WWF 2nd Submission to the Intergovernmental Consultation on Nature-based Solutions - UNEA Resolution 5/5 of March 2, 2022

October 05, 2023

WWF welcomes the effort of the United Nations Environment Programme and the Co-Chairs, to carry out these intergovernmental consultations on Nature based Solutions. This document is intended to provide additional elements to those submitted by WWF during the first global consultation.

This submission is divided in the following sections:

Based on the interventions made by the countries and other organizations, we would like to provide further insights and resources to the consultation, address prevailing concerns and propose avenues to leverage opportunities for advancing the implementation of **high quality, high integrity** NbS that are effective, inclusive, and grounded in a rights-based approach.

1. WWF RECOMMENDATIONS ON THE WAY FORWARD

WWF strongly recommends incorporating these key issues as part of the discussions at the final in-person intergovernmental consultations:

a. **Consolidate progress on the resolution mandate**
   i. The consultation process should lead to the **formalization of a robust and comprehensive standard** (i.e. IUCN Global Standard) that ensures the development and implementation of high-quality and high-integrity NbS interventions. This standard would serve as a guiding framework for designing and assessing the impact, effectiveness and sustainability of NbS projects. It would promote consistency and contribute to scaling up high integrity NbS interventions.
   ii. As part of the intergovernmental consultations, the **examples of best-in-class**, science based NbS interventions that were shared, could be part of a **comprehensive compilation** organized based on key criteria: (1) societal challenges, (2) ecosystems, (3) intervention types - protection, sustainable management, restoration -, (4) methodology, and (5) metrics. This exercise will provide a foundation of examples for knowledge exchange and learning experiences among countries.
   iii. During regional consultations, country representatives have consistently emphasized the need for guidance on the design and implementation of NbS. Therefore, a **practical toolkit**

could be developed with essential resources (gathered through consultation process); greatly assisting countries in designing and implementing effective NbS solutions tailored to their unique circumstances.

b. **Foster convergence with Multilateral Environmental Agreements**

i. Highlighting the significance of nature-based solutions in addressing climate and nature intertwined crises, a short term outcome of the consultation should be to provide clear recommendations on synergies within two key processes that can strengthen the implementation and scale-up of high-quality Nature-based Solutions interventions as well as to **promote the integration of NbS into cohesive climate and biodiversity instruments**:

1. **The consultation should discuss and provide recommendations from Member States, to be considered by the Global Stocktake** (GST)**, to include NbS in the next round of** Nationally Determined Contributions (NDCs), National Adaptation Plans (NAPS) and Long-Term Low Emissions Development Strategies (LT-LEDS)**.** We anticipate that this stocktake will reflect the current state and offer recommendations concerning nature's role in combating climate change. It offers an opportunity to enhance the integration of NbS, including standards, indicators, metrics, and safeguards, into the guidance for countries updating their NDCs and LT-LEDS.
2. **This consultation should discuss and provide clear recommendations to maintain and strengthen Nature based Solutions in Decision 15/30 leading up to COP16**. The Convention on Biological Diversity (CBD), Twenty-fifth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA), will discuss various topics, including on *Biodiversity and Climate Change* (Agenda Item 7). Maintaining NbS in the decision will facilitate its incorporation into National Biodiversity Strategies and Plans (NBSAPs) and foster synergies with other national planning processes and policy instruments, such as NAPs, NDCs and LT-LEDS.

ii. Additionally, the consultation should aim to contribute to defining how NbS can support the Rio Conventions alignment through a synergistic implementation; through national instruments -NDCs, LT-LEDS, NAPs, and NBSAPs.

c. **Build ownership of Nature based Solutions at the National level**

i. Recognition of NbS in various multilateral agreements -UNEA 5, CBD, UNFCCC, UNCCD, and Ramsar- marks a positive starting point towards their integration into national policy frameworks. To fully harness the potential of NbS, there must be a clear understanding of the tool and national ownership.

ii. This can be achieved by creating enabling conditions that position NbS as a strategic tool for achieving climate and nature objectives. These enabling conditions include effective integration of NbS into national policy plans, capacity building for design and implementation, resource allocation for scaling, inclusion of all stakeholders with their rights and safeguards, and the development of monitoring and evaluation metrics.

