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

Second Roundtable of Local Representatives
of the SCS SAP Project
17 September, 2025, Jakarta, Indonesia

An overview of the marine ecosystem in Nha Trang Bay and the monitoring of seagrass meadow ecosystems in Khanh Hoa Province

Khanh Ha province, Vietnam
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An overview of Khanh Hoa Province

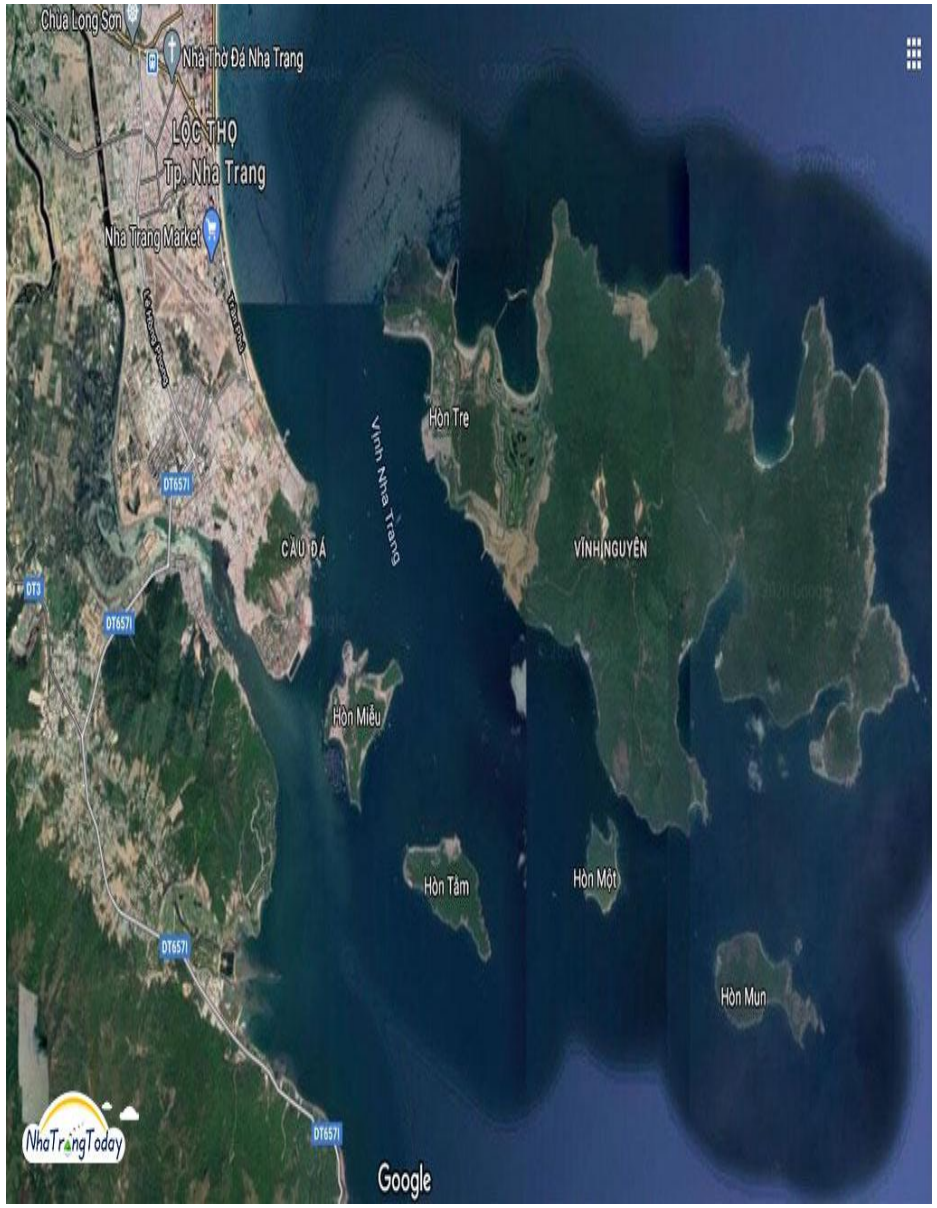
- Khanh Hoa Province covers a natural area of 8,555.86 km^2, according to official data from the Department of Surveying, Mapping and Geographic Information of Viet Nam in 2025.

