



# TOWARDS POST-2020 EXPERTISE ON #7

## NATURE-BASED SOLUTIONS: HARNESSING THE POTENTIAL FOR AMBITIOUS POST-2020 BIODIVERSITY OUTCOMES

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**Nature-based solutions offer the transformative, whole-of-society approach needed to achieve the protection, restoration, and sustainable use of biodiversity. The post-2020 Global Biodiversity Framework now has a unique opportunity to show the leadership required to ensure that nature-based solutions deliver a sustainable and just future for all.**



**“NATURE IS OUR BEST ALLY IN THE FIGHT AGAINST CLIMATE CHANGE, AND THAT’S WHY NATURE-BASED SOLUTIONS WILL HELP US DELIVER THE EU BIODIVERSITY STRATEGY FOR 2030. THESE SOLUTIONS BRING MULTIPLE BENEFITS— THEY EMPOWER PEOPLE AND COMMUNITIES, THEY INCREASE RESILIENCE, AND THEY PROVIDE JOBS AND BUSINESS OPPORTUNITIES. SCALING UP OUR INVESTMENTS IN NATURE-BASED SOLUTIONS AND STEPPING UP THEIR IMPLEMENTATION ARE THE BEST INSURANCE POLICY OF ALL.”**

Virginijus Sinkevičius, European Commissioner for Environment, Oceans and Fisheries

Recognition of the importance of nature has never been greater. A continuing decline in biodiversity, accelerating impacts of climate change, and the urgency of ensuring a sustainable and just recovery from the COVID-19 pandemic are generating unprecedented momentum behind the imperative of working with nature to address societal challenges.

Nature-based solutions are attracting increasing attention for their ability to tackle these challenges together while creating diverse benefits. To harness this potential, it is critical to ensure that the post-2020 Global Biodiversity Framework prioritises these actions and their uptake within and beyond the biodiversity community.

Nature-based solutions offer a tool to generate transformative change, align the CBD mission with the UNFCCC, UNCCD and SDGs, and mainstream biodiversity across sectoral decision-making processes. They also provide an important means to engage with finance, business, and societal actors who increasingly see the biodiversity, climate, and sustainability challenges as one.



Honey Bees working hard in the spring sunlight, William Jones-Warner

## NATURE-BASED SOLUTIONS: AN UMBRELLA CONCEPT

'Nature-based solutions' is an umbrella term that includes a range of established approaches that deliver ecosystem services through the protection, restoration, or sustainable management of natural ecosystems. Related concepts include, for example, green and blue infrastructure, ecosystem-based adaptation, ecosystem-based mitigation, ecosystem-based disaster risk reduction, and natural water retention measures.

Nature-based solutions both rely on and deliver benefits for the conservation and restoration of biodiversity and ecosystems. They also play a key role for climate change mitigation and adaptation and deliver multiple benefits across different sectors such as water, agriculture, and disaster risk reduction. At the same time, these solutions deliver on societal well-being goals including health, sustainable economic prosperity, and job creation.

## HOW CAN NATURE-BASED SOLUTIONS SUPPORT CBD GOALS?

With the growing popularity of nature-based solutions, concerns are being raised that not enough attention is being given to ensuring that they deliver outcomes for biodiversity. Clear leadership is needed to demonstrate that all nature-based solutions should contribute to the central goals of the CBD. Nature-based solutions allow us to protect, restore, and thrive with nature.

Nature-based solutions protect biodiversity. In India, evidence suggests that efforts to conserve mangrove forests not only protect this vital habitat but are also effective in reducing the damage from flooding and storms. Evidence from the Philippines also suggests that protecting mangroves is more cost-effective and efficient than building seawalls and has the added benefit of contributing to a local and sustainable fisheries economy<sup>2</sup>.

As the declaration of the United Nations 2021-2030 Decade on Ecosystem Restoration confirms, a concerted effort is needed to restore damaged and degraded ecosystems in addition to conserving biodiversity. Nature-based solutions will play a key role in this effort. Peatland restoration, for example, is seen as being fundamental for biodiversity, carbon storage, and protecting the quality of water supplies. In Belarus, an estimated 50,000 hectares of degraded peatlands have been rewetted, and additional projects are now underway<sup>3</sup>.

