an average 5-401 kg/ km² biomass are also recorded.

Outside the MPAs, the potential positive effects observed include spillover and dispersal of fish eggs and larvae from inside the MPAs. The MPAs contribute to higher fishery production by making this spillover available to catch and by an increase in the reproductive output, thus contributing to more fish and coral larvae settling in the MPAs to become part of the adult population. Majority of the respondents perceived the establishment of the MPAs to be beneficial in the long run since they observed an increase in fish volume.

In terms of Outcome 2, the CCRMP was only partially successful in providing sustainable alternative sources of income.

Reliance on fishing as the main source of income is still evident in Camiguin; 77.69 percent of respondents considered fishing as their primary source of income. The “spillover” effect of the MPAs on the target and contiguous municipalities benefitted the residents of Camiguin, whose main source of income is fishing.

On the other hand, the introduction of alternative livelihood programs as a strategy to reduce reliance on fish catch to enable the coastal resources Executive Summary Impact Evaluation of the Camiguin Coastal Resource Management Project (CCRMP) | FINAL REPORT xvi to regenerate was generally received positively by the stakeholders. However, the effectiveness of the established enterprises differed greatly between the fishery or agriculture-based and ecotourism-based livelihoods. For the food processing projects, vulnerability to shocks, trends, and seasonality were not anticipated and difficulty in sourcing raw materials was a major challenge. These, coupled with low entrepreneurial mindset-readiness, prompted some fisherfolk to return to fishing after trying the productprocessing livelihood projects. On the other hand,

ecotourism-based enterprises were observed to be better alternative sources of income. Fisherfolk engaged in the provision of tourism-related services had significantly reduced their reliance on fish catch, as in the case of snorkeling guides in Catarman and pump boat operators in Mahinog. The sustainability of these enterprises will be maintained with the support from the LGUs, other government agencies, non-government organizations (NGOs), and the private sector. Considering the total revenue and user fees generated in the past ten years vis-à-vis the CCRMP Phase 2 project cost, the ROI was considerably high at 416 percent.

In terms of Management Effectiveness, while Camiguin's MPAs contributed to the enhancement of coastal resources resulting to improved outcomes, there is still a need to consider broader ecosystem-based management and expand the conventional fisheries management framework to explicitly consider a wider view of the fishery and its ecosystem, including its human dimension. Key lessons and recommendations include, among others:

For the MPAs to become effective for conservation and to meet desired fisheries objectives, these should be complemented by strong LGU support and be able to access technical support from the Department of Environment and Natural Resources (DENR), Bureau of Fisheries and Aquatic Resources (BFAR), and other academic institutions. Such groups can converge and discuss common problems and develop appropriate strategies towards meeting effective management of protected areas. Where applicable several fishery management tools can complement MPA management such as coastal zoning, coastal law enforcement, marine pollution management, closed season, reduction in the number of fisherfolk, and rotational or periodically harvested area closures. In establishing new MPAs, the new focus of the LGUs, DA-BFAR, and DENR should be on quality and towards a network of MPAs.

Vital to the long-term sustainability of the MPA is the social buy-in and compliance of all stakeholders. Project buy-in comes from the LGUs' commitment of having jurisdiction over the protected area's management including conservation as well as implementation of community-based projects. The active participation of people's organizations (POs) as major stakeholders for the community-based activities can ensure a formal structure for local participatory decision making and project sustainability.

Community stakeholders suggest that the development of alternative or supplementary livelihood activities should have been undertaken even xvii before the design and establishment of the MPAs. In the short-run, these advanced livelihood activities will be an important incentive for participation especially for stakeholders who will be directly affected and economically disrupted from fishing.

Policies that support the maintenance of the MPAs already exist however, what is lacking is the stronger implementation and enforcement of these laws. Introduction and use of real-time monitoring and evaluation activities using technology can be effective complementary initiatives - new technologies can enhance integrated data management systems including monitoring and surveillance such as drone and vessel tracking system for commercial boats.