



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

**First Meeting of the Regional Working Group on Mangroves**

Teleconference, 1 December 2021

# **EVALUATION OF SAP IMPLEMENTATIONS OF MANGROVE FOCAL AREA DURING 2008-2021**



## Table of Contents

1. INTRODUCTION.....	3
Outcome 1.1 Appropriate forms of sustainable management established for 860,000 ha of mangrove .....	3
2. STATUS OF SAP IMPLEMENTATION .....	5
2.1. Cambodia.....	5
Mangrove targets in Cambodia based on 2008 SAP.....	5
Summary of activities and outputs of the period 2008-2021 .....	5
2.2. CHINA.....	7
Mangrove target sites in China based on 2008 SAP .....	7
Summary of activities and outputs of the period 2008-2021 .....	7
2.3. INDONESIA.....	10
Mangrove target sites in Indonesia based on 2008 SAP .....	10
Summary of activities and outputs of the period 2008-2021 .....	10
2.4. PHILIPPINES.....	13
Mangrove target sites in Philippines based on 2008 SAP.....	13
Summary of activities and outputs of the period 2008-2021 .....	13
2.5. THAILAND.....	17
Mangrove target sites in Thailand based on 2008 SAP .....	17
Summary of activities and outputs of the period 2008-2021 .....	17
2.6. VIET NAM.....	20
Mangrove target sites in Viet Nam based on 2008 SAP.....	20
Summary of activities and outputs of the period 2008-2021 .....	20
ANNEXES .....	24
Annex 1. Details of properties and variables, data and information requirements for mangrove site characterization. ....	24

## List of Tables

Table 1. The 26 priority mangrove sites for management within the framework of Strategic Action Programme implementation .....	4
Table 2. Outcome 1.1: outputs and targets for mangrove management .....	4
Table 3. Cambodia - Changes in management and restoration of key agreed sites since 2008 .....	5
Table 4. Cambodia - Key achievements towards the SCS SAP implementation (2008-2021) .....	7
Table 5. China - Changes in management and restoration of key agreed sites since 2008 .....	7
Table 6. China - Key achievements towards the SCS SAP implementation (2008-2021).....	10
Table 7. Indonesia - Changes in management and restoration of key agreed sites since 2008 .....	10
Table 8. Indonesia - Key achievements towards the SCS SAP implementation (2008-2021) .....	13
Table 9. Philippines - Changes in management and restoration of key agreed sites since 2008.....	13
Table 10. Philippines - Key achievements towards the SCS SAP implementation (2008-2021) .....	17
Table 11. Thailand - Changes in management and restoration of key agreed sites since 2008.....	17
Table 12. Thailand - Key achievements towards the SCS SAP implementation (2008-2021) .....	20
Table 13. Viet Nam - Changes in management and restoration of key agreed sites since 2008 .....	20
Table 14. Viet Nam - Key achievements towards the SCS SAP implementation (2008-2021).....	22

# 1. INTRODUCTION

## **OUTCOME 1.1 APPROPRIATE FORMS OF SUSTAINABLE MANAGEMENT ESTABLISHED FOR 860,000 HA OF MANGROVE**

One of the anticipated outputs from the UNEP/GEF Project entitled “*Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand*” is an up-dated Strategic Action Programme, 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 UNEP project document for “*Implementing the Strategic Action Programme for the South China Sea and Gulf of Thailand*” adopted by the GEF Secretariat 2 November 2016 (GEF ID 5538) 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 through implementation of the National Action Plans in support of the SAP, and strengthening regional co-ordination for SCS SAP implementation.

Regarding SAP implementation for the mangrove focal area, the key anticipated outcome is the establishment of appropriate forms of sustainable management including relevant reforms of laws and regulations for 860,000 ha of mangrove bordering the SCS basin. The project also aims to support the national actions through a regionally co-ordinated programme of technical support; the objective of which is to assist countries in effectively and sustainably managing their mangrove resources. At the national level, activities will focus on: the declaration of 57,400 ha of mangrove as National Parks and Protected Areas; the designation and plans for the management of 166,600 ha of mangrove as non-conversion, sustainable use areas; national reform of laws and regulations for the sustainable use of 602,800 ha of mangrove forest; replanting of 21,000 ha of deforested mangrove land; and biodiversity increased for 11,200 ha of mangrove forest via enrichment planting (Table 1). Following the adopted project document, in preparation for implementation of the mangrove activities of the SAP, comprehensive site characterization information and data were compiled to establish detailed baselines for the 26 mangrove sites identified as priority locations for management within the framework of SAP implementation. These site characterisations contain geographical coordinates, information on the physical environment, environmental state information, socio-economic and resource use information, biological data, and information on the status of existing management at these sites (see a summary of information at the 26 sites in the Annex 1).

It is noted that the process in selecting these 26 sites was adopted by the Regional Science and Technical Committee (RTRC) quite early in 2002. The RTRC urged the National Technical Working Groups (NTWG), and national committees in each country to review the data and information collated during the preparatory phase of the project, and to regularly provide updated data and information, particularly in relation to data source. The Regional Working Group (RWG) on Mangroves proceeded to finalise data sets, cluster analyses and ranking procedures according to their significance in terms of biological diversity, threats, and transboundary importance via series of RWG meetings. These outputs were reported for reviews of the RTRC and then proposed for consideration and adoption of the Project Steering Committee (PSC). Ultimately, decisions were taken, both at the national and regional levels, by an appropriately constituted body having authority and responsibility for policy level decision-making. These bodies, the PSC and Inter-Ministry Committees, were advised by the RTRC and the NTWGs respectively, on matters of substance relating to the scientific and technical soundness of the alternative courses of action before each body, for decision. Four among 26 mangrove sites were recommended by RTRC and then selected by the Project Steering Committee in 2004 for implementation during the course of SCS Project, including: Fangchenggang (China), Batu Ampar (Indonesia), Busuanga (Philippines) and Trat Province (Thailand).

This evaluation provides evidences on proactive contribution of the participating countries in implementing the SAP and supports to estimate their 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.

**Table 1. The 26 priority mangrove sites for management within the framework of Strategic Action Programme implementation**

CHINA Site and Present Area (ha)		INDONESIA Site and Present Area (ha)		PHILIPPINES Site and Present Area (ha)		THAILAND Site and Present Area (ha)		VIET NAM Site and Present Area (ha)	
Shangkou	812	Belitung Island	22,457	Busuanga	1,298	Trad Province	7,031	Tien Yen	2,537
Qinglangang	1,189	Angke Kaput	328	Coron	1,296	Thung Kha Bay - Savi Bay	3,543	Xuan Thuy	1,775
Dongzhaigang	1,513	Batu Ampar	65,585	San Vicente	133	Pak Phanang Bay	8,832	Can Gio	8,958
Futien	82	Ngurah Rai	1,374	Ulugan	790	Kung Kraben Bay	640	Ca Mau	5,239
Fangchenggang	1,415	Bengkalis	42,459	San Jose	483	Welu River Estuary	5,478		
				Subic	148				
				Quezon	1,939				
<b>TOTAL</b>	<b>5,011</b>	<b>TOTAL</b>	<b>132,203</b>	<b>TOTAL</b>	<b>6,087</b>	<b>TOTAL</b>	<b>25,524</b>	<b>TOTAL</b>	<b>18,590</b>

**Table 2. Outcome 1.1: outputs and targets for mangrove management**

Regional targets	Cambodia	China	Indonesia	Philippines	Thailand	Viet Nam	Total
Output 1.1.1 Declaration of 57,400 ha of mangrove as National Parks and Protected Areas	0	5,330	20,000	631	1,400	30,000	<b>57,400</b>
1.1.2 Designation and plans for the management of 166,600 ha of mangrove as non-conversion, sustainable use areas	0	0	165,000	0	1,600	0	<b>166,600</b>
1.1.3 Reform of laws and regulations for the sustainable use of 602,800 ha of mangrove forest	49,900	0	490,800	2,000	10,000	50,000	<b>602,800</b>
1.1.4 Replanting of 21,000 ha of deforested mangrove land	2,500	500	0	2,000	8,000	8,000	<b>21,000</b>
1.1.5 Biodiversity increased for 11,200 ha of mangrove forest via enrichment planting	0	5,000	0	1,000	3,200	2,000	<b>11,200</b>
1.1.6 Established mechanism for monitoring management, ecological and socio-economic indicators at 26 sites [based on SAP results framework]	2,500	5,011	132,203	6,087	25,524	18,590	<b>184,909</b>

## 2. STATUS OF SAP IMPLEMENTATION

### 2.1. CAMBODIA

#### Mangrove targets in Cambodia based on 2008 SAP

Given the fact of insufficient data and information from Cambodia for site characterisation, the PSC decided to adopt the targets on mangrove area and sites would be identified in SAP implementation. However, in the National Action Plan on Mangroves in 2008, Cambodia planned to develop management plans for the Ream National Park mangrove forest, the Peam Krasoab wildlife sanctuary, the Dang Peng multiple use area, and the Botum Sakor National Park, including replanting of mangrove areas in Peam Krasoab and Toul Korke Communes in Koh Kong Province, Prey Nob District in Preah Sihanouk Province, and in Kampot and Kep Provinces, with enrichment planting in identified areas in Koh Kong and Preah Sihanouk Provinces. This evaluation can help Cambodia to review what have been done and design further actions in implementing the SAP at the national level.

