

United Nations

General Assembly

United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea

Twenty-fifth meeting

Contribution to the twenty-fifth meeting of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea

Submitted by Australia

1. Australia welcomed the proposal of the topic 'Capacity building and the transfer of marine technology: New developments, approaches and challenges' at the informal consultations for the General Assembly resolution on oceans and law of the sea in November 2024. At these consultations, Australia supported the proposed theme and reaffirmed that the United Nations Convention on the Law of the Sea (UNCLOS) is the comprehensive legal framework within which all activities in the oceans and seas must be carried out. The General Assembly emphasised this understanding in the text of the oceans and the law of the sea resolution (79/144) which was adopted on 12 December 2024.
2. As an island continent, Australia has sovereign rights over a vast area of ocean. Australia's maritime jurisdiction has some of the world's largest coral and rocky reef systems, 12 per cent of the world's blue carbon ecosystems, the third largest area of mangroves globally and 50 per cent of the world's seagrass species. Australia is committed to practising effective and sustainable management to protect and strengthen our vast ecosystem of ocean and coastal assets, and adapt to and mitigate the effects of climate change. Australia protects more ocean than any other country in the world, protecting 52 per cent of our oceans and making Australia a global leader in marine conservation. Equally, Australia recognises that the ocean is by its nature global. Ecosystems, biodiversity and marine resources extend beyond and across maritime boundaries. The health of the waters under one State's jurisdiction are intertwined with the health of the ocean as a whole. Accordingly, the protection of the marine environment and the conservation and sustainable use of marine resources require international cooperation. Australia recognises and welcomes the contribution of all States to these cooperative efforts. Further, Australia recognises the importance of capacity building and the transfer of marine technology to ensuring such cooperation is meaningful and effective.
3. Australia recognises that capacity building is essential to ensuring that all States are able to fully implement UNCLOS, benefit from the sustainable development of the ocean and seas, and participate fully in global and regional forums on ocean affairs and the law of the sea, including in relation to the protection of the marine environment and the conservation and sustainable use of marine resources. It is important to ensure that capacity building initiatives are sustainable and available where they are most needed. Australia supports the voluntary transfer of marine

technology on mutually agreed terms, with due regard to be given to the needs and priorities of developing States, particularly the least developed countries and small island developing States.

4. Australia recognises the importance of traditional knowledge in ocean conservation and sustainable use. We draw on this knowledge and emphasise the contribution of Indigenous Peoples in addressing regional and global ocean challenges.
5. Australia underlines the importance of gender equality and the full enjoyment of human rights by all women and girls. Australia recognises the diverse roles, including leadership roles, played by women in marine technology and the importance of mainstreaming gender in this area and ensuring capacity building activities are equally accessible to women.
6. Australia also underlines that the opportunities and benefits of capacity building and the transfer of marine technology should be available to people with disability on an equitable basis to others. This includes ensuring that barriers to equitable participation are removed, ensuring the full and meaningful participation of people with disability and their representative organisations in consultation and decision-making processes, and ensuring that meetings, information and materials are made available in formats accessible to people with disability.

BBNJ Agreement

7. Australia welcomed the adoption of the *Agreement under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction* (the BBNJ Agreement) in New York on 19 June 2023. Australia was an active proponent and leader in negotiations to secure the BBNJ Agreement, including as a member of the High Ambition Coalition (HAC) for biodiversity beyond national jurisdiction. Australia proudly supported Pacific Island States to participate in the BBNJ negotiations and continues to support their implementation of the Agreement.
8. Australia is committed to ensuring the full and effective implementation of the BBNJ Agreement. Australia is chairing, alongside Belize, the Preparatory Commission to prepare for the entry into force of the BBNJ Agreement and the convening of the first meeting of the conference of Parties to the Agreement, and encourages States to engage constructively in the work of the Commission.
9. Australia considers capacity building and transfer of marine technology to be essential elements for the attainment of the objectives of conservation and sustainable use of marine biological diversity, and to implementing an equitable and effective BBNJ Agreement where all States can fulfil their obligations under, and benefit from, the BBNJ regime. The BBNJ Agreement provides that Parties shall, within their capabilities, ensure capacity building for developing States Parties and cooperate to achieve the transfer of marine technology, and recognises the special circumstances of small island developing States (SIDS) and least developed countries.

10. Australia is engaging with partners in the Pacific, Indian Ocean and Southeast Asia to support States to ratify and implement the Agreement, and to share Australia's technical expertise, including on marine protected area (MPA) management and compliance and environmental impact assessment. Australia is doing early, foundational work to potentially partner with regional neighbours on MPA proposals once the BBNJ Agreement enters into force. For example, Australia's science agency (CSIRO) is developing a new 'biogeographic regionalisation' for the Indian Ocean to support future Indian Ocean MPA proposals, including by leveraging the regional expertise of the Indian Ocean Rim Association States.
11. Importantly, the BBNJ Agreement provides that the transfer of marine technology undertaken under the Agreement shall take place on fair and most favourable terms, including on concessional and preferential terms, and in accordance with mutually agreed terms and conditions as well as the objectives of the Agreement. The Agreement also provides that the transfer of marine technology shall take into account all rights over such technologies and be carried out with due regard for all legitimate interests, including *inter alia* the rights and duties of holders, suppliers and recipients of marine technology and taking into particular consideration the interests and needs of developing States for the attainment of the objectives of the Agreement.

