



Working Group on Blue Carbon Actions (WGBCA) in Western Pacific Region

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Fourteenth Intergovernmental Session of the IOC Sub-Commission for the Western Pacific
4-7 April 2023, Jakarta, Indonesia



Presentation outline



- What is blue carbon?
- Blue carbon matters to WESTPAC
- Proposed lifetime of the WG
- Objectives and expected outputs/outcomes
- Tentative members identified
- Activities tentatively planned for May 2023- April 2025
- Recommendations,

What is Blue Carbon ?



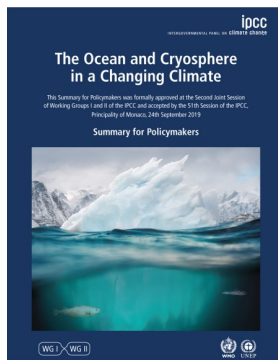
From



Blue carbon is **the carbon captured by the world's oceans** and represents more than **55%** of the green carbon.

—*Blue Carbon: The Role of Healthy Oceans in Binding Carbon*, 2009

to



All **biologically-driven** carbon fluxes and storage in marine systems that are **amenable to management***.

—*IPCC SROCC*, 2019



* **Mangroves, Seagrasses, Tidal Marshes, Macroalgae**

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Blue carbon in a changing world



Climate change

Pressures

Human activities



Ocean warming

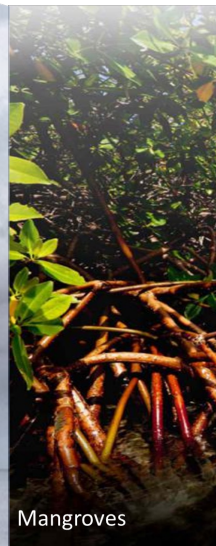
Sea level rise

Heat wave

Acidification

Deoxygenation

Storm surge



Mangroves



Tidal Marshes



Seagrasses



Seaweeds

Deforestation

Water Pollution

Overfishing

Sea reclamation

Alien species



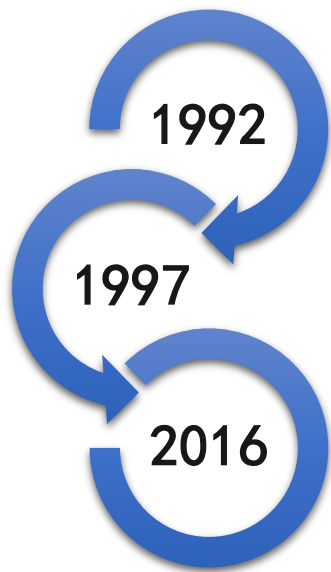
Climate Mitigation & Adaptation

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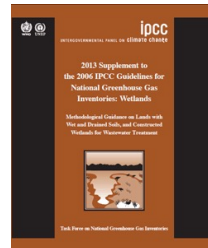
Blue Carbon under UNFCCC and Paris Agreement



1992
UNFCCC
National GHGs Inventory

1997
Kyoto Protocol

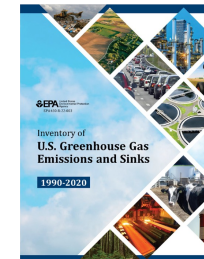
2016
Paris Agreement
Nationally Determined Contribution



2013 Supplementary to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories : Wetlands Chapter 4: Coastal Wetlands

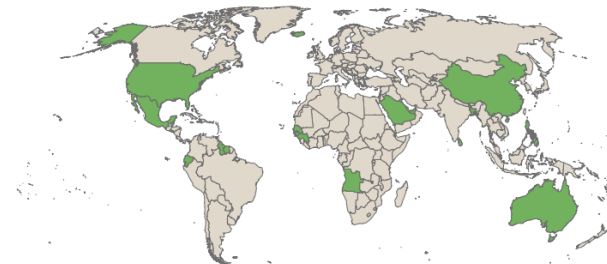


Australia



United States

MITIGATION



Angola Antigua and Barbuda Australia Bahamas Bahrain Bangladesh Belize Brunei China Comoros Cook Islands Ecuador El Salvador Guinea Guyana Haiti Iceland Kiribati Marshall Islands Mexico Philippines Saudi Arabia Senegal Seychelles Sri Lanka Suriname United Arab Emirates United States of America

