



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

CHINA
National Profile

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1. INTRODUCTION

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

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

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

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

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

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

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

2. STATUS AND TRENDS IN COASTAL HABITATS AND THEIR MANAGEMENT

2.1 Distribution and diversity of coastal habitats

Mangroves: China contributes less significantly to the overall total of mangroves in the South China Sea with 23,400 ha of the total 1.7 million ha. In terms of species richness, China is less significant with 26 true mangroves of the total 45 observed in the South China Sea. In China, mangroves are commonly found in the three regions, east coast of Hainan, Leizhou Peninsula, and Guangxi coast, where mangrove areas are 2,763 ha at east coast of Hainan, 7,242 ha in Leizhou Peninsula and 8,375 ha at Guangxi coast respectively, and 18,389 ha altogether, accounting for 81% of total mangrove area in China.

Mangrove trees in China mainly grow along the coastline of Hainan, Guangxi, Guangdong, Fujian, Taiwan, Hong Kong, and Macao. A total of 36 species of mangrove are recorded in China, of which 26 species in 15 genera under 13 families are true mangrove and 10 species in 10 genera belonging to 9 families are semi-mangrove. Geographically, 35 species of mangrove trees are found growing in Hainan, 19 species in Guangdong, 18 species in Guangxi, 17 species in Taiwan, 9 species in Fujian, and 5 species in Macao, as those introduced species are not accounted.



Seagrass: Of the 78,300 ha of known seagrass sites in the South China Sea, around 1,960 ha is located in the coastal waters of China. The significant seagrass areas include: Liusha seagrass bed (900 ha), Hepu seagrass bed (540 ha) and Lian seagrass bed (320 ha). Of the 18 species of seagrass found in the coastal waters of the South China Sea, 8 are present in waters of China. The coastlines of the northern sub-region in China have characteristics of subtropical areas and the species include *Zostera japonica* together with *Halophila beccarii*, *Halophila ovalis*, *Halophila decipiens*, *Enhalus acoroides*, *Thalassia hemprichii*, *Halodule pinifolia*, *Halodule uninervis*, *Cymodocea rotundata* and *Ruppia maritime*. The sub-tropical species *Z. japonica* often forms mono-specific seagrass beds and has been recorded in Tieshan Bay and Pearl Bay, Guangxi Province, and Hong Kong.



Coastal wetlands: around 20,276 ha is found in China in the total wetland area of 4,201,145 ha identified in the South China Sea. Estuaries, lagoons and inter-tidal flats are dominant features of China's coasts bordering the South China Sea. Significant estuarine areas include the Pearl River (12,783 ha) and Beilun River (1,083 ha). Significant lagoon is Wenchang (218 ha). The three significant inter-tidal flats are Shantou (1,435 ha), Hepu (3,951 ha) and Zhazhou (806 ha).



2.2 Threats to coastal habitats

Threats to mangroves: Historical estimates suggested that mangrove area in China was once as much as 250,000 ha. In early 1950s, mangrove coverage in China was still around 50,000 ha. In 2001, the remaining mangrove in China only covers an area of 22,639 ha (22,025 ha in mainland China mainly in the three provinces of Guangdong (9,084 ha), Guangxi (8,375 ha), and Hainan (3,930 ha); and 614 ha in Taiwan, Hong Kong, and Macao).

Contemporary causes of loss of mangrove habitat are no longer dominated by shrimp culture although this remains one cause in China. Conversion of mangrove to land for industrial purposes (including harbour construction) has grown over the last ten years and is now significant in China. Degradation of mangrove habitats as a consequence of chronic pollution from shrimp farming operations is now more prevalent in China. Mangroves are also threatened by grazing, bird hunting, commercial animal collecting, exotic mangrove species, and pest and diseases



Threats to seagrass: The National Action Plan for Seagrass in China (2007) has identified serious threats to seagrass beds as follows: building shrimp ponds; aquaculture with seawater; fishing by netting; poisoning and electroforming shrimps and exploding fish; digging shellfish; trawling; pollution; and port and sea-route digging. The key threats to seagrass in ranked order of their significance to basin level following the regional assessment loss of this dominant coastal habitat include:

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



Threats to coastal wetlands: The National Action Plan of China on Wetlands (2006) identified the threats to the wetlands as natural disturbances and human disturbances. Natural disturbances are natural changes causing disturbances in the wetland such as climate change, flooding, drought, volcano explosion, fires, earthquakes, and plant diseases and pests. Human factors include: enclosing beaches for land reclamation to impact the sea-route and flood discharge, destroy the wetland plants, cause the coastal eroding and degrade the habitats; over-exploitation of resource.



