



Implementing the Strategic Action Programme for
THE SOUTH CHINA SEA AND GULF OF THAILAND
(SCS SAP) Project

**Philippines
National Profile**

*DRAFT
June 2021*



Contents

1. INTRODUCTION.....	3
2. STATUS AND TRENDS IN COASTAL HABITATS AND THEIR MANAGEMENT	4
2.1 Distribution and diversity of coastal habitats	4
2.2 Threats to coastal habitats	6
2.3 Management of coastal habitats in the Philippines	8
3. SAP Target and planned actions.....	13
3.1. Mangroves.....	13
3.2. Coral reefs	14
3.3. Seagrass.....	16
3.4. Coastal wetlands.....	17
3.5. Land-based pollution.....	18
4. NATIONAL BASELINE INFORMATION AND DATA.....	19
4.1 National reports.....	19
4.2 Site characterizations	20
5. NATIONAL COORDINATION ARRANGEMENTS	23
5.1 National inter-ministry committee	23
5.2 National technical working group	23
5.3 Specialized executing agencies	23
5.4 Stakeholder participation	23
6. NEXT STEPS.....	24

1. INTRODUCTION

The South China Sea is a semi-enclosed sea, which supports a number of unique habitats and ecosystems that are amongst the most biologically diverse shallow water marine ecosystems globally. The richness and productivity of the South China Sea and associated environments are, however, seriously threatened by high population growth, pollution, overharvest and habitat modification, resulting in high rates of habitat loss and impairment of the regenerative capacities of living resources. The socio-economic impacts of environmental deterioration are significant for the economies of this region.

Recognising that actions were urgently needed to halt degradation of the environment of this marine basin, the countries of the region sought the assistance of UNEP and the Global Environment Facility (GEF) and the project “[Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand](#)” was implemented from 2003-2008. This included a Transboundary Diagnostic Analysis of the issues and problems and their societal root causes as the basis for development of a Strategic Action Programme (SAP) which was inter-governmentally adopted in 2008. The SAP established a series of objectives and priority costed actions for coastal habitats, land-based pollution management, and the over-exploitation of fish stocks in the South China Sea.

In order to support implementation of the SAP, the UNEP GEF “Implementing the Strategic Action Programme for the South China Sea and Gulf of Thailand” (SCS SAP) Project was submitted and endorsed by the GEF in 2016, and began implementation in 2019. The objective of the Strategic Action Programme for the South China Sea and Gulf of Thailand (SCS SAP Project) is:

“To assist countries in meeting the targets of the approved Strategic Action Programme (SAP) for the marine and coastal environment of the South China Sea (SCS) through implementation of the National Action Plans in support of the SAP, and strengthening regional co-ordination for SCS SAP implementation.”

This will be achieved through the cooperation of participating countries, intergovernmental organizations, regional organizations, public-private sectors partnerships, civil society and non-governmental organizations (NGOs), leading scientists from the region. The project will also contribute to global targets such as the Sustainable Development Goals and Agenda 2030 and the Convention on Biological Diversity (CBD) Post 2020 Biodiversity Framework.

Participating Countries:	Cambodia, China, Indonesia, Philippines, Thailand and Vietnam
Implementation Agency:	United Nations Environment Programme (UNEP)
Executing Agencies:	United Nations Office for Project Services (UNOPS) and the Southeast Asian Fisheries Development Center (SEAFDEC)
GEF Funding:	15 million USD (with approximately 83 million USD in co-financing)
Timeline:	2018-2023
Web-links:	https://scssap.org

This current document is based on the national reports, TDA and SAP prepared between 2005-2008 and presents SAP targets adopted. Countries are in the process of further refining their national activities for implementation from 2021-2024.

2. STATUS AND TRENDS IN COASTAL HABITATS AND THEIR MANAGEMENT

2.1 Distribution and diversity of coastal habitats

Mangroves: The Philippines contributes less significantly to the overall total of mangroves in the South China Sea (28,000 ha of the total 1.7 million ha). In terms of species richness, the Philippines is comparatively lower with 28 true mangroves of the total 45 observed in the South China Sea. In terms of areal extent, notable mangrove sites in the Philippines is located in Quezon and Busuanga, with total areas of 1,939 ha and 1,298 ha respectively.



Coral Reefs: Of the 750,000 ha of coral reef been identified in the South China Sea, around 464,000 ha is located in coastal waters of the Philippines. Large coral sites include the Bolinao/Lingayen Gulf (9,560 ha), Calamianes Group of Islands (18,200 ha) and El Nido, Palawan (4,250 ha). In terms of diversity at individual localities, hotspots of coral species richness occur at El Nido with 305 species and Bolinao with 322 species. Records of more than 200 species occur at a number of sites in Philippines. Verde Island passage, for example, is considered a globally significant hotspot of coral reef associated species.



Seagrass: Of the 78,332 ha of known seagrass sites in the South China Sea, around 23,245 ha is located in the coastal waters of the Philippines. The largest areas of seagrass meadow identified in the Philippines to date is in the coastal waters of Cape Bolinao (22,400 ha). Of the 18 species of seagrass found in the coastal waters of the South China Sea, 15 are present in waters of the Philippines. *Halophila* genus is the most diverse and widespread in coastal waters throughout the region. Of the tropical species, *Thalassia ciliatum* is generally found in seagrass beds from the intertidal to the low sub-tidal zone (2-17 m) in the southern and western shores of the Philippines, particularly reported in Cuyo Island, the northernmost limit of its distribution in the Indo-west Pacific.



Coastal wetlands: Of the total wetland area of 4,201,145 ha identified in the South China Sea, around 183,818 ha is found in the Philippines. Estuaries and inter-tidal flats are dominant features of the Philippines' coasts in the South China Sea. The Malampaya Sound (24,500 ha) is the significant estuarine area. Significant inter-tidal flats include the Balayan Bay (75,000 ha), Manila Bay (30,000 ha) and El Nido mudflats (54,303 ha).



2.2 Threats to coastal habitats

Threats to mangroves: Conversion of mangrove to land for industrial purposes (including harbour construction) has grown over the last period but of low importance in the Philippines. Charcoal production continues to degrade mangroves in the Philippines, despite legislation banning all harvesting of mangroves.



Threats to coral reefs: Direct and indirect threats to coral reefs in the Philippines are ranked in order of their significance in Table 1.