The consultation should **explore a mechanism -**resulting from the technical and financial collaboration between countries and the support from Non-State actors**- that provides advisory and technical assistance to governments - at national level- to design and**

implement high integrity NbS interventions, when requested, fostering ownership of NbS as **an effective tool for national policy**.

d. **Address concerns around Nature-based Solutions for climate change mitigation and adaptation**

i. **Carbon offsetting.** This consultation could reinforce the message that following the mitigation hierarchy (reducing one's own emissions before compensating them) should be a must for corporates wanting to invest in NbS to achieve net zero. Immediate and substantial reduction in greenhouse gas emissions is essential to mitigate the worst impacts of climate change. While NbS, like forest restoration and soil carbon sequestration, already play a significant role in absorbing atmospheric carbon, they cannot substitute for the reduction of emissions at source. The emphasis on NbS should not detract from aggressive decarbonization targets. Both approaches should be pursued concurrently and synergistically to achieve the maximum beneficial outcomes for the climate, ecosystems, and societies, ensuring a holistic and effective response to climate change.

ii. **Rights and safeguards.** NbS is a practical, effective and inclusive approach that can, if properly applied, trigger multiple benefits. WWF considers that it is necessary to shield the concept of NbS to avoid inappropriate uses resulting in damage to society or nature. That is why we consider that this consultation process should **champion the incorporation of a rights-based approach for NbS** implementation. It is critical to involve key constituencies and rights holders through consultation, planning, and implementation phases of NbS.

iii. **Adaptation benefits.** Clear evidence based and measurable impacts remain the main challenges of valuing the role of NbS for climate change adaptation. This consultation should enhance the understanding of the value of NbS for climate change adaptation and highlight the need for a clear framework to measure the adaptation benefits from NbS interventions, including practical metrics and indicators that should guide both implementers and investors (the framework should be linked to the Global Goal on Adaptation).

e. **Unlock resources for sustainable finance of NbS**

i. The consultation should address the following points:

1. **Review and reform of subsidies** that encourage overexploitation of nature and relocate them to incentivise transitions to nature-positive practices.
2. **Increase public funding**, which is instrumental in initiating nature-based solutions, demonstrating their viability and economic potential to reduce investors' perceived risks. By financing pilot projects, governments can showcase the profitability and effectiveness of NbS, fostering market development and investor confidence.
3. **Develop blended finance** approaches, where public or philanthropic funds are strategically combined with private capital, to catalyze larger private investments.
4. To scale private investment in nature, policymakers should **establish robust mandated Payment for Ecosystem Services or biodiversity credit markets** that create financeable revenue instruments, bearing in mind to achieve spatial scale by aggregating small-scale projects for easier evaluation and greater access to major capital markets, ensuring scalable and quality Nature-Based Solution (NbS) interventions.

2. INPUTS TO THE THREE TASKS OF THE CONSULTATION

The inputs are organized starting with **task 2**, aiming to clarify the nature-based solutions concept and its application principles to dispel related controversies. This clarity is needed to foster confidence among countries in applying and adopting NbS, serving as a groundwork for identifying best NbS practices. Case studies of best practices requested under **task 1** will then be presented, including a proposal for the metrics and evidence that should be considered for high quality, high integrity NbS interventions. Finally, for **task 3**, the submission will suggest ways to increase sustainable financing flows to NbS.

Task 2 *"Assess existing and discuss potential new proposals, criteria, standards and guidelines to address divergences,...",* inputs include (a) a set of principles -aligned with IUCN standards- for high quality NbS field projects and (b) misuses of NbS and existing guidance to avoid them.

(a) Principles. As WWF, we have established a comprehensive set of principles for high-quality nature-based solutions interventions that can be consulted in our guide "How to design high quality NbS field projects: a guide for Practitioners". These principles are designed to be universally applicable, taking into account diverse circumstances. They include specific standards/methodologies and indicators to measure impact and monitor progress. We aligned our principles to the IUCN Global Standard as a foundational framework and benchmark for these interventions[1], as follows:

Principles applied to all types of NbS interventions[2]	**Alignment with IUCN standard**
1. Be a place-based intervention that uses and restores the functioning power of ecosystems.	Criterion 2
2. Explicitly address one or more of the identified societal challenges (climate change mitigation, adaptation and disaster risk reduction, food security, water security and health). Note: For specific considerations of NbS per societal challenge please refer to our previous submission.	Criterion 1
3. Use nature sustainably; and improve/enhance biodiversity.	Criterion 3
4. Consider and manage the co-benefits and trade-offs of the nature-based solutions for people and biodiversity.	Criterion 4 and 6
5. Contribute directly and tangibly to human wellbeing at the local level.	Criterion 1 and 4.
6. Be designed and implemented with engagement, participation, and consent of all the stakeholders in the project area, especially IPLCs, youth, women, people with disabilities and other vulnerable or marginalized groups. Consider the diverse values, needs and perspectives of stakeholders and rights holders in the landscape where the intervention takes place.	Criterion 5

[1] We also acknowledge the NbS guidelines developed by a consortium of 20 organizations, including the University of Oxford , as well as the Handbook for Practitioners of NbS issued by the European Commission.
[2] How to design high quality NbS field projects: a guide for Practitioners.

