

*STRENGTHENING THE
MARINE PROTECTED AREA
SYSTEM TO CONSERVE
MARINE KEY BIODIVERSITY
AREAS (SMART SEAS
PHILIPPINES)*

Terminal Evaluation Report

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Abbreviations

BDFE	Biodiversity-Friendly Enterprise
BMB	Biodiversity Management Bureau
DA-BFAR	Department of Agriculture-Bureau of Fisheries and Aquatic Resources
CBD	Convention on Biological Diversity
CBRM	Community-based Resource Management
CDR	Combined Delivery Report
CI	Conservation International
DENR	Department of Environment and Natural Resources
DG	Davao Gulf
FARMC	Fisheries and Aquatic Resources Management Council
GEF	Global Environmental Facility
ICM	Integrated Coastal Management
KBA	Key Biodiversity Area
LB	Lanuza Bay
LGU	Local Government Unit
LMMPA	Locally Managed Marine Protected Area
LVG	Low Value Grant
METT	Management Effectiveness Tracking Tool
MKBA	Marine Key Biodiversity Area
MPA	Marine Protected Area
MPAN	Marine Protected Area Network
MTR	Midterm Review
NFRDI	National Fisheries Research and Development Institute
NIPAS	National Integrated Protected Area System
PAMB	Protected Area Management Bureau
PEMSEA	Partnerships Prevention and in Environmental Management for the of Marine Pollution in the East Asian Seas of East Asia
PIF	Project Information Form
PIR	Project Implementation Report
PMU	Project Management Unit
PPG	Project Preparation Grant
ProDoc	Project Document
TE	Terminal Evaluation
TSPS	Tañon Strait Protected Seascape
UNDP	United Nations Development Program
UP-MSI	University of the Philippines Marine Science Institute
VIP	Verde Island Passage

Executive Summary

Project Information Table

Project details		Project milestones	
Project title	Strengthening Marine Protected Areas to Conserve Marine Key Biodiversity Areas in the Philippines		
UNDP Project ID (PIMS #):	4389	PIF Approval Date:	01/06/2012
		CEO Endorsement Date:	18/02/2014
GEF Project ID:	4810	ProDoc Signature Date:	06/08/2014
UNDP Atlas Business Unit, Award ID:	00076994	Date Project Manager hired:	16/06/2015
Country:	Philippines	Inception Workshop date:	17/12/2014
Region:	Asia	Mid-Term Review Completion Date:	May 2018
Focal Area:	Biodiversity	Terminal Evaluation Completion Date:	December 2020
		Planned Operational Closure Date:	31/01/2021
GEF Operational Programme or Strategic Priorities/ Objectives:	BD-1: Improve Sustainability of Protected Area Systems UNDP Strategic Plan Output 1.4.1 Solutions scaled up for sustainable management of natural resources, including sustainable commodities and green and inclusive value chains		
Implementing Partner (GEF Executing Entity)	Department of Environment and Natural Resources - Biodiversity Management Bureau (DENR-BMB)		
Other government partners	Bureau of Fisheries and Aquatic Resources (BFAR) and Local Government Units (LGU)		
NGOs/ CBOs involvement	Conservation International Philippines (CIP), Fishbase Information Network (FIN), HARIBON Foundation, Kabang Kalikasan ng Pilipinas (WWF Philippines), RARE Philippines, UP Marine Science Institute		
Financial information			
PDF/PPG	at approval (US\$M)		at PDF/PPG completion (US\$M)
GEF PDF/PPG grants for project preparation	8.00		8.00
Co-financing for project preparation	25.83		25.83
Project	at CEO Endorsement (US\$M)		at TE (US\$M)
[1] UNDP contribution:	1.50		-
[2] Government:	16.85		23.65
[3] Other multi-/bilaterals:	-		-
[4] Private Sector:	-		-
[5] NGOs:	7.48		-
[6] Total co-financing [1 + 2 + 3 + 4 + 5]:	25.83		23.65
[7] Total GEF funding:	8.00		7.58
[8] Total Project Funding [6 + 7]	33.83		31.23

Brief description of the project

The project Strengthening the Marine Protected Area System to Conserve Marine Key Biodiversity Areas (Smart Seas Philippines) was implemented from 2014 till 2020 under the UNDP NIM modality by the DENR-BMB through five local responsible partners: Conservation International Philippines, HARIBON Foundation, the National Fisheries Research, and Development Institute, RARE, and WWF Philippines.

Strengthening the Marine Protected Areas System to Conserve Marine Key Biodiversity Areas has been a game changer in the conservation of coastal and marine ecosystems in the Philippines by consolidating and mainstreaming marine protected area networks and establishing credible financial mechanisms for locally managed marine protected areas in the Philippines.

In 2014, there were over 1,600 locally managed and 28 NIPAS marine protected areas covering 1.7 million hectares of coral reefs, mangrove forests and pelagic habitat. Despite this remarkable accomplishment, the small size and unsystematic location of most MPAs was failing stop the ongoing degradation of coastal and marine ecosystems in the Philippines. Unsystematic establishment of marine protected areas left most marine key biodiversity areas only marginally protected. Key Biodiversity Areas were identified between 2002 and 2009 to secure optimal representation of biodiversity within protected areas and ensure conservation of threatened and restricted range species. Moreover, most marine protected areas in the Philippines were not effectively managed, with some no more than paper parks. Compounding matters, the wide gap between the financial needs of MPAs and the actual funding, all coming from overburdened local government units (LGUs) compromised the sustainability of effective local marine protected areas, the backbone of the Philippines' coastal and marine conservation. Hence, expanding, systematizing and improving management effectiveness and financial sustainability of MPAs became a key target of the Philippine Development Plan, and the DENR's Protected Area and Coastal and Marine Resources programs and Philippines National Biodiversity Strategy and Action Plan (PBSAP). To that end, eight million dollars were secured from the Philippines GEF biodiversity focal area allocation to fund a project to strengthen the conservation, protection, and management of Marine Key Biodiversity Areas (MKBAs) in the Philippines by establishing marine protected area networks over at least 441,268.2 ha covering unprotected MKBAs, articulated around three outcomes:

Outcome 1: increased management effectiveness of MPAs and MPANs

Outcome 2: improved financial sustainability of MPAs and MPANs

Outcome 3: established enabling policy framework for marine biodiversity conservation

Smart Seas Philippines was implemented at five large sites: Verde Island Passage, South(east)ern Palawan, Tañon Strait, Lanuza Bay, and Davao Gulf, extending over 2,546,188 hectares of municipal waters (9% of the Philippines' municipal waters) and including 21 marine key biodiversity areas. The project supported capacity development for management effectiveness in 128 MPAs and 69 LGUs

Evaluation Ratings Table

1. Monitoring & Evaluation (M&E)	Rating
M&E design at entry	Satisfactory
M&E Implementation	Satisfactory
Overall Quality of M&E	Satisfactory
2. Implementing Agency (IA) Implementation & Executing Agency (EA) Execution	Rating
Quality of UNDP Implementation/Oversight	Satisfactory
Quality of Implementing Partner Execution	Satisfactory
Overall quality of Implementation/Execution	Satisfactory
3. Assessment of Outcomes	Rating
Relevance	Satisfactory
Effectiveness	Satisfactory
Efficiency	Satisfactory
Overall Project Outcome Rating	Satisfactory
4. Sustainability	Rating
Financial Sustainability	Likely
Socio-Political Sustainability	Likely
Institutional Framework and Governance Sustainability	Likely
Environmental Sustainability	Likely
Overall Likelihood of Sustainability	Likely

Concise summary of findings and conclusions

Smart Seas Philippines consolidated four marine protected area networks (MPANs) at the Verde Island Passage, Lanuza Bay, Davao Gulf, and Palawan sites. MPANs are classified as other effective area-based conservation measures (OECM) contributing to Aichi target 11 and bringing the proportion of municipal waters under conservation measures to 11% (from 6% in 2014), which represents 73% of the 2028 Philippines Biodiversity Strategy and Action Plan (PBSAP) target. In establishing and consolidating marine protected area networks, the project successfully mainstreamed the critical concept of connectivity between marine protected areas at the local government level, which is consistently cited by LGU officials as one of the main rationales for creating and managing MPANs. Together with the promotion of a policy instrument to facilitate the declaration of MPA networks (Joint Memorandum Circular, JMC), these successful examples make it very likely that other MPA networks will be declared at different locations in the Philippines. Moreover, Smart Seas Philippines has decisively promoted the government's vision of a seascape approach to marine conservation by showing the links between watershed management and coastal and marine areas through a pollution model and introducing cetaceans and potentially other larger marine vertebrates as indicators of the overall health of the seascape. However, the project has only partially achieved its representativeness targets. While the project has helped expand MPA cover by over 50,000 hectares, this has not significantly increased the protection of MKBAs or increased the area of no-take zones, which were both identified as barriers for marine conservation at the project's design stage. Still, the project's implementing agency can strengthen the proposed policy instrument (JMC) to promote MPA networks by including KBAs in the systematic selection

criteria to establish MPANs. Moreover, the BMB has the opportunity to bolster its cooperation with the national fisheries agency (Department of Agriculture-Bureau of Fisheries and Aquatic Resources) by ensuring coordination in the implementation of the MPAN JMC and BFAR's executive order 263 that establish fishery management areas. Beyond that, stronger cooperation between the two leading environmental agencies affecting the coastal zone (DENR and BFAR) and LGUs is needed to correct the relentless suboptimal governance of the foreshore, which continues to enable the destruction of coastal habitats.

Outside its system-wide results, the project's partners have successfully boosted the management effectiveness of over 100 MPAs. The terminal evaluation shows that the capacity development activities performed by Smart Seas' partners have resulted in significant increases in management effectiveness scores (METT scores), which are linked to improvements in habitats condition and fish biomass outcomes. On the financial sustainability of marine protected areas, the project has developed business models that make MPAs less dependent on public funding by monetizing their ecosystem services (ecotourism, sustainable aquaculture). Presently, lockdowns and travel restrictions implemented to control the on-going COVID-19 pandemic have prevented the project-supported community-based business ventures from taking off.

Synthesis of the key lessons learned

- Marine protected area networks are a flexible and effective tool that will ensure conservation benefits from MPAs. Municipalities favor protected area networks over other area-based conservation measures and fisheries management tools. Contrary to a NIPAS protected area, LGUs do not relinquish control over their marine protected area. They also enable efficient coordination, harmonization of ordinances, pooling of resources, and leveraging financial support.
- The project's implementing agency correctly identified reliable partners. The project management arrangements enabled an efficient project execution from inception, without the long delays typical of implementing a GEF biodiversity project due to the selected responsible partners' characteristics. Future projects should seek such features in implementing partners for future biodiversity projects in the Philippines and elsewhere:
 - a. Established organizations with robust technical and scientific standards and know-how. The project's local responsible partners also had access to global conservation networks and expertise.
 - b. Strong links to local communities, local government units and decentralized government offices lasting over several electoral cycles (since the late 1980s in the case of the project's responsible partners)
 - c. Independent organizations without any political or ideological affiliation beyond commitment to conservation and co-management of biodiversity

- Contrary to previous experiences on alternative income-generating ventures, this project has developed viable community-based business ventures (biodiversity-friendly enterprises) based on ecosystem services from MPAs that can also strengthen the financial sustainability of marine protected areas. The following necessary conditions for the success in developing viable business plans are identified:
 - a. Preparation of a robust, realistic plan including market study and financial projections, entailing the support of an accompanying organization already present on the ground, like the project's responsible partners, with links to both communities and government organizations.
 - b. A grant mechanism to catalyze the ventures' launching and sustain them through the first three years of implementation. In this case, UNDP's low-value grants have been essential to ensure the viability of the project's biodiversity-friendly enterprises

Recommendations Summary Table

Rec #	TE Recommendation	Entity Responsible	Time frame
A	Category 1:		
A.1	Continue promoting the declaration of further MPANs.	DENR-BMB	2020-
A.2	Encourage LGUs to expand the area of no-take zone within MPANs.	DENR-BMB, project LRPs	2020-
B	Category 2:		
B.1	Systematically monitor marine ecosystems and allocate funds for surveys in a coordinated manner	DENR-BMB	2020-
C	Category 3:		
C.1	Harmonize BFAR's fishery management areas with MPAs and MPA networks	DA-BFAR, DENR-BMB, LGUs	2020-2021
D	Category 4:		
D.1	Disseminate project results and technical information to relevant coastal actors in the Philippines and elsewhere, especially within the Sulu Sulawesi Large Marine Ecosystem and within the Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security (CTI-CFF).	PMU, DENR-BMB, project RP	2020-2021
E	Category 5:		
E.1	Ensure that LVG tranches can be fully released, and extend technical and financial support to BDFEs for at least the first three years of operation	UNDP, DENR-BMB and RPs	2020-2021

1 Introduction

1.1 Evaluation Purpose

As mandatory for all GEF-funded, UNDP-implemented projects, the UNDP country office in the Philippines commissioned an independent evaluation team in May 2020 to conduct the project's terminal evaluation with the objectives of:

- Determine project impacts and current status of barriers identified during the project's development stage.
- Identify good practices in management arrangements and capacity building needs of the implementing and responsible partners for future GEF-UNDP projects.
- Identify measures to sustain the project's gains and mainstream them in the national and local government's regular programs.
- Extract lessons learned and good practices for replicating/scaling up, mainstreaming/putting sustainability mechanisms in place.

1.2 Scope of the Evaluation

The terminal evaluation (TE) examines the project's design, implementation, and results, from its concept (PIF) and development stages (PPG) between 2007 and 2014 to its implementation between 2014 and 2021. The evaluation of the project's design includes:

- An assessment of the project's theory of change.
- Results' framework (results chain, indicators).
- Identified risks and assumptions.
- The participation of relevant stakeholders at the national and the local levels.
- The degree to which is linked and includes lessons learned from similar interventions.

Project implementation includes assessing the stakeholders' actual participation and the effectiveness, adaptive capacity of its management arrangements, and the project's delivery and co-finances. The TE rates agency performance based on how the GEF agency (UNDP) and the implementing partner (DENR-BMB) have provided adequate resources to ensure project success. The TE also rates the project's M&E system based on how monitoring data was and used to inform adaptive management.

The evaluation of the project's results is based on their relevance, effectiveness, efficiency, sustainability, and impact.

Relevance refers to the project's degree of alignment with national and global biodiversity targets. Alignment with national priorities means the degree to which the project contributes to national conservation targets. Globally, the project should support relevant CBD targets at the time of project design, including Aichi targets and the GEF-5 results' framework.

The effectiveness criterion refers to the degree to which the project has achieved the project's indicator framework's expected targets.

The project's efficiency is evaluated against the incremental cost criteria, i.e., assessing if the project cost was a justifiable investment over the baseline and by comparing expenditure per area with similar projects. It will also consider whether results were achieved in a timely fashion as envisaged in the project design stage. The project's relevance, efficiency, and effectiveness are rated by a 6-point scale, from highly satisfactory to highly unsatisfactory.

The TE assesses the financial, socio-economic, institutional, and environmental risks to outcome sustainability. Financial sustainability depends on the funding gap and status and trends of public budget and expenditure (municipal, state, national, international) on marine protected areas, including the project-promoted low-value grants. Socio-economic sustainability is judged based on the degree to which key stakeholders' current interests align with project results. Institutional sustainability refers to the adoption by project stakeholders of project solutions. Finally, environmental sustainability refers to the extent to which threatened ecosystems in the project's two intervention areas can recover or are too degraded. The terminal evaluation rates sustainability on a four-point scale: likely, moderately likely, moderately unlikely, unlikely.

Finally, the criterion of impact refers to the mitigation of threats to coastal ecosystems and the degree to which the project has included broader development objectives, including gender and human rights considerations.

1.3 Methodology

The terminal evaluation employs a mix of qualitative and quantitative research methods:

- Desk review of relevant documents, including project reports, peer review articles and grey literature. Annex 5 includes a list of all documents reviewed.
- Semi-structured individual interviews with project stakeholders at the national and the local levels
- Statistical and GIS analysis of effectiveness and capacity scores and extent of protected areas over key biodiversity areas

1.4 Data Collection and Analysis

The project document included 95 marine protected areas (MPA) to be supported by project activities. However, the terminal evaluation team compiled 125 locally managed MPAs (LMMPAs) with some involvement in the project that excluded some of the original 95 and added new ones. Some MPAs in Palawan have been merged. Out of the 125 MPAs, 116 have METT scores, but only 59 had 2013 scores (baseline), and 106 had values older than 2017. To ensure comparability among sites, the TE follows the criterion of the MTR: changes in METT score are calculated using the most recent value (2018 or younger) and the oldest value (older than 2017). Factors underlying the score were identified by correlating project actions related to inputs (training, management plans) and outcomes (fish biomass), documented in project

reports, and conveyed by the evaluation respondents. The reported MPA area was compared with polygons provided by the local responsible partners through the PMU. The polygons were also clipped to a KBA layer to determine the correspondence between project MPAs and KBAs, and combined with Google Earth imagery to verify main ecosystems covers and the presence of reported threats.

Interviewees (respondents) were systematically selected based on MPA management effectiveness scores. Due to the ongoing COVID-19 pandemic, travel restrictions and health concerns prevented actual field visits. Hence, the evaluators interviewed respondents remotely employing teleconference applications or cellular phones. The evaluators determined the number of MPAs selected per site by weighing an equal number of MPAs per site with the relative size in terms of population, the number of MPAs, and the area of the five project sites. 17 MPAs/LGUS were selected to conduct interviews, with at least two MPAs per site (table 1). At all 17 interviews, the evaluation team interviewed members of the people's organization involved in managing the MPA and a corresponding LGU official: agricultural, CRM, or equivalent. Management board members of the project-supported MPA networks and the PAMB of the Tañon Strait Protected Seascape NIPAS MPA were also interviewed. The evaluators interviewed representatives from DENR and BFAR from the six regions involved and each of the five project responsible partners. A list of all persons interviewed can be found in annex 3. The evaluation team conducted the interviews in English, Tagalog, or Visaya according to the respondent's preference.