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Map of 28 countries that include a reference to coastal wetlands in terms of mitigation in their NDCs

22 | Blue Carbon - Nationally Determined Contributions Inventory

ADAPTATION



Bahamas Bahrain Bangladesh Belize Benin Cambodia Cameroon Cape Verde Cook Islands Côte d'Ivoire Cuba Djibouti Dominican Republic Ecuador Egypt Eritrea Fiji Gabon Gambia Georgia Grenada Guatemala Guinea-Bissau Guyana Haiti Honduras India Lebanon Liberia Madagascar Malaysia Marshall Islands Mauritius Mexico Morocco Myanmar Nauru Niue Oman Republic of Congo Saint Lucia Saint Vincent and the Grenadines Saudi Arabia Senegal Seychelles Singapore Somalia South Africa Sri Lanka Sudan Suriname Tanzania Thailand Togo Uruguay Vanuatu Venezuela Vietnam

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[Blue-Carbon-NDC-Appendix.pdf \(bluesolutions.org\)](https://www.grid-arendal.no/Blue-Carbon-NDC-Appendix.pdf)



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An Oceanic Natural-based Solution not only for climate Change

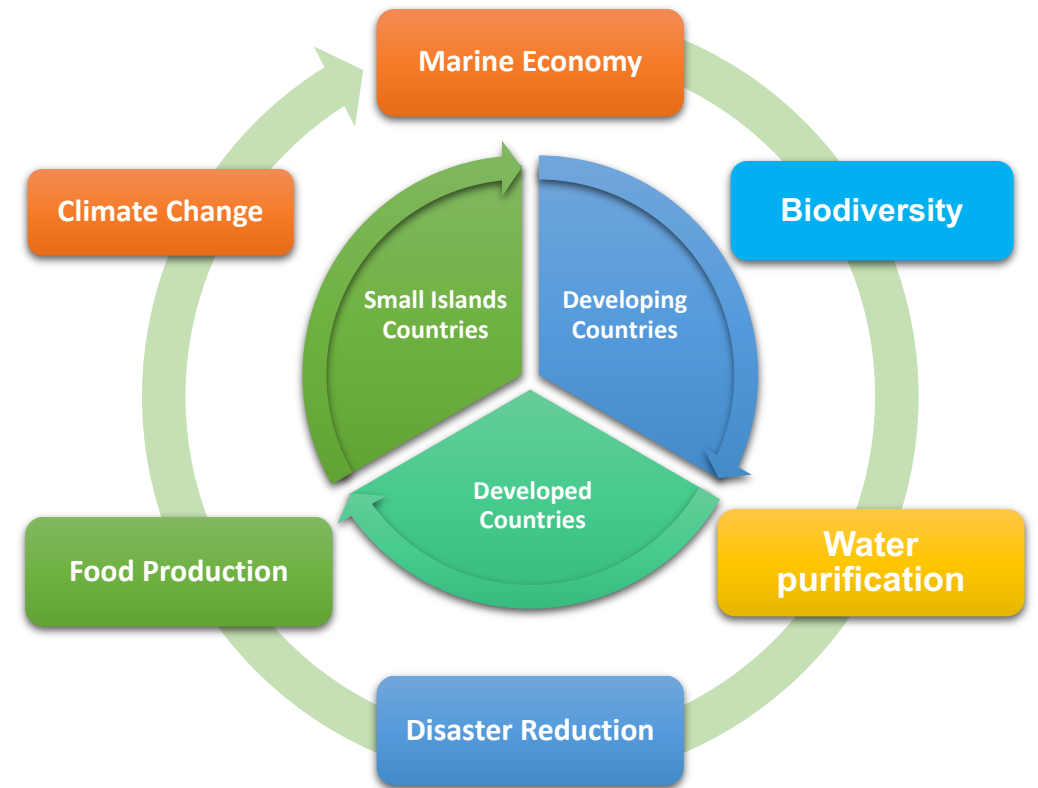
