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"Protecting wetlands for our common future"
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Report of the Secretariat onassessment of progress on wetland restoration

Background

1. This report was prepared in response to Resolution XIV.6 on *Enhancing the Convention's visibility and synergies with other multilateral environmental agreements and other international institutions*[1] which, in paragraph 35, "requests the Secretariat to assess the progress on wetland restoration and report to COP15 and further requests the Secretariat, subject to the availability of resources, to strengthen capacities of Contracting Parties in wetland restoration through training opportunities and other means".

2. The Secretariat engaged two consultants to undertake the assessment, guided by an advisory group composed of representatives of the United Nations Convention to Combat Desertification (UNCCD), the Food and Agriculture Organization of the United Nations (FAO), the United Nations Environment Programme – World Conservation Monitoring Centre (UNEP-WCMC), the Society for Ecological Restoration (SER), the Convention on Biological Diversity (CBD) and the Scientific and Technical Review Panel (STRP) of the Convention. Input and advice were also provided by other partners, including the International Organization Partners (IOPs) of the Convention.

3. The full assessment report is published as information document COP15 Inf.3.[2] It draws on scientific and grey literature, global datasets, case studies, and previous and ongoing work under the Convention, including the 2018 Technical Note on Wetland Status and Trends, and Global Wetland Outlooks (2018, 2021 and 2025 editions). The assessment uses a mixed-methods approach, combining quantitative data with expert judgement.[3]

4. The present report provides a synthesis of the findings of the assessment including an overview of degraded wetlands, restoration commitments and activities, and an indicative assessment of progress towards Target 12 of the 4th Strategic Plan 2016-2024[4] and Target 2 of the Kunming-

[1] See https://www.ramsar.org/document/resolution-xiv6-enhancing-conventions-visibility-synergies-other-multilateral.
[2] See https://www.ramsar.org/document/cop15-inf3-report-secretariat-assessment-progress-wetland-restoration-full-assessment.
[3] For detailed information on the methodological approach, see section 3 of the assessment.
[4] See https://www.ramsar.org/document/4th-strategic-plan-2016-2024-2022-update.

Montreal Global Biodiversity Framework (KM-GBF)[5]. It further identifies recommendations towards accelerating wetland restoration, supporting implementation of the Convention, and strengthening the Convention's contribution towards international restoration targets including those of the 2030 Agenda for Sustainable Development and Sustainable Development Goals (SDGs), the KM-GBF, and the UN Decade of Ecosystem Restoration.

Wetland restoration is a priority

5. Wetlands, defined by the Convention as "areas of marsh, fen, peatland or water (natural or artificial; permanent or temporary; static or flowing; fresh, brackish or salt), including marine waters with low tide depths not exceeding six metres"[6], are among the most important ecosystems on the planet. They support extraordinary biodiversity by providing critical habitat for hundreds of thousands of species across taxa, including an estimated 100,000 freshwater species[7], many of which are endemic, migratory or threatened. They also underpin human wellbeing by regulating water cycles, maintaining coastal resilience and supporting livelihoods through fisheries, agriculture and tourism.

6. Accurately determining the current global extent of wetlands remains a significant challenge. The Global Wetland Outlook (2018) estimated that wetlands cover over 12.1 million square kilometres, while more recent studies suggest a range from six million km² to 29.8 million km².[8,9] This wide variability stems from differences in classification systems, mapping methodologies, and whether, for example, intertidal and subtidal wetlands are included. These inconsistencies hinder monitoring efforts and highlight the need for harmonized approaches.[10] Inland wetlands, including lakes, rivers, swamps and peatlands, account for the majority of global wetland area, followed by coastal and marine wetlands. Human-made wetlands, such as rice paddies and reservoirs, add to the total but comprise a much smaller share.