Table 1. MPA/LGU interview per project site

Project site	# of interviews with LGUs and MPA management councils
Davao Gulf	5
Lanuza Bay	2
Palawan	2
TSPS	2
VIP	6

METT scores were correlated with capacity scores and ecological outcomes (fish biomass) data using a CLR model. Fish biomass data were obtained from surveys in 2016-17 and 2018-19 at 24 MPAs (4 Davao Gulf, 4 Lanuza Bay, 2 Palawan, 6 TSPS, and 7 VIP), of which 11 were located within KBAs. Correlation with management effectiveness scores was only possible for these 24 MPAs.

Capacity scores were provided for the Southern Palawan, Davao Gulf, and Lanuza Bay MPANs. For the Verde Island Passage, the evaluation averaged the LGU's capacity score, as an MPAN level capacity assessment was not provided. Individual MPA capacity scores were provided for Lanuza Bay and the Verde Island Passage. Capacity scores were correlated with a measure of the project's training activities, based on a list of all training and trainees was obtained from the PMU and standardized by the municipalities' population to account for the differences in population and resource users. This measure, we called training intensity, was correlated with capacity scores using a CLR model.

Data to estimate the current MPA finance and funding gap came from different sources:

1. Forty-five updated management plans
2. Records from interviews
3. Project's costing tool

The PMU provided 60 MPA management plans corresponding to 83 MPAs, of which 45 contained some information on budget requirements and actual financing. We verified this with 17 individual interviews with LGU officials and reports from LRP. For VIP, funding information from both sources showed excellent correspondence. For Lanuza Bay, the information in the MPA management plans and the Excel sheets differed. We opted to use data from the Excel sheets, as these offered more detail on expenditure and corresponded better with information from LGU officials. For the Tañon Strait Protected Seascape (TSPS), 18 Community Based Resource Management (CBRM) and Municipal Agricultural Office (MAO) budget data were provided (out of 24 total TSPS LGUs). However, CBRM and MAO allocation include agriculture and other services, but they did not indicate MPA allocation. Thus, for TSPS, the terminal evaluation used only information from the MPA management plans and interviews. For Palawan, the MPA management plans provided the data for the funding requirements, while actual funding was contained in the costing tool Excel sheets. The terminal evaluation used the official mean exchange rate for 2019 (51.80 PHP/ US\$) to convert data to Philippine Peso. The 45 management plans were also used to estimate LGU co-finance. Daily minimum wage rates per region were obtained from official sources and multiplied by 247 (days) to obtain an annual equivalent compared to additional income generation from the project's biodiversity-friendly enterprises.

To estimate the number of beneficiaries and the proportion of fishery dependent population, we extracted data on the number of fisherfolk from MPA management plans that included that data. If the plan referred to registered fisherfolk instead of households, we multiplied that number by the average number of persons per household in the area (from the 2015 Philippines census). The mean number of fisherfolk per municipality per site was multiplied by the number of LGUs to approximate the number of municipal fisherfolk. We then divided the municipal fisherfolk estimate by the population of the corresponding LGU population (2015 census). The resulting percentage was averaged per site, necessarily underestimating the fishery-dependent population, as it ignores people involved in the marketing of fish and shellfish gleaners.

For efficiency, the evaluation team selected GEF-funded projects from the GEF project database, using only the GEF grant to calculate cost per protected area of management effectiveness interventions, as it figured in the Project Identification Form (PIF).

1.5 Ethics

The evaluation was conducted in accordance with the principles outlined in the United Nations Evaluation Group (UNEG) 'Ethical Guidelines for Evaluations and the evaluators have signed the code of conduct, attached to this report.

The evaluation's team leader was also the team leader of the midterm review. To prevent any conflict of interest, the national consultant, with ample experience in the evaluation of projects, independently review the evaluation of the implementation of MTR recommendations.

1.6 Limitations

Due to the on-going Covid-19 pandemic, international and domestic travel was effectively impeded. Thus, the national consultant (based in Davao) and the international consultant (based in Europe) conducted all interviews through telephone and online means. To account for location, threat and stresses and main ecosystems, Google Earth[®] satellite imagery was used, and a virtual visit was conducted to each of the 125 MPAs, using the polygons of the MPAs and MPANs provided by the local responsible partners through the PMU.

1.7 Structure of the evaluation report

The report is composed of two main sections: Findings, which covers project design, implementation, effectiveness, efficiency, impact, sustainability, and catalytic effects, and Conclusions, Recommendations and Lessons Learned.

2. Project Description

The project Strengthening the Marine Protected Area System to Conserve Marine Key Biodiversity Areas (Smart Seas Philippines) was implemented from 2014 till 2020 and funded with a grant from the GEF trust fund under the biodiversity focal area amounting to US\$ eight million. The project will be operationally closed on January 31, 2021.

Development context up to 2015.

Smart Seas Philippines addressed challenges in consolidating an effective system of marine protected areas in the Philippines. Locally managed marine protected areas in the Philippines constitute a success story in community-based conservation and biodiversity co-management. With support from academic institutions and civil society organizations, the establishment of locally managed MPAs started during the 1970s but took off, especially in the Visayas (Central Philippines), from the 1990s. The local government code of 1991 and the fisheries code of 1998 (amended in 2015) strongly supported the establishment of small, locally managed marine protected areas (MPAs). Local MPAs demonstrated that co-management with coastal communities produced strong conservation results (improvement in fish biomass within the no-take zone) and even some encouraging impacts on fisheries through spillover. The tourism industry has also capitalized on reefs and protected areas. Tourism accounted for 10% of the GDP in 2015 and 13% of the total employment.

To address coordination problems in the enforcement of MPAs and the fisheries code, coastal municipalities in the Philippines started to build alliances in the mid-1990s. Setting them up was promoted by civil society organizations and environmental NGOs. Concurrently, the national government consolidated and expanded the national system of protected areas into the marine and coastal ecosystems and defined marine conservation priorities. The enactment of the National Integrated Protected Area System (NIPAS) Act in 1992 established the national protected area system. While most NIPAS protected areas are terrestrial, the number and extent of NIPAS marine protected areas increased steadily between 1994 and 2006. The national government's agency governing NIPAS areas is DENR's Biodiversity Management Bureau (BMB), formerly the Protected Areas and Wildlife Bureau (PAWB). The BMB founded its coastal and marine division in 2014.

Simultaneously, the Philippines' government and environmental organizations were striving to achieve more systematic biodiversity conservation. In 2002, government, academe, and NGO stakeholders identified 206 priority conservation areas. These were consolidated in 2006 as 101 key biodiversity areas (KBA) for the terrestrial ecosystem. In 2008-2009, an analogous process promoted by the DENR-BMB, under the Coral Triangle Initiative, with HARIBON and Conservation International Philippines identified 123 marine key biodiversity areas. Workshop participants identified marine key biodiversity areas (MKBA) based on the presence of threatened or restricted ranges species of seaweeds, seagrass, corals, mollusks, sharks and rays, bony reef fishes, and mammals.

Problems that the project sought to address.

At the time of the project concept, over 1,600 locally managed MPAs covered some 24,000 hectares of mostly coral reef ecosystems (a mere 2% of the Philippines' reef area). 28 NIPAS

marine protected areas covered 1,450,000 hectares of coral reef, mangrove, and (mostly) pelagic ecosystems. The vast majority of NIPAS MPAs are multiple-use areas with the denomination of protected seascape (corresponding to IUCN category V). Together with locally managed MPAs, they amounted to 5% of the municipal waters and about 1% of the Philippines' total marine area (EEZ).

Despite the growing extension of the marine protected areas, their small size and scatteredness meant that they could not prevent coastal and marine ecosystems' degradation and the consequent decline of artisanal fisheries. However, the ad hoc, uncoordinated establishment of MPAs, and their small size and proportion of reefs covered meant that locally managed MPAs failed to curb the on-going degradation of coral reefs in the Philippines. In 2008 just 10% of Philippine coral reefs were in good or excellent condition. Moreover, LGUs established marine protected areas without taking connectivity (e.g., larval export) or representativeness into consideration. The project document states that of 123 MKBAs, 70 were unprotected and 53 protected. Based on data from Ambal et al. (2012) and the Foundation for the Philippine Environment, 66 MKBAs were entirely unprotected, 33 partially, and 24 wholly protected. Worst, most marine protected areas in the Philippines were not effectively managed, with some no more than paper parks. Only 30% of MPAs were effectively managed in 2014. Yet, most MPAs implemented some surveillance and monitoring activities. But at too many MPAs, insufficient support from the local governments, on which they depended, severely curtailed enforcement efforts. Hence, volunteers' patrolling and surveillance at their expense, as well as legal challenges to fine and apprehend violators posed significant hurdles to marine protected area effectiveness.

How the project objectives fit into the partner government's strategies and priorities

The project supports the achievements of several targets of the current National Biodiversity Strategy and Action Plan of the Philippines, the Philippine Development Plan, and the Country Program Document of the UNDP, as described in section Results/ Relevance. The project is also aligned with local government objectives and local communities, expressed in integrated coastal management plans and protected area management plans.

Project sites

The project design identified five large project sites where the project responsible partners have long worked with local governments (LGUs) and people's organizations: Verde Island Passage (VIP), South(east)ern Palawan (SP), Tañon Strait (TSPS), Lanuza Bay (LB) and Davao Gulf (DG). The sites extended over 2,546,188 hectares of municipal waters (9% of the Philippines' municipal waters). In terms of habitat coverage, the project document states that the project's sites include 73,625 hectares of coral reefs (3% of Philippine reefs) and 64,155 hectares of mangroves (25% of mangroves in the Philippines). However, the individual site descriptions included or annexed to the ProDoc account only for 33,000 and 4,100 hectares of coral reefs and mangroves, respectively. Estimates of coral reefs and mangrove habitats in the Philippines range from 1.2 to 2.5 million hectares of coral reefs and around 250,000 hectares of mangroves. The true extent of coral reefs and mangroves, based on national averages, could be approximately 40,000 hectares for coral reefs and 5 to 6,000 hectares for mangroves. As most coral reefs in the Philippines, the project site's reefs are subject to critical anthropogenic

threats, and their health ranges mostly between poor and fair (less than 25 to 50% average hard coral cover).

The project document cites 282 MPAs covering 31,571 hectares at project sites. Based on data provided by the project and the World Database on Protected Areas, in 2014, there were 215 locally managed marine protected areas (LMMPA) declared by 81 LGUs, covering 57,446 hectares, and three NIPAS marine protected areas (Sagay Marine Reserve, Tañon Strait Protected Seascape and Mabini Protected Landscape and Seascape) covering 488,429 hectares. The project's responsible partners finally worked with a subset of 69 LGUs and 125 LMMPAs. The final area of the project's MPAs amounted to 89,940 hectares of mostly coral reef ecosystems and two NIPAS MPAs, covering 456,106 hectares of coral reefs and pelagic habitats. The increase in area was due to the consolidation of municipal MPAs in Palawan, without expanding no-take zones.

Table 2. Project's LMMPAs

Site	Count of MPA	Median size (hectares)
Davao Gulf	19	30
Lanuza Bay	17	43
Palawan	18	23
Tañon Strait Protected Seascape	71	15
Verde Island Passage	91	41

The total population of the 69 LGUs was 5.7 million people in 2015 (6% of the population of the Philippines), who are assumed to directly or indirectly depend on ecosystem services stemming from the municipal waters, including livelihood, employment, and food. We estimate fishing households to be between 3 and 35% of homes across the sites, bringing the population directly depending on coastal fisheries, and direct beneficiaries of the project, at around half a million people. The coastal population of Davao Gulf and Southern Palawan include indigenous minorities. These comprise the Samal, Calagatanes, and Culamanes in Davao Gulf and the Palawan of Southern Palawan.

Table 3. Project sites and LGUs

Project site	LGUs	Population (2015)	% depending on fishery
Davao Gulf	Davao, Digos, Samal, Panabo and Tagum cities, municipalities of Lupon, Mabini, Maco, San Isidro and Sta. Cruz	2,665,733	4%
Lanuza Bay	Tandag City and the municipalities of Cantilan, Carrascal, Cortes, and Lanuza	138,248	35%
Palawan	Municipalities of Aborlan, Bataraza, Brooke's Point, Narra and Sofronio Española	283,021	17%
TSPS	Bais and Guihulngan, cities, municipalities of Alegria, Aloguinsan, Amlan, Ayungon, Bantayan, Bindoy, Calatrava, Ginatilan, La Libertad, Manjuyod, Moalboal, Samboan, San Jose, San Remigio, Santander, Sta. Fe, and Toboso	897,229	3%
VIP	Cities of Batangas and Calapan, and municipalities of Abra de Ilog, Balayan, Banton, Bauan, Buenavista, Calatagan, Concepcion, Corcuera, Gasan, Gloria, Lemery, Lian, Lobo, Looc, Lubang, Mabini, Mogpog, Nasugbu, Naujan, Paluan, Pinamalayan, Pola, Puerto Galera, San Juan, San Teodoro, Tingloy, and Torrijos	1,730,619	16%

Immediate and development objectives of the project

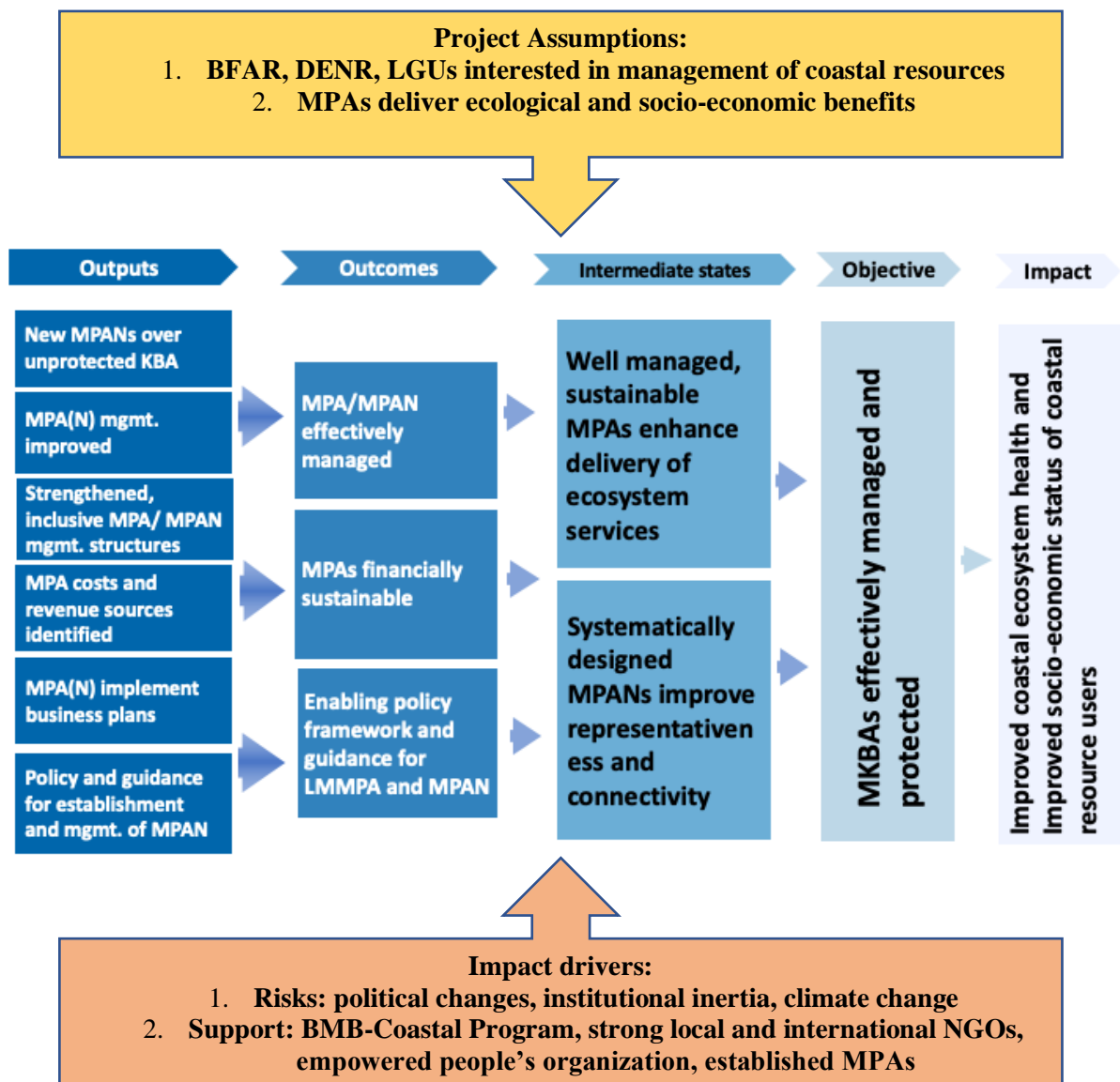
The overall project objective is to strengthen the conservation, protection, and management of Marine Key Biodiversity Areas (MKBAs) in the Philippines by expanding marine area under protection by at least 441,268.2 ha, including unprotected critical marine ecosystems (KBAs). Smart Seas' strategy entailed promoting the establishment of networks of marine protected areas (MPANs), and improving management effectiveness and financial sustainability of locally managed marine protected areas (LMMPA).

Description of the project's Theory of Change.

The PRODOC articulates the project strategy in three outcomes (figure 1):

- Outcome 1: increased management effectiveness of MPAs and MPANs
- Outcome 2: improved financial sustainability of MPAs and MPANs
- Outcome 3: established enabling policy framework for marine biodiversity conservation.

Figure 1. Project's theory of change.



3. Findings

3.1 Project Design/ Formulation

Definition of the problem to be addressed and its root causes

The project identifies habitat change, overexploitation, and pollution as the leading causes of coastal ecosystem degradation, ultimately driven by population growth and compounded by overlapping jurisdictions and limited capacities of LGUs and national government agencies (NGA), primarily DENR and BFAR.

