LOCAL ACTION REGIONAL IMPACT

Strategic Action Programme (SAP) implementation for the South China Sea and Gulf of Thailand: Habitat management achievements 2008 - 2021

SCS SAP

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Local Action, Regional Impact

Strategic Action Programme (SAP) implementation for the South China Sea and Gulf of Thailand: Habitat management achievements 2008 - 2021

September 2026

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LIST OF ACRONYMS

Acronym	Full meaning
BSNP	Butom Sakor National Park (Cambodia)
COBSEA	Coordinating Body on the Seas of East Asia
GEF	Global Environment Facility
KKRS	Koh Kapik Ramsar Site (Cambodia)
MoE	Ministry of Environment
MOA	Memorandum of Agreement
MPA	Marine Protected Area
NAP	National Action Plan
OECM	Other Effective Area-Based Conservation Measure
PCU	Project Coordination Unit
PKWS	Peam Krasop Wildlife Sanctuary (Cambodia)
PPC	Provincial People's Committee
SAP	Strategic Action Programme
SCS	South China Sea
TDA	Transboundary Diagnostic Analysis
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNOPS	United Nations Office for Project Services

MESSAGE

There is a profound lesson in measuring progress achieved quietly.

The milestones in this report accumulated over thirteen years following the 2008 adoption of the Strategic Action Programme for the South China Sea (SCS SAP). Supported by the earlier GEF/UNEP SCS Project, this progress was driven by the steady dedication of national institutions, partner organizations, and local communities. While the Global Environment Facility (GEF) approved the project to accelerate regional implementation in 2016, complex negotiations and the COVID-19 pandemic meant substantial external resources did not reach the ground until after 2021. Thus, the progress made by Cambodia, China, Indonesia, the Philippines, Thailand, and Viet Nam during this window was built largely on their own resolve.

This report goes beyond accounting for protected hectares and newly established Marine Protected Areas (MPAs). It proves these nations embraced a shared transboundary vision under challenging circumstances.

We must also acknowledge the unsung heroes: the scientists who stayed engaged, the non-governmental organizations that sustained local conservation, and the governments and local communities that breathed life into management plans. These achievements rightfully belong to them.

However, we must also speak candidly about an ongoing challenge. Monitoring mechanisms are currently established at 70% to 80% of targeted coral reef and seagrass sites, yet they are present at only 40% to 50% of mangrove and wetland sites. Without consistent monitoring, verifying the true on-the-ground impact of "sustainable management" remains difficult.

Establishing a harmonized, regionally consistent framework for monitoring and evaluation is an essential foundation for our next steps.

Marine environmental challenges such as pollution and habitat connectivity inherently cross borders. Regional agreements rely entirely on robust national actions, and sustaining this balance demands both domestic commitment and regional coherence.

Looking ahead, emerging initiatives such as SEA:LEARN, SEA:PUFFER and the associated SEA:Grants program, alongside our deepening collaboration with the Coordinating Body on the Seas of East Asia (COBSEA), represent the enduring architecture that will sustain this vital work.

Safeguarding the South China Sea and Gulf of Thailand's diverse ecosystems — mangroves, coral reefs, seagrass beds, and wetlands, is crucial for global ocean resilience, coastal protection, and food security.

Through the 2008 Strategic Action Programme, together, we have established a strong foundation. Our task now is to build upon this foundation with enhanced coordination, continuous improvement, rigorous monitoring, and renewed ambition.

We extend our deepest gratitude to all six countries and every individual involved.

Anders Faaborg Poulsen
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Our task now is to build upon this foundation with enhanced coordination, continuous improvement, rigorous monitoring, and renewed ambition.

INTRODUCTION

The South China Sea and Gulf of Thailand support some of the world's most diverse coastal and marine ecosystems — mangroves, coral reefs, seagrass beds, and wetlands that millions of people depend on for food, livelihoods, and coastal protection. Decades of degradation, however, have placed these ecosystems under mounting pressure.

In response, countries in the region worked with the United Nations Environment Programme (UNEP) and the Global Environment Facility (GEF) to conduct a Transboundary Diagnostic Analysis (TDA) from 1997 to 1999 to identify the root causes of environmental decline as the foundation for coordinated action. From 1998-2000, the Strategic Action Programme (SAP) was formulated from this process as the basis for the development and implementation of the UNEP/GEF project "Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand" (SCS Project). Approved by the participating countries at the 8th Project Steering Committee meeting in Hanoi in August 2008, the updated SAP set concrete targets for coastal habitat protection, pollution management, and sustainable fisheries, with implementation expected to begin in 2008/2009 alongside efforts to secure further GEF support.

On 3 November 2016, the GEF approved the project "Implementing the Strategic Action Programme for the South China Sea and Gulf of Thailand" (SCS SAP Project) to drive implementation at the regional level. Regional actions were designed to support national and local efforts through: capacity building; exchange of experience and good practices; shared guidelines and management tools; standardized regional synthesis and comparison; sound scientific information for decision-making; and policy engagement across government levels. National and local action was also emphasized as critical to meeting SAP targets. Countries developed National Action Plans (NAPs) to translate these regional targets into nationally relevant priorities.

