

Addendum to the ICRI Recommendation on the inclusion of coral reefs and related ecosystems within the CBD Post-2020 Global Biodiversity Framework

Adopted at the 36th ICRI General Meeting (online), December 2021

Recognising the International Coral Reef Initiative (ICRI) decision at its 34th ICRI General Meeting that there is an urgent and continued need for action to address coral reef issues in the post-2020 Global Biodiversity Framework;

Noting that the Post-2020 Global Biodiversity Framework and its associated monitoring framework provide an important opportunity to deliver focused, strategic action to safeguard coral reef ecosystems from further decline and drive progress towards a future of living in harmony with nature;

Recalling the decision by ICRI in May 2020 to adopt the Recommendation on the inclusion of coral reefs and related ecosystems within the CBD Post-2020 Global Biodiversity Framework and noting that this addendum forms a part of this Recommendation;

Welcoming the progress of the ICRI ad hoc Committee to engage with and contribute to the CBD Process in line with Decision 14/34 of the Convention on Biological Diversity;

Noting that the First Draft of the Global Biodiversity Framework includes a new target that focuses on restoration this addendum provides additional recommendations relevant to this particular issue;

Recalling the 2019 ICRI Resolution to update the 2005 ICRI resolution on artificial coral reef restoration and rehabilitation;

Noting the results of the 6th Status of the Coral Reefs of the World report (GCRMN, 2021), demonstrated a continuing decline of the state of coral reefs, combined with projections for continued impacts from climate change, restoration will comprise an important management option for the persistence of coral reefs;

The International Coral Reef Initiative: Calls upon its members and other relevant stakeholders to take into account the information provided as Appendix 1 to ensure:

1. The language of target 1 of the GBF calls for the retention and safeguarding of vulnerable ecosystems and the language of target 2 sets ambitions that drive restoration actions that are appropriate for coral reef ecosystems;
2. The adoption of an appropriate indicator within the monitoring framework of the Global Biodiversity Framework to ensure accountability and measurability in delivering progress against this target for coral reef ecosystems;

Appendix 1: Detailed recommendations with regards to Target 2 of the Global Biodiversity Framework

ICRI notes the need for an integrative approach to the management of interconnected ecosystems and recognises the beneficial impacts of co-locating ecosystem restoration efforts.

Explanatory note: The restoration of other ecosystems (associated ecosystems or those located from ridge to reef) has been demonstrated to have benefits for coral reefs (e.g. restoring forests

in the watersheds co-located with coral reefs can reduce pressures from sedimentation; beneficial feedback loops regarding acidification in seagrass beds)¹

ICRI welcomes a stand-alone target on restoration within the Global Biodiversity Framework, recalling that restoration, including passive methods of restoration such as the removal of pressures, will play an important role for coral reefs as a valid management option in areas when natural recovery is eroded, and that restoration can complement other actions to support reef resilience.

Explanatory note: This paragraph recalls the sentiments of text in the ICRI Resolution on Restoration (2019) “ICRI recognises that reef restoration is a valid management option in areas when natural recovery is eroded, and that restoration can complement other actions to support reef resilience”. And the Recommendation on inclusion of coral reefs within the Post-2020 GBF (2020) “ICRI notes the important role that restoration must play but urges that any reference to restoration should be appropriate and achievable within the given timeframe for all ecosystems and perverse incentives for inappropriate restoration, that causes more harm than good, should be avoided”.

ICRI acknowledges and welcomes the use of a numeric target within the restoration target.

Explanatory text: Recognising that there are technical challenges with restoration of coral reef ecosystems at scale, the expert consultation strongly supported the value of having a numeric element in any GBF target on restoration to ensure that progress can be measured and ensures sufficient ambition for all ecosystems. It is important to note that some ecosystems (such as coral reefs) may have particular vulnerabilities and long timelags for restoration success that may make achievement of a common numeric target difficult. This should not undermine continued and increased investment in restoration effort and innovation, to achieve longer term success beyond the timeframes of the GBF (ie. 2030 and 2050)."

ICRI recommends that the language of the target comprises two elements and establishes ambition in (1) the desired action to be taken and (2) the outcome to be achieved;

Explanatory text: The expert consultation agreed that clearly articulating these two aspects of the target would help clarity in interpretation and the ability to define appropriate metrics.

ICRI recommends that the target should pay attention to key ecosystems, such as coral reefs, by including reference to vulnerable ecosystems, or an appropriate alternative phrasing.

Explanatory Note: The current wording of the target focuses on “Priority ecosystems” there is no definition of this term in the [glossary of terms](#) developed with respect to the GBF - but there

¹ Andrés F. Suárez-Castro, Hawthorne L. Beyer, Caitlin D. Kuempel, Simon Linke, Pasquale Borrelli, Ove Hoegh-Guldberg. **Global forest restoration opportunities to foster coral reef conservation.** *Global Change Biology*, 2021; 27 (20): 5238 DOI: [10.1111/gcb.15811](https://doi.org/10.1111/gcb.15811); Manzello DP, Enochs IC, Melo N, Gledhill DK, Johns EM (2012) Ocean Acidification Refugia of the Florida Reef Tract. *PLoS ONE* 7(7): e41715. <https://doi.org/10.1371/journal.pone.0041715> <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0041715>; Camp EF, Suggett DJ, Gendron G, Jompa J, Manfrino C and Smith DJ (2016) Mangrove and Seagrass Beds Provide Different Biogeochemical Services for Corals Threatened by Climate Change. *Front. Mar. Sci.* 3:52. doi: 10.3389/fmars.2016.00052 <https://www.frontiersin.org/articles/10.3389/fmars.2016.00052/full>; Lui et al. (2020) Influence of the seagrass *Thalassia hemprichii* on coral reef mesocosms exposed to ocean acidification and experimentally elevated temperatures <https://static1.squarespace.com/static/580e3c475016e191c523a0e2/t/5dbf253452537379a67a2fc7/1572807991828/Liu+et+al.+2020+STOTEN.pdf>