The root causes are well known after nearly five decades of implementing coastal resource management projects in the Philippines. However, the link with population growth, cited in many grey literature reports is questionable, and not proven. Instead, governance problems caused by inefficient administrations and economic growth lie behind most coastal habitats' current degraded status in the Philippines. Locally managed protected area co-managed by POs constitutes the best-known conservation tool to deliver ecological outcomes in the Philippines. LMMPAs seem the more effective when compared NIPAS MPAs: to date, against a growing peer-reviewed literature on the effects of LMMPAs, no evidence exists of how NIPAS MPAs have achieved similar results.

Analysis of barriers to and enablers for achieving outcomes

The project correctly identifies the barriers preventing MPAs from delivering ecological outcomes: scale issues (small size, limited connectivity), management capacity, and financial limitations. The project addresses these three barriers with a similar strategy to many other previous interventions: enabling regulatory framework (outcome 3), capacity development for management effectiveness (outcome 1), and alternative income generation schemes (outcome 2). The innovative part of the project strategy involves addressing scale issues by extending support to larger NIPAS MPAs, creating networks of protected areas, and involving critical actors beyond the LGUs and POs: the DENR and BFAR at the national and provincial level. Moreover, the project added a scientific dimension to marine conservation by stressing the need for connectivity studies and the scientific design of marine protected areas, including systematic conservation, such as maximizing the amount of protected KBAs and involving leading marine research institutions like the UP-MSI and the NFRDI.

Feasibility of results and validity of assumptions

The sheer size, scatteredness, and institutional variety of the project sites may be seen at first glance as a critical weakness. However, the project was efficiently designed to be implemented by responsible partners with a long experience working with local institutions (LGUs, POs, local NGOs, etc.) coordinated by the national protected area agency (DENR-BMB). Although there were coordination and ownership issues during implementation, they did not pose an insurmountable challenge for implementing the project. The project strategy's main weakness was the contradiction between a clearly defined set of sites and MPAs that did not maximize representativeness (number of MKBAs) and its claim to increase protection and ecological conditions at MKBAs. The project strategy does not address how it would integrate locally

managed MPAs with the national integrated protected area system. The project document states that it would increase the "Number of MKBAs in the Philippines included in the PA System (IUCN Categories I-VI)" from 53 to 66 MKBAs by establishing MPAN that "will fall mostly under IUCN Category V." As remarked by the MTR, IUCN Category V refers to protected areas, not protected area networks. Since the number of MKBAs did not stem from a rigorous gap analysis but rather by chance occurrence within each responsible partners' area, the project left unprotected MKBAs adjacent to the project sites outside the project domain. Moreover, the project's ecological effects (fish biomass, cetacean population, pollution reduction) were expected to manifest at the level of MKBA. Eventually, the contradiction was solved by focusing on LMMPA and NIPAs MPAs for the project's three outcomes, relegating MKBAs to a secondary status.

Lastly, the project's indicator framework includes a rapid response of marine ecosystems to the expected improvement in management effectiveness. Even if the MPAs and MPANs were effectively managed from year 1 of implementation, there is no guarantee that fish biomass, cetacean populations, or pollutions levels would positively respond within five years. Yet, as we will show in section Effectiveness, the project has produced some exciting results on all accounts.

Linkages and lesson learned from other interventions within the sector

The project document states that Smart Seas would coordinate and benefit from "lessons learned" from several projects, including GEF funded biodiversity project implemented by international financial institutions. During the project's implementation, there was only some cooperation with GEF's Partnerships Prevention and in Environmental Management for the of Marine Pollution in the East Asian Seas of East Asia (PEMSEA) at the VIP site. However, the project's responsible partners had significant experience implementing marine biodiversity projects at Smart Seas sites. For instance, GEF's PEMSEA promoted Integrated Coastal Management plans and marine protected areas in Batangas and Mindoro Occidental, both part of the Verde Island Passage, from the mid-1990s to the mid-2010s. Conservation International (CI) implemented the Sulu-Sulawesi Seascape Conservation Initiative between 2005 and 2010, funded by the US Aid, to implement the SSME conservation plan. Under this project, 14,000 hectares in the Verde Island Passage were declared as protected areas, and the provincial governments and LGUs of Batangas and Mindoro Oriental established MPA networks. With US Aid funding, WWF implemented the Sulu Sulawesi Conservation Program (1999-2004), supporting the successful establishment of a user fee system in Mabini and Tingloy (Batangas). With CI, WWF also implemented the Coral Triangle Support Partnership project between 2009 and 2013, which focused on VIP and some LGUs in Palawan, including Aborlan, to establish and strengthen MPAs. DA-BFAR also implemented three successive US Aid's funded projects: Coastal Resources Management (1996–2003), the Fisheries Improved for Sustainable Harvest (FISH) from 2004 till 2010, and Ecosystems Improved for Sustainable Fisheries (ECOFISH) from 2012 till 2017. These initiatives facilitated the establishment and management effectiveness of marine protected areas and other fisheries management measures, in eight locations, including Verde Island Passage.

Project stakeholders

The project's primary stakeholders were municipal and city governments and fisherfolk communities. These were to be integrated into the project through participation in capacity development activities and guided the planning of protected areas, led by the project's responsible partners: Conservation International Philippines, HARIBON Foundation, RARE, WWF Philippines, and the National Fisheries Research and Development Institute are four NGOs and one government research facility, with experience in coastal resource management and with links to their assigned project areas, which were also involved in the project design.

The project's board included a good representation of different government sectors, including tourism, indigenous peoples, social affairs, and civil society and academe representation.

3.2 Project Implementation

Adaptive management

Project stakeholders introduced minor changes during the inception workshops in 2015, modifying the METT score targets and the ecological indicators: different fish families, fish biomass instead of density, and cetaceans instead of large marine vertebrates. The MTR in 2018 highlighted the relatively slow progress in the declaration of the committed category V protected areas (target of 4,412 km² of new protected areas) and the unrealistic nature of many of the MPA-based business plans being developed. The project stakeholders accepted the MTR recommendations during their board meeting in May 2018, increasing their support to municipalities at the Lanuza and Davao Gulf sites to complete their MPAN management plans, which they achieved by 2018. After a recommendation by the MTR, the project reviewed MPA business plans focusing on feasible income-generating aquaculture or tourism projects and developing a funding mechanism (low-value grants) to catalyze their implementation.

Planned and Actual stakeholder participation and partnerships agreements

Local stakeholders, people's organizations (POs), and local governments mostly interacted with the project through the local responsible partners in their respective sites. The stakeholders' engagement was robust from the beginning: in 2015, provincial DENR officials, PO members, and LGU staff participated actively in the project's five inception workshops. During implementation, fisherfolk associations (as MPA managers) and LGUs remained very actively involved, mostly as recipients of capacity development products, and by actively developing management and business plans at the MPA and MPAN levels.

The Project Board was established at project inception and composed as foreseen in the project document. The DENR-BMB and the National Economic Development Authority (NEDA) co-chaired the board to ensure linkage to national development goals. Unusually, UNPD was only a board member and not a co-chair, but this does not seem to have been a problem for the implementation. The representation of other government agencies in the project board: Department of Interior and Local Government (DILG), Leagues of Provinces, Cities, and Municipalities, DA-BFAR, Department of Tourism (DOT), National Commission for Indigenous

Peoples (NCIP), Department of Social Welfare and Development (DSWD), Philippine Commission on Women (PCW), and National Anti-Poverty Commission (NAPC) ensured the inclusion of transversal issues and the replication of project measures at different localities.

The board met twice a year on average, eight times in total, discussing results of the project M&E instruments and delivering recommendations to improve implementation. From the national agencies, participation was fair, except for the absence of the NCIP. Indigenous people issues were only relevant in Palawan, where the LGUs and POs dealt with IP members' inclusion in MPA management boards.

Implementation arrangements were never an issue discussed during board meetings. However, from other reports and interviews, there are three issues about the management arrangements, including the participation of the decentralized offices of DA-BFAR and DENR in project activities. For DA-BFAR, this is mainly explained by the different focus of BFAR (on fisheries production rather than conservation) and their on-demand approach to projects, i.e., BFAR would only act if another NGA or LGU requests an intervention, may it be financial or technical assistance. DA-BFAR is one of the three NGAs involved in the key Joint Memorandum Circular at the national level. Hence a more active involvement of BFAR could be expected. The establishment of fishery management zones by BFAR provides an opportunity for synergies between the BMB-backed MPA networks and BFAR's fishery management effort.

The initial limited ownership and participation of DENR with the project at the national and local level was driven by the fact that although the PMU is technically part of BMB, its staff had contractual agreements with the UNDP and functioned as an independent unit BMB. The new national project director has since taken action better to integrate the PMU with the rest of the BMB. Many DENR officers were unaware that the DENR was the implementing partner of the project at the provincial level, understanding it as another foreign-funded project implemented by international NGOs. To address these issues, the PMU contacted the concerned DENR and BFAR offices to introduce Smart Seas and seek assistance in conducting various activities. The responsible partners ensured better coordination with the regional and provincial DENR offices by hiring liaison staff. However, in general terms, DENR staff at the regional and local levels do not yet see the coastal environment outside NIPAS MPAs as their responsibility, although they cooperate with the management of MPANs when requested.

Little frictions arose between the PMU and LRPs, which were satisfactorily solved. Those frictions were related to applying the METT tracking tool and the direct supervision of PMU over the Biodiversity-Friendly Enterprises.

A staff of 13 clerical and technical staff, led by a project manager, three outcome and one communication officers staffed the PMU. In the project document, a total number of 21 was foreseen, including consultants. The local responsible partners had the freedom to configure their field operations, which they conducted through field coordinators and community facilitators, without any significant issues.

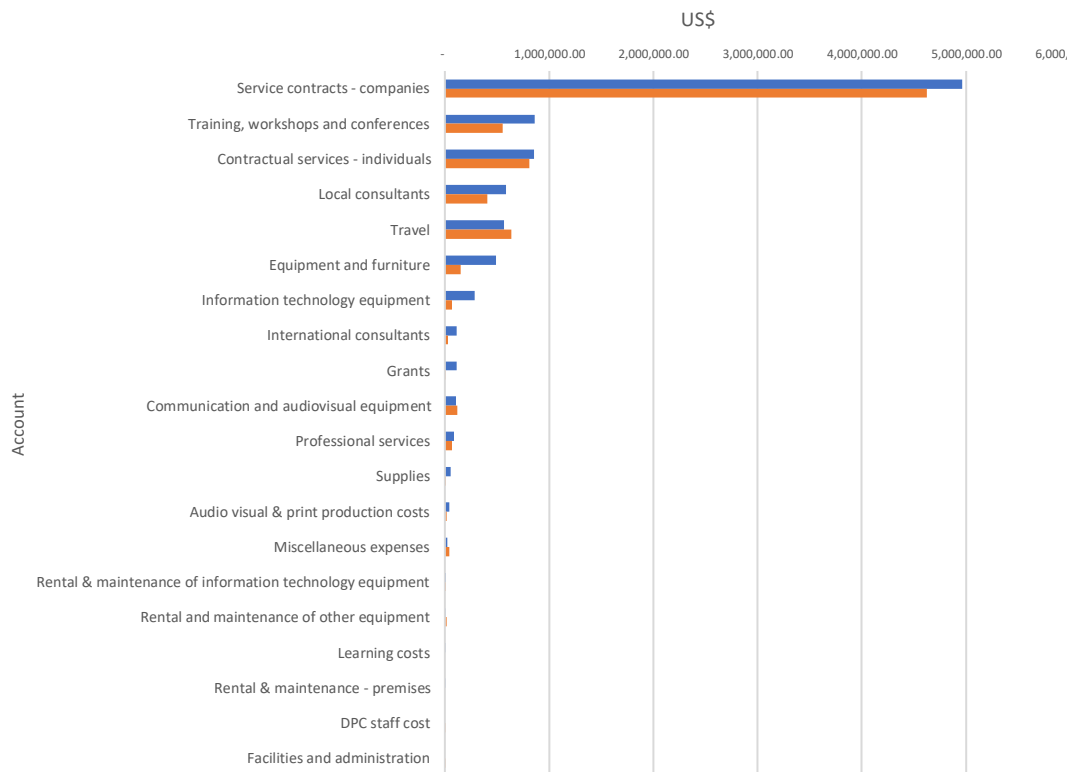
Other relevant stakeholders were the UP-MSI and the Fishbase Information and Research Group, which prepared knowledge products on fish abundance and connectivity critical for the project's success.

The implementation arrangements have been adequate and able to solve implementation challenges. Implementation arrangements were never an issue discussed in audit and spot check reports, PIRs, QPRs, or project board meetings.

Project finance and co-finance

The project reached 94% delivery in June 2020. Annual delivery has followed the yearly work plans closely with only minor deviations (Figure 2). Unusually for a NIM project, 80% of delivery has been directly executed by the UNPD. Observations and adverse risk ratings were made in the annual audit reports of 2019 and 2020. The PMU has devised an action plan to address the findings, setting deadlines, and holding several meetings to review the status of compliance.

Figure 2. Actual expenditure vs. annual work plans



Committed co-finance in the project document amounts to US\$ 25,833,490. Based on the limited information available (Table 5), the terminal evaluation estimates that 92% of the expected co-finance amount has been delivered, albeit not from the sources initially intended. Virtually all co-finance has been cash contributions from LGUs with minor assistance from the DENR. For LGU contribution, we considered an investment in MPAs during the project's lifetime as co-finance. AIP allocations for ICM has increased in all five project sites during the implementation period. A small cash contribution from a power company to the Batangas MPA awards has been recorded for the private sector. Its sustainability report explicitly mentions the intervention of the RP Conservation International. DENR has provided regular annual appropriations to manage protected areas, wildlife, and coastal and marine resources/areas. BFAR has similar annual budgets for local and foreign-assisted programs and projects. However, they are not sufficiently specified to determine their co-finance value.

Table 4. Co-financing table

	UNDP financing (US\$m)		Government (US\$m)		Partner Agency (US\$m)		Total (US\$m)	
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual
Grants	1.50	-	16.85	23.64	No data	0.15	18.35	23.64
Loans								
In-kind					7.48	-	7.48	-
Other								
Totals	1.50	-	16.85	23.64	7.48	0.15	25.83	23.64

Table 5. Confirmed sources of co-financing at TE stage.

No information was supplied as to the type of co-finance at the ProDoc, or the PMU Table from 2017. Letters refer to the co-finance letters.

Co-financier	Prodoc (2014)	Letters (2013)	Type	PMU (2017)	TE (2020)	Type
LGU	-	1,098,399.00	in-kind	-	23,356,883.32	Cash
UNDP	1,500,000.00	1,500,000.00	grant	506,481.82	-	
CI		1,070,463.00	in-kind	130,667.00	-	
HARIBON		3,035,045.00	in-kind	10,488.63	-	
WWF		438,212.84	in-kind	442,445.00	-	
RARE		900,000.00	in-kind	643,220.67	-	
FIN		237,024.00	in-kind	2,742.27	-	
CSO (unspecified)	7,480,319.00				-	
UP-MSI		-		-	-	
DENR		353,390.00	in-kind	8,998,688.19	286,982.92	Cash
NFRDI-BFAR		2,000,000.00	in-kind	381,275.00		
Other nat. gov't.				4,037.00		
Nat. gov't. (unspecified)	16,853,171.00			148,732.00		
Private sector					6,177.61	Cash
TOTAL	25,833,490.00	10,632,533.84		11,268,777.58	23,650,043.84	

Monitoring and evaluation

Overall assessment of M&E (*)

The overall rating of the project's M&E system is satisfactory. Despite issues with ecological indicators and METT scores described below, the PMU and project partners dedicated sufficient resources to monitoring and evaluation activities conducted efficiently and effectively.

Design at entry (*)

The design at entry of the project's M&E is rated as satisfactory. The project indicator framework included 15 SMART indicators in line with other GEF biodiversity focal area projects. Despite the challenges cited below, the logical link between project action and indicators is

strong, and all variables are a priori relatively straightforward and easy to measure and record. See table 16 for the full list of indicators.

Development objective indicators included the expected ecological outcomes of the successful expansion of the marine protected area, increased management effectiveness, and consolidation of a seascape approach to coastal conservation. Thus, Smart Seas' interventions were expected to increase the mean biomass of important fish guilds, maintain cetacean populations (as an indicator for general ecosystem health), and reduce pollution levels. None of these indicators had baselines established at project design, although scattered and partial documentation (not covering all sites) on all three existed. Showing gains against ecological targets is problematic due to the response time scales of ecological systems and external factors not in control of the project. These include climatic factors, internal population factors (e.g., recruitment failures), and land-based activities. The project design assumed that establishing baselines and obtaining results would be possible within the first year of implementation at no significant costs. Precisely, project stakeholders introduced changes at the project's inception to increase the validity and improve efficiency in collecting information. Thus, fish density was changed for fish biomass (kg/m²), conveying more fishery-significant information than mere density (individuals/m²). The fish guilds were also modified to include commercially important species. The elaborate list of large marine vertebrates to be monitored was reduced to easily observed cetaceans. While marine vertebrates such as elasmobranchs, marine reptiles, or dugong possess higher conservation priority and a more intimate relationship with coastal and marine habitats, monitoring their populations would have been challenging and costly.

The rest of the framework indicators were straightforward and related to the achievement of project milestones:

- Inclusion of 13 non-protected KBAs within protected areas.
- Increasing management effectiveness and capacity scores by 10-35%.
- Development of a set number of MPAN, MPA, and business plans.
- Percentage of MPA funding from sources other than LGUs.
- Enactment of one policy instrument.

Implementation (*)

Implementation of monitoring and evaluation activities is rated as satisfactory, despite the issues described in this section. Establishing the baselines of the objective's indicators and collecting data on their evolution involved a significant portion of the project resources and budget. Moreover, the information collected is patchy both in time and space, therefore not representing the entirety of the project sites or a significant time series. For instance, fish visual censuses could only be conducted in 28 non-KBA locations in 2016 and 2019, and local responsible partners could perform only one cetacean survey at two sites. Hence the need to institutionalize surveys, data gathering, and publication. However, the information collected and reported completely fulfilled the project document's monitoring requirements and delivered very significant insights on how capacity development affects management effectiveness and ecological outcomes as described under section Effectiveness of this report.