7. It is estimated that at least 35% of wetlands have been lost since 1970[11] and wetland loss and degradation continue at an alarming rate, driven by land-use change, pollution, water abstraction, climate change and infrastructure development. In addition to these recent trends, historical analyses estimate that approximately 3.4 million km² of inland wetlands have been lost since 1700,[12] although these long-term figures vary depending on definitions and data sources. The impacts are especially severe for freshwater biodiversity, with nearly one-third of freshwater fish species estimated to be at risk of extinction.[13]

[5] See https://www.cbd.int/gbf/targets/2.
[6] An introduction to the Ramsar Convention on Wetlands, 7th ed. (previously The Ramsar Convention Manual). Convention on Wetlands, Gland, Switzerland.
[7] Convention on Wetlands. Wetlands and Biodiversity Factsheet.
[8] Zhang et al. (2024) Global annual wetland dataset at 30 m with a fine classification system from 2000 to 2022. Scientific Data, 11(1). https://doi.org/10.1038/s41597-024-03143-0.
[9] Hu et al. (2017) Global wetlands: Potential distribution, wetland loss, and status. Science of The Total Environment, 586, 319–327. https://doi.org/10.1016/j.scitotenv.2017.02.001.
[10] Dixon et al. (2016) Tracking global change in ecosystem area: The Wetland Extent Trends index. Biological Conservation, 193, 27–35. https://doi.org/10.1016/j.biocon.2015.10.023.
[11] Convention on Wetlands (2018) Global Wetland Outlook: State of the World's Wetlands and their Services to People. Gland, Switzerland: Convention on Wetlands Secretariat.
[12] Davidson, N.C. (2014) How much wetland has the world lost? Marine and Freshwater Research, 65(10), 934–941. https://doi.org/10.1071/MF14173.
[13] FAO. 2022. The State of World Fisheries and Aquaculture 2022. Towards Blue Transformation. Rome, FAO. https://doi.org/10.4060/cc0461en.

8. Many wetland ecosystems have experienced and continue to experience hydrological changes, nutrient loading, fragmentation and declining ecological function. These changes reduce their ability to provide critical services such as flood regulation, carbon storage and habitat connectivity, and jeopardize their role in supporting climate and biodiversity objectives. In this context, wetland restoration[14] is both an urgent necessity and a strategic opportunity to reverse ecological damage while also achieving multiple co-benefits including climate resilience, improved water quality and availability, enhanced disaster risk reduction and sustainable livelihoods.

9. The Convention has long recognized this, embedding restoration in its strategic plans, addressing it in numerous Resolutions (e.g., Resolutions VIII.16, XIII.13 and XIV.6[15]) and technical guidelines. Restoration efforts are also central to achieving international commitments, including:
   - Target 2 of the KM-GBF: "ensure that by 2030 at least 30 per cent of areas of degraded terrestrial, inland water, and coastal and marine ecosystems are under effective restoration";
   - SDG 6.6: "protect and restore water-related ecosystems";
   - SDG 14.2: "sustainably manage and protect marine and coastal ecosystems, including through strengthening their resilience and restoration in order to achieve healthy and productive oceans";
   - SDG Target 15.1: "conserve and restore terrestrial and inland freshwater ecosystems"; and
   - The Paris Agreement on climate change.

10. The UN Decade of Ecosystem Restoration (2021-2030) is a global initiative to promote and accelerate the restoration of ecosystems, including wetlands, supporting countries in achieving global goals by raising awareness, mobilizing partnerships and strengthening implementation.

Efforts in the context of the Convention on Wetlands

11. Since the early 1990s, the Convention has recognized restoration as a core element of wetland conservation and wise use. Recommendation 4.1 (1990) encouraged the initiation of restoration projects, while Recommendation 6.15 (1996) called for the integration of restoration into national environmental policies. Resolution VII.17 (1999) further emphasized restoration as a key component of national wetland planning. In Resolution VIII.16 (2002), Contracting Parties adopted principles and guidelines for wetland restoration. This provided structured, adaptable guidance for planning, implementation and monitoring, and remains a cornerstone for action at the national level.

