

STATUS OF CORAL REEFS OF THE WORLD: 2025

RESULTS AND IMPLICATIONS FOR
THE KUNMING-MONTREAL GLOBAL
BIODIVERSITY FRAMEWORK (KM-GBF)

SCIENCE-TO-ACTION BRIEF



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Coral reefs are among the world's most valuable natural assets. They are living infrastructure, supporting food security, livelihoods, coastal protection, economies, biodiversity, and cultural identity for close to one billion people.

Coral reefs worldwide are in decline, and the interval in which they recover between disturbances is shortening. Successive marine heatwaves, driven by climate change, are causing widespread coral mortality and reducing the capacity of reefs to recover between disturbances. This threatens one of the planet's most biodiverse ecosystems and the benefits coral reefs provide for up to a billion people.

The Global Coral Reef Monitoring Network (GCRMN) "Status of Coral Reefs of the World: 2025" Report provides Parties and observers to the Convention on Biological Diversity (CBD) with the most comprehensive global assessment of coral reef status and trends to date. The report examines patterns of change from 1980-2024 of **hard coral and macroalgal cover**, providing an essential evidence base for climate-resilient reef management. Contributed from **600 partners** across more than **120 countries, territories, and economies**, the report draws on over **21.1 million observations** from **87,299 surveys** representing **36,886 sites**. As ocean temperatures continue to climb and local pressures mount, the window to safeguard these ecosystems is rapidly closing - making timely, evidence-based action more critical than ever.

WHY THE GCRMN MATTERS FOR THE KM-GBF

Effective implementation of the KM-GBF depends on **consistent, comparable, and long-term biodiversity data** to measure progress towards global goals and targets. However, the draft Global Report on Collective Progress in the Implementation of the Kunming-Montreal Global Biodiversity Framework [CBD/SBSTTA/28/2/Add.1/Rev.1, p. 312], highlights significant gaps in baselines against which progress can be assessed including **coral cover**.

The GCRMN provides Parties with a mature, standardised, and globally coordinated biodiversity monitoring community of practice. Through its long-term and global network, indicators, regional and global assessments, and monitoring standards, GCRMN helps countries:

- Implement KM-GBF targets related to coral reef ecosystems
- Monitor progress using scientifically robust indicators
- Report nationally and globally against KM-GBF commitments
- Strengthen evidence-based decision-making and adaptive management

The provision of biodiversity monitoring data on the status and trends of coral reefs, by the GCRMN, helps address these gaps by providing assessments on the world's most extensive long-term evidence base.

This evidence is particularly important in the context of the evolution of the KM-GBF monitoring framework. When the framework was adopted through [Decision 15/5](#), it included three coral reef-specific complementary indicators: **Live coral cover; Hard coral cover and composition; and Global coral reef extent**. The explicit inclusion of these indicators followed advocacy by the International Coral Reef Initiative (ICRI), including its [2020 Recommendation calling for coral reefs and related ecosystems to be appropriately reflected in the post-2020 KM-GBF](#).

Following the adoption of [Decision 16/31](#) at the resumed session of CBD COP16 in February 2025, these **coral reef indicators were no longer retained** as separately listed complementary indicators, having been identified as **possible disaggregations of headline indicators**. This change makes it particularly important that Parties continue to ensure that coral reef condition is measurable, visible and appropriately represented within the implementation and monitoring of the GBF.

The GCRMN observational network and its data provide a crucial foundation for understanding coral reef conditions and trends globally. These data underpin a range of broader assessments and decision-making processes, including [Red List of Ecosystems](#) assessments, biodiversity reporting and other ecosystem monitoring and conservation applications. This data can also inform national monitoring processes and the development of national reports, including through their **relevance to Headline Indicator A.1 (Red List of Ecosystems)**, and their contribution to understanding trends in coral reef ecosystems alongside assessments of **A.2 (Extent of natural ecosystems)**. This is addressed through the optional disaggregation of indicators by realm, biome and ecosystem functional group, using Levels 2 and 3 of the [Global Ecosystem Typology](#), or equivalent classifications. Within the marine realm, coral reefs are represented under the **M1 Marine shelf biome**, specifically **M1.3 Photic coral reefs**. This provides a mechanism for coral reef information to be reflected in assessments of relevant GBF indicators, even where coral reefs are not identified as a standalone indicator.

