

**Water Policy and Modernization in Africa in face of  
the impending crisis**

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## **Water Policy and Modernization in the face of the impending water crisis**

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### ***“Water and Water Everywhere not a Drop to Drink”***

Water covers 70% of the Earth’s surface. Yet, surprisingly small percentage is available for human use. It is a sad reality too, that in our planet usable water is unevenly distributed by nature and unfairly allocated by humans. We all need clean and uncontaminated water. A healthy person’s body is made up of 70% of water. One can feel thirsty after losing just 1% percent of the bodily fluids and can face death if dehydration nears 10% percent, something that can happen in 2 to 3 days without water. Similarly, plants would die as a result of sustained water stress. For instance, in the Sahelian countries of West Africa the amount of rainfall dropped by 30% during 1961-1990 from what it used to be during 1931-1960. The consequence of this is that large number of forests died and vegetation disappeared. So did wildlife (lions, elephants, giraffe, leopards, etc.). It is astonishing to observe in the Sahelian countries that domestic animals freely roaming around at night while they would be devoured by hyenas, say in East Africa.

It is known that 97% of all the water on earth is saltwater, unsuitable for drinking or growing crops. Only

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3% is fresh water, totaling about 35 million cubic kms. If this water were to cover the earth's surface evenly, it would make a layer 70 meter thick, an impressive amount. Yet, almost all of this fresh water is stored in form of ice in the Polar Regions and in deep underground aquifers. Such waters remain technologically or economically inaccessible for use. Only less than 100,000 cubic km - just 0.3% - of total fresh water reserves on earth- is found in the rivers and lakes that constitute the bulk of our water supply. Thus water is an extremely scarce resource. Unlike oil, it is a resource with no substitute. It is also one of those rare resources that humans share with plants and animals; thus essential to keep the ecosystem in balance.

The amount of fresh water is not only small, but is also declining. According to the UN, 2/3rds of the world's population will have inadequate access to fresh water by the year 2025. Recent research findings indicate that the universal decline in water resources is due to multiple factors: global warming, increased personal consumption caused by huge population growth, insatiable industrial requirements, widespread pollution and irrigation, the latter consuming roughly 2/3rds of all the waters.

In Africa, also, the water resource is depleting alarmingly. The water issue is becoming one of the primary concerns of African leaders.

**This presentation, does not aspire to provide** a complete picture of the water crisis in Africa; neither does it pretend to offer a solution. It rather tries to highlight the water challenges the African countries currently are

facing. It also discusses some of the attempts to address the problem and the policy environment in water management. By so doing, the expose will hopefully have some inputs to the conference and might raise some points for discussion and debate.

### ***No Water, No Development***

It is often said rhetorically that: 'Water is life'. This simple statement encapsulates the crucial role water plays to in human life. It determines how we live, what we consume and whether we are sick or healthy. No wonder then that, many great civilizations were made possible where water was in adequate supply through out the year. It explains why ancient civilizations evolved on the banks of the biblical rivers the Tigris and Euphrates, and the Nile, and also on the Niger, the Zambezi and many more. Water has provided an environment for healthy living and was the basis for progress of agriculture and industry (Elatty and Abu-Zeid, 1997: 234). Without water, there would be no development, and efforts to reduce poverty would also be futile. Experts are unanimous in agreeing that meeting the Millennium Development Goals' (MDGs) targets, for instance, critically hinges directly or indirectly upon access to fresh water.

If adequate water was essential to sustain ancient civilizations, it is even more essential for sustainable socio-economic progress in modern times: food production, industry, including the leisure and the tourism industry, the environment and other human

needs such as sanitation are impossible without adequate development of water resources. In present day Africa, we are far from having adequate water to build upon our modern and urban based economy due to water scarcity and related aggravating factors. We are rather faced with the crisis of management of our water resources, which are likely to be very acute in the foreseeable future unless some drastic measures are taken.