#### Summary of activities and outputs of the period 2008-2021

Table 3. Cambodia - Changes in management and restoration of key agreed sites since 2008

	<b>Peam Krasop Wildlife Sanctuary</b>
Improvement of site management	<i>Is there any new management plan or regulation established at the site. YES/NO? Mention type and year established.</i>
	<i>Who is responsible for day-today management of the site? Mention number or persons.</i>
	<i>Is management and enforcement adequate/weak/lacking?</i>
Participation engagement	<i>Is there a mechanism to engage participation of communities, private sector, foundations, NGOs in conservation and sustainable use. YES/NO? If yes, describe</i>
Rehabilitation	<i>Have any actions been undertaken for the rehabilitation of mangroves at the site. YES/NO? If yes, describe actions and number of hectares rehabilitated.</i>
Monitoring and trends of changes	<i>Has the site been monitored? YES/NO If yes, please describe monitoring design (ecological &amp; socio-economic indicators), monitoring practices and trends of changes related to habitat degradation and loss as well as influences to local community</i>
National initiatives and Projects	<i>Have any national initiatives and/or projects been executed at the site? YES/NO? If yes, please mention initiative project, dates executed and budget (if available). Plus any key references, reports on achievements.</i>
Fund raising and sustainable financial mechanisms	<i>Please outline budget sources for activities and any mechanism developed to sustain long term funding</i>
Recommendation	<i>Select one of the following recommendations regarding the site:</i> <ul style="list-style-type: none"> <li>• <i>Under effective management, no more support needed for the site</i></li> <li>• <i>Further support to implement prior activities in SCS SAP Project (list of priorities)</i></li> </ul>
	<b>Botum Sakor National Park</b>
Improvement of site management	<i>Is there any new management plan or regulation established at the site, YES/NO? Mention type and year established.</i>
	<i>Who is responsible for day-today management of the site? Mention number or persons.</i>
	<i>Is management and enforcement adequate/weak/lacking?</i>
Participation engagement	<i>Is there a mechanism to engage participation of communities, private sector, foundations, NGOs in conservation and sustainable use, YES/NO? If yes, describe</i>
Rehabilitation	<i>Have any actions been undertaken for the rehabilitation of mangroves at the site. YES/NO? If yes, describe actions and number of hectares rehabilitated.</i>

Monitoring and trends of changes	<i>Has the site been monitored? YES/NO If yes, please describe monitoring design (ecological &amp; socio-economic indicators), monitoring practices and trends of changes related to habitat degradation and loss as well as influences to local community</i>
National initiatives and Projects	<i>Have any national initiatives and/or projects been executed at the site? YES/NO? If yes, please mention initiative project, dates executed and budget (if available). Plus any key references, reports on achievements.</i>
Fund raising and sustainable financial mechanisms	<i>Please outline budget sources for activities and any mechanism developed to sustain long term funding</i>
Recommendation	<i>Select one of the following recommendations regarding the site:</i> <ul style="list-style-type: none"> <li>• <i>Under effective management, no more support needed for the site</i></li> <li>• <i>Further support to implement prior activities in SCS SAP Project (list of priorities)</i></li> </ul>
<b>Ang Kor (Kep)</b>	
Improvement of site management	<i>Is there any new management plan or regulation established at the site. YES/NO? Mention type and year established.</i>
	<i>Who is responsible for day-today management of the site? Mention number or persons. Is management and enforcement adequate/weak/lacking?</i>
Participation engagement	<i>Is there a mechanism to engage participation of communities, private sector, foundations, NGOs in conservation and sustainable use. YES/NO? If yes, describe</i>
Rehabilitation	<i>Have any actions been undertaken for the rehabilitation of mangroves at the site. YES/NO? If yes, describe actions and number of hectares rehabilitated.</i>
Monitoring and trends of changes	<i>Has the site been monitored? YES/NO If yes, please describe monitoring design (ecological &amp; socio-economic indicators), monitoring practices and trends of changes related to habitat degradation and loss as well as influences to local community</i>
National initiatives and Projects	<i>Have any national initiatives and/or projects been executed at the site? YES/NO? If yes, please mention initiative project, dates executed and budget (if available). Plus any key references, reports on achievements.</i>
Fund raising and sustainable financial mechanisms	<i>Please outline budget sources for activities and any mechanism developed to sustain long term funding</i>
Recommendation	<i>Select one of the following recommendations regarding the site:</i> <ul style="list-style-type: none"> <li>• <i>Under effective management, no more support needed for the site</i></li> <li>• <i>Further support to implement prior activities in SCS SAP Project (list of priorities)</i></li> </ul>
<b>Kampot</b>	
Improvement of site management	<i>Is there any new management plan or regulation established at the site, YES/NO? Mention type and year established.</i>
	<i>Who is responsible for day-today management of the site? Mention number or persons. Is management and enforcement adequate/weak/lacking?</i>
Participation engagement	<i>Is there a mechanism to engage participation of communities, private sector, foundations, NGOs in conservation and sustainable use, YES/NO? If yes, describe</i>
Rehabilitation	<i>Have any actions been undertaken for the rehabilitation of mangroves at the site. YES/NO? If yes, describe actions and number of hectares rehabilitated.</i>
Monitoring and trends of changes	<i>Has the site been monitored? YES/NO If yes, please describe monitoring design (ecological &amp; socio-economic indicators), monitoring practices and trends of changes related to habitat degradation and loss as well as influences to local community</i>
National initiatives and Projects	<i>Have any national initiatives and/or projects been executed at the site? YES/NO? If yes, please mention initiative project, dates executed and budget (if available). Plus any key references, reports on achievements.</i>
Fund raising and sustainable financial mechanisms	<i>Please outline budget sources for activities and any mechanism developed to sustain long term funding</i>
Recommendation	<i>Select one of the following recommendations regarding the site:</i>

- *Under effective management, no more support needed for the site*
- *Further support to implement prior activities in SCS SAP Project (list of priorities)*

In addition to the mangrove management at the priority sites of the SAP, additional key achievements towards the SCS SAP outcomes and outputs should be reported from 2008-2021.

**Table 4. Cambodia - Key achievements towards the SCS SAP implementation (2008-2021)**

Regional Output	National target (ha)	Implication at the national level	Details at sites
Output 1.1.1 Declaration of 57,400 ha of mangrove as National Parks and Protected Areas	0	<i>Total area (ha) of mangrove as National Parks and Protected Areas</i>	<i>Site names &amp; area (ha) at each site</i>
1.1.2 Designation and plans for the management of 166,600 ha of mangrove as non-conversion, sustainable use areas	0	<i>Total area (ha) of mangrove as non-conversion, sustainable use areas</i>	<i>Site names &amp; area (ha) at each site</i>
1.1.3 Reform of laws and regulations for the sustainable use of 602,800 ha of mangrove forest	49,900	<i>Number of sites where management policies and institutional reform were improved</i>	<i>No of reforms and specify whether national or site specific, and if site specific which sites</i>
1.1.4 Replanting of 21,000 ha of deforested mangrove land	2,500	<i>Total area (ha) of mangrove replanted</i>	<i>Site names</i>
1.1.5 Biodiversity increased for 11,200 ha of mangrove forest via enrichment planting	0	<i>Total area (ha) of mangrove enrichment planting</i>	<i>Site names &amp; area (ha) at each site</i>
1.1.6 Established mechanism for monitoring management, ecological and socio-economic indicators at 26 sites [based on SAP results framework]	2,500	<i>Total area (ha) of mangrove with established monitoring mechanism</i>	<i>Site names &amp; area (ha) at each site</i>

## 2.2. CHINA

### Mangrove target sites in China based on 2008 SAP

As indicated in the project which was approved for SAP implementation, 5 mangrove sites were proposed for China as seen in the table below with the total area around 5,011 ha.