7. Have a landscape/seascape focus and cross-sectoral and thematic approach. Note: this approach does not exclude designing and implementing small-scale projects or place-based NbS. These initiatives can be valuable in themselves and may also serve as prototypes for future replication or scaling, thereby contributing to a broader and more comprehensive strategy.	Criterion 2
8. Be context specific and appropriate.	Criterion 2
9. Ensure cost-effective in relation to other solutions (such as hard infrastructure or technological ones).	Criterion 4
10. Have a long-term perspective in mind, even if funding is short-term.	Criterion 8

(b) Misuses of NbS and existing guidance to avoid them. WWF recognizes the potential of nature-based solutions as a comprehensive and practical tool to generate multiple benefits in society while addressing the challenges that most affect us today (climate change and disaster risk management, loss of biodiversity, food security, water security, and human health)[3]. However, the inadequate interpretation and subsequent application of practices that do not follow principles and standards of NbS may trigger problems of maladaptation, inequity, greenwashing, ineffectiveness, and negative impacts on ecosystems and biodiversity.

To mitigate these issues, we propose to **clearly state what cannot be considered a nature-based solution.** We suggest UNEP capture these misconceptions or misguided narratives that jeopardize the benefits for people, nature and climate, thus, limiting the many benefits and opportunities associated with the concept. Some known **pitfalls which do not represent NbS** in practice are:

1. **When NbS are used to offset emissions (or other environmental harm) without following the mitigation hierarchy,** thereby not prioritizing internal emission reductions first. To achieve Net-Zero, companies must have an ambitious emission reduction strategy aligned to the goals of the Paris Agreement before moving to invest in nature-based solutions to tackle residual emissions (see annex 4 for additional information).
2. **When harmful agriculture and forestry actions are labeled as NbS**. Expansion of agriculture into natural areas, monoculture plantations or planting trees in non-forest ecosystems are detrimental to biodiversity. Therefore, these should not be considered NbS.
3. **When interventions infringe human rights and the land rights of IPLCs**. Under no circumstance should NbS be implemented without the full recognition and respect of indigenous peoples and local communities' rights and without their free prior informed consent. Actions that generate displacement or land grabbing cannot be considered NbS.
4. **When governance does not, by design embed recognitional, procedural, and distributive equity, and is instead biased towards powerful stakeholders** (such as those with easier access to finance, resources, and influence). This includes the exclusion of vulnerable or marginalized stakeholders

[3] There is strong evidence that biodiversity and healthy ecosystems are crucial to tackle societal challenges including mitigating and adapting to climate change (Roe et al. 2021; Pörtner et al. 2023; UNFCCC 2022), ensuring food and water security (Pörtner et al. 2023), and tackle the risk of emerging infectious diseases (Rohr et al. 2019).

(notably IPLCs), the lack of inclusive and fair debate about the distribution of benefits, and the capture of benefits by elites, disproportionately to their own interests.

5. **When interventions are not climate-smart, lacking in robust adaptive management processes.** Interventions not informed by the latest climate change data, and climatic impacts on ecosystems and biodiversity, could result in ineffective interventions or maladaptation.

Note: Some organizations have released specific guidelines to prevent NbS misuse. Please see annex 1 for further information.

In addition, as we strengthen the global efforts to scale nature-based solutions, we must not neglect or displace attention from addressing the underlying socio-economic drivers of climate and biodiversity loss, notably continued fossil fuel emissions, land use change, and exploitation of nature and its resources. Addressing these drivers is a prerequisite to creating an environment where NbS can scale.

WWF welcomes the continued evolution of a framework that provides clarity on the implementation of high quality and high integrity NbS, and encourages all stakeholders to adhere to the best available standards and always bear in mind the responsibility to respect, protect, and fulfill the rights and aspirations of the people who live in the areas where the NbS take place.

Only by complying with standards and producing evidence that showcases the benefits and potential trade-offs of NbS can we objectively distinguish the 'best practices'. As part of the inputs presented for **task 1** *"Compile examples of best practice in nature-based solutions, based on the best available science"*, WWF is submitting an updated list, included in **Annex 2**, of metrics and evidence suggested to evaluate whether NbS are interventions of high quality and integrity.

In addition, examples of high quality NbS interventions are included in **Annex 3** with specific evidence of why we consider them best practices and the enabling conditions that have facilitated consistent progress during implementation. A web map is also available for public use where additional NbS projects implemented by WWF are showcased.

