



Implementing the Strategic Action Programme for the South China Sea and Gulf of Thailand (SCS SAP Project)

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ACHIEVEMENTS IN IMPLEMENTING THE STRATEGIC ACTION PROGRAMME IN INDONESIA DURING 2008-2021



Achievements in Implementing the Strategic Action Program in Indonesia during 2008-2021

INTRODUCTION

Recognizing 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) in preparing 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). The up-dated Strategic Action Programme was one of the anticipated outputs from the UNEP/GEF Project entitled “*Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand*” (SCS Project), and the document contains the final text as approved by all countries during the 8th meeting of the Project Steering Committee in Hanoi, Viet Nam, August 2008. It was anticipated that the countries would commence implementation of the envisaged actions in 2008/2009 in parallel with the process in seeking further support from GEF for the SAP implementation.

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 implement the SAP, at the regional level, the GEF adopted on November 03, 2016 the project entitled “*Implementing the Strategic Action Programme for the South China Sea and Gulf of Thailand (SCS SAP Project)*”. It was noted that regional actions would contribute to achieving the target through: capacity building for activities at the national and local levels; provision of opportunities in exchange of experiences and good practices among countries in the region; common guidelines and other tools used by countries in management planning and practices; standardisation in regional synthesis and comparison; provision of sound scientific information for management; and encouraging governments at all levels to develop policy related to environment management. It was also emphasised that actions at the national and local levels are critical for success of the SAP targets. National Action Plans (NAPs) were developed in all participating countries and had been, or would be adopted by, governments to meet national priorities and to contribute to regional targets incorporated in the SAP.

As other participating countries, Indonesia developed the NAPs for habitat and land-based pollution management during the course of the SCS Project and have conducted a series of activities in implementing the SAP and NAPs since 2008. This evaluation provides evidences on proactive contribution of Indonesia in implementing the SAP and NAPs on mangroves, coral reefs, seagrass and coastal wetlands and supports to estimate country co-finance for environment management in the SCS during last decade. The reviews of past activities and outputs would be helpful for seeking the gaps which shall be addressed in implementing the SCS-SAP project in 2022-2023.

EVALUATION OF ACHIEVEMENTS

1/ Mangroves

SAP Targets and Summary of Achievements

The Strategic Action Programme targets for mangroves in Indonesia 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 165,000 ha of mangroves, as well as the reform of laws and regulations for the sustainable use of mangrove areas in Indonesia. The Strategic Action Programme targets also focus on increasing the area of mangrove designated as a National Park or assigned Protected Area status by 20,000 ha. Priority areas for management include: Belitung Island (22,457 ha), Angke Kaput (328 ha), Batu Ampar (65,585 ha), Ngurah Rai (1,374 ha) and Bengkalis (42,459 ha). There have existed many activities using national resources for implementing the SAP in last years

since 2008. The recently available data provide with numerous outputs (see table 1) but has not allowed for description as requested. Generally, at 5 sites (Batu Ampar, Angke Kapuk, Ngurah Rai, Belitung, Bengkalis) the Government and the Parties have carried out mangrove management activities, including Forest Cover Monitoring, Capacity Building, Community Empowerment, and Training, as well as Law Enforcement. In addition, at the national level, since 2019 the Government of Indonesia has implemented a policy of Accelerating Mangrove Rehabilitation since 2019 with a target of 600,000 ha in Indonesia and specifically 7,600 ha have been rehabilitated in 2021.

Table 1. Summary of the SAP targets for mangroves and achievements during 2008-2021 in Indonesia

Regional output	SAP 2008 targets (ha)	SAP target sites and achievements (ha) during 2008-2021					
		Belitung	Angke Kapuk	Batu Ampar	Ngurah Rai	Bengkalis	Total
1.1.1 Declaration of 57,400 ha of mangrove as National Parks and Protected Areas	20,000	22,456	328	34,000	1,373	10,000	66,785
1.1.2 Designation and plans for the management of 166,600 ha of mangrove as non-conversion, sustainable use areas	165,000	-	-	32,000	-	42,459	74,459
1.1.3 Reform of laws and regulations for the sustainable use of 602,800 ha of mangrove forest	490,800		328	32,000			32,328
1.1.4 Replanting of 21,000 ha of deforested mangrove land	0	5,000	328	5,000	50	3,000	13,378
1.1.5 Biodiversity increased for 11,200 ha of mangrove forest via enrichment planting	0	5,000	328	5,000	1,373,50		10,328
1.1.6 Monitoring of management effectiveness	NA	22,456.18	328	34,000	1,373,50	10,000	66,784