- Shangkou 812
- Qinglangang 1,189
- Dongzhaigang 1,513
- Futien 82
- Fangchenggang 1,415

### Summary of activities and outputs of the period 2008-2021

**Table 5. China - Changes in management and restoration of key agreed sites since 2008**

	Shangkou
Improvement of site management	<i>Is there any new management plan or regulation established at the site. YES/NO? Mention type and year established.</i>
	<i>Who is responsible for day-to-day management of the site? Mention number or persons.</i>
	<i>Is management and enforcement adequate/weak/lacking?</i>



Participation engagement	<i>Is there a mechanism to engage participation of communities, private sector, foundations, NGOs in conservation and sustainable use. YES/NO? If yes, describe</i>
Rehabilitation	<i>Have any actions been undertaken for the rehabilitation of mangroves at the site. YES/NO? If yes, describe actions and number of hectares rehabilitated.</i>
Monitoring and trends of changes	<i>Has the site been monitored? YES/NO If yes, please describe monitoring design (ecological &amp; socio-economic indicators), monitoring practices and trends of changes related to habitat degradation and loss as well as influences to local community</i>
National initiatives and Projects	<i>Have any national initiatives and/or projects been executed at the site? YES/NO? If yes, please mention initiative project, dates executed and budget (if available). Plus any key references, reports on achievements.</i>
Fund raising and sustainable financial mechanisms	<i>Please outline budget sources for activities and any mechanism developed to sustain long term funding</i>
Recommendation	<i>Select one of the following recommendations regarding the site:</i> <ul style="list-style-type: none"> <li>• <i>Under effective management, no more support needed for the site</i></li> <li>• <i>Further support to implement prior activities in SCS SAP Project (list of priorities)</i></li> <li>• <i>Replace by another site or cancel: Please provide justifications</i></li> </ul>
<b>Qinglangang</b>	
Improvement of site management	<i>Is there any new management plan or regulation established at the site, YES/NO? Mention type and year established.</i>
	<i>Who is responsible for day-today management of the site? Mention number or persons.</i>
	<i>Is management and enforcement adequate/weak/lacking?</i>
Participation engagement	<i>Is there a mechanism to engage participation of communities, private sector, foundations, NGOs in conservation and sustainable use, YES/NO? If yes, describe</i>
Rehabilitation	<i>Have any actions been undertaken for the rehabilitation of mangroves at the site. YES/NO? If yes, describe actions and number of hectares rehabilitated.</i>
Monitoring and trends of changes	<i>Has the site been monitored? YES/NO If yes, please describe monitoring design (ecological &amp; socio-economic indicators), monitoring practices and trends of changes related to habitat degradation and loss as well as influences to local community</i>
National initiatives and Projects	<i>Have any national initiatives and/or projects been executed at the site? YES/NO? If yes, please mention initiative project, dates executed and budget (if available). Plus any key references, reports on achievements.</i>
Fund raising and sustainable financial mechanisms	<i>Please outline budget sources for activities and any mechanism developed to sustain long term funding</i>
Recommendation	<i>Select one of the following recommendations regarding the site:</i> <ul style="list-style-type: none"> <li>• <i>Under effective management, no more support needed for the site</i></li> <li>• <i>Further support to implement prior activities in SCS SAP Project (list of priorities)</i></li> <li>• <i>Replace by another site or cancel: Please provide justifications</i></li> </ul>
<b>Dongchangang</b>	
Improvement of site management	<i>Is there any new management plan or regulation established at the site. YES/NO? Mention type and year established.</i>
	<i>Who is responsible for day-today management of the site? Mention number or persons.</i>
	<i>Is management and enforcement adequate/weak/lacking?</i>
Participation engagement	<i>Is there a mechanism to engage participation of communities, private sector, foundations, NGOs in conservation and sustainable use. YES/NO? If yes, describe</i>
Rehabilitation	<i>Have any actions been undertaken for the rehabilitation of mangroves at the site. YES/NO? If yes, describe actions and number of hectares rehabilitated.</i>
Monitoring and trends of changes	<i>Has the site been monitored? YES/NO If yes, please describe monitoring design (ecological &amp; socio-economic indicators), monitoring practices and trends of changes related to habitat degradation and loss as well as influences to local community</i>



National initiatives and Projects	<i>Have any national initiatives and/or projects been executed at the site? YES/NO? If yes, please mention initiative project, dates executed and budget (if available). Plus any key references, reports on achievements.</i>
Fund raising and sustainable financial mechanisms	<i>Please outline budget sources for activities and any mechanism developed to sustain long term funding</i>
Recommendation	<i>Select one of the following recommendations regarding the site:</i> <ul style="list-style-type: none"> <li>• <i>Under effective management, no more support needed for the site</i></li> <li>• <i>Further support to implement prior activities in SCS SAP Project (list of priorities)</i></li> </ul>
<b>Futien</b>	
Improvement of site management	<i>Is there any new management plan or regulation established at the site, YES/NO? Mention type and year established.</i>
	<i>Who is responsible for day-today management of the site? Mention number or persons.</i>
	<i>Is management and enforcement adequate/weak/lacking?</i>
Participation engagement	<i>Is there a mechanism to engage participation of communities, private sector, foundations, NGOs in conservation and sustainable use, YES/NO? If yes, describe</i>
Rehabilitation	<i>Have any actions been undertaken for the rehabilitation of mangroves at the site. YES/NO? If yes, describe actions and number of hectares rehabilitated.</i>
Monitoring and trends of changes	<i>Has the site been monitored? YES/NO If yes, please describe monitoring design (ecological &amp; socio-economic indicators), monitoring practices and trends of changes related to habitat degradation and loss as well as influences to local community</i>
National initiatives and Projects	<i>Have any national initiatives and/or projects been executed at the site? YES/NO? If yes, please mention initiative project, dates executed and budget (if available). Plus any key references, reports on achievements.</i>
Fund raising and sustainable financial mechanisms	<i>Please outline budget sources for activities and any mechanism developed to sustain long term funding</i>
Recommendation	<i>Select one of the following recommendations regarding the site:</i> <ul style="list-style-type: none"> <li>• <i>Under effective management, no more support needed for the site</i></li> <li>• <i>Further support to implement prior activities in SCS SAP Project (list of priorities)</i></li> </ul>
<b>Fangchengang</b>	
Improvement of site management	<i>Is there any new management plan or regulation established at the site, YES/NO? Mention type and year established.</i>
	<i>Who is responsible for day-today management of the site? Mention number or persons.</i>
	<i>Is management and enforcement adequate/weak/lacking?</i>
Participation engagement	<i>Is there a mechanism to engage participation of communities, private sector, foundations, NGOs in conservation and sustainable use, YES/NO? If yes, describe</i>
Rehabilitation	<i>Have any actions been undertaken for the rehabilitation of mangroves at the site. YES/NO? If yes, describe actions and number of hectares rehabilitated.</i>
Monitoring and trends of changes	<i>Has the site been monitored? YES/NO If yes, please describe monitoring design (ecological &amp; socio-economic indicators), monitoring practices and trends of changes related to habitat degradation and loss as well as influences to local community</i>
National initiatives and Projects	<i>Have any national initiatives and/or projects been executed at the site? YES/NO? If yes, please mention initiative project, dates executed and budget (if available). Plus any key references, reports on achievements.</i>
Fund raising and sustainable financial mechanisms	<i>Please outline budget sources for activities and any mechanism developed to sustain long term funding</i>
Recommendation	<i>Select one of the following recommendations regarding the site:</i> <ul style="list-style-type: none"> <li>• <i>Under effective management, no more support needed for the site</i></li> <li>• <i>Further support to implement prior activities in SCS SAP Project (list of priorities)</i></li> </ul>

In addition to the mangrove management at the priority sites of the SAP, additional key achievements towards the SCS SAP outcomes and outputs should be reported.

**Table 6. China - Key achievements towards the SCS SAP implementation (2008-2021)**

Regional Output	2008 National target (ha)	Implication at the national level	Details at sites
1.1.1 Declaration of 57,400 ha of mangrove as National Parks and Protected Areas	5,330	<i>Total area (ha) of mangrove as National Parks and Protected Areas</i>	<i>Site names &amp; area (ha) at each site</i>
1.1.2 Designation and plans for the management of 166,600 ha of mangrove as non-conversion, sustainable use areas	0	<i>Total area (ha) of mangrove as non-conversion, sustainable use areas</i>	<i>Site names &amp; area (ha) at each site</i>
1.1.3 Reform of laws and regulations for the sustainable use of 602,800 ha of mangrove forest	0	<i>Number of sites where management policies and institutional reform were improved</i>	<i>No of reforms and specify whether national or site specific, and if site specific which sites</i>
1.1.4 Replanting of 21,000 ha of deforested mangrove land	500	<i>Total area (ha) of mangrove replanted</i>	<i>Site names</i>
1.1.5 Biodiversity increased for 11,200 ha of mangrove forest via enrichment planting	5,000	<i>Total area (ha) of mangrove enrichment planting</i>	<i>Site names &amp; area (ha) at each site</i>
1.1.6 Established mechanism for monitoring management, ecological and socio-economic indicators at 26 sites	5 sites	<i>Total area (ha) of mangrove with established monitoring mechanism</i>	<i>Site names &amp; area (ha) at each site</i>

## 2.3. INDONESIA

### Mangrove target sites in Indonesia based on 2008 SAP

As indicated in the project which was approved for SAP implementation, 5 mangrove sites were proposed for Indonesia as seen in the table below with the total area around 132,203 ha:

