Ramsar Technical Report 12

Convention on Wetlands

Ramsar

Scaling up wetland conservation and restoration to deliver the Kunming-Montreal Global Biodiversity Framework

Guidance on including wetlands in National Biodiversity Strategy and Action Plans (NBSAPs) to boost biodiversity and halt wetland loss and degradation

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Foreword

As we find ourselves on the brink of critical decisions for biodiversity, the urgency to address the loss and degradation of wetlands worldwide becomes clearer and more crucial. Wetlands cover only about 6% of the Earth's surface, yet they support 40% of all known plant and animal species, providing vital services that sustain life. Despite their significance, >3 million km² of wetland ecosystems have been lost since 1700, far outpacing the degradation of other biomes. This stark reality underscores the need for targeted and effective conservation efforts, captured in our Technical Report 12, which provides essential guidance for integrating wetlands into National Biodiversity Strategies and Action Plans (NBSAPs).

Adopting the Kunming-Montreal Global Biodiversity Framework (KM-GBF) marks a pivotal moment in our collective efforts to reverse biodiversity loss. With its ambitious targets, the KM-GBF offers a pathway toward a 2050 vision where biodiversity is "valued, conserved, restored, and wisely used", ensuring benefits for all. Wetlands, from peatlands and marshes to estuaries and deltas, are key to achieving these goals due to their role in carbon storage, water purification, and as buffers against natural disasters.

The importance of wetlands extends beyond their ecological functions. They underpin a sustainable economic future, enhancing agricultural productivity, supporting fisheries, and offering opportunities for ecotourism. Socially, they are culturally significant areas that provide recreational spaces, support traditional ways of life, and maintain the heritage of local communities. By strategically incorporating wetlands into NBSAPs, we align with global biodiversity targets and strengthen the socio-economic fabric of nations, which should resonate with all stakeholders.

Technical Report 12 details how wetlands can be integrated into NBSAPs, ensuring that these vital ecosystems are prioritized in national and international conservation efforts. It provides policymakers, practitioners, and stakeholders with concrete examples and strategic guidance to harness the power of wetlands to meet the goals of both the Convention on Wetlands and the KM-GBF.

By integrating wetland conservation into NBSAPs, countries can address the direct and indirect drivers of wetland loss, set realistic and impactful conservation targets, and implement effective area-based conservation measures. Our guidance also underscores the importance of robust data on wetlands, which forms the bedrock of successful policymaking and the adaptive management of wetlands in both inland water and coastal environments. This emphasis on data should reassure policymakers of the soundness of their decisions and the effectiveness of their actions.

As we move forward, the role of international cooperation and the engagement of all sectors of society cannot be overstated. Through this report and its ongoing work, the Scientific and Technical Review Panel (STRP) remains committed to providing the scientific and technical basis for action that preserves the invaluable services wetlands provide.

Dr Hugh Robertson
Chair of the Scientific & Technical Review Panel

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Summary

Wetland conservation and restoration is an essential component of delivering the Kunming-Montreal Global Biodiversity Framework (KM-GBF) vision of a world living in harmony with nature where "by 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people."

This document supports the inclusion of ambitious wetland commitments and actions in National Biodiversity Strategies and Action Plans (NBSAPs) as a pivotal way of boosting biodiversity, to achieve the goals of both the Convention on Wetlands and the KM-GBF.

This report focuses on the critical role of wetlands in achieving the 23 targets of the KM-GBF by 2030. It provides guidance to Parties to the CBD on how to incorporate the role and importance of wetlands and key actions into their NBSAPs in relation to each target. It also provides Contracting Parties to the Convention on Wetlands, with information on how to support delivery of the KM-GBF and achieve targets within the Fourth Strategic Plan of the Convention on Wetlands and the forthcoming Fifth Strategic Plan.

For each KM-GBF target, technical guidance, along with case studies, is provided about what could be included in NBSAPs for wetlands. Annex 1 also provides information on alignment of the KM-GBF targets with national delivery of targets within the Convention on Wetlands' Fourth Strategic Plan along with more detailed information on target setting and implementing wetland conservation and restoration.

This report is designed to assist all those involved in updating and delivery of NBSAPs, including those responsible for assessing progress at different scales. It will be useful for government officials (including CBD Focal Points and Convention on Wetlands Focal Points), national level NBSAP Steering Committees, those providing advice and those involved in implementation across sectors at national and global levels. We encourage all parties to share this guidance widely with relevant stakeholders.

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Key messages

1. Restore wetlands

NBSAPs should include ambitious national targets (in hectares, and in kilometres for rivers) and plans for effective wetland restoration given the poor state of inland waters and coastal wetland ecosystems. This would make a key contribution to the restoration of at least 30 percent of areas of degraded terrestrial, inland water, and coastal and marine ecosystems globally by 2030, as agreed in KM-GBF Target 2.

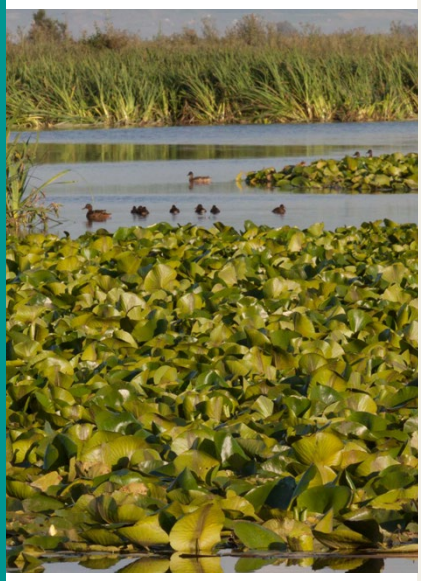
2. Protect wetlands

NBSAPs should include explicit targets and plans for increasing the area of inland waters and coastal wetland ecosystems in protected areas and other effective area-based conservation measures (OECMs) to contribute to the 30x30 targets, as agreed in KM-GBF Target 3. National wetland conservation targets should be in hectares for wetlands and in kilometres for rivers. Underrepresented and high biodiversity wetland types, such as Key Biodiversity Areas, should be prioritized.

3. Tackle the drivers of wetland loss

NBSAPs should include actions to address the key drivers of wetland loss. These will vary between countries, but often include unsustainable agriculture and infrastructure, land use change, pollution or overexploitation. NBSAPs should address these drivers by including wetlands explicitly in KM-GBF Targets:

- Target 1 – Spatial planning
- Target 7 – Pollution reduction
- Target 10 – Agriculture, aquaculture, fisheries and forestry
- Target 15 – Business biodiversity-related risks and impacts



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4. Improve data on wetlands

Robust wetland data can underpin the delivery of multiple KM-GBF goals and targets and is useful for measuring progress. NBSAPs can include actions to improve information on the extent and condition of all wetlands, including Wetlands of International Importance (“Ramsar Sites”) and other wetlands of high biodiversity value. If a country’s national wetland inventory (NWI) is out of date or needs improvement (for example, by adding data on wetland extent, condition and biodiversity) this can be included specifically as a high priority cross-cutting action in a NBSAP.

5. Harness wetlands as solutions

A wetland-focused NBSAP requires urgent actions to halt and reverse the loss of wetlands and their biodiversity. However, wetlands contribute much more. Embracing the power of wetlands as solutions is just as important. NBSAPs should include policies and targets to embed wetlands as solutions to help achieve the following KM-GBF Targets:

- Target 7 – Pollution reduction - treatment wetlands can be constructed to remove harmful pollutants from water
- Target 8 – Minimize the impacts of climate change - peatlands, mangroves, mudflats and other wetland types can store carbon and boost climate resilience as nature-based solutions
- Target 11 – Restoring nature’s contributions to people - wetlands provide multiple ecosystem services such as food, fresh water, flood protection, climate regulation, cultural and spiritual value, health and well-being, and nutrient and water cycling
- Target 12 – Enhance green urban spaces - urban wetlands are essential to making cities liveable. During storms, urban wetlands absorb excess rainfall, reduce flooding and minimize other negative impacts. Urban wetlands also act as a filter for pollution, improve water and air quality, and reduce extreme high temperatures

6. Prioritize wetland wildlife hotspots and ecological corridors

Ecological corridors including flyways, swimways and other animal corridors should be given special attention within NBSAPs to ensure all critical flyway and swimway sites are included in effectively managed protected areas or OECMs, with connectivity maintained and enhanced. NBSAPs should include national policies and targets for flyways and swimways to support delivery of the following KM-GBF Targets:

- Target 2 – Restore 30% of all degraded ecosystems
- Target 3 – Conserve 30% of land, waters and seas
- Target 4 – Halt species extinction

7. Empower people

NBSAPs should encourage and empower people to conserve wetland biodiversity by building capacity, transferring technology and recognizing the knowledge and experience of Indigenous Peoples and local communities. The knowledge and expertise of Indigenous Peoples and local communities, and the Convention on Wetlands' various networks, including Regional Centres and Initiatives, the Scientific and Technical Review Panel (STRP) and the Communication, Education and Public Awareness (CEPA) Oversight Panel should be recognized and incorporated into national plans to deliver the following KM-GBF targets:

- Target 20 – Strengthen capacity building, technology transfer and cooperation
- Target 21 – Ensure knowledge is available and accessible
- Target 22 – Ensure participation in decision making

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8. Measure what matters

Indicators relevant to wetlands should be included in NBSAPs for each of the 23 KM-GBF targets. The highest priority is to understand what the wetland types are, where they are, their boundaries and their condition – a national wetland inventory. Targets for protection, restoration, conservation and wise use can then use this inventory information. Global datasets will support reporting, however development of a national wetland inventory underpins delivery of NBSAPs for wetlands.

9. Fix the finance

NBSAPs should seek to increase investments in wetlands and eliminate incentives that are contributing to wetland loss and degradation. This may include price and subsidy reforms that encourage efficient use of resources and policies to phase out subsidies harmful to wetland ecosystems and biodiversity, and quantified upscaling of investment in wetland conservation, restoration and creation. Wetland finance should be included in national plans in response to the following KM-GBF Targets:

- Target 18 – Reduce harmful incentives and scale up positive incentives for biodiversity
- Target 19 – Mobilize $200 billion per year for biodiversity

10. Activate allies and seek synergies

Reach out to the Convention on Wetlands' National Focal Points, International Organization Partners (IOPs) and other international and national NGOs. The revision of NBSAPs and development of national targets should be carried out in close collaboration with the Convention on Wetlands' National Focal Points, and with NGOs and other stakeholders, including the six IOPs to the Convention on Wetlands (BirdLife International, IUCN, WWT, Wetlands International, WWF and the International Water Management Institute). Such organizations can provide expertise and knowledge to inform wetland related target setting, indicators, policy design, implementation, and resource mobilization, as well as connections to multi-stakeholder, cross-convention initiatives such as The Freshwater Challenge and Mangrove Breakthrough.

Join the NBSAP Forum and the NBSAP Accelerator Partnership which are mechanisms aiming to identify and share tools and materials to support the development of NBSAPs.

1. Introduction

Background

This Technical Report was prepared by the Scientific and Technical Review Panel (STRP) of the Convention on Wetlands, as a high priority task of the STRP work plan 2023-2025 (Task 5.2) in response to Resolution XIV.6, *Enhancing the Convention's visibility and synergies with other multilateral environmental agreements and other international institutions* and Resolution XIV.14, *Future implementation of scientific and technical aspects of the Convention for 2023-2025*. This Technical Report demonstrates the critical role of wetlands in delivering multiple goals and targets of the Kunming-Montreal Global Biodiversity Framework (KM-GBF) and provides guidance for how wetlands should be included within National Biodiversity Strategies and Actions Plans (NBSAPs).

1.1. Wetlands and the Global Biodiversity Framework

The Kunming-Montreal Global Biodiversity Framework (KM-GBF) was adopted by the 15th Conference of Parties of nearly 200 countries at CBD COP15 in December 2022 (Decision 15/4[1]). It contains four long-term goals for 2050 and 23 targets to halt and reverse biodiversity loss by 2030.

The role of wetlands and the need to value and protect them is critical to the delivery of KM-GBF targets. This report provides guidance on actions and policies that can be included in National Biodiversity Strategies and Actions Plans (NBSAPs) to assist Parties in meeting commitments under the CBD, the Convention on Wetlands and other related multilateral environmental agreements (MEAs).

Wetlands of International Importance ("Ramsar Sites") and all wetlands identified as important sites for biodiversity, ecological connectivity, and ecosystem services should feature strongly in NBSAPs. All types of wetlands (natural and human made) in a country should be considered in the process of updating NBSAPs.

Annex 1 indicates how national plans to deliver each KM-GBF target should be aligned with national delivery of targets within the Convention on Wetlands' Fourth Strategic Plan and provides more detailed information on target setting, on implementation of wetland conservation and restoration actions, monitoring and useful resources.

Indicators relevant to wetlands should be included in NBSAPs for each of the 23 KM-GBF targets. This report provides specific guidance on indicators for targets 2, 3, 5, 7, 9, 10, 11 and 12, as they have major implications for wetlands. This includes a pair of indicators for measuring the protection coverage of inland wetlands, and a tool to facilitate their calculation, which are in development and will be ready for use by countries and the Target 3 custodian (UNEP-WCMC) by COP16[2, 3].

Wetlands are explicitly included in KM-GBF Target 2 on restoration and Target 3 on protected areas (30x30) via wording on inland waters and coastal areas. Beyond the direct reference to inland waters and coastal ecosystems in Targets 2 and 3, all 23 KM-GBF targets are critically important for wetlands, their biodiversity and overall life on earth.

The Freshwater Challenge[4] and the Mangrove Breakthrough exemplify the ambitious global multi-stakeholder initiatives necessary to accelerate and upscale the restoration and protection of wetland habitats and help deliver Targets 2 and 3 (as well as UNFCCC and other MEA objectives) including through the integration of wetland targets into revised NBSAPs and other national plans.

Freshwater Challenge

The Freshwater Challenge is a country-led initiative that aims to support, integrate and accelerate the restoration of 300,000 km of degraded rivers and 350 million hectares of degraded wetlands by 2030, as well as conserve priority freshwater ecosystems. 46 countries (as of March 2024) have joined.

The Freshwater Challenge supports alignment and integration of freshwater ecosystems across national plans to deliver global goals on climate, water, disaster risk reduction, sustainable development and biodiversity – including Target 2 and Target 3 of the KM-GBF.

The Freshwater Challenge aims to increase overall investment in the restoration and conservation of freshwater ecosystems and substantially increase the social and economic returns on those investments, as a result of hydrological, ecological and wider environmental improvements.

1 https://www.cbd.int/doc/decisions/cop-15/cop-15-dec-04-en.pdf
2 https://www.globalwetlandwatch.org/home/
3 https://www.protectedplanet.net/en/thematic-areas/wdpa?tab=WDPA
4 https://www.freshwaterchallenge.org/

Mangrove Breakthrough

The Mangrove Breakthrough provides a framework for state and non-state actors to work together towards a global science-based target of securing the future of over 15 million hectares of mangroves globally by 2030, underpinned by a goal of reaching USD 4bn of sustainable finance. The acceleration of action and investment through the Mangrove Breakthrough contributes directly to the achievement of KM-GBF Target 2 and Target 3, as well as UNFCCC objectives.

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1.2. Wetlands and their importance for biodiversity

Wetlands are aquatic-influenced ecosystems in freshwater, saline and brackish environments. They include temporary and permanent freshwater habitats such as rivers, lakes, ponds, marshes, swamps, peatlands and those located in coastal areas and adjacent to marine environments such as mangroves, saltmarshes and mudflats[5].

The use of the terms inland waters and coastal ecosystems in the Convention on Biological Diversity corresponds to the definition of wetlands as defined, in Article 1.1 of the Convention on Wetlands, as: "areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres". Under both Conventions, the depth limit applies only to marine areas[1]. Within this document, both inland waters and coastal wetland ecosystems are discussed.

Although wetlands make up only around 6 per cent of the Earth's surface, 40 percent of all known plant and animal species live or breed in wetlands (Kopf *et al.* 2015, Convention on Wetlands 2018). Wetlands therefore hold a significant proportion of global biodiversity, with the freshwater component alone accounting for an estimated 12% of all species that you do not need a microscope to see including over one third of vertebrates, almost all amphibians, and half of fishes (Garcia-Moreno *et al.* 2014, Dudgeon *et al.* 2006, Carrete Vega & Wiens 2012).

Wetlands are also important as connecting ecosystems, linking different habitats and facilitating the movement of species. Many animals, especially migratory birds and fishes, depend on wetlands as resting places, feeding areas or breeding grounds during their journeys. This often results in high concentrations of these species in wetland habitats. The connectivity role of wetlands is vital for maintaining healthy populations and genetic diversity.

Wetlands also play a crucial role in contributing to and maintaining global processes which underpin biodiversity. These processes include hydrological, biogeochemical, primary productivity and energy flow between different ecosystems. Wetland water processes provide

5 https://www.cbd.int/waters/inland-waters/

physical, chemical and ecological connectivity to support biodiversity and health in all ecosystems.

Wetlands also play a very significant role in delivering provisioning, regulatory, supportive and cultural services.

To achieve the overall goal of reversing biodiversity loss, it is crucial to protect, effectively manage and restore wetlands for the biodiversity they contain or should contain, as well as the role they play as habitat connectors, and the important contribution they make to climatic and hydrological global processes (Tickner *et al.* 2020).

1.3. Wetland loss and degradation and its impact on biodiversity

Despite their critical importance for biodiversity, climate and people, wetlands have seen huge losses globally since 1700, with more than 85% of wetlands lost compared to 75% of the land surface significantly altered, and 66% of oceans experiencing increasing cumulative impacts (IPBES 2019). The Living Planet Index shows that freshwater species populations have seen a decline on average of 83% since 1970, more than twice the average decline in terrestrial and marine species (Tickner *et al.* 2020).

Wetlands have been lost through infilling and drainage for conversion to agriculture and urban settlements and have been heavily degraded due to pollution, alterations to hydrological regimes, loss of connectivity, invasive species and over extraction of natural resources including water, plants and animals. Climate change is also heavily impacting wetlands through more severe and frequent droughts and increased evapotranspiration due to higher temperatures (IPCC 2023).

The loss and degradation of wetlands needs to be halted and reversed so it is essential that effective measures are included within NBSAPs to conserve and restore wetlands.

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2. How to include wetlands in NBSAPs for each of the KM-GBF targets

2.1. Target 1: Plan and manage all areas to reduce biodiversity loss

Ensure that all areas are under participatory, integrated and biodiversity inclusive spatial planning and/or effective management processes addressing land- and sea-use change, to bring the loss of areas of high biodiversity importance, including ecosystems of high ecological integrity, close to zero by 2030, while respecting the rights of indigenous peoples and local communities.

Many wetlands are areas of high biodiversity importance and high ecological integrity (herein referred to as "high biodiversity importance wetlands") and require stronger consideration and integration into spatial planning and related management processes.

