Climate Adaptation and Protected Areas Initiative

Nature-Based Solutions Inventory for Zambia

June 2026

What Is the Nature-Based Solutions Inventory?

This inventory aims to showcase the variety of nature-based solutions (NbS) projects that have been completed recently or are currently under implementation in Zambia. It highlights the varied responses across the country to the climate and biodiversity crises, including efforts to address the increasing risks and vulnerabilities brought about by a changing climate.

The inventory provides information about the approaches taken by these NbS projects, the climate and biodiversity risk they address, their intended beneficiaries, and the ecosystems they target.

The inventory is a living document developed by the International Institute for Sustainable Development under the Climate Adaptation and Protected Areas (CAPA) Initiative funded by Global Affairs Canada. The CAPA initiative in Zambia is led by WWF.

Who Is the NbS Inventory for?

The information in this inventory will be beneficial for stakeholders working in or with an interest in the NbS sphere of work. Stakeholders include government officials, adaptation practitioners, conservation practitioners, and donors.

The inventory is intended to help stakeholders understand the NbS implementation landscape in Zambia, pinpoint existing gaps, potential synergies, and collaboration opportunities, and avoid duplication.

What Are NbS?

NbS are "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" (United Nations Environment Assembly, 2022). These actions help people and communities mitigate

the effects of and adapt to climate change, thereby increasing ecosystem resilience. They can also provide social co-benefits by recognizing and involving all groups of people, especially underrepresented groups, as active agents of change in the implementation of NbS for adaptation projects. This involves assessing how climate change will affect people of all genders and social backgrounds and identifying how NbS can help to address these impacts.

Ecosystem-Based Adaptation in Zambia

Ecosystem-based adaptation (EbA) actions, a subset of NbS, use "biodiversity and ecosystem services as part of an overall adaptation strategy, to help people adapt to the adverse effects of climate change" (Convention on Biological Diversity, 2009). They include measures that protect, conserve, restore, sustainably use, and manage natural ecosystems to strengthen the resilience of communities and ecosystems to the impacts of climate change.

Why Do NbS, Especially EbA, Matter for Zambia?

Zambia's economy and its citizens' livelihoods are highly dependent on the country's natural resources. Agriculture accounts for approximately 3.4 percent of the GDP (World Bank Group, 2024a) and provides employment for about 70% of the population (Zambia Development Agency, 2024). Considering direct and indirect values (excluding the market value of carbon), Zambia's forests were estimated to contribute about 4.7% of GDP. This contribution extended to at least 6.3% when multiplier effects of forestry and tourism related activities on other sectors were taken into account (Ministry of Lands, Natural Resources and Environmental Protection, 2015). With 20 National Parks (NPs), 36 Game Management Areas (GMAs) and 490 Forest Reserves (FRs), these protected areas support biodiversity and ecotourism. Meanwhile, wetlands, rivers, lakes, and swamps cover about 4.8% of the total land and play a crucial role in water regulation, food security, and sustaining local economies. This includes the fisheries sub-sector which contributes about 3.3% of national GDP (Ministry of Lands, Natural Resources and Environmental Protection, 2015).

This dependency on natural resources makes the country and its people highly vulnerable to the impacts of climate change. It underscores the need for mainstreaming NbS, and EbA strategies in particular, into national policies to ensure that actions to adapt to the impacts of climate change are planned for and that the country's ecosystems continue to be healthy and provide for communities. This is especially relevant because Zambia's country development strategies highlight increasing temperature extremes, erratic rainfall, drought, and floods as threats to its economic growth and food security, with projections pointing to worsening climatic conditions (Ministry of National Development Planning, 2017; Ministry of Finance and National Planning, 2022).

The country development strategies also emphasize the importance of climate adaptation strategies, and reaffirm the role of NbS, especially EbA interventions, in enhancing resilience (Ministry of Green Economy and Environment, 2021).

What Are We Learning About NbS in Zambia?

At the time of writing, the NbS projects are intensely concentrated in ecologically and economically vital landscapes in and around Zambia's national parks (the Sioma Ngwezi National Park, the Mosi-oa-Tunya National Park, the Lower Zambezi National Park, and the North and South Luangwa National Parks) as well as in the Bangweulu Wetland, the Lukanga Swamp, the Kafue Flats, the Barotse Basin in the Upper Zambezi floodplain, the Lake Tanganyika Basin, miombo woodlands, and agricultural lands. These areas are critical biodiversity hotspots, home to vulnerable ecosystems and communities dependent on natural resources for resilience and livelihoods.

The NbS projects in Zambia employ a diverse range of approaches, including restoring wetlands and rehabilitating floodplains for flood control and rainwater harvesting; regenerating forests for carbon sequestration; agroforestry to enhance soil quality; and managing wildlife for biodiversity conservation. To provide economic benefits as well as environmental gains, many of the initiatives integrate NbS with the development of livelihoods, such as beekeeping, alternatives to firewood, and sustainable harvesting of non-timber forest products.

Other NbS interventions demonstrate land-use transformations that make ecosystems more resilient. Efforts to restore rangeland are improving the stability of pastureland through rotational grazing models, while rehabilitating riparian buffer zones is helping to control erosion and improving freshwater security. In agricultural landscapes, NbS interventions are integrating agroforestry with conservation farming, thereby reinforcing food security and climate adaptation for vulnerable communities.

The NbS projects in Zambia also integrate capacity building and policy, to ensure long-term sustainability and alignment with national frameworks. Many of the initiatives focus on improving institutional capacity, promoting participatory governance, and providing community training, thereby equipping stakeholders with the skills necessary for climate adaptation and biodiversity conservation. To keep community-driven conservation at the heart of implementation, the interventions are deeply embedded in participatory governance, traditional knowledge systems, and nature-based livelihood strategies. Many of the projects also prioritize gender-responsive approaches, actively engaging women, young people, and marginalized groups to build inclusive adaptation mechanisms.

Distribution of NbS Projects in Zambia

The NbS projects presented in this inventory are distributed across eight provinces of Zambia, with some projects spanning multiple provinces and districts. In total, the inventory documents 13 NbS for adaptation projects. These are most highly concentrated in Central Province and Eastern Province, each of which host four projects, followed by Northern Province, Southern Province, and Western Province, each of which hosts three projects.

- Western Province hosts three projects, together covering the Barotse Basin and the districts of Mwandi, Sesheke, and Sioma.

- Southern Province also hosts three projects, which cover Kazungula, Livingstone, Zimba, and the Lower Kafue sub-catchment districts of Choma, Mazabuka, and Monze.
- Central Province has four projects, covering the districts of Chibombo, Chitambo, Kapiri Mposhi, Ngabwe, and Serenje.
- Eastern Province also has four projects, covering Chipata, Katete, Luangwa, Lundazi, Mambwe, Nyimba, Petauke, and Sinda.
- Lusaka Province hosts one project in the district of Chongwe.
- Luapula Province features two projects, which cover the districts of Chifunabuli, Kawambwa, Lunga, Nchelenge, and Samfya.
- Northern Province hosts three projects, between them covering the districts of Chilubi, Lupososhi, Luwingu, Mbala, Mpulungu, Mungwi, and Nsama.
- Muchinga Province has two projects covering the districts of Chama, Isoka, Kanchibiya, Lavushi Manda, Mafinga, and Mpika.

