

THE KUNMING-MONTREAL GLOBAL BIODIVERSITY FRAMEWORK: A CRITICAL MOMENT FOR CORAL REEFS

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BACKGROUND

The Kunming-Montreal Global Biodiversity Framework (GBF), adopted in December 2022 during the 15th Conference of the Parties to the Convention on Biological Diversity (CBD), is a milestone agreement aimed at halting and reversing biodiversity loss by 2030. It aims to catalyse, enable, and galvanise urgent and transformative action by Governments, and subnational and local authorities, with the involvement of all of society, to achieve the outcomes it sets out in its Vision, Mission, Goals and Targets. The GBF provides a crucial roadmap for safeguarding the planet's biodiversity, including protecting 30 per cent of the Ocean by 2030, often referred to as 30x30. Whilst not explicitly mentioned in its 23 Targets, the GBF remains relevant to coral reef ecosystems with 16 out of 23 targets proposed to be highly relevant (Table 1). The urgency for action has never been more pressing, making the upcoming Sixteenth meeting of the Conference of the Parties to the Convention on Biological Diversity (CBD COP16) a pivotal moment for coral reef ecosystems. The oceans transcend borders, and the challenges we face demand a collective response – all nations–both coral reef and non-coral reef states – must unite #ForCoral.

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KEY ASKS FOR CORAL REEFS AT CBD COP16

The significance of coral reefs extends beyond their immediate ecological value; they are vital for global biodiversity, economic stability, and climate resilience. As the world grapples with the realities of biodiversity loss, COP16 represents a unique opportunity to catalyse urgent and transformative actions for coral reefs. By prioritising effective management, restoration, and community engagement, we can forge a sustainable future for these vital ecosystems.

1. Strengthened Management Frameworks: Advocate for the integration of comprehensive management practices within the GBF framework. Effective spatial planning and marine protected areas (MPAs) are essential to preserving coral reef ecosystems. By halting land and sea use changes and ensuring sustainable fishing practices, we can enhance the resilience of coral reefs against environmental stressors. This aligns directly with **Target 1** and **Target 3**. To double the area of coral reefs under effective protection by 2030, with 100% protected by 2050; bolstering resilience-based coral reef conservation efforts to transcend **Target 3** of the GBF.

2. Effective Restoration: Assist the development and implementation of innovative solutions at scale and climate smart designs that support coral adaptation to impact 30% of degraded reefs by 2030. Effective restoration (Target 2) of coral reef ecosystems should prevent reefs from becoming dominated by algae, prevent loss of biodiversity, allow reefs to maintain structural rugosity, and keep pace with warming oceans and sea level rise.

3. Pollution Management and Regulation: Highlight the urgency of reducing land-based pollution (**Target 7**) that degrades coral reefs. This includes implementing stronger regulations on agricultural runoff, plastic waste, and nutrient pollution. By improving water quality and minimising pollutants entering marine environments, we can significantly enhance the health and resilience of coral ecosystems.

4. Capacity Building and Knowledge Sharing: Stress the importance of investing in capacity building (**Target 20**) for effective management of coral reefs. This involves training local authorities, community groups, and stakeholders in sustainable practices and fostering knowledge sharing between nations. Better-equipped communities can implement and enforce regulations that protect coral reefs from overexploitation and environmental degradation.

5. Monitoring and Accountability: Call for the establishment of robust monitoring systems that track the health of coral reefs and evaluate the effectiveness of management strategies. *The Global Coral Reef Monitoring Network (GCRMN)* can play a

crucial role in this, providing essential data to inform adaptive management approaches that can respond dynamically to changing conditions and threats.

6. Scaling Up Finances from Public and Private Sectors: Advocate for increased financial investment for coral reefs from both public and private sectors. Blended finance models, public-private partnerships, and innovative funding mechanisms can unlock significant resources to support the restoration, management, and resilience of coral reefs. This aligns with **Target 19**, which focuses on increasing financial resources for biodiversity conservation, ensuring coral reef ecosystems receive adequate funding to meet national and global targets #ForCoral.

RELEVANCE OF THE GBF TO CORAL REEFS

Coral reefs occur in over 100 countries, territories and local economies, and are one of the most threatened ecosystems in the world, despite their immense value to the one billion people (13% of the global population) that depend on them for their livelihoods, food security, and coastal protection. However, coral reefs are rapidly declining due to anthropogenic pressures such as climate change, pollution, overfishing, and habitat destruction. The global coverage of living coral has declined by 50% since the 1950s, whilst at least 63% of coralreef-associated biodiversity has declined with loss of coral reef extent¹. The Global Coral Reef Monitoring Network (GCRMN) identified the loss of 14% of the world's hard coral cover between 2009 to 2018². Addressing these drivers of loss needs comprehensive efforts to manage coastal development, improve water quality, regulate fishing practices, and promote sustainable tourism among others, to ensure the long-term survival of coral reef ecosvstems.

