

Nature-based solutions for climate and biodiversity protection in selected national climate contributions

168 Nationally Determined Contributions (NDCs) were examined for Nature-based solutions (NbS) related keywords in English, Spanish and French from the latest NDCs submitted by the parties until 2023.

6 case study countries among the countries containing a high number of NbS related keywords were selected to cover a diverse income levels and geographies. The UK and USA were noted for ecological similarities to Germany, while Indonesia and China were recognized for specific NbS efforts.

2 example measures from national NbS policies per case study country were selected because of their relevance for the implementation of the Germany's Federal Action Plan on Nature-based solutions for Climate and Biodiversity. The measure examples were examined regarding their alignment with the definition and criteria of NbS.

Nationally Determined Contributions (NDCs) under the Paris Agreement (PA), outline each party's mitigation goals and strategies to reduce greenhouse gas emissions. They are central to achieve the PA's long-term temperature goals. Parties are expected to present ambitious, clear and transparent NDCs.

Nature Based Solutions (NbS) were officially defined in March 2022 during the fifth session of the United Nations Environment Assembly (UNEA-5) as: *"actions to protect, conserve, restore, sustainably use and manage natural or modified terrestrial, freshwater, coastal and marine ecosystems which address social, economic and environmental challenges effectively and adaptively, while simultaneously providing human well-being, ecosystem services, resilience and biodiversity benefits"*.

The respective resolution also highlighted the importance of the implementation of social and environmental safeguards in NbS.

Challenges for the successful implementation of the reviewed measures

- Challenges to the permanence of the climate mitigation benefits of NbS measures can be attributed to political, legal, governance, and social causes, and to the nature of the Agriculture, Forestry and Other Land Use (AFOLU) sector.
- Insufficient funding or lack of long-term finance and bureaucratic barriers jeopardise the climate protection effect of NbS measures and limit a transition away from long-established or lucrative harmful land use practices.
- Lack of governance structures to underpin the implementation of NbS measures.
- Lack of policy coherence jeopardises the climate protection effect of NbS measures.
- Difficulties in designing and implementing the NbS measure in alignment with the ecosystem to achieve synergies with biodiversity protection and to generate social benefits.
- A lack of ambitious or unclear targets reduces the potential of positive impacts of NbS measures.

Factors for successful implementation of the reviewed measures

- Linking NbS measures to existing programmes and ensuring long-term implementation and effectiveness through policy coherence.
- Clear target formulation, frequent monitoring and evaluation are required to make successes visible and, if necessary, to implement target-oriented changes during implementation.
- Effective and long-term funding mechanisms enable the realization of NbS measures and help to implement them in the long-term.
- Good practice in stakeholder involvement ensures NbS measure implementation and permanence.
- Promote the synergies and co-benefits of NbS for climate change mitigation to increase stakeholder acceptance and to achieve additional societal targets.
- Focused action in hotspot/priority areas to facilitate effective use of resources and enhance achievement of co-benefits and synergies.

UNITED STATES OF AMERICA



1. "Life from Soil: The Ranching Sustainability and Viability Planning Network (RSVP)" is a community-based initiative to improve the ecological function of grasslands in the Northern Great Plains (NGP) in the U.S. states of Montana, Nebraska and South Dakota.

2. Following the REPLANT Act from November 2021, a national Reforestation Strategy for the U.S. was developed. The USDA Forest Service develops national and regional 10-year implementation plans.

Insights from the analysed measures:

Both measures are still under development, and scientifically sound data on the impact are not yet available. Generally, the measures are implemented under active NGO involvement, which creates additional implementation capacity. The RSVP project is accompanied by a comprehensive ecological monitoring but still the financial support period of 10 years for farmers is very short. It is not clear how biodiversity protection will be secured in the Reforestation Strategy and recruiting the labourers who can carry out the tree planting will be a significant challenge.

UNITED KINGDOM



1. The England Peat Action Plan (EPAP) has the goal to restore peatlands to contribute to the net zero emission target and to achieve wider environmental goals, such as biodiversity protection.