Finally, inputs for **task 3** *"Identify options for supporting sustainable investment in nature-based solutions…"* include three specific proposals to increase resource mobilization to scale NbS interventions and finance them long-term.

The lack of finance currently directed at NbS, and nature in general, is recognized as a key barrier to scaling NbS (UN, 2022). Ensuring financial viability requires considering various mechanisms, including public funding, market-based, philanthropy, voluntary labor and commitments, as well as alignment with regulatory compliance and fiscal policy measures (IUCN, 2020).
Clear opportunities for channeling public finance to NbS exist, starting with repurposing environmentally harmful subsidies. These currently amount to at least US$1.25 trillion of direct funding annually (approximately 2% of global GDP) (Koplow & Steenblik, 2022; World Bank), as well as US$ 6 trillion in implicit subsidies, reflecting the aggregate cost to people and planet of these (World Bank). This alone is significantly greater than the annual investment needed for NbS by 2030 (US$ 484 billion) (UNEP, 2022). Subsidies can instead be directed towards incentivising NbS, such as through economic incentives

rewarding sustainable land management and use of biodiversity as called for in the Kunming-Montreal Global Biodiversity Framework (GBF; see Target 18).

Allocation of public funds towards NbS would also signal to markets that nature is valuable, thereby further catalyzing private finance (Barbier, 2022). The direct funding of nature through government budgets can also catalyze job growth and economic output substantially, as investments in other types of infrastructure have (BenDor et al. 2015a). Beyond supporting crucial ecosystem services, such direct investments in nature have strong economic multiplier effects for jobs and economic output (Batini et al. 2022; BenDor et al. 2015b; Liew-Kie-Song & Perez-Cirera, 2020), often greater than those associated with investments in traditional sectors (e.g. manufacturing, oil, and gas) (Edwards et al. 2023; BenDor et al. 2015a). Further, public financing (through grants, or concessional loans by Development Finance Institutions and Multilateral Development Banks) is essential to lay the foundation for commercial capital. First, public funding is crucial to establish interventions demonstrating the business case for NbS, thereby reducing perceived risks by investors. Second, strategic use of public and philanthropic money can help mobilize capital from the private sector, through blended finance approaches to maximize positive returns to both investors and society (WWF / Nature^Squared, 2020).

For private financing mechanisms, potential commercial revenue streams for NbS currently fall into three overarching categories –

I. "yield enhancing" – where there is an increase in the value (price or output) of local products and services as a result of implementing NbS. These include commodities produced by agri/aquaculture, forestry, fisheries, and ecotourism.
II. "loss avoidance"- where NbS prevent future local economic, social, or environmental loss by contributing to flood defense, clean water supply, resource protection, and health benefits, or to biodiversity restoration. These typically require jurisdiction-specific legislated or contracted mechanisms to establish payments for these benefits, such as Payments for Ecosystem Services or mandated biodiversity net-gain schemes, as recently adopted in the UK.
III. "Climate mitigation benefits" – where NbS verifiably mitigate atmospheric CO2 concentrations through avoided emissions or carbon sequestration, enabling sale of carbon credits.

To date most non-philanthropic private investment in nature has been largely based on commodity revenues (the agricultural yield enhancement from sustainable practices) or carbon credits. This suggests that for a substantial scale-up in private finance to occur, policymakers must move to establish robust mandated PES or biodiversity credit markets that create financeable revenue instruments. However, creating financeable revenue streams is a necessary but not sufficient condition to tap into large scale finance. Achieving spatial scale is essential due to the need to meet the minimum "ticket sizes" of investors. This can be achieved through aggregation of local projects into single project entities or portfolios where intermediate financial entities (locally-based banks, project developers, supply chain corporate investors, nature-focused impact funds) can efficiently evaluate the financing proposition offered by NbS. In time and with policy support, aggregation by projects at the landscape scale should facilitate direct access to wholesale capital markets – bond finance, institutional equity and DFI facilities. However, it is important to stress that the design and implementation of small-scale projects through a

place-based bottom-up approach (with a view towards scaling spatially) is crucial to ensure that high-level policy and investment initiatives have robust channels through which to fund and implement high-quality NbS interventions.

A place-based, bottom-up approach is also crucial to establish the social and ecological foundations which underpin effective NbS, in a way that aligns with stakeholder and right-holders needs and perspectives. This includes establishing the architecture for inclusive governance, ensuring biodiversity net-gain, and establishing robust adaptive management mechanisms.