In April 2024, the International Coral Reef Initiative (ICRI) and National Oceanic and Atmospheric Administration (NOAA) announced the *Fourth Global Coral Bleaching Event (GBE4*), the second in the last decade. The GBE4 has now surpassed the extent of the Third Global Coral Bleaching Event (GBE3), in which over 75% of coral reefs worldwide have been affected by bleaching-level heat stress (as of August 2024).

This dire situation highlights the urgent need for action in line with the GBF targets such as **Target 1** to undertake spatial planning and management to halt land and sea use change, **Target 2** for the effective restoration of at least 30% of degraded terrestrial and inland water areas, and of marine and coastal areas, **Target 3** to place more areas of marine and coastal environments under area-based conservation measures to reduce biodiversity loss, **Target 7** to reduce the risks from all types of pollutants to marine and coral reef biodiversity, and **Target 8**, minimising impacts of climate change on biodiversity to build resilience, to further mitigate their degradation and facilitate their recovery.



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¹⁻ Eddy, T., Lam, V., Reygondeau, G., Cisneros Montemayor, A., Greer, K., Palomares, M., Bruno, J., Ota, Y., & Cheung, W. (2021). Global decline in capacity of coral reefs to provide ecosystem services. Cell Press. DOI: https://doi.org/10.17615/t504-7978

²⁻ Souter, D., Planes, S., Wicquart, J., Logan, M., Obura, D., Staub, F. (eds) (2021). Status of coral reefs of the world: 2020 report. Global Coral Reef Monitoring Network (GCRMN) and International Coral Reef Initiative (ICRI). DOI: 10.59387/WOTJ9184

Table 1. Action Targets of the Kunming-Montreal Global Biodiversity Framework and their relevance to warm water coral reefs and associated ecosystems³.

2030 GBF ACTION TARGETS	RELEVANCE TO CORAL REEFS AND ASSOCIATED ECOSYSTEMS
Target 1. Spatial planning and retention of wilderness/intact areas	HIGH – Marine and coastal ecosystem extent, integrity, and connectivity are all aspects that will require increased capacity to monitor and achieve.
Target 2. Restoration	HIGH - Restoring tropical marine and coastal ecosystems such as coral reefs, mangroves and seagrass beds is critically important
Target 3. Protected areas and other effective area-based conservation measures	HIGH – Crucial for the recovery of tropical marine and coastal ecosystems. A key aspect is ensuring these areas are effectively and equitably managed.
Target 4. Conservation and recovery of species	HIGH – Important for endangered reef fauna such as turtles, elasmobranchs and hard corals, and an important aspect of ecosystem recovery and restoration. Links to T5 and T9 through bycatch mitigation in fisheries
Target 5. Harvest and trade of wild species	HIGH – Relevance to high value trade of marine resources such as shark fins and, sea cucumbers but also strongly linked to sustainable fisheries.
Target 6. Invasive alien species	MEDIUM – However, can be regionally high e.g., lionfish in the Caribbean
Target 7. Pollution	HIGH – Particularly for land-based pollution from agricultural and urban areas and sea-based pollution such as ghost fishing gear, with an overall focus on nutrients and plastic.
Target 8. Biodiversity and climate change	HIGH – Promoting the use of nature-based solutions to increase resilience in the marine and coastal environment to CC impacts. Strong linkages with T1, T2, T3, T5, T7 and T9.
Target 9. Sustainable use of wild species	HIGH – Sustainable fisheries management is key, especially for small-scale fisheries in SIDS and LDCs
Target 10. Sustainable agriculture, forestry, and aquaculture	MEDIUM – Sustainable aquaculture, minimising downstream effects on tropical coastal ecosystems through sustainable land use
Target 11. Ecosystem functions and services	HIGH – Connections to marine and coastal ecosystems in terms of food provision, coastal protection, and storm-water management

³⁻ International Coral Reef Initiative. (2024). Guidance Document on Integrating Coral Reefs and Associated Ecosystems into National Biodiversity Strategies and Action Plans. London, United Kingdom: International Coral Reef Initiative (ICRI) Secretariat.