2. The England Tree Action Plan (ETAP) outlines the government's plan on how England should contribute to the UK goal of planting 30,000 ha of woodland annually by the end of 2025.

To achieve the targets of both action plans, the government launched the Nature for Climate Fund with a total funding of £764 million until 2025.

Insights from the analysed measures:

Although, ETAP led to an increase in woodland cover, it is still behind the governments set targets. Landowners have a lot of freedom to choose the structure and future purpose of their new woodlands. Hence, woodlands created under ETAP are not necessarily supporting biodiversity. The EPAP considers biodiversity protection and commits to a strategy for regular stakeholder involvement. Public funding is low and the engagement of carbon credits via the Peatland Code is described as an obstacle because of its long-term commitments in land-use changes for private landowners. EPAP and ETAP have been classified as not ambitious enough by experts to significantly contribute to the UKs climate mitigation targets.

PEOPLE'S REPUBLIC OF CHINA



1. The Sloping Land Conversion Programme (SLCP) is a nationwide programme to "increase forest cover, alleviate soil erosion, conserve biodiversity, and increase rural household income". The Natural Forest Protection Programme, (NFPP): targets 200 million ha forest area by 2035 and has a long-term vision until 2050.

2. The Yangtze River Conservation Programme focuses on promoting erosion control in the upper reaches, improving the ecological conditions of the river, and promoting economic and social development in the impacted regions.

Insights from the analysed measures:

The analysed NbS measures have had long implementation periods supported by public funding. Measures have improved over time, for example reforestation efforts now focus on using native species, consider the risks associated with monocultures and issues related to water availability. Measures are often implemented with a top-down approach, which limits opportunities for participation and consultation.

BRAZIL



1. The Action Plan for the Prevention and Control of Deforestation in the Legal Amazon (PPCDAm) is one of Brazil's main instruments for achieving the zero deforestation NDC goal.

2. The Sectoral Plan for Adaptation to Climate Change and Low Carbon Emissions in the Agriculture and Livestock Sector (Plan ABC+) is an action plan for climate mitigation and adaptation in the Brazilian agricultural sector.

Insights from the analysed measures:

The Brazilian government recognises that deforestation and the biodiversity crisis are intertwined. The two analysed measures aim to align mitigation targets in the forestry and agriculture sectors with positive impacts on biodiversity. Commercial reforestation and recovery of degraded pastures under the Plan ABC+ need to be implemented with safeguards to avoid negative impacts on biodiversity.

ETHIOPIA



1. The Green Legacy Initiative (GLI) is a national-level initiative to re-green the country. It sets out annual tree-planting targets to restore degraded lands, increase forest cover and reduce the impacts of climate change.

2. The Oromia Forest Landscape Program (OFLP) is implemented via REDD+. It aims to contribute to sustainable development, address biodiversity conservation, ensure adaptability with natural ecosystem processes and support adaptability.

Insights from the analysed measures:

Prime Minister initiated the nationwide tree planting under the Green Legacy Initiative. But the long-term impact and success of the first phase was limited because of unclear responsibilities for the trees after planting and low financial resources.

The OFLP monitoring and reporting is aligned with the national MRV system, which supports the implementation of the NDC. Also, vital ecosystem services are supported in the project, but political instability poses a risk to the further success of OFLP among other risks, according to the World Bank.

INDONESIA



1. The triple-R programme (Rewetting, Revegetation and Revitalisation of local livelihoods), is a measure to reduce peatland loss, improve water management and restore peatland areas.

2. The Sumatra Merang project implements afforestation, reforestation, revegetation and wetland restoration and conservation. Funded through carbon credits, it has already sold more than 3 million credits. The crediting period started in 2016 and is running until 2062.

Insights from the analysed measures:

The analysis shows that both measures have been successful in reducing emissions. A key success factor has been community engagement. Economic stability remains the biggest challenge for some communities in the projects. To provide economically viable alternative cultivation methods or access, other sources of income are important to overcome this challenge.

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