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Identify high biodiversity importance wetlands

NBSAPs should include actions to identify high biodiversity wetlands. This can be done using existing classifications such as: World Heritage Sites, Biosphere Reserves, Red List of Ecosystems, Key Biodiversity Areas, Important Bird and Biodiversity Areas, Ramsar Sites, and other international designations, in addition to national designations such as: Strict Nature Reserves, National Parks, Environmentally Sensitive Areas, Wildlife Sanctuaries and National Monuments.

Some high biodiversity importance wetlands will be outside these classifications so species surveys and habitat data should be used to identify areas that are nationally or internationally high in wetland species richness, endemism, or threatened species or support exceptionally high (significant at population scale) concentrations of individuals of a species, or areas with unique wetlands or important or threatened wetlands. Wetlands that have high ecological integrity, when their dominant ecological characteristics occur within their natural ranges of variation, and can withstand and recover from most disturbances should also be included.

In the absence of adequate species data, wetland ecosystem classifications can be used to ensure representation of key habitat types.

Key Biodiversity Areas (KBAs)

Key Biodiversity Areas (KBAs) are sites of global significance for the conservation of biodiversity. Currently there are 16,333 KBAs acknowledged worldwide, and more continue to be identified nationally using simple, globally standardised criteria and thresholds.

There are 11 criteria organized into five categories: (1) threatened biodiversity, (2) geographically restricted biodiversity, (3) ecological integrity, (4) biological processes, and (5) irreplaceability.

As the building blocks for designing the ecosystem, bottom-up approach and maintaining effective ecological networks, Key Biodiversity Areas are a key starting point for landscape-level conservation planning. Governments, inter-governmental organisations, NGOs, the private sector, and other stakeholders can use the identification of freshwater and coastal KBAs as a tool to identify and augment national systems of globally important wetland sites for conservation.

Include wetlands in spatial planning

Biodiversity-inclusive spatial planning should incorporate the specific conservation needs of wetland ecosystems and address the multiple, and often distinct, drivers of wetland loss and degradation. Key drivers include dams and other infrastructure, mining and other extractive activities, increased demand for water, agricultural conversion and drainage, conversion to aquaculture, urban expansion, urban and agricultural pollution, climate change, and invasive species. Spatial planning should be designed to address such threats both locally and in the context of the connected hydrological nature of wetlands.

Spatial planning needs to be participatory and respect the rights of Indigenous Peoples and local communities that live within or rely on wetlands.

Improve wetland data

Where adequate data is not available, NBSAPs should include actions to identify data gaps and generate the data necessary for effective wetland management and enhanced consideration of wetlands in spatial planning.

Synergies

The inclusion of wetlands in national plans to deliver Target 1 supports the implementation of Sustainable Development Goal (SDG) 6 *Clean Water and Sanitation* and SDG 15 *Life on Land*.

Kenya - Integrating wetlands into spatial planning across national and sub-national levels

The integration of wetland considerations into national and local spatial planning processes is a key pathway for delivering Target 1 of the KM-GBF. Kenya's **National Spatial Plan (2015-2045)** provides a comprehensive framework for sustainable land and sea use activities. This plan has been cascaded into the sub-national level. For instance, the **Lamu County Spatial Plan (2016-2026)** prioritizes the conservation of mangrove wetlands and integrates wetland protection into development planning.

From a policy perspective, Kenya's **Integrated Coastal Zone Management (ICZM) Policy of 2009** explicitly focuses on the sustainable management of coastal areas, including wetlands. The policy framework emphasizes the conservation and restoration of coastal ecosystems, aligning with the objectives of the NBSAP.

The **National Wetlands Policy, 2015** provides for the identification of wetlands for designation and gazettement as conservation areas and to develop and implement appropriate management plans.

One of the goals of the **Kenya Wetlands Restoration Strategy (2023-2032)** is to develop strategies for the implementation of wetland conservation and management at county and national levels. These include appropriate wetland management plans.

The **Kenya National Mangrove Ecosystem Management Plan (2017 – 2027)** proposes the use of spatial plans to map out areas for future development without encroaching into mangrove areas.

The **County Governments Act 2012,** under Article 110 (2) (j), obliges the County government to develop spatial plans indicating the areas designated for conservation and recreation.

The **Draft Wetlands Regulations 2017** obligates the National Environment Management Authority to facilitate the development of integrated wetland management plans, to prevent and control further degradation of wetlands.

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2.2. Target 2: Restore 30% of all degraded ecosystems

Ensure that by 2030 at least 30 per cent of areas of degraded terrestrial, inland water, and marine and coastal ecosystems are under effective restoration, in order to enhance biodiversity and ecosystem functions and services, ecological integrity and connectivity.

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Wetland restoration targets

Ambitious national targets and plans for wetland restoration are necessary for NBSAPs given the significant loss and degradation of wetlands that has occurred in all regions of the world (Davidson & Finlayson 2019). Wetland restoration targets are needed for inland waters and coastal ecosystems in KM-GBF Target 2. National targets should be set out in hectares for most wetlands, and in kilometres for rivers identifying the specific wetlands, river basins and landscapes where restoration will be undertaken. Targets covering wetland restoration should be qualitative as well as quantitative, aiming for improved condition and connectivity.

NBSAPs should recognize that restoring wetlands is also critical for the restoration of terrestrial and marine ecosystems, because wetlands play an important role in the hydrological connectivity and supply for other ecosystems. The contribution wetland restoration makes to climate mitigation, resilience and adaptation (Fennessy & Lei 2018), KM-GBF Target 8, should also be recognized.

Wetland restoration plans should incorporate the restoration of wetlands that have been converted to non-wetlands (wetland reduction in extent); restoration of remaining wetlands that are degraded (wetland condition); and restoration of any disruption in hydrological connections, such as dam removal (connectivity and flow). Restoration includes the restoration of physical, chemical and ecological processes across landscape scales such as catchments. Prioritization of areas to be conserved or restored can be informed by features such as endemism, conservation status of hosted species and the role the wetland plays in connectivity networks.

Flyway and swimway restoration

NBSAPs should give special attention to flyway restoration. Flyways are the networks of habitats that provide the conditions and connectivity for migratory birds to complete their annual cycle of migration, typically covering large distances. For wetland sites in such networks, alongside the extent and quality of the wetland itself, the connection with the next step is a critical feature, defined by parameters such as distance and resistance (affected by obstacles, which can be natural or man-made, and weather). NBSAPs should also give a high priority to the restoration of swimways, which are the equivalent of flyways for fish and other aquatic biodiversity.

For prioritization of management, conservation and restoration intervention in flyways, the Critical Site Network tool is available in the African Eurasian Flyway.

This tool, which can be queried from a species, site and country perspective, helps identify priority areas for specific species of migratory (water)birds. It also provides information about what makes these areas so important, therefore identifying what needs to be targeted in terms of management, conservation or restoration. Guidance is also available on how to identify potential effects of climate change and how to integrate this into national approaches.

Data and information

Countries can set national restoration targets for different types of wetlands by using the Wetland Extent Trends (WET) Index, national wetland inventories and the Connectivity Status Index (CSI) for rivers, which can be aggregated at various scales[6], [7]. This information can be used to assess the loss and degradation of wetlands, particularly those of high biodiversity importance. It can also be used to identify potential restoration locations by considering wetland processes and functioning, such as suitable hydrological inputs and outputs, and environmental and socio-economic constraints, such as existing high biodiversity non-wetland species or risks of pollution from adjacent urban areas.

Countries can also utilize the Montreux Record (the register of Ramsar Sites that identifies where changes in ecological character are occurring or have occurred), and the Ramsar Site Information Service (reports of changes in Ramsar Site ecological character), to prioritize restoration activities for wetlands of international importance, with the aim of successful restoration allowing such Sites to be removed from the Record.

Landscape scale restoration

Restoration planning and activities should adopt a landscape-scale approach, to incorporate the restoration of physical, chemical and ecological processes across landscape scales such as catchments and mobilize diverse sectors and interests.

6 https://www.wetlands.org/cbd-framework-proposal-on-target-2-ecosystem-restoration-for-rivers/
7 https://wwfint.awsassets.panda.org/downloads/1110__int_briefing5lr.pdf

Target 2. Wetland examples

France's NBSAP (Stratégie Nationale Biodiversité 2030)[8]

Wetland preservation and restoration is a national priority. The creation of a national park dedicated to these ecosystems, with at least 50,000 ha of wetlands is expected to have been restored by 2026 and efforts are continuing and will continue until the end of the decade.

Objective of the action: Create a new national park to protect wetlands by 2030

Description of the action: The objective is to create a national wetlands park with the aim of protecting and promoting this type of ecosystem particularly for their importance for biodiversity but also for the fight against climate change and adaptation to its effects. The government will immediately launch work with communities and stakeholders to bring about the creation of this 12th national park before the end of the decade.

Indicator(s) with target value: By 2030, a new national park for the protection of wetlands is created.

Mangroves

The Mangrove Breakthrough aims to restore mangroves to cover at least half of all recent losses. Using the Global Mangrove Watch extent and change maps, it is estimated that 818,300 ha of mangroves are considered "restorable". Assuming science-based restoration practices are employed and result in long-lasting restoration, restoring half of recent loss would represent 409,150 ha by 2030 (~51,000 ha per year).

Mangroves are therefore highly relevant to the implementation of multiple goals and targets across the KM-GBF. The KM-GBF complementary indicators specifically refer to mangroves, including Complementary Indicator a.9 on Continuous Global Mangrove Forest Cover, Complementary Indicator a.12 on Trends in mangrove extent, and Complementary Indicator a.10 on Trends in mangrove forest fragmentation. **The updates of NBSAPs to align with the KM-GBF goals provides an opportunity for governments to incorporate mangrove action into their new plans.** Kenya (2000-2005 with an updated draft 2019-2030), Mozambique (2015-2035), Madagascar (2015-2025) and Tanzania (2015-2020) have included mangrove targets within their NBSAPs. Sri Lanka has adopted a National Policy on Mangrove Ecosystem Conservation and Restoration and has drafted a National Action Plan and the National Guidelines for Restoration of Mangroves that include targets to be incorporated into the NBSAP[9].

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8 https://www.cbd.int/doc/world/fr/fr-nbsap-v3-fr.pdf
9 http://env.gov.lk/web/images/downloads/biodiversity_division/publications/National_Guidelines_for_the_Restoration_of_Mangrove_Ecosystems_of_Sri_Lanka.pdf

2.3. Target 3: Conserve 30% of land, waters and seas

Ensure and enable that by 2030 at least 30 per cent of terrestrial, inland water and of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem functions and services, are effectively conserved and managed through ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation measures, recognizing indigenous and traditional territories, where applicable, and integrated into wider landscapes, seascapes and the ocean, while ensuring that any sustainable use, where appropriate in such areas, is fully consistent with conservation outcomes, recognizing and respecting the rights of indigenous peoples and local communities, including over their traditional territories.

Wetland conservation targets

NBSAPs should include explicit targets and plans for increasing the area of inland waters and coastal wetland ecosystems in protected areas and other effective area-based conservation measures (OECMs) to contribute to the 30x30 target. National wetland conservation targets should be in hectares for wetlands, and in kilometres for rivers. Underrepresented and high biodiversity wetland types should be prioritized.

Review of wetland protected areas and OECMs

NBSAPs should include an analysis of the extent to which existing protected areas and OECMs cover biologically important, representative, and connected wetlands. Establishing a baseline for protected area coverage of wetlands will be key to tracking progress over time. This can show opportunities to strengthen the management of existing protected wetland areas to contribute to 30x30 and gaps that could be filled by new or expanded protected areas. A new pair of indicators – one for rivers and streams, and one for lakes and other wetlands – will be available for generating this information, using either global or (preferably) national-level datasets.

Key Biodiversity Areas (KBAs), Important Bird and Biodiversity Areas (IBAs)', and Wetlands of International Importance (Ramsar Sites) and other areas under relevant international designations, in addition to national protected area designations, and existing OECMs should be reviewed to identify all wetland protected areas. Some important wetlands will be outside these classifications so species survey data, habitat ecosystem data, cultural significance data etc. should be used to identify wetlands for inclusion into existing or new protected areas and OECMs, including areas and mechanisms used by Indigenous Peoples. Updated guidance on the recognition of OECMs is in development and will be inclusive of wetland-related OECMs[10]. Guidance is already available on the identification and designation of Ramsar Sites (Ramsar Regional Center – East Asia 2023) and how to develop management plans (Ramsar Regional Center – East Asia 2020) for protected wetland areas.

Freshwater ecosystems can require protections beyond those provided by conventional terrestrial protected areas. Therefore, countries may include in their NBSAPs consideration of new or amended categories for freshwater protections (e.g. protected free-flowing rivers) in national-level policy to contribute to 30x30.

10 OECM guidance - https://www.protectedplanet.net/en/thematic-areas/oecms?tab=OECMs

Flyways and swimways

Flyways and swimways should be given special attention as part of 30x30 implementation at national level, with measures to ensure all flyway and swimway sites are included in protected areas and OECMs and effectively managed, with connectivity maintained and enhanced.

It is important that management plans for all wetland protected areas and OECMs are adopted and updated on a regular basis.

Target 3. Wetland examples

Chile – Laguna Torca – Protected area

The 604-hectare Laguna Torca reserve is located in a lacustrine system made up of several lagoons on Chile's coast, south of Santiago. This site is a KBA. It provides habitat for high densities of over 90 species of birds, including the swamp crow and the coscoroba swan (Coscoroba coscoroba), along with the coypu (Myocastor coypus), the culpeo fox (Lycalopex culpaeus) and the lesser grison (Galictis cuja). BirdLife International reports this site's threat score to be very high, condition to be favourable and conservation action to be medium. It is unknown if the site is managed for aquatic species at this time. **This site is a protected area with important biodiversity values and effective protection; therefore it should contribute to Target 3.**

Example adapted from A Pathway for Inland Waters in the 30x30 Target

Thailand – Mae Ngao Community Fish Reserve - Potential OECM

Over the last three decades Indigenous P'ganyaw (Karen) communities along the Mae Ngao River have established a network of more than 50 no-take river reserves ranging between 0.2 and 2 km long. The communities were unified in their opposition to a national park designation, clear that their primary goal was the maintenance and augmentation of fish stocks. As conservation is a secondary goal, the reserves can be considered equivalent to an OECM.

Communities delineate the boundaries, develop and enforce penalties for noncompliance and some cases sell licenses for catch and release angling. Relative to non-protected sites, the reserves contain ~27 per cent more fish species, 124 per cent higher fish density, and 2,247 per cent more fish biomass. **This suggests networks of small, community no-take reserves offer a model for protecting biodiversity and augmenting fisheries and can contribute to Target 3.**

Example adapted from A Pathway for Inland Waters in the 30x30 Target

2.4. Target 4: Halt species extinction, protect genetic diversity and manage human-wildlife conflicts

Ensure urgent management actions to halt human induced extinction of known threatened species and for the recovery and conservation of species, in particular threatened species, to significantly reduce extinction risk, as well as to maintain and restore the genetic diversity within and between populations of native, wild and domesticated species to maintain their adaptive potential, including through in situ and ex situ conservation and sustainable management practices, and effectively manage human-wildlife interactions to minimize human-wildlife conflict for coexistence.

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Recognize species' dependence on wetlands

Although making up only around 6% of the Earth's surface, 40% of all known plant and animal species live or breed in wetlands. Freshwater species populations alone have seen a decline on average of 83% since 1970, more than twice the average decline in terrestrial and marine species[11]. According to the IUCN Red List, 25% of the world's freshwater fish species (3,086 out of 14,898 assessed species) are at risk of extinction[12]. NBSAPs should include specific measures for halting wetland species extinction and restoring the health of populations living and breeding in wetlands. They should recognize that the delivery of Target 4 depends on the protection, restoration and management of wetland ecosystems.

Recovery plans for threatened wetland species

NBSAPs should include actions as set out in the IUCN Global Species Action Plan (IUCN 2023) in accordance with their national capacity and circumstances to ensure the recovery of threatened wetland species. These include:

- Assess the conservation status of all wetland species and identify those needing targeted recovery actions;

11 https://livingplanet.panda.org/

12 IUCN Red List Update December 2023. https://www.iucn.org/press-release/202312/freshwater-fish-highlight-escalating-climate-impacts-species-iucn-red-list#:~:text=A%20new%20assessment%20finds%20that,are%20affected%20by%20climate%20change.&text=The%20IUCN%2

- Develop national targets for threatened wetland species to halt and reverse their human induced decline and therefore their removal from the Red List;
- Develop and implement recovery plans (single species, multi-species, site-based, or threat-based) for all wetland species that require one; and
- Support the protection and designation of Ramsar Sites that support >1% of a population of wetland-dependent species.

Target 4. Wetland examples

China – Anti-Electrofishing Volunteer Network Fighting Illegal Fishing

The China Biodiversity Conservation and Green Development Foundation has established a volunteer programme that assisted fishery authorities in uncovering nearly 1,000 cases of illegal fishing in 2018 alone within the Yangtze River Basin. The programme consists of extensive education and awareness activities including environmental classes and lectures, the launch of the "RiverEye" mobile application to encourage public participation in reporting and preventing illegal fishing of critically endangered fish species and advocacy against the release of invasive species like the largemouth bass.

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2.5. Target 5: Ensure sustainable, safe and legal harvesting, and trade of wild species

Ensure that the use, harvesting and trade of wild species is sustainable, safe and legal, preventing overexploitation, minimizing impacts on non-target species and ecosystems, and reducing the risk of pathogen spillover, applying the ecosystem approach, while respecting and protecting customary sustainable use by indigenous peoples and local communities.

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Wetlands are important as a source of food and nutrition for many people around the globe. For example, in Cambodia, fish from the large Tonle Sap Lake and associated floodplains which include two Ramsar Sites provide communities with 60-80% of their animal protein. In the lower Mekong Basin, rice paddies are also important spawning areas for fish, with over 20 fish species found in rice fields in Lao PDR. Together with other species found in wetlands such as insects, molluscs, crabs and shrimps, wetlands are a vital component of food security for many rural communities.

The use, harvesting and trade of wetland wild species should be given specific consideration in NBSAPs to ensure the sustainable, safe and legal use to prevent overexploitation and minimize impacts on non-target species and wetland ecosystems.

To assess the impact of harvesting, trade or use of wild wetland species on non-targeted species and ecosystems including any potential health impacts, countries can use the FAO and USGS inland fisheries threat index[13] (this can also be used for Targets 9 and 10).

Countries can adopt a One Health ecosystem approach in their NBSAPs to recognize the inextricable connections between humans, pet animals, livestock and wildlife (both plants and animals) and their social and ecological environment. Embracing an ecosystem approach involves recognizing the dependence of health and well-being on "healthy wetlands" which can only be achieved through wise use, most often at a landscape and/or catchment scale. Wise use incorporates the sustainable use and harvesting of wetland plant and animal species. The concept of "prevention is better than cure" within an ecosystem approach should be included particularly when focused at a landscape or catchment scale, to ensure

13 Inland Fisheries Alliance Resources (https://www.inlandfisheriesalliance.org/resources) or directly downloadable at: https://static1.squarespace.com/static/600f3c551f5d246dcefc421b/t/6388e87da623a5739dec1ab6/1669916853747/Briefing+Document+-+Inland+Fisheries+Indicator

maintenance of ecosystem services and reduce the risk of pathogen spillover and negative impacts to wetland species, maximize benefits and minimize costs for wetland stakeholders.