NbS Inventory

1 Climate Adaptation and Protected Areas (CAPA) Initiative

Implementation entity	WWF Zambia in partnership with the International Institute for Sustainable Development (IISD) and the Department of National Parks and Wildlife
Project status	Ongoing (2023–2026)
Location	**Southern Province:** Kazungula, Livingstone **Western Province:** Sesheke, Sioma
Intended beneficiaries	• Smallholder farmers • Beekeepers • Indigenous communities • Managers of protected areas • Conservation agencies • Community-based organizations • Local community groups, including individuals from underrepresented groups (women, youth, and persons with disability)
Societal challenges addressed by NbS	Climate mitigation; Climate adaptation Human health; Food security Economic & social development; Biodiversity degradation & loss Disaster risk reduction; Water security
Ecosystem(s) targeted	Modified and protected terrestrial and aquatic ecosystems
Ecosystem services provided	• Food for human consumption and wildlife • Water • Climate regulation • Flood control • Pollination
Description of NbS	The NbS for adaptation interventions implemented in the CAPA project focus on restoring river and stream buffer zones, as well as desilting and stabilizing lagoons and dry water pans. In forests, the focus is on regenerating trees in degraded portions through farmer-managed natural regeneration (FMNR) practices and assisted natural regeneration; restoring community forests by promoting fire management techniques and the sustainable harvesting of non-timber forest products; and encouraging agroforestry through planting fruit trees in homesteads. NbS interventions are also rehabilitating rangelands by growing fodder grasses, and restocking wildlife species in the Sioma Ngwezi National Park.

The project is also supporting the integration of NbS and gender equality and social inclusion (GESI) considerations into documents related to managing protected areas, such as park management plans. By integrating GESI principles, management activities can be implemented in a way that responds to the needs and concerns of all community members. This is being achieved by deliberately identifying and training a gender, age, and ability-diverse group of GESI champions at each site.

Key project interventions include:

- Restoring 50 m of the buffer zone along both banks of the Nsongwe River and the Lubemba and Lutwa streams, covering 400 hectares (ha) of the river basin.
- Regenerating 400 trees per ha (depending on the availability of tree saplings and live tree stumps) to modify the microclimate and provide non-timber forest products in Nsongwe area.
- Working closely with livestock farmers to provide better grazing areas for domestic animals and wildlife by planting fodder grass on 140 ha of rangeland.
- Planting and growing 30,000 fruit trees in home orchards and gardens across three sites, with 10 assorted fruit trees provided to each participating household.
- Stabilizing lagoons and dry pans for freshwater harvesting in and around protected areas, including sustainable desilting works: one in each community–Ngweze and Makanda, Lyabangu, two in Mosi-oa-tunya National Park, and two in Sioma Ngwezi National Park.
- Restocking wild animals (50 zebra, 100 wildebeest, and 100 impala) in the Sioma Ngwezi National Park
- Using reforestation and fire management practices to restore degraded land inside protected community forests, including 100 ha in Nanduka and Kaseno forests within Kalobolelwa community.
- Restoring 100 ha of the Mahalahala and Masilaha community forests and encouraging sustainable forest management by supporting six women-led community fruit tree nurseries established for afforestation and reforestation efforts.
- Promoting the sustainable harvesting of devil's claw and mungongo nuts for their oils by engaging community members in Ngweze and Makanda in dialogue about unsustainable harvesting methods that result in land degradation around the Sioma Ngwezi National Park.

Together, these interventions are helping to protect and sustain biodiversity and provide nature-positive livelihood opportunities for local communities. They are also supporting long-term management considerations and inclusive benefits from NbS as a viable solution for building resilience to climate change.

Climate risks addressed	• Droughts and dry spells: leading to less water available for agriculture and fodder for livestock. • High temperatures and heat waves: leading to more evapotranspiration, soil degradation, and stress on crops and livestock. • Flooding due to surface runoff: causing erosion, reducing soil fertility, and disrupting local water resources. • Reduced rainfall and increased rainfall variability: leading to unpredictable growing seasons and threatening food security. • Strong winds: causing damage to infrastructure and vegetation, eroding the soil, and reducing agricultural productivity.
Biodiversity risks addressed	• Reduced river water volumes: leading to river systems drying up and reducing aquatic biodiversity—for example, in the Nsongwe River. • Reduced forest quality: less diversity and richness of plant and animal species in the forests. • Wetland deterioration: leading to water pans drying up and the loss of the diverse ecosystems and biodiversity they contain. • Increased growth of invasive species in protected areas and the surrounding ecosystems: driven by climate change creating environments conducive to invasive species. • Less food being available for wildlife: due to more dry spells and droughts affecting vegetation regeneration rates. • Slow regeneration of ecosystems, with an observable decline in the integrity of ecosystems and the availability of resources. • More migration of animals into surrounding areas, including communities, as higher temperatures in the protected areas reduce the suitability of habitats.
Reference	https://www.iisd.org/capa/kaza https://www.mot.gov.zm/?p=2837

2 Growing Greener: Restoration and sustainable use of agro-pastoralist systems in open arid landscapes across southern Africa

Implementation entity	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) in partnership with Centre for Coordination of Agricultural Research and Development, Conservation International, and Peace Parks Foundation
Project status	Ongoing (2022–2029)
Location	**Western Province:** Mwandi
Intended beneficiaries	• Agro-pastoralist communities • Smallholder farmers • Local conservation groups • Rural households who depend on livestock and agriculture
Societal challenges addressed by NbS	Climate mitigation; Climate adaptation Human health; Food security Economic & social development; Biodiversity degradation & loss Disaster risk reduction; Water security
Ecosystem(s) targeted	• Semi-arid savannas characterized by sparse vegetation, which are prone to degradation from overgrazing • Riparian zones along rivers and streams
Ecosystem services provided	• Soil stabilization • Water retention and availability • Biodiversity enhancement • Habitat quality improvement
Description of NbS	The NbS intervention is focusing on restoring degraded lands and improving the sustainability of agro-pastoralist systems. The project aims to catalyze nature-based land use and market-supported systems that align socio-economic development with the restoration of semi-arid landscapes and biodiversity, thereby combating desertification at the community, national, and regional levels (International Climate Initiative, 2022), whose drivers include climate change. It also integrates proven agro-pastoral practices and traditional knowledge systems to drive community-based conservation efforts. In its implementation, the project integrates gender training into the Herding for Health model. The project has developed a gender working paper, which identifies gaps, challenges, and recommendations for effectively incorporating gender into Herding for Health interventions.