2.3 Management of coastal habitats

Mangrove management

In China, the total area of mangroves is 23,400 ha under various forms of management. Table 1 presents the estimated areas of mangrove under different forms of land-use designation and management in China.

Table 1: Estimated areas of mangrove under different forms of land-use designation and management in China

Land-use designation and management	Area (ha)
Total area (ha)	23,400
Production forest	0
Conversion	0
Parks & Protected Areas (Conservation) non-extractive use	15,800
Non-use of mangrove but extractive resource use (fish, crabs etc.)	7,670
Private land, unregulated use	0
Area currently under management Regulated in laws/regulations	15,800
Areas estimated as currently under sustainable management	15,800

It is noted that in China, areas considered as currently being sustainably managed include all mangrove lands contained within National Parks and Protected Areas (15,800 ha) while 7,670 ha of mangrove area are used for extractive use of non-mangrove resources (e.g. fish and crabs). A total of 16,800 ha (72 percent) of the total China's mangroves of 23,400 ha are deemed to be sustainably managed.



The China Mangroves National Action Plan 2000-2010 (2004) has outlined threats and issues concerning mangrove and its management in China. The issues concerning mangrove management in China include: no specific legislation on mangroves, cross-sectoral management and poor coordination; single ownership of mangroves and existing management regime hinder the inflow of investment; lack of rational use technology and mode; lack of national norms and criteria of mangrove forestation, monitoring, and evaluation; short of funds for mangrove protection and research; and no platform to improve mangrove education, information share, and public involvement.

Seagrass management

In China, among four known seagrass sites with a total area of 1,960 ha, 150 ha are under some form of management. The significant site is located in Liusha seagrass bed. The areas and status of management at these sites is summarized in Table 2.

Table 2: Status of known seagrass sites in China coastal waters

Name	Area (ha)	Legal Status	Area under Management	Management Effectiveness
China	1,960		150	
Hepu seagrass bed	540	National Dugong Reserve	150	Medium
Liusha seagrass bed	900	None	No	N/A
LiAn seagrass bed	320	Proposed Marine Park	No	N/A
Xincun seagrass bed	200	Proposed Marine Park	No	N/A

In terms of seagrass management, the problems identified in the NAP include: inadequate laws and regulations related to the conservation of seagrass; limited coordination and cooperation among governments, non-governmental organizations and local commune on the conservation and rational use of seagrass; slow development and construction of seagrass natural reserves or demonstration sites; human activities such as pollution discharge and coastal development projects; limited knowledge and awareness on seagrass ecosystem functions and benefits resulting to degradation; limited or shortage of scientific researches on seagrass including knowledge/information exchange; and limited human resources and capacity on seagrass management.



Coastal wetland management

In China, the total area of wetlands is 20,276 ha with three specific types of wetlands as follows: estuaries (13,866 ha), lagoons (218 ha) and inter-tidal flats (6,192 ha). Table 3 presents the areas and management status of wetlands types in China.

Table 3 Legal and management status of known inter-tidal mudflats, estuaries and coastal lagoons in China

Name of site	Area (ha)	Legal and Management Status		
		Protected – Non-use (Subsistence/commercial)	Sustainable use	Non-sustainable use
Estuaries				
Pearl river	12,783	Wetland Park (200ha)	N.A.	N.A.
Beilun river	1,083	National level nature reserve	N.A.	N.A.
Lagoons				
Wenchang	218	Provincial level nature reserve	N.A.	N.A.
Inter-tidal flats				
Shantou	1,435	Municipal level nature reserve	N.A.	N.A.
Hepu	3,951	Municipal level nature reserve	N.A.	N.A.
Zhanzhou	806	Provincial level nature reserve	N.A.	N.A.