- Belitung Island 22,457
- Angke Kaput 328
- Batu Ampar 65,585
- Ngurah Rai 1,374
- Bengkalis 42,459

### Summary of activities and outputs of the period 2008-2021

**Table 7. Indonesia - Changes in management and restoration of key agreed sites since 2008**

	Belitung Island
Improvement of site management	<i>Is there any new management plan or regulation established at the site. YES/NO? Mention type and year established.</i>
	<i>Who is responsible for day-today management of the site? Mention number or persons.</i>
	<i>Is management and enforcement adequate/weak/lacking?</i>

Participation engagement	<i>Is there a mechanism to engage participation of communities, private sector, foundations, NGOs in conservation and sustainable use. YES/NO? If yes, describe</i>
Rehabilitation	<i>Have any actions been undertaken for the rehabilitation of mangroves at the site. YES/NO? If yes, describe actions and number of hectares rehabilitated.</i>
Monitoring and trends of changes	<i>Has the site been monitored? YES/NO If yes, please describe monitoring design (ecological &amp; socio-economic indicators), monitoring practices and trends of changes related to habitat degradation and loss as well as influences to local community</i>
National initiatives and Projects	<i>Have any national initiatives and/or projects been executed at the site? YES/NO? If yes, please mention initiative project, dates executed and budget (if available). Plus any key references, reports on achievements.</i>
Fund raising and sustainable financial mechanisms	<i>Please outline budget sources for activities and any mechanism developed to sustain long term funding</i>
Recommendation	<i>Select one of the following recommendations regarding the site:</i> <ul style="list-style-type: none"> <li>• <i>Under effective management, no more support needed for the site</i></li> <li>• <i>Further support to implement prior activities in SCS SAP Project (list of priorities)</i></li> <li>• <i>Replace by another site or cancel: Please provide justifications</i></li> </ul>
<b>Angke Kaput</b>	
Improvement of site management	<i>Is there any new management plan or regulation established at the site, YES/NO? Mention type and year established.</i>
	<i>Who is responsible for day-today management of the site? Mention number or persons.</i>
	<i>Is management and enforcement adequate/weak/lacking?</i>
Participation engagement	<i>Is there a mechanism to engage participation of communities, private sector, foundations, NGOs in conservation and sustainable use, YES/NO? If yes, describe</i>
Rehabilitation	<i>Have any actions been undertaken for the rehabilitation of mangroves at the site. YES/NO? If yes, describe actions and number of hectares rehabilitated.</i>
Monitoring and trends of changes	<i>Has the site been monitored? YES/NO If yes, please describe monitoring design (ecological &amp; socio-economic indicators), monitoring practices and trends of changes related to habitat degradation and loss as well as influences to local community</i>
National initiatives and Projects	<i>Have any national initiatives and/or projects been executed at the site? YES/NO? If yes, please mention initiative project, dates executed and budget (if available). Plus any key references, reports on achievements.</i>
Fund raising and sustainable financial mechanisms	<i>Please outline budget sources for activities and any mechanism developed to sustain long term funding</i>
Recommendation	<i>Select one of the following recommendations regarding the site:</i> <ul style="list-style-type: none"> <li>• <i>Under effective management, no more support needed for the site</i></li> <li>• <i>Further support to implement prior activities in SCS SAP Project (list of priorities)</i></li> <li>• <i>Replace by another site or cancel: Please provide justifications</i></li> </ul>
<b>Batu Apar</b>	
Improvement of site management	<i>Is there any new management plan or regulation established at the site. YES/NO? Mention type and year established.</i>
	<i>Who is responsible for day-today management of the site? Mention number or persons.</i>
	<i>Is management and enforcement adequate/weak/lacking?</i>
Participation engagement	<i>Is there a mechanism to engage participation of communities, private sector, foundations, NGOs in conservation and sustainable use. YES/NO? If yes, describe</i>
Rehabilitation	<i>Have any actions been undertaken for the rehabilitation of mangroves at the site. YES/NO? If yes, describe actions and number of hectares rehabilitated.</i>
Monitoring and trends of changes	<i>Has the site been monitored? YES/NO If yes, please describe monitoring design (ecological &amp; socio-economic indicators), monitoring practices and trends of changes related to habitat degradation and loss as well as influences to local community</i>

National initiatives and Projects	<i>Have any national initiatives and/or projects been executed at the site? YES/NO? If yes, please mention initiative project, dates executed and budget (if available). Plus any key references, reports on achievements.</i>
Fund raising and sustainable financial mechanisms	<i>Please outline budget sources for activities and any mechanism developed to sustain long term funding</i>
Recommendation	<i>Select one of the following recommendations regarding the site:</i> <ul style="list-style-type: none"> <li>• <i>Under effective management, no more support needed for the site</i></li> <li>• <i>Further support to implement prior activities in SCS SAP Project (list of priorities)</i></li> <li>• <i>Replace by another site or cancel: Please provide justifications</i></li> </ul>
<b>Ngurah Rai</b>	
Improvement of site management	<i>Is there any new management plan or regulation established at the site, YES/NO? Mention type and year established.</i>
	<i>Who is responsible for day-today management of the site? Mention number or persons.</i>
	<i>Is management and enforcement adequate/weak/lacking?</i>
Participation engagement	<i>Is there a mechanism to engage participation of communities, private sector, foundations, NGOs in conservation and sustainable use, YES/NO? If yes, describe</i>
Rehabilitation	<i>Have any actions been undertaken for the rehabilitation of mangoves at the site. YES/NO? If yes, describe actions and number of hectares rehabilitated.</i>
Monitoring and trends of changes	<i>Has the site been monitored? YES/NO If yes, please describe monitoring design (ecological &amp; socio-economic indicators), monitoring practices and trends of changes related to habitat degradation and loss as well as influences to local community</i>
National initiatives and Projects	<i>Have any national initiatives and/or projects been executed at the site? YES/NO? If yes, please mention initiative project, dates executed and budget (if available). Plus any key references, reports on achievements.</i>
Fund raising and sustainable financial mechanisms	<i>Please outline budget sources for activities and any mechanism developed to sustain long term funding</i>
Recommendation	<i>Select one of the following recommendations regarding the site:</i> <ul style="list-style-type: none"> <li>• <i>Under effective management, no more support needed for the site</i></li> <li>• <i>Further support to implement prior activities in SCS SAP Project (list of priorities)</i></li> <li>• <i>Replace by another site or cancel: Please provide justifications</i></li> </ul>
<b>Bengkalis</b>	
Improvement of site management	<i>Is there any new management plan or regulation established at the site, YES/NO? Mention type and year established.</i>
	<i>Who is responsible for day-today management of the site? Mention number or persons.</i>
	<i>Is management and enforcement adequate/weak/lacking?</i>
Participation engagement	<i>Is there a mechanism to engage participation of communities, private sector, foundations, NGOs in conservation and sustainable use, YES/NO? If yes, describe</i>
Rehabilitation	<i>Have any actions been undertaken for the rehabilitation of mangoves at the site. YES/NO? If yes, describe actions and number of hectares rehabilitated.</i>
Monitoring and trends of changes	<i>Has the site been monitored? YES/NO If yes, please describe monitoring design (ecological &amp; socio-economic indicators), monitoring practices and trends of changes related to habitat degradation and loss as well as influences to local community</i>
National initiatives and Projects	<i>Have any national initiatives and/or projects been executed at the site? YES/NO? If yes, please mention initiative project, dates executed and budget (if available). Plus any key references, reports on achievements.</i>
Fund raising and sustainable financial mechanisms	<i>Please outline budget sources for activities and any mechanism developed to sustain long term funding</i>
Recommendation	<i>Select one of the following recommendations regarding the site:</i> <ul style="list-style-type: none"> <li>• <i>Under effective management, no more support needed for the site</i></li> <li>• <i>Further support to implement prior activities in SCS SAP Project (list of priorities)</i></li> </ul>

• *Replace by another site or cancel: Please provide justifications*

In addition to the mangrove management at the priority sites of the SAP, additional key achievements towards the SCS SAP outcomes and outputs shall be reported.