- This area encompasses the mainland, more than 200 large and small islands, and the Truong Sa archipelago.

Nha Trang bay

- Nha Trang Bay is located in Khanh Hoa Province, Central Viet Nam, with an area of approximately 507 km², comprising 19 large and small islands.
- The bay is sheltered from winds, with clear waters and minimal silt, creating favorable conditions for the formation and development of marine biodiversity.
- In 2003, Nha Trang Bay was recognized as a member of the World's Most Beautiful Bays Club

Current Status Map of Biodiversity in Thi Nai Lagoon Nature Reserve, Vietnam



Biodiversity in the Nha Trang Bay Area

Marine fauna: There are more than 230 species of coral reef fish, including many rare species such as seahorses, clownfish, top shell snails, and giant clams

Coral reefs: There are more than 350 species of hard and soft corals, widely distributed around Hon Mun, Hon Tam, and Hon Tre islands, serving as habitats and breeding grounds for thousands of marine species

Seagrass beds: Distributed in the Dam Tre and Bich Dam areas, with diverse species composition, they serve as natural spawning and nursery grounds for many marine species, while also functioning in carbon sequestration and maintaining habitats for aquatic organisms

Signs of coral recovery around Hon Mun (2024)

Biodiversity in the Nha Trang Bay Area

Mangrove forests and tidal flats cover a relatively small area but play an important role in protecting the coastline and providing habitats and living spaces for aquatic fauna

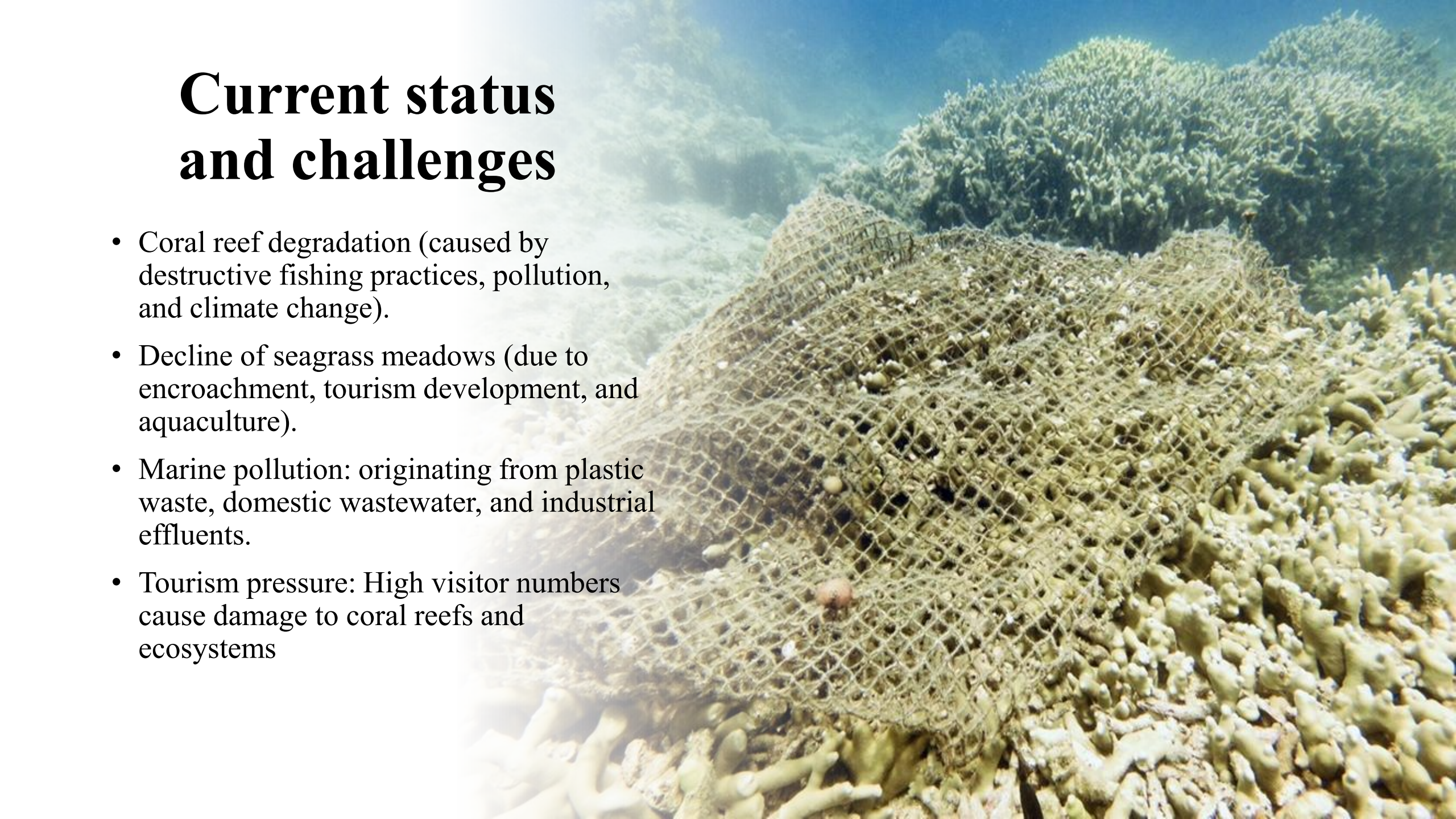
Seaweed beds: Rich in brown, red, and green algae species.