is reference in the indicator one pagers produced as information document CBD/WG2020/3/INF/3, although with a terrestrial focus: "Priority ecosystems – A recent study demonstrated that ecosystem restoration can be prioritised depending on factors such as biodiversity conservation and climate change mitigation (wetlands and forests) or minimizing costs (arid ecosystems and grasslands). Additional priorities may be converted areas within relatively intact tropical forests and shrublands in South America and Africa." There are some concerns that if there is a leaning to interpretation that focuses on climate mitigation this could exclude coral reefs. An alternative language to use could be "vulnerable ecosystems" - the term that was used in the language of Aichi Target 10, and in the current drafting of Target 1, component 1.2 but also not defined within the context of the GBF glossary. Another possibility is to use "priority AND vulnerable ecosystems". It is not proposed that ICRI recommend a preference in language but leave this to the deliberation of CBD Parties. The consensus of the expert participants was that language should be included, whether "vulnerable," "threatened," "priority" or some other term, that specifies that ecosystems should be prioritized based on their status, the term should be defined, and the definition should include coral reefs. One suggestion was to use the [IUCN Red List of Ecosystems](#) as a reference for assessing ecosystem risk levels and prioritisation.

ICRI Recommends that there is a clear link articulated between targets 1, 2 and 3 as well as how these contribute to the delivery of Goal A. ICRI reiterates that target 2 actions are implemented as an integrated part of a management approach that will reduce pressures and restore vulnerable ecosystems.

Explanatory note: For reference the current language of these targets in the 1st draft of the GBF are as follows:

Target 1. Ensure that all land and sea areas globally are under integrated biodiversity-inclusive spatial planning addressing land- and sea-use change, retaining existing intact and wilderness areas.

Target 2. Ensure that at least 20 per cent of degraded freshwater, marine and terrestrial ecosystems are under restoration, ensuring connectivity among them and focusing on priority ecosystems.

Target 3. Ensure that at least 30 per cent globally of land areas and of sea areas, especially areas of particular importance for biodiversity and its contributions to people, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures and integrated into the wider landscapes and seascapes.

ICRI recommends the inclusion within the monitoring framework of an indicator to measure the integrity of the area under restoration. For coral reef ecosystems, this would be the "Live Coral Cover in restored coral reef areas". This proposed indicator is a composite indicator that combines information from the Live coral cover metric (already recommended by ICRI, an Essential Ocean Variable identified by the UNESCO Intergovernmental Oceanographic Commission's Global Ocean Observing System (GOOS) and widely implemented and included within the draft GBF monitoring framework), with the Restored Reef Areal Dimension (RRAD) indicator², which is recommended as a Universal Metric by the Coral Reef Consortium. This indicator provides an approximation of the overall reef area in which corals are planted and the area that restored corals have contributed to

² "Restored Reef Areal Dimension (RRAD)" this is a quick approximation of the overall reef area in which corals are planted and the area that restored corals have spread over time. This metric is valuable as it provides guidance for reporting standardized project size and area of restored reef to gauge the overall impact and success of a restoration project. (See [Coral Reef Restoration Monitoring Guide](#))

increased live coral cover over time. This metric is valuable as it provides guidance for reporting standardized project size and area of restored reef to gauge the overall impact and success of a restoration project.

Indicator title	What does it measure? (in respect to ambitions of T2)	Are the Data and Metadata publicly available (if yes provide URL)	Has the method been peer reviewed? (provide link)	Is there a baseline?	Use at global and National scales?	Entity facilitating assessment/reporting
<p>Live coral cover in restored coral reef areas. Combining Live coral cover + Restored Reef Areal Dimension (RRAD)</p>	<p>Target 2: Component 2.1 Area of freshwater, marine and terrestrial ecosystems restored</p>	<p>Live coral cover: available on request CRC Coral Restoration Database (Appendix 3), and 2) An Evaluation Tool for Coral Restoration (modified from Lirman et al., 2017).</p>	<p>Coral Reef Restoration Monitoring Guide An Evaluation Tool for Coral Restoration (modified from Lirman et al., 2017).</p>	<p>Live Coral Cover baseline (GCRMN, 2021) Area under restoration - Could be constructed as of 2020; based on available data from the existing ICRI Coral Restoration database</p>	<p>Live coral cover used at multiple scales; RRAD is suitable for application at multiple scales</p>	<p>ICRI/ GCRMN/ CRC Potential tools: Allen Coral Atlas</p>

Explanatory Note: this indicator provides valuable initial information on the action aspect of the target, but it is not sufficient to measure an outcome of improved ecological integrity or connectivity. Further guidance is available in the recent ICRI/UNEP publication “[Coral Reef Restoration as a strategy to improve ecosystem services –A guide to coral restoration methods](#)” and a minimum universal set of indicators for measuring progress of coral reef restoration efforts are presented in the [Coral Reef Restoration Monitoring Guide](#).