The challenges for coastal wetland management in China included lack of conservation and rehabilitation, destruction outside the wetland reserve; lack of integrated legislation on resource limits or integrated management of wetland resources; overlapping of wetland administration; lack of special wetland cooperation institution; lack of staff of wetland conservation, management and financing; water quality deteriorating and biodiversity affected negatively caused by pollution; and some crisis caused by introduction of exotic species into wetlands.



3. SAP TARGET AND PLANNED ACTIONS

3.1 Mangroves

The Strategic Action Programme targets for mangroves in China focus on: improving the management of mangrove areas utilized for the sustainable use of mangrove resources. This will be achieved by increasing the area of mangrove designated as a National Park or assigned Protected Area status from 15,800 to 21,130 ha including the replanting of 500 ha of deforested mangrove land and the enrichment planting of a further 5,000 ha of mangrove to increase biodiversity. Priority areas for management in China include Dongzhaigang, Fangchenggang and Qinglangang. Table 4 details the specific Strategic Action Programme targets for mangrove in China.

The following sites were identified in the SAP:

- Shangkou (812 ha)
- Qinglangang (1,189 ha)
- Dongzhaigang (1,513 ha)
- Futien (82 ha)
- Fangchenggang (1,41 ha)

Table 4: Strategic Action Programme targets for future mangrove management in China

SCS SAP Outputs and targets	China
Output 1.1.1 Declaration of 57,400 ha of mangrove as National Parks and Protected Areas	5,330
1.1.2 Designation and plans for the management of 166,600 ha of mangrove as non-conversion, sustainable use areas	0
1.1.3 Reform of laws and regulations for the sustainable use of 602,800 ha of mangrove forest	0
1.1.4 Replanting of 21,000 ha of deforested mangrove land	500
1.1.5 Biodiversity increased for 11,200 ha of mangrove forest via enrichment planting	5,000
1.1.6 Established mechanism for monitoring management, ecological and socio-economic indicators at 26 sites [based on SAP results framework]	10,830

The NAP also outlined the goals and actions for a sustainable mangrove management in China. The main goal is to minimize the degradation of natural mangrove forests in China. The specific goals are to:

- Develop mangrove coordination mechanism and formulate technical criteria
- Protect and rehabilitate the existing mangroves and plant mangrove trees
- Improve mangrove management
- Develop new technologies and modes to rationally use mangroves
- Improve mangrove education and international cooperation

3.2 Seagrass

In China, the Strategic Action Programme identifies four known seagrass sites with a total area of 1,960 ha. All four seagrass sites are targeted for management through the Strategic Action Programme and will result in an increase in seagrass area under management by 700 ha. The significant site is located in Liusha seagrass bed. The areas and status of management at these sites is summarized in Table 5.

Table 5: Status of known seagrass sites and related targets of the Strategic Action Programme for seagrass in China coastal waters

Name	Area (ha)	Target for Management through SAP (ha)
China	1,960	700
Hepu seagrass bed	540	150
Liusha seagrass bed	900	200
LiAn seagrass bed	320	200
Xincun seagrass bed	200	150

Specific national activities will include putting under sustainable management with supporting laws and regulations of seagrass areas, amending national management plans for existing MPAs with significant seagrass areas, to include specific seagrass-related management actions, designating new Marine Protected Areas focusing on seagrass areas identified in the prioritized listings of the SCS Project and establishing mechanisms for monitoring management, ecological and socio-economic indicators at 4 sites (Table 6).