2030 GBF ACTION TARGETS	RELEVANCE TO CORAL REEFS AND ASSOCIATED ECOSYSTEMS
Target 12. Green/blue spaces in urban areas	LOW – Focus on minimising impacts from urban areas on adjacent tropical coastal ecosystems.
Target 13. Access and benefit sharing	MEDIUM – Important for SIDS and LDCs to enable benefits and incorporate traditional local knowledge (ILK).
Target 14. Mainstreaming biodiversity across sectors	HIGH – Mainstreaming biodiversity values for tropical coastal and marine systems across sectors is extremely important.
Target 15. Business and biodiversity	HIGH – Important for sustainable seafood supply chains, coastal tourism, and waste management to minimise pressures
Target 16. Sustainable consumption	MEDIUM – e.g., to minimise waste in urban coastal areas
Target 17. Biosafety	LOW – But linked to transfer of marine invasive species
Target 18. Subsidies and incentives	MEDIUM – Important to reduce or remove harmful incentives and subsidies e.g., for inshore fisheries
Target 19. Increasing financial and other resources for biodiversity	HIGH – Critical to ensure there are sufficient resources to scale up the restoration and management of tropical coastal ecosystems
Target 20. Capacity Building and Development	HIGH – Critical for the monitoring, management, and governance of tropical coastal ecosystems in order to meet the GBF Goals
Target 21. Information and knowledge	HIGH – Adequate availability of quality information is essential for the management of tropical marine and coastal systems
Target 22. Participation of IPLCs	HIGH – Building management and governance systems that involve indigenous peoples and local communities including women and youth in decision making is essential, especially in SIDS and LDCs
Target 23. Participation of women, girls, and youth	HIGH - As per target 22



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VALUE OF CORAL REEFS

Coral reefs cover approximately 0.2% of the seafloor but support at least 25% of marine species and underpin the safety, coastal protection, wellbeing, food, and economic security of one billion people. The value of goods and services provided by coral reefs is estimated at US\$9.9 trillion per year⁴ including US\$36 billion in coral reef tourism⁵. Moreover. \$109 billion of GDP worldwide are protected by coral reefs⁶. In the Asia-Pacific region alone, the economic productivity of coral reefs in terms of direct use from fishing and tourism was \$112,000 per square kilometre of coral reef7. Moreover, a healthy coral reef is expected to deliver \$34.6 billion and \$36.7 billion in the Mesoamerican Reef and the Coral Triangle regions respectively between 2017 and 2030⁸. Coral reefs protect coastal habitats such as seagrass meadows and mangroves, which absorb carbon dioxide from the atmosphere and store it up to 50 times more efficiently than terrestrial forests.

Coral reefs hold immense value on a global scale, while non coral reef dependent countries believe they may not directly benefit from coral reef ecosystems, they still rely on the services they provide to support global biodiversity, fisheries, climate regulation, and scientific research. Coral reefs have been described as the "medicine chests of the 21st century", with more than half of all new cancer research focusing on marine organisms⁹. Coral reefs have even been used in the treatment of cancer, such as leukaemia and lymphoma¹⁰. The impact of coral reef degradation therefore extends beyond national borders, affecting fisheries, biodiversity, and human-wellbeing.

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⁴⁻ Costanza, R., de Groot, R., Sutton, P., van der Ploeg,S., Anderson, S.J., Kubiszewski, I., Fraber, S., Turner, R.K. (2014) Changes in the global value of ecosystem services. Global Environment Change, 26(1): 152-158. DOI: http://dx.doi.org/10.1016/j.gloenvcha.2014.04.002
5 - Spalding, M., Burke, L., Wood, S., Ashpole, J., Hutchison, J., & Zu Ermgassen, P. (2017). Mapping the global value and distribution of coral reef tourism. Marine Policy, 82, 104-113. https://doi.org/10.1016/j.marpol.2017.05.014

^{6 -} Burke, L & Spalding, M. (2022). Shoreline protection by the world's coral reefs: Mapping the benefits to people, assets, and infrastructure. Marine Policy. 146. 105311. DOI: https://doi.org/10.1016/j.marpol.2022.105311

^{7 -} Bartelet, H., & Barnes, M., & Cumming, G. (2024). Estimating and comparing the direct economic contributions of reef fisheries and tourism in the Asia-Pacific. Marine Policy. 159. DOI: https://doi.org/10.1016/j.marpol.2023.105939

⁸⁻ UN Environment, ISU, ICRI and Trucost 2018. The Coral Reef Economy: The business case for investment in the protection, preservation, and enhancement of coral reef health. 36pp

⁹⁻ Fenical William. Marine Biodiversity and The Medicine Cabinet, The Status of New Drugs From Marine Organisms. Octanography, 1996; 9(1): 23-27.

¹⁰⁻ Wali AF, Majid S, Rasool S, Shehada SB, Abdulkareem SK, Firdous A, Beigh S, Shakeel S, Mushtaq S, Akbar I, Madhkali H, Rehman MU. Natural products against cancer: Review on phytochemicals from marine sources in preventing cancer. Saudi Pharm J. 2019 Sep;27(6):767-777. doi: 10.1016/j.jsps.2019.04.013.

