



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

**Fourth Meeting of the SCS SAP Steering Committee**

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## **FINAL REPORT**

**Summary of achievements in implementing the SAP for the South China Sea and Gulf of Thailand on habitat management 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 8<sup>th</sup> 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 Strategic Action Programme (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, on November 03, 2016, the GEF adopted 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.

During the course of the SCS Project, all participating countries developed the NAPs for habitat and land-based pollution management and have conducted a series of activities in implementing the SAP and NAPs since 2008. This summary provides evidence on proactive contribution of countries in implementing the SAP and NAPs on mangroves, coral reefs, seagrass and coastal wetlands management during the last decade. The reviews of past activities and outputs would be helpful for seeking the gaps which shall be addressed in development of updated Transboundary Diagnostic Analysis (TDA) and SAP.

## SUMMARY ACHIEVEMENTS OF PARTICIPATING COUNTRIES

### **For mangrove focal area**

Cambodia established Butom Sakor National Park (BSNP) and Peam Krasop Wildlife Sanctuary (PKWS) in 1993 but no specific zoning system was designated until 2009, when IUCN assisted MoE in the development of a zoning scheme for PKWS (15,500ha). The Butom Sakor National Park (9,127ha) was directly managed by the Ministry of Environment under the law of protected areas. Prey Nob (9,351ha) was declared as a protected area but did not have a management plan that is specific for the purpose of sustainable management of mangroves.

Five mangrove target sites of China with 5,431ha in total were declared as National or Provincial Nature Reserves in the decade of 1980-1990. Among them some were listed in the Ramsar Convention on Wetlands as internationally important wetlands (Shankou - 2002, Dongzhaigang – 1992, Fangchengang - 2008). No mangrove areas of five target sites of SAP in China were declared newly as NPs, while the ecological red line areas for mangroves protection were declared during 2008-2021. Reform of laws and regulations were conducted for the sustainable use in these sites. Various projects replanted 1,960 ha mangroves in coastal areas bordering the South China Sea, including 680ha at five sites of SAP in China during 2008-2021. Biodiversity was increased via enrichment planting in more than 3,900ha.

In the case of Indonesia, 5 mangroves sites totaling 132,203ha were targeted in the SAP (2008). Strengthening the status of mangroves in Indonesia, including these 5 target sites was carried out through the determination of forest areas between 2012-2018 by the Ministry of Environment and Forestry as well as in the determination of protected and cultivation areas in the Regency and Province Regional Spatial Planning (RTRW). Batu Ampar Protected Forest was established in 2014. Management plans for sustainable use of mangroves were developed in Batu Ampar with an area of 33,235 ha and in Benkalis Regency around 42,459 ha. From 2008 to 2015, the rehabilitation programs were carried out by various related parties but the area planted were not well recorded. In 2021, efforts to accelerate mangrove rehabilitation were carried out in 32 Provinces with total area of the entire country estimated as 34,911 hectares. In Batu Ampar, restoration was carried out by parties related to the use of production forests after the logging program with an estimated area where species enrichment carried out around + 5,000 ha during 2008 to 2021.

Around 6,059 hectares of mangroves contributed to the SAP targets for the Philippines. These five sites are within the municipalities of Busuanga (755 has); Coron (2,244 has); San Vicente (907.7 has); Ulugan (789 has); and Quezon (1,616 has). All these municipalities have been regulated by their respective Municipal ECAN Resource Management Plans 2017-2022 and Section 30 of PCSD Resolution No. 05- 250, which specifies the use of the “Ecological Zoning Plan” (EZP) as the municipality's general physical plan. In addition, 784ha of deforested mangrove land were replanted during 2008-2021.

The SAP (2008) identified five mangrove target sites in Thailand (Pak Phanang Bay, Trad Province, Kung Kraben Bay, Welu River Estuary, and Thung Kha Bay–Savi Bay), totalling 36,027ha mangroves. Based on the review, 4 sites were declared as National Park or Nature Reserve before 2008, totalling 8,861ha of mangroves. Pak Phanang National Reserved Forest was established in 2019 with 3.915ha mangroves protected. Reform of laws and regulations for the sustainable use of all 5 sites (36,027ha) was conducted during 2008-2021. Through great national efforts, 7,009ha of mangroves were replanted at the 5 sites for this period.