Table 6. Outcome 1.3 outputs, sites and targets for the management of seagrasses in China

Outputs	China
1.3.1 Twenty-one seagrass areas totalling 15,848 ha under sustainable management with supporting laws and regulations	Hepu seagrass bed Liusha seagrass bed LiAn seagrass bed Xincun seagrass bed
1.3.2 Amended management plans for 7 existing MPAs with significant seagrass areas, to include specific seagrass-related management actions and policy, legal & institutional reforms	
1.3.3 Designation of 7 new Marine Protected Areas focusing on seagrass areas	
1.3.4 Established mechanism for monitoring management, ecological and socio-economic indicators at 21 sites	
Total seagrass area in the 4 target sites (ha)	1,960
Target for management through the SCS SAP project	700

The goals of the action plan are to protect seagrass in China through the following actions, including to:

- Bring the action programs into the coordinating mechanisms of biological species
- Adopt effective measures to avoid further destruction on seagrass and their eco-system

- Reduce or reverse the phenomenon that seagrass and their ecosystem are destroyed seriously
- Maintain and exert all the functions and benefits of seagrass ecosystem
- Ensure sustainable use of seagrass resources to bring benefit to present and future generations

The objectives of the action plan are to:

- Establish perfect mechanism of protecting seagrass and using seagrass rationally
- Set up a coordinating mechanism of managing seagrass ecosystem
- Strengthen the construction of Natural Reserves for Seagrass
- Strengthen the conservation of seagrass and carrying out wide propaganda, education and personnel training
- Establish information system of seagrass
- Strengthen scientific researches on seagrass

3.3 Coastal wetlands

Strategic Action Programme implementation in China will result in the adoption and implementation of management plan for: 2 estuaries – Pearl River (12,783 ha) and Beilun River (1,083 ha); 1 lagoon – Wenchang (218 ha); and 3 inter-tidal flats – Shantou (1,435 ha), Hepu (3,951 ha) and Zhanzhou (806 ha). This includes the declaration of wetland areas with protection status and needed management reforms, and adoption of a regional estuary monitoring scheme for national implementation. Table 7 indicated the regional outcomes and the target for the management of wetlands in China.

Table 7. Outcome 1.4 outputs, sites and targets for the management of wetlands in China

Outputs	China
1.4.1 Integrated management plans developed and under implementation for at least 3 lagoons (26,818 ha), 9 estuaries (614,680 ha), 5 tidal flats (96,903 ha), 1 peat swamp (45,700 ha) and 1 non-peat swamp (9,808 ha)	Pearl river Beilun river Shantou
1.4.2 Declaration of at least 7 wetland areas with protection status (i.e. non-hunting area, nature reserves, protected areas, Ramsar Sites).	Hepu Danzhou
1.4.3 Adoption of a regional estuary monitoring scheme and its national implementation	Wenchang
Total wetland area in the 6 target sites (ha)	14,084

The NAP outlined the basic principles and objectives including the priority actions of wetlands conservation and sustainable utilization in China. The NAP aims to adopt effective measures, regarding prevention as principle, eliminating or alleviating the losing and degraded reasons of wetland, alleviating or controlling the degraded reality of wetland, protecting the wetland and biodiversity that have global important meaning, maintaining the ecological character and basic function of wetland ecosystem, promoting the sustainable development in society, economy and ecology in wetland and surrounding areas, enhancing the ability of integrating protection and development through establishing the demonstration sites, finding out the methods and approaches of coastal wetland conservation and utilization which adapt to South China Sea in China, establishing the conservation model of coastal wetland, then guaranteeing the sustainable utilization of coastal resources and environment in South China Sea. The objectives of the NAP are to:

- Establish wetland nature reserve to protect some important wetland and their biodiversity
- Establish a mechanism for management and coordination regarding wetland conservation and wise use
- Formulation and improvement of wetland conservation legislation
- Inventory, valuation and monitoring of wetland
- Strengthen scientific research on wetlands
- Establishment of an information database and management system

- Public awareness raising, education and personnel training
- Mobilization of public participation

3.4 Land-based pollution

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

The National Action Plan for Land-Based Pollution of China (2007) outlined the principles for the development of the national action plan including the objectives and actions to be taken, from 2005-2010 and 2011-2015. The action objectives and focus of the national action plan are: control of industrial wastewater, sewage, solid waste (domestic and hazardous), agricultural non-point pollution, and marine petroleum pollution including eco-environmental protection, harmonization of national policies and laws including institutions and functions, revision and development of standards, awareness and information exchange, environmental scientific investigation and study and monitoring, sustainability of action programs, and financing and investment.



