



Working Group on Seagrass Research, Monitoring, and Conservation (2025–2028)

WESTPAC WG Co-chairs

Tipamat Upanoi

Department of Marine and Coastal Resources (DMCR), Thailand

Udhi Eko Hernawan

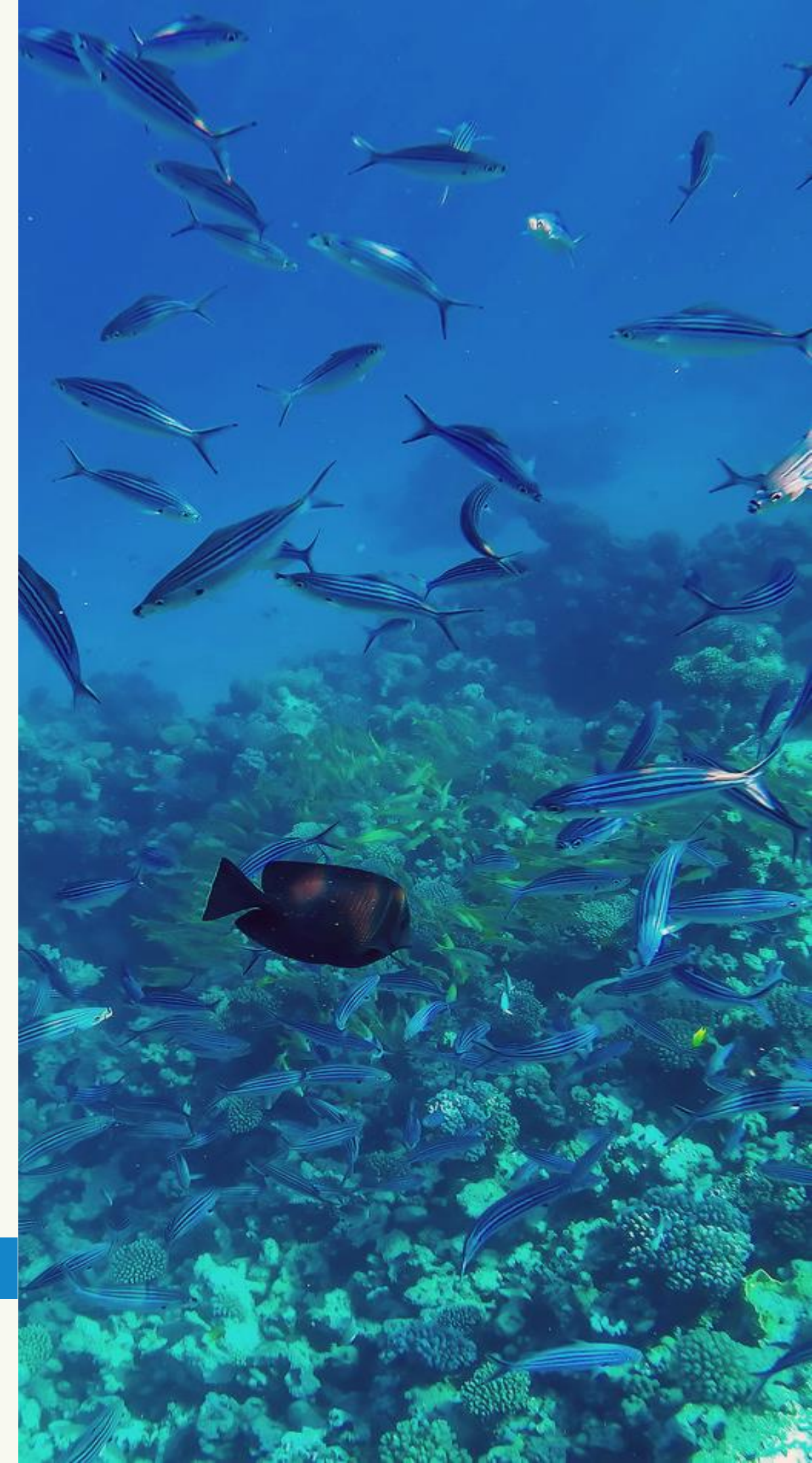
National Research and Innovation Agency (BRIN), Indonesia

Sixteenth Intergovernmental Session of the
IOC Sub-Commission for the Western Pacific (WESTPAC-XVI)
Hangzhou, China, 10-12 November 2026