Customary sustainable use of wetland species by Indigenous Peoples and local communities should be respected and protected.

Target 5. Wetland examples

Malawi – The role of traditional knowledge in the conservation and sustainable use of Elephant Marsh Wetland

Located in Lower Shire, the Elephant Marsh Wetland and its surrounding waters support diverse and unique flora and fauna with internationally significant biodiversity and ecosystem services. The marsh is a source of livelihood to over a million people who are dependent upon the wetland's natural resources for their food, water, construction materials and cultural identity. A survey on traditional knowledge holders carried out by the National Ecosystem Assessment revealed that Elephant Marsh has a well-defined community that possesses a close and profound relationship with the equally well-defined marsh. **Local community traditional knowledge allows communities to adapt to floods and droughts through sustainable use of biodiversity and ecosystem services.** In Elephant Marsh, local women grow traditional crops along the marsh and have been caretakers, offering rites and spiritual practices when in need. **Women have also played a role as stewards of water.** They play an important role in preserving the resources for present and future generations. Not only do the women ensure availability of quality water for domestic use, but also are essential in making it available for spiritual ceremonies like offering at Mbona in Khulubvi.

India – Mangrove conservation in Kerala

The project developed a baseline of the status of mangroves and wetlands of Kerala and reviewed the pattern of resource use in the wetlands in terms of sustainable utilization of resources including wild species. There are 44 rivers and a wide network of estuaries and backwaters that experience tidal influence in Kerala. Once the state had 700 km^2 of mangroves along its coast but it is now estimated that only a total of 17.82 km^2 remains.

Mangrove habitats in Kerala have been lost and degraded due to illegal cutting of mangrove trees for fuelwood and fodder, fish and shrimp culture, indiscriminate human encroachment of mangrove areas for developmental activities, conversion into coconut plantations and for sand dredging.

Community-based mangrove management, including sustainable use of wild species and ecotourism, is a viable alternative for sustainably managing mangrove ecosystems in Kerala. The Government of Kerala has decided to develop green infrastructure (coastal green belts including mangroves) following flooding and landslides as a cost-effective means of increasing resilience against the impacts of hazard events. In this context, effective governance, better planning for rehabilitation of degraded mangroves, sustainable use of wild species and creation of awareness to local communities are being undertaken to conserve, protect and restore the valuable mangrove wetland ecosystems.

2.6. Target 6: Reduce the introduction of invasive alien species by 50% and minimize their impact

Eliminate, minimize, reduce and or mitigate the impacts of invasive alien species on biodiversity and ecosystem services by identifying and managing pathways of the introduction of alien species, preventing the introduction and establishment of priority invasive alien species, reducing the rates of introduction and establishment of other known or potential invasive alien species by at least 50 per cent by 2030, and eradicating or controlling invasive alien species, especially in priority sites, such as islands.

Action on invasive species affecting wetland biodiversity and ecosystems

A key driver of wetland biodiversity loss is invasive alien species (IPBES 2023). Wetland biodiversity is particularly susceptible as it is threatened by both terrestrial and aquatic invasive alien species. Native biodiversity is often outcompeted by invasive alien species. New pathogens and changes in wetland ecosystem structure can also result in biodiversity loss.

NBSAPs should recognize the severe impacts of invasive alien species on wetland biodiversity. They should incorporate policies and actions to identify and manage invasive alien species pathways to prevent their introduction and establishment in wetland ecosystems, and to eradicate or control invasive alien species that have been introduced and established.

This should be based on a robust assessment that identifies key alien species, their introduction pathways, and the wetland sites affected. The development of technical guidelines for the national context can promote appropriate interventions.

Transboundary cooperation

NBSAPs should include interventions that address transboundary dimensions of introduction, management, control and eradication, of invasive alien species, where appropriate.

Target 6. Wetland examples

Thailand, Southeast Asia – Golden Apple Snail

In 1980, the Argentine golden apple snail (*Pomacea canaliculata*) was intentionally introduced into Asia as a high-protein food source for domestic consumption, as well as for export. However, local and foreign consumers failed to acquire a taste for the snail and the snails were quickly discarded into irrigation ditches and public waterways. The species soon made its way to rice fields, where the animals voraciously consumed young rice plants. Control measures such as pesticides and manual removal have often been unsuccessful. **Small-scale initiatives in Thailand have been developed to harvest the snail to produce a fertilizer. This reduces snail numbers and provides livelihood support.**

Example adapted from Linkages Between Development Assistance and Invasive Alien Species in Freshwater Systems in Southeast Asia.

2.7. Target 7: Reduce pollution to levels that are not harmful to biodiversity

Reduce pollution risks and the negative impact of pollution from all sources by 2030, to levels that are not harmful to biodiversity and ecosystem functions and services, considering cumulative effects, including: (a) by reducing excess nutrients lost to the environment by at least half, including through more efficient nutrient cycling and use; (b) by reducing the overall risk from pesticides and highly hazardous chemicals by at least half, including through integrated pest management, based on science, taking into account food security and livelihoods; and (c) by preventing, reducing, and working towards eliminating plastic pollution.

Wetlands should feature in pollution reduction provisions of NBSAPs in two distinct ways: through a focus on reducing pollution that is harmful to wetland ecosystems and biodiversity; and by harnessing the potential of wetland treatment systems to treat agricultural, urban and industrial pollution.

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Reduce pollution of wetlands

Wetland ecosystems and their biodiversity are seriously impacted by pollution as they are often hydrologically connected to agricultural, industrial and urban areas resulting in pollution from excess nutrients, hazardous chemicals, heavy metals, pharmaceutical products, per- and polyfluoroalkyl substances (PFAS), and plastics entering wetlands and impacting wetland biodiversity.

As a priority, NBSAPs should include specific measures to identify and reduce pollution risks and the negative impacts of pollution on wetlands by tackling at source both point source (end of pipe) pollution and diffuse pollution from agricultural, road and urban runoff. Development of protection measures for water source catchments, springs and groundwater recharge areas should be incorporated.

Use wetlands to treat pollution

If pollution reduction is not possible at source, constructed treatment wetlands can also be used to reduce or remove the pollution risk from human activities on wetland, terrestrial and marine ecosystems. Constructed wetlands provide a sophisticated and cost-effective water treatment service involving depositional environments, aerobic water columns, anaerobic sediments, microbial suites, and wetland vegetation, all contributing to the assimilation and extraction of pollutants, parasites and pathogens.

Constructed treatment wetlands can be used to intercept hydrological pathways whether from point source pollution, such as an outlet from an industrial facility, or from diffuse pollution, such as agricultural runoff. Used within approaches such as sustainable drainage systems (SuDS), constructed wetlands can be integrated across urban and rural landscapes to provide effective treatment of polluted water before it enters the hydrological networks that support wetland, terrestrial and marine ecosystems.

Target 7. Wetland examples

Kenya Draft NBSAP 2020-2030

In Kenya pollution from nutrients such as nitrogen and phosphorus is causing eutrophication in critical inland waters such as Lakes Victoria and Naivasha. Kenya's NBSAP addresses this through the inclusion of two targets to reduce pollution of wetlands.

Target 1: By 2030, pollution from all sources, including from excess nutrients, pesticides and highly hazardous chemicals have been brought to levels that are not harmful to ecosystem functions, services and biodiversity, considering cumulative effects while taking into account food security and livelihoods.

Target 2: By 2030, a move towards a more responsible use of plastics, (through enforcing ban on single use plastic products) ensuring that where possible products placed on the market are reusable and recyclable, while reducing new plastic packaging products by 60%.

United Kingdom – Nutrient Neutrality Wetlands

Following a ruling by the Court of Justice of the European Union, Natural England issued new advice to 32 local planning authorities in England in 2019 and to 42 more in 2022. This highlighted that several sites in their areas that were protected under the Habitats Regulations were in "unfavourable condition" due to excess nutrients (phosphorous and nitrogen). Natural England said "extra wastewater from new housing developments" could "make matters worse".

Natural England therefore advised these local planning authorities that they should only approve new housing developments that are "nutrient neutral". In most cases (where the discharge of nutrients cannot be avoided), nutrient neutrality is achieved by putting appropriate mitigation strategies in place. **A key mitigation strategy is the use of constructed treatment wetlands as pollution control measures to treat the excess nutrients from the new housing developments or from other sources, such as agricultural runoff.** The nutrient removal mechanisms within constructed treatment wetlands can be predicted over the long term and can be used to mitigate the additional nutrient loading resulting from housing developments.

2.8. Target 8: Minimize the impacts of climate change on biodiversity and build resilience

Minimize the impact of climate change and ocean acidification on biodiversity and increase its resilience through mitigation, adaptation, and disaster risk reduction actions, including through nature-based solutions and/or ecosystem-based approaches, while minimizing negative and fostering positive impacts of climate action on biodiversity.

Wetlands should be prioritized in NBSAPs to deliver KM-GBF Target 8 in two distinct ways: as effective nature-based solutions for climate adaptation and mitigation; and by ensuring climate policies are better designed to avoid harm to wetland ecosystems and biodiversity.

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Wetlands as nature-based solutions

Wetlands buffer the effects of climate change and are key ecosystems supporting climate adaptation, disaster risk reduction, and resilience. Wetlands absorb excess water and precipitation, helping with flood alleviation. Wetlands also provide water storage and purification, which can enhance drought resilience. Coastal wetlands provide a natural shield that can decrease the harm done by storms and reduce erosion.

Wetland ecosystems hold some of the largest stores of carbon on the planet. Peatlands alone store twice as much carbon as all the world's forests. Coastal and estuarine wetlands such as mudflats, mangroves and seagrass meadows are particularly important for carbon sequestration. However, when drained, dredged and degraded, wetlands can emit significant quantities of greenhouse gases (GHGs). Wetland conservation, restoration and wise use can prevent emissions, and, in many instances, sequester significant amounts of carbon.

Therefore, including targets and policies for wetland protection and restoration and implementing context-specific wetland management in NBSAPs as well as in national climate plans (Nationally Determined Contributions (NDCs) and National Adaptation Plans (NAPs)) can deliver greater benefits and cost effective, coherent action to meet multiple climate and nature goals and minimize trade-offs. Context-specific wetland management is important because each wetland type varies in terms of hydrology, ecology and their role in the carbon

cycle. Existing guidance[14, 15] on how to enhance climate action by including wetlands in NDCs and how to harness the potential of wetlands as nature-based solutions can be considered for the national implementation of KM-GBF Target 8 (Anisha *et al.* 2020).

Climate action in harmony with wetland biodiversity

NBSAPs should also include policies and actions to ensure climate mitigation and adaptation goals are pursued in harmony with nature, including recognition of the critical role of wetland restoration and conservation in halting and reversing nature loss, supporting livelihoods, underpinning water security and in meeting climate goals.

To achieve the Paris Agreement goal of keeping temperatures below 1.5°C, a major shift in the energy sector is needed, covering the production and consumption of energy, and the use and development of sustainable energy sources. However, some climate measures can have negative impacts on biodiversity. For example, hydropower can have devastating impacts on freshwater biodiversity and strongly alter the ecosystem services provided by natural rivers. The expansion of lithium mining, for batteries, is threatening precious and vulnerable wetland ecosystems in the High Andes and the nature and people who rely on them[16]. Bioenergy produced from biomass crops grown on drained peatlands, and related GHG emissions should be accurately accounted for to provide a comprehensive picture of the carbon footprint, and hence support informed decision making. NBSAPs should play a critical role in ensuring a nature-positive energy transition by recognizing these risks and setting out principles and priorities for national action.

NBSAPs can also play an important role in ensuring the agriculture sector's transition to more sustainable, resilient, and regenerative practices are aligned with both biodiversity and climate goals. The promotion of new land management practices, innovations, and technologies, that, while sustaining productivity, lead to the reduction of greenhouse gas emissions (for instance, by rewetting drained organic soils), and enhance other co-benefits (e.g. water provision, flood prevention, etc), will be key. Such practices include paludiculture: productive land use of wet and rewetted peatlands which preserves the peat soil, and thus reduces CO_2 emissions and subsidence, enhances resilience and supports biodiversity.

In short, NBSAPs should include robust policy measures and strong safeguards that protect wetland ecosystems and enhance alignment of climate and biodiversity action.

Target 8. Wetland examples

Ireland's 4th National Biodiversity Action Plan 2023-2030[17]

Target: By 2025, nature-based solutions are contributing to national climate ambitions.

To support the National Climate Objective of achieving a climate resilient, biodiversity rich, environmentally sustainable and climate neutral economy, National Parks and Wildlife Service and other relevant bodies will promote freshwater, transitional, coastal, and marine nature-based solutions (such as coastal, and wetland restoration and restoring "blue carbon" ecosystems) in national, regional, and local rural and urban programmes.

14 Nature in Nationally Determined Contributions (conservation.org)
15 Policy Guidance – The Blue Carbon Initiative)
16 https://www.wetlands.org/publication/briefing-on-lithium-mining-in-the-andes-of-south-america-no-to-water-mega-mining/
17 https://www.cbd.int/doc/world/ie/ie-nbsap-v4-en.pdf.

Mali – Analysis of the policy context for climate change adaptation

Existing policies, strategies and action plans, such as the National Climate Change Policy, National Wetlands Policy, National Action Plan for the Environment, Strategic Framework For Economic Growth and Poverty Reduction, the plans of the Niger Basin Authority, and the Sustainable Development Plan for the Inner Niger Delta (PDD-DIN) and the Integrated Water Resource Management Policy under revision will be analysed and gaps and opportunities in relation to an integrated approach to climate change adaptation will be identified. **This work will be led by the National Agency for Sustainable Development (AEDD) and Wetlands International.**

The main gaps to fill in these policies are the following:

- The concepts of climate change policies and programmes at national level are often incompatible with local realities. It is therefore imperative to integrate the challenges and opportunities of climate change into the municipalities' plans
- The low functionality of a well-structured and efficient organizational framework to facilitate access to national and international climate finance
- Lack of human resources with proven expertise in climate change drivers and impacts directly or indirectly related to them

Natural sponges as a nature-based solution

Wetlands are natural sponges in the landscape, but drainage for agriculture, forestry and urbanization have drastically reduced the capacity of wetlands to absorb and store water. With climate change driving more periods of low or absent rainfall and intense precipitation events, increasing floods and droughts are threatening the health and safety of people and degrading nature. By blocking drainage and restoring the natural capacity of wetland landforms, soils and vegetation to retain water and slow the flow before it enters streams, and by reconnecting floodplains to create more room for rivers, peak flows of water in floods are reduced while base flows in dry periods are increased. **This provides protection from floods and droughts and enhances biodiversity.** The www.naturalsponges.org website showcases the power of natural sponges as a nature-based solution to retain and store water in the landscape that delivers benefits for people, nature, climate and water.

Guinea and Mali – Project to support securing livelihoods and biodiversity in a changing climate (PASMEB/Living Delta)

The design and implementation of community-based climate change adaptation plans ensure sustainable use/restoration of natural resources and biodiversity conservation.

Two main policies are targeted to secure livelihoods and conserve biodiversity: national policy of water; and transboundary water management in terms of dams.

Information campaigns for stakeholders on environmental and biodiversity issues were implemented along with the following strategic intervention options:

- Actions to rehabilitate habitats and protect rare and protected species
- socio-economic activities and stimulation for natural resource management and biodiversity
- Implementation of project activities through the faire-faire approach and the use of national NGOs and grassroots community organizations to exchange experience, expertise and good practices with local stakeholders
- Participation, in the form of financial, material and/or human resources, of the beneficiaries in the implementation of actions
- Correlation of the links between poverty and the environment based on support for socio-economic activities, coupled with actions to manage natural resources

2.9. Target 9: Manage wild species sustainably to benefit people

Ensure that the management and use of wild species are sustainable, thereby providing social, economic and environmental benefits for people, especially those in vulnerable situations and those most dependent on biodiversity, including through sustainable biodiversity-based activities, products and services that enhance biodiversity, and protecting and encouraging customary sustainable use by indigenous peoples and local communities.

Wetlands support wild species that provide important nutrition, food security, livelihoods, health and well-being for all people on the planet. Wetland biodiversity is the source of many goods and services on which people depend, particularly Indigenous Peoples and local communities.

NBSAPs should recognize the essential role of wetlands as vital habitats for the reproduction, growth, migration and subsistence of wild species. National target setting should seek to tackle threats to wild wetland species populations and improve their sustainable use. Identifying and assessing the sustainable use of wetland wild species and quantifying the benefits of wetland wild species in terms of social and economic value, generation of rural incomes, and contribution to food security and nutrition, can provide valuable information to prioritize action.

NBSAPs may also refer to wetland management plans, which need to include detailed provisions for the sustainable use of wild species that support people socially and economically. This is particularly important for communities in vulnerable situations for whom wild species can be crucial for their well-being. Actions to implement this target must consider the customary sustainable use by Indigenous Peoples and local communities.

Target 9. Wetland examples

Tanzania – Ihemi Cluster Wetlands

The Ihemi Cluster wetlands support several sectors including agriculture, forestry and wildlife harvesting that provide vital ecosystem support to the local population. The Ihemi Cluster is facing several challenges including climate change that are impacting the ecosystem and community livelihoods. **A sustainable management plan, that integrates with national policy, has been developed that covers agricultural and the sustainable harvesting of wild species, particularly fish.** Fish are of fundamental importance to the social and economic well-being of the inhabitants within the Ihemi Cluster. The wetlands support thousands of people through fishing and collection of edible plants. Better regulation of capture fisheries is occurring to ensure that the resource is sustainable into the future and better adapted to the changing environment.

Example adapted from Guideline for Sustainable Management of Wetlands in Ihemi Cluster

2.10. Target 10: Enhance biodiversity and sustainability in agriculture, aquaculture, fisheries and forestry

Ensure that areas under agriculture, aquaculture, fisheries and forestry are managed sustainably, in particular through the sustainable use of biodiversity, including through a substantial increase of the application of biodiversity friendly practices, such as sustainable intensification, agroecological and other innovative approaches, contributing to the resilience and long-term efficiency and productivity of these production systems, and to food security, conserving and restoring biodiversity and maintaining nature's contributions to people, including ecosystem functions and services.

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Unsustainable agriculture, aquaculture, fisheries and forestry are major drivers in the conversion and degradation of wetlands and impacts on wetland species (Convention on Wetlands 2022b). However, wetlands are productive ecosystems and when managed sustainably can play a critical role in food and water security, and sustainable livelihoods as they provide a source of water for crops and livestock and as habitat for rice production and aquaculture. Wetlands also support agricultural, aquaculture, fisheries and forestry by ecosystem regulation such as controlling pests, reducing flooding, recharging groundwater, nutrient cycling and carbon sequestration.