Monitoring operations were conducted by the PMU and project partners effectively and on schedule. The PMU reported monitoring results in quarterly reports and PIRs. Project board members discussed progress monitoring results to guide annual work plans. M&E activities, including monitoring missions, the midterm review, and terminal evaluation, were sufficiently funded and efficiently conducted.

METT and capacity scoring exercises presented some quality issues. For instance, METT scores are not always consistent and lack supporting information to justify the scores. Capacity scores were reported in different formats and covering different geographical extents: sitewide or individual MPAs. However, the data reported was more than sufficient to monitor project progress towards its targets. The project now has a comprehensive database that includes biodiversity and socio-economic data. Monitoring data has helped to produce technical reports and guidelines. Still, a considerable amount of information is not available to most stakeholders and not ready to be shared or used. For instance, METT, ecological data, and the KBA biological profiles prepared by FIN have not yet been uploaded to any database. Socio-economic data are less organized and need disaggregation by gender and, when applicable, by ethnic origin to account for effects on IP groups.

The project had a coherent communication strategy that raised awareness among stakeholders (see Mainstreaming of project's products into the national policy framework). Thus, LGU partners report having increased their ICM budget allocations or their willingness to consolidate networks of marine protected areas due to the connectivity study conducted by the UP-MSI on behalf of the project. However, the project's data could still be systematized to generate more information and knowledge materials to be made available to enable the replication of project successes, such as establishing MPANs in other areas of the Philippines.

Overall assessment of implementation, oversight and execution (*)

The terminal evaluation rates the implementation, oversight, and execution of the project as satisfactory. The GEF agency helped the implementing partner, the BMB, conceptualize and develop the project document to support BMB's marine conservation objectives. The BMB-led PMU independently conducted day-to-day operations under the project's national Director's supervision and coordinated with decentralized structures of the Department of Environment and Natural Resources (DENR). The implementation challenges were dealt with within the project management structures without any significant performance or delivery impact.

UNDP implementation oversight ()*

UNDP's implementation oversight is rated as satisfactory. Despite some financial oversight issues, the UNDP was critical during the development stages of the project and provided technical assistance and support essential to the sustainability of the project's results on the financial sustainability of MPA. UNDP's role was critical during the project's concept and development stages.

As a board member, the UNDP participated in the annual discussions on project progress and approval of the PMU's yearly work plans. The UNDP country and regional office also reviewed and rated the annual Progress Implementation Reviews (PIR), providing consistent ratings.

The UNDP country office provided technical assistance in setting up the low-value grants to boost biodiversity-friendly enterprises prepared by people's organizations linked to marine protected areas. The UNDP will still provide support after the project's operation closure to ensure the delivery of this mechanism, which has been momentarily stopped in the wake of the COVID-19 pandemic. Administratively the UNDP supported the projects in procuring goods and services needed to execute the project activities (see section finances). The UNDP did not prevent the issues identified in the project's last audit report, but, as a member of the board, is supporting the PMU in adopting the audit report's recommendations. However, the UNDP could not provide evidence of delivery of their co-finance commitment to the project.

Implementing Partner execution ()*

The implementation of partner execution is rated as satisfactory. Despite some coordination issues with the PMU and regional and provincial DENR offices, the BMB has maintained adequate leadership and supervision of the project throughout its implementation period.

The Biodiversity Management Bureau, formerly Protected Areas and Wildlife Bureau (PAWB), is the government agency charged with managing biodiversity and national protected areas in the National Integrated Protected Area System. The BMB's marine program started in 2014, shortly after identifying terrestrial and marine KBAs. The project is part of BMB's actions towards achieving its goals of expanding, consolidating, and improving marine protected areas' representativeness and effectiveness. The BMB had a leading role in designing the project's logical framework and managing arrangements. Considering the local jurisdiction over municipal waters, where all locally managed protected areas are located, and the long history of cooperation with LGUs and people's organizations on the field, the BMB opted for a decentralized project structure that entailed implementation by local responsible partners. LRPs selection was based on their involvement and participation in the project development and their work in the demonstration sites. All MOAs with the LRPs, including FIN and UP-MSI, were signed by BMB-DENR through its Director, acting as the National Project Director. In all MOAs, it was clearly stated that all rights and responsibilities of the LRP would be conducted through the PMU with regional offices' assistance (DENR).

The project management unit was integrated within the BMB and led by the BMB's executive director for priority programs. Still, working mostly through the responsible partners' field offices and in close contact with local government officials at the sites, DENR officials at the regional and provincial levels did not effectively coordinate with the project. The decentralized structures of the DENR were not included in the consultations leading to the development of the project document, as noted during the project's inception workshop. At the national level, the PMU's focus on issues not directly under the supervision of the DENR-BMB led to the perception of the project as an external, foreign-funded project. However, the national leadership of the BMB and the PMU worked closely to strengthen the integration of the project's activities within the BMB structure that also resulted in better integration and communication with the DENR's decentralized offices. The project board was chaired by the

Undersecretary for Policy, Planning, and International Affairs, with the national project director's support, the position assumed by the BMB executive director throughout the project implementation. Until 2018, the national project director was also the national GEF operation focal point (OFP). The OFP kept informed and rated the project implementation reviews consistently.

Risk management

The risks identified at project design and through the social and environmental screening were generally valid, and were monitored, updated and reported throughout the project implementation period (Table 6).

Table 6. Risk management

Document	Risk	Rating	Mitigation strategy	Actual occurrence and reporting of risks
ProDoc	LGUs may change priority and shift support from the program to other programs given the two election periods within the program life	Medium-high	Project to emphasize non-partisanship and benefits for marginalized and vulnerable communities. Engagement with LGUs should be at the very start of the program and incorporate functionality, co-management and transparency supported by environmental awareness campaigns	Possibility of losing the support of key/ new local chief executives reported in 2017 PIR. Yet, the strong links of the LRPs to LGUs and POs meant that no serious challenges stemmed from administration changes after elections.
ProDoc	Difficulty in coordinating with the partners of the program given their different mandates and expertise	Medium	LRPs engaged in project design. Setting up of independent PMU housed together with Coastal and Marine Management Office of BMB as result of agreement with partners. Management Office of BMB-DENR will allow DENR/BMB regional offices to provide site level support.	The only issues in coordination were related to the vast amounts of information to be shared (METT results, capacity development assessments, survey results) and some overlapping and duplications related to BDFEs and METT exercises that were satisfactorily solved
ProDoc	Overlaps in the mandates of BFAR, BMB and LGUs will result in conflicts and confusion	Low	The project will establish coordinative mechanisms from the national to the local levels that will clarify mandates and jurisdictions, thereby providing more scope for each institution to expand its work on MPAs and coastal management without generating inter-agency conflict	No occurrence
ProDoc	Climate unpredictability may impact the outputs and outcomes of the program	Medium	Climate studies, as they affect the MPAs and MPAN are integral to the program and data on the site MPANs on resilience and CC impact will be used in incorporating climate change adaptation measures in MPA management planning and monitoring	After the Project board meeting 23/11/2016 CCA and vulnerability in MPAs were included in MPA plans.

Document	Risk	Rating	Mitigation strategy	Actual occurrence and reporting of risks
ProDoc	Policy harmonization and complementation may go beyond program life	Medium	Policy advocacy, IEC and social marketing are important components of the program to ensure understanding of the benefits and experiences gained will effect change at national and local policies. This is also an ongoing effort by the partners (government, non-government, academe)	PIR 2017 recognized challenges in passing bill on MPAN and changed strategy to promote a Joint Administrative Order
ProDoc	Sustainability for MPAN at local and national levels may not materialize	Medium	Financial options beyond LGU support (" <i>funding from LGU allocation is not reliable at all times</i> "). Finding incentive mechanisms will include MSN awards, CRM certification, tourism, PES, Community trust funds, carbon market	No occurrence
ESSP	Negative impact on the livelihoods and income of vulnerable local and indigenous communities due to the establishment and management of marine protected areas	NA	The National Commission on Indigenous Peoples (NCIP), member of the Project Steering Committee to facilitate linkages with IPs by overseeing the development of policies to involve IPs in the MPA/MPANs management bodies The project to ensure that vulnerable groups within communities (IP, youth, women) are recognized, consulted and their views incorporated.	Minor issues at one LGU in Palawan involving disputes among IPs about the benefits of MPAs, managed satisfactorily. NCIP had no role in the project.

3.3 Project Results and Impacts

Overall project outcome

The project's overall outcome is rated as satisfactory, as most targets have been achieved. Development Targets not achieved as described below can be attributed to design shortcomings (limited integration of KBAs) or external, unforeseeable events (COVID-19 pandemic). The project's policy outcome has only been partially achieved, but it can still be strengthened by including provisions on KBAs.

The project document committed to establishing three MPA networks: Verde Island Passage (VIP), Lanuza Bay (LB), and Davao Gulf (DG), which would be declared as protected areas of IUCN category V. This would result in the expansion of the national protected area system by at least 441,268.2 ha, including 13 previously unprotected marine key biodiversity areas (MKBA)

The project consolidated four MPANs at the VIP, LB, DG, and Palawan sites and strengthened the TSPS NIPAS MPA. Altogether, the new area under conservation measures represents a total of 1.48 million hectares, exceeding the project's target at a rate of more than thrice. The VIP and LB MPANs have a defined geographical area, zonation provisions, and management plans. In practical terms, they confer the same degree of protection as IUCN category V MPAs like the TSTP. However, they have not been declared protected areas by the local governments or recognized as protected areas by the DENR-BMB. Instead, the DENR-BMB has defined them as other effective area-based conservation measures (OECM) and submitted them as such to the Secretariat of the Convention on Biological Diversity, as part of the Philippines' contribution to Aichi target 11. The new area under OECM brings the proportion of municipal waters under conservation measures to 11% (from 6% in 2014). It could represent 73% of the Philippines Biodiversity Strategy and Action Plan (PBSAP) target of having 2.13 million hectares (1.2% of the EEZ) under protection by 2028. In establishing and consolidating marine protected area networks, the project successfully mainstreamed the critical concept of connectivity between marine protected areas at the local government level, which is consistently cited by LGU officials as one of the main rationales for MPANs, together with efficiency in enforcement. MPANs are now a national policy instrument towards seascape management and marine conservation that has been incorporated into the Philippine Development Plan.

The project strategy demanded that the extension and enhanced management effectiveness of the marine protected area system delivered conservation outcomes, indicated by the level of water pollution, the biomass of target fish in MPAs, and cetacean populations' status at the project's seascapes. The project did not have control over pollution sources. Still, it demonstrated the necessity of integrating watershed management with coastal and marine areas through a pollution model that proved that most siltation affecting coral reefs is originated from agricultural and mining activities away from the coast. The project's fish biomass and cetacean surveys show stability or small increases in cetacean and target fish populations linked to effectively managed MPAs.

In sum, Marine Protected Area Networks consolidated by the project seem to be already delivering conservation outcomes and are part of the Philippines' contributions towards Aichi

target 11. Thus, the terminal evaluation considers the project's protected area target as accomplished.

However, the project has fallen short of its representativeness target. The project's results framework stated that the project would increase "the number of MKBAs in the Philippines included in the PA System (IUCN Categories I-VI)" from 53 to 66 MKBAs. These 13 previously unprotected MKBAS were identified by the project in 2017, covering 253,878 hectares. However, the project has only included 118,293 hectares belonging to eight MKBAs within the Verde Island and Lanuza Bay MPANs. The protected area of one additional KBA in Palawan has been expanded by over 10,000 hectares with project support.

The project has partially achieved its financial sustainability target, making MPAs less dependent on public funding and monetizing their ecosystem services, at least potentially. While LGUs are still and by far the primary sources of funds for MPAs, the project has developed plans for business ventures (biodiversity-friendly enterprises, BDFEs) at 23 MPAs across the five sites, substantially contributing to MPA finances. However, lockdowns and travel restrictions implemented to control the on-going COVID-19 pandemic have prevented the BDFEs from taking off.

Relevance

The project's relevance is rated as satisfactory, on account of the project's alignment with national and local priorities.

Alignment with local priorities

The project targets align with coastal communities and local governments' explicit goals. In some limited areas, conflicts over no-take zones persist. Still, the vast majority of the coastal population and fisherfolk have adopted MPAs as a fundamental tool to manage their fisheries and ensure the conservation of critical habitats: even when the spillover effect is absent or undetectable, the great majority of fisherfolk and LGU officials support MPAs. However, expansion of no-take area, is perceived to be unnecessary and politically impossible by local stakeholders.

Coastal LGUs' annual investment programs (AIP) almost uniformly include integrated coastal management (ICM) allocations, including a specific budget for MPAs. Moreover, the figure of an ICM or even MPA officer independent from the Municipal Agricultural Office (MAO) has become common in the most prosperous LGUs. Smaller LGUs cannot afford dedicated offices, yet enforcement of fishery regulations in municipal waters and MPAs is one of the main tasks. LGUs see MPANs as an opportunity to boost ecological outcomes from MPAs (through connectivity) and as a more effective means to enforce MPA and fishery regulations. Where networks do not exist, even within large category V protected areas, such as the TSPS, municipalities form alliances that work as a de facto MPAN.

National environmental priorities

Smart Seas Philippines stems from and supports several national and regional policy instruments, including the Philippines Biodiversity Strategy Action Plan 2015-2028, the Philippine Development plans 2011-2016 and 2017-2022, the Coral Triangle Initiative National Plan of Action 2009-2020, and the Fisheries Code of the Philippines.

Protected areas and KBA figure prominently in the PBSAP. Smart Seas responds directly to the PBSAP targets 3, Presence and area distribution of live coral cover, mangroves, and seagrasses, 8, Maintenance of fish stocks of economically essential species, and 20, Increase in the coverage of established MPAs/sanctuaries across various aquatic habitats.

The PBSAP 2015-2028 is linked to the Philippine Development Plans 2011-2016 and 2017-2022. The PBSAP contributed to the sector outcome of Chapter 4 (Competitive and sustainable agriculture and fisheries) of the PDP 2011-2016. For the current 2017-2022 PDP, Smart Seas contributes directly to the outcomes of Chapter 20: Ensuring Ecological Integrity, Clean and Healthy Environment. The project is cited explicitly in the PDP under subsector outcome 1 of Chapter 20: rationalizing the identification of MPAs and their networks.

In Palawan, Smart Seas contributed to the conservation targets contained in both the Fisheries Code of the Philippines (15% of municipal waters protected) and the Coral Triangle Initiative National Plan of Action (2009- 2020) (10% of coastal habitats protected). The project is anchored and supportive of other national policy instruments, as detailed in section Country Ownership.

Alignment with UNDP and GEF strategic priorities:

Smart Seas Philippines is framed within the GEF-5's Biodiversity Focal Area and supports the two outcomes of its first objective: Improved management effectiveness of existing and new protected areas and Increased revenue for protected area systems to meet total expenditures required for management. The project is still relevant to the current GEF-7 biodiversity strategy entry points, Improving Financial Sustainability, Effective Management, and Ecosystem Coverage of the Global Protected Area Estate and Inclusive Conservation.

As the project started implementation, the SDGs superseded the MDGs as the UN's global goals. Smart Seas Philippines has contributed to the Philippine's commitment in achieving the SDG 14's targets: *sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts (14.2) and conserve at least 10% of coastal and marine areas (14.5).*

Smart Seas Philippines was designed within the UNDP's 2012-16 (extended to 2018) country program document (CPD) and United Nations Development Assistance Framework (UNDAF) outcome 4. Outcome four dealt with the *adaptive capacities of vulnerable communities and ecosystems*. Here, the project contributed to fulfilling the output: *increased capacities of key duty-bearers to provide an enabling environment for claimholders' improved access to an enhanced natural resources base, sustainable energy, and a cleaner environment*. For the current 2019-2023 CPD, Smart Seas Philippines has contributed between 2,069,000 (counting OECM) and 606,308 hectares (only protected areas) to the output 2.3 target of *800,000 hectares of UNDP-assisted protected areas with high biodiversity effectively managed*.

Effectiveness

The terminal evaluation rates the project's effectiveness as satisfactory. Of the fifteen project targets, only three have been only partially achieved. The project's KBA objective was compromised by the contradiction between the explicitly KBA target and the identified project sites described in the section Project Design. The project could yet achieve its two policy targets (see outcome 3) if the project's proposed policy instrument strengthens its position on KBAs and representativeness.

Development objectives targets

At least 66 out of the 123 MKBAs in Philippines are included in the PA System (IUCN Categories I – VI).

The target has been only partially accomplished (60%). The project document cited 53 completely protected MKBAs out of a total of 123. The project strategy committed to bringing the total number of MKBAs under protection to 66, thus adding 13 additional MKBAs to the "protected area system". There are 21 MKBAs within the municipal waters at project sites. Of these, 19 MKBAs were partially protected by municipal or NIPAS MPAs, most under 5% of their total area, and four (Mabini PLS, Moalboal, Bais Bay and Sagay PS) were entirely contained within NIPAS MPAs (table 6). Only Balut and Sarangani and Ursula Island may be still completely unprotected as of 2020.

In 2017, the project identified 13 MKBAs to be enclosed within the three MPA networks (table 7). As remarked by the MTR, out of those seventeen MKBAs, three (Bais Bay, Moalboal, and Rasa Island) were already included in protected areas declared in 1998 (Tañon Strait), 2005, and 2006 (Narra municipal MPAs and Rasa Island Wildlife Sanctuary).

By 2020, eight MKBAs had been enclosed within the VIP and LB MPAN, which defined their geographical extent as the municipal waters of their member LGU. The Davao Gulf MPAN presently covers 19 locally managed MPAs already declared at project start, thus not changing protection status changes of its 6 MKBAs. Moreover, the expansion of the Brooke's Point MPA has increased the area of the Brooke's Point KBA 10-fold (from 150 to 11,120 hectares).