WWF is working through partnership programmes such as Mobilising More for Climate (MoMo4C), the Dutch Fund for Climate and Development (DFCD), the Landscapes Resilience Fund (LRF), the Nature based Solutions Accelerator (NbSA), WWF Impact, Trillion Trees, WWF and IFRC Partnership, and the recently launched NbS Origination Platform, among others, to help catalyze high-quality bankable NbS projects around the world.

ANNEXES

ANNEX 1: GUIDELINES TO PREVENT MISINTERPRETATIONS

Various organizations have formulated guidelines to prevent the misinterpretation of the NbS concept and mitigate potential risks during its implementation. Notably:

- WWF, 2022. Who reaps the benefits? Integrity principles for benefit sharing in forest NbS for Climate Mitigation. This paper proposes 4 core values for NbS benefit sharing: i) Fair, ii) Accountable, iii) Rights-based and iv) Effective. It defines 12 principles based on ambitious ethical guidelines to achieve high integrity for benefit sharing in forest NbS that should be considered during project design and implementation.
- TNC, 2023. Beyond beneficiaries. Fairer Carbon Market Frameworks. It explores the current frameworks of benefit-sharing, gaps and existing standards to work with IPLCs in Nature Climate Solutions projects. It provides a series of recommendations to achieve robust IPLC partnerships if they wish to engage in carbon crediting projects.
- WWF, 2020. Beyond Science-based Targets: A blueprint for corporate action on climate and nature. It aims to help companies develop a holistic approach that prioritizes Paris-aligned reductions first and then unlock investments for a broad range of climate actions (including NbS). This approach follows a robust mitigation hierarchy and the correct pricing of the long-term cost of the remaining emission.
- WWF, 2021. A Blueprint for High-Quality Interventions that Work for People, Nature and Climate. It helps funders to search for high-quality and high-impact interventions for climate mitigation, only after prioritizing internal emissions reductions.
- WRI, 2022. Guidance on voluntary use of nature-based solution Carbon Credits through 2040. The guidance emphasizes the importance of environmental integrity, biodiversity conservation, securing the rights and livelihoods of IPLCs, and the need for organizations to maintain a mitigation pathway consistent with a 1.5°C warming limit. WRI also recommends specific "guard rails" to ensure the principles are upheld.
- SEI, 2022. Principles for just and equitable nature-based solutions. A set of 5 principles are defined for ensuring just and equitable NbS.
- Seddon, Smith et al. 2021 (nature-based solutions initiative). Getting the message right on nature-based solutions to climate change. This article introduces and explains the 4 high-level guidelines on how to develop successful nature-based solutions ensuring the design of robust, and resilient NbS that address climate change and biodiversity loss, and sustain people.
- Nature-based solutions initiative, 2021. On the misuse of nature-based carbon 'offsets'.

ANNEX 2: CORE ELEMENTS OF NATURE BASED SOLUTIONS AND POTENTIAL INDICATORS TO ASSESS THEM

Core component of and NbS	**Type of evidence**
1. Address a societal challenge	EXAMPLE OF INDICATORS: Climate change Mitigation: -Hectares (terrestrial or marine) under improved and effective management that contributes to CO2 emission reductions. -Tonnes of carbon reduced or avoided by restoration, management and/or protection. Climate change adaptation and disaster risk reduction: -Number of people (males and females) and/ or communities whose vulnerability is reduced or resilience is increased by adopting climate-resilient options (including fisheries, agriculture, etc.) -Change in expected losses of lives and economic assets (US$) due to the impact of nature and climate hazards in the geographic area of the interventions -Quantity of urban/farms/floodplains/ river banks/other areas with reduced exposure to hazards. - Reduction of disaster risks & impacts (i.e. flood peak & drought; coastal flood & erosion – wave heights and speed; less frequency of events; runoffs; sediment loss; fires incidence) to people and/ or infrastructure via different methods such as sustainable drainage systems; protection and restoration of floodplains, wetlands including saltmarshes, mangroves, corals; tree restoration in slopes Food security: -Area allocated for sustainable food production -Number of food secure people (disaggregated by gender) and/or households. Including parameters such as average intake of dietary energy supply adequacy, number of undernourished people (disaggregated by gender) reduced, and crop diversification -Change in productivity, calorie production, or yields per area per season -Number of communities and/or farmers (males and females) adopting food security-related practices Water security: -Quantity of water supplied or available due to water bodies (groundwater, aquifers, baseflow) restoration -Quantity of people (males and females) with access to clean water - Reduction in conflicts due to water insecurity -Quantity of pollution (nutrients) and/or invasive alien species retained and/or filtered and/or removed -Number of water ecosystems reconnected Human health: - Reduction in local air and water pollution - Reduction (in celsius degrees) of urban heat island effect -Reduced injuries/fatalities and/or health- related diseases due to human-nature interactions -Number of people who have access to safe, inclusive and accessible, aesthetic areas such as green and public spaces -Number of square meters of public green area per inhabitant