Resources that generate Socio-Economic value

- Fishery resources: Fish, squid, lobster, sea cucumber, etc.
- Marine tourism: Coral reef diving, water sports, leisure and resorts, etc.
- Scientific research: Ecology, conservation, climate change.
- Ecosystem services: Climate regulation, erosion control, carbon sequestration.

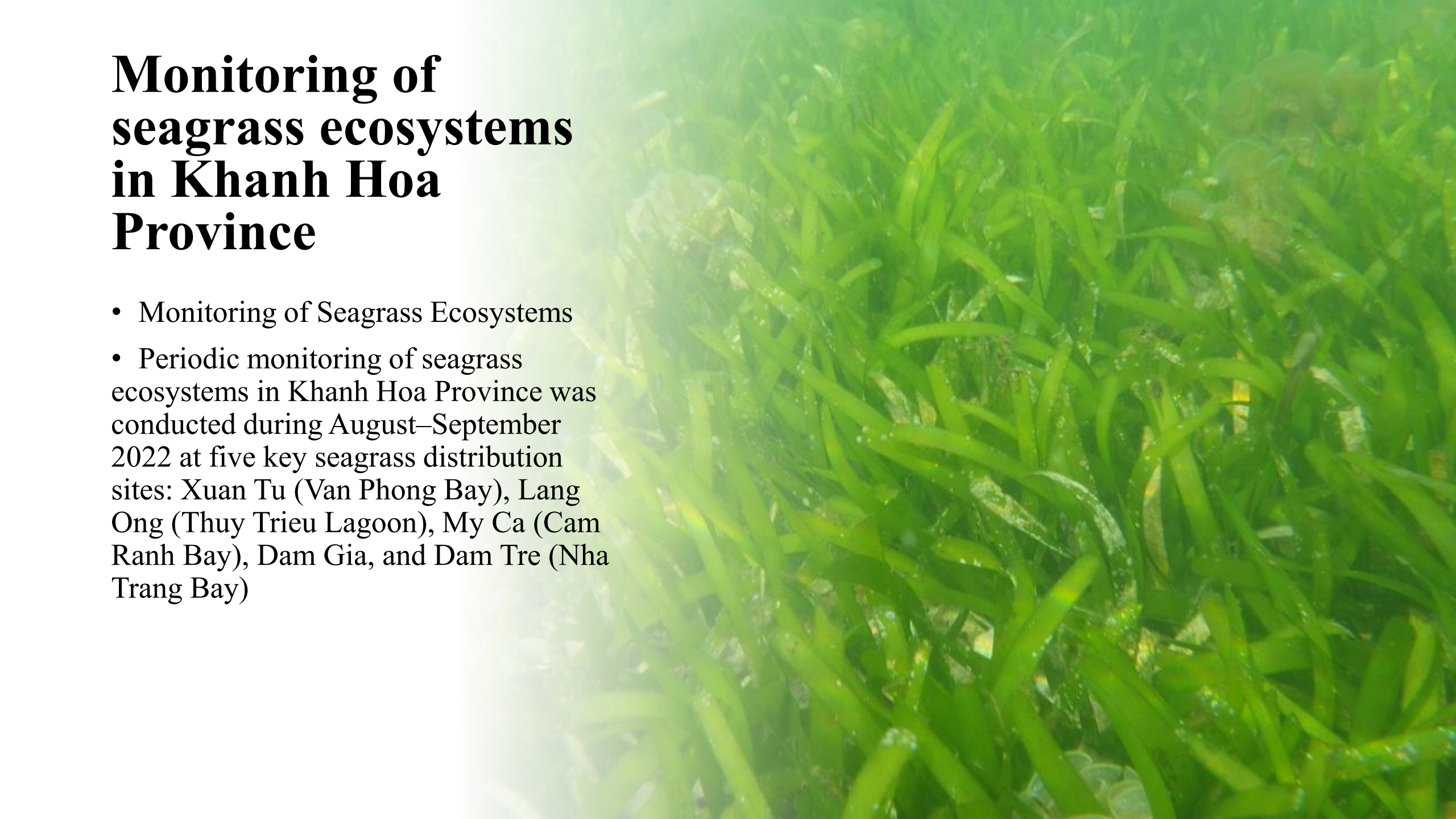
Current status and challenges