4. NATIONAL BASELINE INFORMATION AND DATA

4.1 National reports and publications

During implementing the SCS Project, the detailed national reports on mangroves, coral reefs, seagrass, wetlands, land-based pollution and economic valuation and series of national action plans of China were prepared as a baseline resource for Strategic Action Programme implementation. Some technical reports also developed (Table 8) along with documents related to a good practices on mangrove management¹.

¹ available at http://www.unepscs.org/South_China_Sea_Knowledge/Lessons_Learned/SCS_Lessons_Learned.html

Table 8. List of developed documents and contacting focal points in China

Component	Title	Date	Focal Point/Institution
Mangrove	Economic Valuation of Mangroves in China	2003	Hangqing Fan Guangxi Mangrove Research Center
	China Mangrove National Action Plan by 2015		
	Technical Criteria of Mangrove Afforestation at Demosite	2004	
	China Mangrove National Action Plan 2000-2010	2007	
	China Mangrove National Report	2003	
	Activities of Fangchenggang Mangrove Friendship Association		
	Establishing a Framework for Sustainable Management of Mangroves Based on Government Policy at the Fangchenggang Demonstration Site	2008	
Seagrass	Review Economic Valuation Criteria and Its Application in China	2003	Xiaoping Huang South China Sea Institute of Oceanology
	GIS Maps of Seagrass Beds of China	2003	
	Characterisation of Hepu Seagrass Bed in Guanxi of China (Draft)	2003	
	Seagrass Metadata of China	2003	
	Seagrass National Action Plan	2007	
	Seagrass National Report 1	2005	
	Seagrass National Report 2	2006	
	Review of National Legislation of Seagrass in China	2002	
	Demonstration Site Proposal of Liusha Seagrass Bed in China	2003	
	Review of Past and Ongoing Projects on Seagrass in China	2002	
	Questionnaire on Data of Seagrass in China	2003	
	Causal Chain Analysis of Threats on Seagrass Beds in China	2003	
	Characterisation of Xincun Seagrass Bed in Hainan of China (Draft)	2003	
	Demonstration Site Proposal of Hepu Seagrass Bed in China	2003	
	Seagrass National Report of China (Draft 4)	2005	
	Present Threats to Key Seagrass Beds of China	2003	
National Action for Seagrass of China (Draft 6)	2006		
Wetlands	National Report of China on Wetlands		Chen Guizhu Institute of Environmental Sciences
	Coastal Wetlands Report		
	National Action Plan of China on Wetlands	2006	
Land-based Pollution	Land-based Pollution National Action Plan	2007	Han Baoxin South China Institute of Environmental Sciences
	National Action Plan: Clean Sea Action Plan in Guanxi Autonomous Region	2005	
	National Action Plan: Clean Sea Action Plan in Hainan Province	2006	
	National Report of China on Land-based Pollution in South China Sea - Final Version	2007	
	The Feasibility Study Report of the Maozhouhe River (Loucun River and Xinpou River Branch)	2005	
	Land-based Pollution in the Coastal Region of South China (China National Report)	2004	
	Past and Ongoing Projects Related to Land-based Pollution in the South China Coastal Region (China National Report)	2004	
	Review on National Legal Framework and Institution Arrangement (China National Report)	2004	
	Review on the Currently Executive Criteria for National Decision Making in South China Coastal Region (China National Report)	2004	
	Land-based Pollution Document 2005-2015		
	National Action Plan for Land-based Pollution in South China Coastal Region (Chinese Version 1)	2004	
	National Action Plan: Clean Sea Action Plan in Guanxi Province (Chinese Ver 1)		

Component	Title	Date	Focal Point/Institution
Economic Valuation	The Economic Valuation of Coastal Habitats in South China Sea (Chinese Part)	2006	South China Institute of Environmental Sciences
Others	National Report of China on the Formulation of a Transboundary Diagnostic Analysis and Preliminary Framework of a SAP for the SCS		

4.2 Site characterizations

The SAP for the South China Sea and NAPs of China identified 14 priority sites where interventions will be made for sustainable management of China coastal habitats (Table 9). Among them, Hepu is selected for both thematic areas (Seagrass and Wetlands). Comprehensive site characterization information and data contained best available information for each priority site identified for action as part of Strategic Action Programme implementation. Specific site-level information and data compiled in each site characterization include details of: the geographical locations and boundaries of the sites (including coordinate); the site's physical environment; environmental state; socio-economic and resource use information; biological data; and information on the status of existing management. These baseline assessments of the sites have been made accessible online at <http://gis.unepscs.org>.