The report highlights both the vulnerability and resilience of coral reefs. While repeated marine heatwaves driven by human-induced climate change are causing widespread declines, some reefs demonstrate capacity for recovery where intervals between disturbances remain sufficient. Broader coral reef science also demonstrates that resilience can be strengthened where local pressures, including poor water quality, wastewater pollution, and sedimentation - are reduced. As one of the most comprehensive long-term reports on the status and trends of coral reef ecosystems, the **GCRMN supports national reporting, adaptive management, and assessment of progress under the KM-GBF**. Realising this value will require sustained financial investment in monitoring, capacity development, and institutional support, particularly in developing countries where monitoring gaps are often greatest.

SUPPORTING IMPLEMENTATION OF THE KM-GBF

Whilst not explicitly mentioned in its 23 Targets, the KM-GBF remains relevant to coral reef ecosystems with **16 out of 23 targets proposed to be highly relevant**.¹ The [“Status of Coral Reefs of the World: 2025”](#) provides evidence that can support Parties in two ways: direct contributions to understanding reef status and trends through monitoring data (Table 1); and broader relevance of those findings for management and policy responses (Table 2).

PRIORITIES FOR CONSIDERATION

With scientific evidence stronger than ever and the interconnected nature of climate change and biodiversity loss increasingly evident, long-term coral reef observations provide an essential evidence base to support implementation of the KM-GBF and broader multilateral environmental action.

The “Status of Coral Reefs of the World: 2025” demonstrates both the scale of decline in hard coral cover occurring in one of the world’s most diverse ecosystems and the importance of sustained, coordinated monitoring. As climate-sensitive and highly biodiverse ecosystems, coral reefs are a powerful indicator of biodiversity change and ecosystem resilience, supporting relevant KM-GBF Goals, Targets, and indicators. Strengthened monitoring systems are essential for enabling Parties, observers and partners to assess progress, inform implementation, and support adaptive management, but monitoring must translate into action. The findings of the GCRMN report underscore the need for accelerated implementation of the KM-GBF, increased investment in coral reef resilience, stronger action on climate change and pollution, and effective conservation measures that give coral reefs the greatest possible chance to recover and thrive.

Key Recommendations for Parties, observers, financial institutions and implementation partners:

- **Translate monitoring data into action to address coral reef pressures.** Coral reef monitoring should serve as a catalyst for management and policy action. Parties and partners should leverage GCRMN findings to directly inform, target, and scale up interventions that reduce key drivers of reef decline - including climate change, land and marine-based pollution, unsustainable fishing, and poorly managed coastal development - while embedding resilience-based management into local, national, and regional marine planning.
- **Increase investment in coral reef monitoring, management and resilience building systems** to strengthen the availability of long term ecological data needed to assess condition, inform evidence-based decision-making, support **Goal A indicators**, and improve national reporting, particularly in developing countries where monitoring gaps remain greatest.
- **Expand spatial and temporal monitoring coverage** to improve the representativeness of coral reef observations, strengthen long-term baselines, increase coverage of underrepresented regions and enable more robust assessment of ecosystem trends and progress towards KM-GBF goals and targets.
- **Improve biodiversity data accessibility and interoperability** to ensure coral reef observations can be effectively integrated into national biodiversity monitoring and action plans used to support KM-GBF reporting and indicator assessments, consistent with FAIR data principles.
- **Expand the range of ecological indicators used for coral reef monitoring** beyond hard coral cover, including complementary indicators aligned with Essential Ocean Variables, such as reef fish biomass, water quality, nutrient and sedimentation loads and wastewater exposure, to strengthen assessment of ecosystem condition, resilience, and change under the KM-GBF.
- **Integrate ecological and socio-economic monitoring approaches** to strengthen understanding of links between ecosystem condition and nature’s contributions to people (Target 11).
- **Strengthen integration of coral reef conservation and monitoring** into National Biodiversity Strategies and Action Plans (NBSAPs), ensuring that reef condition and resilience are reflected in national targets, implementation measures, finance strategies, and reporting frameworks.