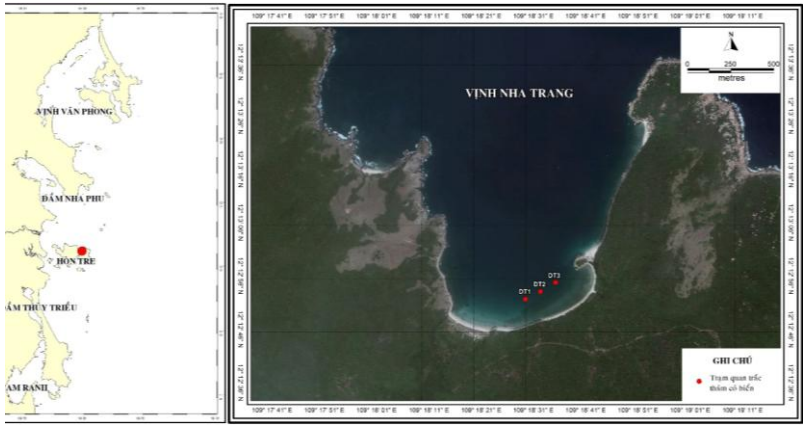
- Coral reef degradation (caused by destructive fishing practices, pollution, and climate change).
- Decline of seagrass meadows (due to encroachment, tourism development, and aquaculture).
- Marine pollution: originating from plastic waste, domestic wastewater, and industrial effluents.
- Tourism pressure: High visitor numbers cause damage to coral reefs and ecosystems

