

**Nile Basin Initiative
Nile Trans boundary Environmental Action Project**

**REGIONAL SUMMARY OF
KEY MESSAGES**

**FROM THE NATIONAL
WATER QUALITY
MONITORING BASELINE
REPORT**

NILE BASIN INITIATIVE

Initiative du Bassin du Nil

Date Oct. 2007

1. Introduction

This report summarizes the status of water quality across the basin as highlighted in the individual national baseline reports. The document highlights the key issues regarding the existing water quality monitoring capacities, and programs. It points out the strengths or opportunities and the weaknesses with regard to capacity for water quality monitoring in the basin as a whole and the way forward.

In the Nile basin as a whole, most of the riparian countries use water in similar ways and as a result, cause similar problems which include; siltation, pollution from domestic and industrial waste water and from agricultural products such as pesticides and fertilizers. Similarly, the laboratories facilities vary in sophistication, and standards with Egypt, Uganda Kenya, Tanzania in that order having significantly the most advanced facilities in the region. On the level of legislation and enforcement, water quality management in the basin receives great attention as seen by the large number of water related legislation and regulations in the national reports although the individual countries lack effective legal enforcement mechanisms. Mostly, the efforts of countries are held back by lack of proper funding. There is an urgent need for a consistent programmed and coordinated water quality monitoring at the national and basin-wide levels.

2. Legal & Institutional Framework for Water Quality Management

Water quality management in the Nile Basin as a whole faces numerous difficulties. Although all the countries of the Nile Basin have in place some kind of institutional and policy arrangements to address water issues, they lack the adequate instruments, such as standards and regulations, to translate into concrete actions and outcomes the policies and strategies. For instance, Burundi has in place the Ministry of Land, Environment & Tourism, National Institute For Environment and Wildlife Conservation, Geographic Institute of Burundi and National Office for Tourism as institutional frameworks addressing water issues. The country also has the National Water Resources Management Policy in place since 2001. The Democratic Republic of Congo addresses water issues through the Ministry of Wildlife Conservation, Water & Forests established in 1975. However the country does not seem to have policies and strategies for water management. Egypt, Tanzania, Rwanda, Uganda, Ethiopia, Sudan, Kenya all have in place similar ministries, policies, strategies and regulations in place. They also have varying technical know-how to draw up programs and other implementation and enforcement instruments, but their efforts are hampered often by lack of funds and weak enforcement.

3. Water Quality Monitoring

In many Nile Basin countries there exist a plethora of actors in the water sector ranging from ministries and agencies to private companies, each handling water issues according to their specific needs. Very few countries have viable national water quality monitoring programs. On the contrary, Uganda and Egypt have managed to register considerable progress establishing proper water quality structures and programs together with sufficiently trained staff. Naturally enough, and with the exception of Egypt and Sudan

and the countries in the Lake Victoria project, the countries do not have in place any form of networking and cooperation amongst themselves. The needs and requirements of the Nile Basin countries relative to TB water quality management are considerable.

The countries that present the pressing need for support in water quality management are Rwanda, Burundi, DRC and Ethiopia. As highlighted by the Water Quality Regional Baseline Report, Burundi is so seriously under-resourced in terms of modern laboratories and this makes it difficult for this country to participate effectively basin-wide. Therefore, field kits and regional labs need to be provided. DRC also needs support in terms of trans-boundary lab facilities. In Ethiopia, there is no central government laboratory responsible for monitoring the Nile. Ethiopia lacks modern equipment and a dedicated national water laboratory. Overall, all the countries of Nile basin with exception of Uganda and Egypt, and to a minor extent, Kenya, Tanzania and Sudan, require considerable support in enhancing their water quality monitoring capabilities.

4. Water Quality Data & Information

The production of water quality data in the individual NBI countries is undertaken by the public and the private sector and international NGO projects in response to specific needs. Most of the data available in the individual NBI countries is on routine WQ parameters, although there exist some data on hazardous parameters such as pesticides, heavy metals and hydrocarbons in some countries. Another sign of weakness is a lack of intra and inter-ministerial exchange of data. In the case of Ethiopia, for instance, the available data does not represent the spatial and temporal conditions of the Nile adequately. Another important source of data on water quality is the laboratories of Lake Victoria Environmental Management Project which brings together Kenya Tanzania and Uganda. In Rwanda considerable efforts were made by the Department of Water & Purification of the environmental ministry (MINTERE) to obtain water quality data over 14 sites along the Nile Basin in August 2000. However the quality of the data that is obtained in many cases is of questionable quality. Parameters that should form the basis for data sharing should be the agreed on transboundary parameters. However information exchange among stakeholders in each country is lacking as there is no formal coordinating arrangement for water information sharing in the countries.