Table 1: Direct and indirect threats to coral reefs in the Philippines (ranked order of significance)

DIRECT THREATS	INDIRECT THREATS
1. Overfishing	1. Unsustainable fisheries and aquaculture
2. Destructive fishing	2. Coastal development
3. Sedimentation	3. Deforestation of upland areas
4. Pollution (eutrophication)	4. Unsustainable tourism
5. Coral bleaching	



Threats to seagrass: The ongoing decadal rate of loss of seagrass in the Philippines is about 30-50 percent. The identified threats to seagrass habitats at the site level are: non-transparency vis-à-vis development of the naval reservation; siltation/sedimentation; unsustainable fishing practices e.g. use of fine mesh nets, over harvesting of associated species, dynamite fishing, trawling; domestic discharges; unregulated coastal development e.g. resorts, tourism and industrial infrastructure, residences; infestations (fungal, viral, insect); oil pollution; and boat scour. The key threats to seagrass in ranked order of their significance to basin level loss of this dominant coastal habitat include:

- Nutrients (eutrophication)
- Destructive fishing such as push nets and trawls
- Sedimentation from coastal development
- Wastewater effluent
- Coastal construction
- Over-fishing



Threats to coastal wetlands: Major threats to the coastal wetlands of the Philippines can be grouped as follows: loss of wetland areas through conversion for agriculture, aquaculture, port and harbor development, human settlement, tourist development, urbanization, industrialization. Wetland ecosystems are also highly degraded as a result of over-exploitation of living resources, use of inappropriate fishing techniques and gear, pollution, deforestation in upland area, invasive species, global trends and natural episodic events such as sea-level rise, typhoons and tsunamis.



2.3 Management of coastal habitats in the Philippines

Mangrove management

In the Philippines, the total area of mangroves is 28,000 ha under various forms of management. Table 2 presents the estimated areas of mangroves under different forms of land-use designation and management in the Philippines.

Table 2: Estimated areas of mangrove under different forms of land-use designation and management in the Philippines

Land-use designation and management	Area (ha)
Total area (ha)	28,000
Production forest	0
Conversion	0
Parks & Protected Areas (Conservation) non-extractive use	27,100
Non-use of mangrove but extractive resource use (fish, crabs etc.)	942
Private land, unregulated use	0
Area currently under management Regulated in laws/regulations	27,100
Areas estimated as currently under sustainable management	26,000

It is noted that in the Philippines, areas considered as currently being sustainably managed include all mangrove lands contained within National Parks and Protected Areas (27,100 ha) while 942 ha of mangrove area used for extractive use of non-mangrove resources (e.g. fish and crabs). Accordingly, 26,000 ha of the total 28,000 ha (or 93 percent) of the Philippines mangroves are deemed to be sustainably managed.

The Philippines Mangrove National Action Plan (2005) recognized the following issues and concerns confronting the management of mangrove forests in the country other than their continued degradation: non-delineation of the boundaries of the mangrove forests, absence of firm efforts towards reversion of abandoned, undeveloped and unproductive fishponds to production or protection mangrove forests, lack of public awareness on the importance of the mangrove forests and their resources, overlapping functions and conflicting policies and legislation of different national government agencies and the LGUs, the non-appropriateness of the existing CBFMA for mangrove forests, the absence of policies to address existence of fully developed and productive illegal fishponds in mangrove timber lands and protected areas, some institutional constraints in the management and administration of the Philippine mangrove forests, and the lack of a comprehensive research and development program on the production, utilization, economics, marketing and other social aspects of mangrove management.. Some positive developments noted include the massive drive initiated by both the government and the private sector including the NGOs, the POs and a number of LGUs on the protection of the mangroves, the declaration of vast hectarage of mangrove forests into wilderness and protected areas, the establishment of the Pagbilao Mangrove Genetic Resource Area, the increased participation of communities in the management and conservation of the mangroves, and the streamlining of the regulation and administration over Philippine mangrove forests.

As to the status of the NAP implementation, many of the targets were addressed by the initiatives and programs on mangroves led by the DENR such as the National Greening Program, the reforestation activity of the country, which includes mangrove areas, the Integrated Coastal Resource Management Program, the Mangrove and Beach Forest Rehabilitation Project, among others. Recent policies and laws developed related to mangrove management is Executive Order 26 or the National Greening Program (NGP), a nationwide reforestation involving the planting of 1.5 billion trees covering 1.5 million hectares for a period of six years from 2011 to 2016. In terms of the progress at the national level, the status are as follows:

- Declaration of mangroves as National Parks and Protected Areas: Out of 240 Protected Areas of the Philippines, 23 are categorized as Mangrove Swamp Forest Reserve. The 14 Mangrove PAs have been verified totalling to 22,377.68 hectares while the remaining 9 Mangrove PAs are yet to be verified.
- Replanting of deforested mangrove land: A total of 3,440.2 hectares had been planted on the Mangrove Rehabilitation and Reforestation component of ICRMP, located in the Regions 2, 3, 4B, 5, 7 and 11. As of 2014, the NGP had planted 21,840 hectares of mangroves. The ERDB MBFRP reported that 50,000 hectares was rehabilitated on regions affected by Typhoon Haiyan and other disasters.

Coral reef management

Of the total coral reef area at the nine target sites of 39,162 ha, it is estimated that only 6 percent (2,390 ha) is under some form of management. While management information is available for all nine sites, only eight sites are being managed, with the effectiveness of that management being rated as medium to low (Table 3).



Table 3: Management status of priority coral reef sites of the Strategic Action Programme in the Philippines

Site name	Area (ha)	Live coral cover (%)	Management legal status	Area under management (ha)	Management effectiveness ¹
Philippines	464,000			2,390	
Batanes	2,050	55	Protected Land/ Seascape	40	Medium
Bolinao/Lingayen Gulf	9,560	40	Municipal Coastal Development Plans & National Park	750	Medium
Masinloc, Zambales	2,000	31	Protected Land/ Seascape & Fish Sanctuary	120	Medium
Batangas Bay, Maricaban Strait	100	52	Marine Tourism Reserve	80	Medium
Puerto Galera, Mindoro	48	22	Man & Biosphere Reserve	20	Medium
Calamianes Group of Islands	18,200	29		300	Low
El Nido, Palawan	4,250	21	Marine Park	1,000	Medium
Port Barton	454	38.2		80	Low
Balabac	2,500		Environmental Critical Protection Zone		

¹ Categories of Management Effectiveness: Low: Area declared or proposed to be declared for management; Management Plan developed and approved. Medium: Existing Management Framework is implemented with inadequacy of manpower, finance and/or equipment: High: Existing Management Framework is implemented with enough trained manpower, equipment, facilities and sustainable finance.