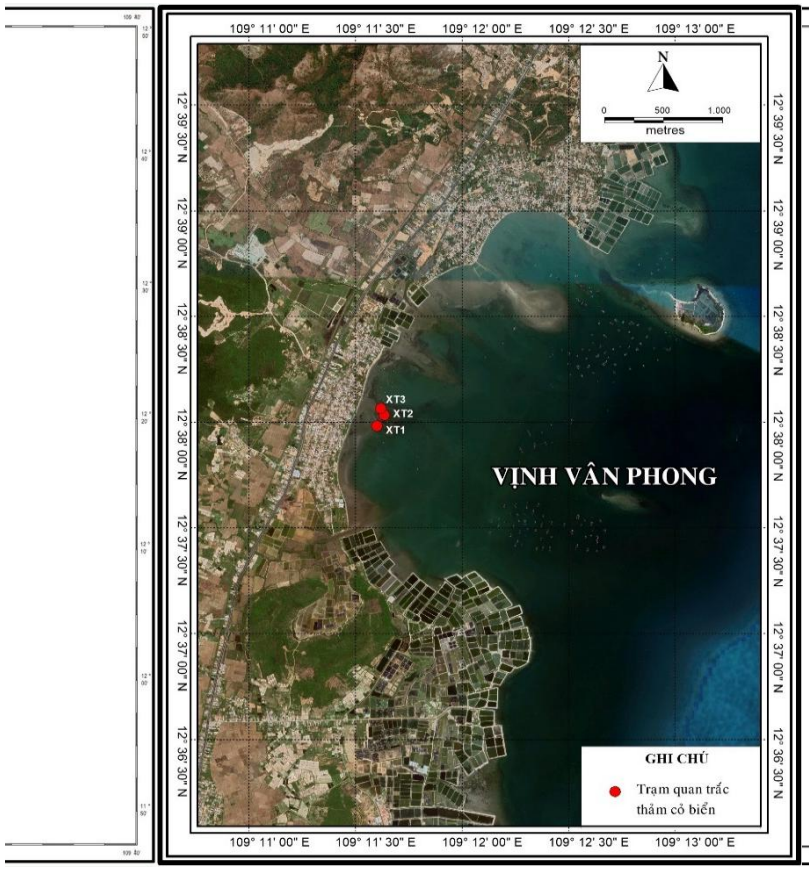


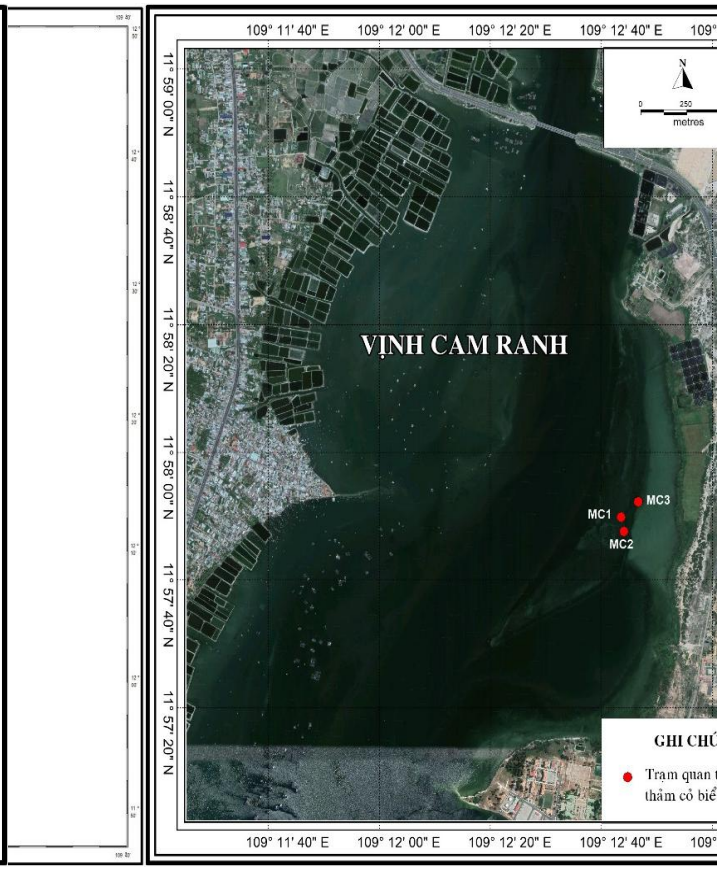
Monitoring of seagrass ecosystems in Khanh Hoa Province

