Training of Trainers Workshop on Low-cost Water Testing and Treatment


The Lake Victoria Water and Sanitation Initiative hosted a three day Training - of - Trainers workshop in Kisii, Kenya from 25-27 November 2008 to equip participants with basic skills in low cost water quality testing. Drawn from towns and cities participating in both the Lake Victoria Water and Sanitation Programme and the Water for African Cities Programme, the participants from Kenya, Uganda, Tanzania, Zanzibar, Rwanda, Ethiopia, Senegal, Ghana, and Burkina Faso in turn developed action plans for implementation of town -level training programmes in their cities.

Opening the workshop officially, the CEO of the Lake Victoria South Water Services Board, Eng. Michael Ochieng reminded participants that the provision of safe drinking water poses a serious challenge to water providers as a result of the rapidly growing populations in African towns and cities, with many residents, particularly the poor, resorting to the use of water from alternative, and often poor quality sources. “As service providers, it is our obligation to undertake periodic water quality monitoring in order to ensure that the water we supply to our consumers is properly treated,” said eng. Ochieng.

While the linkage between water quality and disease is not well appreciated at the community and household levels, waterborne diseases constitute a major public health burden for developing countries, often leading to serious epidemics of diarrhoea, typhoid and cholera. Inadequate training, lack of appropriate equipment and facilities for water quality testing and treatment at source and household levels, inadequate budget allocations for water quality testing and management, low levels of public awareness and poor enforcement of legislation regarding safeguarding water quality and source protection all contribute to the poor state of water quality management.

The definition of “improved water source” that forms the basis for assessing progress in meeting water-related MDG goals does not include the quality of the water source, despite the fact that sources such as dug wells and “protected” springs - classified as improved water sources - often yield water that is not safe for drinking. Even piped water is not regularly or properly tested and treated in many African cities. This situation could be improved if more hard data were available on the quality of drinking water sources, however the cost and technical complexity of water testing and treatment has presented real barriers to the wider and more systematic use of these tools in the detection and prevention of water-borne bacteriological health risks.

A portable bacteriological test kit (the Portable Microbiology Laboratory or PML) designed to determine offers a simple and cost-effective approach to monitoring the bacteriological quality of water. The tests can be performed
within 2-18 hours, with the test results providing a disease risk assessment of water sources as presented by the World Health Organization’s Guidelines for Drinking Water Quality.

The tests also have an awareness-raising function. The kits can be used by institutions such as service providers and municipalities as well as by community groups and individual households. They are an effective means of “demystifying” water quality testing and of raising awareness on the many public health issues associated with water and sanitation, including the direct linkage between water quality and disease. Training programmes conducted at the community level in several towns and villages in Africa have helped to promote greater awareness of the importance of safe drinking water.

A related programme to promote the use of solar cookers offers one solution to the unsafe water problem by showing how water can be made safe for drinking by pasteurizing the water using a solar cooker, the Cookit, and a reusable Water Pasteurization Indicator (WAPI) which verifies when pasteurization occurs.

The LVWATSAN Initiative addresses the water and sanitation needs of the people, particularly the poor, in the secondary towns around Lake Victoria. The Initiative has a clear pro-poor focus, and is intended to generate desirable outcomes that would have a lasting effect on the poor. The development objective of the project is to support secondary urban centres in the Lake Victoria Region to enable them to achieve the water and sanitation related MDG’s and, generally, to contribute to an equitable and sustainable development – economic, social and environmental – of the Lake Victoria Region, to the benefit of the people living in the area.

The Water for African Cities Programme was launched in 1999 with the goal of strengthening the capacity of cities to respond to the urban water and sanitation crisis. A second phase of the Water for African Cities programme is currently being implemented in 14 countries (covering 17 cities). In this phase the focus has been on pro-poor water and sanitation governance, water and sanitation for the urban poor, urban catchments management, water demand management, water education, and awareness-raising and information exchange.

Both the Lake Victoria Initiative and the Water for African Cities Programme will benefit from a structured programme to build capacity in the cities and towns to monitor the various sources and water distribution points (including water sources being used by service providers, community water points, public water kiosks and sources of individual household water systems).

Following the Training of Trainers, workshop participants were provided with their own Portable Micro-biology Laboratory and expected to run subsequent workshops in their home-towns to equip communities with the tools to test their own water. It is envisaged that this will lead to the establishment of community-run water quality monitoring systems. Demonstrating this highly visual water-quality testing tool with water supply in their home communities is expected to raise awareness and concern amongst citizens and inspire action.