The Philippines National Coral Reef Strategy and Action Plan (2004) identified the following issues on coral reef management: Lack of an integrated national vision-mission in coral reef conservation and management action agenda; Non-binding international policies and undefined boundaries; Loose institutional arrangements, low stakeholder participation, and poor coordination at all levels; Poor understanding of reef dynamics and interaction with human uses; Sustainability of monitoring not assured; Mapping and assessment of coral reef habitats in the SCS and other critical or strategic marine biographic regions; Lack of coordinated national monitoring programs of coral reefs and mechanisms for information exchange as a result of poor coordination and institutional arrangements; Poor monitoring, control and surveillance at various scales; Absence of conflict-resolution body; Poor understanding of social, economic and ecological values of coral reefs, uncoordinated awareness program for CRM, and lack of popular coral reef education materials; Local government unit and stakeholder awareness; Inadequate environmental governance; Conflicting social and economic needs and interests in coral reef ecosystems; Lack of resource valuation information and inadequate consideration of transboundary values and their relevance to policy; and Inadequate investments of local government units in coral reef management due to lack of awareness and appreciation of the costs of coral reef conservation and related management initiatives.

As to the status of the NAP implementation, from 2008 to present, many of the targets were continued under the Coral Triangle Initiative. Recent policies and laws developed related to mangrove management include: Executive Order 533 (2006) Adopting Integrated Coastal Management as national strategy to ensure sustainable development of coastal and marine environment; Executive Order 578 (2008) Establishing the national policy on biological diversity, prescribing its implementation throughout the country, particularly in the Sulu Sulawesi Marine Ecosystem and the Verde Island Passage Marine Corridor; Executive Order 797 (2009) Adopting the Coral Triangle Initiative (CTI) National Plan of Action; Presidential Proclamation No. 1412 (2007) Establishing a Critical Habitat and Ecotourism Area within the Coastal Lagoon of Las Piñas and Parañaque as amended in 2008. In terms of the progress in achieving the SAP targets at the national level, the status are as follows:

- Management capacity built for priority coral reef sites: Development of State of the Coral Triangle Report – Philippines
- Development of improved management approaches (integrated, community-based, multiple use) at priority coral reef sites: Development of Vulnerability Assessment Tool for Coastal Ecosystems
- Development and utilization of management tools (licensing and permit systems, seasonal closures, zoning) to address threats to priority sites: Development of Fisheries Information for Sustaining Harvest—Bioeconomic (FISH-BE) model
- Development of ecological and socio-economic indicators for the monitoring of coral reef management effectiveness: - Development of MEAT (MPA Effectiveness Assessment Tool), NEAT (Network Effectiveness Assessment Tool), and Socio-Economic Assessment Tool (SEAT) and NeWPS SAP.

Seagrass management

In the Philippines, only 6,641 ha among 23,245 ha at five known seagrass sites were under some form of management (Table 4).

Table 4: Status of known seagrass sites in the Philippines coastal waters

Name	Area (ha)	Legal Status	Area under Management	Management Effectiveness
Total of 5 sites	23,245		6,641	
Cape Bolinao	22,400	Environmentally Critical Area – MPA	6,000	Medium
Puerto Galera	114	Fish sanctuary part of the Man and Biosphere reserve/	60	Low/Medium
Ulugan Bay	11	Fish sanctuary part of the Man and Biosphere reserve/	11	Medium
Honda Bay	470	Fish Sanctuary part of the Man and Biosphere reserve/	320	Medium
Puerto Princesa	250	Protected Area part of the Man and Biosphere reserve/	250	Medium



As identified in the Philippine National Seagrass Management Plan 2002-2012, human impacts are the primary cause for the loss of coastal habitats primarily due to rapid economic and human population growth. At least 60% of its human population lives close to shallow bays, lagoons and islands fringed by seagrass beds. A large percentage of this population derives their basic needs from these coastal resources. Infrastructure development is doubling at almost decadal rates. Past experiences have shown that an explosive population growth, uncontrolled modification of the coasts, coupled with rapidly dwindling resources will bring about short-term economic development mostly at the expense of the environment. In the Philippines, seagrasses are under threat from loss of mangroves and coral reefs. Mangroves acts as “filter” for sediment from land, coastal development, urban expansion and dredging while coral reefs serve as buffer against waves and storm surges. Other impacts include, substrate disturbance, industrial and agricultural runoff, industrial wastes and sewage discharges.

Coastal wetland management

In the Philippines, the total area of wetlands is 183,818 ha with two specific types of wetlands as follows: estuaries (24,515 ha) and inter-tidal flats (159,303 ha). Table 5 presents the areas and management status of wetlands types in the Philippines. As to the status of the NAP implementation, some of its activities are consistent with the ongoing activities of the Department of Environment and Natural Resources (DENR) and the Philippines Medium Term Development Plan. The NAP is also consistent with the National Wetland Action Plan (NWAPP 2010-2016) which is in turn aligned with the Philippine Biodiversity Strategy and Action Plan.

The institutionalization of the NWAPP however has not yet been made. A Draft Executive Order to establish a wetland national policy and creating the national wetlands conservation committee is being developed. As to the progress in achieving the SAP targets at the national level, the status are as follows:

- Development of management plans for lagoons, estuaries, tidal flats, peat swamps and non-peat swamps: Three (3) target sites linked to the South China Sea Project were identified, namely: Malampaya Sound Protected Landscape and Seascape, Pansipit River Estuary and Manila Bay. The Malampaya Sound Management Plan has been developed, updated and implemented. Activities included assessment of mangrove, coral reefs and fishes; trainings on the preparation of biodiversity responsive comprehensive land use plan, zoning ordinance, comprehensive development plan and investment program; creation and mobilization of local project site committee, etc. The Pansipit River Estuary is the sole outlet of Taal Volcano Protected Landscape (TVPL) towards Balayan Bay and link to the South China Sea. TVPL has a management plan which incorporated the concerns/ issues of Pansipit River. Activities in the estuary included the prevention of fish kill, removal of fish pens which blocked the flow of water towards the sea, continuous information dissemination campaign for the local communities, enforcement, etc. A Manila Bay Coastal Strategy and Operational Plan has been developed for the Manila Bay rehabilitation. The operational plan basically addresses the priority issues/areas of concern on water pollution, habitats and resources and partnership and governance, informal settlers and solid waste management. Each of these issues has a set of objectives and action plans with measurable targets, timeframe, budgetary requirements, implementing arrangements, and enabling policies and laws.
- Declaration of protection status for priority wetland areas – Puerto Princesa Subterranean River National Park declared as Ramsar Site in 2012. The protected area composed of 22,202 hectares is a complex of wetland ecosystem types including underground river, mangrove forest and non-peat swamps; Las Pinas Paranaque Critical Habitat Ecotourism Area (LLPCHEA) is an urban coastal wetland located in Metro Manila specifically Manila Bay. It is designated as Ramsar site in 2012.
- Development of ecological and socio-economic indicators for the monitoring of wetland management effectiveness: The Management Effectiveness Tracking Tool is being used for monitoring of proclaimed National Integrated Protected Areas System sites.