NBSAPs should include wetlands in relation to Target 10 in two distinct ways: recognizing the role of wetlands as productive systems; and introducing sectoral policy interventions and other policy actions to shift to sustainable agriculture, aquaculture, fisheries and forestry management designed to protect and restore wetlands.

A wide range of policies and actions suitable for inclusion in NBSAPs are provided in the Convention on Wetlands Briefing Note No13 "Wetlands and agriculture: impacts of farming practices and pathways to sustainability" (Convention on Wetlands 2022b). These include:

- Ensure efficient use of water resources and protect water sources for wetlands;
- Set catchment limits on water use and pollution;
- Reduce pesticide and fertilizer use especially near wetlands;

- Integrate wetland protection and restoration into agricultural policy and recognizing the full value of benefits provided by wetlands when competing land use decisions are made; and
- Use financial mechanisms and regulation to incentivize agricultural practices that reduce pressures on the ecological character of wetlands and to promote a transition to low-input natural and integrated food production systems that recognize the role of farmers, fishers and foresters in maintaining cultural and regulating services.

Target 10. Wetland examples

Colombia – Bita River Basin

The Rio Bita Ramsar Site is an 824,500-hectare wetland complex found within the Orinoco river basin in Colombia. Vast areas of wetlands within the basin are under threat due to the intensification of agriculture. To reduce pressures on wetlands, working with the Omacha Foundation, the Bita forestry sector has established an integrated environmental management plan that clearly zones areas of the basin for conservation, restoration and sustainable production. The conservation agreement was endorsed by the Ministry of the Environment and has promoted the protection of wetlands alongside sustainable agriculture that is further enhanced by actions to reduce hunting pressure, prevent fires and to plant native forest species, helping to preserve the ecological character of the Wetland of International Importance.

Example adapted from Transforming agriculture to sustain people and wetlands policy brief.

Paludiculture - farming on wet and rewetted peatlands

Paludiculture is the productive land use of wet and rewetted peatlands that preserves the peat soil and thereby minimizes greenhouse gas emissions and protects nature and biodiversity. With paludiculture, peatlands are kept productive under permanently wet, peat-conserving and potentially peat-forming conditions, thus providing a win-win-win situation: the carbon stock is protected, farmer livelihoods are secured, and the ecosystem functions maintained (flood, drought and fire risk reduction).

In Germany, the Greifswald Mire Centre is demonstrating the potential of this kind of innovative farming. It is showing how peat moss (sphagnum) can be grown and harvested on rewetted peatlands, especially bogs, then dried and processed for use as horticulture substrate to replace fossil peat in gardening. In Indonesia, communities are being supported to develop sustainable rural business models that marry protection of the peatlands, their carbon and biodiversity, with strong livelihoods. Growing sago on peatlands instead of oil palm can support high water tables, prevent carbon release, and reduce risk of fires. The sago provides food, and waste can be fed to ducks. To stimulate investment and upscaling of paludiculture in Indonesia, a platform has been created to facilitate exchange between plantation companies, research institutes, governments and NGOs.

Further information: https://www.wetlands.org/blog/peatlands-a-solution-to-transform-our-food-systems/ and https://europe.wetlands.org/news/paludiculture-lessons-for-european-peatlands-from-north-east-germany/

2.11. Target 11: Restore, maintain and enhance nature's contributions to people

Restore, maintain and enhance nature's contributions to people, including ecosystem functions and services, such as the regulation of air, water and climate, soil health, pollination and reduction of disease risk, as well as protection from natural hazards and disasters, through nature-based solutions and/or ecosystem-based approaches for the benefit of all people and nature.

Wetland ecosystems are particularly important in terms of the benefits they provide to society through provisioning, regulating, cultural and supporting ecosystem services (Simpson *et al.* 2023). The biological, chemical and physical structural components of wetlands combine with natural processes such as hydrological, nutrient and energy cycling, soil formation and primary production to provide an important range of functions and ecosystem services that support human life (Convention on Wetlands 2018). Key ecosystem services include (Millennium Ecosystem Assessment (2005):

- Provisioning: Food, fibre; genetic resources; biochemicals, natural medicines, and pharmaceuticals; ornamental resources; and fresh water.
- Regulating: Air quality regulation; climate regulation; water regulation; erosion regulation; water purification and waste treatment; disease regulation; pest regulation; pollination; and natural hazard regulation.
- Cultural: Cultural diversity; spiritual and religious values; knowledge systems; educational values; inspiration; aesthetic values; social relations; sense of place; cultural heritage values; and recreation and tourism.
- Supporting: Soil formation; photosynthesis; primary production; nutrient cycling; and water cycling.

NBSAPs should include polices and actions to enable the full potential of wetlands to deliver ecosystem functions and services to people including protection from disasters, and as effective nature-based solutions. This should include an assessment of key wetland ecosystem services contributing to national food and water security, disaster risk reduction, livelihood support and health and well-being. National targets can incorporate the increased use and mainstreaming of wetland ecosystems as nature-based solutions that are flexible and resilient.

Target 11. Wetland examples

United Kingdom - Sussex

The benefits human societies derive from wetlands are well established, although not necessarily enshrined in legislation or incorporated into local management regimes. The wise use of wetlands, as promulgated under the Convention on Wetlands, is intended as a mechanism to ensure that the benefits delivered to society through ecosystem services are maintained and, where appropriate, restored. The designation process for Ramsar Sites explicitly records information on ecosystem services as well as the more traditionally recorded information on the biodiversity and management procedures. **Analysis of four Ramsar Sites from the county of Sussex in southeast England showed that even for internationally important wetlands there is a failure to recognize the full value of the benefits provided and, importantly, several valuable ecosystem services remain unrecognized.** The gap between recognized and unrecognized ecosystem services has implications for the consideration of wetlands in decision-making and the protection and wise use of all wetlands within Sussex and beyond. **Undertaking a comprehensive analysis of ecosystem service benefits at wetland sites allows them to be included within guidance for wetland managers and decision makers**.

Example adapted from McInnes 2013.

2.12. Target 12: Enhance green spaces and urban planning for human well-being and biodiversity

Significantly increase the area and quality, and connectivity of, access to, and benefits from green and blue spaces in urban and densely populated areas sustainably, by mainstreaming the conservation and sustainable use of biodiversity, and ensure biodiversity-inclusive urban planning, enhancing native biodiversity, ecological connectivity and integrity, and improving human health and well-being and connection to nature, and contributing to inclusive and sustainable urbanization and to the provision of ecosystem functions and services.

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Over half of the world's population lives in urban areas and this is expected to increase to over 60% by 2050 (WWT Consulting 2018). Green and blue spaces can help improve health outcomes for urban populations. Urban wetlands are key green and blue spaces.

NBSAPs should include ambitious plans for creating, managing and restoring urban wetlands for the benefit of people and nature. Urban wetlands are either those that have survived historical development as urbanization gradually took place or that are newly constructed in an urban setting. Urban wetlands are essential to making cities liveable. During storms, urban wetlands absorb excess rainfall, reduce flooding and minimize negative impacts. Urban wetlands also act as a filter for pollution, improve water and air quality, and reduce extreme city temperatures. When conserved and sustainably used, urban wetlands can provide cities with multiple economic, social and cultural benefits and should be integrated into the development and management plans of urban areas (WWT Consulting 2018).

NBSAPs can include actions such as: the integration of wetlands into urban development frameworks and spatial zonation; and the prioritization of wetlands as natural infrastructure (nature-based solutions) in urban planning, including for water management.

Countries can improve awareness and access to urban wetlands through participation in the Convention on Wetlands' Wetland City Accreditation scheme, which recognizes the importance of well managed and an integrated planning approach to urban wetlands.

Further details on harnessing the power of urban wetlands to increase the area, quantity, connectivity, access to and benefits from green and blue spaces in urban and densely populated areas is set out in the "Good Practices for Handbook for Integrating Urban Development and Wetland Conservation" (WWT Consulting 2018).

Target 12. Wetland examples

Sri Lanka – Colombo Wetland Complex

Colombo's urban wetlands contain unique biodiversity that provide flood protection and numerous livelihood services to the residents of Colombo. However, despite the widespread benefits and unique biodiversity, Colombo's wetlands were being destroyed and degraded. Since the 1980s, 60% of the wetlands have been lost, largely through infilling. The wetlands currently provide flood protection for up to a 1 in 50 year flood. **If all wetlands are lost, Colombo would experience a catastrophic flood,** like that experienced in 2010 with flood damages equal to 1% of Colombo's GDP, on average every year. Wetlands are also being degraded through water and solid waste pollution.

The Metro Colombo Catchment Wetland Management Strategy was developed in 2016 as a comprehensive management approach to conserving wetlands across the city and integrating them into city development planning. The strategy identified Colombo's wetlands as biodiversity rich with >250 plant and >280 animal species. This included 9 nationally threatened and 11 near threatened flora, such as the tree climber *Aganope heptaphylla*, and 18 threatened and 18 near threatened fauna, such as the Fishing Cat (*Prionailurus viverrinus)*. **The strategy also determined that wetlands are fundamental to the well-being of the 2.3 million people of Colombo, particularly the urban poor, with 60% of households directly benefiting from wetland livelihoods and products, such as fish and rice, and 100% receiving indirect benefits from flood protection, climate cooling and pest regulation.** As are result of the strategy and increased awareness about the importance of the wetlands as blue / green space within the city a moratorium to prevent wetland infilling was passed in 2018 and a programme of defining wetlands as protected area sanctuaries was commenced. Colombo was also the first capital city to be recognized as a **Convention on Wetlands' Wetland City in 2018 because of the comprehensive approach adopted to integrate wetland protection into urban planning and management.**

Australia – Sydney Olympic Park

The wetlands are managed under an overall vision of the Sydney Olympic Park Authority for protection, conservation and enhancement of its natural assets, including remnant and constructed wetlands. The aims were to be a pioneering example in Australia of environmental sustainability, integrated water management, a friendly co-existence of nature and urban development, an effective partnership between public and private entrepreneurs and a world class sporting facility. Wetlands are within the mosaic of the precinct's urban sprawl. Because of the mosaic nature of the wetlands embedded within development structures, the design and management principles have been sympathetic to each other, thereby forming a "wetland city". The "wetland city" has become a great example of successful co-existence of development and nature protection.

Aboriginal and traditional owners, local residents, scientific and volunteer communities and many other groups have been involved in the design and construction process and further involved in monitoring and assessment.

Example adapted from Good Practices Handbook for Integrating Urban Development and Wetland Conservation (WWT Consulting 2018).

2.13. Target 13: Increase the sharing of benefits from genetic resources, digital sequence information and traditional knowledge

Take effective legal, policy, administrative and capacity-building measures at all levels, as appropriate, to ensure the fair and equitable sharing of benefits that arise from the utilization of genetic resources and from digital sequence information on genetic resources, as well as traditional knowledge associated with genetic resources, and facilitating appropriate access to genetic resources, and by 2030, facilitating a significant increase of the benefits shared, in accordance with applicable international access and benefit-sharing instruments.

Wetlands provide the planet, countries and communities with important genetic resources. It is vital that wetland genetic resources, as well as traditional knowledge associated with genetic resources, are included within applicable access and benefit-sharing instruments.

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2.14. Target 14: Integrate biodiversity into decision-making at every level

Ensure the full integration of biodiversity and its multiple values into policies, regulations, planning and development processes, poverty eradication strategies, strategic environmental assessments, environmental impact assessments and, as appropriate, national accounting, within and across all levels of government and across all sectors, in particular those with significant impacts on biodiversity, progressively aligning all relevant public and private activities, and fiscal and financial flows with the goals and targets of this framework.

It is essential that wetland biodiversity and its multiple values are fully recognized and integrated into policies, regulations, planning and development processes, poverty eradication strategies, strategic environmental assessments and within national accounting. As described in Targets 9, 10, 11 and 12, wetlands play a significant role in providing livelihoods, disaster reduction and contributing to health and well-being so should be included within planning and implementation across all levels of government and across all sectors to ensure wetland biodiversity and ecosystem service delivery is maintained.

NBSAPs should ensure that all relevant national planning instruments and processes include wetlands. Business and financial sectors should be encouraged to include wetlands both as resources that can be impacted by development and which can provide solutions to societal challenges. NBSAPs should contain actions to assess and enhance the inclusion of wetlands and their biodiversity in policies affecting sectors with particularly significant impacts on wetlands, such as agriculture and energy, and within environmental economic accounting.

It is also important that NBSAPs ensure good cross linking to other policy frameworks and actions such as Nationally Determined Contributions (NDCs) and National Adaptation Plans (NAPs) related to implementation of UN Framework Convention on Climate Change and the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs). Linkages between the SDGs and KM-GBF targets are critically important to the delivery of both so linking indicators and methodologies is essential.

Target 14. Wetland examples

Canada – Canadian Wetlands Roundtable

The Canadian Wetlands roundtable has produced the Pan-Canadian Wetland Policy Framework. Canada has obligations to several international agreements which have important implications for wetland conservation, including the Kunming-Montreal Global Biodiversity Framework, the Convention on Wetlands and the North American Waterfowl Management Plan. As a result, all federal, provincial, and territorial governments should now implement concrete actions that align with the level of ambition and associated outcomes of these agreements to halt and reverse biodiversity loss. This includes advancing and improving wetland policy that supports net habitat gains in each jurisdiction in Canada. **The framework developed helps the provinces and territories to design better policies to include wetlands**.

2.15. Target 15: Businesses assess, disclose and reduce biodiversity-related risks and negative impacts

Take legal, administrative or policy measures to encourage and enable business, and in particular to ensure that large and transnational companies and financial institutions:

(a) Regularly monitor, assess, and transparently disclose their risks, dependencies and impacts on biodiversity, including with requirements for all large as well as transnational companies and financial institutions along their operations, supply and value chains, and portfolios;

(b) Provide information needed to consumers to promote sustainable consumption patterns;

(c) Report on compliance with access and benefit-sharing regulations and measures, as applicable;

in order to progressively reduce negative impacts on biodiversity, increase positive impacts, reduce biodiversity-related risks to business and financial institutions, and promote actions to ensure sustainable patterns of production.

Provisions in NBSAPs seeking to deliver Target 15 should be designed to incorporate direct and indirect drivers of wetland loss and degradation, such as infilling and drainage for conversion to agriculture and urban settlements, agricultural, urban and industrial pollution, over extraction of natural resources and alterations to hydrological regimes.

NBSAPs should establish legal and regulatory frameworks to ensure mandatory disclosure of impacts, risks and dependencies on wetland biodiversity and to encourage a shift to nature positive business activities. These should include all wetlands and in particular Wetlands of International Importance and wetlands within protected areas and OECMs.

NBSAPs should ensure that monitoring and reporting by businesses covers not only direct activities but also those of their supply chains so a full understanding of the impacts, risks and dependencies on wetlands is reached.

Target 15. Wetland examples

Brazil – Jaguariúna, São Paulo State

The city of Jaguariúna is in São Paulo State, in the centre of one of the most important water resource management units in Brazil, the Piracicaba, Capivari, and Jundiaí Rivers (PCJ) Watersheds. Currently, surface water demand in the PCJ Basins represents approximately 78.7% of surface water availability, with some sub-basins with demands greater than availability. Approximately 45% of the total demand for water use in PCJ Watersheds is for urban use, 30% for industrial use and 22% for irrigation. Water supply and sanitation companies, in addition to other water users, are encouraged to recognize their impacts and contribute to the Bacias-Jaguariúna Program that aims to increase water security for the population, industry and agriculture of Jaguariúna. **Stakeholders engaged in the project are investing in conservation actions focused on five practices: protection of forest remnants, active reforestation of degraded lands, passive regeneration (focusing on riparian areas within private rural properties), rural sanitation and better soil management practices in agriculture.**

Example adapted from Measuring and Evaluating the Impact of Corporate Watershed Projects guide. The Nature Conservancy 2021.

2.16. Target 16: Enable sustainable consumption choices to reduce waste and overconsumption

Ensure that people are encouraged and enabled to make sustainable consumption choices, including by establishing supportive policy, legislative or regulatory frameworks, improving education and access to relevant and accurate information and alternatives, and by 2030, reduce the global footprint of consumption in an equitable manner, including through halving global food waste, significantly reducing overconsumption and substantially reducing waste generation, in order for all people to live well in harmony with Mother Earth.

Over consumption drives non-sustainable harvesting of wetland plants and animals, conversion of wetlands to other uses (particularly unsustainable, intensive agriculture), over abstraction of water and removal of minerals and genetic material. It also leads to waste impacts on wetlands through solid waste dumping and water pollution. NBSAPs should recognize over consumption as a driver of wetland loss and degradation and contain ambitious measures to reverse this trend.

Key provisions in NBSAPs should include the development of policy and regulatory frameworks and communication, education and public awareness (CEPA) activities to make consumers aware of the impacts of over consumption on wetland biodiversity and the ecosystem services they provide, to reduce waste and resource consumption with known effects on wetlands, and to enable positive change in consumption choices.

Target 16. Wetland examples

Reducing food production impacts on biodiversity through a shift to plant-based diets

National Dietary Guidelines (NDGs) are important tools for changing diets and act as a bridge between global dietary recommendations and local context and relevance. Countries can promote plant-based diets within NDGs to reduce impacts on wetland biodiversity. Planet-based diets are “win-win” consumption patterns that are high on human health benefits and low on environmental impacts. They comprise healthy and sustainable ingredients produced within planetary boundaries and adaptable to local contexts. These diets discourage over-consumption of any food, to the extent that over-consumption negatively impacts biodiversity, the environment and human health. Reducing over-consumption of animal-source foods, by increasing the relative consumption of plant-based foods, confers both environmental and health benefits (win-win).

Plant-based food diets support a move to agricultural systems that restore rather than destroy biodiversity. To reduce the impact on wetlands, agricultural crops with low water consumption and where fertilizer and pesticide use is not necessary should be prioritized.

WWF - Plant-based diets for more sustainable consumption

2.17. Target 17: Strengthen biosafety and distribute the benefits of biotechnology

Establish, strengthen capacity for, and implement in all countries, biosafety measures as set out in Article 8(g) of the Convention on Biological Diversity and measures for the handling of biotechnology and distribution of its benefits as set out in Article 19 of the Convention.

Living modified organisms derived from biotechnology have been proposed as solutions to issues such as invasive alien species and low yields within wetlands. Whilst there are potential benefits, biosafety measures are required to regulate, manage and control the risks associated with the use and release of any living modified organism. NBSAPs need to recognize that it is particularly important in wetlands because they are often hydrologically connected to other ecosystems, and transboundary in nature, so the risk of rapid spread of any living modified organism needs to be taken into account.

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2.18. Target 18: Reduce harmful incentives by at least $500 billion per year, and scale up positive incentives for biodiversity

Identify by 2025, and eliminate, phase out or reform incentives, including subsidies, harmful for biodiversity, in a proportionate, just, fair, effective and equitable way, while substantially and progressively reducing them by at least $500 billion per year by 2030, starting with the most harmful incentives, and scale up positive incentives for the conservation and sustainable use of biodiversity.