	As of 2024, more than 400 people (48 % women) had been trained across Zambia, Botswana, and South Africa to support strategic herding on 121.000 ha of communal rangelands in South Africa and Zambia, thereby improving rangeland health and household resilience. The following key interventions are being implemented in the project: • Herding for Health: a rotational grazing model that improves rangeland management and livestock health, thereby ensuring that pastures are used sustainably. • Integrated communal grazing: using controlled rotational grazing to enhance soil quality and vegetation cover, thereby reducing rangeland degradation. • Community-driven governance structures: strengthening local participation in land management to ensure long-term sustainability. • Using NbS for soil and landscape restoration: developing ecosystem valuation and green enterprises to support restoration economies.
Climate risks addressed	• Prolonged dry spells and droughts • Erratic rainfall • Rising temperatures These climate risks threaten agricultural and livestock systems and exacerbate conflict between humans and wildlife due to increased tensions between pastoral and conservation efforts. The risks lead to poor rangeland conditions; reduced foraging for livestock, which weakens the animals' health and productivity; water scarcity; declining soil fertility; and reduced agricultural capacity.
Biodiversity risks addressed	• Rangeland degradation and pressure: soil erosion and reduced vegetation cover • Loss of foraging resources for livestock and wildlife. • Expansion of agricultural activities • Loss of native habitats and reduced biodiversity • Disrupted landscape connectivity caused by the fragmentation of ecological corridors • Hindered movement of wildlife and more conflict between humans and wildlife
Reference	http://www.peaceparks.org/building-resilience-to-climate-change-in-zambia https://nufarmerafrica.com/2023/06/30/herding-for-health-in-cattle-farms/ https://www.international-climate-initiative.com/en/project/growing-greener-restoration-and-sustainable-use-of-agro-pastoralist-systems-in-open-arid-landscapes-across-southern-africa-22-iii-124-sub-saharan-africa-g-open-arid-landscapes

3	Building the resilience of local communities in Zambia by introducing EbA into priority ecosystems, including wetlands and forests

Implementation entity	Ministry of Green Economy and Environment and the Climate Change Department, in partnership with the United Nations Environment Programme through the Global Environment Facility (GEF)
Project status	Ongoing (2020–2027)
Location	Bangweulu Wetland • **Luapula Province:** Chifunabuli, Lunga, Samfya • **Muchinga Province:** Kanchibiya, Lavushi Manda • **Northern Province:** Chilubi, Lupososhi, Luwingu Lukanga Swamp • **Central Province:** Chibombo, Kapiri Mposhi, Ngabwe
Intended beneficiaries	Vulnerable rural communities living in and around the Bangweulu Wetland, the Lukanga Swamp, and the adjacent forest areas
Societal challenges addressed by NbS	Climate mitigation; Climate adaptation Human health; Food security Economic & social development; Biodiversity degradation & loss Disaster risk reduction; Water security
Ecosystem(s) targeted	• Wetlands: Kafue Flats, Lukanga Swamp • Terrestrial forests: areas adjacent to wetlands
Ecosystem services provided	• Water regulation • Flood control • Carbon sequestration • Provision of resources, such as fish, firewood, hydroelectricity, and water for irrigation
Description of NbS	The project introduced EbA techniques to restore wetlands that play a vital role in regulating water flow and mitigating floods, among other key ecosystem services. The project aims to reduce the vulnerability of rural communities in Zambia to current and future climate change risks. These risks are exacerbated by the ongoing degradation of wetlands and forests, as well as the associated reduction in the provision of ecosystem services.

	Specifically, the project is implementing four primary interventions: • Enhancing government capacity to integrate EbA into sectoral and national policies, environmental plans, and governance frameworks. • Restoring wetlands and forests through afforestation, removing invasive species (such as the weed Salvinia molesta), and ecosystem rehabilitation guided by community-driven conservation approaches. More than 18,000 ha of forest and wetland are being restored. • Supporting communities to adopt climate-resilient agricultural techniques—agroforestry and conservation agriculture; alternative energy sources (biochar kilns, improved cookstoves)—and additional sustainable livelihoods to reduce pressure on natural ecosystems. 3,900 people benefiting from climate-resilient agriculture techniques and alternative sustainable livelihoods (beekeeping, aquaculture, and vegetable-growing). • More than 100,000 people made aware of climate risks and impacts. • Raising awareness of the environmental, economic, and social benefits of EbA through policy briefs, research reports, and the establishment of a web-based knowledge repository for climate adaptation strategies. The project mainstreams gender equality by ensuring that women, young people, and marginalized groups are actively involved in its implementation. This is done by setting up gender-sensitive community groups for participatory environmental governance; providing training on climate-resilient agriculture, financial literacy, and governance for women-led households and youth groups; ensuring equitable access to livelihood opportunities and adaptation resources; and addressing social barriers that limit participation in climate adaptation initiatives.
Climate risks addressed	• Reduced rainfall and shifting rainfall patterns, leading to water scarcity • Drought • Floods

Biodiversity risks addressed	• Degradation of rangeland and wildlife habitats • Fragmentation of ecological corridors • Spread of invasive species (*Salvinia molesta* weed—its uncontrolled proliferation in wetlands reduces water quality, affects fisheries, and alters native ecosystems) • Degradation of wetlands and forests • Human-wildlife conflict due to habitat shifts increasing competition for resources • Declining vegetation cover • Declining wildlife populations due to habitat loss and ecosystem degradation
Reference	https://www.unep.org/ecosystem-based-adaptation-zambia https://www.unep.org/gef/projects/building-resilience-local-communities-zambia-through-introduction-ecosystem-based https://www.unep.org/resources/factsheet/ecosystem-based-adaptation-zambia-2021-2025

4	Community-Based Adaptation: Scaling up Community Action for Livelihoods and Ecosystems (CBA SCALE+) – Zambia		
Implementation entity	CARE Zambia along with IISD, the International Union for Conservation of Nature, the Food, Agriculture and Natural Resources Policy Analysis Network, the Ministry of Green Economy and Environment, and Zimba District Council		
Project status	Ongoing		
Location	**Southern Province:** Zimba		
Intended beneficiaries	• Smallholder farmers • Local authorities (councils and local departments) • Policy-makers • Marginalized and climate-vulnerable community groups, including women and youth (targeting 66,000 individuals)		
Societal challenges addressed by NbS	Climate mitigation	Climate adaptation	
	Human health	Food security	
	Economic & social development	Biodiversity degradation & loss	
	Disaster risk reduction	Water security	
Ecosystem(s) targeted	Wetlands, forests, and agroecosystems		
Ecosystem services provided	• Water regulation: enhancing water retention and reducing flood risks. • Carbon sequestration: absorbing carbon and mitigating climate change. • Soil health: improving fertility and preventing erosion. • Biodiversity: providing wildlife habitats and supporting ecological balance. • Climate resilience: strengthening adaptation to extreme weather.		
Description of NbS	The CBA SCALE+ initiative is a comprehensive effort to strengthen community-based adaptation (CBA) approaches to climate change, integrating nature-based, gender-responsive, and equitable adaptation strategies into local governance and community action. It is premised on the narrative that Zambia, like other countries in Africa, faces increasing climate vulnerability, with extreme weather events affecting ecosystems, infrastructure, and livelihoods. Despite past efforts to promote CBA practices, challenges such as limited institutional support and inadequate resources have hindered the widespread implementation of these practices. CBA SCALE+, therefore, aims to bridge this gap by scaling up localized adaptation strategies, strengthening community resilience, and fostering an enabling policy and financing environment for long-term sustainability.		