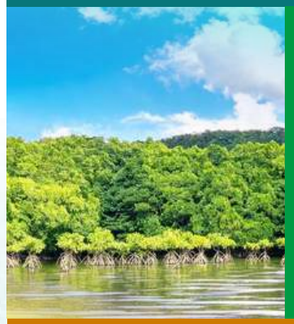
This document summarizes what was achieved between 2008 and 2021 across four habitat focal areas: mangroves, coral reefs, seagrass beds, and coastal wetlands. The findings are drawn from updated country reports and additional inputs as of March 2026.

Between 2008 and 2021, ahead of full GEF-funded implementation, six countries established or upgraded 46 MPAs and OECMs across the South China Sea and Gulf of Thailand — collectively safeguarding more than 2.1 million hectares of coastal habitat.

AT A GLANCE

100.1%
coral reefs managed
of the SAP target (110,430 ha) — 111,598 ha, including five additional sites in China not originally targeted, under management across 30 target sites and five non-target sites.

96.3%
seagrass areas protected
of the SAP target area (26,036 ha) under sustainable management with legal backing — 25,070 ha across 17 sites.



81%
mangroves protected
of the SAP target area (57,400 ha) declared as National Parks or Protected Areas — 46,501 ha in total, with large contributions from Cambodia, Indonesia, and Thailand.

66.9%
wetlands with management plans
of the SAP target (813,647 ha) — 564,012 ha across 19 targeted and non-target sites — covered by integrated management plans.

46
new & upgraded MPAs/OECMs
established or upgraded across all six countries, protecting over 2.1 million hectares in total.

MANGROVES

The SAP set a target of protecting 57,400 ha of mangrove as National Parks and Protected Areas, and designating 166,600 ha for sustainable use. By 2021, 46,501 ha (81% of the declared area target) had been formally protected, with contributions from Cambodia, Indonesia, and Thailand.

Management designations and plans covered about 65% of the sustainable-use target. Legal reforms for sustainable use reached only 29% of the target area, with contributions from China, Indonesia, the Philippines, Thailand, and Viet Nam.

On restoration, countries replanted around 14,681 ha (nearly 70% of the 21,000 ha target). Enrichment planting reached 3,907 ha — 35% of the 11,200 ha target, driven primarily by China.

Monitoring systems remain a gap, with mechanisms established at only 14 of the 26 target sites.

Output	Description	SAP Target	Cambodia	China	Indonesia	Philippines	Thailand	Viet Nam	Total / % of Target
1.1.1	Declared as National Parks and Protected Areas	57,400 ha	9,351	N/A	33,235	N/A	3,915	N/A	46,501 ha / 81%
1.1.2	Designated and planned for sustainable use (non-conversion)	166,600 ha	24,627	N/A	75,694	N/A	N/A	8,900	107,986 ha / 64.8%
1.1.3	Legal reform for sustainable use	602,800 ha	N/A	5,431	32,328	6,059	36,027	93,675	173,520 ha / 28.8%
1.1.4	Replanting of deforested mangrove land	21,000 ha	104	680.8	5,000	784	7,009	1,103	14,680.8 ha / 69.9%
1.1.5	Biodiversity enrichment planting	11,200 ha	N/A	3,907	N/A	N/A	N/A	N/A	3,907 ha / 34.9%
1.1.6	Monitoring mechanisms established (management, ecological, socio-economic)	26 sites	N/A	5	5	4	N/A	N/A	14 sites / 53.8%

Table 1. Mangroves SAP outputs, targets, and achievements by country, 2008–2021.

CAMBODIA

Butom Sakor National Park (BSNP, 9,127 ha) and Peam Krasop Wildlife Sanctuary (PKWS, 15,500 ha) were both established in 1993, but no specific zoning was in place until 2009, when the International Union for Conservation of Nature (IUCN) assisted the Ministry of Environment (MoE) in developing a zoning scheme for PKWS. BSNP is directly managed by MoE under the law on protected areas. Prey Nob (9,351 ha) was declared a protected area but lacks a management plan specific to sustainable mangrove use.

INDONESIA

Five target sites covering 132,203 ha were strengthened through spatial planning designations by the Ministry of Environment and Forestry between 2012 and 2018, as well as through the determination of protected and cultivation areas in Regency and Provincial Regional Spatial Plans (RTRW). Batu Ampar Protected Forest (33,235 ha) was established in 2014. Management plans for sustainable use were developed for Batu Ampar (33,235 ha) and Benkalis Regency (42,459 ha). From 2008 to 2015, rehabilitation was carried out by various parties, though planting areas were not consistently recorded. Species enrichment planting covered approximately 5,000 ha in Batu Ampar during 2008–2021. In 2021, mangrove rehabilitation was scaled up to 32 provinces, covering an estimated 34,911 ha nationally.

THAILAND

The SAP identified five mangrove target sites in Thailand — Pak Phanang Bay, Trad Province, Kung Kraben Bay, Welu River Estuary, and Thung Kha Bay–Savi Bay — totaling 36,027 ha. Four sites were declared National Parks or Nature Reserves before 2008, covering 8,861 ha. Pak Phanang National Reserved Forest was established in 2019, adding 3,915 ha. Legal reforms for sustainable use were applied across all five target sites (36,027 ha), and 7,009 ha were replanted during 2008–2021.

