



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

Second Meeting of the Regional Working Group on Coral Reef and Seagrass Beds

Iloilo City, Philippines 11-12 August 2025

Summary on achievements at SCS SAP Project sites in implementing the PCA/GSA, including reviews on status of monitoring, and data and information available on coral reef and seagrass

THAILAND



Achievements, monitoring status and data/information available at the SCS SAP coral reef and seagrass bed sites in Thailand

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Introduction

As described in the Inception Phase Regional Implementation Report reviewed in the First Steering Committee of the SCS SAP Project held in June 2021, Bangkok, Thailand, the outcomes and outputs for coral reefs and seagrass bed focal areas include:

Outcome 1.2. 110,430 ha of coral reef at 46 priority sites managed sustainably (the sites which are considered as under sustainable management with sufficient capacity, approach reformed and/or tools applied, and stress reduced)	Outcome 1.3 Conservation, management and sustainable use of 26,036 ha of known seagrass area in the South China Sea
Output 1.2.1 Management capacity (number/levels human resources, facilities and equipment, and sustainable financing mechanisms) built for 46 coral reef sites	Output 1.3.1 Twenty-one seagrass areas totaling 25,900 ha under sustainable management with supporting laws and regulations
Output 1.2.2 Management approaches (integrated, community-based, multiple use) improved at 46 coral reef sites	Output 1.3.2 Amended management plans for 7 existing MPAs with significant seagrass areas, to include specific seagrass-related management actions and policy, legal and institutional reforms
Output 1.2.3 Management tools (licensing and permit systems, seasonal closures, zoning) developed and utilized to address key threats at priority sites	Output 1.3.3 Designation of 7 new Marine Protected Areas focusing on seagrass areas identified in the prioritized listings of the SCS Project
Output 1.2.4 Established mechanism for monitoring management, ecological and socio-economic indicators at 6 sites [based on SAP results framework]	Output 1.3.4 Established mechanism for monitoring seagrass habitat management

Recently, all participating countries signed PCA/GSAs for implementing national activities, focusing on the site level under Component 1. The 2nd meetings of the RWGs on habitats will review achievements in implementing the PCA/GSAs at SCS SAP sites (as seen in table 1 for coral reefs and seagrass beds) and others funded by co-finance. Summaries of these achievements of Thailand are described in table 2 and 3 below.

Related to knowledge management system, the Second Meeting of the SCS SAP Steering Committee held on 30-31 January 2024, Bangkok, Thailand adopted the revised workplan of the SCS SAP Project with three outcomes. Among them, outcome 2.1 is Enhanced information-base for coastal habitat management, monitoring and action planning. Under this outcome, a specific regional output for habitat focal areas is 2.1.1. Assessment of existing data and information on coastal habitat in the South China Sea, and review of monitoring and assessment

approaches that can support SCS monitoring program, from national, regional and global sources, combined with project-generated data from Component 1. The extensive compilation, review and analysis of information and data relating to specific habitat sites involve the development of comparable national data and information sets relating to, *inter alia*, the distribution and diversity of coastal habitats, the species richness and hotspots of biodiversity, present threats and the status of management. These enhancements to the information-base for coastal habitat management and action planning will be used to guide the preparation of updated National Reports, the National Action Plans, as well as the revised TDA and SAP.

The Second Meetings of the Regional Working on Habitats will review status of national monitoring, and data and information available at the sites of SCS SAP Project and others, if any, supported by co-finance. The country report of Thailand presents below monitoring status and availability of data and information (table 4).

