



WWF

BRIEF

ZAMBIA

2020

Freshwater

An aerial view of the Kabompo River

ENVIRONMENTAL FLOWS: ORCHESTRATING HEALTHY WATERS

What are environmental flows?

Environmental flows are central to healthy waters and sustainable water management. Environmental flows are the water in river systems from their headwaters to the ocean, that sustains aquatic ecosystems and the benefits they provide. They are an estimate of the amount of water required to be maintained in the environment so that it can continue to sustainably provide environmental goods and services that are the backbone for livelihoods, health and wellbeing, a thriving economy, and a healthy biodiversity.



Why are environmental flows important?

Environmental flows form an essential component of water security. They are about managing water for people and nature, part of a global shift in water governance that recognizes the full range of social, economic, and environmental values and how maintaining healthy ecosystems is an essential component of water resource management.

The values and benefits of environmental flows implementation include; healthy fisheries, enhanced security of water supply for hydroelectric power generation, agricultural, industrial, commercial and municipal purposes, recreation, and intrinsic cultural and spiritual values.

Environmental flows implementation is therefore essential to better meeting the full range of often competing values for water, as they consider the upstream and downstream balance of water resources allocation and use. Implementing environmental flows therefore results in a sustained healthy and functioning ecosystem.

Healthy Rivers & Sustainable Development Goals

Healthy rivers, lakes, wetlands and swamps provide ecosystem services that underpin economies, cultures and livelihoods. Sustainable Development Goals (SDGs) 6,13 and 14 cannot be met if the freshwater regimes that sustain and connect all life are degraded. The water stress Indicator 6.4.2 under SDG 6 tracks how much freshwater is being withdrawn by all economic activities, compared to the total renewable freshwater resources available. It's estimation takes into account environmental flow requirements. Environmental flows can help communities prepare for and adapt to climate change, as their implementation enhances river basins' resilience to climate change impacts, and they also support the maintenance of biodiversity in river basins.



Assessment and Implementation of E-flows

Assessing and implementing environmental flows requires a multi-disciplinary approach to determine the flow requirements of aquatic ecosystems that will keep them in a prescribed ecological health status, as determined through a participatory decision making process with river basin stakeholders. The assessment is followed by implementation and monitoring, integrating the water flow requirements of these ecosystems into the way water is used and managed within the river system. The assessment and implementation of environmental flows therefore involves inseparable scientific and social processes.

WWF Zambia and E-flows

WWF Zambia has been advancing knowledge and application of environmental flows in Zambia since its inception in 1962. WWF has contributed to environmental flows assessments and implementation in water management planning at the river-basin scale, partnered with the Water Resources Management Authority, government and universities to guide the development of environmental flows policy. Moving forward, WWF will continue to support the application of environmental flows in water management to help secure Zambia's freshwater future.



A fisherman on the Barotse Floodplain

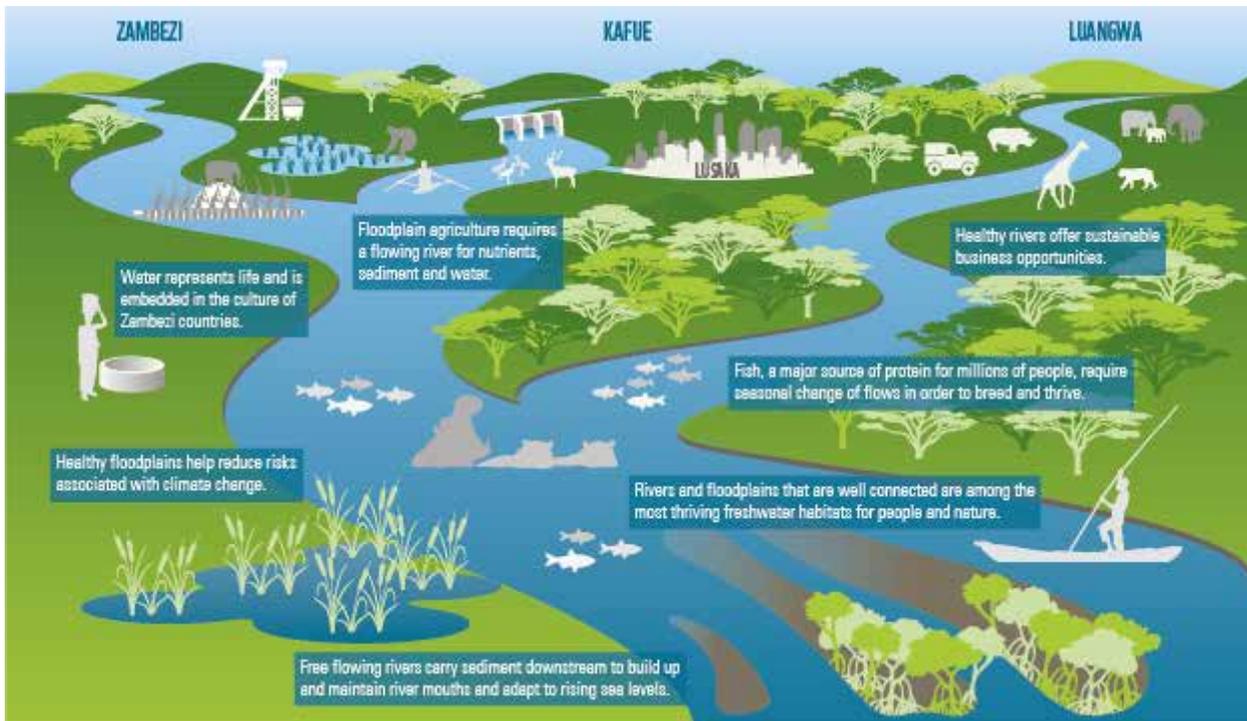
E-flows and Capacity Building

The eflows capacity building project is part of WWF's Freshwater project, funded by the WWF Netherlands through support from the Dutch Ministry of Foreign Affairs (DGIS).

The program is aimed at harnessing local skills and building capacity for environmental flows assessment and implementation. The University of Zambia, under the School of Engineering, is the hosting institution, with support from WWF and the WaterNet Trust. The objectives of the project are;

- To mainstream environmental flows assessment capacity building at University level.
- To build a critical mass of local experts who can contribute to national water allocation planning.
- To support the technical processes for reporting on SDG 6

The rationale behind capacity building on environmental flows is therefore to build a human resource base that can undertake the scientific analytics and consultation processes that will result in secured connectivity via operationalizing transboundary and local environmental flows, secured and protected water sources via a network of transboundary and national Freshwater Protected Areas (WRPAs) as well as improved livelihoods and thriving, climate resilient catchment economies powered by environmental goods and services from healthy ecosystems.



<https://www.swpwater.org/wp-content/uploads/2018/10/Environmental-Flows-Technical-Guidance-Manual.pdf>

https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/publications/publications_handbook_eflows

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