CHINA

All five SAP target mangrove sites (5,431 ha total) were declared National or Provincial Nature Reserves during the 1980s–90s. Three are listed as internationally important wetlands under the Ramsar Convention (Shankou, 2002; Dongzhaigang, 1992; Fangchengang, 2008). No new National Park declarations were made for these sites during 2008–2021, but ecological red line designations for mangrove protection were declared and laws and regulations for sustainable use were reformed. Various projects replanted 1,960 ha of mangroves in coastal areas bordering the South China Sea, of which 680 ha were at the five SAP sites. Biodiversity enrichment planting covered more than 3,900 ha.

PHILIPPINES

Five target municipalities covering around 6,059 ha are governed by Municipal Environmental Critical Area Network (ECAN) Resource Management Plans (2017–2022) and the Ecological Zoning Plan (EZP) under Section 30 of Palawan Council for Sustainable Development (PCSD) Resolution No. 05-250. The municipalities and their mangrove areas are: Busuanga (755 ha), Coron (2,244 ha), San Vicente (907.7 ha), Ulugan (789 ha), and Quezon (1,616 ha). An additional 784 ha of deforested mangrove land were replanted during 2008–2021.

VIETNAM

Three of four SAP target sites were already managed as National Parks or Reserves before 2008. Management plans were developed for two sites totaling 8,900 ha. Site-specific regulations cover all four target sites (Tien Yen, Xuan Thuy, Can Gio, and Ca Mau), totaling 93,675 ha. As of 2016, Viet Nam had replanted 1,103 ha of mangroves; updated figures through 2021 are not yet available.

CORAL REEFS

The SAP targeted 110,430 ha of coral reef at 46 priority sites for sustainable management. By 2021, the region had exceeded this target in area terms: 111,598 ha (100.1%) across 30 SAP target sites and five additional non-target sites in China were under management. However, 12 priority sites have still not met expected management standards.

Monitoring coverage was strong, with mechanisms in place at 38 sites (82.6%), including sites not formally under management. Community-based and co-management approaches were widely applied, particularly for small-scale MPAs.

100.1% — the only SAP habitat focal area to meet and exceed its area target. The region has brought 111,598 hectares of coral reef under management.

Output	Description	SAP Target	Cambodia	China	Indonesia	Philippines	Thailand	Viet Nam	Total / % of Target
1.2	**Coral reef under sustainable management (includes 5 non-target sites in China)**	**110,430 ha / 46 sites**	1,854	31,463*	18,100	4,821	52,423	2,937	**111,598 ha / 100.1%**
1.2.1	**Management capacity built (human resources, facilities, financing)**	**46 sites**	6	5	7	4	5	8	**35 sites / 76.1%**
1.2.2	**Management approaches improved (integrated, community-based, multiple use)**	**46 sites**	7	3	7	4	11	2	**34 sites / 73.9%**
1.2.3	**Management tools applied (licensing, seasonal closures, zoning)**	**46 sites**	4	3	7	4	4	8	**30 sites / 65.2%**
1.2.4	**Monitoring mechanisms established (management, ecological, socio-economic)**	**46 sites**	4	3	7	4	12	8	**38 sites / 82.6%**
	Country targets (ha and sites) of the SAP (2008)		2,260 (7)	0	18,091 (7)	12,500 (9)	72,000 (14)	5,570 (9)	

Table 2. Coral reefs SAP outputs, targets, and achievements by country, 2008–2021. *China's 31,463 ha covers five non-SAP-target sites; these are included in the regional total as additional national contributions.

CAMBODIA

Four reef areas covering 1,854 ha are considered under sustainable management: Koh Sadach (423 ha), Koh Rong (426 ha), Prek Ampil (953 ha), and Koh Pouh (52 ha). Some management tools have been developed and utilized at these sites, and community-based management approaches have been improved at several. However, management capacity at Prek Ampil remains limited.

INDONESIA

Seven target sites covering 18,100 ha are under management with medium-to-good capacity. Five were reorganized or newly designated as MPAs: Anambas (1,263 ha, National MPA, 2014), Bangka (3,305 ha, Regional MPA, 2013), Belitung (2,470 ha, Regional MPA, 2011), Senayang Lingga (Regional MPA, 2014), and Natuna (4,774 ha, amended as Regional MPA, 2008). Management effectiveness was assessed across all seven sites. Bangka, Belitung, and Karimata are also part of the national Fisheries Refugia program.

THAILAND

Thailand covers 52,423 ha across 11 priority sites under high-standard management — a significant improvement from the low-to-medium baseline in 2008, reflecting the country's shift from area coverage to management effectiveness.

CHINA

Although no coral reef sites were originally targeted in the SAP for China, five sites totaling 31,463 ha are managed as National Nature Reserves or National Parks with medium-to-high management capacity. Site-specific regulations have been enacted, including the Regulations on the Protection of Coral Reefs, the Regulations on the Protection of Coral Reefs and Tridacna, and the Plan for the Prevention and Control of Marine Pollution.

PHILIPPINES

Data is available for four of eight target sites, showing 4,821 ha under medium-capacity management. Networks of small-scale MPAs, such as in Bolinao, Masinloc, and Batangas Bay, led by local governments, are the primary management approach.

