Nature-based solutions for an equitable, carbon-neutral, nature-positive world: insights into the BirdLife International Partnership's impact on the ground

Summary

- Climate change and biodiversity loss are the most important – and interdependent – human-induced environmental challenges that society faces today, threatening people's lives and wellbeing. Nature-based solutions (NbS), including conserving and restoring nature habitats, could significantly contribute to climate change mitigation and adaptation, whilst simultaneously benefiting biodiversity and other ecosystem services.
- In this brochure we provide some examples of NbS being delivered by the Birdlife International Partnership around the world and across a range of ecosystems, including mangroves, coasts, forests, marshes and wetlands.
- We want to see increased international leadership and funding for biodiversity and NbS. Investing in measures that help people and ecosystems adapt to and mitigate the impacts of climate change while simultaneously protecting, sustainably managing and restoring biodiversity, ecosystem integrity and associated ecosystem services will increase our chances of leaving our environment in a better state for future generations.
- To achieve biodiversity, climate and sustainable development objectives, a specific focus on appropriate NbS in the post-2020 global biodiversity framework and climate action agenda is required.

Introduction

What are nature-based solutions (NbS)?

The **IUCN Global Standard for Nature-based Solutions** defines NbS as "*actions to protect, sustainably manage and restore natural or modified ecosystems that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits*"[1]. While NbS are often focused on their role in addressing climate change (and may be termed 'natural climate solutions'), they also provide a range of benefits or co-benefits, such as for community resilience, disaster risk reduction, livelihoods, health and wellbeing.

The role of NbS for climate, biodiversity and sustainable development

NbS have the potential to protect and restore biodiversity and ecosystem integrity, while providing powerful opportunities to help to mitigate and adapt to climate change and ensure human wellbeing through the delivery of 'ecosystem services'. In particular, NbS can help to mitigate the impact of climate change by maintaining and increasing the extent of carbon locked within natural ecosystems. NbS are key to meeting the UN Framework Convention on Climate Change (UNFCCC) Paris Agreement goals of mitigating and adapting to climate change; they can provide over 30% of the climate mitigation action needed by 2030 to prevent global temperature rise above 1.5˚C, above which the IPCC warns we would see damaging and irreversible impacts to all life on earth[2]. NbS are a key, multi-benefit tool to bridge the gap between the goals of the Convention on Biological Diversity (CBD) and UNFCCC, while supporting the achievement of the Sustainable Development Goals (SDGs).

1. IUCN (2020) Global Standard for Nature-based Solutions. A user-friendly framework for the verification, design and scaling up of NbS. First edition. Gland, Switzerland: IUCN.
2. https://www.ipcc.ch/sr15/

Implementation principles and standards

To ensure NbS deliver positive outcomes for people, climate and nature, BirdLife is part of a group led by the **Nature-based Solutions Initiative** that has developed four now widely accepted principles that must guide the implementation of NbS[3]:

1. NbS are not a substitute for the rapid phase-out of fossil fuels and must not delay urgent action to decarbonise our economies;
2. NbS involve the protection, restoration and/or management of a wide range of natural and semi-natural ecosystems on land and in the sea; the sustainable management of aquatic systems and working lands; or the creation of novel ecosystems in and around cities or across the wider landscape;
3. NbS are designed, implemented, managed and monitored by or in partnership with Indigenous Peoples and local communities through a process that fully respects and champions local rights and knowledge, and generates local benefits;
4. NbS support or enhance biodiversity, that is, the diversity of life from the level of the gene to the level of the ecosystem.

The BirdLife Partnership and nature-based solutions

BirdLife is working around the world to identify, pilot and scale-up innovative NbS to combat climate change, conserve biodiversity and create local and national economic benefits for sustainable development. The map below gives a flavour of the NbS projects that BirdLife Partners are implementing across the world, with some detailed on the following pages.