Summary Outline



1. Justification and WG duration
2. WG objectives
3. Major activities and outputs (particular those accomplished during 2025-2026)
4. Anticipated activities and outputs in 2027
5. Biennial workplan and budget for 2028-2029, structured around the IOC HLOs
6. Strategic recommendations for future development



1. Justification and WG duration

Declining seagrass habitats posing an existential threat to dugongs

SATURDAY, NOVEMBER 09, 2024 2 minute read

Male
 Play

Following 8 deaths in October, Thai marine scientists working on project to cultivate seagrass beds

Restricted Distribution

IOC/SC-WESTPAC-XV/7.1
Bangkok, 20 February 2025
English only

INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION
(of UNESCO)

Fifteenth Intergovernmental Session of the IOC Sub-Commission for the Western Pacific (WESTPAC-XV)
Tokyo, Japan, 11-13 March 2025

Item 7.1 of the Provisional Agenda

New Working Group Proposal on
Seagrass Research in the Indo-Western Pacific

Established at WESTPAC-XV in March 2025 to strengthen regional cooperation on seagrass research and conservation.

Relevance and context

Seagrass supports biodiversity, fisheries, coastal livelihoods and blue carbon. Decline threatens dependent species, including dugongs.

Regional need

Comparable mapping and monitoring evidence supports regional cooperation and management.

Duration

2025–2028. Implementation through 2029.

2. WG objectives

Overall objective:

To advance seagrass science and regional cooperation in support of effective conservation and restoration in the Indo-Western Pacific.

During 2025–2028, the Working Group aims to:

- **Strengthen research collaboration** through joint activities and exchange among scientists and practitioners.
- **Build national capacity** in seagrass mapping, monitoring and assessment.
- **Establish a regional evidence base** on seagrass status, threats and knowledge gaps.
- **Develop standardized methods** for comparable monitoring and assessment.
- **Support pilot studies** that test approaches under different local conditions.
- **Provide science-based recommendations** for seagrass conservation and restoration.

3. Major Activities and Outputs

- 2025 — Regional kickoff workshop

Activity

WESTPAC convened the regional kickoff workshop in Phuket, Thailand, on 4–6 November 2025, bringing together 50 participants from 10 Member States.

Major outputs

Exchange of national experience in seagrass research, monitoring, conservation and restoration. Practical field demonstrations of mapping, ecological surveys, blue carbon assessment and rehabilitation. Identification of joint priorities, including a regional Seagrass Outlook, restoration guidance, economic valuation synthesis and mapping training.