WHY CORAL REEFS MATTER

\$9.9 trillion

Ecosystem services
provided each year

\$36 billion

Reef tourism value
each year

97%

Wave energy a healthy
reef can absorb

5.3 million

People protected from flooding –
along with \$109B of GDP each year

>25%

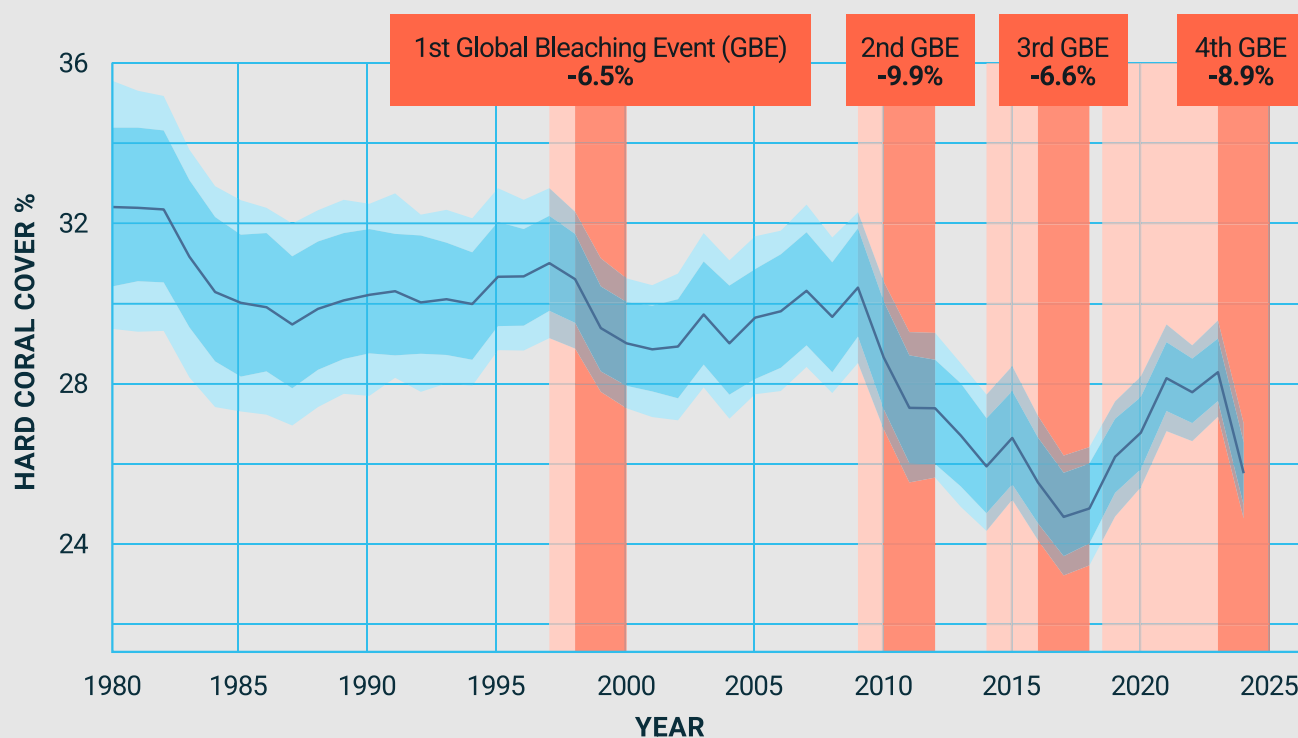
of marine species depend
on reefs but reefs cover <0.2% of
the ocean floor

104 million

People now live within
5km of a coral reef

1 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.

KEY FINDINGS



KEY POINTS



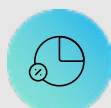
Climate change is the dominant driver

Climate-driven marine heatwaves – and the global bleaching events they drive – are the primary cause of the global decline in hard coral cover, now a recurrent and escalating pressure rather than episodic. Major declines align with the events of 1998, 2010, 2016 and 2023-24.



