



Water resources sustainability — science & technology

David Kasozi, Uganda



IF UGANDA HAS got an area of about 241,134 square kilometres 15 per cent of which is water (2) this makes it one of those countries with a substantial amount of water. However to date only about 30 per cent of the national population has access to safe water (2).

The resources are used for various activities the main ones being domestic, industry and agriculture, all these and other related activities affect the quality and quantity of water available now and for future generations.

Appropriate application of S & T is crucial in order to ensure continued availability of the same. Infact the entire cycle of exploration, harnessing and supply of water to the consumer involves a great deal of S & T activities. These are carried out by various institutions with water management related mandates. All the activities are guided by various policies and plans both implicit and explicit.

Policies in plan

The national science and technology policy

This was drawn out by the Uganda National Council for Science and Technology, the statutory body in charge of S & T development and management in the country. Though it is still in draft form major aspects of it are already in application. Its goal is to “achieve sustainable social and economic development so as to meet the present and future needs of the Ugandan people. In the water sector the policy is to “promote S & T activities that would improve the quality and quantity availability and utilization of ground and surface water” (3).

The set out strategies are:

- Support R & D activities that would help to improve the quality quantity conservation and utilization of surface and ground water.
- Encourage S & T investigations aimed at improving clean water supply systems for urban and rural especially arid and semi a rid areas.
- Facilitate research that is aimed at ensuring prevention of pollution of the water sources
- Support Research and Development in hydrology.

It is evident that the policy’s thrust is research and development. It is supposed to guide the top government planning machinery and the sectors when arriving at specific sectoral policies and plans to ensure that S & T is embedded there in.

The national environment management policy

It was drawn out through the National Environment Action plan process and it covers almost all areas of environment concern including the water resources (4). It has the overall goal of sustainable development which enhances environment quality and resource productivity on a long term basis that meets the needs of the present generations without compromising those of posterity.

In the water sector the policy highlights the importance of accessibility to sufficient and good water by the population and the need for linking water resources wetlands and fisheries into an integrated and coordinated water resources management policy.

The set out strategies dwell on:- Plan development, rehabilitation of the system for continuous assessment of quality and quantity, conducting of inventories and socioeconomic valuation of key cycle ecosystem products and services, promotion of regional cooperation in management, promotion of an integrated approach by various institutions and the establishment of appropriate institution and legal framework and quality and quantity standards.

This policy in the water sector is also somewhat a guiding policy because the actual implementation on the ground is supposed to be done by institutions with direct water management schedules. However when the National Environment Authority is set up some aspects of the policy may be easy to implement at the environment management level.

The water resources policy

The policy is elaborate on the management of the resources, the objective is to sustainably manage and develop the water resources in a coordinated and integrated manner so as to secure/provide water of an acceptable quality for all social and economic needs (5).

The strategies are set out in 3 sets:

- Enabling environment: Here the strategies dwell on what government has to do to enable various actors perform well. Included here are legislation and the development of guidelines and tools for efficient management.
- Institutional arrangement: Included here is the setting up across sectoral water policy committee, integrated approach by various departments and private sector participation.
- Planning and prioritization: Listed here are priorities and plans of achieving them such as provision of

adequate water for domestic needs; minimising of pollution and inclusion of agriculture and forestry practices as part of water resource planning.

This is the actual policy which is expected to be on the ground, though still in draft form it is evident that certain aspect of it are already in application. It is clear that S & T issues though alluded to in various strategies, they are not given the prominence they deserve while they would be crucial when dealing with problems such as pollution, siltation and expansion of the supply system.

According to Nyiira 1994 (6) there is an urgent need to utilise S & T to improve the quality quantity availability and utilization of ground and surface water resources, to accomplish this R & D should be enhanced in the water development subsector. While it can be said that R & D will be in play the policy should have gone further to define what and which areas to cover so that scientists in various institutions could be guided on what research plans to develop. It seems that while the NEMP formulation process took cognizance of the S & T policy the WRP process did not give it much consideration. Though the S & T policy is yet to be adopted by government, it was drawn out in a process participated in by all sectors water inclusive, and it should be utilised in future policy development in the water sector.

Recommendations

In order to ensure that discordance of the policies is avoided in future, the following should be considered:

- A more clearer definition of roles of the UNCST viz a viz the various sectors in the area of policy development.
- Increased networking between the Council and the sectors in order to clear the grey areas.
- Since the Water Action Plan process is a continuous one future policies to be developed should take more cognizance of the S & T policy.
- Since all policy documents in review stress the integrative nature of water, S & T plan for the various sectors should be developed in earnest and the guidance of the national S & T Policy accepted.

References

- 1 National Environment information centre, Ministry of Natural Resources, 1994. *State of the Environment Report*
- 2 Ibid.
- 3 Uganda Nation Council for Science and Technology, 1993. *National Science and Technology Policy (draft)*.
- 4 National Environment Action Plan Secretarial Ministry of Natural Resources, 1994. *National Environment Management Policy*.
- 5 Directorate of Water Development, Ministry of Natural Resources, 1994. *Water Resources Policy (draft)*
- 6 Dr Z.M. Nyiira 1994. *The Challenges of Science and Technology in the Development of Water Resources in Uganda*. Presented at Water Sector conference 3-4 March, 1994 Mukono Kampala.