Table 1. The SCS SAP sites on coral reefs and seagrass beds in participating countries

Country	Coral reef sites	Seagrass bed sites
Cambodia	Koh Kong archipelago, Koh Rong archipelago; Kep Beach and Koh Tonsay and Koh Pou archipelago	Chroy Bros, Kampot Beach, Kep Beach & Koh Tongsay - Koh Pou Archipelagos
China		Hepu, Liusha, Li'an and Xincun, Yifengxi
Indonesia	Bangka, Belitung, Bintan	Bintan, Mapur
Philippines	Bolinao/Lingayen Gulf, Batangas, Busuanga & Coron	Cape Bolinao, Masinloc, Busuanga & Coron
Thailand	Koh (island) Si Chang Archipelago, Koh Lan Arcipelago, Koh Tao, Koh Kra, Koh Mak, and Koh Losin (6)	Bandon Bay (1)
Vietnam	Phu Quoc islands, Nui Chua NP, Bach Long Vi island	Phu Quoc islands, Thuy Trieu lagoon
Total	17 sites, 12,467.6 ha	13 sites, 16,581 ha

Summary of achievements in implementing the PCA/GSA

Table 2. For coral reefs

Regional Output & Verification Means	CR1: Koh Si Chang Archipelago	CR2: Koh Lan Archipelago	CR3: Koh Tao	CR4: Koh Mak Archipelago	CR5: Koh Kra Archipelago	CR6: Koh Losin
<p>1.2.1. Capacity assessment, development of modules & conducting training, capacity improvement, report on management capacity</p>	<p>- Capacity assessment: Working groups established for marine spatial planning (MSP) and sustainable coral reef use.</p> <p>- Training & module development: Conducted training workshops for local government and community stakeholders (MSP, reef management, permit systems).</p> <p>- Capacity improvement: Improved stakeholder knowledge in coral reef management and MSP principles; capacity of 50+ local staff and community members enhanced.</p> <p>- Reporting: Documented capacity gains in site reports and contributed to national-level management effectiveness reviews</p>	<p>- Capacity assessment: Stakeholder mapping and baseline assessment completed.</p> <p>- Training & modules: Conducted targeted workshops for DMCR staff, local government, dive operators, and communities on coral reef management and eco-friendly tourism.</p> <p>- Capacity improvement: Enhanced stakeholder skills in monitoring, enforcement, and sustainable tourism; strengthened collaboration among local networks.</p> <p>- Reporting: Capacity gains and improved practices documented in site and national reports.</p>	<p>- Capacity assessment: The Koh Mak Coral Conservation and Restoration Plan (2025–2028) has been approved by the DG of DMCR.</p> <p>- Training & module development: Developed dive-standard training kits; organized environmental-friendly diving, enforcement workshops and training (draft) Article 20).</p> <p>- Capacity improvement: Enhanced capacity of community, local government, and dive operators;.</p> <p>- Reporting: Reported results in technical and progress reports; effectiveness measured by improved local</p>	<p>- Capacity assessment: The Koh Mak Coral Conservation and Restoration Plan (2025–2028) has been approved by the DG of DMCR.</p> <p>- Training & module development: Developed dive-standard training kits; organized environmental-friendly diving, enforcement workshops and training (draft) Article 20).</p> <p>- Capacity improvement: Enhanced capacity of community, local government, and dive operators;.</p> <p>- Reporting: Reported results in technical and progress reports; effectiveness measured by improved local</p>	<p>- Capacity assessment: Koh Kra MPA (Article 20) Committee Revised. Evaluation of local enforcement and management needs carried out.</p> <p>- Training & module development: Delivered enforcement training (Article 20), coral rehabilitation, and monitoring modules to local staff and communities.</p> <p>- Capacity improvement: Strengthened skills of marine rangers, local government, and volunteers; working group active on site.</p> <p>- Reporting: Documented in management and training reports;</p>	<p>- Capacity assessment: On-site assessment of DMCR and enforcement capacity.</p> <p>- Training & module development: Focused training on legal measures, enforcement under Article 20, and coral conservation provided.</p> <p>- Capacity improvement: Improved capacity for protected area management; 6 patrols, and compliance training sessions conducted.</p> <p>- Reporting: Management capacity improvements reflected in site and national PCA progress reports</p>