Table 5 Legal and management status of known inter-tidal mudflats, estuaries, coastal lagoons and coastal peat swamps in the Philippines.

Name of site	Area (ha)	Legal and Management Status		
		Protected – Non-use (Subsistence/commercial)	Sustainable use	Non-sustainable use
Estuaries				
Malampaya Sound	24,500	Protected seascape	N.A.	N.A.
Pansipit River Estuary	15	N.A.	N.A.	√
Inter-tidal flats				
Balayan Bay Tidal flats	75,000	N.A.	√	N.A.
Manila Bay Tidal Flat	30,000	N.A.	√	N.A.
El Nido, Palawan mudflats	54,303	Protected Seascape	N.A.	N.A.



3. SAP TARGET AND PLANNED ACTIONS

3.1. Mangroves

The Strategic Action Programme targets for mangroves in the Philippines focus on: improving the management of mangrove areas utilized for the sustainable use of non-mangrove resources. This will be achieved via the development and implementation of sustainable use management plans for 2,000 ha of mangroves, as well as the reform of laws and regulations for the sustainable use of mangrove areas in the Philippines. This aims to increase the total area of mangrove being managed effectively on a sustainable use basis from 26,000 ha to 28,000 ha. The Strategic Action Programme targets also focus on increasing the area of mangrove designated as a National Park or assigned Protected Area status from 27,100 to 27,731 ha. It will also result in the replanting of 2,000 ha of deforested mangrove land and the enrichment planting of a further 1,000 ha of mangrove to increase biodiversity. Priority areas for management include Quezon, Coron, Busuanga and Ulagan, all in Palawan. Table 6 details the specific Strategic Action Programme targets for mangrove in the Philippines.

Table 6: Strategic Action Programme targets for future mangrove management in the Philippines

SCS SAP Outputs and targets	Philippines
1.1.1 Declaration of 57,400 ha of mangrove as National Parks and Protected Areas	631
1.1.2 Designation and plans for the management of 166,600 ha of mangrove as non-conversion, sustainable use areas	0
1.1.3 Reform of laws and regulations for the sustainable use of 602,800 ha of mangrove forest	2,000
1.1.4 Replanting of 21,000 ha of deforested mangrove land	2,000
1.1.5 Biodiversity increased for 11,200 ha of mangrove forest via enrichment planting	1,000
1.1.6 Established mechanism for monitoring management, ecological and socio-economic indicators at 26 sites [based on SAP results framework]	5,631



The National Action Plan is premised on the goal of having the country’s mangrove forests and its resources developed and managed on a sustainable basis for the economic and environmental benefits of the people. This goal is translated into the following objectives:

- preservation of the remaining mangrove forests bringing them under effective management and enhancing their biological productivity;
- preservation of parts of the mangrove areas for protection of floral and faunal biodiversity;
- expansion of mangroves through reforestation and plantation development;
- effecting equitable access to mangroves on multiple-use, multiple-user basis;
- provision of adequate supply of mangrove products and services to various end users while at the same time conserving and expanding the resources;
- promotion of economic development in areas around mangrove forests especially in ways that enhance mangrove protection and management; and
- strengthening of institutional arrangements for ensuring sustained management of mangrove resources in the country.

Recommended strategic and immediate actions to attain the above-mentioned objectives are the following: delineation of the mangrove permanent forest estate; sustaining national resource inventory/assessment of mangrove forests in the country; establishment of more genetic resources areas; adoption of C & I for sustainable management of mangrove forests; expansion of the existing mangrove forest areas; lobbying for the amendment of RA7161 to exempt planted mangrove trees from the cutting ban provision; strict regulation of the conversion of mangroves into other land uses; review and strengthening of the policy on reversion of abandoned, undeveloped and unproductive fishponds/shrimp farms to mangrove forest estates; studying and establishing appropriate models for CBFM in mangrove forests; studying and formulating policies to address existing productive illegal fishponds and/or shrimp farms; strengthening IEC on mangrove forests/ecosystems; sustaining training for LGUs and mangrove/coastal communities on the sustainable management of mangroves; promotion of additional alternative livelihood opportunities for mangrove forest resources users, and; prioritization of research and development on the Philippine mangrove forests.

3.2. Coral reefs

The targeted coral reef area to be added for management through SAP implementation is 10,100 ha, bringing the total area across the nine sites (Batanes, Bolinao/Lingayen Gulf, Masinloc, Zambales, Batangas Bay, Maricaban Strait, Puerto Galera, Mindoro, Calamianes Group of Islands, El Nido, Palawan, Port Barton, and Balabac) under management to 12,500 ha (Table 7). The implementation of the Strategic Action Programme also aims to increase the management effectiveness across all nine sites from low and/or medium to high.

Table 7. Strategic Action Programme targets for future coral reef management in the Philippines

Outputs	Philippines
1.2.1 Management capacity built for 46 coral reef sites	Batanes
1.2.2 Management approaches and policy, legal & institutional reforms (integrated, community-based, multiple use) improved at 46 coral reef sites	Bolinao/Lingayen Gulf Masinloc, Zambales Batangas Bay, Maricaban Strait
1.2.3 Management tools (licensing and permit systems, seasonal closures, zoning) developed and utilized to address key threats at priority sites	Puerto Galera, Mindoro Calamianes Group of Islands El Nido, Palawan
1.2.4 Established mechanism for the monitoring of management, ecological and socio-economic indicators at 46 sites	Port Barton Balabac
Total coral reef area in Philippines (ha)	464,000
Total coral reef area of the 9 target sites	36,700
Coral reef area to be supported in SCS SAP project	12,500

At the site and national levels, activities will include: supporting building management capacity (number/levels human resources, facilities and equipment, and sustainable financing mechanisms) for the 9 coral reef sites; improving management approaches (integrated, community-based, multiple use) at 9 coral reef sites; developing management tools (licensing and permit systems, seasonal closures, zoning) in support of legal and regulatory reforms to address key threats at the 9 priority sites; and establishing mechanisms for monitoring management, ecological and socio-economic indicators at the 9 coral reef sites. These are all aimed at increasing management effectiveness and assisting in achieving the coral reef related target of the Strategic Action Programme which is aimed at reducing the decadal loss of live coral cover in the South China Sea from 16 to 5 percent.

