



**Global  
Water for  
Sustainability**  
PROGRAM

## Project Brief:

# Integrated Water Resources Management in the Mara River Basin, Kenya & Tanzania



**The story** of the Mara River begins in the moist, forested uplands of the Mau Escarpment, situated along the western rim of the Eastern Great Rift Valley in Kenya. This richly diverse, montane forest is the source of numerous springs and streams, many of which unite to form the 395-km river. The Mara winds through a region characterized by large-scale agricultural farms before flowing through the grassy expanses of the Masai-Mara National Reserve in Kenya and Serengeti National Park in Tanzania – home to a stunning array of animals, including 18-ft crocodiles and 8,000-lb hippos. The river’s final destination is Lake Victoria, and it is here at the confluence of lake and river, where the greatest concentration of human habitation exists.

### At Issue

Water is scarce in the Mara Basin, and meeting the needs of growing human populations and nature is an enormous challenge. Key issues to be addressed are clearing of the Mau forest at the river’s source, improved water use efficiency in small-scale and industrial agriculture, and provision of safe and reliable water to basin inhabitants. These needs must be met while maintaining sufficient flows in the river to support the Mara-Serengeti ecosystem and wetlands at Lake Victoria. Needs must also be met in a manner that ensures economic and gender equity.

### Partners

To achieve sustainable water resources management in the Mara River Basin, GLOWS is supporting the efforts of several national and local partners, including:

- Ministry of Water and Irrigation (Kenya)
- Ministry of Water and Livestock (Tanzania)
- Bomet & Narok Districts (Kenya)
- Serengeti, Tarime & Musoma Districts (Tanzania)
- Masai Mara National Reserve (Kenya)
- TANAPA Serengeti National Park (Tanzania)
- Community Organizations
- Mara Water User’s Associations

### Implementing Partners

- WWF Eastern Africa Programme Office
- WWF Tanzania Programme Office



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## Project Goals

GLOWS and its partners are working toward a future for the Mara River Basin that is characterized by equitable and well-informed decision making within the framework of a bi-national agreement, where sufficient quantities of clean water are available to people and nature, and where sustainable fisheries provide economic benefits. Our key activities are featured below.

***Trans-boundary Agreement:*** Water is a scarce resource in eastern Africa; so rare, in fact, that it drives the world's largest animal migration. During the dry season – from April to October – hundreds of thousands of zebras, wildebeests, and gazelles make their way into the Mara-Serengeti Ecoregion of Kenya and Tanzania in search of the region's only perennial source of water, the Mara River. This massive migration also draws huge numbers of economy-boosting tourists. As joint stewards over this ecologically sensitive area, Kenya and Tanzania must work together to balance the region's diverse water needs. One of GLOWS' goals is to promote a trans-boundary agreement between the two nations to ensure adequate water flows to sustain biodiversity in these protected areas.

***Meeting Flow Requirements:*** Ensuring sufficient delivery of clean water from the Mara River Basin into the ecologically sensitive areas of the Masai-Mara National Reserve and Serengeti National Park requires a water resources management plan that simultaneously considers the needs of both the natural environment and rural domestic water users. To quantify these needs, GLOWS will measure the volume of water contained in the reserve and perform an assessment of water flow.

***Assessing the Value of Water:*** In the Mara River Basin, it seems you can get something for nothing. Currently, no payment system exists for water, although some major water users, such as miners and industrial agriculturalists, do pay for water permits. Payment for water is important because it can help to maintain high standards for water quality. But in order to apply such a system, water must first be recognized as an economic good with real value.

One strategy for implementing a payment plan includes encouraging the largest revenue-generating enterprises (large-scale agriculture, ecotourism and mining) to financially support those small-scale farmers and pastoralists upstream whose actions impact the quality of downstream resources. In 2005, GLOWS began a payment-for-environmental-service feasibility study to address this possibility.

***Community-based Fisheries Management Plan:*** The majority of fishing in the Mara River occurs in the portion of the lower basin known as the Musoma Swamp. This ecologically sensitive region contains a diverse fish assemblage that provides the primary source of income to local fishers. To promote fisheries resources while also protecting the environment, GLOWS will implement a community-based fisheries management plan that balances the ecological and economic needs within the region. The plan will enable fishing to move beyond a subsistence-level activity to an economically viable industry that protects both water quality and fisheries resources.

***Water Quantity and Quality:*** Water quality and quantity data are essential to developing a water management plan. Hydrological data exist for the Mara River Basin from as early as the 1950s, but significant data gaps render it incomplete. During 2005, GLOWS measured water quality – including sediment load, nutrient concentrations, organic matter, and mercury – and identified problem areas in the basin. A water balance model for the basin that evaluates future water use scenarios and helps guide allocation schemes is also being developed.

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