- Monitoring of Seagrass Ecosystems
- Periodic monitoring of seagrass ecosystems in Khanh Hoa Province was conducted during August–September 2022 at five key seagrass distribution sites: Xuan Tu (Van Phong Bay), Lang Ong (Thuy Trieu Lagoon), My Ca (Cam Ranh Bay), Dam Gia, and Dam Tre (Nha Trang Bay)









Map of Seagrass Monitoring Stations

1. The Lang Ong area is located on the eastern shore of Thuy Trieu Lagoon, within Cam Hai Dong Commune, Cam Lam District. The total area of seagrass meadows in Lang Ong is approximately 35 hectares, with Enhalus acoroides (tape seagrass) being the dominant species.

2. The Xuan Tu marine area, located in Van Phong Bay, covers approximately 106 hectares and hosts six identified seagrass species: Enhalus acoroides (tape seagrass), Thalassia hemprichii (dugong grass), Cymodocea rotundata (smooth ribbon seagrass), Halodule uninervis (narrowleaf seagrass), Halophila minor (lesser halophila), and Halophila ovalis (spoon seagrass)

3. The My Ca area, located on the eastern shore of Cam Ranh Bay (Cam Ranh Peninsula), covers approximately 90 hectares. The seagrass species composition here includes four species: *Enhalus acoroides* (tape seagrass), *Halophila ovalis* (spoon seagrass), *Halophila minor* (lesser halophila), and *Halodule pinifolia* (flatleaf seagrass)

4. Decline: Survey results in August 2022 indicated that 2.1 hectares of seagrass meadows in the northeastern coastal area of Dam Gia had disappeared. Coastal construction activities had completely filled in the seagrass beds. Monitoring results at Dam Gia stations also showed that resource-associated organisms within the seagrass ecosystem were no longer present.

5. The Dam Tre area covers approximately 20 hectares, distributed over a relatively clean sandy bottom or sandy substrate with a thin mud layer on the surface, at depths ranging from 2.5 m to about 12 m. The seagrass species composition includes six species: *Thalassia hemprichii* (dugong grass), *Halophila ovalis* (spoon seagrass), *Halophila major*, *Halophila decipiens* (paddleweed), *Halodule uninervis* (narrowleaf seagrass), and *Halodule pinifolia* (flatleaf seagrass).”

Main causes and solutions

• *For seagrass and coral reef ecosystems:* The main current threats leading to the degradation of these ecosystems in Khanh Hoa Province include overexploitation of resources, destructive fishing practices, and land reclamation activities for the construction of infrastructure and tourism facilities in coastal areas and on islands.

• Therefore, it is necessary to strengthen protection, prevention, control, and reduction of marine environmental pollution; to safeguard and sustainably develop marine ecosystems and biodiversity; to strictly manage and restore marine biological resources; and to actively prevent and rigorously sanction all violations of laws on marine resources and the environment.

Proposed solution

1. **Review, inventory, and monitoring of seagrass and coral reefs in Khanh Hoa province** have been carried out by leveraging resources and support from the SCA-SAP Project, along with technical and management assistance from VEMSI. The objectives are to: *(i) establish appropriate sustainable management practices for mangrove forests; (ii) effectively manage coral reefs at priority sites; (iii) establish agreements for the conservation, management, and sustainable use of seagrass meadows; and (iv) develop integrated management approaches to restore habitats and strengthen the protection of coastal wetlands.*
2. Strengthen the participation of individuals and communities in activities related to "sustainable exploitation and conservation of coastal ecosystems". Promote and effectively implement **Khanh Hoa Province's Co-Management Scheme**, which has been approved for the protection of fishery resources in the province, with the following objectives:(1) Restore and protect fishery resources that are in serious decline.(2) Promote sustainable marine economic development in connection with tourism and aquaculture.(3) Mobilize community participation to reduce pressure on state management.(4) Meet international requirements on combating IUU fishing and environmental protection.(5) Create sustainable livelihoods for fishermen and reduce conflicts among economic sectors."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Thank you for paying attention !