	The project supports farmers, local authorities, and policy-makers in managing climate risks, enhancing biodiversity conservation, and promoting sustainable livelihoods for vulnerable communities. The project partners implement inclusive, gender-specific, and nature-related measures for community-based adaptations. In Zambia, the project aims to enable 66,000 individuals to better cope with climate-related risks where climate change severely threatens livelihood security, agricultural productivity, and natural ecosystems. It actively engages local institutions, civil society organizations, and grassroots movements to expand adaptation efforts and build climate resilience among marginalized groups. Policy-makers and communities in Zambia are encouraged to actively engage in adaptation planning to ensure that solutions are locally driven and sustainable. By fostering knowledge sharing platforms and direct community participation, the project is strengthening long-term climate resilience in Zambia.
Climate risks addressed	• Droughts and prolonged dry spells: strengthening water conservation measures and sustainable land management. • Erratic rainfall and increased climate uncertainty: supporting communities in planning for variable climatic conditions. • Ecosystem degradation and land erosion: implementing nature-based interventions to sustain biodiversity and stabilize landscapes. • Livelihood instability: facilitating adaptation strategies to protect agricultural productivity and rural economies.
Biodiversity risks addressed	The CBA SCALE+ promotes ecosystem-based solutions to maximize biodiversity conservation, addressing the following risks: • Landscape degradation: the loss of productive ecosystems due to unsustainable land-use practices. • Erosion of Indigenous ecological knowledge: a decline in traditional resource management approaches that are essential for conservation. • Habitat loss and fragmentation: poorer ecosystem health affects the survival and biodiversity of species. • Declining agricultural biodiversity: limited use of climate-resilient farming systems impacts food security and ecological stability.
Reference	https://www.iisd.org/projects/cba-scale https://www.carezambia.org/community-based-adaptation-scaling-up-community-action-for-livelihoods-ecosystems-in-southern-africa-and-beyond-cba-scale/

5 Climate change adaptation in forest and agricultural mosaic landscapes (GEF ID 10186)

Implementation entity	Food and Agriculture Organization of the United Nations in partnership with the Ministry of Lands and Natural Resources Zambia and WWF Zambia
Project status	Ongoing (2021–2026)
Location	**Eastern Province:** Nyimba, Petauke **Western Province:** Sesheke, Sioma
Intended beneficiaries	Local farming communities, forest-dependent communities, and local conservation groups
Societal challenges addressed by NbS	Climate mitigation; Climate adaptation Human health; Food security Economic & social development; Biodiversity degradation & loss Disaster risk reduction; Water security
Ecosystem(s) targeted	• Forests: primarily miombo woodlands • Agroecosystems: smallholder farms within the mosaic landscape of forest patches and agricultural fields
Ecosystem services provided	• Soil fertility enhancement: by improving the structure and nutrient content of the soil. • Water regulation: by enhancing water retention in soils and reducing runoff. • Carbon sequestration: by increasing carbon capture.
Description of NbS	The NbS interventions in this project were initiated by equipping community organizations (such as community forestry management groups) with the tools and skills for implementing adaptation measures to strengthen climate resilience in production landscapes. These measures include integrated land-use planning, climate risk assessments, sustainable forest management, and agroforestry. Forest and farm producer organizations are using mobile technologies for aquifer mapping and land-use mapping. They are identifying and developing bankable business plans for climate-resilient value chains in relation to non-timber forest products, such as honey, tamarind, baobab, and mushrooms—thereby setting up small-scale forest enterprises.

	Exchange visits facilitate knowledge sharing among stakeholders on community-based sustainable forest management and forest enterprises. Traditional knowledge, farmer field schools, and field days support the participatory selection of climate-resilient species, with guidelines for sustainable management developed explicitly for the target beneficiaries. Mobile-based monitoring systems have been deployed to track best practices in non-timber forest product management and climate-smart agriculture, with scalable models identified for broader replication at various levels. The project has implemented the following key interventions: • Strengthening the management of productive landscapes by improving community-managed forests and agricultural lands, targeting forestry extension services and local managers. More than 300,000 ha of forest have been preserved by establishing over 30 community forest management groups across Eastern Province and Western Province. • Enhancing value chains in forestry by scaling up sustainable charcoal production technologies and the diversification of non-timber forest products like honey, tamarind, baobab, mungongo nuts, and mushrooms. • Promoting diversified livelihood strategies by supporting underutilized traditional crops, establishing community-based seed banks, adopting certification systems, and strengthening access to market-oriented value chains. • Introducing participatory monitoring and evaluation through drone mapping technologies, improving community participation in forest governance, and peer-to-peer knowledge exchange on sustainable landscape management.
Climate risks addressed	• Shorter rainy seasons and delayed onset of rains • Higher rainfall variability, leading to unpredictable growing conditions • Hotter, drier dry seasons that are impacting water availability • Increased frequency and intensity of extreme weather events, including droughts, dry spells, and floods • High exposure and sensitivity of rain-fed agricultural systems These risks result in impacts such as crop failures, reduced agricultural productivity, food insecurity, and reduced health and resilience of forests and woodlands.

Biodiversity risks addressed	• Habitat loss: due to the expansion of subsistence and commercial farmland into woodlands. • Loss and destruction of forest biodiversity (woodlands): due to harmful fire, overexploitation, and deforestation (especially for charcoal and fuelwood). • Ecological instability: due to the weak integration of crops and trees into landscapes. • Land degradation: leading to declining yields, which impacts food security and rural livelihoods. • Pressure on woodland resources: which negatively impacts women's livelihoods and food security. • Deforestation: due to unsustainable land-use practices.
Reference	https://openknowledge.fao.org/server/api/core/bitstreams/31e2f0f4-825b-4f37-b31f-ef0f273bdd6b/content https://www.eas.gov.zm/?p=11578

6 Promoting climate-resilient, community-based regeneration of indigenous forests in Zambia's Central Province (UNDP PIMS ID 4712; GEF ID 5435)