Three among 4 SAP target mangrove sites in Vietnam were managed as National Parks or Reserves before 2008 and no more sites declared as protection status during the last decade. Management planning for sustainable use was developed for 2 sites with a total of 8,900ha. In parallel with national laws and policies, some specific regulations for local protection and the sustainable use of mangrove forests have also been established and regulated at all 4 sites (Tien Yen, Xuan Thuy, Can Gio and Ca Mau), totaling 93,675ha. There were many efforts on replanting mangroves, as of 2016, Vietnam had planted newly 1,103 ha mangroves.

### **For coral reef focal area**

It is assumed that 4 reef areas in Cambodia have been under sustainable management until 2021 with the total of 1,854ha, including: Koh Sadach (423ha), Koh Rong (426ha), Prek Ampil (953ha) and Koh Pouh (52ha), indicating some management tools developed and utilized. However, capacity for management of the Prek Ampil site has been quite low to meet the requirement. In addition, management approaches such as community-based were improved at a number of sites.

Although no target designed in the SAP, 5 coral reef sites in China have been managed as National Nature Reserves or National Parks with areas around 31,463 ha in total with management capacity at medium or high levels. Some specific regulations were enacted for enhancement of management effectiveness, such as the Regulations on the Protection of Coral Reefs, the Regulations on the Protection of Coral Reefs and Tridacna or the Plan for the prevention and control of marine pollution.

In Indonesia, the total area of coral reefs across 7 SAP target sites under management until 2021 was 18,100 ha with medium or good management capacity. Among them, Anambas with 1,263ha of coral reefs was reorganized as National MPA in 2014, Bangka (3,305ha) as Regional MPA in 2013, Belitung (2,470ha) as Regional MPA in 2011, Senayang Lingga as Regional MPA in 2014, Natuna (4,774ha) amended as Regional MPA in 2008. Implementing the Strategic Action Programme also considered the management effectiveness across all seven sites. Three coral reef sites, Bangka, Belitung, and Karimata, are Fisheries Refugia project sites

Available data on implementing the SAP for the Philippines at 4 sites (per 8 target sites) indicated that 4,821ha of coral reefs have been managed until 2021 with capacity at medium level. Establishments of the networks of small scale MPAs (as in Bolinao, Masinloc and Batangas Bay) with leading role of local governments has been common tools for coral reef management at most these sites.

For Thailand, successfully transitioned from a focus on *total area* to *management effectiveness*. This evaluation showed 52,423 hectares of coral reefs at 11 priority sites are now under a high standard of sustainable management, characterized by sufficient capacity, reformed approaches, and applied management tools. This represents a significant upgrade in quality from the 2008 baseline, where management was rated low-to-medium.

With the degree delivered by the Prime Minister in 2010, the network of MPAs in Vietnam was established. Most of them focused on coral reef conservation. Eight target coral reef sites in Vietnam with a total area of 5,776ha have been managed until 2021 in the form of MPAs or National Parks. Five of them had management capacity at medium and high levels with total area of 2,937ha. Co- management was applied successfully at 2 sites.

#### **For seagrass focal area**

Three areas in Cambodia totaling 6,793ha were considered under sustainable management with supporting laws and regulations developed during 2008-2021. Two MPAs were newly established in this period with an area of 3,187ha in total.

Five sites in China with seagrass area of 1,893ha in total were under sustainable management with supporting laws and regulations. Among them, Hepu site totaling 540ha with 81.7ha seagrass bed (data in 2020) has been a National Dugong Reserve with medium management

effectiveness since 2008. Management plans for 3 existing MPAs with significant seagrass areas were amended during 2008-2021.

Among 7 target seagrass sites in Indonesia, East Bintan has already been declared by District Decree no 267/vi/2010 as the seagrass conservation area. It resulted from the collaborative activity of Local Government, P2O LIPI, and UNEP GEF under the MSP project to assist the local government in improving the management of coastal ecosystems in a sustainable manner. This was the first Seagrass Management Plan in Indonesia that was formally declared by local government. Bintan Marine Protected Area, Riau Islands Province was designated by the Minister of Maritime Affairs and Fisheries in accordance with KEPMEN-KP-18 of 2022 to be managed as an Aquatic Tourism Park. In Mapur island, local fishermen were empowered with environmentally friendly fishing methods and tourist activities such as snorkeling and diving were monitored so as not to damage coral reefs and marine ecosystems

A total of 2,879.49 hectares contributed to implementing the SAP for seagrass in the Philippines (SAP target was 6,920ha at 3 sites). Bolinao seagrass reserve with 60ha was established by Municipal Ordinance No. 2007-02. Bolinao became a member LGU of BBBIDA MPA Network through Municipal Ordinance No. 2007-02. A MOA was signed among the network members on December 21, 2018, but no management plan was approved for their MPAs. Community-based/Joint Management has been an approach in site management in the municipalities of Looc and Lubang. Although the areal extent could not yet be ascertained at this time, the Looc Bay Managed Access Area + Sanctuary was declared by Municipal Ordinance No. 82 on March 09, 2020. The total hectarage of seagrass beds within this conservation area has not been determined.