**Table 8. Indonesia - Key achievements towards the SCS SAP implementation (2008-2021)**

Regional Output	2008 National target (ha)	Implication at the national level	Details at sites
1.1.1 Declaration of 57,400 ha of mangrove as National Parks and Protected Areas	20,000	<i>Total area (ha) of mangrove as National Parks and Protected Areas</i>	<i>Site names &amp; area (ha) at each site</i>
1.1.2 Designation and plans for the management of 166,600 ha of mangrove as non-conversion, sustainable use areas	165,000	<i>Total area (ha) of mangrove as non-conversion, sustainable use areas</i>	<i>Site names &amp; area (ha) at each site</i>
1.1.3 Reform of laws and regulations for the sustainable use of 602,800 ha of mangrove forest	490,800	<i>Number of sites where management policies and institutional reform were improved</i>	<i>No of reforms and specify whether national or site specific, and if site specific which sites</i>
1.1.4 Replanting of 21,000 ha of deforested mangrove land	0	<i>Total area (ha) of mangrove replanted</i>	<i>Site names</i>
1.1.5 Biodiversity increased for 11,200 ha of mangrove forest via enrichment planting	0	<i>Total area (ha) of mangrove enrichment planting</i>	<i>Site names &amp; area (ha) at each site</i>
1.1.6 Established mechanism for monitoring management, ecological and socio-economic indicators at 26 sites	5 sites	<i>Total area (ha) of mangrove with established monitoring mechanism</i>	<i>Site names &amp; area (ha) at each site</i>

## 2.4. PHILIPPINES

### Mangrove target sites in Philippines based on 2008 SAP

As indicated in the project which was approved for SAP implementation, 7 mangrove sites were proposed for the Philippines as seen in the table below with the total area around 6,087 ha:

- Busuanga 1,298
- Coron 1,296
- San Vicente 133
- Ulugan 790
- San Jose 483
- Subic 148
- Quezon 1,939

### Summary of activities and outputs of the period 2008-2021

**Table 9. Philippines - Changes in management and restoration of key agreed sites since 2008**

Busuanga	
	<i>Is there any new management plan or regulation established at the site. YES/NO?</i>

Improvement of site management	<i>Mention type and year established.</i>
	<i>Who is responsible for day-today management of the site? Mention number or persons.</i>
	<i>Is management and enforcement adequate/weak/lacking?</i>
Participation engagement	<i>Is there a mechanism to engage participation of communities, private sector, foundations, NGOs in conservation and sustainable use. YES/NO? If yes, describe</i>
Rehabilitation	<i>Have any actions been undertaken for the rehabilitation of mangroves at the site. YES/NO? If yes, describe actions and number of hectares rehabilitated.</i>
Monitoring and trends of changes	<i>Has the site been monitored? YES/NO If yes, please describe monitoring design (ecological &amp; socio-economic indicators), monitoring practices and trends of changes related to habitat degradation and loss as well as influences to local community</i>
National initiatives and Projects	<i>Have any national initiatives and/or projects been executed at the site? YES/NO? If yes, please mention initiative project, dates executed and budget (if available). Plus any key references, reports on achievements.</i>
Fund raising and sustainable financial mechanisms	<i>Please outline budget sources for activities and any mechanism developed to sustain long term funding</i>
Recommendation	<i>Select one of the following recommendations regarding the site:</i> <ul style="list-style-type: none"> <li>• <i>Under effective management, no more support needed for the site</i></li> <li>• <i>Further support to implement prior activities in SCS SAP Project (list of priorities)</i></li> <li>• <i>Replace by another site or cancel: Please provide justifications</i></li> </ul>
<b>Coron</b>	
Improvement of site management	<i>Is there any new management plan or regulation established at the site, YES/NO? Mention type and year established.</i>
	<i>Who is responsible for day-today management of the site? Mention number or persons.</i>
	<i>Is management and enforcement adequate/weak/lacking?</i>
Participation engagement	<i>Is there a mechanism to engage participation of communities, private sector, foundations, NGOs in conservation and sustainable use, YES/NO? If yes, describe</i>
Rehabilitation	<i>Have any actions been undertaken for the rehabilitation of mangroves at the site. YES/NO? If yes, describe actions and number of hectares rehabilitated.</i>
Monitoring and trends of changes	<i>Has the site been monitored? YES/NO If yes, please describe monitoring design (ecological &amp; socio-economic indicators), monitoring practices and trends of changes related to habitat degradation and loss as well as influences to local community</i>
National initiatives and Projects	<i>Have any national initiatives and/or projects been executed at the site? YES/NO? If yes, please mention initiative project, dates executed and budget (if available). Plus any key references, reports on achievements.</i>
Fund raising and sustainable financial mechanisms	<i>Please outline budget sources for activities and any mechanism developed to sustain long term funding</i>
Recommendation	<i>Select one of the following recommendations regarding the site:</i> <ul style="list-style-type: none"> <li>• <i>Under effective management, no more support needed for the site</i></li> <li>• <i>Further support to implement prior activities in SCS SAP Project (list of priorities)</i></li> <li>• <i>Replace by another site or cancel: Please provide justifications</i></li> </ul>
<b>San Vicente</b>	
Improvement of site management	<i>Is there any new management plan or regulation established at the site. YES/NO? Mention type and year established.</i>
	<i>Who is responsible for day-today management of the site? Mention number or persons.</i>
	<i>Is management and enforcement adequate/weak/lacking?</i>
Participation engagement	<i>Is there a mechanism to engage participation of communities, private sector, foundations, NGOs in conservation and sustainable use. YES/NO? If yes, describe</i>
Rehabilitation	<i>Have any actions been undertaken for the rehabilitation of mangroves at the site. YES/NO? If yes, describe actions and number of hectares rehabilitated.</i>



Monitoring and trends of changes	<i>Has the site been monitored? YES/NO If yes, please describe monitoring design (ecological &amp; socio-economic indicators), monitoring practices and trends of changes related to habitat degradation and loss as well as influences to local community</i>
National initiatives and Projects	<i>Have any national initiatives and/or projects been executed at the site? YES/NO? If yes, please mention initiative project, dates executed and budget (if available). Plus any key references, reports on achievements.</i>
Fund raising and sustainable financial mechanisms	<i>Please outline budget sources for activities and any mechanism developed to sustain long term funding</i>
Recommendation	<i>Select one of the following recommendations regarding the site:</i> <ul style="list-style-type: none"> <li>• <i>Under effective management, no more support needed for the site</i></li> <li>• <i>Further support to implement prior activities in SCS SAP Project (list of priorities)</i></li> <li>• <i>Replace by another site or cancel: Please provide justifications</i></li> </ul>
<b>Ulugan</b>	
Improvement of site management	<i>Is there any new management plan or regulation established at the site, YES/NO? Mention type and year established.</i>
	<i>Who is responsible for day-today management of the site? Mention number or persons.</i>
	<i>Is management and enforcement adequate/weak/lacking?</i>
Participation engagement	<i>Is there a mechanism to engage participation of communities, private sector, foundations, NGOs in conservation and sustainable use, YES/NO? If yes, describe</i>
Rehabilitation	<i>Have any actions been undertaken for the rehabilitation of mangroves at the site. YES/NO? If yes, describe actions and number of hectares rehabilitated.</i>
Monitoring and trends of changes	<i>Has the site been monitored? YES/NO If yes, please describe monitoring design (ecological &amp; socio-economic indicators), monitoring practices and trends of changes related to habitat degradation and loss as well as influences to local community</i>
National initiatives and Projects	<i>Have any national initiatives and/or projects been executed at the site? YES/NO? If yes, please mention initiative project, dates executed and budget (if available). Plus any key references, reports on achievements.</i>
Fund raising and sustainable financial mechanisms	<i>Please outline budget sources for activities and any mechanism developed to sustain long term funding</i>
Recommendation	<i>Select one of the following recommendations regarding the site:</i> <ul style="list-style-type: none"> <li>• <i>Under effective management, no more support needed for the site</i></li> <li>• <i>Further support to implement prior activities in SCS SAP Project (list of priorities)</i></li> <li>• <i>Replace by another site or cancel: Please provide justifications</i></li> </ul>
<b>San Jose</b>	
Improvement of site management	<i>Is there any new management plan or regulation established at the site. YES/NO? Mention type and year established.</i>
	<i>Who is responsible for day-today management of the site? Mention number or persons.</i>
	<i>Is management and enforcement adequate/weak/lacking?</i>
Participation engagement	<i>Is there a mechanism to engage participation of communities, private sector, foundations, NGOs in conservation and sustainable use. YES/NO? If yes, describe</i>
Rehabilitation	<i>Have any actions been undertaken for the rehabilitation of mangroves at the site. YES/NO? If yes, describe actions and number of hectares rehabilitated.</i>
Monitoring and trends of changes	<i>Has the site been monitored? YES/NO If yes, please describe monitoring design (ecological &amp; socio-economic indicators), monitoring practices and trends of changes related to habitat degradation and loss as well as influences to local community</i>
National initiatives and Projects	<i>Have any national initiatives and/or projects been executed at the site? YES/NO? If yes, please mention initiative project, dates executed and budget (if available). Plus any key references, reports on achievements.</i>