Implementation entity	Ministry of Lands, Natural Resources and Environmental Protection and the Forestry Department, in partnership with the United Nations Development Programme
Project status	Completed (2015–2022)
Location	**Central Province:** Chitambo, Serenje
Intended beneficiaries	Local communities around miombo woodland areas in the districts of Chitambo and Serenje, including vulnerable groups, especially women
Societal challenges addressed by NbS	Climate mitigation; Climate adaptation Human health; Food security Economic & social development; Biodiversity degradation & loss Disaster risk reduction; Water security
Ecosystem(s) targeted	Miombo woodlands and agroecosystems
Ecosystem services provided	• Provisioning services: supplying fuelwood, charcoal, food (e.g., fruits, honey), medicines, and timber—key to rural livelihoods in Central Province. • Regulating services: supporting climate resilience through carbon sequestration, water cycling, and soil fertility. • Supporting services: sustaining wildlife habitats and nutrient cycling to maintain ecosystem health. • Cultural services: preserving traditional knowledge, upholding local practices, and boosting local economies.
Description of NbS	The NbS interventions in this project focused on regenerating forests and promoting climate-resilient adaptation practices among forest-dependent communities. The project employed an integrated approach, which entailed strengthening adaptation efforts by building technical and institutional capacity among forest experts and communities. The NbS interventions included planning and implementing climate-resilient agroforestry and assisted natural regeneration in miombo woodlands. More than 1,000 community members and forestry officers were trained in climate-resilient agroforestry techniques and natural regeneration practices, enhancing local ownership and technical know-how. Other interventions included establishing fire monitoring and management plans across districts to support woodland regeneration and reduce the frequency of fires in miombo woodlands.

	To limit the degradation of miombo woodlands caused by charcoal production and encourage the more efficient use of resources, inefficient charcoal production technology was replaced with wood-saving technologies. The project piloted 120 improved charcoal kilns and 50 briquetting machines across 20 village action groups. Their use significantly reduced the amount of wood consumed and emissions compared with traditional charcoal production. These interventions promoted the protection and sustainable use of valuable miombo woodlands that provide vast ecosystem services and wide forest biodiversity. This has strengthened the resilience of forest biodiversity and community livelihoods to climate change, thereby reducing pressure on the forests.
Climate risks addressed	• Rising temperatures • Increased droughts • Extreme rainfall events, which are threatening rural livelihoods
Biodiversity risks addressed	• Degradation of miombo woodlands: caused by unsustainable land use and exploitation of resources. • Reduced biodiversity and ecosystem resilience: due to deforestation and frequent fires, which weaken the woodlands' ability to regenerate. • Loss and reduction of woodland ecosystem services: reducing their role in climate adaptation and livelihoods.
Reference	https://www.thegef.org/projects-operations/projects/5435 https://erc.undp.org/evaluation/documents/download/18261

7 Sustainable Land Restoration project

Implementation entity	World Vision Zambia in partnership with local government, community organizations, and international donors. Funding is provided by the Australian Government.
Project status	Ongoing (2023–2027)
Location	**Central Province:** Chibombo **Eastern Province:** Katete, Sinda
Intended beneficiaries	Households reliant on forests, community forest groups, and local industries
Societal challenges addressed by NbS	Climate mitigation; Climate adaptation Human health; Food security Economic & social development; Biodiversity degradation & loss Disaster risk reduction; Water security
Ecosystem(s) targeted	Forests and agricultural land
Ecosystem services provided	• Water regulation • Soil fertility enhancement • Carbon sequestration • Climate regulation • Provision of water for agricultural use
Description of NbS	The project aims to restore 150,000 ha of degraded forest and farmland through NbS. It employs FMNR to help trees and vegetation regenerate from existing root systems and soil-based seeds. To improve the health of the soil and enhance biodiversity, the project is using assisted natural regeneration, conservation agriculture, and agroforestry. It also aims to support 5,000 rural farming households to transition to sustainable agricultural practices. The project is also integrating academia, non-governmental organizations (NGOs), and traditional leaders into the interventions. The universities involved contribute research on climate-smart agriculture, which informs FMNR techniques and agroforestry models. The NGOs, including World Vision Zambia, are providing community training programs on sustainable land restoration and alternative livelihoods. Traditional leaders, such as Chief Kawaza, are mobilizing communities and advocating for responsible land-use practices, ensuring that there is local ownership of conservation efforts.

	In addition, the project is promoting soil conservation techniques, water harvesting, and integrated land management to strengthen climate resilience and food security. It also undertakes interventions to strengthen policies; for example, by advocating for FMNR to be integrated into Zambia's green economy strategy. Through these interventions, the project is integrating NbS to enhance the resilience of communities and agricultural lands to the negative impacts of climate change. By sustaining ecosystem services—for example, by improving soil fertility, regulating water, and conserving biodiversity—the project is both improving livelihoods and benefiting biodiversity.
Climate risks addressed	• Erratic rainfall • Flash flooding • Prolonged droughts • Increased temperatures leading to heat stress These climate risks affect subsistence farmers, leading to declining crop yields, increased soil depletion, and heightened vulnerability to climate extremes.
Biodiversity risks addressed	• Fragmentation of forest habitat due to reduced tree cover, with less diversity of trees to support wildlife. • Poor soil health due to a heavy dependency on chemical fertilizers. • Loss of forest biodiversity, affecting the forest's ability to provide stable ecosystems that sustain diverse species. • Reduced ecosystem resilience, with reduced ability to withstand environmental challenges. • Loss of ecosystem services for forests and soil.
Reference	https://www.wvi.org/stories/zambia/world-vision-zambia-launches-new-australian-funded-sustainable-land-restoration https://fmnrhub.com.au/

8 Zambia for Agroforestry, Biodiversity, and Climate (Z4ABC)

Implementation entity	Center for International Forestry Research and World Agroforestry, collaborating with the University of Zambia and Mulungushi University. Other key implementers include: • The Natural Resource Institute Finland • The Viikki Tropical Resources Institute at the University of Helsinki • Häme University of Applied Sciences
Project status	Ongoing (2022–2026)
Location	• **Lusaka Province:** Luangwa, Rufunsa • **Eastern Province:** Katete, Nyimba • **Muchinga Province:** Lavushi Manda, Mpika All project intervention sites are located in the Lower Zambezi–Luangwa–Nyika corridor.
Intended beneficiaries	Commercial smallholders, local smallholders, and transporters, inclusive of young people and all genders
Societal challenges addressed by NbS	Climate mitigation; Climate adaptation Human health; Food security Economic & social development; Biodiversity degradation & loss Disaster risk reduction; Water security
Ecosystem(s) targeted	• Agroecosystems • Forested ecosystems • Wildlife ecosystems: national parks and game management areas under threat • Riverine and wetland ecosystems
Ecosystem services provided	• Food production: by supporting agriculture, agroforestry, and value chains. • Water regulation: by maintaining riparian zones and sustaining livelihoods. • Carbon sequestration: reducing emissions through forest management and agroforestry. • Biodiversity support: by supporting national parks and GMAs to protect species. • Livelihood security: by supporting ecosystem-based enterprises that enhance resilience.