THE GCRMN 2025 REPORT: A CRUCIAL TOOL FOR CORAL REEF CONSERVATION



The Global Coral Reef Monitoring Network (GCRMN) has been instrumental in tracking the health of coral reefs over the past two decades. The GCRMN has adopted a new approach, based on the analysis of standardised monitoring data. The "Status and Trends of Coral Reefs of the World: 2020" GCRMN report has been produced using this approach and has made it possible to estimate temporal changes of hard coral and algae cover at the global and regional scales, between 1978 and 2019.

Given the urgency to conserve coral reefs and the commitments made by countries to 2030, there is an immense value, and need, for the next global report, which will serve to provide an update of the 2020 global report. The GCRMN has therefore launched a call for coral reef monitoring data contributions with the report seeking to describe the global-level temporal trends of hard coral, macro algae, turf algae, and coralline algae.

The call for data is supported by a dedicated webpage (*www.gcrmn.net/2025-report*), a "Guide for Data Contributors" and a Data Sharing Agreement, with two webinars planned before 2025. Whilst the number of datasets received by the GCRMN has already exceeded the amount received for the 2020 report, there are clear gaps in data. *An interactive map of data* that have been integrated into the global data set has been launched to aid data contributors and to identify gaps in coral reef monitoring data.

The Status of Coral Reefs of the World: 2025 report will serve as a critical checkpoint on the journey to 2030. It will provide the data needed to assess the status of the world's coral reefs, enabling strategies to be refined at the national, regional and international levels - ensuring their survival in a rapidly changing world.



NATIONAL BIODIVERSITY STRATEGIES AND ACTION PLANS (NBSAPS)

NBSAPs are the main vehicle for implementation of the GBF at the national level and are expected to be a key component of the enhanced planning, monitoring, reporting and review mechanism of the Convention for the GBF. ICRI has remained steadfast to support coral reef nations to include coral reefs in NBSAPs and the alignment of plans and actions,



at the national level, with respect to the implementation of the GBF. Resource: ICRI Guide - https:// icriforum.org/ documents/icricoral-reefs-nbsaps/

ABOUT *ICRI*

The International Coral Reef Initiative (ICRI) is a global partnership of 102 members for the preservation of the world's coral reefs and associated ecosystems (www.icriforum.org), including 45 countries that represent 75% of the world's coral reefs. Founded in 1994 by eight countries, 2024 marks 30 years of commitment to the conservation, protection, and restoration of coral reef ecosystems. Over the years. ICR's actions have been pivotal in highlighting the global importance of coral reefs and related ecosystems to environmental sustainability, food security and social and cultural wellbeing. The work of ICRI is regularly acknowledged in United Nations *documents*, highlighting the Initiative's important cooperation, collaboration, and advocacy role within the international arena.

ICRI has been a long-term partner to the Secretariat of the Convention on Biological Biodiversity (CBD), and its formation was announced at the inaugural Conference of the Parties to the CBD, on 7th December 1994. ICRI has continued to support CBD Parties over the year's including developing a recommendation to the Post-2020 Global Biodiversity Framework

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(GBF) to ensure the appropriate inclusion of coral reef ecosystems, and more recently the release of "A guide for Integrating coral reefs and associated ecosystems into National Biodiversity Strategies and Action Plans (NBSAPs)".





Youtube channel:

@ICRI_Coral_Reef

Register for the ICRI Newsletter: https://www.icriforum.org/newsletters

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#FORCORAL PAVILION



To ensure coral reefs remain at the top of the international agenda, ICRI and its generous cosponsors will host the #ForCoral Pavilion, which stands as a critical platform for one of the world's most threatened, yet valuable, ecosystems at the occasion of the CBD COP16. It highlights the urgent need for coral reef conservation, fostering global collaboration and innovation to protect these vital marine ecosystems. As a beacon for collective action, the Pavilion aims to drive solutions that ensure the survival and resilience of coral reefs, emphasising their importance in the broader context of the GBF. The #Forcoral Pavilion aligns with Global Biodiversity Framework goals, promoting crosssector collaboration to raise awareness of coral reef threats, advocate for stronger conservation policies, and emphasise the critical importance of coral reefs for biodiversity, coastal protection and livelihoods. This will be done through:

- High-level events including panel discussions and interactive sessions
- Quick Fire Talks
- · Launch of new initiatives and projects; and
- Networking opportunities where participants will have the chance to connect with the coral reef community fostering new collaborations and partnerships



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CONTACT THE ORGANISERS

A RICH PROGRAMME TO ENGAGE A GLOBAL AUDIENCE

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Explore the rich programme at the #ForCoral Pavilion to engage a global audience: www.cop16forcoral. org



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