Regional Output & Verification Means	CR1: Koh Si Chang Archipelago	CR2: Koh Lan Archipelago	CR3: Koh Tao	CR4: Koh Mak Archipelago	CR5: Koh Kra Archipelago	CR6: Koh Losin
				enforcement and best-practice adoption	included in national summary for DMCR	
1.2.2. Reviews of management approach, consultation; awareness raising, new/upgraded management approach drafted/submitted/adopted for total ?? ha, coral reef, seagrass ??ha	<p>- Review & consultation: Site-specific management review and stakeholder consultation completed, focusing on coral reef zoning and use regulation.</p> <p>- Awareness raising: Public campaigns and training with local communities, tourism operators, and government agencies.</p> <p>- Management approach: New management plan and zoning scheme (including pilot permit system for reef use) drafted and submitted for approval, covering approximately 700 ha of coral reefs.</p>	<p>- Review & consultation: Stakeholder engagement and management effectiveness review conducted for tourism impacts and reef pressures.</p> <p>- Awareness raising: Conducted outreach activities with dive operators and local businesses to promote responsible use.</p> <p>- Management approach: Upgraded management framework with clearer user zones and strengthened</p>	<p>- Review & consultation: Stakeholder consultation on reef use, tourism, and pressure completed.</p> <p>- Awareness raising: Regular campaigns and meetings with local operators and the community.</p> <p>- Management approach: Strengthened zoning, permit systems, and voluntary codes for sustainable use updated/adopted, covering around 900 ha of coral reefs.</p> <p>- Underwater trash collection</p>	<p>- Review & consultation: A training session was conducted, and feedback was collected on the draft of Article 20. Additionally, local management and tourism impacts were reviewed through broad stakeholder engagement.</p> <p>- Awareness raising: Focused campaigns for dive operators and communities.</p> <p>- Management approach: Sustainable tourism guidelines and updated management plan developed for about 1,400 ha of coral reefs; draft submitted for local adoption. MoU on sustainable management signed</p> <p>- Underwater trash collection</p>	<p>- Review & consultation: Management effectiveness and regulatory review conducted with local and national input.</p> <p>- การศึกษาผลกระทบของ MAPs ด้าน socio economic</p> <p>- Awareness raising: Held meetings and training on conservation rules.</p> <p>- Management approach: Upgraded management plan with enhanced zoning and protection adopted, covering approximately 550 ha of coral reefs.</p>	<p>- Review & consultation: Multi-agency review of protected area management and enforcement.</p> <p>- Awareness raising: Targeted outreach with fishers and patrol teams.</p> <p>- Management approach: Stricter enforcement and expanded protection regime implemented, covering about 1,000 ha of coral reefs.</p> <p>- Underwater trash collection</p>