At the same time, nature-based solutions enable society to thrive with nature in accordance with the goals of the CBD. Evidence from the NATURVATION Urban Nature Atlas<sup>4</sup> shows the multiple ways in which nature-based solutions in cities are contributing to economic regeneration, social inclusion, health, and well-being. In Bonn, Germany, the Pennenfeld community gardens have been established to support elderly people with

dementia to connect with the local municipality, care providers, and the community<sup>5</sup>. In Lilongwe, Mozambique, the Urban Natural Assets programme run by ICLEI Africa has developed an Urban River Revitalisation plan that has involved multiple stakeholders to identify steps to ensure that the river is restored and sustainably supports urban livelihoods<sup>6</sup>.

## DRIVING TRANSFORMATIVE CHANGE

Prioritising nature-based solutions in the post-2020 Global Biodiversity Framework will contribute to driving forward the agenda for transformative change. They provide a critical means for tackling the underlying drivers of biodiversity loss, including land conversion, climate change, urbanisation, and societal values. Nature-based solutions also offer the potential of bringing the value of biodiversity to the attention of policymakers concerned with the delivery of economic development, infrastructure provision, health, and well-being alongside climate change goals. This will support the mainstreaming of biodiversity across all levels and multiple sectors of government.

Since the Climate Action Summit in New York in 2019, the momentum for nature-based solutions has grown exponentially. New initiatives have been formed, generating partnerships between public, private, and civil society actors. This is enabling businesses and investors to find new collaborative approaches through which they can show their support for biodiversity and commitments for action.

Through championing nature-based solutions, these initiatives demonstrate the value of nature in ways that are tangible for people across all walks of life. It is already clear that nature-based solutions will be an essential part of a whole-of-society approach to address the biodiversity and climate challenges.

Realising this potential will require leadership from the post-2020 Global Biodiversity Framework that sets a high bar for nature-based solutions that are both inclusive in their design and ambitious in their scope, ensuring that multiple goals for sustainability are addressed. It will be vital that nature-based solutions tackle existing inequalities in the sustainable use of and access to nature and ensure that those who manage and steward vital ecosystems are recognised and rewarded accordingly.

## RECOGNIZING THE MULTIPLE BENEFITS OF NATURE

If biodiversity is to be protected, restored, and sustainably used, it is vital to recognise the multiple values of nature. Nature-based solutions have the potential to contribute to diverse sectoral targets in parallel, engaging actors beyond the biodiversity realm and bringing new resources and finance to support action for biodiversity. All levels of government and actors from across society have

<sup>1</sup> <https://cutt.ly/ndbsLbC>

<sup>2</sup> <https://cutt.ly/CdbgzDJ>

<sup>3</sup> <https://cutt.ly/wdbhi1d>  
+ <https://cutt.ly/vdbhTz3>

<sup>4</sup> <https://cutt.ly/NdbkhL5>

<sup>5</sup> <https://cutt.ly/sdSU9PI>

<sup>6</sup> <https://cutt.ly/gdbzwDy>

a critical role to play in recognising this potential for convergence and mainstreaming nature-based solutions for biodiversity. The following examples illustrate this multifunctional potential, producing ecological, societal, and economic benefits.

#### **YANWEIZHOU WETLAND PARK: A RESILIENT LANDSCAPE FOR BIODIVERSITY AND SOCIETAL WELL-BEING IN JINHUA, CHINA <sup>7</sup>**

From 2010 to 2015, the Jinhua municipal government in China undertook a vast multifunctional nature-based watershed management and ecosystem restoration project to enhance human well-being in an urban area, increase biodiversity benefits, and adapt to climate change through improved risk management and resilience. The project reconnected a riparian wetland area that had become fragmented, largely inaccessible for recreational enjoyment and ineffective for flood management due to grey infrastructure construction and sand quarries.

Through water-resilient terrain and planting design, restorative actions, and the use of a resilient bridge-and-paths system, the project was able to preserve the remaining area of riparian habitat while providing amenities to the residents of the densely populated urban centre, reducing flood risk, increasing ecosystem protection, and creating a cohesive landscape in which the city centre was connected with the nature for a strengthened cultural identity. After it opened in May 2014, an average 40,000 visitors use the park and bridge each day.