Description of NbS	The Z4ABC project applies NbS relevant to each of the respective landscapes it targets to strengthen climate resilience and diversify livelihoods. In Lusaka province, interventions emphasize agroforestry and sustainable forest management to curb deforestation while creating market-linked products, such as honey and baobab goods, complemented by community-led ecotourism enterprises that reduce reliance on poaching and mining. In Eastern Province, climate-smart agroforestry, watershed protection, and forest-based enterprises improve soil fertility, water retention, and provide eco-friendly income streams like beekeeping and handicrafts. In Muchinga Province, the focus is on wetland restoration, agroecological land-use management, and participatory forest conservation, supporting sustainable harvesting and ethical wildlife tourism. These NbS are reinforced through multi-actor platforms, targeted grants, and participatory land-use scenario modelling. This ensures that ecosystem restoration and livelihood diversification are scaled, integrated into local economies, and aligned with Zambia's national climate priorities and its nationally determined contribution commitments.
Climate risks addressed	• Frequent drought, which negatively impacts food security. • Food insecurity driven by climate change, which affects smallholder farmers due to the erratic weather patterns. • Extreme weather events, with intensifying storms, floods, and heat waves threatening infrastructure, ecosystems, and smallholder farms.
Biodiversity risks addressed	• Deforestation: driven by expanding rain-fed agriculture and charcoal production for urban markets. • Reduced ecological connectivity: driven by agricultural intensification characterized by the expansion of monoculture and the use of pesticides. • Habitat disturbance: encroachment into protected areas putting more pressure on forests and wildlife due to agricultural expansion and population growth. • Human-wildlife conflict: with encroachment into habitats and affecting biodiversity conservation and local livelihoods. • Threat of biodiversity loss: endangered by proposed mining projects near the Lower Zambezi National Park, the North Luangwa National Park, and the South Luangwa National Park.

Reference	https://www.cifor-icraf.org/z4abc/ https://capacity4dev.europa.eu/projects/desira/info/z4abc-zambia-zambia-agroforestry-biodiversity-and-climate_en https://www.cifor-icraf.org/publications/pdf/flyer/Z4ABC-Flyer.pdf https://resilient-landscapes.org/mf_publication/zambia-for-agroforestry-biodiversity-and-climate-z4abc-enhancing-the-sustainability-resilience-and-productivity-of-agricultural-forestry-and-wildlife-based-value-chains-in-zambia/

9 Zambia Integrated Forest Landscape Project (ZIFLP)

Implementation entity	Ministry of Green Economy and Environment, with financial support from the World Bank, BioCarbon Fund's Initiative for Sustainable Forest Landscapes, and the GEF
Project status	Completed (2024)
Location	**Eastern Province:** Chipata, Katete, Lundazi, Mambwe, Nyimba, Petauke, Sinda
Intended beneficiaries	• Rural farming households • Community forest management groups • Women-led enterprises • Wildlife resource boards • Agribusiness partners • Relocated communities near the Lukusuzi National Park
Societal challenges addressed by NbS	Climate mitigation; Climate adaptation Human health; Food security Economic & social development; Biodiversity degradation & loss Disaster risk reduction; Water security
Ecosystem(s) targeted	Forests, agricultural landscapes, wetlands, and rangelands
Ecosystem services provided	• Provisioning of food and forest products • Climate regulation through reduced deforestation and carbon sequestration • Soil fertility improvement and erosion control • Biodiversity conservation and wildlife habitat protection
Description of NbS	The project implemented a range of ecosystem-based interventions that strengthened climate resilience and reduced vulnerability in Eastern Province. The project promoted community forest management, climate-smart agriculture, livelihood diversification through ecosystem-dependent enterprises; improved how wildlife and protected areas are managed; and secured land tenure governance. Together, these interventions enhanced adaptive capacity, reduced climate risks, and supported sustainable livelihoods.

	The key results included: • Community forest management: supported 36 community forest management groups, placing 72,840 ha of forest under sustainable management, with fire control measures introduced and 5.26 million seedlings planted for reforestation. • Climate-smart agriculture: promoted climate-smart agriculture practices across 190,304 ha of farmland, established 478 farmer field schools, and developed 21 farmer-led irrigation schemes to reduce drought risk and improve yields. • Wildlife and human-wildlife conflict management: strengthened the protection of the Lukusuzi National Park through improved patrols and waterholes, and piloted chili-based deterrents to reduce crop raids by elephants. • Land tenure and governance: validated customary land rights, transferring 64,944 ha of land to communities, thereby securing stewardship and enhancing adaptive capacity.
Climate risks addressed	• Droughts and dry spells: through irrigation schemes, fodder banks, and climate-smart agriculture practices. • Flooding and erosion: through integrated land-use planning and soil fertility management. • Rainfall variability: through crop diversification and agroforestry. • Wildfire risks: through community fire management plans.
Biodiversity risks addressed	• Deforestation and forest degradation: through community forest management interventions and linking local adaptation efforts to global climate mitigation "reducing emissions from deforestation and forest degradation in developing countries" (REDD+) mechanisms. • Wildlife habitat loss: by strengthening the protected area through supporting park patrols, fencing, and providing waterholes. • Human-wildlife conflict: through growing chili as an elephant deterrent and erecting eco-friendly fencing. • Decline in ecosystem integrity: through establishing tree nurseries for reforestation, and by rehabilitating pasture for livestock in rangelands.
Reference	https://ziflp.org.zm/sustainable-wildlife-management/ https://www.worldbank.org/en/news/feature/2019/10/30/zambian-farmers-use-spicy-natural-deterrent-to-ease-conflict-with-elephants

10	Accelerate Water and Agricultural Resources Efficiency (AWARE) project		
Implementation entity	GIZ in partnership with the Ministry of Water Development and Sanitation and the Water Resources Management Authority (WARMA), with financial support from the European Union and the German Federal Ministry for Economic Cooperation and Development		
Project status	Ongoing		
Location	• **Southern Province:** Mazabuka, Monze, Mumbwa • **Lusaka Province:** Lusaka All locations are in the Lower Kafue sub-catchment.		
Intended beneficiaries	The project is targeting up to 120,000 people from the following groups: • Smallholder farming households • Community water user associations • Women-led agricultural enterprises • Local agribusiness partners • Provincial water authorities and district councils		
Societal challenges addressed by NbS	Climate mitigation	Climate adaptation	
	Human health	Food security	
	Economic & social development	Biodiversity degradation & loss	
	Disaster risk reduction	Water security	
Ecosystem(s) targeted	• River basins and watersheds • Agricultural landscapes • Wetlands and groundwater systems		
Ecosystem services provided	• Provisioning services: by improving irrigation, water harvesting, and crop yields. • Regulating services: by strengthening climate resilience through mitigating the effects of drought and efficient water use. • Supporting services: by enhancing soil fertility and reducing erosion through integrated water management. • Cultural services: by strengthening community water governance and ensuring equitable access.		