Recommendations

To achieve global leadership on NbS, we want to see governments deliver urgent action and introduce a range of ambitious policies and programmes that deliver:

- Increased international leadership and funding for biodiversity and NbS. Investing in measures that help people and ecosystems adapt to and mitigate the impacts of climate change while simultaneously protecting, sustainably managing and restoring biodiversity, ecosystem integrity and associated ecosystem services will increase our chances of leaving our environment in a better state for future generations;
- NbS-related targets and implementation relating to a range of areas including climate mitigation, area-based conservation, nature and climate finance, and development planning[4];
- NbS, that prioritise protection and restoration of ecosystem integrity, planned and implemented at landscape scale, using an ecosystem approach. This should include cumulative impact assessment and land use planning at ecologically-relevant scales and link to Nationally Determined Contributions and post-2020 biodiversity targets.

3. Nature-based Solutions Initiative (2021) Nature-based solutions to climate change: key messages for decision makers in 2021 and beyond. https://nbsguidelines.info/

4 BirdLife International policy briefing: Nature-based solutions for the post-2020 nature, climate and sustainable development agendas. Available at www.birdlife.org/post2020

Case studies

NBS IN THE AMERICAS

Conserving North American boreal forests for birds and people

BirdLife Partner(s)	Audubon
Location	Boreal forests of North America
Ecosystem type(s)	Wetlands, peatlands, lakes, rivers, mountains, coastlines

Image © Karen Burgess/Alamy

The boreal forest is one of the largest intact forests left on Earth. Stretching from Alaska to Labrador, it provides nesting grounds and migratory stopovers for nearly half of the common bird species found in North America and stores enormous amounts of carbon, especially within its soils, peatlands and permafrost. Through its Boreal Conservation programme, Audubon (BirdLife in the USA) is developing science to highlight the conservation values and priorities for the boreal forest region, and is working in collaboration with Indigenous governments and communities to advance their conservation and land stewardship goals across the boreal forest. More information can be found here.

Restoring the Atlantic Forest to support sustainable livelihoods and biodiversity

BirdLife Partner(s)	Guyra Paraguay
Location	San Rafael Atlantic Forest, Paraguay
Ecosystem type(s)	Tropical forest

Image © Cindy Galeano

As part of a wider transboundary project with BirdLife's Partners in Brazil and Argentina that works toward the long term conservation of the Atlantic Forest, Guyra Paraguay is restoring disconnected forest patches in the landscape using yerba mate. This commodity is part of Paraguay's cultural heritage but has been produced in an unsustainable way for decades. Guyra Paraguay approach for the production of yerba mate includes conserving and restoring the forest. The shade-grown yerba mate programme has scaled up since 2006 to over 70 beneficiaries and has recently secured new funding that will help expand the initiative to 200 beneficiaries. The initiative has proven to be a great strategy to support sustainable livelihoods and biodiversity conservation. On this last point, the biodiversity assessments performed by Guyra Paraguay in 2018 and 2019 have shown that the forest community inside the forest is significantly different from the forest edge and nearby croplands, indicating a positive impact of shade-grown yerba mate plantations regarding forest species. More information can be found here.

NBS IN EUROPE

Realigning coasts to protect nature and people in the UK

BirdLife Partner(s)	Royal Society for the Protection of Birds (RSPB)
Location	Medmerry, West Sussex coast, UK
Ecosystem type(s)	Coastal (intertidal mudflats, saltmarsh, grassland, farmland, saline lagoons, freshwater ponds and ditches, reedbed, scrub, shingle beach)

Image © RSPB

This section of England's southern coastline was in extreme danger of flooding from high tides and storms which were impacting wildlife and causing emotional and economic stress to residents. Since 2009, RSPB has been partnering with government to move coastal defences inland and create 184 ha of new intertidal habitat as a buffer. This has reduced flood risk to 348 homes and other infrastructure, is acting as a blue carbon store, and is benefitting a range of wildlife, especially breeding and wintering wading birds such as avocets. The project is one of the largest open coastal managed realignment schemes in Europe and has shown the multiple benefits that managed coastal realignment can deliver for local people, climate and wildlife. More information can be found here and RSPB has also published a wider 'lessons learned' report on NbS[5].