12. Target 12 of the Fourth Strategic Plan of the Convention on Wetlands 2016-2024 (SP4)[16] focuses on wetland restoration: "Restoration is in progress in degraded wetlands, with priority to wetlands that are relevant for biodiversity conservation, disaster risk reduction, livelihoods and/or climate change mitigation and adaptation." Many recent Resolutions address wetland

[14] Restoration under the Convention is defined as assisting the recovery of a wetland that has been degraded, damaged or destroyed, aiming to re-establish its ecological character (Resolutions XIII.13 and VIII.16). However, in this report, restoration is used more broadly to include actions that improve ecological functionality and integrity, even if full reversion to pre-disturbance conditions is not feasible.
[15] See https://www.ramsar.org/document/resolution-viii16-principles-guidelines-wetland-restoration; https://www.ramsar.org/document/resolution-xiii13-restoration-degraded-peatlands-mitigate-adapt-climate-change-enhance; and https://www.ramsar.org/document/resolution-xiv6-enhancing-conventions-visibility-synergies-other-multilateral.
[16] See https://www.ramsar.org/document/4th-strategic-plan-2016-2024-2022-update.

restoration, for example for specific wetland types such as Resolutions XIII.13 and XIII.14 or for specific purposes such as Resolutions XIV.16 and XIV.17. Several STRP outputs prepared under SP4 also address restoration. Table 1 below summarizes key contributions by the Convention to advancing wetland restoration.

13. National reports submitted to COP15 show that while restoration programmes have been implemented in many countries, overall progress has been uneven. By COP15, 54% of Contracting Parties submitting National Reports report having implemented restoration programmes and 45% report having established national restoration targets, although this represents a slight decrease over the nine year term of SP4. 44% of Parties have identified priority sites for restoration.

14. These trends highlight the important contribution made towards wetland restoration through the Convention, in terms of elevating wetland restoration as a priority, promoting implementation as well as tracking and reporting on wetland restoration globally. National Reports also illustrate the need for continued support, particularly in regions facing technical and financial resource constraints.

Table 1. Key contributions by the Convention on Wetlands to wetland restoration

Category	Output	Brief summary
General wetland restoration priorities, principles and guidance	Recommendation 4.1: *Wetland restoration* (COP4, 1990)	Urges Parties to establish and operationalize wetland restoration projects with institutional commitments.
	Recommendation 6.15: *Restoration of wetlands* (COP6, 1996)	Promotes integration of restoration into national environmental policies and identification of key restoration sites.
	Resolution VII.17: *Restoration as an element of national planning for wetland conservation and wise use* (COP7, 1999)	Recognizes restoration as essential to national wetland strategies.
	Resolution VIII.16: *Principles and guidelines for wetland restoration* (COP8, 2002)	Provides tools, principles and planning methods for wetland rehabilitation.
Wetland type or purpose-specific guidance	Resolution XIII.13: *Restoration of degraded peatlands to mitigate and adapt to climate change and enhance biodiversity and disaster risk reduction* (COP13, 2018)	Addresses peatland restoration as a strategy for climate action, biodiversity and disaster risk reduction.
	Resolution XIII.14: *Promoting conservation, restoration and sustainable management of coastal blue-carbon ecosystems* (COP13, 2018)	Addresses blue-carbon ecosystems - mangroves, salt marshes, and seagrass beds.
	Resolution XIV.15: *Enhancing the conservation and management of small wetlands* (COP14, 2022).	Encourages the development of national and local plans to promote the conservation, restoration and wise use of small wetlands.
	Resolution XIV.17: *The protection, conservation, restoration, sustainable use and management of wetland ecosystems in addressing climate change* (COP14, 2022)	Emphasizes the role of wetlands in climate change mitigation and adaptation, urging integration into climate policies.
	Technical Report 11: *Global guidelines for peatland rewetting and restoration* (2021)	Offers detailed technical advice on peatland restoration interventions.