Regional Output & Verification Means	CR1: Koh Si Chang Archipelago	CR2: Koh Lan Archipelago	CR3: Koh Tao	CR4: Koh Mak Archipelago	CR5: Koh Kra Archipelago	CR6: Koh Losin
		enforcement measures drafted and proposed, covering approximately 900 ha of coral reefs.				
1.2.3. Reviews/assessment of data & information, consultation; zoning; new/upgraded management tools drafted, submitted or adopted on [date] for management of ?? ha of coral reefs/seagrass; activities & outputs in addressing key threats	<p>- Data & consultation: Site-specific ecological data and stakeholder input reviewed to inform zoning and management needs.</p> <p>- Zoning: New zoning for coral reef use, conservation, and restricted areas drafted and discussed with local authorities.</p> <p>- Management tools: Drafted new permit-based access and user fee system for coral reef use, submitted for approval in May 2025, covering ~700 ha.</p> <p>- Threat response: Initiated patrols, coral monitoring, and education to address</p>	<p>- Data & consultation: Conducted surveys of reef health, tourism impacts, and community input.</p> <p>- Zoning: Updated reef zoning map with designated recreational and no-entry zones.</p> <p>- Management tools: Developed guidelines for mooring buoys and waste management, submitted for adoption in Q2/2025, covering ~900 ha.</p>	<p>- Data & consultation: Regular reviews of coral data, tourism activity, and stakeholder engagement.</p> <p>- Zoning: Updated recreational and conservation zones based on pressure mapping.</p> <p>- Management tools: Voluntary codes and reef etiquette signage implemented in 2025 for ~900 ha.</p> <p>- Threat response: Ongoing diver/boat operator training, anchor ban campaigns, and coral rehabilitation events.</p> <p>Smart Marine Patrol</p>	<p>- Data & consultation: Comprehensive assessment of coral status and stakeholder workshops held.</p> <p>- Zoning: Developed new zoning plan prioritizing conservation and sustainable diving.</p> <p>- Management tools: Drafted sustainable tourism guidelines and reef monitoring protocols, submitted to local government in 2025, covering ~1,400 ha.</p> <p>- Threat response: Launched diver awareness and “no-touch” campaigns;</p>	<p>- Data & consultation: Ecological surveys and community input gathered for management planning.</p> <p>- Zoning: Expanded strict protection zones in consultation with DMCR and local partners.</p> <p>- Management tools: Upgraded enforcement and monitoring SOPs adopted in April 2025 for ~550 ha.</p> <p>- Threat response: Increased ranger presence; removed illegal fishing gear; conducted coral recovery assessment.</p> <p>Smart Marine Patrol</p>	<p>- Data & consultation: Marine resource assessments and patrol team consultations conducted.</p> <p>- Zoning: Reinforced no-take and core conservation areas.</p> <p>- Management tools: Strengthened patrol and monitoring tools adopted in 2025, covering ~1,000 ha.</p> <p>- Threat response: Targeted action on illegal fishing, ghost gear removal, and coral damage monitoring.</p> <p>Smart Marine Patrol</p>

Regional Output & Verification Means	CR1: Koh Si Chang Archipelago	CR2: Koh Lan Archipelago	CR3: Koh Tao	CR4: Koh Mak Archipelago	CR5: Koh Kra Archipelago	CR6: Koh Losin
	<p>tourism pressure and anchor damage.</p> <p>Smart Marine Patrol</p>	<p>- Threat response: Installed buoys, increased patrols, and ran campaigns to reduce reef trampling and litter.</p> <p>Smart Marine Patrol</p>		<p>started regular reef checks.</p> <p>Smart Marine Patrol</p>		
<p>1.2.4. Methodology training; Indicators, frequency and number of stations; number of replicates, trend of change?</p>	<p>- Methodology & training: Adopted DMCR standard protocols; conducted workshops for DMCR/local teams and dive operators.</p> <p>- Stations & replicates: 3 monitoring stations, 3–5 replicates each.</p> <p>- Indicators: Live coral cover, fish/invertebrate diversity, bleaching, water quality.</p> <p>- Frequency: twice a year. monitoring</p>	<p>- Methodology & training: DMCR/partners delivered field training for marine rangers and local dive operators.</p> <p>- Stations & replicates: 4 stations, 3–5 replicates per station.</p> <p>- Indicators: Coral cover, key fish, invertebrates, water quality.</p>	<p>- Methodology & training: Comprehensive training for dive operators, NGOs, and communities; focus on participatory data collection.</p> <p>- Stations & replicates: 5 stations, 3–5 replicates.</p> <p>- Indicators: Coral cover, bleaching, fish, tourism impact, water quality.</p> <p>- Frequency: twice a year. (ecological); annual (socio-economic).</p>	<p>- Methodology & training: Capacity building for community, tourism, and DMCR staff in reef monitoring and impact mapping.</p> <p>- Stations & replicates: 3 stations, 3–5 replicates.</p> <p>- Indicators: Coral cover, species diversity, bleaching, tourist pressure.</p> <p>- Frequency: twice a year.</p> <p>- Trend: Enhanced coral resilience;</p>	<p>- Methodology & training: On-site DMCR workshops for rangers and community volunteers on survey and enforcement methods.</p> <p>- Stations & replicates: 2 stations, 3–5 replicates.</p> <p>- Indicators: Coral cover, key fish, bleaching, enforcement outcomes.</p> <p>- Frequency: yearly.</p> <p>- Trend: Stable coral condition; improved</p>	<p>- Methodology & training: Training for DMCR staff and patrols on ecological survey and reporting.</p> <p>- Stations & replicates: 2 stations, 3–5 replicates.</p> <p>- Indicators: Coral cover, large invertebrates, incident reports.</p> <p>- Frequency: yearly.</p> <p>- Trend: High coral integrity maintained; ongoing monitoring supports protection.</p>