Local governance and community-based, co-management approaches were widely applied, particularly for small-scale MPAs.

VIETNAM

A network of MPAs was established following a 2010 Prime Minister's decree, most focused on coral reef conservation. Eight target sites covering 5,776 ha are managed as MPAs or National Parks. Five sites (2,937 ha) have medium or high management capacity. Co-management has been applied at two sites.

SEAGRASS

Seagrass received less attention than coral reefs or mangroves in many countries in 2008. By 2021, the picture had improved considerably. Across 17 sites, 25,070 ha (96.3% of the 26,036 ha target) are under sustainable management backed by laws and regulations.

Eight new MPAs focusing specifically on seagrass were established, surpassing the target of seven. Management plans for five existing MPAs were amended to include seagrass-specific actions.

Seagrass — once the least-protected habitat in the region — now has 96.3% of its SAP target area under sustainable management.

Output	Description	SAP Target	Cambodia	China	Indonesia	Philippines	Thailand	Viet Nam	Total / % of Target
1.3.1	Seagrass areas under sustainable management with supporting laws	26,036 ha / 20 sites	6,793 (3 sites)	1,893 (4 sites)	1,775 (2 sites)	2,879 (4 sites)	2,534 (1 site)	9,196 (3 sites)	25,070 ha (17 sites) / 96.3%
1.3.2	Amended management plans for existing MPAs with significant seagrass	7 MPAs	0	3	0	0	1	1	5 MPAs / 71.4%
1.3.3	New Marine Protected Areas focusing on seagrass	7 new MPAs	2	0	1	1	2	2	8 MPAs / 114.3%
1.2.3	Monitoring mechanisms established for seagrass habitat	20 sites	2	3	1	2	3	2	14 sites / 70%
	Country targets (ha and sites) of the SAP (2008)		11,446 (2)	1,960 (4)	2,420 (7)	6,920 (3)	0	5,050 (4)	

Table 3. Seagrass SAP outputs, targets, and achievements by country, 2008–2021.

CAMBODIA

Three areas covering 6,793 ha are under sustainable management. Two new MPAs (3,187 ha total) were established during 2008–2021.

INDONESIA

East Bintan became Indonesia's first formally declared seagrass conservation area through a 2010 district decree, a result of collaboration between local government, the Research Centre for Oceanography of the Indonesian Institute of Sciences (P2O-LIPI), and UNEP-GEF under the Marine and Coastal Resources Management Small Grants Programme (MSP). Bintan Marine Protected Area was subsequently designated by the Minister of Maritime Affairs and Fisheries in 2022. On Mapur Island, local fishermen were supported in adopting sustainable fishing practices and tourism activities are monitored to minimize damage to coastal ecosystems.

THAILAND

Although Thailand had no specific seagrass sites in the 2008 SAP, 2,534 ha were placed under sustainable management, including 1,197 ha across two new Environmental Protection Areas and one amended MPA management plan (1,337 ha).

CHINA

Four sites totaling 1,893 ha are under sustainable management with supporting laws and regulations. Among them, Hepu National Dugong Reserve (540 ha total, with 81.7 ha of seagrass bed as of 2020) has maintained medium management effectiveness since 2008. Management plans for three existing MPAs with significant seagrass areas were amended during 2008–2021.

PHILIPPINES

Four sites contributing 2,879 ha to SAP seagrass targets are under management. The Bolinao seagrass reserve (60 ha) was established by municipal ordinance, and Bolinao is a member local government unit (LGU) of the BBBIDA MPA Network. A memorandum of agreement (MOA) was signed among network members in December 2018, though no management plans have been formally approved. Community-based and joint management approaches are in use at Looc and Lubang. The Looc Bay Managed Access Area and Sanctuary was declared in 2020, though its seagrass area has not yet been determined.

VIETNAM

Around 9,196 ha across three of four target sites are under sustainable management. Two new MPAs covering 8,916 ha were established, and a management plan for an existing MPA (200 ha) was amended.

COASTAL WETLANDS

The SAP targeted integrated management plans for 813,647 ha of coastal wetlands across 19 sites, covering lagoons, estuaries, tidal flats, and peat and non-peat swamps. By 2021, plans had been developed for 564,012 ha (66.9%) at 19 targeted and non-target sites.

Protected area declarations exceeded the target: 10 areas received formal protection status against a target of seven. Regional monitoring, however, fell short — adopted at only 7 of 19 sites (36.8%).

Output	Description	SAP Target	Cambodia	China	Indonesia	Philippines	Thailand	Viet Nam	Total / % of Target
1.4.1	**Integrated management plans developed and under implementation**	**813,647 ha / 19 sites**	12,000	20,276	267,592	152,506	161,682	93,645	**564,012 ha / 66.9%**
1.4.2	**Declaration of wetland areas with protection status (nature reserves, Ramsar, etc.)**	**7 areas**	0	4	1	2	1	2	**10 areas / 142.9%**
1.4.3	**Regional monitoring scheme adopted and nationally implemented**	**19 sites**	1	2	1	3	N/A	N/A	**7 sites / 36.8%**
	Country targets (ha and sites) of the SAP (2008)		12,000 (1)	20,276 (6)	267,592 (1)	54,515 (3)	55,508 (2)	264,110 (6)	

Table 4. Coastal wetlands SAP outputs, targets, and achievements by country, 2008–2021.

