



Planning for Resilience in East Africa Through Policy, Adaptation, Research, and Economic Development (PREPARED) Project Water Supply, Sanitation, and Hygiene (WASH)

Goal:

The PREPARED Project works to strengthen the resiliency and sustainability of East African institutions, by targeting three key development challenges of East Africa that are likewise high priority areas for the U.S. Government (USG): climate change adaptation, biodiversity conservation, and sustainable access to water supply, sanitation, and hygiene (WASH).

WASH Objective:

Resilient and sustainable water supply, sanitation, and wastewater treatment services in the Lake Victoria basin enhanced.

Partners:

- East African Community (EAC) Secretariat
- Lake Victoria Basin Commission (LVBC)
- Partner States
- Water Utilities/Service Providers
- International NGOs
- Local NGOs

Geographical Focus:

- East African Community (Burundi, Kenya, Rwanda, Tanzania and Uganda)
- 15 WASH demonstration sites in the Lake Victoria Basin i.e. 3 WASH sites per Partner State

Country	Approved PREPARED WASH sites
BURUNDI	<ul style="list-style-type: none"> ▪ Muramvya ▪ Karuzi ▪ Mwalo
KENYA	<ul style="list-style-type: none"> ▪ Bomet-Mulot ▪ Kilgoris-Lolgorian ▪ Nandi Hills
RWANDA	<ul style="list-style-type: none"> ▪ Kigali ▪ Nyagatare ▪ Musanze
TANZANIA	<ul style="list-style-type: none"> ▪ Mwanza ▪ Bunda ▪ Musoma
UGANDA	<ul style="list-style-type: none"> ▪ Jinja ▪ Entebbe ▪ Masaka

The Lake Victoria Basin Commission (LVBC) and East African Community (EAC) Partner States face considerable challenges to increasing the resiliency and sustainability of WASH services in the Lake Victoria Basin (LVB): unplanned growth in rapidly expanding secondary towns; growing competition for water; increasing precipitation variability and uncertainty due to climate change; inefficient operations and excessive water system losses; and limited human and financial capacity in Partner States and the LVBC to make strategic and integrated WASH-related decisions that take into account climate change and biodiversity conservation.

To address these challenges, the PREPARED Project is providing targeted institutional support to the LVBC, local government units and water and sanitation service providers to increase the role and relevancy of WASH programming in the LVB and more effectively integrate it into biodiversity conservation and climate change resiliency actions. The PREPARED WASH and Integrated Water Resource Management (IWRM) strategies focus on:

- ✓ Developing and testing best practices that improve water supply and services and building the capacity of the LVBC Secretariat to house and promote these practices with its clients, water service providers, municipalities, and commercial enterprises; and
- ✓ Introducing approaches and operational methods, tools and technologies for strengthening IWRM within the region, by supporting the newly formed Mara River Basin Joint Management Committee (JMC).

The LVBC Sectoral Council established the PREPARED Regional WASH Task Force (RWASHTF) to provide oversight and guidance to WASH activities. In February 2014 the RWASHTF selected 15 sites for possible PREPARED support, see table to the left. The site selection was based on criteria that included: population size (8,000-300,000); limited investment in WASH services; high incident of waterborne disease; vulnerable to climate change; institutional modalities in place that could be built upon; and high levels of Non-Revenue Water (NRW).

Build Capacity of the LVBC to Improve the Quality and Sustainability of WASH Services within the LVB

Regional WASH Assessment of Baseline Information. In 2012, the Project reviewed the laws, policies, regulations, and standards of WASH in each of the EAC Partner States and evaluated the respective

level of implementation, effectiveness, awareness, and gaps for each key instrument. The key findings are presented in the Baseline WASH Assessment Report.

Improving Service Delivery

Non-Revenue Water (NRW) Strategy.