Environmentally damaging financial support for industries such as the fossil fuel industry, mining or agriculture is having a detrimental impact on wetlands. For example, over $350bn in environmentally harmful subsidies were provided globally for the unsustainable use of freshwater in 2021 and $520bn for environmentally harmful agriculture that often directly involved the drainage and conversion of wetlands (Koplow & Steenblik 2022).

NBSAPs should include targets and plans to eliminate subsidies and financial flows that are harmful to wetland ecosystems. Any subsidies or financial flows that contribute to the direct and indirect drivers of wetland loss and degradation such as incentives that encourage the infilling and drainage of wetlands for conversion to agriculture and urban settlements, that encourage agricultural, urban and industrial pollution or that alter hydrological regimes should be removed.

NBSAPs can incorporate price and subsidy reforms to encourage efficient use of resources and innovation and policies to phase out subsidies harmful to wetland ecosystems and biodiversity. In the context of wetlands, this could involve, for example, cost recovery for water (paying for the costs of supply), resource pricing (taking into account the value of the resource itself for society) and making use of pollution charges, liability and compensation requirements (e.g. for pollution incidents or damage) to reduce the pressures on wetlands and help implement the polluter pays principle (Russi *et al.* 2013).

NBSAPs should also include the development of national targets for positive financial incentives to accelerate and upscale wetland conservation, restoration and wise use.

Actions should be linked to SDGs 2, 7, 9 and 13 to ensure subsidies that help achieve the SDG goals and targets do not have negative impacts on wetland biodiversity and the KM-GBF targets. Actions should also specifically link to SDG 14.6 which addresses the need to prohibit certain forms of fisheries subsidies which contribute to overcapacity and overfishing.

Target 18. Wetland examples

Denmark – Removing subsidies for wetland drainage

In Denmark, approximately 60% of the land area is used for intensive farming where peat-rich lowlands have been drained for farming purposes. **Though these particular fields only represent 7% of the total farmland, they account for more than half the greenhouse gas emissions from agriculture in Denmark.** The Danish Government removed subsidies for wetland drainage and developed a programme of offering subsidies to cease agricultural production on lowland soils with high organic content. **The measures offer a joint solution for mitigating greenhouse gas emissions, nutrient pollution and biodiversity loss.**

2.19. Target 19: Mobilize $200 billion per year for biodiversity from all sources, including $30 billion through international finance

Substantially and progressively increase the level of financial resources from all sources, in an effective, timely and easily accessible manner, including domestic, international, public and private resources, in accordance with Article 20 of the Convention, to implement national biodiversity strategies and action plans, mobilizing at least $200 billion per year by 2030, including by:

(a) Increasing total biodiversity related international financial resources from developed countries, including official development assistance, and from countries that voluntarily assume obligations of developed country Parties, to developing countries, in particular the least developed countries and small island developing States, as well as countries with economies in transition, to at least $20 billion per year by 2025, and to at least $30 billion per year by 2030;

(b) Significantly increasing domestic resource mobilization, facilitated by the preparation and implementation of national biodiversity finance plans or similar instruments according to national needs, priorities and circumstances;

(c) Leveraging private finance, promoting blended finance, implementing strategies for raising new and additional resources, and encouraging the private sector to invest in biodiversity, including through impact funds and other instruments;

(d) Stimulating innovative schemes such as payment for ecosystem services, green bonds, biodiversity offsets and credits, and benefit-sharing mechanisms, with environmental and social safeguards;

(e) Optimizing co-benefits and synergies of finance targeting the biodiversity and climate crises;

(f) Enhancing the role of collective actions, including by indigenous peoples and local communities, Mother Earth centric actions[1] and non-market-based approaches including community based natural resource management and civil society cooperation and solidarity aimed at the conservation of biodiversity;

(g) Enhancing the effectiveness, efficiency and transparency of resource provision and use.

NBSAPs should recognize that major upscaling of investment in wetland conservation and restoration is essential for the delivery of the KM-GBF. National policies should include the provision of funding for direct investment in wetland conservation and restoration and mechanisms to incentivize private sector finance.

NBSAPs can identify opportunities to develop innovative finance schemes such as wetland biodiversity credit schemes and water funds, and identify synergies with climate adaptation and mitigation finance particularly related to the role wetlands play in disaster risk reduction, water and food security, and other ecosystem services delivery.

Many Indigenous Peoples and local communities act for wetland biodiversity, which provides value, and should be recognized within NBSAPs. Non-market based approaches to biodiversity that recognize Mother Earth-centric actions, Rights of Nature and in the context of wetlands, Rights of Wetlands (Society of Wetland Scientists Rights of Wetlands Initiative and Operationalization Working Groups 2023) and Rights of Rivers (The Cyrus R. Vance Center *et al.* 2020) should also be recognized as specific initiatives that provide value in mobilizing resources to conserve wetland biodiversity.

NBSAPs should identify the most important investments required at national level to allow the upscaling of wetland restoration and conservation to deliver simultaneously the KM-GBF, the Convention on Wetlands, SDGs and climate goals.

Target 19. Wetland examples

Canada – Investment in Wetland Learning and Knowledge Hubs

The Government of Canada has established the Natural Climate Solutions Fund that will invest over $5 billion from 2021-2031. Within the fund $20 million will be allocated to fund Learning and Knowledge Hubs for up to 5 years (2024-2029).

Two Wetland Learning and Knowledge Hubs have been established. One is focused on peatlands and the other is focused on mineral wetlands. The Learning and Knowledge Hubs support the following:

- **Implementation**: the development of data and information from natural and/or social sciences - that can inform the implementation of natural climate solutions in Canada
- **Policy**: focused on the direct and indirect improvement of existing and/or development of new policies, tools or programs supporting natural climate solutions design and implementation in Canada
- **Greenhouse gases (GHG) quantification**: capacity building for GHG quantification, including the development or improvement of methods for (1) monitoring and (2) quantification of mitigation outcomes, and (3) assessment of leakage

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2.20. Target 20: Strengthen capacity-building, technology transfer, and scientific and technical cooperation for biodiversity

Strengthen capacity-building and development, access to and transfer of technology, and promote development of and access to innovation and technical and scientific cooperation, including through South-South, North-South and triangular cooperation, to meet the needs for effective implementation, particularly in developing countries, fostering joint technology development and joint scientific research programmes for the conservation and sustainable use of biodiversity and strengthening scientific research and monitoring capacities, commensurate with the ambition of the goals and targets of the Framework.

Capacity-building and technology transfers to promote access to innovation and technical and scientific cooperation related to wetland ecosystems should be supported via the Convention on Wetlands' networks. This includes Ramsar Regional Centres and Regional Initiatives, the Scientific and Technical Review Panel (STRP) and the Communication, Education and Public Awareness (CEPA) Oversight Panel of the Convention. These mechanisms should be recognized in NBSAPs and enhanced where appropriate.

NBSAPs should recognize that a major strengthening of capacity building, technology transfer and technical cooperation is required to tackle the drivers of wetland loss and upscale wetland conservation and restoration. These are essential for achieving the vision, targets and goals of the KM-GBF and ensuring alignment and synergies for the national implementation of global goals on climate, biodiversity, water, disaster risk reduction and sustainable development.

NBSAPs should seek to enhance and mainstream specific wetland ecosystem scientific research and innovation programmes, including to enhance reporting initiatives such as the Global Wetland Watch[18]; and include specific wetland capacity-building programmes within wider CEPA activities.

Target 20. Wetland examples

Canada – Delivering CEPA programmes

The Oak Hammock Marsh Interpretive Centre has been running an outreach education and public awareness raising programme since 1996. This is an example of an innovative CEPA programme that reaches out to a wider community spread over hundreds of square kilometres. **The Legacy Watershed Ecovan Team take to the road every year and travel hundreds of kilometres across Manitoba, Saskatchewan and Ontario delivering wetland conservation messages to schools, youth groups, senior citizens and community groups**.

Example from Handbook on Best Practices for the Planning, Design and Operation of Wetland Visitor Centres

18 www.globalwetlandwatch.org

Australia – Wetland education programme

Hunter Wetlands Centre (HWC) opened in 1986 as Shortland Wetlands Centre. The centre's education program was strongly supported by an early partnership with the New South Wales (NSW) Department of Education, which supplied a qualified teacher and a small budget to allow the development of a school excursion program. The centre's charter was developed around education of all visitors about the value of wetlands. **The cornerstone of the HWC's Learning policy is curriculum-based education. The facility services Kindergarten to year 12 students and integrates environmental education across all curriculum areas.** Courses are based on wetland ecology, promote hands on activity and integrate with Science, Human Society, Environmental Studies and Geography. The Centre also provides professional development for teachers. **Schools visit on a daily basis with approximately 75% of their time spent on outdoor learning.** Teachers are supplied by the NSW Department of Education and communities and the Department has representatives on the HWC Board and Site Management Committees which ensures activities are fully integrated.

Example from Handbook on Best Practices for the Planning, Design and Operation of Wetland Visitor Centres

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2.21. Target 21: Ensure that knowledge is available and accessible to guide biodiversity action

Ensure that the best available data, information and knowledge are accessible to decision makers, practitioners and the public to guide effective and equitable governance, integrated and participatory management of biodiversity, and to strengthen communication, awareness-raising, education, monitoring, research and knowledge management and, also in this context, traditional knowledge, innovations, practices and technologies of indigenous peoples and local communities should only be accessed with their free, prior and informed consent,[2] in accordance with national legislation.

© Linda Wong / CBCGDF

Dissemination of best available data, information and knowledge to decision makers, practitioners and the public related to wetland ecosystems is essential for the achievement of the KM-GBF. NBSAPs should recognize, support and enhance the work of the Convention on Wetlands' network and the Communication, Education and Public Awareness (CEPA) Oversight Panel and the Scientific and Technical Review Panel (STRP) of the Convention.

NBSAPs should identify any key gaps in data, information and knowledge on wetlands and the investment, support and actions needed in response. This can be informed by a national assessment of capacity regarding wetland conservation, restoration and sustainable use.

Additional actions can feature in NBSAPs to ensure wetland knowledge is available and accessible to guide biodiversity action. These include:

- Promoting existing data, tools and resources for wetlands and wetland biodiversity (Red List, Green Status, Free-flowing rivers data, Freshwater Health Index, Convention on Wetlands' publications etc.)
- Ensuring that these data, tools and resources are clearly explained, via communication products and training, and are accessible to government and other stakeholders
- Engaging in specific wetland awareness raising programmes, such as World Wetland Day initiatives, as part of wider CEPA activities for decision makers, practitioners and the public

- Promoting and strengthening mechanisms for sharing and contributing research, innovation and technical developments related to wetland ecosystems for dissemination to decision makers, practitioners and the public via the Convention on Wetlands' network

Target 21. Wetland examples

China – Leveraging Citizen Scientists to Protect Beijing Swifts

China Biodiversity Conservation and Green Development Foundation initiated a citizen science programme in 2014 for studying the migration patterns of Beijing swifts. This involved:

- Installation of tracking devices on swifts to study their migration between northern China and southern Africa.
- Advocacy for the recognition of the value of traditional ancient buildings as wildlife habitats.
- Promotion of public awareness through media campaigns, including the adoption by Beijing Government on Beijing swifts as the mascot for the 2022 China International Fair for Trade in Services (CIFTIS).

All data collected is published on the Global Biodiversity Information Facility (GBIF) making information about Beijing swifts accessible globally.

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2.22. Target 22: Ensure participation in decision-making and access to justice and information related to biodiversity for all

Ensure the full, equitable, inclusive, effective and gender-responsive representation and participation in decision-making, and access to justice and information related to biodiversity by indigenous peoples and local communities, respecting their cultures and their rights over lands, territories, resources, and traditional knowledge, as well as by women and girls, children and youth, and persons with disabilities and ensure the full protection of environmental human rights defenders.

NBSAPs should recognize that many Indigenous Peoples and local communities have developed their cultures based on the interactions with wetlands and water and their ways of life, cultural expressions and value systems are deeply connected to wetland ecosystems (Oviedo & Kenza Ali 2018).

The Convention on Wetlands has a long-standing commitment to the full and effective participation of Indigenous Peoples and local communities in the management of wetlands. The wise and customary use of wetlands by Indigenous Peoples and local communities can therefore play and an important role in the conservation of these ecosystems (Oviedo & Kenza Ali 2018).

In many parts of the world, Indigenous Peoples and local communities have faced removal from decision making and a loss of rights related to wetlands and their biodiversity. NBSAPs must ensure that Indigenous Peoples and local community voices, including women and girls, children and youth, and persons with disabilities, are heard and that they are included in all wetland conservation, management and restoration activities.

NBSAPs can make reference to and incorporate guidance for including Indigenous Peoples and local communities within wetland conservation that is provided in "The relationship of indigenous peoples and local communities with wetlands" 2018 report (Oviedo & Kenza Ali 2018).

Target 22. Wetland examples

Canada – Indigenous Peoples Learning and Knowledge Hub

Under the Environment and Climate Change Canada's (ECCC) Nature Smart Climate Solutions Fund (NSCSF) an Indigenous-led Learning and Knowledge hub has been established. The hub has a specific focus on integrating Indigenous science and knowledge and increasing capacity building within communities. **The hub actively supports Indigenous participation and aims to bridge, braid, and weave Indigenous science with western science approaches to inform and enhance decision-making**.

Malawi – Enhancing Conservation and Sustainable Use of Wetlands

Malawi has several wetlands which are recognized as Protected Areas, Important Bird Areas, World Heritage Sites and Ramsar Sites, for example the Vwaza Marsh Wildlife Reserve, Lake Malawi National Park, Lake Chilwa, the Elephant Marsh and several wetlands not documented, which are important for biological conservation.

Management Plans have been developed and wetland resources are being monitored. The process to establish the Community Conservation Area, following guidelines that involve capacity building for communities to manage the sites and benefit through sustainable harvesting of resources and ecotourism, was also instituted. **CCA within a wetland provides great direction on how communities can manage biodiversity in wetland areas**.

2.23. Target 23: Ensure gender equality and a gender-responsive approach for biodiversity action

Ensure gender equality in the implementation of the Framework through a gender-responsive approach, where all women and girls have equal opportunity and capacity to contribute to the three objectives of the Convention, including by recognizing their equal rights and access to land and natural resources and their full, equitable, meaningful and informed participation and leadership at all levels of action, engagement, policy and decision-making related to biodiversity.

In 2018 Contracting Parties to the Convention on Wetlands adopted Resolution XIII.18 on *Gender and Wetlands*, which recognized the importance of addressing gender equality and women's empowerment in the implementation of the Convention.

Contracting Parties further committed to mainstream a gender perspective in the Convention's work, recognizing that women play a vital role as agents of development and in wetland conservation.

NBSAPs should recognize that equal involvement of women in decision-making in all matters is central to achieving an effective gender-responsive approach to the wise use, management and conservation of wetlands (Convention on Wetlands 2022a).

Information and actions from the "Gender Equality and the Sustainability of the World's Wetlands" (Convention on Wetlands 2022a) report can be used within NBSAPs. These include policies and legislation to provide equal access to and control of natural wetland assets, resources and decision-making processes; and gender disaggregated data collection to monitor participation of women and girls.

Target 23. Wetland examples

Costa Rica – Engagement of women and girls in mangrove management

Women and girls of the Isla de Chira in Costa Rica's Gulf of Nicoya became directly engaged and developed a sense of ownership of their community's mangrove forests. **Three communities worked to restore the surrounding mangrove habitat, with mainly women participating in mangrove-restoration projects, initiating propagule nurseries, reforesting degraded areas, and cleaning and maintaining established mangrove sites.** Previously, much of the gulf's mangroves had been deforested for firewood or converted to salt evaporation areas and shrimp ponds. Women who traditionally extracted molluscs from mangrove forests, for subsistence and income, felt empowered to maintain the mangrove habitat as the degradation was impacting their livelihoods. Women participated in mangrove forest monitoring and restoration, decided on the zonation of the forests for different users and played a key role in organizing education opportunities and forest management.

Gender Equality and the Sustainability of the World's Wetlands - Convention on Wetlands (2022a)

3. Synergies with other MEAs

Synergies with Convention on Wetlands

Annex 1 of this document identifies how including wetlands within NBSAPs, aligns with delivery of the Convention on Wetlands' targets in the Fourth Strategic Plan (2016-2024). The Fifth Strategic Plan is currently being developed in accordance with Resolution XIV.4 that calls for synergy with other MEAs and in particular the KM-GBF.

The KM-GBF, in Section C, paragraph 24, also calls for "*Enhanced collaboration, cooperation and synergies between the Convention on Biological Diversity and its Protocols, other biodiversity-related conventions, other relevant multilateral agreements and international organizations and processes, in line with their respective mandates, including at the global, regional, subregional and national levels, would contribute to and promote the implementation of the global biodiversity framework in a more efficient and effective manner*"[19] and CBD Annex 1 concerning guidance for NBSAPs requests "*Synergies among NBSAPs and the planning and implementation mechanisms of the other biodiversity-related conventions, Rio conventions and other relevant multilateral environmental agreements, and the Sustainable Development Goals should be identified and utilized to maximize efficiency and coherence*"[20].

Synergies with other MEAs

Wetlands are key to delivering many targets of other MEAs beyond the CBD and the Convention on Wetlands, including the UNFCCC, the UNCCD, and Convention on Migratory Species. The Bern III Process has identified the key entry points for cooperation and collaboration amongst MEAs and SDGs. Information Paper 3 [21] has mapped how delivery across MEAs can be coordinated and should be referred to when developing NBSAPs so that delivery of multiple MEA targets can occur.

Initiatives such as the Freshwater Challenge and the Mangrove Breakthrough can also support countries to develop and implement ambitious wetland targets and policies that deliver across multiple conventions - using a whole of society approach that brings together governments, civil society organizations, the private sector, and others.

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19 https://www.cbd.int/doc/c/e6d3/cd1d/daf663719a03902a9b116c34/cop-15-l-25-en.pdf
20 https://www.cbd.int/doc/nbsap/Annex%201%20(NBSAP%20guidance).pdf
21 https://wedocs.unep.org/bitstream/handle/20.500.11822/44506/Bern%20III%20information%20paper%203%20-%20Cross-mapping%20MEA%20strategies.pdf?sequence=1&isAllowed=y

4. Monitoring, indicators, and reporting

Partial guidance on monitoring and indicators has been provided in this document, whilst it is noted that the monitoring and indicator framework for the KM-GBF is currently being finalized by the Ad Hoc Technical Expert Group on Indicators (AHTEG) of the CBD.

Intensive collaboration between MEAs, UN agencies and experts is taking place, aiming to ensure the alignment of indicators and reporting across Conventions and SDGs wherever possible.

Proposals for wetland indicators have been submitted[22] to the AHTEG by the Convention on Wetlands' Secretariat and the Scientific and Technical Review Panel (STRP). These provide wetland specific input for the work of the AHTEG in finalizing the monitoring and indicator framework and informed the proposals on monitoring and indicators included in this report.