Ecosystem Services



Section	Division	Group
Provisioning	Materials	Captured edible plants and animals
		Plants and animals' fiber and structure
		Natural product
		Gene
		Bio-energy (Yes but not recommended)
Regulating	Energy	Other
		biophysical environment
	Flow	Bio regulation
		Pollutant filter and carbon sequestration
		Air regulation (disaster reduction)
		Water regulation (disaster reduction)
	physicochemical environment	Material regulation (erosion reduction)
		Atmosphere regulation (Oxygen production)
		Water cycle regulation
		Soil cycle regulation
Cultural	Physical or experiential use	biotic environment
		Life history, habitat and gene pool conservation
		Disease and pest control
		tourism
		Knowledge and Sciences
		Spirit and Religion
		Intellectual representations



One action, multiple Benefits



UNFCCC & Paris Agreement



Ramsar Convention on Wetlands



Convention on Biological Diversity



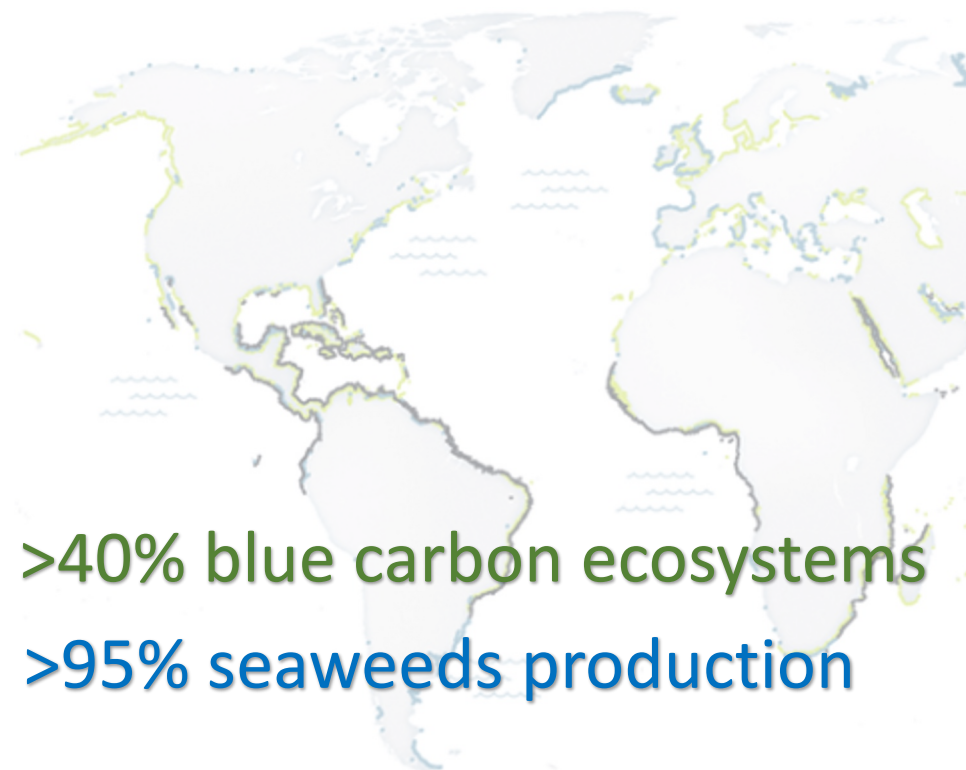
Sustainable Development Goals



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Blue carbon matters to WESTPAC



