

Growing Thirsty

The Effects of Water Scarcity and Variability on the Socio-Economic Transformation in Africa

While the world's economic growth has stalled in the last five years, Africa is emerging as a continent that continues to show signs of sustained economic development despite a rather austere global context. Many believe that the next decade belongs to Africa, and if there is some truth to it, Africa is still years away from meeting its development targets, especially if water issues are not properly addressed.

By Dr. Akiça Bahri

The slow pace of progress of the water sector in Africa reflects a fundamental misunderstanding of the importance of water in economic development and poverty alleviation. The necessity for continued dialogue with stakeholders at events such as the *World Water Week* in Stockholm is therefore ever more justified.

The main challenges of the water sector in Africa remain the low development and use of the water resources potential due to the deficiency of water infrastructure, the critically deficient agricultural water management, the missing water services and institutional platforms, the inadequate access to markets, the lack of financing and capacity of institutions, and the weak government commitment.

These issues are detrimental to a sector that is otherwise in a unique position to reduce exposure to food crisis and to deliver pro-poor growth among rural households.

Water for Africa's socio-economic development

The economic case for the development of water resources as an instrument for eco-

nomie growth can easily be made. Agriculture, industry, and hydropower depend on water and can drive a country's economy upward in a significant way. Yet, if people and businesses have much to gain from developing and better managing this precious resource, the scope of the losses and the missed opportunities from neglect will be devastating.

Africa loses 2 per cent of annual GDP to regular power outages, and between 5 and 25 per cent to droughts and floods in affected countries. In Kenya, for example, estimated losses from flooding in 1997-98 and drought in 1998-2000, amounted respectively to 10 per cent and 16 per cent of GDP. This is to say that if Kenya can decouple its economy from rainfall variability, it can increase its GDP growth by approximately 2.4 per cent. Similarly, growth of GDP in Mozambique, Zambia and Tanzania is thought to have been reduced by 1 per cent in any given year due to hydrological variability, while water pollution in South Africa is estimated to cost 1 per cent of national income annually.

The problem in Africa is not necessarily one of scarcity, but more often one of poor management. While the continent has only 9 per cent of the world's internally renewable

water and 15 per cent of the global population, the problems related to food security and energy are more linked to the under-development of water resources. Utilisation of water resources for domestic and productive activities is low, with less than 5 per cent of Africa's surface and groundwater harnessed, only 5 per cent of Africa's cultivated land is irrigated and less than 10 per cent of its hydropower potential has been developed, leaving power consumption to less than 10 per cent of the average consumption in developed countries.

The loss of productivity due to water-borne diseases and water fetching is not encouraging. Currently, only 60 per cent of people in sub-Saharan Africa have access to improved safe drinking water sources and only about 31 per cent to improved sanitation. This translates into poor people spending one third of their incomes in health treatment. In sub-Saharan Africa, an estimated 1.2 billion cases of diarrhoea are reported every year that lead to the deaths of 770,000 children under five years old.

Meanwhile, women and girls continue to pay a high price for the role they play in fetching water. This involves devoting an



Photo: United Nations, Horn of Africa, Map No. 4188 Rev. 3, October 2011

The focus on water management – the African Water Facility's response

There are countries in Africa with strong national water resource management plans that, as a result, are better prepared than others to deal with the effects of droughts or floods. The African Water Facility (AWF) is supporting East Africa and more particularly Burundi, Djibouti, Ethiopia, Kenya, Rwanda, Tanzania, and Uganda with the implementation of national, regional water projects, among which the implementation of Integrated Water Resources Management and Water Efficiency Plans, which are proven essential, especially in areas where rainfall variability is high and water scarcity is severe.

Droughts and famines have a complex web of impacts. They typically wipe out crops, affect livestock, and coincidentally lead to food shortages and loss of savings, which in turn, affect food prices, to reach levels where the poorest of the poor can no longer afford. Severe droughts can also lead to mass displacement of populations, which can generate conflicts.

The AWF has made it a priority to support activities that increase resilience to droughts by investing in water harvesting, treatment, storage, conveyance and distribution projects. For example, The AWF is contributing at both the regional and national levels towards addressing physical water scarcity, recurring drought and climate variability in the Horn of Africa. The AWF supports also water harvesting for water supply and agriculture in rural districts in Djibouti, as well as introducing water harvesting techniques in Rwanda.

The AWF supported a project aimed at assisting the six member countries of the Intergovernmental Authority on Development (IGAD) to better understand and develop longer-term strategies towards combating the recurring incidents of drought and extreme climate variability. The outcomes of the project include the framework and guidelines for transboundary water cooperation and benefits sharing among riparian countries, an assessment of the socio-economic dimension of water resources in the predominantly arid/semi-arid lands, plans for mitigating environmental degradation and addressing resilience to climate change. While several factors will drive pressures on water resources, the project concluded that population dynamics and competing demands on water resources will be prime.