Non-Revenue Water (NRW) is water that has been processed and supplied (produced) by a Water Utility Operator but cannot be accounted for. The annual commercial water loss in developing countries account for US \$ 2.6 billion, which corresponds to a quarter of the total yearly investment in potable water infrastructure for the entire developing world. In the East African region, the average NRW disaggregated by country in year 2013 stood as follows: Uganda 22%¹, Tanzania 36%², Burundi 41%³, Rwanda 42%⁴, and Kenya 44%⁵. On a conservative estimate, the average NRW in the East Africa region therefore stands at 37%. To help East African water utilities in the WASH selected sites tackle this increasing challenge, the PREPARED Project, Itron, Inc., an international metering and engineering company, and the Uganda National Water and Sewerage Corporation (NWSC) formed a Public Private Partnership (PPP) aimed at reducing NRW levels in Jinja and Iganga, Uganda. NRW is a significant problem affecting most water utilities across the East African region and the lessons learned and best practices from Jinja will be promoted and extended through the LVBC Secretariat to other Partner States within the region. Additionally, a NRW best practices toolkit will be prepared for use by the LVBC Secretariat in rolling out this approach across the Lake Victoria Basin.

The NRW approach and strategy for Jinja and Iganga integrates three key components toward improving NWSC's service delivery:

1. Build NWSC Service delivery improvement program by adopting the already existing internal NWSC Performance Improvement Programs (PIP's) and implementation of the Customer oriented Quality Service Improvement Program (QSIP).

¹ The Water Herald, Volume 4, Issue 3, October-December, 2013 NWSC, Kampala, Uganda

² PREPARED Project Baseline Report 2014

³ PREPARED Project Baseline Report 2014

⁴ PREPARED Project Baseline Report 2014

⁵ PREPARED Project Baseline Report 2014

2. Develop an interactive customer support and outreach framework and approach by conducting a baseline Customer Satisfaction Survey and developing a Customer Engagement Framework (CEF).
3. Implement engineering and Information & Communication Technology (ICT) solutions.

To implement this strategy, the PREPARED Project, Itron and NWSC, as implementing partners of the Jinja and Iganga pilot, each agreed to commit both fiscal and human resources to ensure the successful implementation of the NRW strategy.

Kenya, Rwanda, Tanzania and Burundi WASH support

In **Kenya**, PREPARED will continue to assist the Lake Victoria South Water Services Board through the provision of technical advice to design climate – smart water supplies and wastewater facilities for the towns of Kilgoris – Lolgorian, Nandi Hills and Bomet – Mulot, the priority sites for Kenya.

The designs will integrate the tools developed with PREPARED Program partners under its climate change adaptation component, such as the use of the Vulnerability Index mapping and GeoCLIM tools, both of which use a blended 5 kilometer square climate database for the region, to estimate climate change risk and its impacts on infrastructure and water availability.

In **Rwanda**, Water and Sanitation Corporation Ltd (WASAC) has agreed with the PREPARED Project that the priority focus should be on the introduction of QSIP and the piloting of a pre-paid metering program in Nyagatare and possibly in Musanze. In view of that plan, the Project will support WASAC team trip to Nakuru, Kenya to ascertain from the Nakuru Water Supply and Sewerage Corporation (NAWASSCO) the lessons learned and best practices from their pre-paid meter program, implemented with USAID Sustainable Water and Sanitation for Africa (SUWASA) support, in order to inform the PREPARED Project support. A grant to a Rwandan organization is anticipated to implement the activities in Musanze and Nyagatare and climate change adaptation tools will be integrated within this activity.

In **Tanzania**, Mwanza Urban Water and Sewerage Authority (MWAUWASA) has agreed with the PREPARED Project that the priority focus will be on NRW reduction to be achieved through introduction of QSIP under the PREPARED Project support. The strategy will also involve other MWAUWASA internal NRW reduction initiatives.

A grant to a Tanzanian Non-Governmental organization is anticipated to implement planned activities in Mwanza and climate change adaptation tools will be integrated within this activity.

Support for **Burundi** WASH activities is dependent on the evolving security and political situation in the country. The Project will continue to monitor the situation through USAID/Kenya and East Africa and the US Embassy in Bujumbura.