Australia's activities

12. Australia engages closely with regional neighbours on the protection of the marine environment and the conservation and sustainable use of marine resources. This includes the transfer of innovative technologies and building the capacity of partners to manage their maritime jurisdictions.

(a) Supporting use of Artificial Intelligence to monitor marine ecosystems

13. The Australian Institute of Marine Science (AIMS) supports States to strengthen their ability to monitor, manage, conserve, and rehabilitate coral reefs. AIMS' work involves the application of two AIMS-developed technologies: ReefScan and ReefCloud. These two tools improve modelling and reporting on coral reef monitoring data to better support management decisions. To date, AIMS has supported the transfer of this innovative marine technology to Vietnam, Brunei and the Philippines, and multiple States in the Pacific.
14. ReefScan is an autonomous device that can be attached to a vessel to take underwater images as a vessel travels. Images are then transferred to ReefCloud for analysis. The ReefCloud platform is a digital platform that uses artificial intelligence to analyse underwater images of a coral reef and rapidly extract data on its condition to provide comprehensive, standardised and easily understandable reports. Users of ReefCloud upload photos taken during their coral reef surveys. ReefCloud uses facial recognition technology to identify around seven million parameters from the colour, shape and size of coral. It can then identify the type of coral and analyse how the reef is changing over time, facilitating more timely and informed decision-making to

improve the long-term resilience of coral reefs. ReefCloud is supporting the resilience of coral reefs, particularly in the Pacific region, where many communities rely on coral reefs for economic benefits, coastal protection, cultural connection and food security. AIMS partnered with coral reef monitoring organisations in Fiji and Palau, as well as regional and global coral reef monitoring initiatives and technology developers, to design ReefCloud based on user needs.

15. ReefCloud dramatically reduces the amount of time and input needed to effectively monitor reefs. Users can easily share monitoring data and get up-to-date snapshots of reef condition in days rather than months. For example, the Palau International Coral Reef Centre utilised ReefCloud to classify more than 1.4 million data points from Palau's reefs and analyse over 28,000 photos from 48 reefs with over 90% accuracy. This data was generated within four hours using the ReefCloud platform, a significant improvement from the several months typically required by skilled researchers.
16. AIMS also worked with the Secretariat of the Pacific Regional Environment Programme (SPREP) to collaborate with communities in Samoa, Papua New Guinea and Australia through workshops to share Traditional Knowledge and cross-cultural insights on coral reef management practices across different nations. Recommendations from the workshops guided the development of a ReefCloud Community Dashboard, designed to present information in an accessible, easy-to-understand format for local decision-makers. ReefCloud has been positively received by the Pacific community of conservation practitioners and AIMS continues to work with SPREP to build capacity across the region, supporting implementation of the SPREP Pacific Coral Reef Action Plan, in particular to: utilise research and monitoring, optimise capacity building, and to foster traditional knowledge and practice.
17. Australia has also supported the Pacific Community to develop a cutting-edge Artificial Intelligence-assisted application called Ikasavea (means fish survey). Communities from Pacific Island Countries use Ikasavea on their mobile phones to quickly and accurately identify and record information about coastal species caught. Australia supported Kiribati and Vanuatu to start using Ikasavea in 2023. Coastal resources are critical for the food security of Pacific communities. Accurate information about coastal catches helps to prevent resource depletion, however manual data collection is cumbersome and erroneous. Due to the availability of this new technology, communities are now making better management decisions to protect their coastal resources based on near-real time and high-quality data.

(b) Supporting marine spatial mapping and maritime boundaries

18. Australia delivers tailored assistance in marine spatial mapping to provide countries with improved certainty and visibility of the geography of their coastlines, seabeds, and features to allow better management of their maritime jurisdictions.

19. Australia has contributed to a regional effort, coordinated by The Pacific Community (SPC), to assist 14 Pacific Island countries to establish their maritime zones under international law, specifically UNCLOS. Since 2011, 75% of shared boundaries in the Pacific have been negotiated, countries have been supported to establish their exclusive economic zone (EEZ) limits, and lodge claims for areas of extended continental shelf in accordance with UNCLOS. Clearly defined maritime zones underpin the governance, peace and security, marine conservation, and natural resource management of the Blue Pacific. This activity is a part of Australia's continued support for regional efforts in resolving maritime boundaries.
20. Australia supports institutional capacity-building in Southeast Asia with the aim of assisting governments to characterise the living and non-living marine resources in their maritime domain, identifying current and future threats to resources, and supporting the development of policy responses that reduce environmental, social, and economic risks.
21. Geoscience Australia has provided multi-parameter water quality probes to the Philippines. The water quality probes are used on-site to sample water in-situ and detect several parameters of water quality, including scientific information that can be used to monitor the health of aquatic and marine ecosystems and provide evidence to support the prosecution of environmental infractions. The probes have been deployed in most municipalities of the Province of Palawan for the monitoring of aquatic and marine areas.
22. More broadly, in 2024, Geoscience Australia worked with Southeast Asian partners to:
 - deliver bathymetry technical training workshops to improve bathymetric modelling and knowledge of seafloor geomorphology;
 - support mapping to enable the establishment of new marine protected areas;
 - provide coastal monitoring equipment and training;
 - deliver technical training on python software for high-quality analysis and visualisation in policy documents; and
 - produce hydrographic charts and better coordinate geospatial information workflows and systems.
23. These activities demonstrate the broad range of ways in which Australia is contributing to capacity building and the transfer of marine technology, including to meet the needs of developing States, and contributing to the protection of the marine environment and the conservation and sustainable use of marine resources.