Category	Output	Brief summary
	Briefing Note 3: *Avoiding, mitigating, and compensating for loss and degradation of wetlands in national laws and policies* (2012)	Provides legal and policy examples from Contracting Parties on applying the "avoid-mitigate-compensate" sequence to minimize wetland degradation and loss.
	Briefing Note 4: *The benefits of wetland restoration* (2012)	Summarizes Convention guidance and raises awareness.
	Policy Brief 5: *Restoring drained peatlands: A necessary step to achieve global climate goals* (2021)	Links peatland restoration to climate and biodiversity targets.
	Briefing Note 10: *Wetland restoration for climate change resilience* (2018)	Highlights restoration's role in climate responses.
	Briefing Note 11: *Practical peatland restoration* (2021)	Provides methods and techniques for peatland rewetting and recovery.
Awareness and advocacy materials	Factsheet: *Wetlands restoration: Unlocking the untapped potential of the earth's most valuable ecosystem* (2021)	Provides general awareness on wetland values and restoration.
	Factsheet: *Restoring drained peatlands: Now an environmental imperative* (2021)	Communicates peatland restoration importance and approaches.
	Factsheet: *Realizing the full potential of marine and coastal wetlands: Why their restoration matters* (2021)	Highlights coastal wetland benefits and restoration potential.

Global overview of wetland degradation, restoration commitments, implementation and reporting

15. Despite growing recognition of the importance of wetland restoration, the global extent of degraded wetlands remains poorly quantified, in part due to poor data coverage and differences in definitions and methodologies. However, existing estimates suggest significant loss and degradation in many wetland types. For example, 20-50% of salt marshes,[17] 20-35% of mangroves,[18] 30% of seagrasses[19] and up to 50% of coral reefs[20] have been lost. According to global initiatives such as the UN Environment Programme's Framework for Ecosystem Restoration Monitoring (FERM)[21] and the IUCN Restoration Barometer[22], up to 50% of wetland habitat types globally are now considered severely degraded.[23] Peatland degradation is also widespread, 11.7% globally with more than 50% degraded in parts of Europe and Africa.[24] Achievement of KM-GBF Target 2 will require the effective restoration of at least 30% of

[17] UN (2016) Chapter 49: Salt Marshes. In The First Global Integrated Marine Assessment (World Ocean Assessment I). United Nations Division for Ocean Affairs and the Law of the Sea.
[18] Leal et al. (2022) The State of the World's Mangroves 2022. Global Mangrove Alliance
[19] Waycott et al. (2009) Accelerating loss of seagrasses across the globe threatens coastal ecosystems. PNAS, 106(30), 12377-12381. https://doi.org/10.1073/pnas.0905620106.
[20] IPBES (2019) Global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. IPBES secretariat, Bonn, Germany. https://doi.org/10.5281/zenodo.3831673.
[21] See https://ferm.fao.org/.
[22] See https://iucn.org/resources/conservation-tool/restoration-barometer.
[23] UNEP (2021) Becoming #GenerationRestoration: Ecosystem restoration for people, nature and climate. Nairobi.
[24] UNEP (2022). Global Peatlands Assessment – The State of the World's Peatlands: Evidence for action toward the conservation, restoration, and sustainable management of peatlands; FAO (2020) Peatland mapping and monitoring – Recommendations and technical overview. Rome.

degraded inland, coastal and marine wetlands by 2030. Based on available global estimates of wetland loss, this could correspond to between 900,000 and 1.1 million km² of degraded wetlands that require restoration. Achieving this target depends not only on ambition, but also on improved tracking, coordination and sustained action.

16. At COP15, approximately 66% of Contracting Parties submitting National Reports report having established or partially established national targets for wetland restoration, while 74% have identified or partially identified priority sites for wetland restoration. This reflects an increasing strategic focus on wetland restoration, building on spatial planning and national target setting. Several countries also report specific area-based targets, but the total area committed to restoration under the Convention remains a long way off the KM-GBF target.