Forest restoration in Belarus to reduce emissions while saving waterbirds

BirdLife Partner(s)	BirdLife Belarus (APB), Polish Society for the Protection of Birds (OTOP)
Location	Białowieża Forest National Park, Poland
Ecosystem type(s)	Primeval forest

Image © Tomasz Wilk

The Białowieża Forest is one of Europe's last primeval (old growth) forests. As part of the **Endangered Landscape Programme**[6], our BirdLife Partners from Belarus and Poland are supporting a large landscape-level project aiming at restoring the forest's hydrology. It intends to adopt a transboundary approach to address the international stalemate over Poland's intensive logging. The project envisages that returning groundwater to near-natural levels should enable the rewetting of forests, up to 20,000 ha of drained mires and formerly straightened riverbeds. More information can be found here.

5. RSPB (2021) Harnessing the power of nature to tackle climate change: 5 lessons based on what works: https://www.rspb.org.uk/globalassets/downloads/policy-briefings/NBSReport
6. More information on the Endangered Landscape Programme can be found here: https://www.endangeredlandscapes.org/

NBS IN ASIA

Restoring forests in the Philippines' Sierra Madre to provide benefits for people and nature

BirdLife Partner(s)	Haribon Foundation
Location	Irid-Angelo Mountains, Sierra Madre, Philippines
Ecosystem type(s)	Tropical forest

Image © Haribon

Sierra Madre is considered one of the most biodiverse areas and the largest remaining tract of rainforest in the Philippines. As part of the **Asia-Pacific Forest Governance Project**[7], the Haribon Foundation (BirdLife in the Philippines) is working with local government, the environment ministry and Indigenous Peoples to protect and restore the forest in the Sierra Madre. This community-based project has made a difference on the ground by reducing carbon emissions, protecting wildlife, safeguarding a water catchment for the national capital, Manila, and generating local and national economic benefits for sustainable development. More information can be found here.

Sustainable wetland management in Nepal for people and nature

BirdLife Partner(s)	Bird Conservation Nepal (BCN)
Location	Koshi Tappy Wildlife Reserve, South-East Nepal
Ecosystem type(s)	Wetlands

Image © B. Pandeya

The wetland ecosystem at Koshi Tappu in Nepal is critically important, not just for wildlife, but also for the 100,000 people who inhabit the reserve's buffer zone. Bird Conservation Nepal and conservationists from the UK worked alongside these communities to promote sustainable livelihoods—alleviating the pressure on wetland resources and providing tangible benefits to some of the region's most disadvantaged people. The project has helped improve local attitudes to wildlife conservation and is having a positive effect on the wetland habitats that are so important to birds and other wildlife in the reserve. More information can be found here.

7. More information on Asia-Pacific Forest Governance Project can be found here: https://www.birdlife.org/forest-governance

NBS IN AFRICA

The Greater Gola Landscape, Sierra Leone and Liberia: forest conservation for nature, climate and people

BirdLife Partner(s)	RSPB, the Conservation Society of Sierra Leone (CSSL), the Society for Conservation of Nature in Liberia (SCNL)
Location	The Greater Gola Landscape, Sierra Leone and Liberia
Ecosystem type(s)	Tropical forest

Image © Caroline Thomas

Gola Rainforest, a transboundary area spanning Sierra Leone and Liberia, is not only vital for biodiversity, but also for climate change mitigation and local communities' livelihoods. But extensive tree cover loss in the region is putting the landscape and its local communities under significant pressure. RSPB and other BirdLife Partners, including CSSL and CSNL, have been working with governments and local communities on a series of projects (such as supporting Forest-Friendly cocoa farming) that are delivering nature-based solutions to climate change, supporting people and protecting nature. Through its REDD+ project launched in 2015 in Sierra Leone and the Gola community forest project that ran between 2014 and 2020 in Liberia, action has delivered multiple climate, biodiversity and community benefits. More information can be found here.

Enhancing the resilience of Sahel habitats, West Africa

BirdLife Partner(s)	Nigerian Conservation Foundation (NCF), La Fondation des Amis de la Nature (NATURAMA)
Location	Sahel region
Ecosystem type(s)	Wetlands and drylands

Image © Michiel van den Bergh

Through the "Living on the Edge" project, our Birdlife Partners in Burkina Faso and Nigeria are conserving and restoring wetland and dryland habitats across 13 Important Bird and Biodiversity Areas (IBAs; Key Biodiversity Areas for birds) and are supporting communities to adopt more sustainable land-use practices that are building their resilience to climate change. Their approach is to establish Local Conservation Groups at the community level which facilitate a participative process for more sustainable management of natural resources. More information can be found here.