Thus, as a result of the project, 123,413 hectares of eight MKBAs have been entirely enclosed within OECMs or included within an MPA. Yet, as noted by the MTR, the project did not focus on marine key biodiversity areas, but rather on management effectiveness and financial sustainability of individual MPAs and consolidation of MPA networks. Most project MPAs are outside MKBAs. Out of the 95 MPAs listed in the project document, 61 (128,780 hectares) occurred outside MKBAs and just 34 (18,720 hectares) within MKBAs. For the 127 MPAs (125 LMMPAs and 2 NIPAS MPAs) actually supported by the project, 47 covered MKBAs at least partially, while 79 were completely outside MPAs.

Table 7. MKBAs at the project sites. The 13 MKBAs selected in 2017 are highlighted and the eight MKBAs enclosed in the project’s OECMs are in bold text.

MKBA	Hectares MKBA	Hectares MPA 2014	Hectares MPA 2020	% MKBA Protected or included in OECM 2020	Ha. MKBA protected or included in OECM
Davao Gulf	132,118	40	40	0%	40
Mabini PLS	6,227	6,227	6,227	100%	6,227
Malalag Bay	793	28	28	4%	28
Malita	6,098	28	28	100%	28
Talicud Island	349	96	96	28%	96
Balut and Sarangani Islands	37,017	0	0	100%	0
Carrascal Bay	3,069	152	152	100%	3,069
Consuelo and General Islands	2,615	86	86	100%	2,615
Brooke's Point	34,231	150	11,120	32%	11,120
Rasa Island Wildlife Sanctuary	10,266	4,448	4,448	43%	4,448
Ursula Island	4,095	0	0	0%	0
Bais Bay	4,604	4,604	4,604	100%	4,604
Bantayan Islets	6,090	53	53	1%	53
Moalboal	1,784	1,784	1,784	100%	1,784
Sagay Protected Seascape	16,723	16,723	16,723	100%	16,723
Balayan Bay	48,411	648	648	100%	48,411
Lobo to San Juan	1,339	32	32	100%	1,339
Lubang Island	55,490	11,001	11,001	100%	55,490
Puerto Galera	1,349	365.20	365.20	100%	1,349
Tingloy	8,943	3	3	100%	8,943
Western Calatagan	9,626	262	262	100%	9,626
TOTAL	391,237	57,701	57,701		175,993

5 percent increase in fish biomass of target fish (Serranidae, Siganiidae and Acanthuridae) in MKBAs, particularly in the 5 sites of the Project from baseline

This target has been accomplished. However, the short time elapsed from baseline (2016) to final survey (2018-19) precludes drawing any firm conclusion on fish biomass trends. The project conducted fish visual census and benthos surveys at MPAs sites in 28 LGUs in 2016-17 and 2019-20. The results show the expected correlation between coral reef condition and fish density and the higher biomass existing within MPAs compared with areas adjacent but outside the no-take zone. On average, fish biomass of target species¹ has increased by 7% across the sites, but this increase is not statistically significant ($p=0.09$). The Palawan and Davao Gulf sites show significant decreases (Table 8). Given the expected interannual variation and the short period involved, a negative change should not be interpreted as a failure of MPAs to meet their conservation objectives.

Fish biomass is correlated with management effectiveness after controlling for the MPA's size and age. This result is only nearly statistically significant ($p=0.054$) but suggests an ecological outcome from the improved management effectiveness caused by the project's capacity

¹ The survey’s target species guild was composed by the common catch of artisanal fishers in the Philippines that includes reef herbivores such as acanthurids, reef carnivores such as snappers and groupers, as well as reef-associated pelagics such as jacks and fusiliers.

building activities. Improvements in ecological indicators, including fish biomass, are the primary conservation goal of an effectively managed MPA. Fish biomass has been observed to increase at locally managed MPAs in the Philippines. Such effects depend on the reef area protected, reef condition, specific characteristics (mobility, growth rate, being a fishery target), and, more importantly, years since MPA enforcement. MPA effects on fish biomass can, on average, exceed 5% annually within the first five years of establishment, but interannual variation is substantial. Typically, observable effects occur only over periods of a decade or longer.

Table 8. Changes in the biomass of target species in the five project sites.

Sites	# of MPAs surveyed	% Change biomass (kg/250 m ²)
Davao Gulf	4	-70%
Lanuza Bay	7	12%
Palawan	4	-40%
Tañon Strait	8	22%
Verde Island	12	112%
AVERAGE		7%

Reduction in pollution level against the baseline levels in Verde Island Passage, Lanuza Bay, Davao Gulf, Southern Palawan and Tanon Strait Protected Seascape.

This target could not have been achieved by the project, as land areas contributing to pollution were outside the project's domain. Still, the terminal evaluation considers the target achieved and rated satisfactory, because of the project's pollution model's revealing results.

To determine how pollution is affecting marine ecosystems, establish contributing factors, and craft mitigation measures, the project collected baseline information and developed a Soil and Water Assessment Tool (SWAT) model for Verde Island Passage, Davao Gulf, and Lanuza Bay. The land areas surrounding the marine ecosystems at the three sites are exposed to frequent extreme precipitation events and share some characteristics, including steep sloping terrain and predominance of degraded woodland and cropland. Davao Gulf and Verde Island have significant sediment contributions from crop-dominated watersheds and urban development (Davao and Samal Cities, Batangas City, and Puerto Galera). In both cases, the model showed a positive sedimentation trend caused by agricultural activities in the upper part of watersheds. In Lanuza's case, mining is an important contributor to erosion and sediment plumes affecting mostly the MKBAs of General Island and Carrascal Bay. The project's model shows that marine ecosystems' management is intimately linked to watersheds' management, even those not near the coast. In Lanuza Bay and VIP, the MPAN management plans explicitly include coastal land areas in their geographical scope, but not the watersheds contributing the most to the pollution load.

Moreover, the model's coarse-scale did not allow it to identify the causes of reef degradation at the scale of individual MPAs. For those MPAs in the proximity of urban areas or high tourism areas, coastal development constitutes a clear and present danger. At the VIP and Davao Gulf sites, reclamation and construction of permanent structures at the foreshore continue

unabated, even when LGUs oppose such efforts. The terminal evaluation identifies two drivers for the situation described above:

- Inconsistencies in foreshore governance. The DENR Land Management Unit licenses and monitors 'Foreshore lease agreements' (FLA) uncoordinated with the comprehensive land use plans of the LGUs. The land classification subjacent of FLAs is still based on regulation from the Commonwealth era (CA 141). Based on foreshore lease agreements, developers damage coastal ecosystems, including the destruction of mangrove stands and silting coral reefs. Enforcements of national laws protecting said habitats is weak, enabling both FLA's legal holders and illegal occupants of the foreshore to continue operating in a manner detrimental to national and local conservation and fishery management targets.
- Lack of or very limited engagement with private sector developers. Despite pleas by participants in the project's inception report and following the implementation of most biodiversity projects in the Philippines, the project or its partners did not engage with the private sector. Actors from the public sector argue that involving the private sector is not just complicated due to the sheer number and disparity of activities and goals of the private sector, but counterproductive, as private sector agents are perceived as being necessarily anti-environment

*No net decrease in Dolphin sightings (Risso's Dolphin (*Grampus griseus*), Spinner dolphin (*Stenella longirostris*), Pantropical spotted dolphin (*Stenella attenuata*), Fraser's dolphin (*Lagenodelphis hosei*), Common bottlenose dolphin (*Tursiops truncatus*)*

The terminal evaluation considers this target achieved, as project surveys convey significant information on the health of marine ecosystems. Thus, the target is rated as satisfactory. The project conducted two cetacean one-time surveys at the Tañon Strait and Davao Gulf sites. Tañon Strait is an important marine mammal area (IMMA), and the Davao Gulf MKBA is being assessed for IMMA. Davao Gulf (project site, not MKBA) contains some of the last remaining populations of dugong in the Philippines, but these were not surveyed.

The Tañon Strait has been surveyed extensively since 1995, and its importance as feeding grounds for spinner dolphins (*Stenella longirostris*) and abundance of the dwarf sperm whale (*Kogia sima*) is well attested. The project survey confirmed the Strait's importance for these species but seemed to confirm the decline in their population hinted by previous surveys. This apparent decline is likely linked to increasing fishing effort and maritime traffic, as documented by the study, which argues for improved management of the Tañon Strait NIPAS MPA.

Cetacean surveys have also been conducted in the Davao Gulf since the mid-1990s. Surveys show significant diversity of cetaceans and the consistent presence of spinner and Fraser's dolphins (*S. longirostris* and *Lagenodelphis hosei*) and short-finned pilot whale (*Globicephala macrorhynchus*). The project survey confirmed the high cetacean diversity, including sightings of sperm whales (*Physeter macrocephalus*), dwarf sperm whales, and pigmy killer whale (*Feresa attenuata*), with a higher sighting density in the outer parts of the Gulf (areas not included in the current Davao Gulf MPAN). The survey results suggest that the cetacean population in the Gulf has not significantly changed, and differences from previous surveys can be attributed to

the number of spotters. However, the high density of fishing effort in the Gulf, especially gill nets, does present a threat for cetaceans.

Cetacean populations are not directly linked to coastal ecosystems' health to the same degree as other large marine vertebrates such as elasmobranchs (sharks and rays), dugongs, and marine reptiles (e.g. *Crocodylus porosus*)² are. Yet they are a good indicator of the health of the seascape as a whole. The project surveys show the need to adopt protection measures and regulation of activities beyond the MPAN core zones.

Surveys are relatively expensive activities that require well-trained staff. Their cost (human resources, time, fuel) limits the quality and the frequency of monitoring at MPAs and marine environments in general. Together with the fish visual census surveys, the cetacean surveys add to a mounting volume of data on marine biodiversity in the Philippines and are valuable contributions from the project. However, they do not mean much as a one-time effort, as trends can become apparent only after extended periods. Unfortunately, by the time a decline in population levels or habitat quality has been confirmed, it may be too late to correct.

Outcome 1

At least 959,489.2 hectares coverage of IUCN Category V Protected Landscape PAs in the 5 target sites from a baseline level of 518,221 (i.e. 441,268 hectares)

The TE considers this target fully achieved because of the increase in area in other area-based conservation measures (OECM) at two project sites and expansion of MPAs in Palawan. The project has strengthened and expanded three alliances of LGUs, the Verde Island Passage Network (out of the pre-existing Batangas and Mindoro Oriental networks), the Lanuza Bay Development Alliance, and the Davao Integrated Development Program. By 2017 for the Verde Island Passage (VIP) and Davao Gulf (DG) and 2018 for Lanuza Bay (LB), the alliances officially declared the establishment of three marine protected area networks (MPAN). The three networks are legally recognized and dedicated to long-term conservation outcomes. Two of the MPANs, VIP, and LB include an explicit geographic definition in their management plans: the municipal waters of their component LGUs. In contrast, the Davao Gulf MPAN comprises just the area of its component MPAs.

As the VIP and LB management plans include activities to designate zones with different, they could function almost as category V IUCN marine protected areas, such as the Tañon Strait Protected Seascape. However, the project's implementing agency DENR-BMB has decided to classify the newly declared MPANs as OECM rather than IUCN V MPAs. Considering the defined geographical scopes of the VIP and LB MPANs, the project has added 1.48 million hectares (over three times the target) of marine areas under some conservation measures in the Philippines.

However, the only actual increase in the marine protected area took place in Palawan. The project encouraged the participating LGUs of Aborlan, Sofronio Española, Narra, and Brooke's Point to expand their marine protected areas significantly. Sofronio Española, Bataraza, and

² Not quite a common sight nowadays in the Philippines, except for Balabac Islands, at Palawan's Southern tip and not part of this project.

Narra declared multiple-use protected areas around their pre-existing MPAs, now core zones. Together, they have added 53,195 hectares (a total of 54,392 hectares minus 1,196 hectares of former fish sanctuaries, now core zones). With the support of the project and WWF, the LGU of Aborlan in Southeastern Palawan declared the totality of its 81,374 hectares of municipal waters (including its West coast, not project site) as a protected area. These are encouraging signs of the local government’s attention to marine conservation. However, the total no-take zone area has not changed at all at project sites.

Increase in METT Scores in each of Lanuza Bay, Tañon Strait Protected Seascape, Southern Palawan, VIP and Davao Gulf sites

All MPAN METT score targets have been exceeded (Table 9). This result can be linked to project activities, as scores have been increased mainly by project support to improve management structures and formulate management plans.

Table 9. MPAN METT scores

Site	Baseline score	Target score	2019 METT score	% target achieved
Verde Island	0.29	0.39	0.83	214%
Davao Gulf	0.48	0.58	0.71	122%
Lanuza Bay	0.44	0.58	0.80	138%
Tañon Strait	0.40	0.50	0.66	132%
Palawan	0.40	0.50	0.58	116%

In VIP, the project brought together and expanded two existing provincial networks in the provinces of Batangas and Oriental Mindoro. The VIP MPA Network (MPAN) and Law Enforcement Network (LEN) were legally declared through a Memorandum of Agreement between the provincial governments and national agencies. A five-year management plan was formulated in 2017.

In Davao Gulf, the project reactivated and developed the capacities of the Davao Gulf Management Council (DGMC), which officially declared the Davao Gulf Marine Protected Area Network in 2018, approving its management plan in 2019. The Davao Gulf is a wide marine area that includes LGUs that hugely differ in their urban/ rural population, political dynamism, and dependence on tourism and fisheries. Thus, the Davao Gulf MPAN has a limited geographical scope and is limited to three of the five provinces that form the DGMC.

In Lanuza Bay, the project enabled the official declaration and formulation of a management plan for the Lanuza Bay Development Alliance in 2018. The network has proven resilient to political changes and succeeded in reversing regressive measures in one member LGU reluctant to enforce fishing gear regulations and MPAs.

In Palawan, the project supported the formation of a Law Enforcement Network (LEN) by the municipalities of Aborlan, Narra, Sofronio Española, and Bataraza, which was officially ratified in 2019.

In the TSPS, the project supported the PAMB in formulating its General Management Plan 2015 – 2025 and Manual of Operations and Governance Manual, which is expected to improve the effectiveness of this vast MPA. Additionally, the project has encouraged and supported four inter-LGU alliances, 3 in Negros Oriental and 1 in Cebu, to coordinate enforcement of MPAs and fishery regulations.

At least 25% increase in management effectiveness scores using METT of 95 MPAs

Project MPAs mostly met their METT MPA targets (Table 10). The project has had a significant effect on management effectiveness, which is significantly and positively correlated with capacity development scores. The link between project support and METT scores is also confirmed by the interviews with representatives of people’s organizations and LGU officials involved in the management of MPA.

Small or negative change of METT score is explained by inconsistencies in the score and change in LGU support. Some MPAs report inconsistent scores or implausible changes in score from one year to another: the apparent underperformance of TSPS MPAs can be explained by inconsistencies in the score of four MPAs (out of 16). Wherever there is an actual decline in scores, they are explained by shifts in LGU support.

Table 10. Mean changes in METT scores for individual MPAs.

Site	# of MPA	Average % METT change
Palawan*	19	46%
Davao Gulf	19	46%
VIP	38	42%
Lanuza Bay	14	24%
TSPS	16	13%

*Palawan MPAs have been grouped in seven multiple-use MPAs

Number of gender and IP sensitive MPA/MPAN management plan formulated and implemented

The target of four gender and IP sensitive MPAN management plans has been achieved. Three MPAN plans and one NIPAS MPA plan have been formulated with project support. Management plans approved with project support are also explicit about inclusiveness, gender, and IP issues.

The project has provided assistance in the formulation and approval process of 83 MPA plans, succeeding in updating and approving plans for 67 MPAs, while the plans for further 13 MPA were still at draft stage. In the VIP, Palawan and Lanuza Bay, LGUs prepared a single management plan including all their MPAs, while in Davao Gulf and TSPS, individual MPA plans were developed. All plans include gender or IP issues where applicable.

The limited implementation of MPA plans due to budget deficits remarked by the MTR has been largely solved. As explained under the next outcome, LGU financial support has substantially increased.

35% average increase in capacity score cards of the 5 target MPA networks

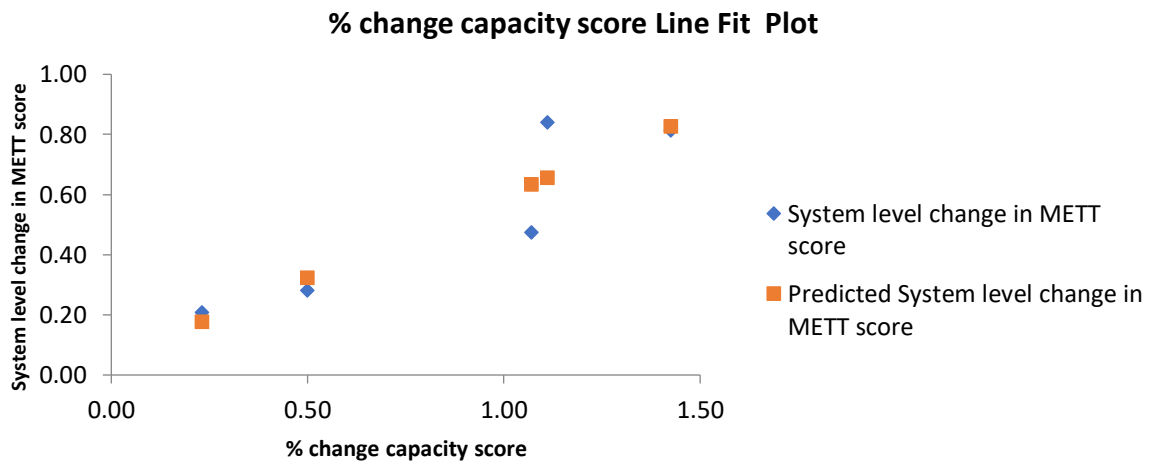
Capacity scores exceed targets at all project sites (Table 11) except for Davao Gulf. Key capacity development activities conducted by the project include an MPA Network Open Distance Learning Course for the provincial and regional office staff of the DENR and training for MPA managers (from people's organizations) and LGU staff on different topics ranging from business planning, to enforcement and ecosystem surveys. Circa 1,500 people participated in the project's workshops. The project also led the updating of management plans in 67 MPAs across the five sites.