Descriptions

1.1.1 Declaration of 57,400 ha of mangrove as National Parks and Protected Areas

[Please provide information: Name, category & area (ha) of mangrove site designated as national park or protected area, year and entity of adoption]

1.1.2 Designation and plans for the management of 166,600 ha of mangrove as non-conversion, sustainable use areas

[Name and area (ha) of each mangrove site under management plan for sustainable use. Indicate status in mapping, site characterizations and management plan endorsement for priority mangrove sites]

1.1.3 Reform of laws and regulations for the sustainable use of 602,800 ha of mangrove forest

[Name and area (ha) of previously unmanaged mangroves for which regulations/ordinances are adopted to enable sustainable management]

1.1.4 Replanting of 21,000 ha of deforested mangrove land

[Name and area (ha) of deforested mangrove land rehabilitated at each site]

1.1.5 Biodiversity increased for 11,200 ha of mangrove forest via enrichment planting

[Name and area (ha) of the site where biodiversity increased and information on increased biodiversity, considering ecological & environmental indicators at enrichment planting sites, including: forest cover; number and diversity of true mangrove species; and size and abundance of *Scylla* spp and *Sesarma* spp]

1.1.6 Monitoring of management effectiveness

[Site name and its area (ha), used indicators, frequency, period and information on habitat improvement, if any]

2/ Coral reefs

SAP Targets and Summary of Achievements

Status in 2008 indicated that 4 sites (12,511 ha) among 7 priority sites in Indonesia were under management with 2 sites at medium and 2 site at low management effectiveness. The targeted coral reef area to be added for management through SAP implementation was 5,580 ha, bringing the total area across the nine sites under management to 18,091 ha. The implementation of the Strategic Action Programme also aims to increase the management effectiveness across all seven sites from non-existing and/or medium to high. Table 2 below highlights the SAP targets and achievements of Indonesia in implementing the SAP during 2008-2021.

Table 2. Summary of the SAP targets for coral reefs and achievements during 2008-2021 in Indonesia

	Managed in 2008	SAP target area (ha)*	Total area (ha) ** managed until 2021	Capacity (2008)	Capacity (2019)	Management approach / Management tools (ha)	Monitoring (ha)
Anambas	6,255		30,329	Good	Medium	MPA	X
Bangka	2,934		2,475	Medium	NA	MPA	X
Belitung	2,271		1,321	Good	Good	MPA	X
Karimata	1,041		59,249	Good	NA	NA	NA

Senayang Lingga			419,135	Medium	Medium	NA	NA
Barelang dan Bintan			312,618	Medium	Medium	NA	NA
Natuna			9,800	Medium	Bad	NA	NA
Batam/Abang Island	N/A		47,500	N/A	Medium	NA	NA
Total	12,511	18,091	51,007				

* No target in ha indicated for each site, total targets = managed in 2008 (12,511ha) + added for management (5,580 ha)

** Area (ha) under sustainable management with sufficient capacity, approach reformed, tools applied and stress reduced

Descriptions

1.2. 110,430 ha of coral reef at 46 priority sites managed sustainably

[Provide data and information of each site where coral reefs were managed, considering reef area (ha) under sustainable management with sufficient capacity, approach reformed, tools applied and stress reduced

1.2.1 Management capacity (number/levels human resources, facilities and equipment, and sustainable financing mechanisms) built for 46 coral reef sites

[Status of management capacity, including: Human resource capacity; Facilities and equipment; and Sustainable financing of each site, if any]

1.2.2 Management approaches and policy, legal & institutional reforms (integrated, community-based, multiple use) improved at 46 coral reef sites

[Status of institutional reform for multi-sectoral, community-based and multiple use coral reef management of each site, if any]

1.2.3 Management tools (licensing and permit systems, seasonal closures, zoning) developed and utilized to address key threats at priority sites

[Status on management tools developed, adopted and applied at priority coral reef sites, including also MSP, MPAs, fisheries sanctuaries...]