Description of NbS	The AWARE project is strengthening Zambia's climate resilience by focusing on integrated water resource management and climate-smart agriculture. Key NbS interventions include: • Rainwater harvesting structures: This involves constructing small dams, check dams, and rooftop harvesting systems in drought-prone districts. It is also promoting community-managed reservoirs to store seasonal rainfall for use during dry spells. • Integrated water catchment management: The project is restoring degraded riverbanks and wetlands in the Lower Kafue sub-catchment. To reduce erosion and flooding, it is also focusing on soil and vegetation conservation. • Climate-smart agriculture: Farmers are being trained in efficient irrigation techniques (drip irrigation and treadle pumps). To provide buffers against the effects of rainfall variability, the project is promoting crop diversification and agroforestry. • Community governance support: The project is strengthening water user associations so they can manage shared water resources. Through capacity building, the project is also supporting the water resources management authority and district councils to enforce equitable water allocation regulations.
Climate risks addressed	• Droughts and dry spells: through irrigation schemes, water harvesting, and efficient water allocation. • Rainfall variability: through diversifying crops and introducing climate-smart agriculture. • Flooding and erosion: through watershed management and soil conservation.
Biodiversity risks addressed	• Wetland degradation: by promoting sustainable water use and protecting recharge zones. • Decline in ecosystem integrity: through integrated watershed management and soil-water conservation practices.
Reference	https://static1.squarespace.com/static/5e8397698c906c4df39838f5/t/62ff91f2007d103733e90003/1660916211847/AWARE_general+factsheet+update+user+stories_2022+update.pdf https://www.eeas.europa.eu/delegations/zambia/zambia-launches-first-ever-national-rainwater-harvesting-strategy_en

11 Strengthening climate resilience in the Barotse Sub-basin

Implementation entity	Government of Zambia in partnership with the World Bank, with financial support from the Climate Investment Funds' Pilot Program for Climate Resilience. Other key implementers included: • The Disaster Management and Mitigation Unit • The Ministry of Green Economy and Environment • Zambia Meteorological Department • Local NGOs (as climate risk and adaptation facilitators) • Traditional leaders and community groups
Project status	Completed (2022)
Location	**Western Province:** Barotse Sub-basin, Upper Zambezi floodplain
Intended beneficiaries	Community members (581,028 people reached), prioritizing women (55.2%) and women-headed households (42%)
Societal challenges addressed by NbS	Climate mitigation; Climate adaptation Human health; Food security Economic & social development; Biodiversity degradation & loss Disaster risk reduction; Water security
Ecosystem(s) targeted	Floodplain wetlands (Upper Zambezi), canal systems and catchment areas, and agricultural landscapes
Ecosystem services provided	• Hydrological regulation: through flood control, drainage, and irrigation. • Soil stabilization and erosion control: through planting vegetation. • Agro-biodiversity enhancement: through introducing drought-resistant crops. • Provisioning services: food, water, and fish farming opportunities. • Cultural services: through community-led governance and Traditional ecological knowledge.
Description of NbS	The project's NbS for adaptation interventions fell under its third component—Pilot Participatory Adaptation—which focused on investments prioritized through climate-resilient planning and on optimizing the climate resilience function of traditional floodplain canals. This adopted a locally led, ecosystem-based approach to strengthen resilience in the Upper Zambezi floodplains.

	Particular interventions included: • Canal rehabilitation with vegetation-based stabilization: Planting grass along embankments restored hydrological functions, reduced erosion, and improved water regulation. • Participatory water resource management: Establishing 42 water user associations ensured sustainable governance of canal systems and long-term ecosystem service provision. • Agro-biodiversity through crop diversification: Introducing drought-resistant crops (cassava, sorghum, and millet) reduced vulnerability to climate variability and enhanced food security. It is important to note that the project also involved other, non-NbS for adaptation interventions, such as solar-powered boreholes, mechanized canal digging, aquaculture, and small ruminant rearing. These also contributed to restoring ecosystem functions, reduced flood and drought risks, and enhanced community resilience while embedding inclusiveness by prioritizing women-headed households and vulnerable groups.
Climate risks addressed	• Flooding: through canal rehabilitation and drainage improvement. • Droughts: through crop diversification and water governance. • Seasonal inundation and isolation: through improved hydrological management.
Biodiversity risks addressed	• Loss of floodplain ecosystem functions • Soil erosion and degradation of canal embankments • Decline in agro-biodiversity and crop resilience
Reference	https://documents1.worldbank.org/curated/en/099011410212525358/pdf/IDU-5aeb4d6b-4831-4e14-800f-eb0822ee8fcf.pdf https://documents1.worldbank.org/curated/en/099940412012221210 https://www.cif.org/sites/cif_enc/files/knowledge-documents/cif_case_study_zambia_revised.pdf

12 Transforming Landscapes for Resilience and Development (TRALARD II)

Implementation entity	Government of Zambia through the Ministry of Green Economy and Environment, with financial support from the World Bank, the Nordic Development Fund, and other partners. Other key implementers included: • The Disaster Management and Mitigation Unit • The Forestry Department • Local NGOs and community-based organizations • Traditional leaders and community groups
Project status	Ongoing (TRALARD II launched in 2025)
Location	Phase 1 was active in selected districts across three provinces: • Luapula Province: Chifunabuli, Kawambwa, Lunga, Nchelenge, Samfya • Muchinga Province: Chama, Isoka, Kanchibiya, Lavushi Manda, Mafinga, Mpika • Northern Province: Chilubi, Mbala, Mpulungu, Mungwi, Nsama Phase 2 (upscaling): • Copperbelt Province • Southern Province
Intended beneficiaries	Rural communities prioritizing women, young people, and vulnerable households dependent on climate-sensitive livelihoods. Phase 1 targeted 976,000 people in rural areas across 16 districts.
Societal challenges addressed by NbS	Climate mitigation; Climate adaptation Human health; Food security Economic & social development; Biodiversity degradation & loss Disaster risk reduction; Water security
Ecosystem(s) targeted	Miombo woodlands, river catchments and wetlands, and agricultural landscapes
Ecosystem services provided	• Regulating services: climate regulation through carbon sequestration, soil stabilization, and erosion control; and hydrological regulation through watershed management. • Provisioning services: food, water, fuelwood, and non-timber forest products (e.g., honey). • Cultural services: community-led governance and Traditional ecological knowledge.