Table 11. Capacity building scores.

Site	Baseline capacity score	2019 score	% change capacity score
Palawan	14	29	107%
Davao Gulf	26	32	23%
Lanuza	18	38	111%
TSPS	18	27	50%
VIP	19	46	143%

Using the ratio of trainees to population per site as a proxy for number of capacity development activities, we found that capacity scores are significantly and positively linked to the project's capacity development activities. Moreover, METT scores also significantly and positively correlate with changes in the capacity of LGU and NGA staff involved in the management of MPANs and the coastal and marine ecosystems (figure 3). A significant and positive link is also found between individual MPA METT scores and capacity development scores where these were provided for individual MPAs (Lanuza Bay and VIP).

Figure 3. Correlation between changes in capacity score and METT scores at MPAN level. Capacity assessments and METT assessments were conducted independently. Df=4, p=0.03



Outcome 2.

At least 25 MPAs (5 MPAs in each site) have income from various sources that covers the recurrent costs as defined by financing plans

At least 25 MPAs in five sites have sustainable financing plans being implemented as part of their management plans

At least 25 MPAs have 50% of their funding coming from sources other than government budgets

All these targets have been achieved, at least potentially. The project developed 25 financing plans for MPAs that are feasible and can become a substantial source of revenue for 23 MPAs and members of the implementing people's organizations (PO). On average, the biodiversity-friendly enterprises designed with project support could account for 50% of the current financial requirements of the 25 MPAs. However, the restrictions associated with the COVID-19 pandemic have prevented these ventures to start operation.

The business plans include a market and viability study, revenue and profit projections. Business plans were mostly based on ecosystem services from the MPAs, as they are based on ecotourism (48%), small-scale aquaculture (35%) and fisheries (13%). The BDFE plans respond to the principles set in the project document, as they need maintaining ecosystem services and constitute in theory viable income-generating activities that would divert fishing effort. BDFEs are expected to generate annual profits ranging between US\$ 2,000 and 20,000 from their third year of operation. This could mean additional income ranging between US\$ 55 and 250 per PO member, or between 4 and 15% of a full year minimum wage employment (table 12).

To boost the development of the BDFEs, the project the project utilized a UNDP's mechanism to deliver low value grants. Business proposals were prepared with the involvement of national government agencies, including the Department of Tourism, the Department of Trade and Industry and DA-BFAR in their areas of competence (tourism, trades and aquaculture). So far, 21 LVGs for were approved for all five project sites, as follows: VIP – 10 MPAs with BDFEs, 5 POs with LVGs; SP - 6 MPAs with BDFEs, 5 POs with LVGs; TSPS - 6 MPAs with BDFEs, 4 POs with LVGs; DG - 7 MPAs with BDFEs, 3 POs with LVGs; and, LB - 4 MPAs with BDFEs, 4 POs with LVGs. 11 POs have received the 1st tranche of LVG releases, with 4 of these having received their 2nd tranches already. The remaining 7 POs had difficulties in implementing their 1st tranche releases due to the COVID19 situation. The other 10 POs are set to begin work on their deliverables once the ECQ is lifted for them to avail of the 1st tranche release. Except for VIP, all the proposals were within the maximum budget of P350,000 per organization for their seed capital requirement. Those MPAs and POs whose revenue generation is on tourism have temporarily shelved their activities due to the shutdowns brought about by the lockdown. This is also the same situation with most BDFEs who recipients of LVG as the release of tranches is conditioned on the completion of pre-identified activities.

BDFEs were also expected to provide diversified funding for MPAs. To start with, the project had to determine actual costs of MPA management. The terminal evaluation, based on the project's MPA costing tool, interviews and MPA management plans has determined that the management costs per hectare in all five sites diminish with MPA size (table 13). Human resources related to enforcement constitutes the largest cost component in an MPA and

MPAN, and networking and alliances among LGUs are seen to reduce management costs vastly. A significant gap is evident across the whole range of MPA sizes comparing actual MPA funding to required financial needs (table 14).

All BDFE plans have a provided for MPA funding, allocating between half and 5% of the net profits for management activities. If the profit projections are realized, BDFEs could amount to over half of mean revenues per hectare for MPAs, albeit with important differences between sites (table 12). Thus, BDFEs could constitute a significant amount of financial resources for MPAs, at least in the case of Palawan and the Verde Island Passage. It must be noted that this is a pure hypothetical case, as those BDFEs have yet to start generating profits. Yet the project has succeeded in developing a in principle viable funding mechanism for MPAs.

Yet, the vast majority of MPAs are still entirely dependent on the municipal budget. Funding from other sources can exceed the municipal allocation for particular cases some years, during the implementation of foreign-funded projects or extraordinary grants from provincial governments or government agencies. Such funding has provided the initial establishment costs (buoys, guardhouses, patrol boat) for some of the project MPAs.

Table 12. Expected social benefits from BDFEs

Site	BDFE type	Mean projected annual net profit before tax from year 3 (US\$)	Mean new income per member (US\$)	Minimum wage (annual employment based on 247 labor days)	% of annual employment on minimum wage
Davao Gulf	Aquaculture	4,654.68	94.37	1,895.73	5%
Lanuza Bay	Aquaculture	3,425.23	163.11	1,561.04	10%
Lanuza Bay	Tourism	1,968.49	54.68	1,561.04	4%
VIP	Tourism	8,762.32	250.35	1693.19	15%

Table 13. Benchmark MPA management cost per MPA size and site

Site	Actual funding				Required funding			
	< 5 ha.	5-49 ha.	50-250 ha.	>250 ha.	< 5 ha.	5-49 ha.	50-250 ha.	>250 ha.
Davao Gulf	39,643	3,107	421.94	24	82,369	38,973.18	2,506.33	656.26
Lanuza Bay	no data	3,525	2,480	no data	no data	11,028.35	6,776.32	no data
Palawan	no data	no data	no data	21	no data	no data	no data	168.75
TSPS	86,833	7,304	no data	194.36	84,066.67	71,682.63	no data	no data
VIP	no data	20,922.07	4,312.83	958.38	11,466.67	31,259.09	5,421	no data
Mean cost per hectare (PHP)	63,238	8,714.52	2,405	299	59,301	38,236	4,901	413
Mean cost per hectare (US\$)	1,221	168	46	6	1,145	738	94.62	7.96

Table 14. Funding gap

Site	< 5 hectares	5-49 hectares	50-250	>250
<i>Davao Gulf</i>	42,726.42	35,865.80	2,084.39	632.68
<i>Lanuza Bay</i>	NA	7,503.82	4,295.96	no data
<i>Palawan</i>	NA	NA	NA	148.15
<i>TSPS</i>	- 2,766.67	64,378.52	NA	NA
<i>VIP</i>	no data	10,337.02	1,107.72	NA
<i>Mean gap per hectare (PHP)</i>	19,979.88	35,916.05	2,496.02	390.41
<i>Mean gap per hectare (US\$)</i>	385.74	693.41	48.19	7.54

Table 15. Mean funding possibilities from BDFEs per site

Site	Mean funding gap (PhP/ha.)	Mean BDFE funding (PhP/ha.)	% BDFE
Davao Gulf	20,327.32	923.82	5%
Lanuza Bay	5,899.89	351.65	6%
Palawan	148.15	235.32	159%
TSPS	30,805.93	2,895.54	9%
VIP	5,722.37	5,900.25	103%
Total mean	12,580.73	2,061.32	56%

Financing and business plans at the MPAN level

DG and VIP MPANs have developed strategic management plans. The DG MPAN is newly organized through the DIDP structure and central to the plan is the operationalization of enterprises within their member MPAs to provide income to the communities and to the MPA itself, and in the future to the MPAN itself. Preparatory activities are underway, among which are: (i) adoption of the plan by DIDP Board; (ii) drafting and circulation of the MOA for the concerned municipalities and cities to express no objection to the inclusion of their MPA in the Davao Gulf MPAN and the adoption of MPAN plan; (iii) data collection to prepare the climate change hazard and vulnerability study for Davao Gulf; (iv) preparation for the project development training and enforcement constitutional and operational manual generation workshop. Despite the DG MPAN currently in a state of inactivity, provincial level MPANs are in a process of organizing themselves.

For VIP, the plan will focus on the thematic area on socioeconomics and sustainable financing with each province providing within their respective AIPs a cumulative total of P74.67 Million for the 4-year period 2015-2018. The funds will not be pooled within the MPAN rather, will be allocated by each province to deliver the objectives in the thematic areas. Investments have also been successfully secured from private sector and non-government partners, JJSEA (P1M), PEMSEA (P4.69M), and First Gen (P320K). The plan for an integrated aquaculture development proved not feasible as the MPAN management was not designed to handle such undertaking.

A project envisioned by Blue Finance in a proposed co-management arrangement of VIP MPAN through mainly eco-tourism tours and other revenue models e.g., blue carbon, sustainable fishing and responsible aquaculture, remains in negotiation stage. A US\$1.4M, 10-year renewable loan agreements will finance capital expenditure needs of MPAs and a multimedia infotainment visitor center. This special purpose equity (SPE) will be co-managed by an advisory committee by local government agencies, provincial government units, academe, non-government organizations and other stakeholders.

The establishment of MPANs and inter-LGU alliances in the project sites has spurred renewed interest among LGUs as a feasible approach for sustaining MPAs, with expected advantages in operating cost-efficiencies, opening of economic and livelihood opportunities, sharing of best practices, among others. The management and financial plans and co-financing and management opportunities provided an impetus to further pursue these project initiatives into its logical conclusions. Hence, the emerging interest in MPAN and in inter-LGU alliances can very well pave the way for the establishment of a system for integrating MPAs similar to the mostly terrestrial NIPAS within the DENR portfolio.

At least 30 participating MPAs have participatory multi stakeholder systems including women and IPs where appropriate

Participation and attendance of women and IPs (especially in SP) in organizational development trainings and in decision-making bodies i.e. ExeCom were given emphasis and attention during these project activities. This included the establishment of a participatory multi-stakeholder system included overseeing the utilization of MPA funds and revenues.

The target of 30 participating MPAs was in fact exceeded as a total of 67 MPAs benefitted in the establishment of a participatory multi-stakeholder system with oversight functions on resource allocation.

Outcome 3

Comprehensive MPA and MPAN Policy Framework in place incorporating gender equality and IP rights developed and effectively implemented addressing at least 50% of the policy recommendations identified through the policy review

This target has been partially achieved. The project document was committed to promoting reforms that would integrate municipal MPAs and NIPAS MPAs to forge a strengthened MPA system in the Philippines, including municipal, NIPAS, and networks of MPAs, based on systematic conservation principles. The project's key outputs were recommendations and the promotion of a policy instrument that would include a legal definition of key biodiversity areas (KBAs) and the official adoption of the list of marine KBAs, prioritizing them in MPA establishment. Further, the new policy should establish uniform guidelines for establishing MPA networks that would take connectivity and co-management, including empowerment and representation of women and indigenous people.

The project has crafted a proposal for a joint memorandum circular (JMC) from the Department of Interior and Local Government, DA-BFAR, and the DENR, enabling the establishment of marine protected area networks. The JMC cites biological connectivity between MPAs as the primary rationale for establishing networks and defines the legal instruments for LGUs to formalize the establishment of MPAs. MPANs are to be registered with the DENR-BMB and constitute a management board, formed by the LGUs' CEO, national agencies (DENR, DA, DILG), academic institutions, MPA managers (usually POs), and NGOs. Besides the board, MPANs must create a technical working group to provide scientific and technical advice. In the current draft, LGUs must harmonize their MPAN management plan with other existing programs, including their integrated coastal management plans, comprehensive land use plans, and fisheries management areas plans. Moreover, LGUs are designated as primary providers of funds for MPAs.

The proposed Joint Memorandum Circular/Order (JMC/JMO) between DENR, BFAR and DILG (and LGUs) have moved forward, and the draft has been deemed acceptable by DILG and BFAR with DENR-BMB requesting these NGAs to send a formal letter of acceptance to expedite the formal issuance of the JMC. The JMC/JMO provides for uniform guidelines in establishing and managing MPANs and consistency in management strategies based on the connectivity of MPAs and MPANs to ensure functional conservation actions.

All policies for MPAs and MPANs management incorporate scientifically based ecological conservation criteria (species abundance and distribution, threats and pressures, larval transmission and dispersal, climate change stresses, etc.

This target has been partially achieved. The project's policy products, including MPAN and MPA plans and the JMC, include scientific principles, especially citing the importance of biological connectivity among habitats and between MPAs. However, MPAN and MPA plans and JMC do not define, discuss, or include marine key biodiversity areas. Moreover, MPANs are not to be part of the national PA system but are classified as OECM, and either JMC or MPAN plans contain any provision to expand the area of the no-take zone. Thus, there is no provision to adopt scientific advice (UP-MSI report 2016) that no-take zones must be considerably increased. Only LGUs in the TSPS and Palawan have between 15 to 100% of their municipal waters within MPAs. However, the total core zone/ no-take zone remains the same, usually protecting under 1% of the municipal waters. The Fisheries Code target of 15% of municipal waters protected is still far from being achieved.

Independently from the project, DA-BFAR adopted an ecosystem approach to fisheries in 2016. The approach was operationalized in 2019 through an Administrative Order (No. 263), which creates fishery management areas (FMA). Regulations within FMAs would be based on stock management, which is not adequate for managing multispecies artisanal fisheries. Yet LGUs must implement FMAs within their waters through the enactment of fisheries ordinances. Twelve main FMAs are defined that include the totality of the Philippines' EEZ. Thus, FMAs 2, 5, 8, and 12 are relevant to the project sites of Davao Gulf, Palawan, Lanuza Bay, and Verde Island Passage. The Administrative Order excludes current NIPAS MPAs, thus not affecting the TSPS. Other than that, it does not mention how FMAs should be harmonized with LMMPAs or MPANs.

Table 16. Progress towards project targets

Indicator	EOP target	Self-reported June 2019	Terminal evaluation assessment	Rating
Objective: Strengthening the Conservation, Protection and Management of Key Marine Biodiversity Areas in the Philippines				
Number of Marine Key Biodiversity Areas in the Philippines included in the PA System (IUCN Categories I – VI)	At least 66 out of the 123 MKBAs in Philippines are included in the PA System (IUCN Categories I – VI)	Achieved. 13 MKBAs in the PA System (IUCN Categories I-VI): Lobo to San Juan, Tingloy, Balayan Bay, Western Calatagan, Lubang Island, and Puerto Galera (VIP), Rasa Island and Brooke's Point (Palawan), Moalboal and Bais Bay (TSPS), Davao Gulf and Talicud Island (Davao Gulf), and Carrascal Bay (Lanuza Bay)	Eight KBAs enclosed within MPAN polygons (not protected area): Lobo to San Juan, Tingloy, Balayan Bay, Western Calatagan, Lubang Island, and Puerto Galera (VIP), Carrascal Bay, Consuelo and General Islands (Lanuza Bay). 32% of Brooke's Point KBA within 1 MPA from 0.4% in 2014	Partially achieved
Mean density of large predatory fish (Serranidae, Lutjanidae, Leprinidae and Carangidae as a group)	5 per cent increase in fish biomass and fish abundance, in MKBAs, particularly in the 5 sites of the Project from baseline	Biophysical assessment to be concluded	Mean 7% increase in fish biomass in MPAs surveys. However, result not conclusive due to narrow time frame. More monitoring results needed.	Achieved
Level of water pollution levels in Verde Island Passage, Lanuza Bay, Davao Gulf, Southern Palawan and Tanon Strait Protected Seascape.	Reduction in pollution level against the baseline levels. Targets to be agreed in Year 1.	A soil and water model for Verde Island Passage, Davao Gulf, and Lanuza Bay was conducted by the project. The study aimed to collect baseline information on sedimentation level and develop a Soil and Water Assessment Tool (SWAT) model.	Model completed for Lanuza Bay and VIP shows increases in pollution due to land-based activities. Results can be used to encourage integrated watershed and coastal management	Achieved
Sightings of Risso's Dolphin, Spinner dolphin, Pantropical spotted dolphin, Fraser's dolphin, Common bottlenose dolphin	No net decrease in dolphin sightings	Cetacean sightings in Davao Gulf from 11 in 2016 to 19 in 2018. As for TSPS, only sightings have been recorded from the recent survey.	Cetacean surveys convey important message about seascape-level threats, especially in the TSPS and thus constitute a powerful material for advocacy	Achieved

Outcome 1: Increased Management Effectiveness of Marine Protected Areas (MPAs) and MPA Networks (MPANs)				
Coverage of IUCN Category V Protected Landscape PAs in the 5 target sites	At least 959,489.2 hectares (minus the baseline value of 518,221 ha corresponding to the Tañon Strait Protected Seascape)	Achieved. Documents declaring and supporting the establishment and management of MPANs in the three (3) project site were already approved covering 1,152,238 hectares	MPANs (OECM) enclose between 1.5 million hectares. Palawan LGUs added 90,000 hectares of new protected areas	Achieved
METT Scores in each of Lanuza Bay, Tanon Strait Protected Seascape, Southern Palawan, VIP and Davao Gulf target sites	Lanuza Bay– 58% TSPS – 50% Southern Palawan – 50% VIP 39% Davao Bay - 58%	Achieved. All of the five (5) project sites have achieved its target increase in METT scores from the baseline data.	Four out of five sites exceed targets at system (MPAN) level, linked to the project's capacity development activities	Achieved
METT Scores in each of the selected 95 MPAs targeted by Management Plan development and implementation	At least 25% increase in management effectiveness scores using METT of 95 MPAs	Positive results of the MPAs can be attributed to the continued support by the local governments to the management bodies	Mean METT results per site exceed or not significantly different from 25%. Results linked to capacity scores and capacity development activities	Achieved
Number of gender and IP sensitive MPA/MPAN management plan formulated and implemented	At least four MPA networks with gender and IP sensitive management plans developed and jointly implemented	Networks supported by the project, 3, namely, Tanon Strait, Lanuza Bay, and Verde Island Passage have legally established management bodies	Three MPA network management plans include gender and IP concerns. 70 MPA management plans updated with project support include gender or IP concerns	Achieved
Average increase in technical and management capacity scores in the 5 target MPA networks	20% average increase in capacity score cards of the 5 target MPA networks by 2016 and 35% average increase by 2018	Achieved in all sites and continue to improve further. An average increase of 38% in capacity score cards of the 5 project sites as of reporting period as against the target of 35% by the end of 2018	Target exceeded at all sites. Changes in score significant and linked to changes in management effectiveness and ecological outcomes	Achieved