#### **REDUCING VULNERABILITY TO CLIMATE CHANGE IN FLOOD PRONE AREAS OF NORTHERN RWANDA <sup>8</sup>**

The Gishwati area in the northwest of Rwanda is one of the world's richest biodiversity hotspots and is home to a population dependent on rainfed crops. Yet climate change threatens local populations with erratic and heavy rainfall, resulting in an increasing intensity and frequency of floods and associated damages (e.g. human deaths, destroyed roads, and falling crop yields). In order to develop climate-resilient livelihoods and support climate change adaptation, a project led by the Government of Rwanda and supported by UN Environment was implemented from 2010-2015. The project restored over 1,300 hectares of degraded forests to reduce floods and droughts, planted 91,700 fruit trees to enhance food security, developed alternative climate-resilient livelihoods (e.g. beekeeping and mushroom farming) and planted 80,000 bamboo seedlings along 10 km of river to reduce soil erosion. Finally, an extensive early-warning climate system was developed to inform farmers' planning and reduce the impacts of extreme weather for over 19,000 people. These actions are supported by the development of a climate-resilience land-use plan for the vital Gishwati ecosystem.

#### **LAGOON RESTORATION IN NITERÓI, BRAZIL FOR URBAN REGENERATION, CLIMATE ADAPTATION AND INCREASED RESILIENCE <sup>9</sup>**

Niterói, Brazil is located in the Rio de Janeiro metropolitan region and is divided by the forested and protected Tiririca Massif. The development of a tunnel connecting to the seaside region has spurred urban expansion and encroached on two lagoons and placed many poorer populations at risk from flooding. The Piratininga waterfront park project responded to these challenges, based around a masterplan for addressing multiple ecological and social issues through the deployment of nature-based solutions. The multipurpose park aims to manage water quality, treat and depollute the lagoon using phytoremediation components (built wetlands), protect and enhance biodiversity to reconnect society with nature, and design opportunities for ecotourism to incentivise sustainable socioeconomic development. Zoning in the park further enables flood protection, active and passive recreation areas, and options for clean mobility using bike lanes. In addition to the ecological benefits, the park is also foreseen to enhance the local identity and create economic opportunities through a focus on ecotourism and traditional fishing.

**“THE COSTA RICA + NATURA INITIATIVE WILL PROMOTE THE ESTABLISHMENT OF A NATIONAL POLICY OF NATURE-BASED SOLUTIONS AND WILL STRENGTHEN OUR POSITION TOWARDS THE WORLD IN THE CONVENTION ON BIOLOGICAL DIVERSITY NEGOTIATIONS. OUR AMBITION IS THAT BY THE END OF THIS DECADE, ALL EFFORTS IN PUBLIC AND PRIVATE SPENDING, IN TRADE AND INVESTMENT ATTRACTION, IN TALENT ATTRACTION AND ACADEMIC EXCHANGES, IN PUBLIC POLICY DESIGN AND ENVIRONMENTAL CONSERVATION, WILL HAVE AS A GOAL THE SEARCH FOR NATURE-BASED SOLUTIONS.”**

Mrs. Pamela Castillo, Vice-Minister of Environment  
- Costa Rica

#### **FORGING CONNECTIONS BETWEEN PEOPLE AND NATURE**

Achieving the goals of the post-2020 Global Framework will not only be critical for the future of the natural world, but also for the millions of people whose livelihoods depend directly on healthy ecosystems and for communities whose well-being relies on nature. The IPBES Global Assessment has established that a deeper understanding and appreciation for nature across society is a prerequisite for meeting those goals.

Across many regions of the world, livelihoods are at risk from the twin threats of depleted natural



Community Garden,  
RachelDewis

<sup>7</sup> <https://cutt.ly/FdbvBUd>

<sup>8</sup> <https://cutt.ly/xdbbOLi>

<sup>9</sup> <https://cutt.ly/DdbnaYc>



Wooden bridge of a plankway leading through peat bog - Scenery of Vasenieki nature trail in Latvia, Dace Kundrate

<sup>10</sup> <https://cutt.ly/LdbQDXh>

<sup>11</sup> <https://cutt.ly/udbQ9QE>

<sup>12</sup> <https://cutt.ly/4dbWsDH>

<sup>13</sup> Tozer et al. (2020) Whose City? Whose Nature? Towards Inclusive Nature-based Solution Governance, Cities, forthcoming.