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22 https://www.ramsar.org/sites/default/files/2024-03/SC63_Inf_3_ahteg_submission_e.pdf

5. Limitations

There are known limitations and knowledge gaps when including wetlands within NBSAPs as the recommendations by necessity are generic rather than specific to each country context. Data is not available for every country or region on: wetland extent and condition for all wetland types, the status of all wetland dependent species, wild wetland species use, wetland ecosystem services and beneficiaries, or the ecological footprint of consumption on wetlands.

Although these data gaps exist for many countries, this should not be seen as a barrier to the inclusion of wetlands within KM-GBF targets, as data limitations can help inform future monitoring requirements. Parties are urged to share their good practices and innovative NBSAP solutions to promote learning and knowledge exchanges on opportunities to mainstream wetlands into NBSAPs.

6. Conclusion

Wetland conservation and restoration is an essential component of delivering the KM-GBF and ensuring that biodiversity is valued, conserved, restored and wisely used.

Technical guidance has been provided on the critical role wetlands play in achieving the 23 targets of the KM-GBF, between now and 2030, and information presented to assist all those involved in updating and delivery of NBSAPs, including those responsible for assessing progress at different scales. This guidance will be useful for government officials (including CBD focal points and Convention on Wetlands focal points), national level NBSAP Steering Committees, those providing advice and those involved in implementation across sectors at national and global levels.

We encourage all parties to share this guidance widely with relevant stakeholders to support wetland conservation and restoration actions nationally and globally in delivering biodiversity conservation.

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The Convention on Wetlands

The Convention on Wetlands, also known as the Ramsar Convention, is a global inter-governmental treaty that provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources.

Annex 1: Guidance on target setting and implementation

GLOBAL BIODIVERSITY FRAMEWORK – TARGET 1

Ensure that all areas are under participatory, integrated and biodiversity inclusive spatial planning and/or effective management processes addressing land- and sea-use change, to bring the loss of areas of high biodiversity importance, including ecosystems of high ecological integrity, close to zero by 2030, while respecting the rights of indigenous peoples and local communities.

ALIGNMENT WITH CONVENTION ON WETLANDS

National plans to deliver Target 1 should be aligned with national delivery of the following targets of the **Convention on Wetlands' Fourth Strategic Plan:**

- **Target 8**: National wetland inventories have been either initiated, completed or updated and disseminated and used for promoting the conservation and effective management of all wetlands; and
- **Target 9**: The wise use of wetlands is strengthened through integrated resource management at the appropriate scale, inter alia, within a river basin or along a coastal zone.

Guidance on target setting and implementation	Resources
Setting national targets ■ Develop quantified commitments to increase national total area of high biodiversity importance wetlands under protection (in hectares and linear kilometres of river systems) and include within spatial planning	World Heritage List Man and Biosphere Reserves IUCN Red List of Threatened Species National Red List IUCN Red List of Ecosystems Key Biodiversity Areas Important Bird and Biodiversity Areas Wetlands of International Importance Other Effective Area-Based Conservation Measures Global Mangrove Watch Other international designations National protected area designations Wetland conservation measures implemented by Indigenous Peoples and local communities
Setting a baseline ■ Identify and describe all high biodiversity importance wetlands and their catchments (Freshwater and Coastal KBAs, IBAs, Ramsar Sites) and map their corresponding spatial extent (ha) and linear distance for rivers (km) ■ Calculation of national total area of high biodiversity importance wetlands in hectares and linear kilometres of river systems and calculation of % of overall country area ■ Condition status of high biodiversity importance wetlands to assess quality using indicators such as connectivity important for species movements, species that are representative for completeness of an ecosystem and existence of essential processes ■ Calculate the number of high biodiversity importance wetlands included within spatial plans	
Actions ■ Undertake the process to designate high biodiversity importance wetlands as protected areas or OECMs that are identified in the national targets ■ Include high biodiversity importance wetlands within spatial plans	
Monitoring ■ Annual update of national total area of high biodiversity importance wetlands in hectares and linear kilometres of river systems and % of overall country area ■ Annual condition status assessment of high biodiversity importance wetlands to assess quality of ecosystem ■ Annual assessment of number of high biodiversity importance wetlands included within spatial plans	
Policy measures ■ Specific spatial planning and management measures to address key drivers of wetland loss and degradation	

GLOBAL BIODIVERSITY FRAMEWORK – TARGET 2

Ensure that by 2030 at least 30 per cent of areas of degraded terrestrial, inland water, and marine and coastal ecosystems are under effective restoration, in order to enhance biodiversity and ecosystem functions and services, ecological integrity and connectivity.

ALIGNMENT WITH CONVENTION ON WETLANDS

National plans to deliver Target 2 should be aligned with national delivery of the following targets of the **Convention on Wetlands' Fourth Strategic Plan:**

- **Target 8**: National wetland inventories have been either initiated, completed or updated and disseminated and used for promoting the conservation and effective management of all wetlands; and
- **Target 12**: 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.

Guidance on target setting and implementation	Resources
Setting national targets ■ Develop national wetland restoration targets for each wetland type in terms of both lost and degraded wetlands that are relevant for biodiversity conservation, disaster risk reduction, livelihoods and/or climate change mitigation and adaptation	Freshwater Ecosystem Explorer Global Mangrove Watch River connectivity status index Freshwater Health Index. IUCN Red List of Ecosystems Key Biodiversity Areas Important Bird and Biodiversity Areas Wetlands of International Importance Global Wetland Watch The Freshwater Challenge Critical Site Network Tool
Setting a baseline ■ National wetland inventory of total remaining wetland area in hectares and linear kilometres of river systems ■ Condition status of wetlands including assessment of connectivity important for species movements ■ Prioritization of wetland types in need of restoration through assessment of wetlands lost and degraded, particularly those of high biodiversity importance ■ Assessment of potential restoration locations by considering wetland processes and functioning, such as suitable hydrological inputs and outputs, and environmental and socio-economic constraints, such as existing high biodiversity non-wetland species or risks of pollution from adjacent urban areas	
Actions ■ Implement restoration of wetlands identified within national targets	
Monitoring ■ Measuring success - assessment of various parameters over different timelines (e.g. vegetation cover versus ecosystem services) ■ Specific guidance, tools and policies for identifying, target setting, implementing and monitoring wetland restoration and management effectiveness *Recommendation on headline indicator* Disaggregation of headline indicator by wetland ecosystem type as defined by a global ecosystem typology To be able to capture progress in the restoration of rivers the indicator method should also provide for measuring in length (km) as well as by area *Recommendation on component / complementary indicators important for wetlands* Include complementary indicators to measure the extent of inland waters and coastal wetland ecosystem restoration including: ■ Status of Key Biodiversity Areas ■ Red List of Ecosystems ■ Species habitat indicator - helpful if looked at in terms of species habitat range covered by area under restoration	

GLOBAL BIODIVERSITY FRAMEWORK – TARGET 3

Ensure and enable that by 2030 at least 30 per cent of terrestrial, inland water and of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem functions and services, are effectively conserved and managed through ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation measures, recognizing indigenous and traditional territories, where applicable, and integrated into wider landscapes, seascapes and the ocean, while ensuring that any sustainable use, where appropriate in such areas, is fully consistent with conservation outcomes, recognizing and respecting the rights of indigenous peoples and local communities, including over their traditional territories.

ALIGNMENT WITH CONVENTION ON WETLANDS

National plans to deliver Target 3 should be aligned with national delivery of the following targets of the **Convention on Wetlands' Fourth Strategic Plan:**

- **Target 5**: The ecological character of Ramsar Sites is maintained or restored, through effective planning and integrated management;
- **Target 6**: There is a significant increase in area, numbers and ecological connectivity in the Ramsar Site network in particular underrepresented types of wetlands including in underrepresented ecoregions and transboundary sites;
- **Target 7**: Sites that are at risk of change of ecological character have threats addressed; and
- **Target 8**: National wetland inventories have been either initiated, completed or updated and disseminated and used for promoting the conservation and effective management of all wetlands.

Guidance on target setting and implementation	Resources
Setting national targets ■ Develop national targets for the conservation of under-represented and high biodiversity wetland types through protected areas and OECMs based on specific wetland types ***Setting a baseline*** ■ List of all protected area and OECM wetlands and corresponding spatial extent of wetlands (ha) and river linear distance (km) excluding from the measurement rivers that mark the borders of protected areas and do not receive the same level of protection as the ecosystems within the protected area ■ Calculated national total area of wetlands in hectares and linear kilometres of river systems in protected areas and in OECMs and calculation of % of total land area and % of total river length ■ Prioritization of wetland types in need of protection through gap assessment of current protected areas and OECMs ***Actions*** ■ Undertake the process to designate protected areas and OECMs based on specific wetland types outlined in national targets ***Monitoring*** ■ Regularly calculate national total area of wetlands and area of target wetland types in hectares and linear kilometres of river systems in protected areas and in OECMs and calculation of % of total land area and % of total river length *Recommendation on headline indicator* Disaggregation of headline indicator by wetland ecosystem type as defined by a global ecosystem typology with specific inclusion of inland waters and coastal wetland ecosystems To be able to capture progress in protected areas and OECMs of rivers the indicator method should also provide for measuring in length (km) as well as by area *Recommendation on component / complementary indicators important for wetlands* Include complementary indicators to measure the extent of inland waters and coastal wetland ecosystem restoration including: ■ Protected area coverage by key biodiversity areas ■ Red List of Ecosystems ■ Connectivity Indicator ■ Protected Area Management Effectiveness ■ Ramsar Management Effectiveness Tracking Tool (R-METT) ■ IUCN Green List of Protected and Conserved Areas ■ Extent to which protected areas and other effective area-based conservation measures cover key biodiversity areas that are important for migratory species	River connectivity status index IUCN Red List of Ecosystems Key Biodiversity Areas Important Bird and Biodiversity Areas Wetlands of International Importance Other Effective Area-Based Conservation Measures, including wetland conservation measures implemented by Indigenous Peoples and local communities Recommended indicators for reporting on the effectiveness of area-based conservation measures UNEP-WCMC, IUCN and JNCC Global Lakes and Wetlands Database HydroATLAS Database which includes RiverATLAS, BasinATLAS and LakesATLAS Global Ecosystem Typology Ramsar Management Effectiveness Tracking Tool (R-METT) IUCN Green List of Protected and Conserved Areas A Pathway for Inland Waters in the 30x30 Target

GLOBAL BIODIVERSITY FRAMEWORK – TARGET 4

Ensure urgent management actions to halt human induced extinction of known threatened species and for the recovery and conservation of species, in particular threatened species, to significantly reduce extinction risk, as well as to maintain and restore the genetic diversity within and between populations of native, wild and domesticated species to maintain their adaptive potential, including through in situ and ex situ conservation and sustainable management practices, and effectively manage human-wildlife interactions to minimize human-wildlife conflict for coexistence.

ALIGNMENT WITH CONVENTION ON WETLANDS

National plans to deliver Target 4 should be aligned with national delivery of the following targets of the **Convention on Wetlands' Fourth Strategic Plan:**

- **Target 5**: The ecological character of Ramsar Sites is maintained or restored, through effective planning and integrated management;
- **Target 6**: There is a significant increase in area, numbers and ecological connectivity in the Ramsar Site network in particular underrepresented types of wetlands including in underrepresented ecoregions and transboundary sites;
- **Target 7**: Sites that are at risk of change of ecological character have threats addressed; and
- **Target 8**: National wetland inventories have been either initiated, completed or updated and disseminated and used for promoting the conservation and effective management of all wetlands.

Guidance on target setting and implementation	Resources
Setting national targets ■ Develop national targets for threatened wetland species to halt and reverse their human induced decline and therefore result in their removal from the Red List	IUCN Red List of Threatened Species National Red List IUCN Green Status of Species Living Planet Index
Setting a baseline ■ Assess the conservation status of all wetland species and identify those needing targeted recovery actions by: ■ Assessing the extinction risk, population size and trends, distribution, threats, and conservation potential of wetland species as better representation within indices is needed; developing National Red Lists; conducting Green Status assessments for wetland species to ascertain effectiveness of any conservation actions; identifying species that require targeted action to enable recovery; and develop comprehensive monitoring programmes	

Actions
■ Develop and implement a recovery plan (single species, multi-species, site-based, or threat-based) for all wetland species that require one by:
  ■ Integrating existing global strategies into national and regional planning; increasing capacity; developing recovery plans, integrating in situ and ex situ planning; and identifying species with similar planning needs.
■ Enact measures to prevent extinctions and recover threatened wetland species by:
  ■ Implementing species recovery plans; including national work plans for wetland species; providing technical and financial support to responsible organisations; conducting species reintroductions according to IUCN guidelines; incorporating assisted colonization for species vulnerable to climate change; strengthen and implement legal frameworks; supporting transboundary conservation; reducing incidental species mortality; and employing a One Health approach.
■ Maintain or establish coordinated ex-situ breeding or propagation programmes for all species that require them by:
  ■ Evaluating the status of ex-situ populations; providing support to range country conservation programmes; and follow Red List guidance on assessments.
■ Minimize loss of genetic diversity across all threatened species and retain at least 95% gene diversity in species where it is already depleted by:
  ■ Evaluating the loss in genetic diversity in populations by contributing information to global assessments.
■ Reduce and manage human-wildlife conflict in wetlands and its drivers through a holistic, cross-sectoral approach by:
  ■ Developing strategies to manage human-wildlife conflict (HWC); increasing capacity to prevent and manage HWC; increasing standards related to HWC; developing national monitoring protocols; and increasing awareness regarding HWC approaches.
■ Determine factors governing species conservation success by:
  ■ Analysing reasons for success and failure of species conservation measures; and promote successful species conservation actions.	

Monitoring ■ Monitor threatened wetland species populations and planned actions, identified in national targets, to determine effectiveness of interventions in halting and reversing population declines	

GLOBAL BIODIVERSITY FRAMEWORK – TARGET 5

Ensure that the use, harvesting and trade of wild species is sustainable, safe and legal, preventing overexploitation, minimizing impacts on non-target species and ecosystems, and reducing the risk of pathogen spillover, applying the ecosystem approach, while respecting and protecting customary sustainable use by indigenous peoples and local communities.

ALIGNMENT WITH CONVENTION ON WETLANDS

National plans to deliver Target 5 should be aligned with national delivery of the following targets of the Convention on Wetlands' Fourth Strategic Plan:

- **Target 5**: The ecological character of Ramsar Sites is maintained or restored, through effective planning and integrated management.

Guidance on target setting and implementation	Resources
Setting national targets ■ Set targets to ensure use of wild wetland species is sustainable	IUCN Red List of Threatened Species National Red List IUCN Green Status of Species Convention on Wetlands Wetland Disease Manual FAO and USGS Indicator for Assessing Threats to Inland Fisheries CITES species classification MSC Chain of Custody Certification

Setting a baseline
■ Develop national baseline through:
  ■ Developing an inventory of wild wetland species currently harvested, traded or used for subsistence within the country
  ■ Identifying status of information on each species in the inventory
  ■ Filling information gaps, as needed	

Actions ■ Inclusion of wild species use, harvesting and trade monitoring and management actions within wetland management planning to ensure sustainable use	

Monitoring
■ Monitor wild species use, harvesting and trade to determine whether it is sustainable and to inform an annual assessment
Recommendation on headline indicator
Include indicators for inland water wetland ecosystems using approach based on the Convention on Wetlands' Wetland Disease Manual and indicator for assessing threats to inland fisheries
Recommendation on component / complementary indicators important for wetlands
  ■ Sustainable watershed and inland fisheries index from FAO and USGS
  ■ Red List Index (for internationally traded species and for migratory species)
  ■ Illegal trade by CITES species classification
  ■ Impacts of fisheries and hunting on migratory species and their habitats
  ■ Number of MSC Chain of Custody Certification holders by distribution country	

GLOBAL BIODIVERSITY FRAMEWORK – TARGET 6

Eliminate, minimize, reduce and or mitigate the impacts of invasive alien species on biodiversity and ecosystem services by identifying and managing pathways of the introduction of alien species, preventing the introduction and establishment of priority invasive alien species, reducing the rates of introduction and establishment of other known or potential invasive alien species by at least 50 per cent by 2030, and eradicating or controlling invasive alien species, especially in priority sites, such as islands.

ALIGNMENT WITH CONVENTION ON WETLANDS

National plans to deliver Target 6 should be aligned with national delivery of the following targets of the **Convention on Wetlands' Fourth Strategic Plan:**

- **Target 4**: Invasive alien species and pathways of introduction and expansion are identified and prioritized, priority invasive alien species are controlled or eradicated, and management responses are prepared and implemented to prevent their introduction and establishment.

Guidance on target setting and implementation	Resources
Setting national targets ■ Develop national targets for priority pathway interventions and invasive alien species eradication	IUCN Environmental Impact Classification of Alien Taxa (EICAT) IUCN Global Invasive Species Database (GISD) Global Register of Introduced and Invasive Species (GRIIS) and enhanced pathways component IUCN Invasive Species Specialist Group's tools and resources
Setting a baseline ■ Identification of key invasive alien species introduction pathways that impact wetlands ■ A list of all invasive alien species within a country and an assessment of their impact on native wetland biodiversity using information such as the IUCN Global Invasive Species Database ■ List of priority invasive alien species pathways that require interventions ■ List of priority invasive alien species that impact wetland ecosystems and require eradication or control ■ List of wetland sites where invasive alien species management actions are required	
Actions ■ National strategy and implementation of priority pathway interventions, invasive alien species eradication and control actions and wetland site based activities ■ Inclusion of invasive alien species management actions within wetland management plans ■ Develop bespoke technical guidelines for national context and promote appropriate interventions for invasive alien species eradication	
Monitoring ■ Monitor priority pathways and the interventions taken to determine their effectiveness at halting invasive alien species dispersal ■ Monitor invasive alien species populations and geographical spread to determine whether national targets are being met	

GLOBAL BIODIVERSITY FRAMEWORK – TARGET 7

Reduce pollution risks and the negative impact of pollution from all sources by 2030, to levels that are not harmful to biodiversity and ecosystem functions and services, considering cumulative effects, including: (a) by reducing excess nutrients lost to the environment by at least half, including through more efficient nutrient cycling and use; (b) by reducing the overall risk from pesticides and highly hazardous chemicals by at least half, including through integrated pest management, based on science, taking into account food security and livelihoods; and (c) by preventing, reducing, and working towards eliminating plastic pollution.

ALIGNMENT WITH CONVENTION ON WETLANDS

National plans to deliver Target 7 should be aligned with national delivery of the following targets of the **Convention on Wetlands' Fourth Strategic Plan:**

- **Target 2**: Water use respects wetland ecosystem needs for them to fulfil their functions and provide services at the appropriate scale inter alia at the basin level or along a coastal zone; and
- **Target 3**: The public and private sectors have increased their efforts to apply guidelines and good practices for the wise use of water and wetlands.