Fund raising and sustainable financial mechanisms	<i>Please outline budget sources for activities and any mechanism developed to sustain long term funding</i>
Recommendation	<i>Select one of the following recommendations regarding the site:</i> <ul style="list-style-type: none"> <li>• <i>Under effective management, no more support needed for the site</i></li> <li>• <i>Further support to implement prior activities in SCS SAP Project (list of priorities)</i></li> <li>• <i>Replace by another site or cancel: Please provide justifications</i></li> </ul>
<b>Subic</b>	
Improvement of site management	<i>Is there any new management plan or regulation established at the site, YES/NO?</i> <i>Mention type and year established.</i>
	<i>Who is responsible for day-today management of the site?</i> <i>Mention number or persons.</i>
	<i>Is management and enforcement adequate/weak/lacking?</i>
Participation engagement	<i>Is there a mechanism to engage participation of communities, private sector, foundations, NGOs in conservation and sustainable use, YES/NO?</i> <i>If yes, describe</i>
Rehabilitation	<i>Have any actions been undertaken for the rehabilitation of mangoves at the site. YES/NO?</i> <i>If yes, describe actions and number of hectares rehabilitated.</i>
Monitoring and trends of changes	<i>Has the site been monitored? YES/NO</i> <i>If yes, please describe monitoring design (ecological &amp; socio-economic indicators), monitoring practices and trends of changes related to habitat degradation and loss as well as influences to local community</i>
National initiatives and Projects	<i>Have any national initiatives and/or projects been executed at the site? YES/NO?</i> <i>If yes, please mention initiative project, dates executed and budget (if available). Plus any key references, reports on achievements.</i>
Fund raising and sustainable financial mechanisms	<i>Please outline budget sources for activities and any mechanism developed to sustain long term funding</i>
Recommendation	<i>Select one of the following recommendations regarding the site:</i> <ul style="list-style-type: none"> <li>• <i>Under effective management, no more support needed for the site</i></li> <li>• <i>Further support to implement prior activities in SCS SAP Project (list of priorities)</i></li> <li>• <i>Replace by another site or cancel: Please provide justifications</i></li> </ul>
<b>Quezon</b>	
Improvement of site management	<i>Is there any new management plan or regulation established at the site, YES/NO?</i> <i>Mention type and year established.</i>
	<i>Who is responsible for day-today management of the site?</i> <i>Mention number or persons.</i>
	<i>Is management and enforcement adequate/weak/lacking?</i>
Participation engagement	<i>Is there a mechanism to engage participation of communities, private sector, foundations, NGOs in conservation and sustainable use, YES/NO?</i> <i>If yes, describe</i>
Rehabilitation	<i>Have any actions been undertaken for the rehabilitation of mangoves at the site. YES/NO?</i> <i>If yes, describe actions and number of hectares rehabilitated.</i>
Monitoring and trends of changes	<i>Has the site been monitored? YES/NO</i> <i>If yes, please describe monitoring design (ecological &amp; socio-economic indicators), monitoring practices and trends of changes related to habitat degradation and loss as well as influences to local community</i>
National initiatives and Projects	<i>Have any national initiatives and/or projects been executed at the site? YES/NO?</i> <i>If yes, please mention initiative project, dates executed and budget (if available). Plus any key references, reports on achievements.</i>
Fund raising and sustainable financial mechanisms	<i>Please outline budget sources for activities and any mechanism developed to sustain long term funding</i>
Recommendation	<i>Select one of the following recommendations regarding the site:</i> <ul style="list-style-type: none"> <li>• <i>Under effective management, no more support needed for the site</i></li> <li>• <i>Further support to implement prior activities in SCS SAP Project (list of priorities)</i></li> <li>• <i>Replace by another site or cancel: Please provide justifications</i></li> </ul>

In addition to the mangrove management at the priority sites of the SAP, additional key achievements towards the SCS SAP outcomes and outputs shall be reported.

**Table 10. Philippines - Key achievements towards the SCS SAP implementation (2008-2021)**

Regional Output	2008 National target (ha)	Implication at the national level	Details at sites
1.1.1 Declaration of 57,400 ha of mangrove as National Parks and Protected Areas	631	<i>Total area (ha) of mangrove as National Parks and Protected Areas</i>	<i>Site names &amp; area (ha) at each site</i>
1.1.2 Designation and plans for the management of 166,600 ha of mangrove as non-conversion, sustainable use areas	0	<i>Total area (ha) of mangrove as non-conversion, sustainable use areas</i>	<i>Site names &amp; area (ha) at each site</i>
1.1.3 Reform of laws and regulations for the sustainable use of 602,800 ha of mangrove forest	2,000	<i>Number of sites where management policies and institutional reform were improved</i>	<i>No of reforms and specify whether national or site specific, and if site specific which sites</i>
1.1.4 Replanting of 21,000 ha of deforested mangrove land	2,000	<i>Total area (ha) of mangrove replanted</i>	<i>Site names</i>
1.1.5 Biodiversity increased for 11,200 ha of mangrove forest via enrichment planting	1,000	<i>Total area (ha) of mangrove enrichment planting</i>	<i>Site names &amp; area (ha) at each site</i>
1.1.6 Established mechanism for monitoring management, ecological and socio-economic indicators at 26 sites	7 sites	<i>Total area (ha) of mangrove with established monitoring mechanism</i>	<i>Site names &amp; area (ha) at each site</i>

## 2.5. THAILAND

### Mangrove target sites in Thailand based on 2008 SAP

As indicated in the project which was approved for SAP implementation, 5 mangrove sites were proposed for Thailand as seen in the table below with the total area around 25.524 ha:

- Trad Province 7,031
- Thung Kha Bay - Savi Bay 3,543
- Pak Phanang Bay 8,832
- Kung Kraben Bay 640
- Welu River Estuary 5,478

### Summary of activities and outputs of the period 2008-2021

**Table 11. Thailand - Changes in management and restoration of key agreed sites since 2008**

	Trat Province
Improvement of site management	<i>Is there any new management plan or regulation established at the site. YES/NO? Mention type and year established.</i>
	<i>Who is responsible for day-today management of the site? Mention number or persons.</i>
	<i>Is management and enforcement adequate/weak/lacking?</i>

Participation engagement	<i>Is there a mechanism to engage participation of communities, private sector, foundations, NGOs in conservation and sustainable use. YES/NO? If yes, describe</i>
Rehabilitation	<i>Have any actions been undertaken for the rehabilitation of mangroves at the site. YES/NO? If yes, describe actions and number of hectares rehabilitated.</i>
Monitoring and trends of changes	<i>Has the site been monitored? YES/NO If yes, please describe monitoring design (ecological &amp; socio-economic indicators), monitoring practices and trends of changes related to habitat degradation and loss as well as influences to local community</i>
National initiatives and Projects	<i>Have any national initiatives and/or projects been executed at the site? YES/NO? If yes, please mention initiative project, dates executed and budget (if available). Plus any key references, reports on achievements.</i>
Fund raising and sustainable financial mechanisms	<i>Please outline budget sources for activities and any mechanism developed to sustain long term funding</i>
Recommendation	<i>Select one of the following recommendations regarding the site:</i> <ul style="list-style-type: none"> <li>• <i>Under effective management, no more support needed for the site</i></li> <li>• <i>Further support to implement prior activities in SCS SAP Project (list of priorities)</i></li> <li>• <i>Replace by another site or cancel: Please provide justifications</i></li> </ul>
<b>Thung Kha Bay - Savi Bay</b>	
Improvement of site management	<i>Is there any new management plan or regulation established at the site, YES/NO? Mention type and year established.</i>
	<i>Who is responsible for day-today management of the site? Mention number or persons.</i>
	<i>Is management and enforcement adequate/weak/lacking?</i>
Participation engagement	<i>Is there a mechanism to engage participation of communities, private sector, foundations, NGOs in conservation and sustainable use, YES/NO? If yes, describe</i>
Rehabilitation	<i>Have any actions been undertaken for the rehabilitation of mangroves at the site. YES/NO? If yes, describe actions and number of hectares rehabilitated.</i>
Monitoring and trends of changes	<i>Has the site been monitored? YES/NO If yes, please describe monitoring design (ecological &amp; socio-economic indicators), monitoring practices and trends of changes related to habitat degradation and loss as well as influences to local community</i>
National initiatives and Projects	<i>Have any national initiatives and/or projects been executed at the site? YES/NO? If yes, please mention initiative project, dates executed and budget (if available). Plus any key references, reports on achievements.</i>
Fund raising and sustainable financial mechanisms	<i>Please outline budget sources for activities and any mechanism developed to sustain long term funding</i>
Recommendation	<i>Select one of the following recommendations regarding the site:</i> <ul style="list-style-type: none"> <li>• <i>Under effective management, no more support needed for the site</i></li> <li>• <i>Further support to implement prior activities in SCS SAP Project (list of priorities)</i></li> <li>• <i>Replace by another site or cancel: Please provide justifications</i></li> </ul>
<b>Pak Phanang Bay</b>	
Improvement of site management	<i>Is there any new management plan or regulation established at the site. YES/NO? Mention type and year established.</i>
	<i>Who is responsible for day-today management of the site? Mention number or persons.</i>
	<i>Is management and enforcement adequate/weak/lacking?</i>
Participation engagement	<i>Is there a mechanism to engage participation of communities, private sector, foundations, NGOs in conservation and sustainable use. YES/NO? If yes, describe</i>
Rehabilitation	<i>Have any actions been undertaken for the rehabilitation of mangroves at the site. YES/NO? If yes, describe actions and number of hectares rehabilitated.</i>
Monitoring and trends of changes	<i>Has the site been monitored? YES/NO If yes, please describe monitoring design (ecological &amp; socio-economic indicators), monitoring practices and trends of changes related to habitat degradation and loss as well as influences to local community</i>