The National Action Plan outlined its Vision for coral reefs, which is “To pursue the sustainable development of the archipelago; are committed to protecting and preserving marine life for the benefit of present and future generations; and in honoring this commitment, we employ strategies that are in harmony with our culture but conform to a holistic ecosystem-based management approach adopted by kindred communities around the world”. The goals are:

- To sustain development of coral reefs within an ICM framework through the ArcDev Agenda
- To sustain the goods and services provided by the coral reefs and all associated ecosystems
- To manage the diverse uses of the reefs and its associated ecosystems through sound environmental governance approaches at the local, national and global levels

The objectives of the National Action Plan are:

- To design and establish institutional mechanisms for national coral reef strategy
- To harmonize policies and actions through strengthened communities at all levels
- To meet adaptively the challenges of ecosystem-based co-management through community-based knowledge of the coral reef ecosystems
- To enhance financial sustainability of coral reefs and its associated ecosystems through good governance, shared roles and responsibilities, and equitable distribution of benefits and costs

To achieve these objectives, activities include: Establish institutional arrangements on a sectoral and hierarchical level for managing the coastal resources and environments through the initiative of the Archipelagic development (ArcDev), which aims to unify the management of the country’s archipelagic land and waters; Identify and implement appropriate policy, strategies and programs to address problems such as the lack of a national vision and framework, opportunities for synergy to overcome the lack of integrated coral reef management, effective implementation of international commitments and weak institutional arrangements and

fostering participation and informed decisions; Adaptive management programs as the major approach to facilitate in understanding coral reef dynamics and its sustainable management, improving visualization tools and decision support, institutionalizing coordinated monitoring, control and surveillance systems at all management levels; and Sustainable financing programs to help in leveraging sustainable investments priorities for coral reef ecosystem management, institutionalizing resource valuation and other social and economic investments to support decision-making and resolving conflict needs and interests in coral reef ecosystems.

3.3. Seagrass

In the Philippines, the Strategic Action Programme identifies five known seagrass sites with a total area of 23,245 ha. The Strategic Action Programme targets three seagrass sites and will result in an increase in seagrass area under management by 6,920 ha. The three sites are located at: Cape Bolinao, Puerto Galera and Honda Bay (Table 8).

Table 8: Targets of the Strategic Action Programme for seagrass in the Philippines coastal waters

Outputs	Philippines
1.3.1 Twenty-one seagrass areas totaling 15,848 ha under sustainable management with supporting laws and regulations	Cape Bolinao Puerto Galera Honda Bay
1.3.2 Amended management plans for 7 existing MPAs with significant seagrass areas, to include specific seagrass-related management actions and policy, legal & institutional reforms	
1.3.3 Designation of 7 new Marine Protected Areas focusing on seagrass areas	
1.3.4 Established mechanism for monitoring management, ecological and socio-economic indicators at 21 sites	
Total seagrass area in the 3 target sites (ha)	22,984
Target for management through the SCS SAP project	6,920

Specific national activities will include putting under sustainable management with supporting laws and regulations three seagrass areas totalling 6,920 ha, amending national management plans for existing MPAs with significant seagrass areas, to include specific seagrass-related management actions, designating new Marine Protected Areas focusing on seagrass areas identified in the prioritized listings of the SCS Project and establishing mechanisms for monitoring management, ecological and socio-economic indicators at 5 sites.

The National Seagrass Conservation Strategy (NSCS) of the Philippines outlined its Vision statement as a “Well-managed seagrass habitats, their functions enhancing the ecological integrity of Philippine coasts, thereby sustaining the development and livelihood activities of dependent populations.” Its goal is to ensure high-level recognition of the ecological and economic importance of seagrass and establish at least two seagrass protected areas in the Philippines by 2012. Taking into consideration the quality and health of seagrass beds to ecological processes, socioeconomic issues, and environmental management issues, the NSCS identified five major themes complete with goals, objectives and actions. These are: Research and Monitoring; National Policy, Legal and Institutional Arrangement and Coordination; Public Awareness, Communication and Education; Capacity Building and Sustainability; and Resource and Habitat Management.

Action activities include: resource assessment and mapping, including inventory of flora and fauna; socio-economic and cultural assessment focusing on the contributions of seagrasses to development (also with the help of the network); database and information management system including decision support system; integration of research programmes with management and policy-making; review and improve existing laws and policies via identification and formulation of policies relevant to seagrasses at all levels of governance; integration of relevant policies of government agencies; stakeholder analysis and involvement; strengthening traditional value and management systems; establish an incentive system for good governance; linkage to regional and international obligations and cooperation; develop, improve, and disseminate awareness materials;

human resource development; institution building and strengthening including networking; financial sustainability; develop guidelines for sustainable use of seagrass resources; strengthen seagrass management through community-based activities; establish/enhance seagrass system through sound use of natural enhancement measures and artificial systems; and develop practical environmentally friendly technologies to sustainably use seagrass.

3.4. Coastal wetlands

In the Philippines, Strategic Action Programme implementation will result in the adoption and implementation of management plan for 2 estuaries - Malampaya Sound (24,500 ha) and Pansipit River Estuary (15 ha); and 1 tidal flat at Manila Bay (30,000 ha). This includes the declaration of wetland areas with protection status and needed management reforms, and adoption of a regional estuary monitoring scheme for national implementation (Table 9).

Table 9: Targets of the Strategic Action Programme for coastal wetlands in the Philippines coastal waters

Outputs	Philippines
1.4.1 Integrated management plans developed and under implementation for at least 3 lagoons (26,818 ha), 9 estuaries (614,680 ha), 5 tidal flats (96,903 ha), 1 peat swamp (45,700 ha) and 1 non-peat swamp (9,808 ha)	Malampaya Sound Pansipit River Estuary Manila Bay Tidal Flat
1.4.2 Declaration of at least 7 wetland areas with protection status (i.e. non-hunting area, nature reserves, protected areas, Ramsar Sites).	
1.4.3 Adoption of a regional estuary monitoring scheme and its national implementation	
Target in implementing the SAP for wetlands of the Philippines (ha)	54,515

The National Action Plan for Philippine Wetlands 2007-2012 (2007) has identified the threats to Philippine wetlands, often emanating from direct and indirect causes. The direct causes of wetland degradation and loss are: coastal development for human settlements, tourism, and shipping; conversion to fishponds; pollution from domestic and industrial wastes; river bed quarrying; erosion and siltation; illegal fishing practices; and wildlife poaching. The indirect causes are: low level of access to basic services (i.e. education, health, and sanitation); poor access to agricultural support; people living below poverty level; high population growth in coastal communities; instances of public apathy and “Makasarili”; uncoordinated institutional arrangements; and lack of appropriate tenurial instruments to ensure wetland protection.