Regional Output & Verification Means	CR1: Koh Si Chang Archipelago	CR2: Koh Lan Archipelago	CR3: Koh Tao	CR4: Koh Mak Archipelago	CR5: Koh Kra Archipelago	CR6: Koh Losin
	(ecological); annual (socio-economic). - Trend: Coral cover stable; some signs of recovery linked to improved management.	- Frequency: twice a year. - Trend: Improved coral health and fish abundance; effective outreach reducing direct impacts.	- Trend: More comprehensive data; zones of recovery expanding with increased community involvement.	monitoring identifies hotspots of stress.	enforcement effectiveness.	

Table 3. For seagrass beds

Regional Output & Verification Means	<i>SG1: Bandon Bay</i>
1.3.1. Reviews of law/regulations, consultations, awareness raising, capacity building; livelihood alternatives; new/upgraded law/regulations developed for total & seagrass area??ha & approved on [date?]. Key activities to improve management.	<p>- Reviews of law/regulations:</p> <ul style="list-style-type: none"> Comprehensive review of national and local regulations relevant to seagrass conservation was conducted, focusing on gaps and opportunities for site-based protection at Bandon Bay. Findings informed proposals for new and upgraded legal measures. <p>- Consultations:</p> <ul style="list-style-type: none"> Multi-stakeholder consultations held with provincial government, DMCR, local community leaders, fishers, and resource user groups. Stakeholder feedback was integrated into legal and management recommendations. <p>- Awareness raising and capacity building:</p> <ul style="list-style-type: none"> Awareness campaigns delivered to local communities and schools to highlight seagrass ecosystem services and conservation needs. Training provided for DMCR officers, local authorities, and community members on seagrass monitoring, management, and law enforcement. <p>- Livelihood alternatives:</p> <ul style="list-style-type: none"> Promotion of alternative, low-impact livelihoods such as eco-tourism (guided seagrass tours) and sustainable bivalve/clam harvesting. Support for community groups to diversify income sources and reduce pressures on seagrass habitats. <p>- New/upgraded law/regulations:</p>

Regional Output & Verification Means	<i>SG1: Bandon Bay</i>
	<ul style="list-style-type: none"> • New management Action plan for seagrass protection was drafted and proposed. • Management measure covered zoning, seasonal restrictions, and sustainable harvest measures for an area of approximately 6,700 ha of seagrass meadows in Bandon Bay. <p>- Key activities to improve management:</p> <ul style="list-style-type: none"> • Demarcation of conservation and sustainable use zones within seagrass areas. • Strengthening local enforcement through patrols and community watch groups. • Regular seagrass health monitoring and reporting. • Integration of seagrass management into the broader coastal resource management framework for Ban Don Bay. • Ongoing community engagement for adaptive management and participatory decision-making.
<p>1.3.2. Reviews/assessment of data & information, consultation; zoning; new/upgraded management tools drafted, submitted or adopted on [date] for management of ?? ha of seagrass; activities & outputs in addressing key threats</p>	<p>- Reviews/assessment of data & information:</p> <ul style="list-style-type: none"> • Comprehensive assessments and consolidation of ecological and socio-economic data for seagrass habitats were completed, using field surveys, community knowledge, and regular monitoring. • Data reviewed included seagrass extent, condition, species diversity, and spatial use patterns, with significant input from LMMA committees. <p>- Consultation:</p> <ul style="list-style-type: none"> • Extensive consultations with DMCR, provincial and district authorities, local communities, fishers, and LMMA stakeholders to identify management priorities and threat hot spots. • Participatory workshops and focus group discussions facilitated the integration of local knowledge and priorities. <p>- Zoning:</p> <ul style="list-style-type: none"> • New zoning plan for seagrass conservation and sustainable use was developed, demarcating LMMA areas and formal conservation zones. • Zoning distinguishes strictly protected, sustainable use, and restoration areas, maximizing both ecological and community benefits. <p>- Management tools (date, area):</p> <ul style="list-style-type: none"> • New and upgraded management tools—including enforcement protocols, community co-management agreements, and monitoring guidelines—were drafted in 2024. • Management framework applies to the entire ~6,700 ha of seagrass in Bandon Bay, with clear designation of LMMA zones. <p>- Activities & outputs in addressing key threats:</p> <ul style="list-style-type: none"> • Implemented measures to reduce destructive fishing, illegal trawling, and anchor damage. • Regular patrols and community surveillance teams established to enforce zoning and resource use rules. • Restoration campaigns and awareness programs to combat seagrass degradation from sedimentation and pollution. • Strengthened reporting and rapid response mechanisms for seagrass disturbance or illegal activities.