	Additional information can be consulted in Chapter 8 "The role of indicators to maximize nature-people-climate synergies" in WWF, 2021. Powering Nature: Creating the conditions to enable nature-based solutions.
2. Ensure biodiversity and ecosystems benefits	Indicators that demonstrate one or several of the following benefits: -Control of invasive species -Enhancement of ecosystem connectivity -Enhancement of ecosystem resilience to climate change -Enhancement of ecosystem health and integrity, including physical variables (E.g. water quantity, and physical and chemical soil properties) -Protection, creation or restoration of habitat for species -Promotion of soil biodiversity -Reduction in species extinction risk (STAR metric) -Reduction of ecosystem pollution -Reduction of human-wildlife conflicts -Reduction of illegal trade of species
3. Provide social and economic co-benefits	Indicators that demonstrate one or several of the following benefits: -Empowering youth, women and IPLCs -Create green jobs -Increase income generation for local communities -Sustainable increase in productivity (goods and services) -Livelihoods diversification -Payment for ecosystem services -Increase in recreational services -Revalorization of cultural practices -Skills enhanced (training) -Peace and conflict resolution
4. Guarantee safeguards for people	-Have a decision-making process that is inclusive for all the stakeholders benefited/affected by the NbS -Have a grievance mechanism in place -Have concrete actions that ensure transparency of the NbS interventions during all the phases (design, implementation, monitoring) -Implement a participatory approach upfront that pursues different modes of stakeholder engagement (i.e. co-management, co-design, joint implementation) -Have a benefit sharing mechanism in place or have taken sufficient actions to promote a fair discussion about the distribution of costs and benefits among stakeholders. -Trade-offs analysis, decision making process, and management
5. Align with national and/or international policies	-Alignment with NDCs (mitigation or adaptation) -Alignment with NBSAPs -Alignment with SDGs -Alignment with National/Sectoral Adaptation Plans -Alignment with National Development Plans -Alignment with Disaster Risk Reduction Policies -Alignment with food and water related policies -Alignment with public health policies

ANNEX 3: FACT SHEETS - BEST PRACTICES

Title of the initiative: *WWF's Triple Benefit Programme (TBP)*

Country(ies): The programme is being implemented in Kenya, Madagascar, Uganda, Myanmar and Nepal. This example will focus specifically on the project in Madagascar.

State of implementation: It is a four year project (2022-2025). The design phase was completed in 2022 and the project is now in the implementation phase.

Societal challenge(s) addressed: Food security, water security, climate change, social and economic development, environmental degradation and biodiversity loss.

How we are using Nature to address societal challenges: The TBP project will be enabling communities to implement NbS to address the most pressing societal challenges in the Amoron'i Onilahy Protected Area in southern Madagascar. The NbS interventions being implemented are watershed restoration and sustainable management of the spiny forest, which are being implemented together with supporting livelihood interventions to improve human well-being, biodiversity, and climate resilience.

Evidence of high-quality:

- **Standard/criteria/guidelines used to design/implement the project**: The TBP is guided by and adheres to the IUCN Global Standard for NbS (2020) to ensure a rights-based approach and high quality NbS interventions.
- **Social considerations or safeguards implemented**: The TBP prioritizes inclusive governance (criterion 5 of the Standard) to safeguard social considerations, ensuring the involvement and protection of local communities. The most pressing societal challenges and the NbS interventions designed to address them were selected in full consultation with local communities.
- **Economic and financial assessment of benefits / benefit sharing mechanism**: A cost-benefit analysis of the NbS interventions was conducted during project design. Economic feasibility (criterion 4) is under continuous assessment. Financial benefits are shared with local communities engaged in sustainable livelihoods.
- **Monitoring and Evaluation**: The TBP employs robust monitoring and evaluation, tracking indicators for biodiversity enhancement, socio-economic benefits, and societal challenge improvements. Besides having its own M&E plan, the project team will be using the IUCN self-assessment tool to assess how the project adheres to each of the Standard's 8 criteria at the beginning, after 2 years and at the end of the project period.
    - **Indicators of biodiversity enhancement:** Metrics include:
        - habitat areas under sustainable management.
        - number of hectares of watershed/forest restored.
        - surveys of Lemur Catta populations in the project area.
    - **Indicators of socio-economic benefits:** Metrics include:
        - Number of people who have diversified and/or improved their income sources with support of the project by 2025 (disaggregated by gender).