Reefs can recover, if given the chance

Following the third global bleaching event, global hard coral cover rose by a relative ~6% between 2017 and 2019 – showing reefs recover when disturbance eases – but shortening windows between events are driving a stepwise decline in coral cover.



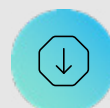
The picture varies by region

Of the 10 GCRMN regions, four show long-term declines, four show no net change, and two show increases relative to the reference period. Effective protection needs coordinated local, national and global action.



What we measure matters

Hard coral cover alone does not fully represent reef condition. Sustained long-term monitoring of a broader set of indicators – including macroalgae, which remains low globally – is essential to detect change, attribute drivers and manage adaptively.



The future is not fixed

At the current frequency of global bleaching events (every 5–6 years) reefs are expected to keep declining; ambitious emissions cuts combined with effective local management offer the strongest pathway to halt the loss of hard coral cover.

TABLE 1

Targets directly informed by GCRMN data and findings.

Target	Relevance to KM-GBF	Report Implications
Goal A (Protect and Restore)	The headline and binary indicators under Goal A include A.1 Red List of Ecosystems and A.2 Extent of natural ecosystems. Whilst coral cover is no longer noted under the complementary indicators it is addressed, through the optional disaggregation of indicators by realm, biome and ecosystem functional group, using Levels 2 and 3 of the Global Ecosystem Typology, or equivalent classifications. Within the marine realm, coral reefs are represented under the M1 Marine shelf biome, specifically M1.3 Photic coral reefs.	The GCRMN report evidence provides a mechanism for coral reef information to be reflected in assessments of relevant GBF indicators, even where coral reefs are not identified as a standalone indicator. The GCRMN, via its regional networks, has contributed to the coral reef Red List of Ecosystems assessments, which will be used by countries in their national reporting on A.1, likely to 2029.
Target 1 (Spatial Planning)	Long-term GCRMN monitoring data contribute to the evidence base for Goal A , including Headline Indicator A.1 (Red List of Ecosystems) .	Globally, hard coral cover has experienced a relative decline of ~9.5% (1980-2009 vs 2020-2024), with current levels at ~25.8%. These long-term reef observations help identify areas of persistence, recovery, and decline, supporting more effective marine spatial planning and prioritisation of conservation actions.
Target 4 (Species Recovery and Genetic Diversity)	Trends in hard coral and macroalgal cover provide evidence of changes in coral reef community structure and ecosystem condition.	Long-term trends show increasing macroalgal cover over the past four decades, particularly following the major global decline in hard coral cover after 2010, however global macroalgal cover remains relatively low at ~6.8%. These changes can affect the habitat and ecological conditions that support species recovery and persistence, but do not directly measure extinction risk or genetic diversity.
Target 8 (Climate Change)	The increasing frequency of climate-driven disturbances suggests that climate impacts are reducing recovery windows for many coral reefs, highlighting the need to strengthen ecosystem resilience and climate adaptation measures within biodiversity strategies and action plans.	Four major global bleaching events since 1998 have resulted in substantial global relative losses of coral cover (~6.5%, ~9.9%, ~6.6%, and ~8.9%, in 1998, 2010, 2014-17, and 2023-24 respectively).
Target 11 (Nature's Contributions to People)	Declines in coral reef condition raise concerns about the continued capacity of reefs to provide essential ecosystem services, including food security, coastal protection, livelihood support, and cultural values.	The report highlights increasing dependence on coral reef ecosystems, with the number of people living within 5 km of coral reefs increasing substantially over recent decades (around 104 million people as of 2020, a 46% increase over two decades).
Target 21 (Knowledge and Data)	The expansion of spatial monitoring data and increased availability of observations strengthen the evidence base for biodiversity assessment, decision-making, and reporting, supporting the objectives of Target 21 and its emphasis on accessible and reliable knowledge.	The GCRMN directly contributes to improving the availability, accessibility, and use of data by providing a long-term dataset on coral reef cover.

TABLE 2

Targets where the report is supportive, but the outputs do not provide explicit data or direct evidence.