The National Action Plan is a cooperative program, which aims to provide a concrete operational plan for the protection, conservation, and restoration of Philippine wetlands, that involves the participation of the national, regional and local governments, non-governmental organizations, people’s organizations and the local communities to attain the common vision of: “People and institutions working responsively and cooperatively for sustainable wetland ecosystems”. The goal is to reverse the environmental degradation of Philippine wetlands sites through conservation, protection, and restoration so that these wetlands will continue to function and provide environmental services while meeting the needs of human society. To achieve the goals, eight strategies have been identified:

- Promote public awareness and commitment to protect wetlands
- Establish an information database and management system
- Maintain and improve the quality of existing wetlands
- Establish demonstration sites to promote conservation, management, and rehabilitation of each wetland type (lagoon, estuary, tidal flat),
- Strengthen legislation, policies, agreements and compliance
- Strengthen institutional partnerships in the management and protection of wetlands

- Establish monitoring, evaluation and feedback system to improve performance and accountability of projects implemented
- Improve the well-being of the local communities within the vicinity of the wetlands

Action activities include: Identify, catalogue, and evaluate available information on wetland functions, wetland values, protection, rehabilitation, policies, and regulations; Develop and publish flyers, brochures, posters and educational packages including production of IEC packages; Establish a wetlands network to improve the information base on area-specific wetlands; Establish and train a data-management group; Create and maintain an integrated and computerized database on wetlands; Develop manuals of techniques/methodologies for assessment and monitoring of wetlands; Develop guidelines for wetland management; Review existing management plans (i.e. resource, watershed, and land use plans) and incorporate provisions for the management of estuaries, lagoons, and intertidal flats whenever appropriate; Provide training programs on wetland characterization, monitoring, and management; Identify demonstration sites through the conduct of rapid resource appraisal of priority sites including wetland mapping; Establish demonstration sites for conservation and restoration of estuaries, lagoons, and tidal mudflats; Monitor critical/threatened/keystone species and their habitats; Delineate possible sanctuary areas for eventual boundary demarcation; Establish rescue centers, nursery and breeding facilities for threatened and vulnerable species; Empower the local communities to enforce local ordinances by organizing and deputizing village watch groups and capacity building workshops; Improve coordination and integration of projects on protection, conservation, and rehabilitation of wetlands among stakeholders; Harmonize and consolidate stakeholders efforts relative to wetland management and enhance public-private sector partnership; Develop a system to evaluate program components including specific techniques and/or strategies as well as target achievement; Identify and develop environment-friendly community livelihood and alternatives, and link with established micro-financing institutions; and Conduct training programs to develop skills in parallel to environmental education, ensuring women and youth's representation and participation.

3.5. Land-based pollution

National level activities will support the: reviews of legislative and institutional frameworks for land-based pollution management in participating countries; harmonization of national Standard Operating Procedures for land-based pollution control and management, including agreed sediment, biota, and water quality criteria; revision of national/provincial policies; development, enactment and implementation of supporting regulations for land-based pollution; and the updating and adoption of National Action Plans, including institutional reform and sustainable financing strategies, for land-based pollution management in the SCS.

The Philippines was not able to develop their National Action Plan on land-based pollution. Instead, a National Report on Land Based Pollution in the Philippines with Respect to the South China Sea was prepared. Several projects were proposed in the national report. This includes: Assessment and management of land-based pollution for small communities in the Philippines; Development of Philippine sediment quality guidelines and standards for the protection of aquatic life; Survey and assessment of sources of land-based pollution in hotspot areas; Development of coastal and sea use plans; Economic valuation of land-based pollution impacts on coastal resources; and Establishment of water quality management area (WQMA). Of these projects, only the development of sediment quality guidelines and assessment of land-based pollution sources were implemented.

Many relevant policies and laws were also developed in the Philippines related to land-based pollution management. These include: a number of: 1) DENR Administrative Orders designating the River System as a Water Quality Management Area (WQMA) and creation of its Governing Board; 2) Memorandum Circulars (MC) on the guidelines for recreational waters monitoring program; and 3) Resolutions on solid waste management and planning for local government units and informal settlers.



4. NATIONAL BASELINE INFORMATION AND DATA

4.1 National reports

A large number of national reports and publications have been produced as part of the SCS Project. These outputs are a valuable information resource on mangroves, coral reefs, seagrass, wetlands, fisheries, and land-based pollution in the Philippines. The detailed national reports on mangroves, coral reefs, seagrass, wetlands, land-based pollution and economic valuation of the Philippines were prepared as a baseline resource for Strategic Action Programme implementation. Some technical reports also developed (Table 10). There existed a document related to a good practice on Network of Small - Scale Sanctuaries²

Table 10. Past national reports and publications in the Philippines

Component	Title	Date	Focal Point/Institution
Mangroves	Mangrove National Action Plan Philippines	2004	Florendo Barangan Coastal and Marine Management Office, DENR
	Mangrove Country Report Philippines 2004	2004	
	The Current Policy System Governing Philippine Mangroves	2004	
Coral Reefs	National Coral Reef Review Series 2: Sustaining Philippine Reefs - Economic Valuation of Philippine Coral Reefs in the South China Sea	2004	Porfirio Alino UP Marine Science Institute
	National Coral Reef Review Series 3: Sustaining Philippine Reefs - Coastal and Marine Resources Management in the Philippines Review of Institutional Arrangements	2004	
	National Coral Reef Review Series 1: Sustaining Philippine Reefs - Policy and Legal Framework for Philippine Coral Reefs and Integrated Coastal Management	2004	
	PHILMARSAST Philippine Marine Sanctuary Strategy	2004	

² Available at http://www.unepscs.org/South_China_Sea_Knowledge/Lessons_Learned/SCS_Lessons_Learned.html