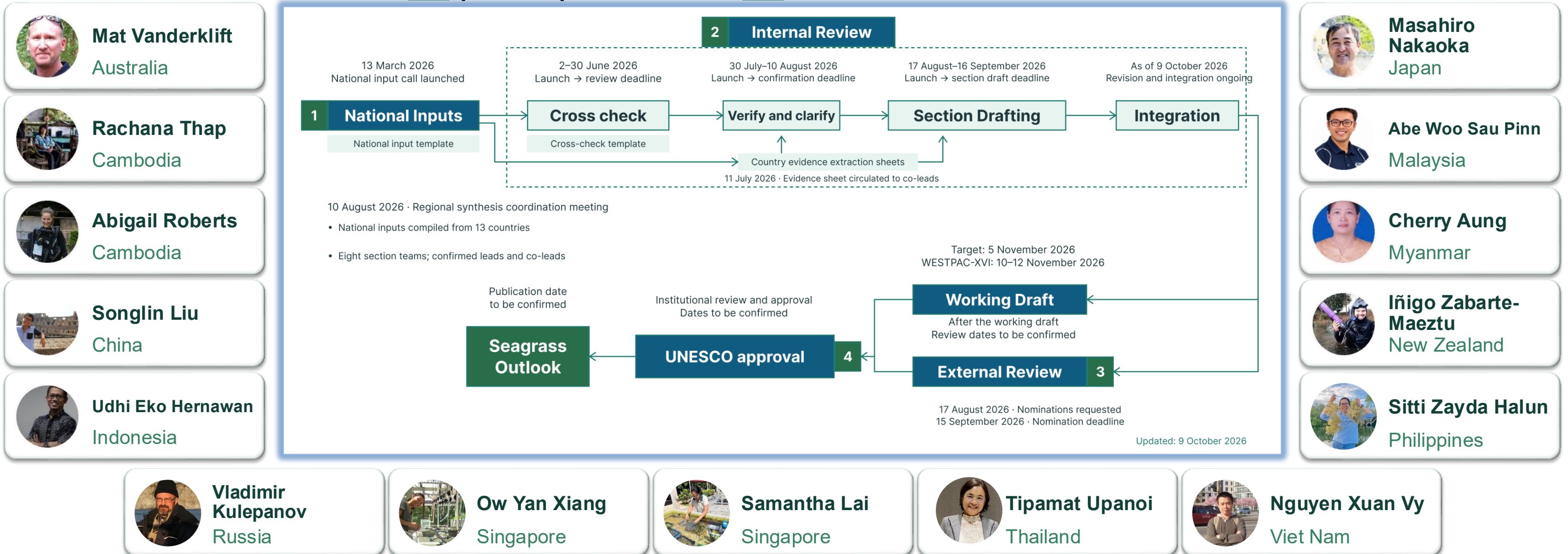


3. Major Activities and Outputs

- 2026 — Preparation of the regional Seagrass Outlook

Participation

National contributors: 15 participants from 13 Member States



3. Major Activities and Outputs

- 2026 — Preliminary Findings from Seagrass Outlook

All 13 country inputs report loss or degradation at some sites.

Seven countries also report local gains or recovery.



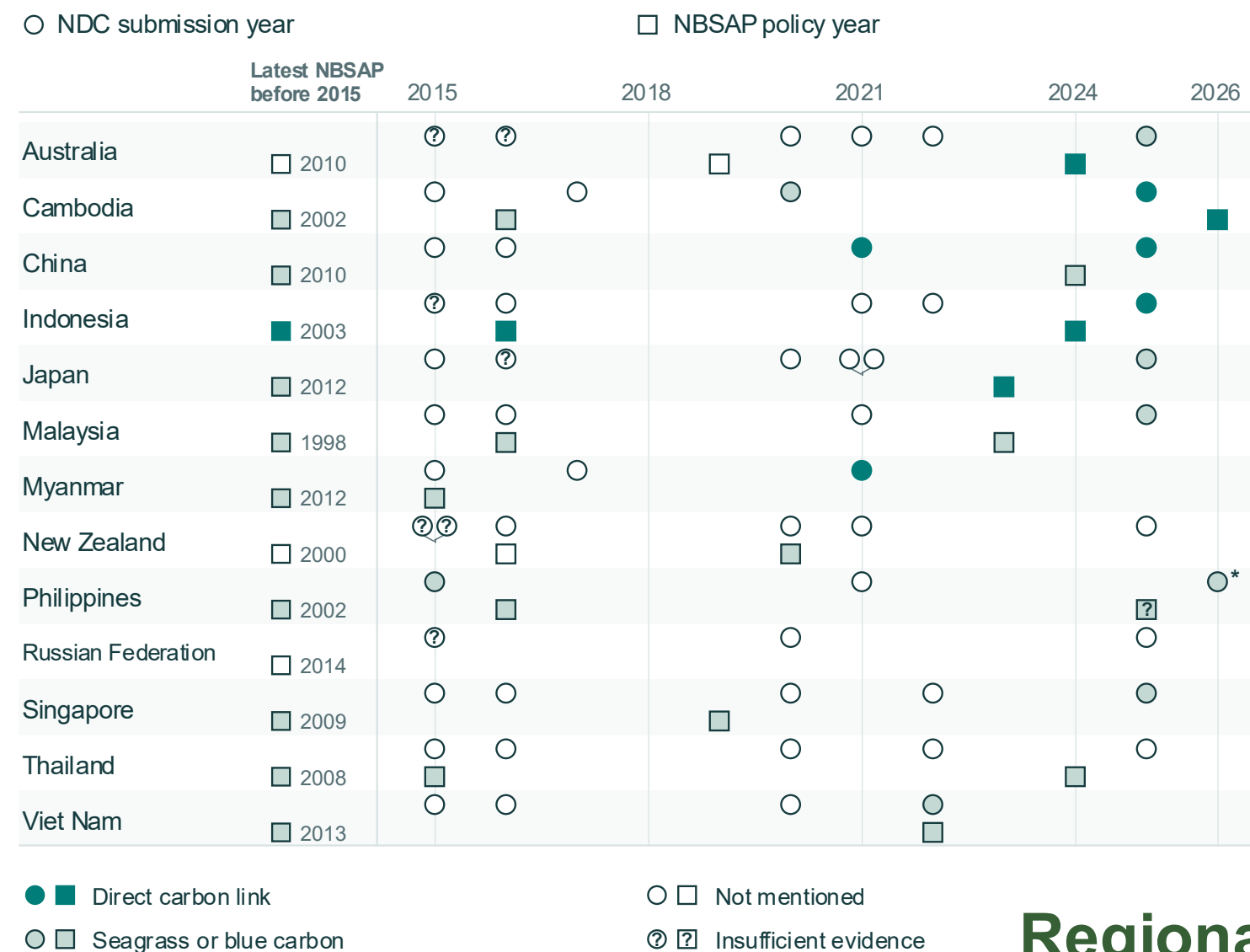
Japan
22 beds declined / 26 expanded
 57 selected beds, 1989–1991 vs 2014–2018