Regional Output & Verification Means	<i>SG1: Bandon Bay</i>
<p>1.3.3. Data & information reviews, consultation; Name & Date of PA amendment; management plan developed for total ?? ha, coral reefs, seagrass ??ha</p>	<ul style="list-style-type: none"> - Data & information reviews: <ul style="list-style-type: none"> • Comprehensive review and consolidation of ecological, spatial, and socio-economic data on seagrass meadows in Bandon Bay were completed. • Habitat mapping, health assessments, and regular monitoring data informed adaptive management planning. • Community-driven data collection and knowledge sharing under the LMMA approach were also incorporated, ensuring local realities are reflected. - Consultation: <ul style="list-style-type: none"> • Multi-stakeholder consultations were conducted with DMCR, provincial authorities, community organizations, LMMA committees, and local user groups. • The participatory process gathered input on threats, management priorities, and traditional use practices, strengthening co-management principles. - Name & Date of PA amendment: <ul style="list-style-type: none"> • Name: Ban Don Bay Seagrass Protected Area (with integrated LMMA Mangrove zones under DMCR Article 18) • Date of amendment: Officially amended by the provincial committee, designating specific areas as LMMAs to support community stewardship and adaptive management. - Management plan developed: <ul style="list-style-type: none"> • The integrated management plan covers the entire seagrass ecosystem and adjacent coral reefs, explicitly incorporating LMMA zones for co-management by local communities. • Total area under management: ~7,500 ha <ul style="list-style-type: none"> ○ Seagrass: ~6,700 ha ○ Coral reefs (adjacent): ~800 ha • The plan establishes LMMA-based conservation and sustainable use zones, monitoring protocols, enforcement mechanisms, and adaptive management processes with direct community participation.
<p>1.3.4. Methodology training; Indicators, frequency and number of stations; number of replicates, trend of change?</p>	<ul style="list-style-type: none"> - Methodology & training: <ul style="list-style-type: none"> • Standardized seagrass monitoring protocols were adopted, aligned with DMCR and SCS SAP guidelines. • Hands-on training sessions delivered for DMCR staff, local authorities, and LMMA community groups on seagrass survey techniques, data collection, and reporting. • Training included habitat mapping, shoot density counts, and water quality assessments. - Indicators monitored: <ul style="list-style-type: none"> • Seagrass coverage (extent and density) • Species composition and diversity • Incidence of physical damage (anchors, trawling scars) - Frequency and number of stations: <ul style="list-style-type: none"> • Monitoring is conducted, twice a year • Six monitoring stations are established across representative zones (core conservation, sustainable use, restoration areas).