Despite no specific sites being prioritized for Thailand in the 2008 SAP, the nation proactively placed 2,534 hectares of key seagrass beds under sustainable management, retroactively aligning this national achievement with the SAP's regional goals. This includes designating 1,197 hectares as 2 new Environmental Protection Areas and one MPA management plan (1,337ha) was amended.

Around 9,196ha of seagrass beds in 3 among 4 target sites in Vietnam were considered under sustainable management during implementing the SAP since 2008. Management plans for 01 existing MPA with significant seagrass area (200ha) was amended and new MPAs were established at 2 sites (8,916ha in total).

#### **For wetland focal area**

Koh Kapik Ramsar Site (KKRS) in Cambodia has been declared since 1999 but specific zoning of KKRS was done in 2009 even after the established PKSW with the support of IUCN. There is no specific management plan of this estuary made available. However, a five-year Management Plan for Peam Krasop Wildlife Sanctuary (2018-2022) was developed and also applied for KKRS as 60% of its total area overlaps under PKWS.

Integrated management plans for six wetland SAP target sites in China with 20,276ha in total were developed and under implementation. During 2008-2021, 4 National Wetland Parks were established at different sites with a total wetland area of 1,355ha.

Regarding wetland management in Indonesia, Sembilang National Park Long-term Management Planning 2020 – 2029 was developed for integrated management of Sembilang

estuary (267,592ha) following designation of Berbak-Sembilang Biosphere Reserve in 2018 and Indonesia's Ramsar site (2011).

Management plans were developed for 3 wetland sites in the Philippines totalling 152,506ha, much more than 54,515ha as SAP target. Among them, 2 MPAs (41,167ha in total) were newly established during 2008-2021.

For Thailand, demonstrated exceptional success by developing and implementing integrated management plans for five sites totaling 161,682 hectares, including the two SAP priority sites (Thale Noi and Khao Sam Roi Yot). Key designations were also secured, notably the designation of Khao Sam Roi Yot as a Ramsar site in 2008.

The SAP targets Vietnam wetlands included 2 coastal lagoons, 3 estuaries and 1 tidal mudflat totaling 264,110ha. The conservation areas were established in 2 among these 6 sites. the Provincial People's Committee (PPC) of Thua Thien Hue has established the Tam Giang - Cau Hai Wetland Protected Area in 2020. the Thai Thuy Wetland Protected Area in Ba Lat estuary was established in 2019 by the Thai Binh PPC. The integrated management plans were developed and implemented for Dong Nai estuary and Ca Mau National Park where were recognized as Biosphere Reserves.

## **COMPARATIVE ANALYSIS**

The comparison analysis below, based on updated country reports and additional inputs upon March 2026, provides the figure on level of achievements in implementing the SAP toward the targets designed in 2008. More detailed data for tracking achievements by each regional output can be seen in Annex 1.

As reported, many mangrove areas were declared as National Parks or Protected Areas before 2008 and some newly established in Cambodia, Indonesia and Thailand during 2008-2021 with more than 46,501 ha of mangroves in total (81% compared with the target). Designation and plans for management achieved at relative rate, nearly 65% but reforms of laws and regulation for sustainable use were conducted for limited mangrove area, achieving only nearly 29% of the targets. The figure on restoration looks good, around 70% for replanting and 36% for enrichment planting compared with the targets. Data on monitoring is quite poor and trends of changes have not described for many sites.

Until 2021, total 30 sites (per 46 SAP target coral reef sites) and 5 sites from China (not targeted in the SAP) have been managed at different management effectiveness, totalling 111,598 ha or 100.1 % compared with the target. Diverse management tools such as seasonal closures, zoning, MPA development) were developed and utilized to address key threats at priority sites. Community-based management or involvement of private sector were applied widely at small scale within coral reef sites. Coral reef monitoring was conducted at 38 sites, including the sites not under management, considering participation of scientist organizations. There existed a concern that 12 prior coral reef sites have not been managed as expected.