Thailand
34% of assessed seagrass area degraded
 2025 assessment

3. Major Activities and Outputs

- 2026 — Preliminary Findings from Seagrass Outlook

Seagrass blue carbon is moving into national climate and biodiversity policy.



* PH 2026: seagrass excluded from historical emissions and mitigation assessment

Climate pathway

- Australia & Japan
- Indonesia
- Cambodia & Malaysia

National GHG accounting

NDC preparation and national blue-carbon action

NDC adaptation and restoration measures

Biodiversity pathway

- Cambodia, Malaysia & Philippines
- China
- Japan

National biodiversity strategies

Ecological Conservation Redline

30by30 and Nature Symbiosis Sites

Regional evidence gap

Methods and coverage vary across habitats, carbon pools, geographic areas and assessment periods.

WESTPAC-XVI, 10-12 November 2026, Hangzhou, China

3. Major Activities and Outputs

- 2026 — Preliminary Findings from Seagrass Outlook

Seagrass meadows face overlapping pressures from human activities and climate-related disturbances.

- Human activities
- Climate-related disturbances

Coastal development
(Case from China)

Sediment inputs
(Case from Thailand)

Bottom trawling
(Case from Cambodia)

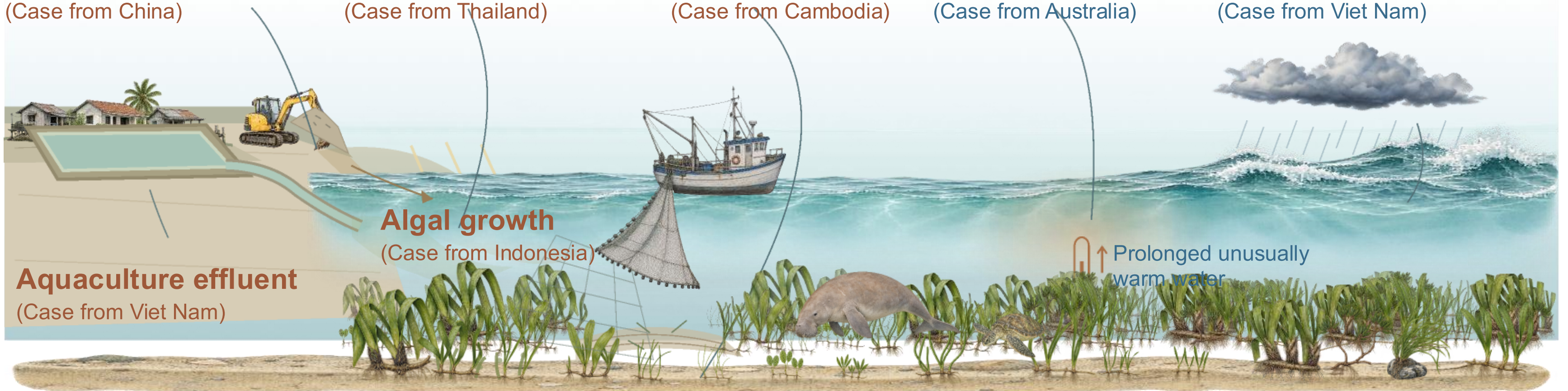
Marine heatwaves
(Case from Australia)

Storms & waves
(Case from Viet Nam)

Aquaculture effluent
(Case from Viet Nam)

Algal growth
(Case from Indonesia)

