

Near Lake Shore Drinking Water Project

Planning Meeting

19 – 20 September 2008

Imperial Hotel, Kisumu, Kenya



Introduction:

This workshop was organized in three stages. Stage I, September 19, 2008, involved a series of presentations around the water/sanitation health issue with a particular emphasis on community-level interventions (see a full list of presentation titles and authors in Appendix I). The day concluded with summary remarks from Dr Robert Hecky. After a brief review of the day's proceedings, Dr Hecky emphasized the exploratory nature of the meetings. He congratulated the speakers for amply demonstrating not only the importance of these communities to the Lake Victoria ecosystem, but also the core issues associated with the problems of safe water and sanitation in these communities. He then indicated several action steps, described below.

Stage II, September 20, 2008, began with visits to several community sites, hosted by the GLUK (see next section). This essential building block of workshop proceedings provided a strong foundation for subsequent discussion about the way forward to possible solutions.

Stage III involved a post-site visit meeting of the core planning group which quickly came to consensus around the essential ingredient of community involvement at every stage in the planning and execution of such projects and that accountability and on-going responsibility for the initiative could and should remain with that community. A useful model of graduate education and training, often used by the Great Lakes University, Kisumu, as well as many other universities, involves strong links between these students and intervention communities. GLUK goes further, enlisting graduate students as advisors, acting as a liaison between project advisors and community members, thus training the next generation of community based water, environment and health researchers.

The balance of this report consists of a detailed discussion of the impressions of, and lessons learned from, community visits as well as a more comprehensive reporting of the workshop wrap up.

Community visits:

First site – the first site was a beach to demonstrate how the Lake is used for washing cars, trucks, bicycles and all the wash water goes back into the lake. What was interesting to note was that local children were swimming in this water but they were aware of the fact that they should not drink this water.



Second site – Dunga beach community unit. On one hand it was a successful story on the community management side, where the locals managed fisheries (with a cooperative) and had a supply of drinking water from the local authority. On the other hand due to decreasing water levels, it was difficult to get boats to the landing site.





Third Site - Nyamware Partnership, Nyamware North Sub Location, Nyando District, Kisumu.

There are two sub-locations in Nyamware i.e. Nyamware North and Nyamware South Sub locations. In Nyamware North Sub Location, there are eleven villages with a total population of twenty five thousand. The sub location borders two rivers, which drain their waters into Lake Victoria. This is a low-land area that floods during heavy rains. Flooding leads to the flow of human effluent into the rivers. This water is used by livestock and for domestic purposes. During this long period of rains, there is frequent outbreak of water-borne diseases such as typhoid, cholera, amoeba, bilharzias and Malaria. Many villagers die before reaching the nearby health centre which is an 8km walk from the village. Due to the porous nature of the black cotton soil, latrines fall when it rains heavily and therefore they are not sustainable. In most cases, the villagers dispose of their human wastes directly into the lake. Children who play in the lake end up drinking contaminated water. The main economic activities in this area are fishing and farming.

Community health workers from Nyamware Partnership (which is a community self-help group in Nyamware North sub location) are collaborating with the Great Lakes University, Kenya Red Cross and World Vision to educate the villagers on the importance of drinking clean water and proper use of sanitation facilities. The following are some of the views of Nyamware Partnership community health-based workers:

Mary Owino, Nyamware Partnership Community Health Worker

She has worked with the community for the last four years. She acknowledged that the main challenge facing the villagers is getting access to clean drinking water. They buy water from the vendors at Kshs.2/= per 20 litres container. Some of them boil water for drinking. But most widows and orphans cannot afford to buy or boil water hence they draw contaminated lake water for their daily use. She suggested that boreholes should be drilled to help them access safe drinking water. They also need long lasting latrines that could be reinforced with ballast or cement as a possible solution.

Rosebella, Nyamware Partnership Community Health Worker

She supervises the digging of drainages and trenches along the rivers' boundaries. These drainages channel excess water into the lake during flooding. She said that they need help to create more drainage to ease water flooding in the area.

Lydia Olweny, Nyamware Partnership Home-based Health Worker

She takes care of HIV positive people in the area. She acknowledged that the main challenge is to provide clean drinking water to these people since the majority drink untreated water, which leads to complications. Usually before they refer the sick people to the hospitals, they advise them on the need to treat or boil their drinking water. They provide them with water treatment kits obtained from the health care centre in the area. They also educate them to be responsible in order not to spread the HIV virus to unaffected population. They advise them on food nutrition issues to help them build their immune systems. She suggested that they should be provided with more water treatment kits.

In conclusion, the main problems facing Nyamware sub location are: access to safe drinking water, frequent flooding and outbreak of water borne diseases during heavy rains. The government has not been supportive in providing adequate drugs. The health clinic available is quite far from the area. The Constituency Development Fund (CDF) application process is very complicated given their level of expertise. Poverty is also a major issue in this community.

Some short term solutions proposed during the meeting include: rain water harvesting should be embraced by the villagers and; they should also be assisted to acquire big tanks to store water during rainy seasons.

Next steps:

In the afternoon there was a general discussion of the project based on the presentations, the previous discussions and the community visits.