- Increase in the number of people engaging in sustainable and decent livelihoods opportunities each year (disaggregated by gender).

o **Indicators of improvement of societal challenge**: Progress is measured against targets related to food security, water security, climate resilience, and economic development. Metrics include:
- Increase in the proportion of people having adequate access to water by 2025
- Proportion of households reporting improved resilience capacity against the effects of climate change by 2025

Enabling conditions: In order to improve the effectiveness and sustainability of the project goals, the project will be working to improve the enabling conditions for NbS. These include creating an organizational development plan with selected local CSO partners, improving policy advocacy capacity of CSOs and capacity building of authorities on NbS.

Title of the initiative: *River Nyamwamba - Reduce devastation of downstream infrastructure (including Kampala) by restoring degraded land and nature-based buffers along the riverbanks*

Country: Uganda

State of implementation: under implementation phase.

Societal challenge(s) addressed: Climate change adaptation and disaster risk reduction, Water security, and food security.

How we are using Nature to address societal challenges: The project is implementing priority catchment management measures covering the restoration of degraded land and establishment of nature-based buffers on the river bank. Which includes i) implementation of restoration of degraded land through soil and water conservation measures (already implemented on 251 ha of degraded land), ii) building of bamboo-based buffers at the degraded river bank (already established along 20km), and iii) restoration of deforested communal and individual land through tree growing (already accomplished on 825ha).

Evidence of high-quality:

- **Standard/criteria/guidelines used to design/implement the project**: The project implemented the NbS Project origination guidelines (internal tool aligned to the IUCN standard) and Decision Support Tool by WWF Resilient Asian Deltas (RAD) Initiative.
  The NBS Benefits Explorer Tool was also used to explore potential solutions and benefits for the prioritized landscape.
- **Social considerations or safeguards implemented**: Engagement of local communities, provincial administration and local leaders in the midstream Nyamwamba sub catchment to implement catchment-based community driven activities aimed at

improving soil and water conservation, riverbank restoration and community livelihood improvements.

- **Economic and financial assessment of benefits / benefit sharing mechanism**: While the project yields benefits for the broader regions in the lower basin areas, it also emphasizes enhancing the well-being of local communities. This is achieved by promoting alternative income-generating activities at the household level, such as fish farming, stone product development, beekeeping, fruit cultivation, ecotourism, and horticulture.
- **Monitoring and Evaluation**: The complete set of indicators and mid-term achievements can be consulted here. Metrics include:
    - **Indicators of biodiversity enhancement:**
        - Improvement in the stock of riverine fish species
        - Extension of restored riparian vegetation
    - **Indicators of socio-economic benefits:**
        - Household income increased
        - Number or direct jobs created (including woman and youth)
        - Number of households trained in catchment management measures
    - **Indicators of improvement of societal challenge**:
        - Reduced damages and losses of lives and economic assets (US$) downstream.
        - Extension of areas secured against hazards.
        - Number of households adopting food security-related practices (beekeeping, fish farming, fruit and vegetable growing).

Enabling conditions: Support from government (Ministry of Water and Environment) and funding from the World Bank were essential to mobilize an integrated response to minimize the loss of life, livelihoods and property caused by the frequent flooding of River Nyamwamba.

Title of the initiative: *Recharge Pakistan*

Country: Pakistan

State of implementation: Designed and recently approved by the Green Climate Fund.

Societal challenge(s) addressed: Climate change adaptation and disaster risk reduction, water security and food security.

How we are using Nature to address societal challenges: The project will improve preparedness against high-risk climate disasters associated with increasing flooding in the Indus basin. The actions proposed are primarily designed to keep more floodwater from reaching agricultural and community lands by slowing run-off and making use of wetlands to hold and absorb it. EbA and green infrastructure interventions include: restoration of degraded agro-ecological landscapes; rehabilitation of degraded wetlands, flow paths, and channels; and creation of storage ponds, embankments and gabion bunds. The project will also promote climate-resilient livelihoods among vulnerable target communities, including the adoption of climate-resilient agricultural inputs (e.g., drought-resilient crop varieties), that in tandem

with other non-NbS interventions such as increased access to improved extension services, and improved access to water from new water storage tanks, will optimize on-farm water efficiency and support agricultural production under increasingly severe drought conditions.