Target	Relevance to KM-GBF	Report Implications
Target 2 (Restoration)	GCRMN does not compile data on coral reef restoration, but its long-term assessment of reef degradation and recovery provides relevant context for implementing restoration.	The report documents widespread coral reef decline, while also showing periods of recovery following disturbance. This demonstrates the importance of maintaining conditions that allow reefs to recover naturally and remain resilient.
Target 3 (30x30)	Declines in hard coral cover are often linked to declines in coral reef biodiversity, highlighting the importance of effective marine protected and conserved areas.	The report documents significant declines in hard coral cover and provides evidence relevant to identifying coral reef conservation priorities. It does not directly assess the coverage or effectiveness of protected and conserved areas.
Target 5 (Sustainable, Safe and Legal Harvesting and Trade of Wild Species)	Macroalgal cover is widely used as a complementary indicator of coral reef condition, and increases in macroalgal cover can lead to fundamental changes in ecosystem function.	While the report focuses on hard coral cover rather than harvest data, overharvesting key functional groups (such as herbivorous fish for example) can accelerate macroalgal growth that competes with live hard coral for space. An example of this relationship is referenced in the Caribbean Regional Chapter. This illustrates the broader ecological risks associated with unsustainable marine exploitation and highlights the importance of sustainable harvesting practices in supporting reef resilience.
Target 7 (Pollution)	GCRMN findings are relevant to the Target's focus on reducing cumulative pressures on biodiversity, as local pressures can compound climate-related impacts on coral reefs.	The global assessment does not directly quantify pollution impacts or assess progress against the Target 7 elements. However, regional findings identify local pressures as factors that can compound climate-related impacts and contribute to coral reef degradation.
Target 14 (Integrate Biodiversity in Decision-Making at Every Level)	Evidence on differences in coral reef condition and trends across regions is relevant to integrating biodiversity considerations into policies, planning and decision-making.	Observed differences in coral reef trajectories among regions demonstrate the importance of understanding ecosystem condition and trends within different environmental and socio-economic contexts.
Target 15 (Biodiversity-Related Risks and Negative Impacts)	Data on coral reef condition and trends are relevant to sectors that depend on or affect coral reef ecosystems, including tourism and fisheries.	Long-term trends in coral reef condition demonstrate changes in the health and resilience of reef ecosystems, providing evidence relevant to understanding sectoral dependencies, impacts and biodiversity-related risks.
Target 19 (Resource Mobilisation)	Sustained and substantially increased investment in coral reef monitoring, conservation and resilience-building is needed to strengthen biodiversity knowledge systems and support effective implementation of the KM-GBF, and address persistent finance gaps particularly in developing countries.	The report identifies remaining data gaps and uneven monitoring capacity, highlighting the need for continued investment in long-term coral reef monitoring and conservation.
Target 20 (Capacity Building and Technology Transfer)	Strengthening coral reef monitoring systems requires scientific capacity, knowledge exchange, access to technology and technical cooperation, particularly where monitoring capacity remains limited.	The report recommends continued strengthening of monitoring systems and highlights the importance of sustained technical capacity and collaboration to expand and maintain long-term reef monitoring.
Target 22 (Equitable & Inclusive Participation)	GCRMN brings together partners across countries, territories and regions, demonstrating the value of collaborative and diverse contributions to biodiversity knowledge and conservation.	The GCRMN approach involves hundreds of partners and contributors, supporting collaborative knowledge generation across regions. However, the report does not directly assess equity, participation or inclusion outcomes.
Target 23 (Gender Equality)	GCRMN highlights the importance of recognising the needs and contributions of reef-dependent communities in biodiversity conservation and management.	The report highlights the importance of reef-dependent communities, but does not directly assess gender equality, gender-disaggregated outcomes or progress against Target 23.

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The GCRMN Report Communications & Policy Taskforce is gratefully acknowledged for its contribution to the development of this Science-to-Action brief. It demonstrates the enduring commitment, expertise and collaborative spirit of the global coral reef community, and its shared dedication to informing policy and action through science.

This brief synthesises key findings from the "GCRMN Status of Coral Reefs of the World 2025", to support the implementation of the KM-GBF. The conclusions and recommendations presented here should not be interpreted as an official policy, decision, or position of any government, institution, or organisation.



To read the full report, visit:
gcrmn.net/2025-report