



NATURE-BASED SOLUTIONS IN THE KAFUE FLATS, ZAMBIA

Communities across the world are experiencing the increasingly devastating impacts of climate change and weather-related disasters, with developing countries bearing the brunt of the resulting social, economic and environmental consequences. Without urgent action to combat climate change and build climate resilience, these disasters are expected to worsen. Nature-based Solutions (NbS) are one course of action to address these issues, but they are still far from reaching their full potential.

In recognition of the role that nature can play in protecting people and reducing the impact of disasters, The International Federation of Red Cross and Red Crescent Societies (IFRC) and World Wide Fund For Nature (WWF) have joined forces. The partnership explores how NbS can strengthen the resilience of vulnerable landscapes and communities to climate and disaster risk.

Giving hands and feet to this partnership, the Zambian and Dutch WWF and Red Cross societies initiated a 10+ year program to develop compelling NbS propositions to reach immediate and long-term climate resilience of communities and their natural environment in the Kafue Flats, Zambia. Launched in January 2023, the program starts with a 1.5 years *proof of concept* project to identify the most suitable NbS to address floods and drought in this ecosystem.

Nature-based Solutions (NbS)

are “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” ([IUCN](#)).

Examples include reforestation to prevent floods and restoring mangroves and coral reefs to protect against storm surges. NbS have been identified as a powerful and effective tool to support disaster risk reduction and resilience and adaptation abilities among communities, whilst providing significant economic benefits.

A joint [study](#) by WWF and the IFRC concluded that NbS have the potential to reduce the intensity of climate change and weather-related hazards by at least 26%. They can also save developing countries costs resulting from climate change, with estimates ranging from US\$ 104 billion in 2030 to US\$ 393 billion in 2050. However, NbS are far from reaching their full potential, with initiatives often remaining small-scale and project-based. This program seeks to change that.



The Kafue Flats

The Kafue Flats ecosystem is a mosaic of wetlands, grasslands, and woodlands that provide critical habitat for a diverse array of flora and fauna, including several endangered species. Approximately 1 million people live in this area, with many relying on it for their livelihood. The functioning of the ecosystem is largely dependent on the seasonal flooding of the Kafue River. These floods support the growth of aquatic plants and provide food and shelter for a range of fish species, which in turn support local fisheries. The floodplains also provide grazing areas for wildlife and livestock, and support the growth of a range of crops, including rice, maize, and vegetables.

Climate change is already affecting the Kafue Flats ecosystem, with rising temperatures, changing rainfall patterns, and more frequent and severe droughts and floods. Human modifications to the ecosystem, including land-use changes, dams, and infrastructure development, have also had significant impacts on the functioning of the ecosystem. This affects people as well, as the inhabitants of the Flats depend on the ecosystem for water, fish, irrigation, grazing land, transport, energy and tourism. Restoring the natural system will allow it to fulfill these functions, while also reducing the risk of natural disasters by absorbing excess water during floods and releasing water during droughts.

PROOF OF CONCEPT PROJECT

In this 1,5 year *proof of concept* project, the main question is which Nature-based Solutions are most suitable to address floods and drought, raising the resilience of people and nature in the Kafue Flats. The project has three key outputs:

1. Three concrete value propositions for effective NbS interventions enhancing flood and drought resilience of communities and nature in the Kafue Flats. Local stakeholders such as authorities, knowledge institutes and communities are closely involved in researching these propositions;
2. A position paper on the potential humanitarian, economic and environmental benefits of linking disaster management and NbS to encourage governments, communities, donors, practitioners and the private sector to incorporate nature in climate adaptation and disaster risk reduction action.
3. A collaboration and resource mobilization strategy to catalyze the next phase of the program.

The project will leverage earlier and ongoing work by the partners. For example, the Zambia Red Cross Society has experience strengthening the resilience of communities against floods in the Zambezi River Basin. And WWF is already working on restoration of riparian zones to address soil erosion and water quality issues in the Kafue Flats. If the *proof-of-concept* project is successful, the program will continue by implementing the selected interventions together with local communities and preparing a pipeline with funding propositions in 4-5 additional landscapes.