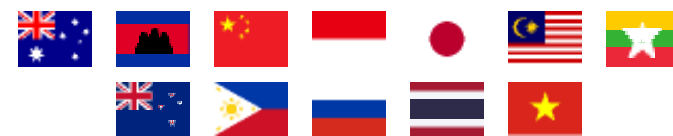
↑ Prolonged unusually
warm water



3. Major Activities and Outputs

- 2026 — Preliminary Findings from Seagrass Outlook

Frequently reported challenges → Practices to build on



4. Anticipated activities and outputs in 2027

Activities	Outputs
Consolidate and disseminate regional knowledge	Publication - Seagrass Outlook in the Western Pacific - Seagrass Restoration Guidebook in the Western Pacific
Review mapping and monitoring methods	A review of existing methods and proposed core indicators to inform protocol development in 2028–2029
Identify management needs and policy questions	Preliminary priorities from the Outlook to inform policy recommendations in 2028–2029
Deliver subtidal seagrass mapping training	A training workshop, practical training materials and hands-on mapping exercises

5. Biennial Workplan for 2028-2029

1. Regional mapping and monitoring protocol

HLO 1: Healthy ocean and sustained ocean ecosystem services

No.	Activity / Output Description	Expected Result / Output	2028 H1	2028 H2	2029 H1	2029 H2	IOC RP (USD)	XB (USD)	Lead Responsibility
1.1.1	Develop and review a regional mapping and monitoring protocol	One protocol and standard reporting template, with core indicators, survey methods, metadata and quality assurance. Expert and Member State review completed by 2029 H2.	✓	✓	✓	✓	TBC	TBC	Technical lead and drafting team (TBC), WG experts and participating Member States

Proposed milestones

2028 H1: Review scope and existing methods

2028 H2: Draft protocol and reporting template

2029 H1: Expert and Member State review

2029 H2: Finalize and submit to WESTPAC

Use existing sites and datasets where feasible. Technical exchange supports review. New regional surveys and a permanent network require separate resources.

Proposed scope. RP and XB amounts, funding sources and lead institutions require confirmation with WESTPAC.

5. Biennial Workplan for 2028-2029

2. Policy-oriented recommendations

HLO 1: Healthy ocean and sustained ocean ecosystem services

No.	Activity / Output Description	Expected Result / Output	2028 H1	2028 H2	2029 H1	2029 H2	IOC RP (USD)	XB (USD)	Lead Responsibility
1.2.1	Develop policy-oriented recommendations for seagrass conservation and restoration	One policy brief for coastal and marine managers, with actionable recommendations and a consultation summary. One biennial report covers all three activities by 2029 H2.	✓	✓	✓	✓	TBC	TBC	WG co-chairs and policy drafting lead (TBC), WG members and management representatives

Proposed milestones

2028 H1: Agree audience and policy questions

2028 H2: Draft using Outlook and available evidence

2029 H1: Consult scientific and management representatives

2029 H2: Finalize brief and biennial report

Address habitat protection, local pressure reduction and coordinated management. Use available Outlook findings and protocol outputs. National policy adoption remains a longer-term aim.

Proposed scope. RP and XB amounts, funding sources and lead institutions require confirmation with WESTPAC.

5. Biennial Workplan for 2028-2029

3. Restoration Guide dissemination and use

HLO 1: Healthy ocean and sustained ocean ecosystem services

No.	Activity / Output Description	Expected Result / Output	2028 H1	2028 H2	2029 H1	2029 H2	IOC RP (USD)	XB (USD)	Lead Responsibility
1.2.2	Disseminate and promote use of the Seagrass Restoration Guide	Dissemination package, an online technical exchange and a summary of user feedback for future refinement, subject to Guide availability and resources. Document delivery by 2029 H2.	✓	✓	✓	✓	TBC	TBC	Restoration Group: Thailand, Indonesia, Malaysia, China, Viet Nam and Singapore. Lead institution TBC.

Proposed milestones

2028 H1: Confirm Guide availability and target users
 2028 H2: Disseminate Guide and supporting materials
 2029 H1: Hold online exchange and collect user feedback
 2029 H2: Summarize feedback and lessons for future updates

Build on the Guide expected by mid-2027. Emphasize site suitability, pressure reduction and ecological outcomes. New restoration pilots are outside the core commitment.

Proposed scope. RP and XB amounts, funding sources and lead institutions require confirmation with WESTPAC.



6. Strategic recommendations for future development

Comparable methods and evidence

Use shared indicators and transparent reporting to support management and track outcomes.

Regional science for policy needs

Address local pressures and coordination across coastal, marine and watershed authorities.

Responsible use of restoration guidance

Reduce pressures, assess site suitability and monitor ecological outcomes beyond initial planting.

A feasible next phase with WESTPAC

Agree three priorities, lead institutions, resources and WG arrangements through 2029.