Concluding discussion focused on the following issues:

- Need for an up-to-date environmental scan of on-going activities;
- Choice of intervention community(ies);
- Choice of technology(ies) to be implemented.

In addressing these issues, it was thought essential that:

- Emphasis be placed on the 'fit' between community and technology and that no one technology be promoted above others;
- Communities are aware of the range of choices available to them, their advantages and disadvantages;
- Any partners involved in the initiative (Universities; NGOs; others) recognize that first and foremost that the community will set the agenda.

While it is clear that on-going data collection and comprehensive research into water/sanitation/health issues is needed, there was consensus among the core group that there is perhaps an even greater need to take action on the provision of safe water, particularly for the most vulnerable. Technologies exist that may allow us to test this, in the short term, among communities aware of the links between water, sanitation and health.

There was a general agreement on a number of issues:

- The community led approach was the most likely to succeed because of the many social, economic and cultural issues surrounding state of water supply and especially sanitation.
- Linking safe water supply to improvements in sanitation would be a desirable outcome.
- The approach of presentations to the community of various options from a water ladder of methods and technologies ranging from simple to more complex appeared to be an option likely to succeed.
- It was emphasized that the role of the mediator in this process, should be that of a "trusted advisor" already well-respected by that community.

There was a recommendation that the project seek out and identify other institutions and agencies in the area who have an interest in safe water and sanitation provision.

The core group concluded the day with the suggestion that UNU-INWEH develop a roadmap or work plan for project implementation. This would include a clear articulation of the role of all project partners. This roadmap will be forthcoming in due course.

Appendix I

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“Finding Solutions to Polluted Lake-shore Drinking Water in Rural African Communities: Women, Community Learning and Appropriate Technology” has been funded by AGFUND. The main objective of the project is to develop an integrated planning framework for the provision of safe drinking water to lakeside communities, based on a synthesis of regional Great Lakes experiences, then test its applicability through a pilot project in lakeside Lake Victoria communities in Kenya. The pilot-scale implementation will lead to planning, implementing and operating community-based, women-led pollution control and drinking water treatment programmes. These lake water treatment programmes and technologies will be designed to be replicable on a large-scale throughout the African Great Lakes Region.

DAY 1: Friday 19 September, 2008

0900-1000: Opening Session

- Introduction of Participants
- Welcome Remarks by Owino-Okongo, Deputy Vice Chancellor, GLUK
- Welcome by UNU-INWEH, Dr. Colin Mayfield
- Project Overview by Professor Bob Hecky
- Welcome remarks by M.P. Shabeer Shakil
- Opening Statement by Mayor of Kisumu, Mr. Sam Okello

1000-1030: Coffee/Tea Break

1030-1230: Experiences in Water / Sanitation in the Lake Region

Chair: Tom Okurut

- 1030-1045: Water Treatment Ladder (Colin Mayfield, UNU-INWEH)
- 1045-1100: Meeting the MDGs on Rural Sanitation - A paradigm shift of pathogen and nutrient control (Eric Odada, UON)
- 1100-1115: Safe Drinking water studies: Water Quality Studies in the Lake Victoria Region (Shem Wandiga, UON)
- 1115-1130: Water quality problems in Lake Victoria and some indigenous water treatment technologies around the lake in Tanzania (John Machiva)
- 1130-1145: Community Health Issues in Lake Victoria Region (Owino-Okongo, GLUK)
- 1145 – 1200: Water and Community Health: Kisumu District Experience (D.M. Sabwa Karanja)
- 1200 – 1230: Discussions and Recommendations

1230-1400: Lunch Break

1400-1730: Experiences in Water and Sanitation in Lake Victoria Region (Regional Organizations/NGOs)

Chair: Susan Elliott

1400-1415: Micro-credit financing and sustainability, (Tom Okurut, LVBC)

1415-1430: Use of community managed Micro-Water Schemes for increased safe water coverage in the low income settlement of lake shore communities –Kisumu City, (Alfred Adongo, SANA)

1430-1500: ‘Household Water Treatment Technologies with special emphasis on Solar Water Disinfection (SODIS)’ and Lake Water Sand Filtration through Shallow Wells, the KWAHO experience in Mfangano Island in Lake Victoria Presentation, (Catherine Mwango, KWAHO)

1500-1530: Coffee/Tea Break

Chair: Susan Elliott

1530-1545: Available Technologies and Lessons Learnt in their Applications in Africa, (Kris Kapoor)

1545-1600: Safe water challenges in The Lake Victoria Region (John Okungu, LVEMP, Kenya)

1600 - 1615 The need for Integrated Approach in Provision of Safe Drinking water for Lake Victoria Shore-line Communities (Tanzania) (Dickson Rutagemwa, LVEMP, Tanzania)

1615 - 1620 Domestic water supply and its implications on Lake Victoria shore communities Presentation by (Fred Muyodi, Makerere)

1620 – 1720 General Discussions

1720-1730: Closing Remarks (Prof. Bob Hecky) for the workshop

18:00 Dinner (Everyone is invited)

DAY 2: Saturday 20 September, 2008

- 9:00-12:00 Visit to the communities; meetings with community leaders; informal meetings to plan the next steps for the project; core group project meeting.

After lunch:

Core Group Project Meeting

Closing Remarks and way forward for the project