Resource Efficiency Partnership

The PREPARED Project, in partnership with the LVBC has been conducting annual waste water assessments for hotels in the Mara – Serengeti trans-boundary landscape since 2013. The major recommendation stemming from these assessments was the need to improve the treatment and management of solid waste and wastewater in the landscape. In order to address these challenges, the PREPARED

Project organized a partnership with the Mara Serengeti Hoteliers Forum (MSHF), Badische Anilin-und Soda-Fabrik (BASF) East Africa, LVBC, and environmental and water resource management agencies from Kenya and Tanzania. The partnership aims to support resource efficiency in the operations of hotels in the Mara – Serengeti landscape, with particular emphasis on water usage and water cycles.

During Mara River Day 2015, MSHF, BASF, the PREPARED Project, LVBC Secretariat, the Kenya National Environment Management Agency (NEMA) and Water Resource Management Authority (WRMA) signed a concept note that provides a cooperative framework for working together towards reducing adverse effects of wastewater discharges into Mara – Serengeti landscape. The approach aims to up-scale green technologies and innovations in the Mara, identify and implement best practices and standards to improve resource efficiency for hotel and tourist operations, and gather information from wastewater assessments and routine monitoring to inform policy and decision makers. A Memorandum of Understanding (MoU) between the PREPARED Project, BASF and the MSHF was signed in November 2015 and commits resources to the initiative.

Integrated Water Resource Management (IWRM) in the Mara River Basin (MRB): The Project supported the LVBC Secretariat's efforts to coordinate and facilitate the signing of a MoU between the Republic of Kenya and United Republic of Tanzania (URT) on the sustainable management of the Mara River Basin (MRB). The MoU was signed by the two governments on September 15, 2015 at the Mara River Day celebrations in Butiama, Tanzania. The final MoU outlines the institutional framework and responsibilities for managing the MRB, including the establishment of Joint Management Committee (JMC), comprising a Joint Steering Committee (JSC), which is the decision making body comprised of Permanent Secretaries; the Joint Technical Committee (JTC), which is an advisory body to the JSC,

comprised of Directors; and the Joint Implementation Committee (JIC), which will be an implementation body made of technical personnel. The signing of the MoU is the culmination of 18 months' worth of work and negotiation, including multiple country and bi-lateral consultations.

Key stakeholders from Kenya and Tanzania developed a road-map for implementing the MoU on September 7, 2015 in Nairobi. PREPARED offered to provide interim secretariat services (calling meetings, taking notes, following-up on agreed action points); sponsor up to two meetings; and worked with LVBC Secretariat to organize a study tour to the Southern African Development Community (SADC) region to learn more about the establishment, rules and procedures, and operations of the Permanent Okavango River Basin Water Commission (OKACOM). The East African delegation met with the SADC Water Team in Gaborone, Botswana to get a better idea of the role and responsibilities of a regional institution similar to the LVBC Secretariat, for promoting effective river basin organizations' capacity development. The results from held trip will be used by PREPARED to assist in the development of an action plan for the organizational development of the MRB JMC and Project support for the next two years.

Improve the Resiliency of WASH Services

Applying the lessons learned by other climate change programs, the Project will increase the resiliency of WASH services by:

- Working with PREPARED Program Partners to prepare downscaled climate projections that will be used to assess community hazards and identify adaptation strategies as part of the LVB VIA;
- Preparing probable future climate impact scenarios for the WASH sector; and
- Developing a WASH adaptation plan of action that recommends “no regret” or “limited regret” options to improve the resiliency of services and supporting institutions and policies for targeted basins.

Expected Results

- Increased access and sustainability of water supply and sanitation services in 15 small towns and peri-urban centers of the LVB;
- Improved data collection, management, decision making and dissemination on drinking water supply and sanitation service access and sustainability throughout the region;
- Strengthened capacity of Water and Sanitation Service Providers (WSSP's) to provide improved WASH quality services;
- Region-wide climate change VIA conducted of drinking water supply and sanitation services, as well as an analysis of broader water availability and demand scenarios; and
- Resiliency of drinking water supply and sanitation services to climate change in the region strengthened.

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