Mangroves Salt Marsh Seagrass



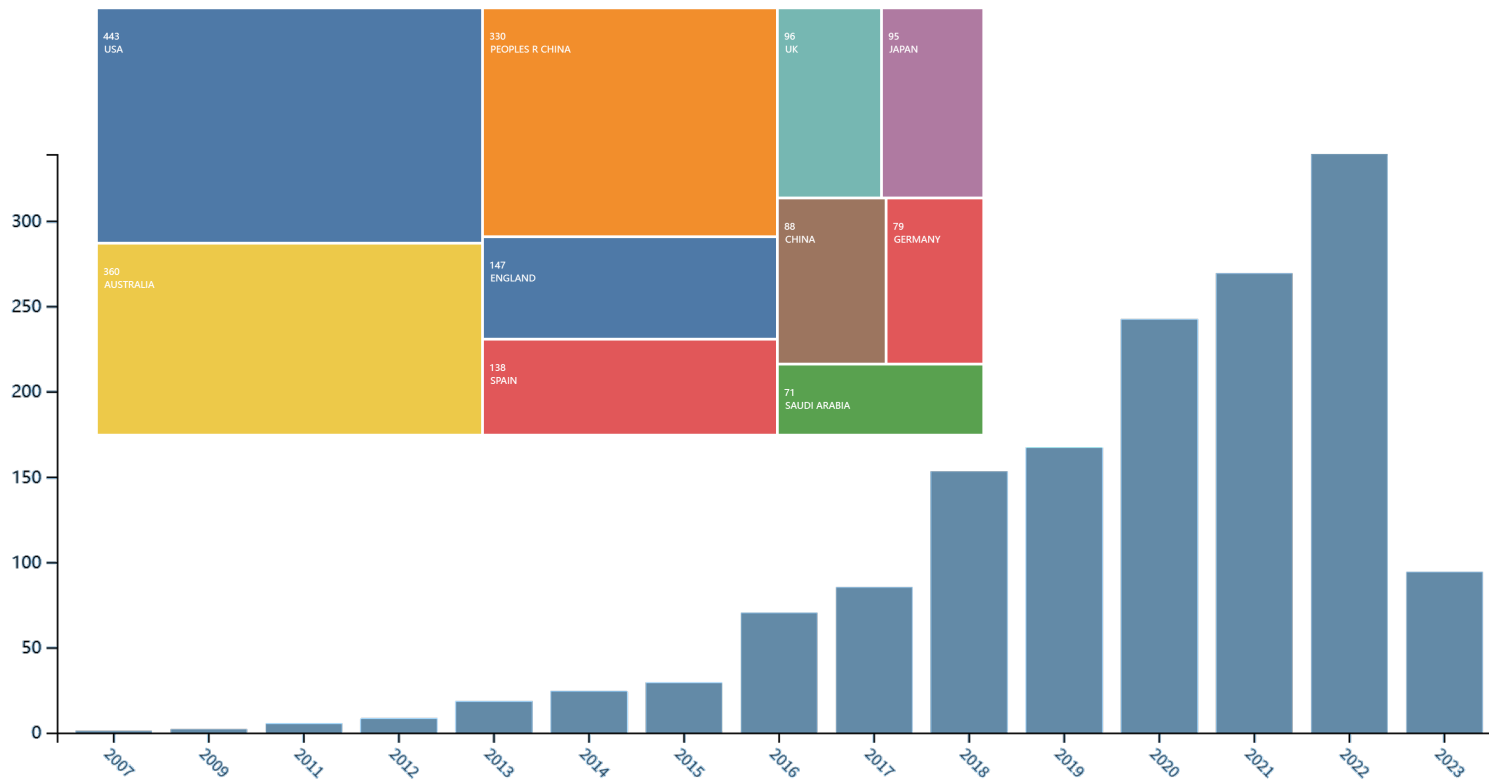
Australia	Republic of Korea
Bangladesh	Russia
China	Samoa
Democratic People's Republic of Korea	Singapore
Fiji	Solomon Islands
France	Sri Lanka
Indonesia	Thailand
Japan	Tonga
Malaysia	United Kingdom
New Zealand	United States of America
Philippines	Vietnam



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More things to do besides papers

>53% of 1515 SCI articles on blue carbon are published by scientists from WESTPAC members



Take blue carbon as a solution to many regional issues



Blue carbon matters to UN Ocean Decade & SDGs



10 Ocean Decade Challenges

Main solution to

- 2 Protect and restore ecosystems and biodiversity
- 5 Unlock ocean-based solutions to climate change
- 6 Increase community resilience to ocean hazards

Contribute to

- 1 Understand and beat marine pollution
- 3 Sustainably feed the global population
- 4 Develop a sustainable and equitable ocean economy

Key area to

- 7 Expand the Global Ocean Observing System
- 8 Create a digital representation of the ocean
- 9 Skills, knowledge and technology for all
- 10 Change humanity's relationship with the ocean

SDGs





Proposed lifetime of the new initiative

- The WG will operate for two years from 2023 to 2025, with annual activities planned to achieve the objectives.
- If the WG could not achieve its objectives within two years, it may be extended for another two years.