Bangka Islands: The coral reef ecosystem on Bangka Island is managed by establishing Marine Protected Areas, including the West Bangka KKL and South Bangka KKL. This management policy is stated in the Decree of the Regent of West Bangka No. 188.45/352/2.05.01/2013. The MPA is prioritized as a Full Protection Area for conch Snails (*Strombus turturella*) and the Decree of the Regent of South Bangka No.188.45/119.4/DKP/2012.

Belitung Islands: The coral reefs management on Belitung Island is carried out by establishing a marine conservation area managed by the local government. Belitung Regency KKP and East Belitung KKP as stated in the Decree of the Belitung Regent Number: 188.45/156.A/KEP/DKP/2014 dated March 28, 2014, regarding the Establishment of Reserves for the Water Conservation Area of Belitung Regency, Decree of the Regent of East Belitung Number 2.05.5/021/ DKP/I/2012 concerning Designation of Water Conservation Areas for Pemesut Island Cluster as Core Zone, Nangka Island as Sustainable Fisheries Zone and Sandung Island as Marine Tourism Mina Utilization Zone in East Belitung Regency in 2012.

1.2.4 Established mechanism for monitoring coral reef management

[Description of mechanism established for monitoring coral reef management effectiveness and stress reduction (indicators, frequency, number of stations, period & and information on habitat improvement, if any)]

Anambas Islands. Coral reef monitoring was conducted from 2015 to 2021. Coral life cover was fluctuated that increased from 2015 to 2020 (31.51% to 42.75%) and decreased in 2021 (34.89%) (Ramadhani et al. 2015, Puspitasari et al. 2016, Arafat et al. 2020, Setiawan et al. 2021). Research Center for Oceanography-LIPI has 12 permanent transects for coral reef health monitoring in Anambas MPA. The status is fair for 11 locations and good for 1 location.

Bangka Islands: The coral reefs management on Bangka Island is quite good, evident from the increasing status of live corals. The percentage of coral cover decreased from 2013 to 2014 (47.82% to 36.00%) and increased from 2014 to 2019 (Siringoringo et al. 2013, Siringoringo et al. 2014, PKSPL Report 2015, 2016 Report of Identification for Marine and Fisheries Biodiversity 2019). There are 33 observation stations spread over the waters of Bangka, West Bangka, Central Bangka, and South Bangka Regencies in 2019. Research Center for Oceanography-LIPI has ten permanent transects for coral reef health monitoring in Bangka Island. The status is Excellent for 1 location, fair for 3 locations, good for 3 locations, and poor for 3 locations.

Belitung Islands: Live coral cover on Belitung Island increased from 2013 to 2015 (59.38-66.34%) and decreased from 2016 to 2018 (55.03-34.55%). Research Center for Oceanography-LIPI has 21 permanent transects for coral reef health monitoring in Belitung Island. The coral status in Belitung Regency is fair for 2 locations, good for 7 locations, and poor for 2 locations, while in Belitung Timur, Regency is fair for 7 locations and good for 3 locations.

3/ Seagrass

SAP Targets and Summary of Achievements

For Indonesia, the Strategic Action Programme targets seven seagrass sites and would result in an increase in seagrass area under management by 2,400 ha. The largest target site is Bintan Island with target area of 1,500 ha, others include: Temiang, Medang-Mesanak, Mapor, Bangka-Belitung, Senayang, Anambas. In last dozen years, there existed some activities to implementing the SAP and Seagrass NAP supported by central and local governments. The table 2 below summarizes achievements during 2008-2021 under every regional outputs of the SAP for seagrass in Indonesia.