Table 9. The sites selected for implementing the SAP in China

Mangroves (5 sites, 10,830 ha)	Seagrass (4 sites, 700 ha)	Wetlands (6 sites, 20,276 ha)
Shangkou	Hepu seagrass bed	Pearl river
Qinglangang	Liusha seagrass bed	Beilun river
Dongzhaigang	LiAn seagrass bed	Shantou
Futien	Xincun seagrass bed	Hepu
Fangchenggang		Danzhou
		Wenchang

The data required for prioritization of these priority sites were provided sufficiently by focal points on mangroves, seagrass and coastal wetlands during the SCS project. The Table 10, 11, 12) below were quoted from “*Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand*”. South China Sea Knowledge Document No. 2. UNEP/GEF/SCS/Inf.2 in order to provide basic information of the sites.

Table 10. Selected physical and biological properties and variables for mangrove potential demonstration sites in China

Site	Shangkou	Qinglangang	DongXhaiGang	Futien	Fangchenggang
Present Area (ha)	812	1,189	1,513	82	1,415
Zones spp. assoc	4	6	5	3	4
% of change in area	11	-56	-14	-26	-10
True mangrove spp.	9	25	16	7	10
Density >1.5m high /Ha	11,980	10,183	8,433	10,233	12,300
% cover	90	80	80	80	90
No. Crustacean. spp.	65	60	32	29	67
No Bivalve	40	50	24	16	62
No. Gastropod spp.	33	62	27	21	40
No. Fish spp.	95	90	84	11	71

Site	Shangkou	Quinglangang	DongXhaiGang	Futien	Fangchenggang
No. Bird spp.	28	39	43	58	42
No. migratory bird spp.	76	32	35	99	145

Table 11. Biodiversity and other environmental properties and variables for selected seagrass sites in China

Site Name	Area (ha)	% cover	Depth range	Seagrass spp.	Penaeid spp.	Gastropod spp.	Siganid spp.	Urchin spp	Threatened spp.	Associated ecosystems	Migratory species
Hepu	540	85	4	4	5	12	1	3	3	1	2
Liusha	900	90	3	2	5	11	1	1	2	2	2
LiAn	320	82	3.2	5	4	17	1	1	3	2	2
Xincun	200	87	2	4	4	6	1	1	2	2	1

Table 12. Properties and variables of wetland potential demonstration sites in China

Site	Area (ha)	Total no. fish spp.	Total no. birds spp.	No. wetland types	No. migratory spp.	Site specific endemic spp.
Beilun Estuary	1,083	145	133	2	93	13
Pearl River Estuary	12,783	302	227	2	141	37
Dan zhou lingao Intertidal Flat	806	149	157	3	101	21
Hepu Intertidal	3,951	227	193	3	137	27
Shantou Inter-tidal	1,435	213	179	3	100	15
Wenchang Lagoon	218	227	193	3	137	20

5. NATIONAL COORDINATION ARRANGEMENTS

5.1 National inter-ministry committee

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

5.2 National technical working group

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

compile and evaluate national level sources of information and data for sharing at the regional level. The membership of China's National Technical Working Group is currently under finalization.

5.3 Specialized executing agencies

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

5.4 Stakeholder participation

The Strategic Action Programme for the South China Sea emphasizes a high degree of provincial/local government and community participation in its implementation. This will involve, for example, community participation in the identification of Terms of Reference and membership for community-based management committees at the sites where management plans will be developed and implemented. Intensive consultation processes will also be undertaken to identify key threats at priority areas, agree upon management measures, and to facilitate high-levels of provincial/local government and community stakeholder ownership of management plan development and formal endorsement. In support of local implementation of the management plans, national committees and National Technical Working Groups will be engaged in supporting governments and communities in the design of awareness programmes, development of local networks of management practitioners, and capturing and sharing information about the results and best practices generated at these sites.