Objectives and expected outputs/outcomes

- foster a blue carbon research and practice network for facilitating the **exchange of knowledge and expertise** on blue carbon among WESTPAC members;
- Identify **common interest** in blue carbon cooperation and explore the **possibility of developing a blue carbon project or programme** under the IOC/WESTPAC framework.
- **a series of webinars** for sharing knowledge and experience and identifying common interests
- **a status report** for tracking progress and identifying problems in regional blue carbon policy, research, and practice.
- **a project/programme proposal** for prioritizing and mapping out the roadmap of regional blue carbon cooperation.

Tentative members identified so far

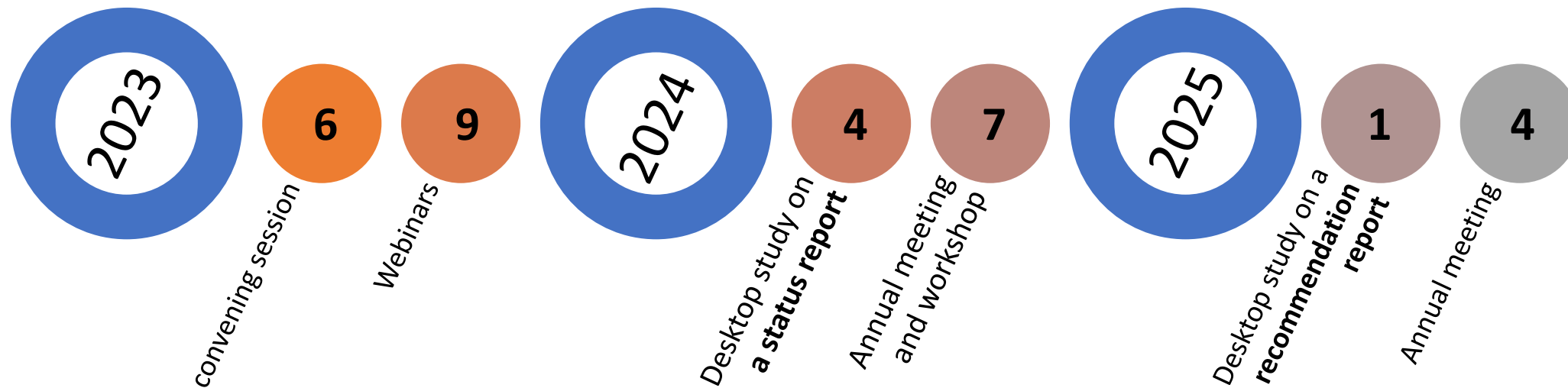


- ZHAO Peng (China)
- Daniel Gorman (Australia)
- Jinsoon Park (Korean)
- Kazuo Nadaoka (Japan)
- Abe Woo Sau Pinn (Malaysia)
- Suchai Worachananant (Thailand)
- Pham Van HIEU (Vietnam)
- Severino G. SALMO (the Philippines)
- Sasmito, Sigit D(Singapore)
- Udhi Hernawan (Indonesia)
- Luitgard schwendenmann (New Zealand)
- Other international initiatives related to blue carbon
-

**The WG is open to individuals and organizations willing to contribute.
All potential members will be further confirmed through the first workshop of the WG.**



Activities tentatively planned for May 2023- April 2025





Recommendations

- **Data synthesis**

Open-accessed database, data gaps

- **Capacity Building**

Research, accounting, and practice

- **Broader financial resources**

Organizations, enterprises, etc.

- **Network & collaboration**

voices from officials, scientists, enterprise, and communities.



Thank You

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<https://hb.hainanu.edu.cn/nanhaihaiyang/info/1071/1575.htm>