CAMBODIA

Koh Kapik Ramsar Site (KKRS) was declared in 1999. A zoning plan was developed in 2009. No site-specific management plan exists for the estuary; the five-year Management Plan for Peam Krasop Wildlife Sanctuary (PKWS) (2018–2022) also applies to KKRS given its 60% overlap with the sanctuary.

INDONESIA

Berbak-Sembilang was designated a United Nations Educational, Scientific and Cultural Organization (UNESCO) Biosphere Reserve in 2018 and a Ramsar site in 2011. A long-term management plan for Sembilang National Park (267,592 ha) was developed for 2020–2029.

THAILAND

Five sites totaling 161,682 ha have integrated management plans, including the two SAP priority sites — Thale Noi and Khao Sam Roi Yot. Khao Sam Roi Yot was designated a Ramsar site in 2008

CHINA

Integrated management plans cover all six wetland target sites (20,276 ha total). Four National Wetland Parks were established during 2008–2021, adding 1,355 ha.

PHILIPPINES

Management plans cover 152,506 ha across three wetland sites which are well above the 54,515 ha SAP target. Two new MPAs (41,167 ha combined) were established during 2008–2021.

VIETNAM

The SAP targets for Viet Nam covered 264,110 ha across two lagoons, three estuaries, and one tidal mudflat. Two new protected areas were established: Tam Giang–Cau Hai Wetland Protected Area, established in 2020 by the Provincial People's Committee (PPC) of Thua Thien Hue Province, and Thai Thuy Wetland Protected Area in Ba Lat Estuary, established in 2019 by the Thai Binh PPC. Integrated management plans were implemented for Dong Nai Estuary and Ca Mau National Park, both recognized as UNESCO Biosphere Reserves

Protected area declarations for coastal wetlands exceeded the SAP target by nearly 43%, with 10 areas formally designated against a target of seven.

COUNTRY-LEVEL HIGHLIGHTS

The analysis below, based on updated country reports and additional inputs from March 2026, summarizes the level of progress toward SAP targets set in 2008 until 2021.

Cambodia

4 MPAs/OECMs‡ · 4 focal areas

Mangroves – protected areas & sustainable use plans (Outputs 1.1.1 & 1.1.2)	**20–22% of SAP achieved total**
Coral reefs managed (Output 1.2)	**82% of country target** *1,854 ha*
Seagrass managed (Output 1.3.1)	**27% of SAP achieved total** *6,793 ha*
Wetlands managed (Output 1.4.1)	**100% of country target** *12,000 ha*

HIGHLIGHT
Community-based reef management improved at multiple sites

China

10 MPAs/OECMs‡ · 4 focal areas

Coral reefs managed (Output 1.2)	**31,463 ha** *five non-SAP-target sites*
Mangrove enrichment planting (Output 1.1.5)	**3,907 ha** *only country reporting this output*
Seagrass MPA management policy (Output 1.3.2)	**3 of 7 SAP target MPAs** *with seagrass management policy*

HIGHLIGHT
Biodiversity increased from mangrove enrichment planting; manages 31,463 ha of coral reefs beyond the SAP target network

Indonesia

7 MPAs/OECMs‡ · 4 focal areas

Mangroves designated for sustainable use (Output 1.1.2)	**74,459 ha**
Wetlands managed (Output 1.4.1)	**100% of country target** *267,592 ha*
Coral reefs managed (Output 1.2)	**100% of country target** *18,100 ha*

HIGHLIGHT
First formally declared seagrass conservation area in the country (East Bintan, 2010)

Philippines

10 MPAs/OECMs‡ · 4 focal areas

Wetland management plans (Output 1.4.1)	**280% of country target** *27% of SAP total · 152,506 ha*
Coral reefs: local government-led management (Output 1.2)	**4,821 ha**
Seagrass managed (Output 1.3.1)	**2,879 ha**

HIGHLIGHT
Wetland management plans exceed SAP target by 2.8x

Thailand

6 MPAs/OECMs‡ • 4 focal areas

Reef management approaches improved (Output 1.2.2)	**≈32% of SAP achieved total** *1 of 34 sites regionally*
Wetland management plans (Output 1.4.1)	**291% of country target** *28% of SAP total - 161,682 ha*
Mangroves replanted (Output 1.1.4)	**48% of SAP achieved total** *7,009 ha*

HIGHLIGHT
Shifted from area-based to management effectiveness-based approach for coral reef management

Viet Nam

9 MPAs/OECMs‡ • 4 focal areas

Mangroves, legal coverage (Output 1.1.3)	**54% of SAP achieved total** *93,675 ha*
Seagrass managed (Output 1.3.1)	**37% of SAP achieved total** *9,196 ha*
Reef capacity, tools & monitoring (Outputs 1.2.1, 1.2.3 & 1.2.4)	**8 sites** *21–27% of SAP achieved per output*

HIGHLIGHT
Coral reef sites managed as national parks or Marine Protected Areas following the 2010 Prime Minister's decree

