

# Mara River Flows

## Integrated Water Resource Management

... for people and for nature

April 2010

Greetings from the Mara River Basin! In April, the long rains continued, bringing with them high flows in the river and challenging roads. April also brought a number of other exciting activities: a quarterly meeting for the Transboundary Water for Biodiversity and Human Health in the Mara River Basin project brought together our partners on the ground, we kicked off our new research program in the Mara Basin with a field trip for incoming researchers and the East African Community officially launched two reports critical to conservation and management of the Mara River Basin.

### State of the River

The Mara Conservancy's [Mara Monthly report for April](#) noted that with all the rain we received in April, we have now had six months of regular, and at times very heavy, rains. All of this rainfall has really recharged the river system, and this month we saw the river reach levels significantly higher than we have seen in the last two years. Looking at the pictures below, the river looks like it was almost flooding in early April, and in fact, it was flowing over the lower Mara Bridge. However, you can still see portions of sandy banks on the river's edge and the river is several meters from overflowing its channel, indicating that this flow level is far from flood stage. Of course, all of this rain brought more than just water with it—you can see the turbidity level on this particular day was 3463 NTU!



New Mara Bridge – March 14<sup>th</sup>, 2010



New Mara Bridge – April 3<sup>rd</sup>, 2010

### Water quality parameters for the Mara River

Date	Time	Temp	pH	DO%	Salinity	Turbidity
M/D/Y	hh:mm:ss	C		%	ppt	NTU
03/14/2010	16:15:11	24.75	7.28	77.4	0.05	183
04/03/2010	12:28:25	20.06	7.34	81.3	0.05	3463

## Research



*Picture 1: Trans-boundary research team in the Mara River Basin*

Frank Masese will be studying biogeochemical cycling and waste assimilation processes in the river and how they vary as a function of flow level. Ezra Natumanya will be studying the hydrology of the basin and the spatial and temporal variability in runoff. Joseph Mtamba will be studying the Mara Wetland in Tanzania and trying to understand its history through determining the spatial and temporal dynamics of its annual flooding. Edwin Hes also will be working in the Mara Wetland, studying how key ecological functions and services are affected by the annual and inter-annual flooding regime. Fidelis Kilonzo has already started his research on climate change impacts on the hydrology of the basin and the relationship with land use change.



*Picture 2: The MaraFlows research team*

The *MaraFlows* program is also being supported by USAID – East Africa through the Transboundary Water for Biodiversity and Human Health in the Mara River Basin (TWB-MRB) program, by supporting research for a number of East African Master’s students, whose work will be integrated within the doctoral projects listed above. Karibu to our new team of Mara researchers! The first student in this group is Wesley Langat, who we introduced in our February newsletter.

## Governance

On April 22, Earth Day, we celebrated one of the biggest achievements of the TWB-MRB program. The East African Community and the Lake Victoria Basin Commission officially launched the [Environmental Flow Assessment \(EFA\)](#) and [Biodiversity Strategy and Action Plan \(BSAP\)](#) reports that had been prepared for the Mara River Basin.

These reports were the product of highly consultative processes that involved multiple Ministries and stakeholders from Kenya and Tanzania. The EFA report details the scientific process used to determine reserve flows for the Mara River, which are protected by both Kenyan and Tanzanian water laws; prescribes recommended flow levels to maintain the reserve; and recommends specific actions

necessary to implement these flows. The BSAP describes three habitats in the basin critical for biodiversity conservation; assesses their current status, threats against them and ongoing actions to conserve them; and outlines objectives and activities necessary for their conservation. Both of these reports provide critical information and guidance necessary to align the efforts of multiple actors in the basin towards the same conservation goals. Most importantly, they have both been adopted by the Lake Victoria Basin Commission (LVBC) of the East Africa Community (EAC), and recommended for implementation in all partner states. The LVBC has also received \$3 million USD from USAID – East Africa over the next three years to implement the recommendations of these reports, which means these reports will guide conservation efforts in the basin for years to come.