Component	Title	Date	Focal Point/Institution
	Sustaining Philippine Reefs - Harmonizing our Efforts Through a National Coral Reef Strategy (Draft Version 1)	2004	
	NCRS National Coral Reef Strategy	2004	
	Reefs Through Time Biennial Report on the Status of Philippine Coral Reefs		
	Network of Small - Scale Sanctuaries in Masinloc, Philippines	2008	
Seagrass	National Seagrass Conservation Strategy of the Philippines		Miguel Fortes UP Marine Science Institute
	Country Report: Seagrasses of the Philippines		
	Completion Report Bolinao Seagrass Demonstration Site Project Completion Report and Annexes: C - Presentation and Handouts D - Attendance Sheets E- Maps and Photos F - Financial and Audit Reports		
Wetlands	Philippine Wetlands in the South China Sea: Conservation Priorities		Marlynn Mendoza Protected Areas and Wildlife Bureau, DENR
	Review of Legislation and Policies on Philippine Wetlands		
	Philippines National Report on Wetlands	2005	
Land-Based Pollution	National Report Land-based Pollution in the Philippines with Respect to the SCS	2008	Percie Otico Environmental Management Bureau, DENR
	National Water Quality Status Report (2014 – 2019)	2020	Environmental Management Bureau, DENR
	Water Quality Status Report – Region 1 (2014 – 2019)	2020	
	Water Quality Status Report – Region 2 (2014 – 2019)	2020	
	Water Quality Status Report – Region 3 (2014 – 2019)	2020	
	Water Quality Status Report – Region 4A (2014 – 2019)	2020	
	Water Quality Status Report – Region 4B (2014 – 2019)	2020	
	Water Quality Status Report – National Capital Region (2014 – 2019)	2020	
	Philippine International Commitments on Environment and Natural Resources Roadmaps and Updates	2019	Department of Environment and Natural Resources
	The Project for Capacity Development on Improving Solid Waste Management through Advanced/Innovative Technologies	2019	Environmental Management Bureau, DENR
National Solid Waste Management Report (2008-2018)	2018	Environmental Management Bureau, DENR	
Fisheries	General Information on Coastal Resource Management		Noel Barut National Fisheries Research and Development Institute
	Metadata Reference Collection (Fisheries Component)	2004	
	Executive Summary of the National Report Philippines (Fisheries Component)	2004	
Others	National Report of the Philippines on the Formulation of a Transboundary Diagnostic Analysis and Preliminary Framework of a SAP for the SCS		

4.2 Site characterizations

The SAP for the South China Sea and NAPs of the Philippines identified 22 priority sites where interventions will be made for sustainable management of a coastal habitats (Table 11). Comprehensive site characterization

information and data contained best available information for each priority site identified for action as part of Strategic Action Programme implementation. Specific site-level information and data compiled in each site characterization include details of: the geographical locations and boundaries of the sites (including coordinate); the site's physical environment; environmental state; socio-economic and resource use information; biological data; and information on the status of existing management. These baseline assessments of the sites have been made accessible online at <http://gis.unepscs.org>.

Table 11. The sites selected for implementing the SAP in the Philippines including Fisheries Refugia sites.

Mangroves	Coral Reefs	Seagrass	Wetlands	Fisheries Refugia
7 sites	9 sites	3 sites	3 sites	3 sites
5,631 ha	12,500 ha	6,920 ha	54,515 ha	
Busuanga Coron San Vicente Ulugan San Jose Subic Quezon	Batanes Bolinao/Lingayen Gulf Masinloc, Zambales Batangas Bay, Maricaban Strait Puerto Galera, Mindoro Calamianes Group of Islands El Nido, Palawan Port Barton Balabac	Cape Bolinao Puerto Galera Honda Bay	Malampaya Sound Pansipit River Estuary Manila Bay Tidal Flat	Bolinao – Rabbitfish Coron – Mangrove jack Masinloc – Frigate tuna

The data required for prioritization of these priority sites were provided sufficiently by focal points on mangroves, seagrass and coastal wetlands during the SCS project. The Tables 12 to 15 below were quoted from “Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand”. South China Sea Knowledge Document No. 2. UNEP/GEF/SCS/Inf.2 in order to provide basic information of the sites.

Table 12. Selected physical and biological properties and variables for mangrove potential demonstration sites

Site	Busuanga	Coron	San Vicente	Ulugan	San Jose	Subic	Quezon
Present Area	1,298	1,296	133	790	483	148	1,939
Zones spp. assoc	5	5	5	4	4	3	5
% change in area	-5	-50	-15	-10	-80	-20	-40
True mangrove spp.	24	26	14	16	25	23	32
Density >1.5m high /Ha	7,550	7,080	3,780	5,100	3,180	1,420	4,000
% cover	90	M	80	85	60	90	80
No. Crustacean. spp.	6	7	6	8	7	8	5
No Bivalve	15	15	15	15	13	14	14
No. Gastropod spp.	36	37	36	36	34	35	37
No Fish spp.	9	13	13	13	7	16	11
No Bird spp.	45	42	36	42	48	44	44
No migratory bird spp.	27	34	40	39	37	57	37

Table 13. Biodiversity and other environmental properties and variables for selected seagrass sites in the Philippines (M = data unavailable)

Site Name	Cape Bolinao	Puerto Galera	Ulugan Bay	Puerto Princesa/Honda Bay
Area (ha)	2,500	114	11	670
% cover	75	95	90	90
Depth range	1.7	4.5	2.5	4
Seagrass spp.	9	9	8	8
Penaeid spp.	7	3	3	4
Gastropod spp.	23	11	10	18
Siganid spp.	6	2	2	4
Urchin spp	4	3	5	5
Threatened spp.	3	3	4	3
Associated ecosystems	2	2	2	2
Migratory species	1	1	0	1

Table 14. Properties and variables for potential coral reef demonstration sites in the Philippines used in determining similarities and differences among sites. (M = data unavailable)

Site Name	Hard coral species	live coral cover (%)	No. of algae spp.	No. of crustacean species	No. of echinoderm species	No. of coral reef fish species	Other ecosystem	No. of endangered and threatened species
Batanes, Basco	M	55.00	41	M	M	86	1	3
Bolinao/Lingayen Gulf	199	40.00	224	M	M	328	2	4
Masinloc, Zambales	M	33.00	57	M	M	249	2	4
Batangas bay/Maricaban	290	48.00	141	M	M	155	2	4
Puerto Galera, Mindoro	267	33.00	75	M	M	333	2	5
El Nido, Palawan	305	40.00	129	M	M	480	2	5

Table 15. Properties and variables used for the cluster analysis of wetland potential demonstration sites in the Philippines (M = data unavailable)