- Mangrove management targets were met by most countries, except for Indonesia (56.3%) and Cambodia (68%). Replanting and enrichment targets were generally not met, except by Indonesia. Monitoring data is unavailable for Cambodia, Thailand, and Viet Nam.
- Coral reef area under management was below target in the Philippines (38.6%) and Viet Nam (52.7%). Monitoring was conducted at 82.6% of target sites regionally, but only 4 of 7 sites in Cambodia and 4 of 9 in the Philippines.
- Seagrass management area targets fell short in the Philippines (41.6%), Viet Nam (54.9%), and Cambodia (59.3%). Regional monitoring reached 70% of sites, but only 1 of 7 sites in Indonesia and 2 of 4 in Viet Nam.
- Thailand and Viet Nam did not meet wetland management targets, achieving 34.4% and 35.5% respectively. Wetland monitoring is the weakest across all habitats, reaching just 36.8% of target sites regionally, with missing data from Thailand and Viet Nam.

Output group	Cambodia	China	Indonesia	Philippines	Thailand	Viet Nam	Regional total (%)
Mangrove area under various forms of improved management	68	101.9	56.3	230.3	307.2	128.2	**82.00%**
Mangrove replanting and enrichment	4.2	83.4	5,000 ha*	26.1	62.6	11	**57.70%**
Coral reef area managed at priority sites	82	31,463 ha*	100	38.6	72.8	52.7	**100.10%**
Seagrass area under management with supporting laws and regulations	59.3	96.6	73.3	41.6	2,534 ha*	54.9	**96.30%**
Coastal wetland area with management plans developed and under implementation	100	100	100	279.8	34.4	35.5	**66.90%**

Table 5. Achievement ratings (%) compared with SAP targets by country and habitat output group. Figures marked with an asterisk (*) indicate absolute values where direct percentage comparison is not applicable (e.g., non-targeted contributions or missing baseline).

COMPARATIVE ANALYSIS

The analysis below, based on updated country reports and additional inputs from March 2026, summarizes the level of progress toward SAP targets set in 2008 until 2021.

MANGROVES

Many mangrove areas were already declared as National Parks or protected areas before 2008. New declarations in Cambodia, Indonesia, and Thailand between 2008 and 2021 brought the total to 46,501 ha (81% of the target). Management designations and plans reached 65% of the sustainable-use target, while legal reform for sustainable use reached only 29%. Restoration performed well — around 70% for replanting and 36% for enrichment planting. Monitoring data remains sparse across many sites.

CORAL REEFS

By 2021, 30 SAP target sites and five additional non-target sites in China were under management at varying levels of effectiveness, totaling 111,598 ha (100.1% of the target). Diverse management tools — including seasonal closures, zoning, and MPA development — were applied at priority sites. Community-based management and private-sector engagement were widely used. Monitoring was conducted at 38 sites, including sites not formally under management. Despite the aggregate progress, 12 priority sites have not met management expectations.

SEAGRASS

Seagrass management has improved markedly since the 2008 SAP, when seagrass received less policy attention than coral reefs and mangroves. By 2021, 17 sites covering 25,070 ha (96.3% of target) are under sustainable management with supporting laws and regulations. Eight new seagrass MPAs were designated and management plans for five existing MPAs were updated. Seagrass MPA targets were broadly met.

COASTAL WETLANDS

Integrated management plans were developed for 564,012 ha (66.9% of target) across 19 sites. Protected area declarations exceeded the target at 10 areas (142.9%). Regional monitoring adoption, however, remains low at 36.8% of target sites. Consistent monitoring across wetland sites is a key gap across most countries.

REGIONAL OBSERVATIONS

Monitoring: the region's most important shared priority

Across all four habitat focal areas, monitoring is the output where the region has most consistently fallen short. Mechanisms are in place at 70–83% of coral reef and seagrass target sites but at only 54% of mangrove and 37% of wetland sites. Thailand and Viet Nam reported no wetland monitoring data; Cambodia, Thailand, and Viet Nam reported no mangrove monitoring data.

Without systematic monitoring, it is difficult to verify whether areas described as under "sustainable management" are achieving management objectives in practice. Harmonized monitoring frameworks, consistently applied across all six countries, are the single most impactful investment the next project phase can make.

> **Monitoring is the region's most urgent shared priority. Extending mechanisms to all target sites would close the most significant evidence gap in regional coastal management.**

Data completeness and reporting gaps

Several apparent under-achievements reflect data gaps rather than absence of management activity. Key examples: the Philippines' coral reef contribution covers only 4 of 8 target sites; Indonesia's mangrove rehabilitation from 2008–2015 was not consistently recorded; Viet Nam's mangrove replanting data extends only to 2016; and Looc Bay's seagrass area (Philippines) has not been quantified. Targeted data recovery and reporting support in these areas could substantially improve the regional picture.

Management effectiveness versus area coverage

SAP targets were largely framed in terms of area and site counts. Thailand's experience in coral reefs, which is a deliberate shift from area coverage to management effectiveness, demonstrates a more ambitious standard. The next SAP revision provides an opportunity to embed effectiveness criteria more explicitly alongside area targets, building on the coverage achievements of the current period.