In a complementary project at the national level, the AWF has supported the Government of Djibouti in addressing the issues of water scarcity in the country. The mobilisation of water resources project

Dr. Akiça Bahri, Coordinator, African Water Facility, African Development Bank

Photo: Mikael Ullén/SIWI

enormous amount of time and energy to a single chore that keeps them away from school or from engaging in income generating activities that could benefit their families and communities.

The Horn of Africa – a preventable tragedy: from hotspot to hopespot

Droughts are not new to the Horn of Africa. The region has been exposed to a number of extended periods of severe lack of water since the end of the 1960s, which have contributed to migration, cultural separation, population dislocation and the collapse of ancient cultures. So one could rightfully wonder how come we have allowed this region to reach this level of crisis currently unfolding before our very eyes with millions of people enduring extreme suffering and famine.

The current and repeated food security crises in the Greater Horn of Africa are a harsh reminder that insufficient attention has been given to addressing the root causes of vulnerability to drought in these arid and semi-arid lands. Inappropriate policies, conflicts and neglect have jeopardised people's access to water for food and for livestock.

But one thing is clear, if the Horn of Africa cannot escape the unavoidable, with more droughts expected in the coming years, it can prevent the repeat of the current level of devastation through better management of its water resources and focus on drought resilience strategies.

These days, governments and experts find themselves wondering what is needed to devise a long-term development programme that could sustainably harness the productive potential of these areas and reduce repeated crises, or which promising options and innovations could help farmers become more resilient and food-secure in the face of disaster – the solutions to

this complex problem are scanty, and not that easy. Developing long term sustainable solutions will help in ending the recurring drought and famine emergencies. The Africa Regional Strategy for Disaster Risk Reduction and the Programme for Action 2006-2015 provides a roadmap on how to reduce disaster risk in Africa.

And though there are many ways to address the problems of physical and economic water crises, solutions that prioritise the construction of storage infrastructure should be encouraged. These may be costly measures, but strengthening storage capacity by small and large scale reservoirs is a remedy for hydrological extremes and will significantly contribute to building resilience to climate variability. Other measures include traditional and modern water harvesting techniques, improved groundwater management, water conservation, and planting of drought-resistant and early-maturing crops. Building on traditional knowledge related to natural resource management will allow the pastoralists and agro-pastoralists to cope with shocks and help them sustain their livelihoods. Also, advances in hydrological information systems could benefit the region; their use is encouraged as they promise a better understanding of these otherwise preventable water related humanitarian disasters. Drought early warning and monitoring programmes could be strengthened. Long-term programme must adopt a holistic approach involving a variety of actors and partnerships with the private sector and locally based institutions would help to provide services to the local populations. Regional cooperation cannot be overlooked, as this is understood to be absolutely indispensable, not only to solve regional water problems but also for conflict resolution and peace-building in the region.

“Droughts and famines have a complex web of impacts. They typically wipe out crops, affect livestock, and coincidentally lead to food shortages and loss of savings, which in turn, affect food prices”

in Djibouti is a multipronged approach, involving studies and physical interventions, towards meeting multiple water requirements for livestock, agriculture and domestic purposes. The technical studies identified potential sites for the construction of major water storage infrastructure; while geophysical investigations identified sites with significant groundwater potential, some of which have already been developed

into high yielding boreholes. The physical interventions involve constructing a dam and spate irrigation; the project is constructing several underground water harvesting reservoirs for livestock watering and domestic uses.

The facility is also supporting countries to increase resilience to droughts by supporting regional coordination of drought monitoring, prediction and early warning

activities, showcasing the uptake of best practices into policy, planning for drought risk reduction and management, and supporting regional and national efforts in drought risk preparedness.

Dr. Akiça Bahri

*Coordinator, African Water Facility,
African Development Bank*



FURTHER READING

African Union, 2010

Programme of action for the implementation of the Africa regional strategy for disaster risk reduction (2006-2015), Adopted at the Second African Ministerial Conference on Disaster Risk Reduction, held in Nairobi, Kenya, 14-16 April 2010. www.unisdr.org/files/13655_POAinEnglishadoptedinNairobi16April%5B1%5D.pdf

FAO, 2011

FAO Somalia – A 5-year Strategy and Plan of Action 2011-2015.

The Impact of the Global Financial Crisis on Financial Flows to the Water Sector in Sub-Saharan Africa

Joyce, J., Granit, J., Frot, E., Hall, D., Haarmeyer, D., Lindström, A. . Report 28. SIWI, 2010

Can Water Undermine Africa's Growth in the 21 Century?

Kamara, A., 2010. Issues and Options. 5 p.

Water Security for Food Security: Findings of the Comprehensive Assessment for Sub-Saharan Africa, Africa World Water Week, Tunis

Molden, D., 2008., 26-28 March 2008, 20 p.

Financing water security for economic growth in Africa

Winpenny, J. 2011. A Paper for the African Development Bank. July 21, 2011. 59 p.

SOMALIA: Parents wait with their malnourished and dehydrated children in a corridor at Banadir Hospital in the Somali capital Mogadishu, Somalia.