5. Water Quality Assurance, Laboratories & Staffing

Each country has facilities to monitor and analyze water but the quality of these facilities is mixed. At least four countries, Egypt, Uganda, Kenya and Tanzania have fairly advanced equipment and the rest had minimal facilities. For a baseline study to be undertaken it is vital that the quality of the data is reliable and consistent. Ideally, each country should have similar lab quality equipment, and use the same methods, but at this time this is not the case.

Many laboratories have requested further training. It should be useful for each country to submit details of their training requirements which could be submitted at the NBI water quality workshop with a view to establish a training program. Water quality control, sampling procedures and testing methods are variable basin-wide. It is recommended that the agreed on Manuals be used by those countries that do not as yet have standardized methods for sampling and testing. Since few NB laboratories are

participating in the GEMS/Water quality assurance program; it is recommended that for a start an inter-lab. Proficiency testing program be initiated in the region; leading to subsequent accreditation.

6. Involvement of the other stakeholders in WQM

Community involvement in water quality monitoring is especially emphasized in the LVEMP countries as an essential element for sustainable management of Lake Victoria. In Burundi, the authorities regard grassroots involvement in water monitoring as crucial for the fulfillment of the government's commitment to extend water services to the rural areas. Therefore a financially autonomous community water management entity was established under the name Community Water Services to allow local community participation in water related activities. Sudan is also one of the leading countries in the involvement of communities in water management. In Sudan hygiene practice in the households is high and more volunteers are joining water related activities. In other countries, except Egypt, water quality monitoring is yet to be a top national issue and this explains the weak or narrow scope of local stakeholders and NGOs involvement, in water quality management.

7. Sources of Water Pollution

All the countries of the Nile Basin seem to suffer from similar pollution problems. Many riparian countries are dependent on agriculture as the mainstay of their economies and this produces the following problems:

- Sediments
- Pesticides residues
- Fertilizer residues
- Sewage effluent
- Industrial effluents

Solid waste dumping is variable in each country and this can be controlled by good legislation, controls and designated water tips.

Countries should list threats of pollution such as storage of chemicals close to the Nil, or factories that do not produce effluence but cause waste following a disaster. It is recommended that an inventory of such sites also be made. A hazard assessment study could then be undertaken to produce emergency contingency plans. In the developed countries, periodic emergency trails are undertaken to ensure tall the stakeholders can efficiently deal with such a crisis. This is particularly important in dealing with trans-boundary pollution control. Faecal pollution is also anther serious water quality threat in a number of NBI countries

8. Enforcement

All the countries have the legislation to enforce waste water treatment water, standards and regulations although the quality of this legislation varies from one country to another. The main problem is the enforcement of the legislation. It is comparatively easy to pass

laws and produce commendable water quality policies promising high ideals, but the difficulty appears when it comes to actually implement these laws and policies. However, it could be argued that this may be true initially but once the policing becomes efficient, the polluter pay principle should make the system self-sustaining. There is on the other hand, concern that these penalties could make the companies less viable and encourage them to relocate abroad resulting in adverse economic consequences for the country.

9. Recommendations

National:

- Upgrade national lab facilities and staff technical capacities
- Elaboration of national standards base on WHO guidelines
- Support the establishment of water quality monitoring programs
- Establishment of water quality sampling programs
- Standardize data and information collection, processing and storage procedures
- Encourage the publication of water quality bulletins
- Organize regular public awareness on water quality
- Inventories on points of faecal pollution
- Inventory of sources of industrial effluents focusing on BOD and COD levels and the discharge sites
- Financial support from donors for water quality and pollution prevention activities

Trans-boundary Actions

- Adopt regional Nile transboundary water quality monitoring Strategy and prepare a regional water quality monitoring action plan,
- Encourage countries to develop water quality management strategies and effectively implement if already formulated water policies and strategies,
- Prepare periodic Nile water quality reports and water quality maps,
- Countries to adopt recognized and common methods of sampling and testing
- Countries to participate in regional Quality Assurance program,
- A regional inventory of pollution threats to the Nile be prepared,
- An Agreement on combating transboundary pollution be formulated,
- The network of RWQWG members be converted into a regional Standing Committee on Water Quality Management,
- Involve all actors as they are water users,
- Enhance awareness on water quality issues at all levels,
- Enhance regional capacity for water quality monitoring by seeking extra financial support from donors.