Table 2. SAP targets and summary of achievements in implementing the SAP during 2008-2021 in Indonesia

Regional Output	SAP target sites & area (ha)	East Bintan
1.3.1 Twenty seagrass areas totaling 26,036 ha under sustainable management with supporting laws and regulations		2,600

1.3.2 Amended management plans for 7 existing MPAs with significant seagrass areas, to include specific seagrass-related management actions and policy, legal and institutional reforms	2,420	
1.3.3 Designation of 7 new Marine Protected Areas focusing on seagrass areas identified in the prioritized listings of the SCS Project	East Bintan (1,500ha): Temiang, Medang-Mesanak, Mapor, Bangka-Belitung, Senayang, Anambas.	460
1.3.4 Established mechanism for monitoring seagrass habitat management		

Descriptions

1.3.1 Twenty seagrass areas totaling 26,036 ha under sustainable management with supporting laws and regulations

[Name, area (ha) of every site under sustainable management, taking account that management regulations exist & laws and regulations enacted for seagrass management]

The Seagrass Conservation area is applied to all seagrass area in East Bintan which covers an area of approximately 2,600 hectare based on data of seagrass mapping in the area using remote sensing method conducted by Kuriandewa and Supriadi, 2006. *East Bintan Coastal Resources Management Plan, The East Bintan Coastal Area Zoning Plan and Sustainable Tourisms Spatial Plan* were prepared to assist the Local Government in improving the management of coastal ecosystems in sustainable manner. Institutional arrangement has been established through the creation of EBCOMBO (East Bintan Collaborative Management Board) -- consisting of representatives of stakeholders -- that functions as consultative, and advisory forum. The East Bintan Coastal Resource Management Plan (EBCRMP) was adopted and endorsed by EBCOMBO.

1.3.2 Amended management plans for 7 existing MPAs with significant seagrass areas, to include specific seagrass-related management actions and policy, legal and institutional reforms

[Name, grass area (ha) of MPA management plans containing seagrass-related management actions]

1.3.3 Designation of 7 new Marine Protected Areas focusing on seagrass areas identified in the prioritized listings of the SCS Project

[Name, area (ha) of newly established MPAs focused on seagrass management, considering year of establishment, entity of adoption, category ...]

East Bintan has already declared by District Decree no 267/vi/2010 as the seagrass conservation area. It was resulted from the collaborative activity of Local Government, P2O LIPI, and UNEP GEF under the project entitled "Demonstration of Community Based Management of Seagrass Habitat in Trikora Beach". This project was funded by Global Environment Facility (GEF) through medium size project criterion. The most important output in this project is the Ecological biological data of seagrass ecosystem that were used as reference for deciding the seagrass conservation area specifically

A significant achievement is the determination of seagrass sanctuaries at four coastal villages, namely Teluk Bakau, Malang Rapat, Berakit and Pengudang which all together covers 5 hectares of 5 seagrass sanctuaries.-A seagrass sanctuary is a portion of seagrass bed specially set aside as a "no-take zone", where no extractive exploitation of resources is allowed. the *Bupati* issued a decree (time?) to save the dugong, the nearly extinct marine mammal living on seagrass in Bintan, and its environment. The Bupati is preparing to raise the dugong as a flagship animal of the district of Bintan.

Local Seagrass Protected Area in 5 locations of four villages were established in 2019. Each village has established a village Marine Protected Area (Daerah Perlindungan Laut/DPL). Seagrass sanctuaries at Limbung Village covered 18.75 ha, Sekanah (314.11 ha), Benan village (13.38 ha), Temiang village (9.31 ha), Batu Belonang village (31.80 ha), Mamut village (13.48 ha) and Penaah village (61.13 ha) (COREMAP web).

1.3.4 Established mechanism for monitoring seagrass habitat management

[Status of mechanism established for monitoring seagrass management effectiveness and stress reduction, including indicators, number of stations, frequency, period and information on habitat improvement, if any at each site]

East Bintan: As a tool of monitoring the environmental changes, a special program was established in year 2008 to 2010 in what is known as “Sea Grass Watch” which is part of global seagrass monitoring system. This activity invited the participation of local university (Maritime University of Raja Ali Haji – UMRAH, at Tanjung Pinang). This monitoring program was carried out half yearly and annually onward. Monitoring of seagrass environment revealed that nutrients content near human habitation tend to increase which indicated a trend of eutrophication.

4/ Wetlands

SAP Targets and Summary of Achievements

The Strategic Action Programme implementation will result in the adoption and implementation of management plan for one estuary at Sembilang National Park (387,500 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 4 below summarizes achievements on wetland management (ha) in implementing the SAP target during 2008-2021.