Seagrass management has been improved clearly during implementing the SAP adopted in 2008 when seagrass beds had considered less than coral reefs and mangroves in a number of countries bordering the SCS. Until 2021, 17 seagrass sites were considered as under sustainable management with supporting laws and regulation, their total area is about 25,070ha, 96.3% compared with the SAP targets. Eight MPAs were newly established

focusing on seagrass habitats and management plans of 5 existing MPAs were amended to increase seagrass management. Generally, the targets on seagrass related MPAs were achieved.

Integrated management plans for wetland management were developed during 2008-2019 at 19 targeted and non-target sites, totaling 564,012ha equivalent 66.9% of the target in hectare. Number of wetland areas declared with protection status looks good, 1.4 times more than the target (10/7 areas), considering that some small protected areas were established in large wetlands. Monitoring of wetland status and description of trends of changes would be considered as weakness of wetland management in most countries.

Having said that the established mechanism for monitoring management, ecological and socio-economic indicators were designed as an important target to enable evaluating management effectiveness in implementing the SAP at the site level. The reviews of achievements of this target indicated advances in coral reef and seagrass monitoring which were conducted at 70-80% target sites. The figures for mangroves and wetlands looked under expectation, monitoring activities occurred at only 40 – 50% target sites. Therefore, there existed a concern about reality of the term “sustainable management” while evaluating management effectiveness.

The further evaluation of the achievements in implementing the SAP at the national level showed the figures (see details in the table 1 and Annex 1) for each participating country with some highlights as follows:

- The targets related to mangrove management improvement met by most countries, except Indonesia (56.3%) and Cambodia (68%). Mangrove replanting and enrichment not met for most countries, except Indonesia. Unavailable monitoring information to evaluate management effectiveness in Cambodia, Thailand and Vietnam
- Poor achievements on reef area under management at the Philippines (38.57%) and Vietnam (54.92%). Monitoring conducted at 80.4% of target sites regionally, only 4/7 in Cambodia, 4/9 in the Philippines
- The target on seagrass bed area under management achieved at relative low levels at the Philippines (41.6%); Vietnam (54.92%) and Cambodia (59.35%). Monitoring conducted at 70% of target sites regionally, only 1/7 in Indonesia & 2/4 in Vietnam
- Thailand and Vietnam not met the target on wetland management, 34.36% and 35.46% respectively. Poor monitoring to evaluate management effectiveness, only 36.8% of target sites regionally, unavailable information in Thailand and Vietnam

Table 1. Rating (%) achievements compared with targets designed in the SAP

Output groups	Cambodia	China	Indonesia	Philippines	Thailand	Viet Nam	All
Mangrove area under various forms of improved management	68.0	101.9	56.3	230.3	307.2	128.2	82.0
Mangrove replanting & enrichment	4.2	83.4	5,000/0 ha	26.1	62.6	11.0	57.7
Coral reef area managed at prior sites	82.0	31,463/0ha	100.0	38.6	72.8	52.7	100.1
Seagrass area under management with supporting laws and regulations	59.3	96.6	73.3	41.6	2534/0 ha	54.9	96.3

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Coastal wetland area at target sites where management plans developed and under implementation	100.0	100.0	100.0	279.8	34.4	35.5	66.9
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**Annex I. Summary and comparative analysis of achievements in implementing the SAP on habitat management****Table I.1. Mangrove SAP targets and summarized achievements in implementing the SAP during 2008-2021**

<b>Regional targets (SAP, 2008)</b>	<b>Cambodia</b>	<b>China</b>	<b>Indonesia</b>	<b>Philippines</b>	<b>Thailand</b>	<b>Viet Nam</b>	<b>Total &amp; % compared the target</b>
Output 1.1.1 Declaration of 57,400 ha of mangrove as National Parks and Protected Areas	9,351	N/A	33,235	N/A	3,915	N/A	<b>46,501ha 81%</b>
1.1.2 Designation and plans for the management of 166,600 ha of mangrove as non-conversion, sustainable use areas	24,627	N/A	74,459	N/A	N/A	8,900	<b>107,986ha 64.8%</b>
1.1.3 Reform of laws and regulations for the sustainable use of 602,800 ha of mangrove forest	N/A	5,431	32,328	6,059	36,027	93,675	<b>173,520ha 28.8%</b>
1.1.4 Replanting of 21,000 ha of deforested mangrove land	104	680.8	5,000	784	7,009	1,103	<b>14,680.8 69.9%</b>
1.1.5 Biodiversity increased for 11,200 ha of mangrove forest via enrichment planting	N/A	3,907	N/A	N/A	N/A	N/A	<b>3,907ha 34.9%</b>
1.1.6 Established mechanism for monitoring management, ecological and socio-economic indicators at 26 sites [based on SAP results framework]	N/A	5	5	4	N/A	N/A	<b>14 sites 53.8%</b>