Guidance on target setting and implementation	Resources
Setting national targets ■ Develop targets to reduce pollution sources that negatively impact wetland ecosystems and their biodiversity including emission standards and reduction targets and water quality standards and improvement targets	Lake Water Turbidity and Trophic State Index (Freshwater Explorer relating to SDG 6.6.1) FAOSTAT – inorganic fertilizer use UN Water – Proportion of bodies of water with good ambient water quality National water quality monitoring data
Setting a baseline ■ Identification of the main pollution sources that negatively impact wetland ecosystems and their biodiversity ■ Identification of pollution levels that are harmful to wetland biodiversity and ecosystem functions and services ■ Identification of the main pollution control measures already in place to protect wetlands and an assessment of the effectiveness on pollution levels	
Actions ■ Development of pollution control measures that include a reduction in pollutant use and the use of constructed treatment wetlands and other green/blue infrastructure across the rural and urban landscape to intercept and treat pollution ■ Development of protection measures for water source catchments, springs and groundwater recharge areas	
Monitoring ■ Monitor air and water quality within wetland ecosystems to determine whether national targets are being met *Recommendation on headline indicator* Include indicators of eutrophication of inland water wetland ecosystems, including lakes and rivers Include indicators of excessive sedimentation of inland water and coastal wetland ecosystems Include indicators of highly hazardous chemicals including but not limited to pharmaceutical products, per- and polyfluorinated alkyl substances (PFAS or forever chemicals), heavy metals and polyaromatic hydrocarbons *Recommendation on component / complementary indicators important for wetlands* ■ Fertilizer use – is included as a component indicator and is highly relevant for inland waters and coastal wetland ecosystems. FAOSTAT provide data relating to the use of inorganic fertilizer ■ Proportion of bodies of water with good ambient water quality (existing component indicator for Target 11 and SDG indicator 6.3.2)	

GLOBAL BIODIVERSITY FRAMEWORK – TARGET 8

Minimize the impact of climate change and ocean acidification on biodiversity and increase its resilience through mitigation, adaptation, and disaster risk reduction actions, including through nature-based solutions and/or ecosystem-based approaches, while minimizing negative and fostering positive impacts of climate action on biodiversity.

ALIGNMENT WITH CONVENTION ON WETLANDS

National plans to deliver Target 8 should be aligned with national delivery of the following targets of the **Convention on Wetlands' Fourth Strategic Plan:**

- **Target 12**: 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.

Guidance on target setting and implementation	Resources
Setting national targets ■ Develop national targets for wetland restoration of lost and degraded wetlands that are relevant for biodiversity conservation, disaster risk reduction, livelihoods and/or climate change mitigation and adaptation (see Target 2)	Freshwater Ecosystem Explorer Global Mangrove Watch River connectivity status index Freshwater Health Index. IUCN Red List of Ecosystems Key Biodiversity Areas Important Bird and Biodiversity Areas Wetlands of International Importance Global Wetland Watch The Freshwater Challenge Nature in Nationally Determined Contributions (conservation.org) Locking Carbon in Wetlands: Enhancing Climate Action by Including Wetlands in NDCs - Wetlands International Policy Guidance — The Blue Carbon Initiative
Setting a baseline ■ National wetland inventory of wetland types and area in hectares (task the same as in Target 2) ■ List of anthropogenically-changed wetlands as emission sources and calculation of their GHG emissions using the 2006 IPCC Guidelines for National Greenhouse Gas Inventories and the 2013 Wetlands Supplement and Peatlands: Guidance for Climate Change Mitigation Through Conservation, Rehabilitation and Sustainable Use methodologies	
Actions ■ Wetland site protection and management or wetland restoration actions that contribute to climate change adaptation ■ Design vulnerability assessments to droughts, floods and fire for human communities and wetland biodiversity, followed by the preparation of relevant adaptation plans at the appropriate levels ■ Develop transboundary vulnerability assessments and adaptation plans for shared river and lake basins and aquifer systems ■ Incorporate wetland protection and restoration targets into new or revised climate plans, drought management plans, and land degradation neutrality plans, ensuring coherence with the revised NBSAPs	

Monitoring
■ Change in:
  ■ wetland spatial extent (required for Sustainable Development Goal 6.6.1 on change in extent of water-related ecosystems); and
  ■ wetland restoration activities (see Target 2 and can be linked to Nationally Determined Contributions agreed under the UN Climate Change Conference (COP21) in Paris) that contribute to reducing GHG emissions over reporting period so carbon stocks and annual net GHG emissions, by land-use category, split by natural and non-natural land cover can be calculated	

Policy ■ Incorporate wetlands into national climate legislation, covering aspects of both mitigation and adaptation	

GLOBAL BIODIVERSITY FRAMEWORK – TARGET 9

Ensure that the management and use of wild species are sustainable, thereby providing social, economic and environmental benefits for people, especially those in vulnerable situations and those most dependent on biodiversity, including through sustainable biodiversity-based activities, products and services that enhance biodiversity, and protecting and encouraging customary sustainable use by indigenous peoples and local communities.

ALIGNMENT WITH CONVENTION ON WETLANDS

National plans to deliver Target 9 should be aligned with national delivery of the following targets of the **Convention on Wetlands' Fourth Strategic Plan:**

- **Target 9**: The wise use of wetlands is strengthened through integrated resource management at the appropriate scale, inter alia, within a river basin or along a coastal zone.

Guidance on target setting and implementation	Resources
Setting national targets ■ Develop national targets for wild wetland species populations ■ Develop sustainable use targets for wild wetland species	IUCN Red List of Threatened Species Integration and provisions related to Indigenous Peoples and local communities in the work of the Convention on Biological Diversity and its Protocols
Setting a baseline ■ A list of wild wetland species that are managed for sustainable use within the country ■ A list of wild wetland species that are used but not managed for sustainable use within the country. For example, for inland fisheries the FAO and USGS inland fisheries threat index[1] could be used to assess non-sustainable use (this can also be used for Target 5 and 10). ■ The number of people using wild wetland resources for energy, food or culture ■ Assessment of the social and economic importance of wild wetland resource use	
Actions ■ Inclusion of wild wetland resource use management actions within wetland management planning to ensure sustainable use	
Monitoring ■ Monitor wild wetland resource use to ensure sustainable use and national targets are met *Recommendation on headline indicator* Disaggregate the indicators on benefits from the sustainable use of wild species and percentage of the population in traditional occupations by wetland ecosystem type and include inland water, coastal and marine species *Recommendation on component / complementary indicators important for wetlands* ■ Red List Index (species used for food and medicine)	

1 Inland Fisheries Alliance Resources (https://www.inlandfisheriesalliance.org/resources) or directly downloadable at: https://static1.squarespace.com/static/600f3c551f5d246dcefc421b/t/6388e87da623a5739dec1ab6/1669916853747/Briefing+Document+-+Inland+Fisheries+Indicator

GLOBAL BIODIVERSITY FRAMEWORK – TARGET 10

Ensure that areas under agriculture, aquaculture, fisheries and forestry are managed sustainably, in particular through the sustainable use of biodiversity, including through a substantial increase of the application of biodiversity friendly practices, such as sustainable intensification, agroecological and other innovative approaches, contributing to the resilience and long-term efficiency and productivity of these production systems, and to food security, conserving and restoring biodiversity and maintaining nature's contributions to people, including ecosystem functions and services.

ALIGNMENT WITH CONVENTION ON WETLANDS

National plans to deliver Target 10 should be aligned with national delivery of the following targets of the **Convention on Wetlands' Fourth Strategic Plan:**

- **Target 2**: Water use respects wetland ecosystem needs for them to fulfil their functions and provide services at the appropriate scale inter alia at the basin level or along a coastal zone;
- **Target 3**: The public and private sectors have increased their efforts to apply guidelines and good practices for the wise use of water and wetlands;
- **Target 7**: Sites that are at risk of change of ecological character have threats addressed;
- **Target 9**: The wise use of wetlands is strengthened through integrated resource management at the appropriate scale, inter alia, within a river basin or along a coastal zone; and
- **Target 12**: 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.

Guidance on target setting and implementation	Resources
Setting national targets ■ Develop national targets for wetland functional health of wetlands that provide agriculture, aquaculture, fisheries and forestry benefits	FAOSTAT fertilizer use AQUASTAT water use FAO State of the world fisheries and aquaculture The Convention on Wetlands has published the following on the issue: • Policy Brief 6 (2021): transforming agriculture to sustain people and wetlands identifies priority actions across sectors to increase the sustainability of agriculture and promote the wise use of wetlands. • Briefing note 13 (2022): Wetlands and agriculture: impacts of farming practices and pathways to sustainability. Coastal habitat mapping: mangrove and pond aquaculture conversion (Clark Labs) providing an inventory from 1999-2022 for pond aquaculture conversion Global Wetland Watch
Setting a baseline ■ Determine the functional health of the wetland ecosystems that provide natural benefits through agriculture, aquaculture, fisheries and forestry to ensure they are sustainable. For example, for inland fisheries the FAO and USGS inland fisheries threat index[2] could be used to monitor health (this can also be used for Target 5 and 9).	

2 Inland Fisheries Alliance Resources (https://www.inlandfisheriesalliance.org/resources) or directly downloadable at: https://static1.squarespace.com/static/600f3c551f5d246dcefc421b/t/6388e87da623a5739dec1ab6/1669916853747/Briefing+Document+-+Inland+Fisheries+Indicator

Actions and Policies

- Increase efficiency in the use of resources
  - Ensure efficient use of water resources and protect water sources for wetlands
  - Limit use of fertilizers and pesticides near wetlands
  - Transition to integrated crop-livestock-fish agriculture and forestry practices or other low input or natural systems
- Protect and enhance natural resources
  - Stop conversion of wetlands by recognizing the full value of benefits provided by wetlands when competing land use decisions are made
  - Restore degraded wetlands
  - Improve agricultural, aquaculture, fisheries and forestry practices to reduce pressures on the ecological character of wetlands
- Improve livelihoods, and foster inclusive economic growth
  - Apply financial mechanisms to promote sustainable practices and wetland wise use
  - Recognize the role of local farmers, fishers and foresters in maintaining cultural and regulating services
  - Promote integrated practices (diversification) for economic, climate and ecosystem resilience
- Enhance the resilience of people, communities and ecosystems
  - Manage wetlands to maintain their natural capital and services to agriculture, aquaculture, fisheries, forestry and people
  - Support traditional practices to retain links between cultural identity, wetlands and human well-being
  - Identify future climate scenarios and adapt practices for wetlands
- Adapt governance to new challenges
  - Build cross-sectoral collaboration
  - Develop policy responses that set catchment limits on water use and pollution
  - Improve institutional and finance frameworks to avoid, mitigate and offset the adverse effects of agriculture, aquaculture, fisheries and forestry on wetlands and wetland species, and promote sustainable practices

Monitoring

- Monitor the functional health of the wetland ecosystems that provide natural benefits through agriculture, aquaculture, fisheries and forestry to ensure they are sustainable

Recommendation on headline indicator

Include within the indicator on proportion of agricultural area under productive and sustainable agriculture data on area under productive and sustainable aquaculture and food harvested from wild populations (i.e. fisheries)

Recommendation on component / complementary indicators important for wetlands

- Trends in fertilizer use (already included as a component indicator under Target 7) – available from FAOSTAT
- Pesticide use per area of cropland (already included as a complementary indicator under Target 7) – available from FAOSTAT
- Level of water stress listed as (Target 11 Component indicator) from AQUASTAT
- Water abstraction by sector (agriculture) from AQUASTAT
- Tonnes of aquaculture production (e.g. from the FAO State of the world fisheries and aquaculture)

GLOBAL BIODIVERSITY FRAMEWORK – TARGET 11

Restore, maintain and enhance nature's contributions to people, including ecosystem functions and services, such as the regulation of air, water and climate, soil health, pollination and reduction of disease risk, as well as protection from natural hazards and disasters, through nature-based solutions and/or ecosystem-based approaches for the benefit of all people and nature.

ALIGNMENT WITH CONVENTION ON WETLANDS

National plans to deliver Target 11 should be aligned with national delivery of the following targets of the **Convention on Wetlands' Fourth Strategic Plan:**

- **Target 11**: Wetland functions, services and benefits are widely demonstrated, documented and disseminated; and
- **Target 12**: 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.

Guidance on target setting and implementation	Resources
Setting national targets ■ Develop national targets for wetland restoration of lost and degraded wetlands that are relevant for biodiversity conservation, disaster risk reduction, livelihoods and/or climate change mitigation and adaptation (see target 2) ■ Develop national targets for the use of wetlands as nature-based solutions	Freshwater Ecosystem Explorer Global Mangrove Watch River connectivity status index Freshwater Health Index. IUCN Red List of Ecosystems Key Biodiversity Areas Important Bird and Biodiversity Areas Wetlands of International Importance Global Wetland Watch The Freshwater Challenge

Setting a baseline
■ A list of all wetland ecosystem services provided by wetlands within the country and identification of key wetland ecosystem services contributing to national food and water security, disaster risk reduction, livelihood support and health and well-being. This links to national reporting required under the Convention on Wetlands.
■ An assessment of the functional health of wetlands to deliver ecosystem services in terms of the following (can be linked to Target 10 assessments):
  ■ Disaster risk reduction
  ■ Health and well-being
  ■ Use of wild wetland resources for energy, food or culture	

Actions ■ Include wetland conservation and restoration as nature-based solutions in local and national planning	
Monitoring ■ Link to Target 2 monitoring of wetland restoration ■ Monitor the use of wetlands as nature-based solutions and their inclusion within local and national planning *Recommendation on headline indicator* Disaggregate services provided by ecosystems by ecosystem type and by natural and constructed wetland ecosystems *Recommendation on component / complementary indicators important for wetlands* ■ The Global Mangrove Watch has an ecosystem services data layer, which could be identified as a complementary	
Policy ■ Development and implementation of legislation, guidance and planning policies to promote wetland conservation and restoration as nature-based solutions for ecosystem service delivery including payment for ecosystem services programmes	

GLOBAL BIODIVERSITY FRAMEWORK – TARGET 12

Significantly increase the area and quality, and connectivity of, access to, and benefits from green and blue spaces in urban and densely populated areas sustainably, by mainstreaming the conservation and sustainable use of biodiversity, and ensure biodiversity-inclusive urban planning, enhancing native biodiversity, ecological connectivity and integrity, and improving human health and well-being and connection to nature, and contributing to inclusive and sustainable urbanization and to the provision of ecosystem functions and services.

ALIGNMENT WITH CONVENTION ON WETLANDS

National plans to deliver Target 12 should be aligned with national delivery of the following targets of the **Convention on Wetlands' Fourth Strategic Plan:**

- **Target 6**: There is a significant increase in area, numbers and ecological connectivity in the Ramsar Site network in particular underrepresented types of wetlands including in underrepresented ecoregions and transboundary sites; and
- **Target 11**: Wetland functions, services and benefits are widely demonstrated, documented and disseminated.

Guidance on target setting and implementation	Resources
Setting national targets ■ Develop national targets for wetlands in hectares and linear kilometres of river systems as public space within urban areas or as % of overall urban area within the country	Wetland City Accreditation Operational guidance for the Wetland City Accreditation Good Practices Handbook for Integrating Urban Development and Wetland Conservation
Setting a baseline ■ Determine the extent of wetlands in hectares and linear kilometres of river systems as public space within urban areas and calculation of % of overall urban area within the country	
Actions ■ Proactively avoid wetland loss and degradation as a result of urban development, including development frameworks and spatial zonation to protect ecosystem services and addressing water management issues ■ Undertake integrated planning: wetland protection and management should be integrated into the wider elements of urban spatial planning and development ■ Involve Indigenous peoples and local communities and promote stakeholder participation during planning and management processes ■ Explicitly include wetlands as natural infrastructure (nature-based solutions) in urban planning, including all aspects of water management, such as stormwater management, water resources and water treatment ■ Treat wetlands not merely as areas that are important for nature conservation per se, but as key elements within urban water management infrastructure and essential components in providing water resources ■ Include the value of wetlands – the costs of wetland loss and degradation and the value wetlands can add should be taken into account when considering urban and infrastructure development ■ Set standards to use constructed wetlands as natural wastewater treatment systems to mitigate urban pollution and sedimentation ■ Recognize the importance of wetlands and their services as key elements for supporting green and blue infrastructure in the urban environment	

Monitoring

- Record the average share of built-up areas that wetlands provide as green/blue space for public use
- Record the urban areas that have attained Wetland City Accreditation

Recommendation on headline indicator

Information from the headline indicator for Target 11 (B.1 Services provided by ecosystems) should be used to disaggregate by urban blue/green spaces to support a calculation of the average share of the built-up area of cities that is green/blue space for public use for all

Recommendation on component / complementary indicators important for wetlands

Number of cities accredited as Wetland Cities (Wetland City Accreditation). The scheme was adopted through Resolution XII.10 in 2015 and updated in 2022 through Resolution XIV.10. As of 2022, the Convention on Wetlands has recognized 25 cities for their efforts to safeguard urban wetlands for people and nature. Operational guidance for the accreditation was published in 2023.

Other available indicators include:

- Coverage of protected areas and OECMs within urban environments
- Presence of a policy on water sensitive urban design that includes consideration of drainage, barriers to fish movement etc.
- Presence of a policy on access to green/blue spaces
- Presence of a policy on connectivity between urban green/blue spaces

Policy

- Promote the wise use of urban wetlands by enhancing policy and establishing regulations for protection in an urban context
- Set up legislation and governance on urban wetland protection

GLOBAL BIODIVERSITY FRAMEWORK – TARGET 13

Take effective legal, policy, administrative and capacity-building measures at all levels, as appropriate, to ensure the fair and equitable sharing of benefits that arise from the utilization of genetic resources and from digital sequence information on genetic resources, as well as traditional knowledge associated with genetic resources, and facilitating appropriate access to genetic resources, and by 2030, facilitating a significant increase of the benefits shared, in accordance with applicable international access and benefit-sharing instruments.

ALIGNMENT WITH CONVENTION ON WETLANDS

National plans to deliver Target 13 should be aligned with national delivery of the following targets of the **Convention on Wetlands' Fourth Strategic Plan:**

- **Target 11**: Wetland functions, services and benefits are widely demonstrated, documented and disseminated.

Guidance on target setting and implementation	Resources
Setting national targets ■ Develop national targets for permits or their equivalents for wetland genetic resources including those related to traditional knowledge	Integration and provisions related to Indigenous Peoples and local communities in the work of the Convention on Biological Diversity and its Protocols IUCN Seed Conservation Specialist Group Free Prior and Informed Consent
Setting a baseline ■ A list of wetland genetic resources identified within the country ■ Assessment of the monetary and non-monetary benefits associated with wetland genetic resources and the identification of key beneficiaries	
Actions ■ Develop a national action plan to ensure the identification and equitable sharing of benefits from wetland genetic resources	
Monitoring ■ Monitor permits or their equivalents for wetland genetic resources against national targets	

GLOBAL BIODIVERSITY FRAMEWORK – TARGET 14

Ensure the full integration of biodiversity and its multiple values into policies, regulations, planning and development processes, poverty eradication strategies, strategic environmental assessments, environmental impact assessments and, as appropriate, national accounting, within and across all levels of government and across all sectors, in particular those with significant impacts on biodiversity, progressively aligning all relevant public and private activities, and fiscal and financial flows with the goals and targets of this framework.