17. Globally, large-scale initiatives signal growing momentum. According to FERM, 20 countries have committed a total of more than 44 million hectares (ha) of wetlands for restoration, with major contributions from Pakistan (25 million ha), China (10 million ha) and Kazakhstan (eight million ha). The IUCN Restoration Barometer tracks ecosystem-wide pledges of over 50 million ha across 18 countries, although wetland-specific contributions are not consistently disaggregated. Small Island Developing States (SIDS) such as Comoros and Vanuatu have also adopted relatively ambitious wetland restoration goals. However, most pledged areas in the Barometer are currently focused on forests, underscoring the need to enhance reporting for wetland-specific restoration.

18. A persistent gap remains between commitment and implementation. At COP14, only 8% of Contracting Parties reported that wetland restoration activities had progressed to the implementation stage. By COP15, this figure has risen to 54% of Parties reporting that restoration or rehabilitation programmes have been implemented since COP14. This increase likely reflects a combination of on-the-ground progress and improvements in national reporting. Complementary data from the Restoration Barometer show that, of the 50 million ha pledged, only 14.2 million ha (28% of the area pledged) were reported as under active restoration as of 2022. In the case of FERM, although the scale of commitments is high, quantified and verified data for wetland-specific progress remain limited, with many projects lacking explicit area data or focusing on very localized interventions.

19. Identified barriers include inadequate financing, limited institutional and technical capacity, and insufficient integration into national land-use, infrastructure, and development plans. These challenges are echoed across all regions, with context-specific obstacles evident in low- and middle-income countries, many of which also exhibit lower reporting rates to global frameworks and platforms such as the Convention, FERM and RESTOR.

20. Several international initiatives and partnerships are now supporting countries to overcome these challenges and scale up restoration. The Freshwater Challenge[25] aims to help countries restore 350 million ha of wetlands and 300,000 km of degraded rivers by 2030. Other initiatives focusing on specific wetland types include the Global Mangrove Alliance and its Mangrove Breakthrough initiative[26], the Global Peatlands Initiative[27] and the Kelp Forest Challenge[28].

[25] See https://www.freshwaterchallenge.org/.
[26] See https://www.mangrovealliance.org/ and https://www.mangrovealliance.org/news/the-mangrove-breakthrough/.
[27] See https://globalpeatlands.org/.
[28] See https://kelpforestalliance.com/kelp-forest-challenge?gad_source=1.

21. Monitoring and reporting of wetland restoration remain fragmented. Disaggregation of wetland types (e.g., peatlands, seagrasses and coral reefs) is often lacking, and few countries report on the ecological condition of restored wetlands. Most indicators focus on area alone, with limited data on long-term outcomes, biodiversity gains, or social impacts. As a result, it remains difficult to assess whether reported restoration contributes to ecological recovery or achievement of KM-GBF Target 2.

22. There is growing recognition that spatial coverage alone is not sufficient to measure restoration success. More comprehensive metrics are gaining attention, including ecological integrity, connectivity, improved ecosystem services and benefits to local communities, particularly in the context of the UN Decade of Ecosystem Restoration and through the FAO freshwater restoration guidelines under development. These dimensions can better align restoration monitoring with the broader goals of the Convention and the KM-GBF.

23. Meanwhile, the prevention of further degradation remains essential. Restoration should not replace protection. The Convention's "avoid-mitigate-compensate" approach (approved through Resolution XI.9[29]) gives priority to maintaining wetlands in good ecological condition. In many cases – and particularly where restoration is expensive or technically complex – preventing degradation may be the most effective investment.

24. Global efforts toward wetland restoration are gaining momentum, supported by a robust policy foundation, increasing alignment across global initiatives and national targets. Notable progress has been made in identifying priority sites, setting restoration goals, and initiating implementation. However, challenges remain in bridging the gap between ambition and action. Key barriers include limited financing, gaps in monitoring systems, and the under-integration of restoration into sectoral policies and investment frameworks. Addressing these constraints will be crucial for achieving KM-GBF Target 2 and ensuring meaningful ecological recovery.