Table 4. Summary of achievements on wetland management (ha) in implementing the SAP target at priority sites during 2008-2021 in Indonesia

Regional outputs	Sembilang	Others*
1.4.1 Integrated management plans developed and under implementation for at least 2 lagoons (21,818 ha), 10 estuaries (639,418 ha), 5 tidal flats (96,903 ha), 1 peat swamp (45,700 ha) and 1 non-peat swamp (9,808 ha)	267,592	
1.4.2 Declaration of wetland areas with protection status (i.e. non-hunting area, nature reserves, protected areas, Ramsar Sites)	To be added	
1.4.3 Adoption of a regional monitoring scheme and its national implementation	NA	

* Insert column if more sites required

Descriptions

1.4.1 Integrated management plans developed and under implementation for at least 2 lagoons (21,818 ha), 10 estuaries (639,418 ha), 5 tidal flats (96,903 ha), 1 peat swamp (45,700 ha) and 1 non-peat swamp (9,808 ha)

[Name and area (ha) of each wetland site under management plan for sustainable use with integrated management plans adopted and activities in implementation]

2014-2018: In Sembilang NP, Konsorsium Bentang Alam Sembilang (KIBAS) which consists of Haki, WBH, Wetlands International-IP, dan Khatulistiwa Hijau, conduct research related to the condition of forest land cover, habitat, and population of Sumatran tigers, and social conditions of the community, protection of mangrove and peat ecosystems through capacity building of Sembilang National Park, community empowerment, animal monitoring programs, and education

2016-2020: The Project KELOLA Sendang (Kemitraan Pengelolaan Lanskap Sembilang – Dangku) aimed I) To support and promote green growth development in the South Sumatra province. More specifically, the Master Plan establishes landscape management partnerships that promote greenhouse gas emission reductions and preserve biodiversity, while at the same time boosting an inclusive and sustainable local economy, ii) To promote integration of collaborative and thematic frameworks, iii) To strengthen information databases at all levels, iv) To developed policy support, v) To mainstream partnership model in local development planning, vi) To strengthen commitment for achievable partnerships through Partnership Action Plans in each Model Area, vii) To develop multi-stakeholder forums to promote landscape partnership development, and viii) To design collaborative evaluations based on benefit and impact analysis

2018: Designated as Berbak-Sembilang Biosphere Reserve. The most important role of Berbak and Sembilang NP are become an ecosystem balancer, flora, and fauna protection, and potentially developed as a natural and eco-tourism destination in the future. Funding from LIPI dan KLHK. National Park Management, ZSL Tiger Monitoring, Installment of camera trap to monitor population dynamic of Sumatran Tiger, as an indicator for target achievement on the improvement of priority species population

2020: Development of Sembilang National Park Long-term Management Planning 2020 – 2029. The Management Plant served as the main document to guide overall management of the National Park. Under this document, management of protected areas defined as a systematic effort to manage the area through planning, protection, preservation, utilization, monitoring and control. The Management Plan aimed on the improvement of management effectivity, increase natural resources utilization efficiency, improvement of accountability and ensuring community engagement on the area management.

In addition, maintain mudflat as primary habitat for migratory waterbirds in Berbak – Sembilang National Park

1.4.2 Declaration of wetland areas with protection status (i.e., non-hunting area, nature reserves, protected areas, Ramsar Sites)

[Name and area 9ha) of wetlands sites assigned protection status; year of declaration, adoption entity]

- Indonesia’s Ramsar site (2011)
- East Asian-Australasian Flyway Network site (2012)
- National Strategic Area (2017)
- Man and Biosphere Reserve site (2018)
- Tiger Conservation Landscape site (?)

1.4.3 Monitoring scheme for wetland management

[Name and area (ha) of wetland sites where mechanism established for monitoring wetland management effectiveness and stress reduction: indicators, frequency, number of stations, period]

REFERENCE

[Please list documents from which the information and data were used for this evaluation]

Shea, William. 2020. Kelola Sendang – a Project Narrative. Indonesia: Zoological Society of London Indonesia Program.

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