ALIGNMENT WITH CONVENTION ON WETLANDS

National plans to deliver Target 14 should be aligned with national delivery of the following targets of the **Convention on Wetlands' Fourth Strategic Plan:**

- **Target 1**: Wetland benefits are featured in national/local policy strategies and plans relating to key sectors such as water, energy, mining, agriculture, tourism, urban development, infrastructure, industry, forestry, aquaculture, fisheries at the national and local level; and
- **Target 13**: Enhanced sustainability of key sectors such as water, energy, mining, agriculture, tourism, urban development, infrastructure, industry, forestry, aquaculture and fisheries, agriculture and ecotourism practices when they affect wetlands, contributing to biodiversity conservation and human livelihoods.

Guidance on target setting and implementation	Resources
Setting national targets ■ Develop national targets for wetland biodiversity to be included within policies, regulations, planning and development processes ***Setting a baseline*** ■ Assessment of how wetlands and their biodiversity are included within environmental economic accounting ■ Assessment of the policies, regulations, planning and development processes that specifically include (or fail to include) wetlands and their biodiversity as key delivery elements ***Actions*** ■ Mainstream wetland biodiversity within policies, regulations, planning and development processes ***Monitoring*** ■ Monitor whether wetland biodiversity is included within policies, regulations, planning and development processes against national targets	IUCN Red List of Threatened Species Integration and provisions related to Indigenous Peoples and local communities in the work of the Convention on Biological Diversity and its Protocols

GLOBAL BIODIVERSITY FRAMEWORK – TARGET 15

Take legal, administrative or policy measures to encourage and enable business, and in particular to ensure that large and transnational companies and financial institutions:
(a) Regularly monitor, assess, and transparently disclose their risks, dependencies and impacts on biodiversity, including with requirements for all large as well as transnational companies and financial institutions along their operations, supply and value chains, and portfolios;
(b) Provide information needed to consumers to promote sustainable consumption patterns;
(c) Report on compliance with access and benefit-sharing regulations and measures, as applicable;
in order to progressively reduce negative impacts on biodiversity, increase positive impacts, reduce biodiversity-related risks to business and financial institutions, and promote actions to ensure sustainable patterns of production.

ALIGNMENT WITH CONVENTION ON WETLANDS

National plans to deliver Target 15 should be aligned with national delivery of the following targets of the **Convention on Wetlands' Fourth Strategic Plan:**

- **Target 3**: The public and private sectors have increased their efforts to apply guidelines and good practices for the wise use of water and wetlands;
- **Target 9**: The wise use of wetlands is strengthened through integrated resource management at the appropriate scale, inter alia, within a river basin or along a coastal zone; and
- **Target 13**: Enhanced sustainability of key sectors such as water, energy, mining, agriculture, tourism, urban development, infrastructure, industry, forestry, aquaculture and fisheries, agriculture and ecotourism practices when they affect wetlands, contributing to biodiversity conservation and human livelihoods.

Guidance on target setting and implementation	Resources
Setting national targets ■ Develop national targets for businesses to monitor and report their impacts and dependencies on wetland biodiversity	IUCN guidance supporting businesses to make Nature-Positive contributions
Setting a baseline ■ Assess the legal frameworks and instruments within the country that mandate businesses to monitor and report to consumers and the public their impacts and dependencies on wetland biodiversity ■ Number of companies reporting on risks, dependencies and impacts on wetland biodiversity ■ Wetlands specifically included within indicators based on Task Force for Nature-related Financial Disclosures	
Actions ■ Update legal frameworks and instruments to mandate businesses to monitor and report their impacts and dependencies on wetland biodiversity ■ Capacity building to support businesses to monitor and report their impacts	
Monitoring ■ Monitor whether businesses report their impacts and dependencies on wetland biodiversity against national targets	

GLOBAL BIODIVERSITY FRAMEWORK – TARGET 16

Ensure that people are encouraged and enabled to make sustainable consumption choices, including by establishing supportive policy, legislative or regulatory frameworks, improving education and access to relevant and accurate information and alternatives, and by 2030, reduce the global footprint of consumption in an equitable manner, including through halving global food waste, significantly reducing overconsumption and substantially reducing waste generation, in order for all people to live well in harmony with Mother Earth.

ALIGNMENT WITH CONVENTION ON WETLANDS

National plans to deliver Target 16 should be aligned with national delivery of the following targets of the **Convention on Wetlands' Fourth Strategic Plan:**

- **Target 3**: The public and private sectors have increased their efforts to apply guidelines and good practices for the wise use of water and wetlands.

Guidance on target setting and implementation	Resources
Setting national targets ■ Develop national targets for the ecological footprint of consumption on wetlands	Plant-based diets for more sustainable consumption
Setting a baseline ■ Ecological footprint of consumption on wetlands within a country ■ Extent to which communication, education and public awareness (CEPA) activities include the impacts of consumption on wetlands and how people are encouraged to reduce consumption and waste	
Actions ■ Develop activities that raise awareness about the impacts of consumption on wetlands	
Monitoring ■ Monitor the ecological footprint of consumption on wetlands against national targets	

GLOBAL BIODIVERSITY FRAMEWORK – TARGET 17

Establish, strengthen capacity for, and implement in all countries, biosafety measures as set out in Article 8(g) of the Convention on Biological Diversity and measures for the handling of biotechnology and distribution of its benefits as set out in Article 19 of the Convention.

Guidance on target setting and implementation	Resources
Setting national targets ■ Develop national targets that ensure all risks are fully assessed for the release of living modified organisms into wetland ecosystems	The Cartagena Protocol on Biosafety
Setting a baseline ■ Biosafety legal and administrative measures that fully assess the risk to wetland ecosystems ■ Adequate risk assessment protocols for any release of living modified organisms into wetland ecosystems	
Actions ■ Implement national assessment protocols and develop capacity building programmes	
Monitoring ■ Monitor the assessments undertaken, the release protocols and the impacts on the wetland ecosystems	

GLOBAL BIODIVERSITY FRAMEWORK – TARGET 18

Identify by 2025, and eliminate, phase out or reform incentives, including subsidies, harmful for biodiversity, in a proportionate, just, fair, effective and equitable way, while substantially and progressively reducing them by at least $500 billion per year by 2030, starting with the most harmful incentives, and scale up positive incentives for the conservation and sustainable use of biodiversity.

ALIGNMENT WITH CONVENTION ON WETLANDS

National plans to deliver Target 18 should be aligned with national delivery of the following targets of the **Convention on Wetlands' Fourth Strategic Plan:**

- **Target 3**: The public and private sectors have increased their efforts to apply guidelines and good practices for the wise use of water and wetlands.

Guidance on target setting and implementation	Resources
Setting national targets ■ Develop national targets for positive financial incentives to promote wetland conservation, restoration and wise use ■ Develop national targets for the elimination, phasing out or reform of aid, subsidies and other incentives harmful to wetland biodiversity	Valuing wetlands: Guidance for valuing the benefits derived from wetland ecosystem services
Setting a baseline ■ Determine the positive financial incentives in place to promote wetland conservation, restoration and wise use ■ Determine aid, subsidies and other incentives harmful to wetland biodiversity. For example, subsidies to poorly planned and ecologically harmful, water-related infrastructure projects; subsidized fuel leading to over pumping of aquifers for irrigation and subsidies to intensive farming or other polluting industries ■ Determine any gaps in water pricing and supply that encourages inefficient use and therefore negative impacts on wetland biodiversity	
Actions ■ Establish a programme of financial incentives to promote wetland conservation, restoration and wise use	
Monitoring ■ Monitor the financial incentives and disincentives related to wetland conservation, restoration and wise use	

GLOBAL BIODIVERSITY FRAMEWORK – TARGET 19

Substantially and progressively increase the level of financial resources from all sources, in an effective, timely and easily accessible manner, including domestic, international, public and private resources, in accordance with Article 20 of the Convention, to implement national biodiversity strategies and action plans, mobilizing at least $200 billion per year by 2030, including by:

(a) Increasing total biodiversity related international financial resources from developed countries, including official development assistance, and from countries that voluntarily assume obligations of developed country Parties, to developing countries, in particular the least developed countries and small island developing States, as well as countries with economies in transition, to at least $20 billion per year by 2025, and to at least $30 billion per year by 2030;

(b) Significantly increasing domestic resource mobilization, facilitated by the preparation and implementation of national biodiversity finance plans or similar instruments according to national needs, priorities and circumstances;

(c) Leveraging private finance, promoting blended finance, implementing strategies for raising new and additional resources, and encouraging the private sector to invest in biodiversity, including through impact funds and other instruments;

(d) Stimulating innovative schemes such as payment for ecosystem services, green bonds, biodiversity offsets and credits, and benefit-sharing mechanisms, with environmental and social safeguards;

(e) Optimizing co-benefits and synergies of finance targeting the biodiversity and climate crises;

(f) Enhancing the role of collective actions, including by indigenous peoples and local communities, Mother Earth centric actions[1] and non-market-based approaches including community based natural resource management and civil society cooperation and solidarity aimed at the conservation of biodiversity;

(g) Enhancing the effectiveness, efficiency and transparency of resource provision and use.

ALIGNMENT WITH CONVENTION ON WETLANDS

National plans to deliver Target 19 should be aligned with national delivery of the following targets of the **Convention on Wetlands' Fourth Strategic Plan:**

- **Target 17**: Financial and other resources for effectively implementing the Fourth Ramsar Strategic Plan 2016 – 2024 from all sources are made available.

Guidance on target setting and implementation	Resources
Setting national targets ■ Develop national targets for public and private funding for wetland conservation, restoration and wise use	Valuing wetlands: Guidance for valuing the benefits derived from wetland ecosystem services
Setting a baseline ■ Determine the mechanisms, type and amount of public and private funding for wetland conservation, restoration and wise use	
Actions ■ National policies that provide public funding for wetland conservation and wise use ■ Funding mechanisms for incentivizing private investment in wetland conservation and wise use ■ Domestic country public funding of conservation and wise use of wetlands and their biodiversity ■ Domestic country private funding of conservation and wise use of wetlands and their biodiversity	
Monitoring ■ Monitor public and private funding for wetland conservation, restoration and wise use against national targets	

GLOBAL BIODIVERSITY FRAMEWORK – TARGET 20

Strengthen capacity-building and development, access to and transfer of technology, and promote development of and access to innovation and technical and scientific cooperation, including through South-South, North-South and triangular cooperation, to meet the needs for effective implementation, particularly in developing countries, fostering joint technology development and joint scientific research programmes for the conservation and sustainable use of biodiversity and strengthening scientific research and monitoring capacities, commensurate with the ambition of the goals and targets of the Framework.

ALIGNMENT WITH CONVENTION ON WETLANDS

National plans to deliver Target 20 should be aligned with national delivery of the following targets of the **Convention on Wetlands' Fourth Strategic Plan:**

- **Target 14**: Scientific guidance and technical methodologies at global and regional levels are developed on relevant topics and are available to policy makers and practitioners in an appropriate format and language; and
- **Target 19:** Capacity building for implementation of the Convention and the Fourth Ramsar Strategic Plan 2016 – 2024 is enhanced.

Guidance on target setting and implementation	Resources
Setting national targets ■ Develop national targets for wetland ecosystem scientific research and innovation programmes and wetland capacity-building programmes within CEPA activities	Communication, Education and Public Awareness (CEPA) – A Toolkit for National Focal Points and NBSAP Coordinators Convention on Wetlands CEPA Handbook
Setting a baseline ■ Assess the type and number of wetland ecosystem scientific research and innovation programmes and wetland capacity-building programmes within CEPA activities that occur nationally	
Actions ■ Specific wetland ecosystem scientific research and innovation programmes ■ Specific wetland capacity-building programmes within CEPA activities ■ Mechanisms for sharing and contributing research, innovation and technical developments related to wetland ecosystems via the Convention on Wetlands network	
Monitoring ■ Monitor wetland ecosystem scientific research and innovation programmes and wetland capacity-building programmes within CEPA activities against national targets	

GLOBAL BIODIVERSITY FRAMEWORK – TARGET 21

Ensure that the best available data, information and knowledge are accessible to decision makers, practitioners and the public to guide effective and equitable governance, integrated and participatory management of biodiversity, and to strengthen communication, awareness-raising, education, monitoring, research and knowledge management and, also in this context, traditional knowledge, innovations, practices and technologies of indigenous peoples and local communities should only be accessed with their free, prior and informed consent,[2] in accordance with national legislation.

ALIGNMENT WITH CONVENTION ON WETLANDS

National plans to deliver Target 21 should be aligned with national delivery of the following targets of the **Convention on Wetlands' Fourth Strategic Plan:**

- **Target 8**: National wetland inventories have been initiated, completed or updated and disseminated and used for promoting the conservation and effective management of all wetlands;
- **Target 14**: Scientific guidance and technical methodologies at global and regional levels are developed on relevant topics and are available to policy makers and practitioners in an appropriate format and language; and
- **Target 16:** Wetlands conservation and wise use are mainstreamed through communication, capacity development, education, participation and awareness.

Guidance on target setting and implementation	Resources
Setting national targets ■ Develop national targets for wetland data sharing and awareness raising programmes within CEPA activities	Communication, Education and Public Awareness (CEPA) – A Toolkit for National Focal Points and NBSAP Coordinators Convention on Wetlands' Scientific and Technical Review Panel Outputs IUCN Red List of Threatened Species IUCN Red List of Ecosystems Wetlands of International Importance Other Effective Area-Based Conservation Measures
Setting a baseline ■ Assess the mechanisms for sharing existing data, tools and resources related to wetland biodiversity ■ Assess the type and number of wetland awareness raising programmes, within CEPA activities, that occur nationally	
Actions ■ Promote existing data, tools and resources for wetlands and wetland biodiversity (Red List, Green Status, Free-flowing rivers data, Freshwater Health Index, Convention on Wetlands' publications etc) ■ Ensure that these data, tools and resources are clearly explained, via communication products and training, and are accessible to government and other stakeholders ■ Specific wetland awareness raising programmes, such as World Wetland Day initiatives, within CEPA activities for decision makers, practitioners and the public ■ Mechanisms for sharing and contributing research, innovation and technical developments related to wetland ecosystems for dissemination to decision makers, practitioners and the public via the Convention on Wetlands' network	
Monitoring ■ Monitor the type and number of wetland data sharing and awareness raising programmes within CEPA activities against national targets	

GLOBAL BIODIVERSITY FRAMEWORK – TARGET 22

Ensure the full, equitable, inclusive, effective and gender-responsive representation and participation in decision-making, and access to justice and information related to biodiversity by indigenous peoples and local communities, respecting their cultures and their rights over lands, territories, resources, and traditional knowledge, as well as by women and girls, children and youth, and persons with disabilities and ensure the full protection of environmental human rights defenders.

ALIGNMENT WITH CONVENTION ON WETLANDS

National plans to deliver Target 22 should be aligned with national delivery of the following targets of the **Convention on Wetlands' Fourth Strategic Plan:**

- **Target 10:** The traditional knowledge, innovations and practices of Indigenous Peoples and local communities relevant for the wise use of wetlands and their customary use of wetland resources are documented, respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention, with a full and effective participation of Indigenous Peoples and local communities at all relevant levels.

Guidance on target setting and implementation	Resources
Setting national targets ■ Develop national targets of the involvement of Indigenous peoples and local communities, women and girls, children and youth and persons with disabilities within wetland conservation	Indigenous peoples, local communities and wetland conservation, Convention on Wetlands Secretariat.
Setting a baseline ■ Assessment of the legal and policy provisions relevant to strengthening the involvement of Indigenous peoples and local communities, women and girls, children and youth and persons with disabilities within wetland conservation	

Actions
■ Adaptation of laws and policies to enable more and better participation from Indigenous peoples and local communities within wetland conservation by:
  ■ Exploring options for promoting legal and policy reform and alternative approaches to strengthen provisions for participation, access to information and to justice; and informing Indigenous peoples, communities and others about the legal provisions that support meaningful participation
■ Ensure participation is meaningful by advancing recognition and security of people's rights and creating real opportunities for co-governance and for sharing decision-making power by:
  ■ Reviewing the situation regarding rights of ownership and access to resources and examining options to provide clarity and security of rights; and identifying conflicts and resolution mechanisms, with other wetland resource users, if community rights are secured and upheld
■ Recognising, working with and strengthening customary governance of Indigenous peoples and local communities in relation to wetlands by:
  ■ Documenting, in a participatory way, the customary systems related to wetlands; giving assurance that their systems will be respected; identifying synergies with statutory regulations; inviting community authorities to sit at committees, for example basin or transboundary basin organizations and water users, and delegating official functions to them; and supporting capacity-building of traditional authorities
■ Enhancing the involvement of women and girls, children and youth and persons with disabilities by:
  ■ Recognising the role women and girls, children and youth and persons with disabilities have in safeguarding wetlands; recognizing the role they have in transmitting traditional knowledge; supporting full participation in governance; mainstreaming gender, age and disability issues across wetland and cross-sectoral policies and plans; and ensure solutions to enhance equality are adapted to cultural contexts of Indigenous peoples and communities
■ Enhancing livelihood benefits by:
  ■ Undertaking an analysis of resource use activities of communities in wetlands; involving agencies working on poverty reduction, food security, health and community development to coordinate actions with wetland programmes; and explore new livelihood activities that maintain sustainable resource use	

Monitoring ■ Monitor the degree to which Indigenous Peoples and local communities, women and girls, children and youth and persons with disabilities are involved within wetland conservation	

GLOBAL BIODIVERSITY FRAMEWORK – TARGET 23

Ensure gender equality in the implementation of the Framework through a gender-responsive approach, where all women and girls have equal opportunity and capacity to contribute to the three objectives of the Convention, including by recognizing their equal rights and access to land and natural resources and their full, equitable, meaningful and informed participation and leadership at all levels of action, engagement, policy and decision-making related to biodiversity.

Guidance on target setting and implementation	Resources
Setting national targets ■ Develop national targets for participation of women and girls in all levels of decision making, ownership and access to resources within wetland wise use and conservation	Gender Equality and the Sustainability of the World's Wetlands
Setting a baseline ■ Assess the involvement of women and girls in all levels of wise use and conservation of wetlands (see also Target 22 for data)	
Actions ■ Develop and strengthen people-centred governance policies and legislation that respects women through full access and control of wetland assets including land ownership, rights and economic autonomy ■ Develop and strengthen policies and legislation that provide equal access to and control of natural wetland resources so women can manage and protect their livelihoods ■ Develop and strengthen policies and legislation that recognizes and includes women and decision-makers and leaders enabling their participation in decision-making processes at all levels in the wise use and conservation of wetlands ■ Ensure comprehensive sex-disaggregated data collection, awareness-raising, equitable decision-making and inclusive engagement of all stakeholders to cultural contexts of Indigenous peoples and communities	
Monitoring ■ Monitor the participation of women and girls, by using sex-disaggregated data, in all levels of decision making, ownership and access to resources within wetland wise use and conservation	