Outcome 2:				
Financial resources for conservation and management of MPAs in five project sites	At least 25 MPAs (5 MPAs in each site) have income from various sources that covers the recurrent costs as defined by financing plans	Benchmark management costs of MPAs have been established. MPAs were profiled to see how financial and business plans can be developed to support management of their areas.	Benchmark costs established and 25 viable business plans developed	Achieved
Percentage of MPA funding coming from sources other than government budgets	50% of income from sources other than government budgets by 2018	VIP: Business plans for 6 MPAs have been developed and implemented. Assisted POs in Palawan have begun operations. In TSPS, POs engaged in catering service has been engaged by the LGU during the nutrition month. In Lanuza Bay, bangus and siganid polyculture is on its 2nd harvest schedule. POs engaged in catering service had its 1st income from the UNDP monitoring team. DG business plans have been formulated and is for validation before end of month.	25 BDFE's have the potential to significantly increase financial flows for MPAs. On average they could reach 56% of the current financial gap for the 25 MPAs.	Achieved
Number of MPAs with participatory multi-stakeholder systems in place to oversee utilization of MPA funds and revenues include women and IPs where appropriate	At least 30 participating MPAs have participatory multi stakeholder systems including women and IPs where appropriate	MPA plans include a standard composition for the management board, with women organizational charts. Indigenous groups are acknowledged in LB, and SP.	All 25 business plans examined explicit about inclusion of women and IPs into its decision-making bodies. All also include outline of actions to include marginalized coastal communities	Achieved

Number of sustainable financing plans implemented in participating MPAs	At least 25 MPAs in five sites have sustainable financing plans being implemented as part of their management plans	15 MPAs in Batangas, Oriental Mindoro and Occidental Mindoro are implementing their financial plans 6 BDFEs in Palawan Ecotourism business development in Negros Oriental	25 viable business plans developed, but operation on-hold due to COVID-19 pandemic	Achieved
Outcome 3: Established Enabling Policy Framework for Marine Biodiversity Conservation.				
Presence of a comprehensive MPA and MPAN Policy Framework that is also gender- and IP- sensitive and inclusive	A comprehensive MPA and MPAN Policy Framework in place incorporating gender equality and IP rights developed and effectively implemented addressing at least 50% of the policy recommendations identified through the policy review	In 2016, the project conducted a comparative analysis and regulatory gap analysis of the three (3) key pieces of legislation on the establishment and management of marine protected areas (MPAs) and on expansion into MPA networks: the Fisheries Code, the Local Government Code and the National Integrated Protected Areas System (NIPAS) Act. Based from the policy review, the policy needs are the following: a. Legal definition of key biodiversity areas (KBAs); b. Official adoption of the list of marine KBAs; c. Prioritization of marine KBAs in MPA establishment; d. Guidelines for LGU establishment of MPA networks;	A Joint Memorandum Circular promoting MPANs discussed with DENR, DA-BFAR and DILG. However, JMC lacks definition of KBAs, representativeness targets and defines MPANs as other area-based conservation measures. Thus, it does not strictly meet target. Explicit mention of gender and IP issues present	Partially achieved

		<p>e. Clarification on the respective regulatory and revenue-generating functions of the DENR and the LGU over NIPAS MPAs;</p> <p>f. Reiteration of the mainstreaming of biodiversity conservation in agency plans, policies and programs; and</p> <p>g. Promotion of women participation and involvement in MPA management.</p>		
<p>Number of policies for MPAs and MPANs management that incorporate scientifically-based ecological conservation criteria (species abundance and distribution, threats and pressures, larval transmission and dispersal, climate change stresses, etc</p>	<p>All policies for MPAs and MPANs management incorporate scientifically-based ecological conservation criteria (species abundance and distribution, threats and pressures, larval transmission and dispersal, climate change stresses, etc</p>	<p>The output of the national and local policy reviews undertaken from 2016 to 2018 were already incorporated in the draft JMC. In addition to this, local ordinances were already enhanced to include the recommendations from the local policy review</p>	<p>The project has strengthened and promoted the concept of MPA connectivity. Connectivity is explicitly mentioned in the JMC and in MPAN management plans as rationale for MPANs. However, MPAN plans, MPA plans and JMC have not contributed to a more representative MPA system including additional KBAs under protection. Scientific advise of expanding core zones not followed by MPAs or MPANs and Fisheries Code target of 15% protection far from being achieved.</p>	<p>Partially achieved</p>

Efficiency (*)

The terminal evaluation rates the project's efficiency as satisfactory based on the delivery of project results within the allotted time frame and resources and cost-effectiveness compared to similar projects.

Project management and timeliness

The project acted in five areas in Central and Southern Philippines with a project management unit based in the country's capital, Manila. The implementation arrangements were efficient since field activities were performed by the project's responsible partners: Conservation International Philippines, the National Fisheries Research and Development Institute, HARIBON Foundation, RARE, and WWF Philippines had implemented support to fisheries management and marine protected areas at their respective sites, for at least one decade before the project's start. The RPs were also actively involved and led the project design process. Thus, 50% of the project grant was disbursed through the RPs, while PMU-related contracts and acquisitions (contract services, travel, equipment, etc.) represented a fourth of total expenditures (23%).

The project needed a non-cost extension of 18 months, as recommended by the MTR. However, this meant only exceeding the planned human resources cost by 4%. The extension was deemed necessary to consolidate project results. Moreover, the extension has guaranteed the permanence of the project during the COVID-19 pandemic, which, as mentioned above, had detrimental effects on livelihood support activities.

Comparison of the project cost and time versus output/outcomes

Smart Seas Philippines had costs according to its archipelagic context, compared with other GEF-funded projects of similar strategy and expected outcomes (Table 17). The comparison uses only similar project components, in this case, actions to increase management effectiveness over a fixed extent of protected area. As expected, archipelagic or isolated contexts (Philippines, Comoros, Djibouti) are more expensive than continental contexts (Central America). Thus, the cost per area of Smart Seas Philippines is in line with similar experiences worldwide, and therefore we consider it an efficient intervention.

Table 17. Comparison of cost per area with other GEF-funded project.

Period	Project	Country	Component	GEF grant (US\$)	Km ² PA	US\$/km ²
GEF-4	Consolidating MPAs	Costa Rica	Management effectiveness	230,163.00	21,733.00	10.59
GEF-5	Strengthening the sub-system of MPA	Honduras	Management effectiveness	1,153,818.00	17,222.79	66.99
GEF-5	Conservation and sustainable use of biodiversity in MPAs	Guatemala	Management effectiveness	1,753,000.00	1,941.48	902.92
GEF-5	Smart Seas Philippines	Philippines	Management effectiveness	5,205,736.00	4,412.68	1,179.72
GEF-6	Mitigating key sector pressures on biodiversity and strengthening the national system of MPAs	Djibouti	Management effectiveness	1,487,976.00	565.00	2,633.59
GEF-5	Development of a representative national network of terrestrial and marine protected areas	Comoros	Management effectiveness	3,000,000.00	810.00	3,703.70

Sustainability (*)

Overall likelihood of sustainability (*)

The sustainability of project achievements in their financial, socio-economic, and institutional dimension is likely. While MPA managers at the PO and the LGU levels still need support, especially technical assistance, there is no reason to doubt that national government agencies and NGOs would continue to assist MPA and MPA networks. Even considering the COVID-19 economic crisis's effect, it is more likely than not that LGU would continue to allocate a budget for coastal resource management and MPAs.

MPANs are likely to continue function, especially the VIP and Lanuza Bay MPA networks. Given the expected approval of the JMC enabling declaration of MPANs, it is likely that more MPANs will be declared in the following years. However, coastal ecosystems' environmental sustainability and associated fishery need the expansion of no-take zones and enhancement of the protected area system's representativeness by including additional KBAs. A more robust MPA system would be better positioned to resist climate change impacts and give coral reefs a chance to adapt.

Financial sustainability (*)

LGUs at the provincial and municipal/ city levels have been consistently increasing their allocations for coastal resource management, including MPAs, during the project's implementation period. As detailed under outcome two above, the finance gap persists, but AIP allocations keep on rising. There has also been a more intense involvement of provincial governments allocating funds for coastal management and marine protected areas and networks. However, the new conservation and fishery management instruments, MPANs and Fisheries Management Areas, will demand important financial contributions from LGUs. MPANs could serve to mobilize further funds, as the VIP MPAN is already doing.

Protected areas and people's organizations have developed viable biodiversity-friendly enterprises with project support through low-value grants. The assessed business plans are feasible and will likely improve participating households' incomes over the next years, even if they did not quite meet their intended MPA financing goals.

Still, the current economic crisis linked to the COVID-19 pandemic cast a shadow over economic perspectives. The Philippine economy is projected to contract by 3.4 to 5.5% in 2020 before rebounding and growing by 6.5-7.5% in 2021 and 2022. So far, tourism and aquaculture-related livelihood options supported by the project have been paralyzed by the national and local governments' sanitary measures. Yet, we can assume that the economic recovery and the likely easing of travel and other pandemic-linked restriction during the next years will not leave a permanent mark on public budget allocations or the viability of community-based tourism or aquaculture initiatives.

Socio-political sustainability (*)

Commitment with the success of area-based conservation measures prevails among the main actors, even when "rogue" local administrations try to reverse gains in conservation and erode protected areas or fishery regulations. Peer pressure within LGU alliances and the provincial government level, with the support of the main NGAs, DENR and BFAR have been able to contain and correct such divergencies during the project's lifetime. More importantly, local responsible partners intend to continue working at project sites and will foreseeably support the new MPANs and the TSPS.

The DENR-BMB is committed to continuing its efforts to enhance conservation and sustainable use of the coastal environment. Two of its three main programs are dedicated to these goals:

- Protected Area Development and Management: to conserve biodiversity within and adjacent to NIPAS protected areas and the expanded ENIPAS Act of 2018 and increase protection of KBAs, including through LMMPAs.
- Management of Coastal and Marine Resource Areas to sustainably manage coral reefs, seagrass beds, mangrove stands, soft bottom areas (mudflats), plankton community, and water quality of coastal areas.

The project has consolidated and documented the process of setting up and managing protected area networks. MPANs are now included in the Philippine Development Plan and supported by the JMC currently reviewed for approval by the Departments of Interior and Local Government, Environment and Natural Resources, and Agriculture (DILG, DENR, and DA-BFAR).

Institutional framework and governance (*)

The current policy and regulatory framework sustain the establishment and management of MPAN under the local government code and the updated fisheries codes. Networks are an attractive policy instrument for local governments because of the relatively straightforward process to set them up. They are preferred to NIPAS MPAs because they do not relinquish control over their municipal waters to a PAMB that is widely seen as not very effective in dealing with the day-to-day management of fishery and conservation issues within municipal waters. Hence, municipal alliances and networks have been multiplying and expanding over the last ten years. Only two NIPAS MPAs (14,241 hectares) have been declared since 2006.

The project-supported circular and the engagement of the RPs with the regional and provincial offices of DENR and BFAR have helped align those two agencies better with the LGUs and the conservation of coastal and marine ecosystems. Still, challenges remain:

- The management of foreshore lease agreements is done without proper participation of coastal and marine stakeholders, opening a wide door to coastal ecosystems' degradation.
- BFAR is setting up fisheries management zones to introduce stock-based fisheries management measures. The fishery management areas need to be harmonized with the MPAN policy supported by the project to enable synergies between fishery management and conservation target. Moreover, stock-based fisheries management may be

appropriate for the pelagic targets of the commercial fisheries, but not for the multispecies artisanal fisheries within municipal waters.

Environmental sustainability (*)

Climate change represents a clear and present danger for coral reefs globally and in the Philippines. Rising surface temperatures and acidification threaten reefs, which are the primary ecosystem protected by marine protected areas, with disproportionate importance for coastal communities' livelihoods and nutrition quality. However, this growing natural pressure will trigger the adaptation within reef communities, slowly shifting species compositions towards more resilient ones. Thus, a system swift to algae dominated reefs would be avoided. The degradation of coral reefs into algae-dominated reefs would have catastrophic consequences for fisheries, tourism, and coastal protection. To improve the resilience of coral reefs and other critical coastal ecosystems such as seagrass meadows and mangrove stands, it would be necessary to expand the coverage of no-take zones and include more KBAs in the PA system. This enhancement has proven very challenging, and not even this project could make any significant changes in the total area of no-take zones. However, the example of LGUs in Palawan and the enhanced capacities for MPA and MPAN management at project sites make it more likely than not that LGUs will commit to further expansion of MPAs.

Country Ownership

Project design

The implementing and responsible partners of the project were the primary players in the conceptualization and the development of the project document of Smart Seas Philippines. During the project preparation stage, local consultations led by the respective responsible partners were held in 64 LGUs, with participation of local officials and fisherfolk representatives, resulting in the final selection of the 95 MPAs and corresponding municipalities at the core of project activities. However, there was limited participation by regional and provincial offices of the DENR and BFAR in the development of the project. Their incorporation and participation in project activities occurred later during project implementation.

The project was conceptualized from an array of existing national sectoral and development plans, including the Philippine Development Plan (PDP 2011-2016), the Presidential Executive Order 533 (Adopting Integrated Coastal Management as a National Strategy to Ensure the Sustainable Development of the Country's Coastal and Marine Environment and Resources and Establishing Supporting Mechanisms for Its Implementation) and the National Plan of Action for the Coral Triangle Initiative (under Executive Order 797). The project was also designed to be consistent with the following national laws: Fisheries Code of 1998 (RA 8550), Local Government Code of the Philippines (RA 7160,) and the Wildlife Resources Conservation and Protection Act (RA 9147) which provided the framework for fisheries management, local governance and the conservation of wildlife resources, respectively. It also supports the Philippine Climate Change Act of 2009 (RA 9729), by strengthening marine PA systems' capacity to respond to climate variability and climate-induced risk.

Mainstreaming of project's products into the national policy framework

Several technical bulletins were issued by BMB-DENR during project implementation on: Guidelines on establishing and managing marine protected areas; Checklist for the review of protected area management plans; Guidelines in the identification and recognition of biodiversity-friendly enterprise; Guidelines on the granting and utilization of financial assistance for biodiversity-friendly enterprise in Coastal and Marine Ecosystems Management Program; Adopting the management effectiveness tracking tool (METT) for assessing and monitoring management effectiveness of protected areas; and, Technical guide on biodiversity assessment and monitoring system for coastal and marine ecosystems.

At the local levels, several policy milestones were achieved. A model MPA ordinance were crafted in the project sites of DG, VIP, TSPS and SP to guide the review and updating of their respective MPA ordinances at the city and municipal governance levels. In LB, a policy study provided for a gap analysis and recommendations was conducted for the establishment of a local MPA network.

The main recommendations were for the inclusion of conservation objectives, the results of the ecological connectivity study, and the formal recognition of the LB Development Alliance (LBDA) for incorporation into a CFARM ordinance by all its 7-member LGUs. A CFARM Primer was also developed to guide local legislators. A Governance Manual and Manual of Operations were also drafted and endorsed to BMB for review and approval.

Country representatives from government and civil society involved in project implementation, including as part of the Project Board

The Project Board was composed of representatives from the government sector, UNDP, the academe and non-government organizations. The national government was represented from national government agencies, namely: DENR, BMB, UNDP, NEDA, DILG, BFAR, DOT, NCIP, DSWD, PCW, Leagues of Provinces, Cities and Municipalities; while the NGO sector by at least 3 representatives from national NGOs chosen by the NGO implementing partners. The PB/SC shall be chaired by the DENR Undersecretary for Staff Bureaus and Co-Chaired by NEDA.

All representations actively participated in board meetings except for NCIP (attended once) while PCW never attended a single meeting. Due to the ex-officio characteristic of representation and designation of alternates from government national agencies, it was expected that different personalities were in attendance but proper archiving of previous board meeting proceedings ensured that tracking and knowledge management were preserved thus allowing the Board membership the continuity in monitoring of progress of project results and in policy-making.

Gender equality and women's empowerment

Contribution to gender equality and women's empowerment

The inclusion of PCW as a member of the Project Board recognized their prospective contribution towards gender mainstreaming in MPA/MPAN establishment and management, in the conduct of gender sensitivity trainings and in the development of knowledge products. PCW though has not attended a single meeting thus, no discussions on gender equality. ProDoc did not extensively discuss the importance of gender equality in the project, nor has indicated any expected output hence, there was no explicit gender analysis, nor a gender action plan developed.

Capacity building - HGDT (Harmonized Gender Development Tool) was introduced to familiarize LRPs with the expectation to incorporate gender perspectives and initiate activities to achieve gender parity. Reports show only SP GAD persons participated.

Contribution of the gender outcomes to the project's biodiversity outcomes

The process of developing the MPA and MPAN management plans did take into account women empowerment and participation at all levels critical for the successful management of marine biodiversity as reflected in MPA management objectives, capacity building activities and stakeholder consultations. In VIP, despite the physical demands of the job, women bantay-dagat volunteers were not precluded from performing enforcement activities.