Regional Output & Verification Means	<i>SG1: Bandon Bay</i>
	<ul style="list-style-type: none"> - Number of replicates: <ul style="list-style-type: none"> • At each station, 3–5 replicates are measured per indicator per survey to ensure data reliability. - Trend of change: <ul style="list-style-type: none"> • Data indicates stable or slightly increasing seagrass coverage and shoot density in most zones. • Improved seagrass health observed in LMMA and strictly protected areas. • Reduction in physical damage trends (e.g., from destructive fishing, anchoring) following new zoning and enforcement. • Early signs of recovery in previously degraded patches due to community-led restoration and patrols.

Summary on status of monitoring related to coral reefs and seagrass beds in Thailand

1. Status of Monitoring Related to Coral Reefs in Thailand

Number of Stations and Locations

- **Total number of monitoring stations:**
 - **19 monitoring stations** are established across key coral reef demonstration sites:
 - **Koh Si Chang:** 3 stations
 - **Koh Lan:** 4 stations
 - **Koh Mak:** 3 stations
 - **Koh Kra:** 2 stations
 - **Koh Losin:** 2 stations
 - **Koh Tao:** 5 stations
- **Locations:**
 - Stations are distributed to cover core conservation, use, and buffer zones at each site.
 - All station locations are geo-referenced and mapped in the national monitoring database maintained by DMCR.

Ecological Indicators:

- Live coral cover (live/death coral)
- Coral bleaching incidence and recovery
- Key reef fish and invertebrate abundance/diversity
- Incidence of coral disease and physical damage (e.g., from anchors, trampling)

Socio-economic/Management Indicators:

- Tourism pressure and compliance
- Community and stakeholder participation in monitoring and patrols

Frequency:

- Ecological indicators:
 - 1-2 times per year
- Socio-economic indicators:
 - At a certain time or as part of project evaluation cycles

2. Status of Monitoring Related to Seagrass in Thailand

Number of Stations and Locations

- **Total number of monitoring stations:**
 - **16 monitoring stations** across major seagrass demonstration and management sites, including:
 - **Bandon Bay:** 6 stations
 - **Other demonstration sites (e.g., Phang Nga Bay, Libong, Trang etc.):** 10 stations
- **Locations:**
 - Stations are distributed to represent core conservation, sustainable use, restoration, and LMMA (Locally Managed Marine Area) zones.
 - Each station is geo-referenced and mapped within the national DMCR monitoring database.

- Maps of station locations are included in site technical reports and national annexes, available upon request for presentations.

Ecological Indicators:

- Seagrass coverage (area and density)
- Species composition and biodiversity
- Physical damage incidence (e.g., anchors, trawling scars)

Socio-economic/Management Indicators:

- Community participation in monitoring and enforcement
- Incidence of destructive activities (e.g., illegal fishing, anchoring)

Frequency:

- Ecological indicators:
 - 1-2 times per year
- Socio-economic indicators:
 - At a certain time or as part of project evaluation cycles

Table 4. Availability of data and information at the sites on coral reefs and seagrass beds

[Note: Recently Available (RA), Will be available (WA), Not available (NA), Remark: Reason for not available]

Type of Data/Information	CR1: Koh Si Chang	CR2: Koh Lan	CR3: Koh Tao	CR4: Koh Mak	CR5: Koh Kra	CR6: Koh Losin	SG1: Bandon Bay	Remarks
Geographic information	RA	RA	RA	RA	RA	RA	RA	
Co-ordinate	RA	RA	RA	RA	RA	RA	RA	
Habitat mapping	RA	RA	RA	RA	RA	RA	RA	
Reef type	RA	RA	RA	RA	RA	RA	NA	Seagrass only at SG1
Coral reef area (ha)	RA	RA	RA	RA	RA	RA	NA	
Seagrass area (ha)	NA	NA	NA	NA	NA	NA	RA	
Changes of habitat area since 2010	RA	RA	RA	RA	RA	RA	RA	
Biological information	RA	RA	RA	RA	RA	RA	RA	
Live coral cover, dead coral cover, algae, abiotic	RA	RA	RA	RA	RA	RA	WA	WA: Data system under improvement at SG1
Trend of changes of coral and algae cover	RA	RA	RA	RA	RA	RA	WA	WA: For SG1, algae trends partial/in progress
Hard coral species/genera	RA	RA	RA	RA	RA	RA	NA	
Soft coral species/genera	RA	RA	RA	RA	WA	WA	NA	WA: Ongoing taxonomic review at CR5, CR6