NBS IN THE MIDDLE EAST

Restoration of the Iraqi marshes for the Indigenous Marsh Arab tribes

BirdLife Partner(s)	Nature Iraq
Location	Mesopotamian marshlands, Iraq
Ecosystem type(s)	Marsh

Image © Nature Iraq

BirdLife Partner Nature Iraq has worked to restore large areas of the Mesopotamian Marshes that were drained in the 1990s by President Saddam Hussein. Between 40% and 60% of the drained area has been re-inundated, and with specific management in some areas these marshes are once again the source of water, food, shelter and income for the Indigenous Marsh Arabs. More information can be found here.

NBS IN THE PACIFIC

Protection and restoration of mangroves for wildlife and people in Palau

BirdLife Partner(s)	Palau Conservation Society (PCS)
Location	Babeldaob Island, Palau
Ecosystem type(s)	Coastal

Image © Wang LiQiang / Shutterstock

Palau Conservation Society (PCS) has been coordinating an ecosystem approach to decision-making, to address coastal erosion on Palau's largest island, the location of three IBAs (Middle Ridge, Western Ridge and Ngerutechei). Working with communities and government this project ensured that adequate forested coastal buffer zones are in place to help mitigate coastal erosion, minimise the impact on water quality from saltwater inundation and improve the conservation of coastal biodiversity. More information can be found here.

Bringing science and people together to support policy and practice

Below we highlight a couple of key ways we are combining our scientific expertise and people-centred approach to ensure uptake of nature-based solutions into policy and practice.

Spatial nature-carbon mapping to support national development planning: Mapping nature, carbon and other ecosystem services across national territories can identify priority areas for the protection, restoration and sustainable management of ecosystems to enhance biodiversity at the same time as climate change mitigation, adaptation and disaster risk reduction. RSPB's mapping of carbon in nature rich areas at landscape, national and regional scales[8] and BirdLife's global mapping of carbon in **Key Biodiversity Areas[9]** provide examples of how such maps can guide national spatial planning to support global goals across the nature, climate and sustainable development agendas.

Supporting multi-stakeholder partnerships to share experience and scale-up solutions: Birdlife leads and/or collaborates with others such as through the **Climate Action Network** (CAN) and its Ecosystems Working Group, the **Friends of Ecosystem-Based Adaptation (**FEBA) and the **Trillion Trees**[10] initiative to share lessons and develop joint guidance and policy recommendations on the key role of ecosystems and biodiversity for climate change mitigation, adaptation and resilience to inform international negotiations at the CBD[11] and UNFCCC[12].

8. Such as this storymap: https://rspb.maps.arcgis.com/apps/Cascade/index.html?appid=2b383eee459f4de18026002ae648f7b7
9. BirdLife is a founder member of the KBA Partnership: http://www.keybiodiversityareas.org/
10. Trillion Trees is an unprecedented joint venture between three of the world's largest conservation organisations - BirdLife International, Wildlife Conservation Society (WCS) and WWF - to end deforestation and restore tree cover: https://trilliontrees.org/
11. PEDRR and FEBA (2020) Promoting nature-based solutions in the post-2020 Global Biodiversity Framework. https://www.iucn.org/sites/dev/files/promoting_nbs_in_the_post-2020_global_biodiversity_framework.pdf
12. Climate Action Network (2021) CAN Briefing: The role of ecosystems and biodiversity for climate change mitigation ambition and adaptation and resilience. https://climatenetwork.org/resource/can-briefing-the-role-of-ecosystems-and-biodiversity-for-climate-change-mitigation-ambition-and-adaptation-resilience-june-2021/

Together we are BirdLife International: the global Partnership for nature and people

BirdLife International is the world's largest nature conservation Partnership, with 115 national NGO partners, one per country. Through our unique local-to-global approach, we deliver world-leading science and high impact and long term conservation for the benefit of nature and people, sharing experience and informing policy at local, national, international and global levels. Since 2010, BirdLife's Climate Change Programme has been delivering high impact scientific research, technical tools and guidance, policy advocacy and project support on the ground to enhance synergies between climate action and biodiversity conservation. www.birdlife.org