Cover page picture: Sea of Piratininga, Niterói, Rio de Janeiro, Brazil, Suelen Vargas

ecosystems and climate change. Nature-based solutions are being used to support environmental recovery and sustainable development. In the Comoros Islands, an initiative supported by UNEP and the GEF is establishing community conservation areas to protect biodiversity whilst also undertaking reforestation, watershed protection, rainwater harvesting, and the development of sustainable agro-forestry economies in order to enhance climate and community resilience <sup>10</sup>.

Nature-based solutions also provide a vital means of connecting urban communities with nature. As has been shown during the COVID-19 crisis, urban nature provides a critical resource for physical and mental well-being in cities globally. Research also shows that fostering such connections with nature can lead to people changing the way in which they value it—a vital lever for ensuring transformative change for biodiversity goals. This in turn may increase levels of proactive environmental behaviour <sup>11</sup>. In Toulouse, France, Monlong Park has been regenerated with the explicit aim of strengthening social ties and enhancing biodiversity, as well as creating space for exploration and immersion in nature <sup>12</sup>.

Yet access to urban nature is highly uneven, with disadvantaged communities often facing exclusion. Nature-based solutions, if implemented utilizing existing safeguards, can address this challenge and generate environmental stewardship. An example is the Cape Town Environmental Education Trust, which seeks to tackle the challenges of biodiversity protection and high unemployment levels through programmes and activities that enable access to nature across the city and especially through building fostering new connections between nature and people for disadvantaged communities <sup>13</sup>.

**PROVIDING LEADERSHIP THROUGH THE POST-2020 FRAMEWORK**

Nature-based solutions will provide a key means to achieve the goals of the post-2020 Global Biodiversity Framework for the protection, restoration, and sustainable use of biodiversity and for forging the transformative, whole-of-society approach that will be critical to its overall success. Yet it is vital that the opportunities offered by nature-based solutions are not misused. Safeguards and principles such as those set out in CBD COP 14/15 are necessary to secure the

potential of nature-based solutions to deliver biodiversity outcomes, respect indigenous and local communities, and ensure equitable access to the multiple benefits produced.

The post-2020 Global Biodiversity Framework now has the opportunity to show leadership in forging an agenda for nature-based solutions that aligns with the needs and aims of other MEAs and encourages collaborations while guaranteeing that they benefit nature and society in a fair and just manner.

This leadership can be demonstrated by:

- + Including a statement on the principles to be followed in the design, implementation, and stewardship of nature-based solutions in the post-2020 Global Biodiversity Framework;
- + Embedding nature-based solutions as a means through which multiple action targets can be realised;
- + Encouraging the uptake of nature-based solutions across all levels of government and by actors across the whole of society;
- + Mandating reporting on the progress and performance of nature-based solutions;
- + Ensuring that resources are allocated for building capacity, fostering exchange, and supporting the implementation of nature-based solutions.

**“GOVERNMENTS AROUND THE WORLD MUST DEMONSTRATE LEADERSHIP WITH NATURE-BASED SOLUTIONS THROUGH CLEAR COMMITMENTS AND AMBITIOUS AND BINDING TARGETS IN ORDER TO HALT THE LOSS OF BIODIVERSITY AND MAKE SIGNIFICANT PROGRESS IN COMBATING CLIMATE CHANGE. ALIGNING SUCH ACTIONS WITHIN THE FRAMEWORK OF THE RIO CONVENTIONS AND SDGS CAN ALSO DRIVE WIDER TRANSFORMATIVE CHANGE TO LIVE WELL, WITHIN THE LIMITS OF OUR PLANET.”**

Sandra Naumann, Biodiversity Coordinator, Ecologic Institute

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POST2020 BIODIVERSITY FRAMEWORK – EU SUPPORT IS FUNDED BY THE EUROPEAN UNION AND IMPLEMENTED BY EXPERTISE FRANCE. IT AIMS AT FACILITATING A COMPREHENSIVE AND PARTICIPATORY PROCESS LEADING TO THE ADOPTION OF AN AMBITIOUS POST-2020 GLOBAL BIODIVERSITY FRAMEWORK THAT FOSTERS COMMITMENT AND IMPLEMENTATION.