Coverage of hard corals	RA	RA	RA	RA	RA	RA	NA	
Coverage of soft corals	RA	RA	RA	RA	WA	WA	NA	WA: Ongoing at CR5, CR6
Molluscs – species and density	WA	WA	WA	WA	WA	WA	WA	WA: Surveys in progress/partial for all sites
Crustacean-species and density	WA	WA	WA	WA	WA	WA	WA	Same as above
Fish – coral reef fish, species abundance	RA	RA	RA	RA	RA	RA	WA	WA: Fish monitoring systemizing at SG1
Fish – Transient for breeding, species abundance	WA	WA	WA	WA	WA	WA	WA	WA: Occasional survey/partial data
Changes of fisheries resources	WA	WA	WA	WA	WA	WA	WA	WA: Monitoring/assessment ongoing
Reptiles	NA	NA	WA	NA	WA	WA	NA	WA: Opportunistic records at CR3, CR5, CR6
Mammals	NA	NA	NA	NA	NA	NA	WA	WA: Dugong, dolphin data partial at SG1
SCS Endemic species	WA	WA	WA	WA	WA	WA	WA	WA: Identification and reporting in progress
Endangered/threatened species (IUCN)	RA	RA	RA	RA	RA	RA	RA	
Source & sink of larvae	WA	WA	WA	WA	WA	WA	WA	WA: Connectivity studies planned/in progress
Social – use information	RA	RA	RA	RA	RA	RA	RA	
Ownership	RA	RA	RA	RA	RA	RA	RA	
Management regime	RA	RA	RA	RA	RA	RA	RA	
Current use (fishing, tourism)	RA	RA	RA	RA	RA	RA	RA	
Traditional use	WA	WA	WA	WA	WA	WA	RA	WA: Some sites data not fully consolidated
Environment services	WA	WA	WA	WA	WA	WA	RA	WA: Economic/eco system services assessment ongoing

Potential use	RA	RA	RA	RA	RA	RA	RA	
Significance/national importance/priority	RA	RA	RA	RA	RA	RA	RA	
Protection category (MPA, NP...), total area, coral reef area, seagrass area in hectare	RA	RA	RA	RA	RA	RA	RA	
Efforts in coral reef restoration	RA	RA	RA	RA	RA	RA	NA	
Stress-pressure information	RA	RA	RA	RA	RA	RA	RA	
Sedimentation	RA	RA	RA	RA	RA	RA	RA	
Landfills	RA	RA	RA	RA	RA	RA	RA	
Overfishing	RA	RA	RA	RA	RA	RA	RA	
Destructive fishing	RA	RA	RA	RA	RA	RA	RA	
Eutrophication	RA	RA	RA	RA	RA	RA	RA	
Crown of Thorns (COT) infestation	RA	RA	RA	RA	RA	RA	NA	
Bleaching (year occurred, % bleaching, mortality)	RA	RA	RA	RA	RA	RA	NA	
Others	WA	WA	WA	WA	WA	WA	WA	Other threats under further review
Economic valuation	WA	WA	WA	WA	WA	WA	WA	Valuation studies ongoing/incomplete
Values of direct use	WA	WA	WA	WA	WA	WA	WA	
Values of indirect use	WA	WA	WA	WA	WA	WA	WA	
Values from environmental services	WA	WA	WA	WA	WA	WA	WA	
Value of investment	WA	WA	WA	WA	WA	WA	WA	
Values of potential (commercial) sustainable use	WA	WA	WA	WA	WA	WA	WA	
Total Economic Value	WA	WA	WA	WA	WA	WA	WA	
Economic losses from impact/habitat loss	WA	WA	WA	WA	WA	WA	WA	