Description of NbS	The project's NbS interventions are integrated across four components: (a) promoting diversified, resilient, sustainable livelihoods, (b) management of protected areas, (c) project management, coordination, and monitoring, and (d) contingency emergency response component. The interventions to manage valuable ecosystems are complemented by nature-positive livelihoods. The project is implementing the following key NbS to build resilience to climate change among people and ecosystems: • Forest and woodland restoration: The project is restoring biodiversity and improving carbon sequestration by establishing community woodlots, assisting the natural regeneration of miombo woodlands, and carrying out enrichment planting. • Agroforestry and climate-smart agriculture: This involves integrating nitrogen-fixing trees (e.g., *Faidherbia albida*) into farming systems; promoting drought-resistant crops (cassava, sorghum, and millet); and introducing conservation farming practices (minimum tillage and crop rotation) to improve soil fertility and reduce erosion. • Watershed and wetland rehabilitation: Wetlands and river catchments are being restored to improve water regulation and reduce flood and drought risks, and watershed committees are being set up to encourage sustainable governance. • Livelihood diversification linked to ecosystem services: These include beekeeping and honey production tied to forest restoration; aquaculture integrated into wetland rehabilitation; rearing small livestock (goats and poultry) to reduce reliance on forest resources; and developing nature-based value chains and ecotourism. • Collaborative management of protected areas, including support for buffer zone activities such as establishing community forests, promoting agroforestry and climate-smart agriculture, and introducing alternative livelihoods like beekeeping and aquaculture. The project further aims to strengthen institutional and governance frameworks and capacities, improve integrated monitoring systems, and promote community participation, including a special focus on women, youth and disabled people, in planning and implementation processes. It was developed to improve the flow of climate finance to local communities through sustainable financing mechanisms, including carbon credits in a new jurisdictional Emission Reduction Program (Nordic Development Fund, n.d.).

	It is important to note that the project also involves non-NbS interventions, such as renewable energy (solar), small-scale irrigation, and mechanized infrastructure support. These complement the project's NbS by enhancing resilience and embedding inclusiveness, with women-headed households and vulnerable groups prioritized.
Climate risks addressed	• Flooding: through wetland restoration and catchment management. • Drought: through watershed rehabilitation, agroforestry, and drought-resistant crops. • Land degradation: through reforestation, soil conservation, and conservation farming.
Biodiversity risks addressed	• Loss of miombo woodland ecosystems • Decline in agro-biodiversity and crop resilience • Habitat degradation affecting wildlife and ecosystem services
Reference	https://www.mgee.gov.zm/wp-content/uploads/2025/11/Revised-ESMF-for-TRALARD-II-edition-II-Nov.-4-2025.pdf https://documents1.worldbank.org/curated/en/099120924132011511/pdf/P5079711779f410f188cd130c9dfe59cc9.pdf https://www.nor.gov.zm/?page_id=3083 https://www.ndf.int/what-we-finance/projects/project-database/transforming-landscapes-for-resilience-and-development-ii-tralard-c173.html

13 Lake Tanganyika Development Project

Implementation entity	Government of Zambia through the Ministry of Green Economy and Environment, with financial support from the African Development Bank. Other key implementers include: • Mpulungu District Council • Nsama District Council • Community-based organizations • Traditional leaders
Project status	Ongoing (2015–2026)
Location	**Northern Province:** Mpulungu, Nsama (in the Lake Tanganyika basin)
Intended beneficiaries	Communities living around the Lake Tanganyika basin, in particular vulnerable households dependent on fisheries, agriculture, and natural resources: 70,000 people, 50% of whom are women, and approximately 1,000 of whom are unemployed young people.
Societal challenges addressed by NbS	Climate mitigation; Climate adaptation Human health; Food security Economic & social development; Biodiversity degradation & loss Disaster risk reduction; Water security
Ecosystem(s) targeted	The Lake Tanganyika freshwater ecosystem; wetlands and river catchments feeding into the lake; and agricultural and forest landscapes surrounding the basin
Ecosystem services provided	• Provisioning services: fish, and non-timber forest products (e.g., fruits, timber, and medicines). • Regulating services: hydrological regulation and water quality improvement, soil stabilization, and erosion control. • Cultural services: Traditional ecological knowledge and community governance.
Description of NbS	The project takes an integrated approach to protecting the ecological integrity of the Lake Tanganyika basin and improving the quality of life for the basin's population by providing essential economic infrastructure and support for sustainable livelihoods. It promotes the wider adoption of sustainable technology and management practices for land, forests, and water to reduce land degradation and deforestation while increasing agricultural production.

	The NbS implemented include the following: • Watershed and catchment rehabilitation: reforesting degraded slopes and riparian zones to reduce sedimentation and improve water quality. • Sustainable fisheries management: establishing community-led fishery committees to regulate fishing practices, protect breeding grounds, and restore aquatic biodiversity. • Agroforestry and climate-smart agriculture: integrating trees into farming systems, promoting drought-resistant crops, and introducing soil conservation practices. • Livelihood diversification: introducing aquaculture projects, ecotourism linked to Lake Tanganyika's biodiversity, and beekeeping tied to forest restoration, as well as supporting market linkages. The project is helping to train women in various skills and provide them with seed money to start small businesses including raising small ruminants, beekeeping, irrigation, financial literacy, and gender-friendly technologies (in particular, labour-saving technologies). It is also helping to prepare women to participate in the different community committees dealing with natural resources (such as community resource boards and community conservation development committees), encouraging at least 60% involvement of women in the management of fisheries, agriculture, irrigation infrastructure. Other interventions complement the NbS by enhancing resilience and inclusiveness; for example, the construction of socio-economic infrastructure (health facilities, schools, and roads) and renewable energy systems.
Climate risks addressed	• Higher temperatures: Water temperatures in Lake Tanganyika have warmed by 0.1°C (0.18°F) per decade for the past 100 years. This is not only affecting the ecological stability of the lake but also has resulted in a 20% reduction in the lake's biological productivity (African Development Bank Group, 2015, p. 10). This is being addressed through interventions including afforestation and fish farming to relieve pressure on the fish stock. • Flooding and heavy rainfall: These risks are being mitigated through watershed rehabilitation and reforestation. • Drought: Resilience is being strengthened through climate-smart agriculture and water resource management.
Biodiversity risks addressed	• Loss of aquatic biodiversity in Lake Tanganyika • Soil erosion and degradation of catchments • Decline in forest and agro-biodiversity

Reference	https://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/Zambia_%E2%80%93_AR-Lake_Tanganyika_Development_Project_-_01_2015.pdf https://mapafrica.afdb.org/en/projects/46002-P-ZM-AA0-021 https://www.mgee.gov.zm/?page_id=4165 https://mapafrica.afdb.org/en/projects/46002-P-ZM-AA0-021

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CLIMATE ADAPTATION AND PROTECTED AREAS (CAPA) INITIATIVE

The Climate Adaptation and Protected Areas (CAPA) Initiative seeks to promote nature-based solutions (NbS) to strengthen climate resilience and protect biodiversity in and around protected areas and critical ecosystems. The CAPA Initiative, funded by Global Affairs Canada, will work with local communities, traditionally underrepresented groups, women's groups, and national and local authorities in Belize, Fiji, the Greater Virunga Landscape, and the Kavango–Zambezi Landscape to implement site-specific activities that respond to the risks, vulnerabilities, needs, and priorities of local communities and ecosystems, as identified through comprehensive assessments of the climate, gender, biodiversity, and conflict contexts. The CAPA Initiative is led by the International Institute for Sustainable Development (IISD), the Wildlife Conservation Society (WCS), and the World Wide Fund for Nature (WWF).

To learn more, visit https://www.iisd.org/capa.

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