**Table I.2. Coral reef SAP targets and summarized achievements in implementing the SAP until 2021**

<b>Regional targets (SAP, 2008)</b>	<b>Cambodia</b>	<b>China</b>	<b>Indonesia</b>	<b>Philippines</b>	<b>Thailand</b>	<b>Viet Nam</b>	<b>Total &amp; % cmpared with the targetss</b>
1.2. 110,430 ha of coral reef at 46 priority sites managed sustainably (ha)	1,854	31,463	18,100	4,821	52,423	2,937	<b>111.598ha 100.1%</b>
1.2.1 Management capacity (number/levels human resources, facilities and equipment, and sustainable financing mechanisms) built for 46 coral reef sites	6	5	7	4	5	8	<b>35 sites 76.1%</b>
1.2.2 Management approaches (integrated, community-based, multiple use) improved at 46 coral reef sites	7	3	7	4	11	2	<b>34 sites 73.9%</b>
1.2.3 Management tools (licensing and permit systems, seasonal closures, zoning) developed and utilized to address key threats at priority sites	4	3	7	4	4	8	<b>30 sites 65.2%</b>
1.2.4 Established mechanism for monitoring management, ecological and socio-economic indicators at 46 sites [based on SAP results framework]	4	3	7	4	12	8	<b>38 82.6%</b>
Targets (ha and sites) for management of SAP (2008)	2,260 (7)	0	18,091 (7)	12,500 (9)	72,000 (14)	5,570 (9)	<b>46 sites</b>

**Table I.3. Seagrass SAP targets and summarized achievements in implementing the SAP during 2008-2021**

<b>Regional targets (SAP, 2008)</b>	<b>Cambodia</b>	<b>China</b>	<b>Indonesia</b>	<b>Philippines</b>	<b>Thailand</b>	<b>Viet Nam</b>	<b>Total &amp; % compared with the targets</b>
1.3.1 Twenty seagrass areas totaling 26,036 ha under sustainable management with supporting laws and regulations	6,793 (3 sites)	1,893 (4 sites)	1,775 (2 sites)	2,879 (4 sites)	2,534 (1 site)	9,196 (3 sites)	<b>25,070ha</b> <b>96.3%</b>
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	0	3	0	0	1	1	<b>5</b> <b>71.4%</b>
1.3.3 Designation of 7 new Marine Protected Areas focusing on seagrass areas identified in the prioritized listings of the SCS Project	2	0	1	1	2	2	<b>8</b> <b>114.3%</b>
1.3.4 Established mechanism for monitoring seagrass habitat management for 20 sites	2	3	1	2	3	2	<b>14</b> <b>70%</b>
Targets (ha & site) of the SAP adopted in 2008	11,446 (2)	1,960 (4)	2,420 (7)	6,920 (3)	0	5,050 (4)	<b>20 sites</b>

**Table I.4. Wetland SAP targets and summarized achievements in implementing the SAP during 2008-2021**

<b>Regional targets (SAP, 2008)</b>	<b>Cambodia</b>	<b>China</b>	<b>Indonesia</b>	<b>Philippines</b>	<b>Thailand</b>	<b>Viet Nam</b>	<b>Total &amp; % compared with the targets</b>
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) ( <i>813.647ha in total</i> )	12,000	20,276	267, 592	152,506	161,682	93,645	<b>564,012ha</b> <b>66.9%</b>
1.4.2 Declaration of 7 wetland areas with protection status (i.e. non-hunting area, nature reserves, protected areas, Ramsar Sites)	0	4	1	2	1	2	<b>10</b> <b>142.9%</b>
1.4.3 Adoption of a regional monitoring scheme and its national implementation (19 sites)	1	2	1	3	N/A	N/A	<b>7</b> <b>36.8%</b>
Targets (ha & site) of the SAP adopted in 2008	12,000 (1)	20,276 (6)	267, 592 (1)	54,515 (3)	55,508 (2)	264,110 (6)	<b>19 sites</b>