Evidence of high-quality:

- **Standard/criteria/guidelines used to design/implement the project**: GCF standards detailed in their programming Manual, and sectoral guides: Ecosystems and ecosystem services, and water security.
- **Social considerations or safeguards implemented**: GCF's Environmental and Social Policy (ESP), Indigenous Peoples Policy (IPP) and WWF's Environmental and Social Safeguards Framework. The project has an Environmental and Social Management Framework (ESMF), including an Indigenous Peoples Planning Framework (IPPF), and a Grievance Redress Mechanism (GRM).
- **Economic and financial assessment of benefits / benefit sharing mechanism**: An economic analysis for the project was undertaken using a cost-benefits analysis (CBA) approach. The results suggest that the total package of interventions is cost-beneficial, with the total project investment generating a NPV of US$30 million, with a benefit to cost ratio (BCR) of 1:1 and an EIRR of around 13.6%. The results also show that under a 'with project' scenario, the benefits of adaptation interventions under the future climate are higher than the costs for all the types of intervention to be implemented in all project target areas.
- **Monitoring and Evaluation**: The project includes monitoring and evaluation systems to track progress towards the planned outcomes over the seven-year term of the project. Metrics include:
    - **Indicators of biodiversity enhancement:**
        - Hectares of terrestrial forest, terrestrial non-forest, freshwater and coastal marine areas brought under restoration and/or improved ecosystems
        - Percentage increase in migratory birds' population at Manchar Lake
        - Percentage increase in migratory birds' population at Indus Game Reserve (D.I Khan)
    - **Indicators of socio-economic benefits:**
        - Beneficiaries (female/male) adopting improved and/or new climate-resilient livelihood options
        - Number of community representatives/leaders trained on how to implement, operate and maintain EbA and green infrastructure interventions
        - Area (ha) of land under improved climate- resilient agricultural management
    - **Indicators of improvement of societal challenge**:
        - Change in expected losses of economic assets due to the impact of extreme climate- related disasters in the geographic area of the GCF intervention
        - Beneficiaries (female/male) adopting innovations that strengthen climate change resilience
        - Hectares of natural resources brought under improved low-emission and/or climate-resilient management practice
        - Area (ha) of flood extent reduced
        - Amount of water captured/retained by the EbA and green infrastructure interventions

- Number of people (disaggregated by women and men) protected from flooding

Enabling conditions: Championed by Pakistan's Ministry of Climate Change and the Federal Flood Commission, under the Ministry of Water Resources, this project has been made possible by the collaboration of local communities in DI Khan, the Ramak Watershed, Manchar Lake, Chakar Lake, the Green Climate Fund, the United States Agency for International Development, The Coca-Cola Foundation and WWF. This seven-year investment represents the largest investment to date in an ecosystem-based approach to flood and water resources management at the national level.

ANNEX 4 - OPPORTUNITIES AND OBSTACLES: NBS AND CLIMATE MITIGATION

NbS in the land sector could contribute up to 30% of the climate mitigation needed by 2050 to meet the Paris Agreement's objective of limiting global warming, while supporting other societal goals such as climate adaptation, water provisioning, livelihoods, and biodiversity conservation (Roe, S., Streck, C., Obersteiner, M. *et al.*, 2019). Furthermore, as businesses begin to recognize their dependencies on climate and nature, their demand for investment-ready NbS portfolios that lower deforestation and land conversion and support landscape restoration and sustainable natural resource management is increasing.

However, there are risks that NbS interventions are designed and implemented in ways that fail to address the key drivers of nature loss and underlying barriers to sustainable and equitable development. NbS interventions that are poorly designed, priced, or governed not only risk negative outcomes and backlash, but present missed opportunities for transformational change when time is running out for tropical forests and other critical ecosystems. Current examples of such issues include expansive claims that are not supported by science-based targets; poor quality carbon 'offsets' with limited climate change mitigation benefits and/or adverse impacts on biodiversity; and pricing terms that are not consistent with principles of equitable benefit-sharing with sovereign and local stewards of nature, nor ensuring the durable long-term sustainability of investments.

Some important trends present a unique set of opportunities for a different approach to NbS that is holistic, landscape-based, and community-centered: increased momentum of landscape and jurisdictional initiatives in several tropic forest geographies (Boyd, Stickler, Duchelle, et al., 2018); renewed commitment to biodiversity conservation through the Global Biodiversity Framework (GBF); and an increased focus on the role of Indigenous peoples in conserving 80% of Earth's biodiversity.

Ensuring that nature-based solutions deliver real, lasting gains for nature and people requires deep engagement with local governments and communities; concepts and plans that use the best science and metrics available; clear, measurable goals that quantify impact; forward-looking plans that ensure project interventions are self-sustaining and provide the intended benefits well into the future.