A range of other mechanisms to facilitate stakeholder input and participation are included in the programme of work for SAP implementation. These include: the operation of consultative processes in support of the updating and Ministerial adoption of a revised Transboundary Diagnostic Analysis and Strategic Action Programme for the SCS marine basin, including prioritization of national management actions to address climate variability and change; knowledge exchanges between government and the scientific community through biennial Regional Scientific Conferences; best practice exchanges between local government officials and coastal managers on science-based management via annual Mayor's Round-Table meetings; coordination with the UNEP/GEF fisheries refugia initiative and other GEF-financed initiatives operating in the East Asian Seas, including PEMSEA; and the operation of an award program on best practices in coastal habitat and land-based pollution management for communities, local governments and industry.

Mechanisms to further facilitate NGO, CSO, and CO participation in Strategic Action Programme implementation include: the revitalization of cooperative arrangements with GEF SGP in the commissioning and implementation of community-level initiatives in support of the achievement of SAP targets, including those relating to reforestation and enrichment planting at priority mangrove sites. Annual NGO forums will also be convened to elicit CSO and CO inputs to planning, and monitoring and evaluation, of the SCS-SGP partnership. Similar processes will be operated to engage the private sector in identify opportunities for private sector investment (e.g. oil and gas, fisheries, tourism) in implementation of an updated Strategic Action Programme. The planning of cooperation between governments and the private sector for the implementation of the updated Strategic Action Programme will be facilitated via the operation of partnership forums.

In China, the Ministry of Environmental Protection (MEP) given its role as a member of COBSEA, the regional executing entity for the project, will lead project execution at the national level. MoP's Department of Pollution Control, Department of International Cooperation, and Department of Policy and Law, and South China Institute of Environmental Sciences have been identified as key stakeholders. The Department of International Cooperation of the State Oceanic Administration is also a primary stakeholder. From the perspective of national technical and execution capacity, the Guangxi Mangrove Research Centre, the South China Sea Institute of Oceanology of the Chinese Academy of Sciences, the Institute of Environmental Sciences of Sun Yat-Sen University, the Research Centre of Wetland Science of Sun Yat-Sen University, and the Department of Natural Resources and Environment at Guangdong Ocean University are critically important stakeholders.

The large provincial governments of Guangdong, Guangxi and Hainan provide services to more than 160 million people in southern China and the offices of the Governors for these provinces are important political stakeholders. Similarly, the governments of the prefecture-level cities of these provinces are also important stakeholders from the perspective of harnessing local-level support for operational management. The government of Shantou City, particularly the Shantou Wildlife Conservation and Management Office and Shantou Wetland Natural Reserve Station and the government of Shenzhen City and the Baoan Bureau of Environmental Protection are important local-level authorities in the area of the priority mangrove and wetland areas in Guangdong province. In Guangxi, similar local authorities identified as primary stakeholders include the Beihai Municipal People's Government, particularly the Environmental Protection Bureau of Beihai City, and the Hepu County Government, including its administration for the Hepu Dugong Nature Reserve. The Fangchenggang City government, including its Oceanic Administration Bureau, Environmental Protection Bureau, Forestry Bureau, City Planning Bureau, Fisheries Bureau and Tourist Bureau is another primary stakeholder in Guangxi.

Project preparation identified significant emerging capacities within a range of NGOs, CBOs and COs operating in the coastal provinces of Guangdong, Guangxi and Hainan, many of which have a demonstrable track record in the area of community-based approaches to coastal and marine environment and natural resource management. These include inter alia: the Guangdong Ecological Society; the Zhuhai Biological Society; the Leizhou Peninsula Coastal Ecological Conservation and Education Society; Guangxi Biodiversity Research and Conservation Association; the Fangchenggang Mangrove Protection Association; the Hainan South China Sea Institute of Tropical Marine Biology and Disease; and the Beihai Civil Volunteers Association.

6. NEXT STEPS

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