Project management also reported that it had no control over gender participation in activities and further made the observation that most activities are predominated by men. However, it was continually stressed that women can freely participate and be consulted actively and treated equally. Women were mainly assigned to perform financial and secretariat functions. In income generating activities i.e. BDFE, it was observed that women predominated during the conduct of trainings and in implementation.

Contributing to closing gender gaps in access to and control over resources;

In governance mechanisms, although the project has no control over the ex-officio representations during board meetings, it was observed that the chairmanship was often held by women with attendees during some meetings dominated by women too. In project sites, the VIP MPAN LEN secretariat is evenly distributed among men and women; while among MPAs, gender discrepancies were observed either way i.e. some are dominated by men while others are by women. At the LGUs level, discussions on fisheries and enforcement are dominated by men.

Overall, the project's overall approach towards gender mainstreaming is without gender bias nor preference, but rather can be considered as gender-blind as it unknowingly maintained the status quo and did not actively perform gender analysis to determine the presence of a possible unequal structure of gender relations.

Including gender analysis as a project output raises the awareness in identifying areas where integration of women concerns could have been applied. This alone could have facilitated the development of anticipatory action/s and for proposing appropriate measures that could be integrated in the management plans and in the livelihood projects.

Cross-cutting issues

Broader development impacts

The project intended to boosting community income by exploring various schemes such as PES, fishery concessions, and catch quotas. The PMU engaged a social development specialist and devised possible revenue mechanisms to be implemented with the support of low-value grants. However, it followed traditional alternative income generation projects, including aquaculture and tourism initiatives, but not payment for ecosystem services, as explicitly mentioned in the project document.

The project had the explicit target of improving indigenous peoples' participation in the management of coastal resources, where applicable. The engagement of indigenous people in SP raised their level of awareness on the use of right fishing gears. Their participation in MPA management as a relevant stakeholder, among others, was a forward step towards inclusivity.

Positive or negative effects of the project on local populations

Narratives on good practices documented the extent to which the project has brought benefits to marginalized and disadvantaged groups. They included how fisherfolk have changed their views in managing resources. For instance, they came to accept seasonal closures, the creation of networks and sub-networks, and understanding the scientific basis of the connectivity study. Moreover, the project could roll out an effective awareness campaign and introduce alternative livelihoods to counter concerns from communities regarding perceived deprivation of fishing grounds and livelihood opportunities by the declaration of no-catch zones.

To date, there are not any available data on changes in income. It must be noted that the biodiversity-friendly enterprises (the livelihood projects) have been stopped by the restrictions on travel imposed in the wake of the COVID-19 pandemic.

GEF additionality

The project has enabled the mainstreaming of MPA networks into the national and local policy frameworks. MPA networks were established before this project, and their benefits in terms of more efficient enforcement and connectivity were well established. However, with the production of national officially sanctioned guidelines, including model ordinances and orientation on planning, together with a Joint Memorandum Circular, local government units have been provided with the necessary technical and legal basis to facilitate the establishment of networks. MPA networks are a first step towards mainstreaming biodiversity into a

comprehensive seascape-wide management process. At the VIP network, for instance, there are current discussions on the effects of maritime transportation on the marine environment and ways in which the maritime industry can coordinate and cooperate with local environmental governance efforts.

Catalytic/ Replication effect

Smart Seas has scaled-up the concept of the isolated, small-sized, locally managed marine protected area. As discussed earlier, locally managed MPAs, albeit small, can deliver significant conservation benefits in relatively short periods. However, to achieve nation-wide conservation targets, enhancing, and coordinating efforts to enforce them and mainstream the concept of connectivity between coastal and pelagic ecosystems has constituted a significant step towards a seascape approach. The project's outputs are likely to facilitate the adoption of the seascape approach in managing coastal resources by facilitating the establishment of MPA networks.

Progress to impact

The project has not yet caused any significant impact by reducing anthropogenic pressures on coral reefs and other coastal ecosystems or yielded significant ecological outcomes. Threats to coral reefs from unregulated and illegal fishers and coastal development continue unabated and marine protected area has been only marginally expanded by the project.

However, Smart Seas Philippines has put in place several elements with the potential to achieve significant impacts in the next 5 to 10 years. The project has consolidated a new instrument to enhance conservation: networks of marine protected areas that may even result in the expansion of actual protected area, as demonstrated by the project's municipalities in Palawan. The cetacean surveys, the results of the pollution models, and the connectivity study have impressed in coastal actors, particularly LGUs, a sense of urgency to act to prevent further degradation.

Nonetheless, reducing threats and improving ecosystem health will need a more decisive enhancement of protection by expanding no-take zones and stricter protection MPAs.

The positive mean results from the project's reef and cetacean surveys are encouraging. Reef surveys confirm the importance of no-take zones that sustain much higher fish biomass than equivalent adjacent areas. Moreover, fish biomass is linked to reef health (hard coral cover) and management effectiveness, strengthening the conclusion of the UP-MSI study that the expansion of no-take zones is necessary to achieve durable ecological outcomes from MPAs.

The cetacean surveys have shown that, at least, there seems to be no decline in the populations of cetaceans at two of the Philippines' most important marine mammal areas. However, the surveys also show that the level of threats, fishing, shipping, and pollution keeps on rising, which may negatively impact cetaceans, as indicators of the health of the seascapes in the near future.

4. Main Findings, Conclusions, Recommendations, Lessons Learned

4.1 Main findings

Smart Seas Philippines had a robust, logical, and feasible theory of change. However, its design included contradictions between the stated goal of conserving key biodiversity areas and the project sites defined by the local responsible partners. Still, implementation of the projects by four renowned conservation NGOs and the National Fisheries Development Institute (responsible partners) was key to the project achievements: consolidating marine protected area networks, raising management effectiveness and financial sustainability of MPAs. The responsible partners achieved significant results in increasing awareness of government actors and communities, considerably increasing their capacities for MPA management causally linked with improved management effectiveness scores and ecological outcomes.

However, the management arrangements caused some degree of overlap and coordination deficits between local responsible partners and the BMB-based project management unit (PMU). The PMU's focus on issues outside the traditional roles of the DENR's central and decentralized offices caused some initial loss of ownership and coordination issues with the regional and provincial DENR offices. However, actions taken by the national project director, the PMU, and the local responsible partners, including intensified contacts and liaison with the national project direction and the DENR decentralized offices, mitigated the frictions and allowed for better integration of regional and provincial DENR officials in project activities and improving the communication of the PMU with the rest of the BMB structure.

Smart Seas Philippines has contributed to the Philippines' national development targets as expressed in the National Development Plan and the Philippine Biodiversity Strategy and Action Plan. By consolidating marine protected area networks as other effective area-based conservation measures (OECMs), the project has added 1.48 million hectares (over three times the target) of marine areas under some conservation measures in the Philippines. However, the project's achievements in terms of the actual protected area have been more limited. The project has decisively contributed to increasing the area under protection by 53,195 hectares. But this has resulted from the consolidation of existing marine protected areas in Palawan as multiple-use IUCN category V-like protected areas. Thus, the project's activities have not led to any additional no-take zone area, deemed already insufficient to ensure conservation outcomes at the project's design stage.

Moreover, the project has made minimal gains in increasing the number and area of KBAs under protection. Even if eight MKBAs, out of a commitment of 13, are now enclosed in the project's OECMs, only 10,000 hectares of one KBA (Brooke's Point) have been effectively included within a protected area. In this regard, the project's main policy result, the proposed Joint Memorandum Circular (JMC), which should facilitate and guide declaration of marine protected area networks at different locations, could be strengthened by including provisions to systematize and enclose KBAs within their geographical limits, as well as encourage the expansion of no-take zones. Expanding strict protection zones has proven challenging and not yet accepted by most local stakeholders, who consider that most areas have already reached the maximum sustainable number of "sanctuaries" (no-take zones). Extension of protection (no-take zones) and threatened species (including more KBAs) are key to coastal ecosystems' environmental sustainability in the Philippines, which are already

under threat by climate change, compounded by ongoing severe anthropogenic pressure. Poor foreshore management is still a primary driver of coastal degradation. While the project has not solved foreshore management issues, the improved coordination between decentralized government offices and LGUs that MPANs may help overcome this critical threat. Provided there are significant advances on those fronts, the coral reef in the Philippines will have a chance to adapt to climate change and continue to deliver ecosystem services to coastal populations, including adaptation benefits (e.g., coastal protection). Despite these challenges, the project's results consolidating marine protected area networks and improving management effectiveness seem to have catalyzed improvements in marine protected areas' ecological outcomes. While the project's targets seemingly committed ecological outcomes beyond the project's capabilities, including increases in fish biomass, cetacean populations' status, and pollutions levels, Smart Seas Philippines was able to report on all targets, providing essential insights. Smart Seas has supported the BMB's seascape approach to marine conservation by showing increasing threats to cetacean populations by fishing effort and shipping and the role of land-based activities in determining the amount of pollution affecting coastal ecosystems. Moreover, the project reports an increase in target fish biomass in protected areas, linked to management effectiveness. The project's monitoring activities have contributed to producing valuable knowledge products such as the connectivity study, the pollution model, the cetacean, and fish visual surveys that have supported the establishment of the MPA networks and raised awareness among local stakeholders (LGUs and POs). The knowledge generated by the project has been used to create technical guidelines issued by the BMB and has informed the proposed Join Memorandum Circular. Beyond that, Smart Seas has collected a wealth of information about 125 locally managed MPA in the Philippines, including their management effectiveness, threats, and governance, which can still be used to generate other knowledge products. They need to be appropriately packaged and made available to relevant stakeholders: LGUs, environmental civil society organizations, and fisherfolk associations, which in turn may facilitate further conservation measures as cited above. Smart Seas Philippines has developed 25 viable business plans associated with ecosystem services of MPAs (biodiversity-friendly enterprises) that could generate a significant stream of revenues for MPAs. The project has demonstrated that the finance gap for MPAs is still substantial and that the vast majority of MPAs are still entirely dependent on LGU budget allocations. The LGUs allocation for MPAs and coastal resource management has increased over the project's implementation period, which can be partially attributed to the responsible partners' work. The UNDP and the PMU developed and implemented a small grants mechanism (low-value grants) with relevant national government agencies' participation to kickstart the biodiversity-friendly enterprises (BDFE). However, BDFE's products and services were dependent on pre-pandemic market conditions. Travel restrictions and lockdowns continue to be enforced to control the spread of COVID-19 but prevent tourist arrivals and sales of aquaculture products. Hence, the BDFEs have yet to start operating and producing any revenue stream for MPAs. The presence of the responsible partners and the UNDP's low-value grants are key for the project's biodiversity-friendly enterprises' sustainability.

4.2 Conclusions

The project has supported achieving the Philippines' national conservation targets, national contribution to Aichi target 11 and SDG 14. The project's main achievement has been the consolidation of marine protected area networks (MPAN). MPANs encourage cooperation among LGUs and national government agencies, promote adoption of a seascape approach, integrating diverse land-based and marine activities, and catalyze gains in management effectiveness and ecological outcomes of MPAs. However, they do not substitute the need to increase the area of marine protected areas, especially no-take zones, and the need for a more systematic conservation approach that includes the KBA concept. The BMB can improve these issues by enhancing the project's proposed policy instrument and promoting a more systematic conservation approach.

The project has contributed to improving the coordination of national and local actors involved in managing coastal and marine ecosystems. Yet significant challenges remain, as shown by the limited coordination between the BMB and the DENR regional and provincial offices and the management of foreshore lease agreements. The new BFAR's executive order 263 on fisheries management offers a further opportunity to seek synergies between fishery and conservation targets by ensuring that the implementation of policy instruments (the JMC and the EO 263) is well coordinated.

The project has produced high-value data that significantly impacted policy at the national and the local level, showing the clear need for comprehensive information on the marine and coastal environment to guide policymakers. Surveys are still conducted in an ad-hoc uncoordinated manner by different government and non-government actors at the local and national levels. Even the wealth of information collected by the project's PMU and local responsible partner gives a limited, scattered image of coastal ecosystems' reality. Systematic surveys, or at least coordination and sharing of methods and results by government agencies and NGOs, with academic support, would enable drawing significant conclusions on the ecological and social impact of conservation measures.

The implementing agency, the DENR-BMB, internalized project results by clarifying reporting lines and involving its local offices in project activities. The implementing agency has profited from the project experience to issue technical guidance and develop a Joint Memorandum Circular that can consolidate MPA networks as a fundamental biodiversity management instrument and a step towards a seascape approach to coastal and marine ecosystems management. However, despite the great effort made by the PMU and local responsible partners to collect and information, further processing and packaging would be necessary to enhance local support for conservation measures.

Smart Seas has made significant contributions towards more sustainable financing of marine protected areas and increasing coastal population's income. The project-developed business plans are based on robust financial and market analysis. In contrast to previous plans developed within this and past conservation projects, they seem to be viable and sustainable ventures that, by depending on the maintenance of ecosystem services from MPAs, deserved the name of "biodiversity-friendly enterprises." COVID-19 pandemic-related restrictions pose severe challenges for achieving project targets, especially related to the financial sustainability of MPAs.

4.3 Recommendations

The DENR-BMB should continue promoting the declaration of further MPANs. To ensure delivery of ecological outcomes, the DENR-BMB, the DENR regional and provincial offices could coordinate with the project's LRPs to encourage LGUs to expand the no-take zone area.

The DENR-BMB should strive to increase coordination among the DENR divisions, bureaus, and units to ensure foreshore management guidelines better compatible with sustainable use and conservation of coastal ecosystems.

DENR and BFAR need to harmonize BFAR's planned fishery management areas with MPAs and MPA networks and mainstream the knowledge generated by Smart Seas, particularly its ecological surveys, connectivity study, and pollution model.

DENR-BMB should increase support for the systematic monitoring of marine ecosystems by allocating funds for surveys in a coordinated and organized manner, involving the deployment of technical resources lodged at the DENR regional and provincial offices.

The PMU and responsible partners need to consolidate the project's knowledge management system by systematizing and packaging. In this way, it would enable communicating and disseminating the project results and wealth of technical information to relevant coastal actors in the Philippines and elsewhere, especially within the Sulu Sulawesi Large Marine Ecosystem and within the Coral Triangle Initiative on Coral Reefs, Fisheries, and Food Security (CTI-CFF). Moreover, the PMU needs to transfer the project's knowledge management system into the BMB's permanent structure.

DENR-BMB and UNDP need to devise a mechanism to ensure that LVG tranches can be fully released in the future, even beyond the project life, whether within the UNDP system or lodged with implementing partner DENR-BMB. Although project activities have decisively encouraged and people's organizations to participate in biodiversity-friendly business ventures, community-based actors manifest the necessity of expanding technical and financial support for at least the first three years of the venture's operations. The COVID-19 related economic slowdown and recession affecting the tourism sector makes it imperative to adjust the delivery of low-value grants to the post-pandemic economic recovery pace.

4.4 Lessons learned

Marine protected area networks are a flexible and effective tool that will ensure conservation benefits from MPAs. The project has proven that setting up a marine protected area is a relatively straightforward process, provided the participating LGUs have common interests in coordinating enforcement of their fishery ordinance or Integrated Management Plans. Once established, MPAN also functions as an "insurance" against political changes in a given LGU unfavorable to conservation goals.

Municipalities favor protected area networks over other area-based conservation measures and fisheries management tools. Contrary to a NIPAS protected area, LGUs do not relinquish control over their marine protected area and deal directly with issues without a cumbersome PAMB, widely seen as inefficient. They also enable efficient coordination, harmonization of ordinances, pooling of resources, and leverage to mobilize financial support and enforcement actors. Moreover, an MPAN offers the possibility of increasing marine protected areas' effect and advancing towards conservation targets without closing other sites to artisanal fisheries.

For future projects, Smart Seas Philippines' experience shows that MPANs are flexible tools that enable enhancement of the conservation outcomes of small, locally managed no-take zones. MPANs promote community and local government participation. MPANs could be applied in contexts where local government organizations have devolved powers over their coastal resources. For instance, in other Southeast Asian, e.g., Thailand, or Latin American countries, e.g., Guatemala, El Salvador.

Smart Seas' management arrangements have proven very successful, albeit not exempt from risks. Executing projects through technical organizations with experience and competence in coastal resource management facilitates efficient progress towards the project targets. The risks involved are miscoordination, the more significant, the more organizations involved, and the loss of ownership by the implementing partner. Still, the project's implementing agency correctly identified reliable partners. The management arrangements enabled an efficient project execution from inception, without the long delays typical of implementing a GEF biodiversity project due to the selected responsible partners' characteristics. Future projects should seek such features in implementing partners for future biodiversity projects in the Philippines and elsewhere:

- d. Established organizations with robust technical and scientific standards and know-how. The project's local responsible partners also had access to global conservation networks and expertise.
- e. Strong links to local communities, local government units, and decentralized government offices lasting over several electoral cycles (since the late 1980s in the case of the project's responsible partners)
- f. Independent organizations without any political or ideological affiliation beyond commitment to conservation and co-management of biodiversity

Contrary to previous experiences on alternative income-generating ventures, this project has developed viable community-based business ventures (biodiversity-friendly enterprises) based on ecosystem services from MPAs that can also strengthen the financial sustainability of marine protected areas. The following necessary conditions for the success in developing viable business plans are identified:

- c. Preparation of a robust, realistic plan including market study and financial projections, entailing the support of an accompanying organization already present on the ground, like the project's responsible partners, with links to both communities and government organizations.
- d. A grant mechanism to catalyze the ventures' launching and sustain them through the first three years of implementation. In this case, UNDP's low-value grants have been essential to ensure the viability of the project's biodiversity-friendly enterprises

5. Annexes

1. Terms of Reference
2. Itinerary
3. List of Persons Interviewed
4. Summary of Field Visits
5. List of Documents Reviewed
6. Evaluation Matrix
7. Interview Summary
8. Tracking Tool
9. Code of Conduct

TE Report Clearance Form

Terminal Evaluation Report for PIMS ID 4389 Strengthening Marine Protected Areas to Conserve Marine Key Biodiversity Areas in the Philippines

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