National initiatives and Projects	<i>Have any national initiatives and/or projects been executed at the site? YES/NO? If yes, please mention initiative project, dates executed and budget (if available). Plus any key references, reports on achievements.</i>
Fund raising and sustainable financial mechanisms	<i>Please outline budget sources for activities and any mechanism developed to sustain long term funding</i>
Recommendation	<i>Select one of the following recommendations regarding the site:</i> <ul style="list-style-type: none"> <li>• <i>Under effective management, no more support needed for the site</i></li> <li>• <i>Further support to implement prior activities in SCS SAP Project (list of priorities)</i></li> <li>• <i>Replace by another site or cancel: Please provide justifications</i></li> </ul>
<b>Kung Kraben</b>	
Improvement of site management	<i>Is there any new management plan or regulation established at the site, YES/NO? Mention type and year established.</i>
	<i>Who is responsible for day-today management of the site? Mention number or persons.</i>
	<i>Is management and enforcement adequate/weak/lacking?</i>
Participation engagement	<i>Is there a mechanism to engage participation of communities, private sector, foundations, NGOs in conservation and sustainable use, YES/NO? If yes, describe</i>
Rehabilitation	<i>Have any actions been undertaken for the rehabilitation of mangoves at the site. YES/NO? If yes, describe actions and number of hectares rehabilitated.</i>
Monitoring and trends of changes	<i>Has the site been monitored? YES/NO If yes, please describe monitoring design (ecological &amp; socio-economic indicators), monitoring practices and trends of changes related to habitat degradation and loss as well as influences to local community</i>
National initiatives and Projects	<i>Have any national initiatives and/or projects been executed at the site? YES/NO? If yes, please mention initiative project, dates executed and budget (if available). Plus any key references, reports on achievements.</i>
Fund raising and sustainable financial mechanisms	<i>Please outline budget sources for activities and any mechanism developed to sustain long term funding</i>
Recommendation	<i>Select one of the following recommendations regarding the site:</i> <ul style="list-style-type: none"> <li>• <i>Under effective management, no more support needed for the site</i></li> <li>• <i>Further support to implement prior activities in SCS SAP Project (list of priorities)</i></li> <li>• <i>Replace by another site or cancel: Please provide justifications</i></li> </ul>
<b>Welu River estuary</b>	
Improvement of site management	<i>Is there any new management plan or regulation established at the site. YES/NO? Mention type and year established.</i>
	<i>Who is responsible for day-today management of the site? Mention number or persons.</i>
	<i>Is management and enforcement adequate/weak/lacking?</i>
Participation engagement	<i>Is there a mechanism to engage participation of communities, private sector, foundations, NGOs in conservation and sustainable use. YES/NO? If yes, describe</i>
Rehabilitation	<i>Have any actions been undertaken for the rehabilitation of mangroves at the site. YES/NO? If yes, describe actions and number of hectares rehabilitated.</i>
Monitoring and trends of changes	<i>Has the site been monitored? YES/NO If yes, please describe monitoring design (ecological &amp; socio-economic indicators), monitoring practices and trends of changes related to habitat degradation and loss as well as influences to local community</i>
National initiatives and Projects	<i>Have any national initiatives and/or projects been executed at the site? YES/NO? If yes, please mention initiative project, dates executed and budget (if available). Plus any key references, reports on achievements.</i>
Fund raising and sustainable financial mechanisms	<i>Please outline budget sources for activities and any mechanism developed to sustain long term funding</i>
Recommendation	<i>Select one of the following recommendations regarding the site:</i> <ul style="list-style-type: none"> <li>• <i>Under effective management, no more support needed for the site</i></li> <li>• <i>Further support to implement prior activities in SCS SAP Project (list of priorities)</i></li> </ul>

• *Replace by another site or cancel: Please provide justifications*

In addition to the mangrove management at the priority sites of the SAP, additional key achievements towards the SCS SAP outcomes and outputs shall be reported.

**Table 12. Thailand - Key achievements towards the SCS SAP implementation (2008-2021)**

Regional Output	2008 National target (ha)	Implication at the national level	Details at sites
1.1.1 Declaration of 57,400 ha of mangrove as National Parks and Protected Areas	1,400	<i>Total area (ha) of mangrove as National Parks and Protected Areas</i>	<i>Site names &amp; area (ha) at each site</i>
1.1.2 Designation and plans for the management of 166,600 ha of mangrove as non-conversion, sustainable use areas	1,600	<i>Total area (ha) of mangrove as non-conversion, sustainable use areas</i>	<i>Site names &amp; area (ha) at each site</i>
1.1.3 Reform of laws and regulations for the sustainable use of 602,800 ha of mangrove forest	10,000	<i>Number of sites where management policies and institutional reform were improved</i>	<i>No of reforms and specify whether national or site specific, and if site specific which sites</i>
1.1.4 Replanting of 21,000 ha of deforested mangrove land	8,000	<i>Total area (ha) of mangrove replanted</i>	<i>Site names</i>
1.1.5 Biodiversity increased for 11,200 ha of mangrove forest via enrichment planting	3,200	<i>Total area (ha) of mangrove enrichment planting</i>	<i>Site names &amp; area (ha) at each site</i>
1.1.6 Established mechanism for monitoring management, ecological and socio-economic indicators at 26 sites	5 sites	<i>Total area (ha) of mangrove with established monitoring mechanism</i>	<i>Site names &amp; area (ha) at each site</i>

## 2.6. VIET NAM

### Mangrove target sites in Viet Nam based on 2008 SAP

As indicated in the project which was approved for SAP implementation, 4 mangrove sites were proposed for Viet Nam as seen in the table below with the total area around 18,509 ha:

- Tien Yen            2,537
- Xuan Thuy        1,775
- Can Gio            8,958
- Ca Mau            5,239

### Summary of activities and outputs of the period 2008-2021

**Table 13. Viet Nam - Changes in management and restoration of key agreed sites since 2008**

	Tien Yen
Improvement of site management	<i>Is there any new management plan or regulation established at the site. YES/NO? Mention type and year established.</i>
	<i>Who is responsible for day-today management of the site? Mention number or persons.</i>
	<i>Is management and enforcement adequate/weak/lacking?</i>

Participation engagement	<i>Is there a mechanism to engage participation of communities, private sector, foundations, NGOs in conservation and sustainable use. YES/NO? If yes, describe</i>
Rehabilitation	<i>Have any actions been undertaken for the rehabilitation of mangroves at the site. YES/NO? If yes, describe actions and number of hectares rehabilitated.</i>
Monitoring and trends of changes	<i>Has the site been monitored? YES/NO If yes, please describe monitoring design (ecological &amp; socio-economic indicators), monitoring practices and trends of changes related to habitat degradation and loss as well as influences to local community</i>
National initiatives and Projects	<i>Have any national initiatives and/or projects been executed at the site? YES/NO? If yes, please mention initiative project, dates executed and budget (if available). Plus any key references, reports on achievements.</i>
Fund raising and sustainable financial mechanisms	<i>Please outline budget sources for activities and any mechanism developed to sustain long term funding</i>
Recommendation	<i>Select one of the following recommendations regarding the site:</i> <ul style="list-style-type: none"> <li>• <i>Under effective management, no more support needed for the site</i></li> <li>• <i>Further support to implement prior activities in SCS SAP Project (list of priorities)</i></li> <li>• <i>Replace by another site or cancel: Please provide justifications</i></li> </ul>
<b>Xuan Thuy</b>	
Improvement of site management	<i>Is there any new management plan or regulation established at the site, YES/NO? Mention type and year established.</i>
	<i>Who is responsible for day-today management of the site? Mention number or persons.</i>
	<i>Is management and enforcement adequate/weak/lacking?</i>
Participation engagement	<i>Is there a mechanism to engage participation of communities, private sector, foundations, NGOs in conservation and sustainable use, YES/NO? If yes, describe</i>
Rehabilitation	<i>Have any actions been undertaken for the rehabilitation of mangroves at the site. YES/NO? If yes, describe actions and number of hectares rehabilitated.</i>
Monitoring and trends of changes	<i>Has the site been monitored? YES/NO If yes, please describe monitoring design (ecological &amp; socio-economic indicators), monitoring practices and trends of changes related to habitat degradation and loss as well as influences to local community</i>
National initiatives and Projects	<i>Have any national initiatives and/or projects been executed at the site? YES/NO? If yes, please mention initiative project, dates executed and budget (if available). Plus any key references, reports on achievements.</i>
Fund raising and sustainable financial mechanisms	<i>Please outline budget sources for activities and any mechanism developed to sustain long term funding</i>
Recommendation	<i>Select one of the following recommendations regarding the site:</i> <ul style="list-style-type: none"> <li>• <i>Under effective management, no more support needed for the site</i></li> <li>• <i>Further support to implement prior activities in SCS SAP Project (list of priorities)</i></li> <li>• <i>Replace by another site or cancel: Please provide justifications</i></li> </ul>
<b>Can Gio</b>	
Improvement of site management	<i>Is there any new management plan or regulation established at the site. YES/NO? Mention type and year established.</i>
	<i>Who is responsible for day-today management of the site? Mention number or persons.</i>
	<i>Is management and enforcement adequate/weak/lacking?</i>
Participation engagement	<i>Is there a mechanism to engage participation of communities, private sector, foundations, NGOs in conservation and sustainable use. YES/NO? If yes, describe</i>
Rehabilitation	<i>Have any actions been undertaken for the rehabilitation of mangroves at the site. YES/NO? If yes, describe actions and number of hectares rehabilitated.</i>
Monitoring and trends of changes	<i>Has the site been monitored? YES/NO If yes, please describe monitoring design (ecological &amp; socio-economic indicators), monitoring practices and trends of changes related to habitat degradation and loss as well as influences to local community</i>