National action beyond SAP targets

Some of the most significant achievements fall outside the formal SAP target network. China designated five coral reef sites not originally targeted in the SAP; Thailand proactively managed seagrass without a specific national target; and 46 MPAs and OECMs collectively protect more than 2.1 million hectares. These contributions demonstrate that the SAP has catalysed national action well beyond what the formal targets envisaged.

ANNEX

LIST: PROTECTED AND MANAGED AREAS ESTABLISHED OR UPGRADED, 2008–2021

Beyond the SAP target sites, all six countries established or upgraded MPAs and OECMs at additional locations across the region. The 46 areas listed in this section collectively protect 94,648 ha of mangroves, 259,154 ha of coastal wetlands, 32,488 ha of coral reefs, and 30,576 ha of seagrass beds — reflecting strong national commitment to conserving biodiversity and marine resources in the South China Sea and Gulf of Thailand.

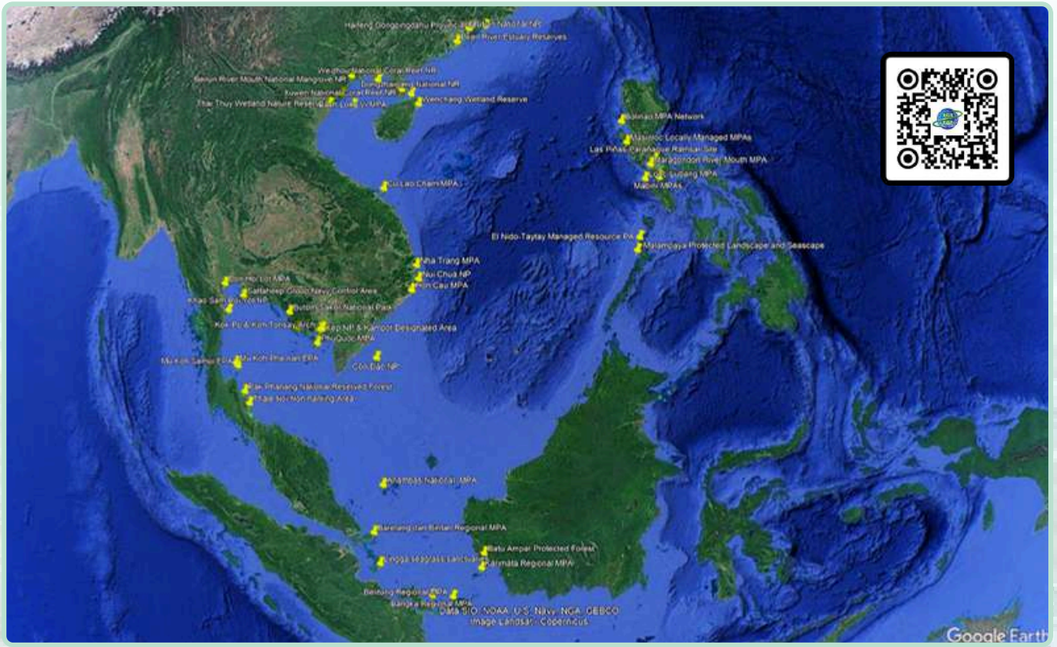
The SAP has catalyzed national action well beyond what the formal targets envisaged. The 46 protected areas established beyond the target network are evidence of something harder to measure — genuine commitment and political will.

Country	Name	Type	Est.	Upgr.	Total (ha)	Mangrove (ha)	Wetland (ha)	Coral Reef (ha)	Seagrass (ha)
Cambodia	Butom Sakor National Park	NP	1993	2011	9,127	—	—	—	—
	Kep NP & Kampot Coastal Designated Area	NP/DA	1993	2020	800	350	—	—	—
	Koh Po and Koh Tonsay Archipelago	MPA	2018	—	11,307	68	—	3,900	—
	Koh Rong MFMA	MFMA	2018	—	468	—	—	—	—
China	Shankou Mangrove National Nature Reserve	NNR	1980	2017	836	—	—	—	—
	Qinglangang Provincial Nature Reserve	PNR	1981	2009	1,444	—	—	—	—
	Dongzhaigang National Nature Reserve	NNR	1980	2014	1,771	—	—	—	—
	Futien National Nature Reserve	NNR	1984	2012	89	—	—	—	—
	Beilun River Mouth Mangrove National NR	NNR	1983	2018	1,300	—	—	—	—
	Weizhou Island Coral Reef National Marine Park	NMP	2012	—	2,513	—	—	—	—
	Pearl River Estuary Reserves (network)	Network	<2008 & 2016–21	—	48,072	—	—	—	—
	Beilun Estuary National Nature Reserve	NNR	2000	2008	1,083	—	—	—	—
	Guangdong Haifeng Gongpingdahu Provincial NR	PNR	2008	—	11,591	—	—	—	—
	Wenchang Wetland Reserve	WR	2020	—	2,072	—	—	—	—
Indonesia	Anambas National MPA	NMPA	2011	—	1,262,686	766	850	3,706	90
	Bangka Regional MPA	RMPA	2013	2020	7,373	12,120	10,470	2,348	350
	Belitung Regional MPA	RMPA	2011	2017	124,321	19,395	1,843	10,131	—
	Karimata Regional MPA	RMPA	2004	2014	210,000	1,034	1,041	326	—
	Barelang dan Bintan Regional MPA	RMPA	2007	2022	66,867	1,880	6,145	2,094	—
	Lingga Seagrass Sanctuaries	SG Sanct.	2019	—	17,500	—	—	—	462
	Batu Ampar Protected Forest	PF	2014	—	65,585	33,235	33,140	—	—