This is a tremendously exciting time to be working in the Mara River Basin, and the launch event was really a celebration of these initiatives. Dignitaries present included the East African Community (EAC) Secretary General, The Tanzanian High Commissioner to Kenya, the Permanent Secretary for the Ministry of Environment and Mineral Resources, the Conservation Secretary from the Ministry of Forestry and Wildlife, the Director of USAID-EA, the Executive Secretary from the Lake Victoria Basin Commission and the Director of Water Resources from Kenya. The documents were officially launched in a speech by the Kenyan Minister for Forestry and Wildlife, the Honorable Dr. Noah Wekesa. Also present at the event were officials from the Kenya Water Resources Management Authority, UNESCO-IHP, UNESCO-IHE, IUCN, WWF-ESARPO, Florida International University, CARE-Kenya, Mara Conservancy, Transmara County Council, Narok County Council, SIDA as well as other stakeholders and organizations working in the Mara River Basin. You can view videos from the event and download the reports on our blog at <http://maraadventure.blogspot.com/>.



*Picture 3: Mr. Mohamed Awer, WWF-ESARPO Kenya Country Director, giving the closing remarks of the launch event.*

## Partners on the Ground



*Picture 4: Community at Kemgesi Village celebrating their new water system*

April also marked the beginning of a new quarter in the TWB-MRB program, and all of our partners gathered for a quarterly meeting in Mugumu, Tanzania, hosted by CARE – Tanzania. These meetings give our partners a chance to share their accomplishments and challenges from the previous quarter along with their plans for the upcoming quarter. We also have the opportunity to exchange ideas and lessons learned, and we always take a day to visit a field site of the hosting institution, so we can learn more about their work. CARE-TZ has been working in Mugumu since 2007, providing water, sanitation and hygiene services to rural communities in the Mara River Basin that live near

Serengeti National Park. Some of the activities have included installing rainwater harvesting systems and VIP latrines in schools, working within communities to promote the desire for improved sanitation facilities, and developing Village Savings and Loan (VSL) committees to allow community members to save sufficient money to invest in their own improved water, sanitation and hygiene services.

During this visit, we had the wonderful opportunity to visit Kemgesi Village, where CARE-TZ had helped them to protect a spring and reticulate the clean water to three distribution points. The community was very excited to celebrate the official completion of this project, and they met us in the road with a crowd of people, singing, dancing and playing musical instruments. We went to visit the spring, which had been carefully fenced off and protected from contamination. Then we followed the water downhill to a 25,000 L masonry tank built to sustain water pressure, and further down to one of the taps where the clean water could be accessed. One of the USAID-EA representatives joining us timed the outflow of water, and found that it filled a 20 L bucket in 2.5 minutes, which is very good considering the minimum standard is 5 minutes. It was inspiring to see the community celebrating this new access to clean drinking water.



*Picture 5: Timing the outflow of a water tap at Kemgesi*

## Other Interesting Happenings



All of the rain this month brought many blessings and a few challenges. The roads in the Mara get rapidly worse in the rain, and we experienced the joy of being stuck for the first time in quite a while. Fortunately, we had some visiting researchers along to help out, and we got out fairly quickly. Other than that, we are pleased to report that the Land Rover has been running smoothly, and as long as you don't mind being rained on while inside, it's a great ride!

The other big development from April is that Chris and Amanda were both accepted into graduate programs at [Yale University](http://www.yale.edu), in Connecticut, USA, and we will be beginning their studies in August, 2010. Amanda will be pursuing her PhD in Ecology and Evolutionary Biology and Chris will be pursuing his MSc in Forestry and Environmental Studies. Although it will be very hard for us to leave, we are excited to know we will be returning soon to conduct our research in the Mara. After having the phenomenal opportunity to gain experience working with our implementing partners on the ground, we hope to be able to contribute sound science to help guide policy and development work into the future. We will be here until mid-July, though, so you'll be hearing from us for a few more months before we hand over the reins to our new colleagues.

## See you next month!

In May, we look forward to the continuation of the long rains. We will also be holding the next series of workshops for development of a PES scheme in the Mara, attending the Ecological Society of East African Annual Conference, and heading to the Netherlands to analyze our remaining water quality samples. Our partners will also be busy this month, planning for the next phase of activities in the basin. We look forward to updating you on all of this soon!

### Who are we?

Christopher Dutton is the Coordinator of the Trans-boundary Water for Biodiversity and Human Health in the Mara River Basin (TWB-MRB) Project. Amanda Subalusky is the Research Coordinator – East Africa for Florida International University. We both work within the GLOWS consortium. Read more about us at <http://maraadventure.blogspot.com>

### What is GLOWS?

GLOWS is a consortium financed by the United States Agency for International Development (USAID) working to increase social, economic, and environmental benefits to people of the developing world through clean water, healthy aquatic ecosystems and sustainable water resources management. Read more about it at [www.globalwaters.net](http://www.globalwaters.net)