Recommendations to accelerate restoration through the Convention on Wetlands

25. The following recommendations draw on the assessment's findings and highlight priority actions to support more effective wetland restoration:

    i. Restoration and protection:

- Prioritize conservation over restoration, recognizing that intact wetlands are irreplaceable in function and value and that restoration should not be used to justify continued degradation.
- Incorporate "no net loss" principles into national policies and planning processes to avoid future wetland degradation and reduce restoration needs.
- Strengthen legal protection for wetlands and halt further loss and degradation by addressing key drivers such as pollution, unsustainable resource extraction, drainage and poorly planned infrastructure.
- Expand and connect protected area networks to better represent wetlands of high importance for biodiversity and ecosystem services, and ensure both freshwater and coastal/marine ecosystem dynamics are fully considered in site design and management, in line with KM-GBF Target 3[30].

[29] See https://www.ramsar.org/document/resolution-xi9-integrated-framework-guidelines-avoiding-mitigating-compensating-wetland.
[30] See https://www.cbd.int/gbf/targets/3.

ii. Restoration monitoring and data integration:

- Address key data gaps, including a coherent assessment of degraded wetland area disaggregated by different wetland types.
- Develop clear guidance to align national reporting under MEAs and platforms such as FERM and RESTOR, including disaggregation by wetland type, indicator harmonization, and compatibility with the Convention on Wetlands classification system of wetland type.
- Encourage voluntary, complementary reporting to FERM and RESTOR, while maintaining consistency and continuity in National Reporting under the Convention on Wetlands.
- Promote catchment-scale reporting using hydrological units (e.g., HydroBASINS), especially for transboundary river and lake systems, and link to outcomes in connected ecosystems such as coral reefs and floodplains.
- Establish long-term monitoring and adaptive management systems that engage local stakeholders, using tools such as the FAO Resource Guide on KM-GBF Target 2, the Restoration Project Information Sharing Framework, and UN Decade indicators.
- Support capacity-building to improve national tracking systems, including in relation to the ecological condition of restored wetlands, effectiveness of interventions by wetland type, and socio-economic outcomes.

iii. Policy, finance and enabling instruments:

- Mobilize long-term funding for wetland restoration through national budgets, public-private partnerships and international climate and biodiversity finance mechanisms.
- Incentivize wetland restoration through economic instruments such as tax incentives, payments for ecosystem services and carbon credit schemes.
- Integrate wetland values into national development planning and natural capital accounting to support mainstreaming into economic decision-making.

iv. Governance and participation:

- Ensure inclusive governance that enables Indigenous Peoples, local communities and other wetland users to participate actively in restoration planning, target setting and implementation.
- Enhance cross-sectoral coordination, particularly among the environment, water, agriculture and infrastructure sectors, and leverage existing structures such as basin management organizations.
- Mainstream wetland restoration into sector-specific strategies and investment plans, including agriculture, irrigation, urban development and water resource management.

v. Nature-based solutions and innovation:

- Scale up nature-based solutions, such as mangrove restoration, river reconnection, floodplain rehabilitation and soil stabilization, as part of integrated strategies for climate adaptation and biodiversity recovery.
- Use constructed wetlands strategically where appropriate (e.g., for urban water treatment or flood mitigation), recognizing their supplementary role and limits compared to natural wetlands.
- Support innovation, applied research and traditional knowledge systems that enhance restoration effectiveness and resilience.

26. Enhancing knowledge, awareness and technical support is essential to accelerate wetland restoration. Through the communication, capacity building, education, participation and awareness raising (CEPA) programme, the Convention can support outreach on national restoration targets, promote community engagement, and raise awareness of restoration co-benefits. In parallel, the STRP could be tasked with advancing harmonized classification of

wetland types across platforms, improving data on degraded wetland area and priorities for restoration as well as restoration indicators, and providing guidance on ecological condition monitoring. These activities can collectively address persistent data gaps and strengthen the enabling environment for implementation.

27. Strengthening the Convention's role as a knowledge broker and coordination platform – through improved technical guidance, national reporting systems, CEPA activities and STRP outputs – can help Contracting Parties translate their restoration ambitions into measurable progress. Improved collaboration with external partners (such as UNEP and FAO) and alignment with global frameworks such as the KM-GBF and the SDGs will also support this goal.