Site	Area (ha)	Total no. fish spp.	Total no. birds spp.	No. wetland types	No. migratory spp.	Site specific endemic spp.
Pansipit River Estuary	15	75	24	1	10	1
Balayan Bay Tidal flats	75,000	M	25	2	20	15
Manila Bay Tidal Flat	30,000	M	25	3	20	10
El Nido, Palawan mudflats	54,303	M	26	2	10	1
Malampaya Sound	24,500	156	26	3	10	0

5. NATIONAL COORDINATION ARRANGEMENTS

5.1 National inter-ministry committee

The National Inter-Ministry Committee (IMC) for the Philippines will be revitalized and assume overarching responsibility for Strategic Action Programme implementation in the Philippines. The IMC will review and approve reports from the National Technical Working Group and the Specialized Executing Agencies for mangroves, coral reefs, seagrass, wetlands, land-based pollution, and economic valuation regarding the outputs and outcomes of efforts to achieve Strategic Action Programme targets. The Philippines' IMC will meet on a biannual basis during the operational phase of SAP implementation to guide the timely execution of national-level activities. The membership of the National Inter-Ministry Committee of the Philippines is under finalization with the leadership by Department of Environment and Natural Resources as the lead agency.

5.2 National technical working group

The Philippines' National Technical Working Groups (NTWG) will review and co-ordinate national scientific and technical activities of Strategic Action Programme implementation. The NTWG will review and evaluate, from a scientific and technical perspective, progress in the achievement of Strategic Action Programme targets, and provide guidance for improvement when necessary. The NTWG will provide the IMC with: recommendations on proposed national and site-based activities, work plans, and budgets; technical guidance and suggestions to improve Strategic Action Programme activities where necessary, including the reform of policy, legislation and institutional arrangements; facilitate co-operation with relevant national and provincial organizations and projects to enhance the information and science base for use in achieving Strategic Action Programme targets and in preparing updated National Action Plans and a revised Strategic Action Programme in the Philippines; and compile and evaluate national level sources of information and data for sharing at the regional level. The provisional membership of National Technical Working Group of the Philippines is under finalization.

5.3 Specialized executing agencies

National Specialized Executing Agencies (SEAs) will be engaged by the Strategic Action Programme Implementation Unit (SAP-IU) and assume overall responsibility for the execution of the national-level activities in their respective areas of expertise for Strategic Action Programme implementation in accordance with the initiative's results framework. The SEAs will convene quarterly meetings of national committees for mangroves, coral reefs, seagrass, wetlands, land-based pollution, and economic valuation, and will nominate a National Focal Point to: (a) act as the main point of contact with the SCS SAP-IU; (b) act as Chair of the his/her respective National Committee; (c) act as a member of NTWG; and (d) act as a member of the respective Regional Working Group or Task Force. The SEAs will also plan and implement activities aimed at achieving the national-level goals and targets Strategic Action Programme for the South China Sea. In doing so, the SEAs will engage with national networks to the fullest extent possible, and establish institutional linkages with provincial and local governments and communities. The National Committee will be a core group of this engagement, including representatives from organizations and experts which are related to each thematic area. The Specialized Executing Agencies and Focal Points in the Philippines are under finalization.

5.4 Stakeholder participation

In the Philippines, the DENR will act as the lead agency and draw on inputs from various offices and bureaus within the Department including Biodiversity Management Bureau (BMB), Environmental Management Bureau (EMB), River Basin Control Office (RBCO), Mines and Geoscience Bureau (MGB), Land Management Bureau (LMB), Ecosystems Research and Development Bureau (ERDB), National Water Resources Board (NWRB), Planning and Policy Services Office (PPSO) and the Foreign Assisted Service and Project Service Office (FASPSO). At the level of national coordination and governance, other primary stakeholders include the National Economic Development Authority (NEDA) and its Office of Agriculture, Natural Resources and

Environment, the Bureau of Fisheries and Aquatic Resources (BFAR) and its National Fisheries Research and Development Institute, the Department of Foreign Affairs (DFA) and its Maritime and Ocean Affairs Office, the Department of Science and Technology (DOST) and the Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development and the Industrial Technology and Development Institute (ITDI), the Department of Interior and Local Government (DILG), and the Philippine National Police Maritime Group, and the National Commission on Indigenous Peoples (NCIP).

Technical capacities of the abovementioned departments and offices will also be drawn on to support scientific and technical elements of the project and national level execution. In this connection, the University of the Philippines' Marine Science Institute and the Institute of Environmental Science and Meteorology are key technical stakeholders, as are the Policy Studies Division of DENR's Planning and Policy Studies Office, the Environmental Research Section of DENR's Environmental Management Bureau, and the Caves, Wetlands and Other Ecosystems Section of DENR's Biodiversity Management Bureau. At the provincial and municipal level, key stakeholders identified during project preparation include the Palawan Council for Sustainable Development, offices of the Provincial Agriculturists, the Municipal Government of Bolinao in Pangasinan, the Municipal Governments of Busuanga and Taytay in Palawan, the Malampaya Sound Protected Land and Seascape Administration in Palawan, the Municipal Government of Masinloc in Zambales, the Fisheries and Aquatic Resources Management Council, the Association of Resort Owners and Tourism Establishments, and Peoples' Organizations. Key NGOs were identified to be Anak ng Dagat and Amahan at Ugnayan ng Pangisdaan ng Orion.

For Land-based Pollution Component, the key technical arm of the DENR is the Environmental Management Bureau (EMB). Key stakeholders, include the DENR's PPS and FASPS offices, the various divisions of EMB, DENR-RBCO, MGB, and the Manila Bay Coordinating Office (MBCO). The EMB regional offices in Regions 1, 2, 3, 4A, 4B, and the National Capital Region (NCR) are likewise key stakeholders for the land-based pollution. Other land-based pollution key stakeholders include several research and academic institutions, industry and business organizations, non-government organizations, as well as other national government agencies, including the DOST, Fertilizer and Pesticides Authority (FPA), Laguna Lake Development Authority (LLDA), Subic Bay Management Administration (SBMA), Palawan Council for Sustainable Development (PCSD) and other national and local agencies, including the local government units (LGUs) in the regions along SCS. Table 3 presents a list of a non-inclusive stakeholders for land-based pollution.

6. NEXT STEPS

During 2020-2021 National Implementation Reports (NIR) will be developed to elaborate for each of the SCS SAP Outcomes and Outputs the activities to be executed in each site in order to achieve the SAP targets. This will include updated information and adjustments to address current status of SAP implementation since 2008 and revision of sites and planned activities if appropriate. The NIR will also include a detailed workplan and budget including partnerships and co-financing, to be adopted by the SCS SAP Project Steering Committee.