Country	Name	Type	Est.	Upgr.	Total (ha)	Mangrove (ha)	Wetland (ha)	Coral Reef (ha)	Seagrass (ha)
Philippines	Busuanga Forest Reserve	FR	1981	2017	64,735	755	2,739	—	—
	Coron Forest Reserve	FR	1981	2017	44,539	2,739	1,619	4,052	1,850
	Maragondon MPA	MPA	2011	—	35,700	—	—	—	—
	Las Piñas–Parañaque Wetland Park (Ramsar)	Ramsar	2013	—	3,849	—	—	—	—
	Bolinao MPA Network	MPA Net.	2018	—	91	—	—	—	60
	Masinloc Locally Managed MPAs	LMMA	2015	—	1,500	813	—	—	—
	Mabini MPAs	MPA	2015	—	114	—	—	—	—
	Looc Lubang Locally Managed MPAs	LMMA	2013	—	1,493	—	—	—	—
	El Nido–Taytay Managed Resource Protected Area	MRPA	2012	—	3,127	513	—	—	—
	Malampaya Protected Landscape and Seascape	PLS	2000	2012	200,115	3,442	196,673	—	—
Thailand	Pak Phanang National Reserved Forest	NRF	2019	—	10,735	3,915	—	—	—
	Mu Koh Samui Environmental Protection Area	EPA	2018	—	803	—	—	—	—
	Mu Koh Pha-ngan Environmental Protection Area	EPA	2018	—	394	—	—	—	—
	Khao Sam Roi Yot National Park	NP	1982	2008	9,808	—	—	—	—
	Sattaheep Group Navy Control Area	NCA	N/A	2021	288	—	—	—	—
	Thale Noi Non-Hunting Area	NHA	2007	2019	45,700	—	—	—	—
Viet Nam	Cat Ba National Park	NP	N/A	2014	74	—	—	—	—
	Bach Long Vi MPA	MPA	2013	—	1,578	500	—	—	—
	Cu Lao Cham MPA	MPA	2010	2020	13,500	536	—	50	—
	Nha Trang Bay MPA	MPA	2002	2014	24,965	754	—	52	—
	Nui Chua National Park	NP	N/A	2021	7,352	1,303	—	70	—

Country	Name	Type	Est.	Upgr.	Total (ha)	Mangrove (ha)	Wetland (ha)	Coral Reef (ha)	Seagrass (ha)
	Hon Cau National Park	NP	2010	—	12,500	—	—	506	—
	Con Dao National Park	NP	1993	2020	14,000	1,000	—	300	—
	Phu Quoc MPA	MPA	2007	2020	16,545	513	—	6,825	—
	Thai Thuy Wetland Nature Reserve	NR	2019	—	6,500	—	6,500	—	—

Type abbreviations: DA = Designated Area; EPA = Environmental Protection Area; FR = Forest Reserve; LMMA = Locally Managed Marine Area; MFMA = Marine Fishery Management Area; MPA = Marine Protected Area; MPA Net. = MPA Network; MRPA = Managed Resource Protected Area; NCA = Navy Control Area; NHA = Non-Hunting Area; NMP = National Marine Park; NMPA = National Marine Protected Area; NNR = National Nature Reserve; NP = National Park; NR = Nature Reserve; NRF = National Reserved Forest; PF = Protected Forest; PLS = Protected Landscape and Seascape; PNR = Provincial Nature Reserve; RMPA = Regional Marine Protected Area; SG Sanct. = Seagrass Sanctuary; WR = Wetland Reserve.



Priority sites for the South China Sea SAP and fisheries refugia, plotted on GoogleEarth. Scan the QR code to access the live map.

The “Implementing the Strategic Action Programme for the South China Sea and Gulf of Thailand” (SCSSAP) Project is a transboundary waters project led by UNEP in partnership with UNOPS, funded by the GEF.

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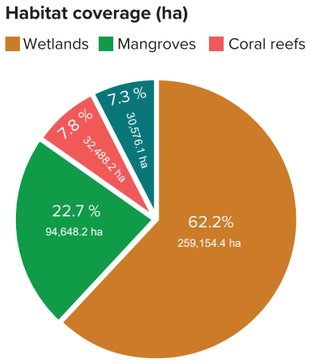
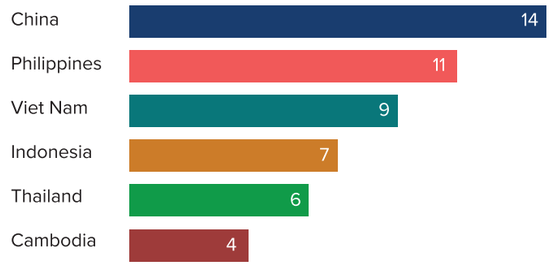
Habitat coverage (ha)



Areas by Country



Note: Habitat area figures may reflect overlapping ecosystems within multiple habitat sites.

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