National initiatives and Projects	<i>Have any national initiatives and/or projects been executed at the site? YES/NO? If yes, please mention initiative project, dates executed and budget (if available). Plus any key references, reports on achievements.</i>
Fund raising and sustainable financial mechanisms	<i>Please outline budget sources for activities and any mechanism developed to sustain long term funding</i>
Recommendation	<i>Select one of the following recommendations regarding the site:</i> <ul style="list-style-type: none"> <li>• <i>Under effective management, no more support needed for the site</i></li> <li>• <i>Further support to implement prior activities in SCS SAP Project (list of priorities)</i></li> <li>• <i>Replace by another site or cancel: Please provide justifications</i></li> </ul>
<b>Ca Mau</b>	
Improvement of site management	<i>Is there any new management plan or regulation established at the site, YES/NO? Mention type and year established.</i> <i>Who is responsible for day-today management of the site? Mention number or persons.</i> <i>Is management and enforcement adequate/weak/lacking?</i>
Participation engagement	<i>Is there a mechanism to engage participation of communities, private sector, foundations, NGOs in conservation and sustainable use, YES/NO? If yes, describe</i>
Rehabilitation	<i>Have any actions been undertaken for the rehabilitation of mangoves at the site. YES/NO? If yes, describe actions and number of hectares rehabilitated.</i>
Monitoring and trends of changes	<i>Has the site been monitored? YES/NO If yes, please describe monitoring design (ecological &amp; socio-economic indicators), monitoring practices and trends of changes related to habitat degradation and loss as well as influences to local community</i>
National initiatives and Projects	<i>Have any national initiatives and/or projects been executed at the site? YES/NO? If yes, please mention initiative project, dates executed and budget (if available). Plus any key references, reports on achievements.</i>
Fund raising and sustainable financial mechanisms	<i>Please outline budget sources for activities and any mechanism developed to sustain long term funding</i>
Recommendation	<i>Select one of the following recommendations regarding the site:</i> <ul style="list-style-type: none"> <li>• <i>Under effective management, no more support needed for the site</i></li> <li>• <i>Further support to implement prior activities in SCS SAP Project (list of priorities)</i></li> <li>• <i>Replace by another site or cancel: Please provide justifications</i></li> </ul>

In addition to the mangrove management at the priority sites of the SAP, additional key achievements towards the SCS SAP outcomes and outputs shall be reported.

**Table 14. Viet Nam - Key achievements towards the SCS SAP implementation (2008-2021)**

<b>Regional Output</b>	<b>2008 National target (ha)</b>	<b>Implication at the national level</b>	<b>Details at sites</b>
1.1.1 Declaration of 57,400 ha of mangrove as National Parks and Protected Areas	30,000	<i>Total area (ha) of mangrove as National Parks and Protected Areas</i>	<i>Site names &amp; area (ha) at each site</i>
1.1.2 Designation and plans for the management of 166,600 ha of mangrove as non-conversion, sustainable use areas	0	<i>Total area (ha) of mangrove as non-conversion, sustainable use areas</i>	<i>Site names &amp; area (ha) at each site</i>
1.1.3 Reform of laws and regulations for the sustainable use of 602,800 ha of mangrove forest	50,000	<i>Number of sites where management policies and institutional reform were improved</i>	<i>No of reforms and specify whether national or site specific, and if site specific which sites</i>



1.1.4 Replanting of 21,000 ha of deforested mangrove land	8,000	<i>Total area (ha) of mangrove replanted</i>	<i>Site names</i>
1.1.5 Biodiversity increased for 11,200 ha of mangrove forest via enrichment planting	2,000	<i>Total area (ha) of mangrove enrichment planting</i>	<i>Site names &amp; area (ha) at each site</i>
1.1.6 Established mechanism for monitoring management, ecological and socio-economic indicators at 26 sites	4 sites	<i>Total area (ha) of mangrove with established monitoring mechanism</i>	<i>Site names &amp; area (ha) at each site</i>

## ANNEXES

### ANNEX 1. DETAILS OF PROPERTIES AND VARIABLES, DATA AND INFORMATION REQUIREMENTS FOR MANGROVE SITE CHARACTERIZATION.

	Properties and Variables	Data & Information needed	
Geographic information	Co-ordinates	Latitude & Longitude central position of areas <50 Ha; GPS Boundary or number (min 4) of paired co-ordinates for larger areas; end points for linear strips.	
	Area	(Units Km <sup>2</sup> or Ha)	
Physical Environment	Substrate (soil)	Proportion of sand, silt, clay	
		Bulk Density	
	Freshwater regime		Mean monthly rainfall (mm)
			Mean monthly River discharge (m <sup>3</sup> sec <sup>-1</sup> )
	Tidal regime		Range (m)
			Diurnal, semi-diurnal, mixed
	Slope	Degrees (tangent)	
	Temperature	Mean, max, min, monthly (°C)	
	Soil Salinity	Range (psu)	
	Water quality		Total suspended solids
			Contaminant concentration/flux
			Other parameters as available
		Geomorphic class	Description, lagoon, tidal flats, estuaries, islands etc.
Environmental state information	Present status	Vegetation Canopy Cover (% area)	
	Pressure (threats) – present	% loss of species or area or canopy cover in last five years	
	Pressure (threats) – future	Estimated future losses from known development plans	
Social & use information	Ownership	Description: Federal, State, Community, private	
	Management regime	Description: Land-use planning, Institutional framework, stakeholder co-ordination, forestry practices, restoration replanting, stakeholder investment, fishery practices.	
	Current use	Description: Commercial, subsistence	
	Potential use	Alternative livelihoods	
	Significance/national importance	Use designation in national/state master plans	
Biological data	Natural/Managed	Proportions of total area natural and replanted	
	Species diversity	(True) Mangrove <sup>1</sup> tree species Density (no ha <sup>-1</sup> )	
		Crustacea – Crab genera, density	
		Molluscs – Bivalve genera, density	
		Molluscs – gastropods genera, density	
		Fish – Residents, species abundance	
		Fish – Transient for breeding, species abundance	
		Mammals, resident	
		Birds, resident species	
		Birds, migratory species	
		Reptiles, resident species	
		List others as available (e.g. mud lobster)	
	Genetic diversity		
	Heterogeneity	Formations – number of canopy layers (strata)	

	Properties and Variables	Data & Information needed
		Average and range Height (m), by species
		Average and range Girth, (cm) by species
		Zonation – number of zones by dominant species
		Ecotones – average width (m), major species
	SCS Endemic species	List species and abundance
	Endangered or threatened species (IUCN criteria)	List species and abundance if data available
Stress-pressure Information	Intrinsic/internal sources of change	Resident human population
		Natural e.g. frequency of typhoon throw, change in allochthonous sediment inputs, marine based flooding
	Extrinsic/external sources of change	Changes in catchment basin e.g. dam construction water diversion etc.
	Rates of change, historical review	Rates of loss of cover and/or species over the period 1990-2000
	Social and economic drivers of change in environmental state	Description, quantitative if possible e.g. pop'n growth, immigration, income/livelihood, demand/consumption, management regime)
Economic valuation <sup>2</sup>	Values of direct use	Timber, charcoal, living marine resource extraction Yr 2000 local currency total
	Values of indirect use	Carbon sequestration, ecotourism, nursery areas for shrimps Yr 2000 local currency total
	Values from environmental services	Coastal protection, sediment stabilisation, water quality enhancement, contaminant sink, reduction of wave energy & erosion
	Value of investment	Restoration, replanting
	Values of potential (commercial) sustainable use	
	Total Economic Value	Yr 2000 local currency total

<sup>2</sup> Barbier, E.B. 1997. *Economic Valuation of wetland: A guide for policy makers and planners*. RAMSAR Convention Bureau, IUCN.