### *Water Crisis? What water crisis?*

Occurrences of social and economic crises usually provoke debate from optimistic or pessimistic group of thinkers. Such tendency is nicely captured by the following poetic expression:

Water pessimists are wrong but useful.

Water optimists are right but dangerous.

Water pessimists are useful because they raise the urgency of water issues. Water optimists on the other hand, encourage the natural human tendency to ignore a problem that has never been encountered in 5000 years of managing water (Allan T., 2004).

In present day Africa, the debate between pessimists and optimists seems to be settled as there is undeniable consensus about the existence of the water crisis and the possibility of its worsening if no bold measures are taken. Suffice it here to give some facts and figures to illustrate the manifestation of the water crisis in Africa.

Compared to the rest of the world, per capita water availability is highest in South and North America, while Africa, Asia and Europe having far less water per capita. Countries with freshwater resources in the range of 1000-1600 cubic meters per capita per year are said to be water stressed, exposed to major problems in drought years. Countries with annual internal renewable water resources less than 1000 cubic meters per capita per year are considered water scarce. Below this threshold, water availability is considered a severe constraint on socio- economic development and environmental quality. The aggregate water availability in Africa of 9400 cubic meters per capital per year in 1980 suggests ample water supplies, but these aggregate regional figures hide the huge inter-spatial and inter-temporal variability in water availability within the region. Indeed, the variability can have a very stark contrast within the confines of individual countries. For instance, the South Western Gambella region of Ethiopia (in the Nile basin) has about 5000 cubic meters of water per capita per year while the North Eastern and the South Eastern Afar and Somali Regional states respectively have about 300 cubic meters of water per capita per year, making them heavily water scarce.

According to some reports, about 300 million people in Africa do not have access to safe water and about 313 million have no access to sanitation. In rural parts of the continent, where the vast majority of the people live, the figure is even gloomier: about 47% having no access to clean water and 45% lacking decent sanitation facilities.

It is known that low access to safe water supply and inadequate sanitation are root causes of many diseases that lead to high infant and maternal mortality rates.

It is estimated that the amount of fresh water available for each African is about a quarter less now than it was in 1950. This expresses the growing requirements for domestic fresh water use, sanitation, industry and agriculture. The situation is getting worse as a consequence of population growth, rapid urbanization, increasing demand for irrigated agriculture and industry.

Beyond the statistics, observation in our urban and peri-urban and shanty towns of the depressingly inadequate water and sanitary facilities show the alarming condition that we are in. In severe circumstances, plastic bags are utilized as toilets in poor shanty towns as highlighted in UNDP's 2006 Human Development Report. The urban poor purchasing water from peddlers end up by paying more per litre of water than their well to do counterparts obtaining their water from their walls through the tap. The urban and peri-urban agriculture which supplies the cities with vegetables and fruits uses unclean and at times unsafe water from sewerages and contaminated sources.

### ***Why water crisis in Africa?***

The root causes of the African water crisis are many and complex. An exhaustive expose of the root causes is beyond the scope of this presentation. Out of estimated annual renewable water resources of 5400 billion cubic meters per year, Africa has utilized only 3% percent of the resource; this means that it has ample potential to base upon its socio-economic development and poverty

reduction efforts. Indeed, its mighty rivers, huge lakes and its under ground water reservoirs - the latter catering 75 % of the potable water for continent's population – suggest the existence of the potential.

However, in Africa water resources are unevenly distributed and it occurs less where it is needed most. The vast Sahara and Kalahari Deserts are homes for pastoralists with migratory life styles; and the arid semi-arid areas often are water stressed. In contrast, the tropical belt of mid-Africa and the Indian Ocean Island countries have mostly abundant and, in some cases, excessive occurrence of water ( Donkor, 2004).

Compared to other regions of the world, Africa's position in the inter-tropics means that there is high level of evaporation such that the amount of run offs that makes the basis of renewable annual resource disappears before getting to the main water bodies such as lakes and rivers. Added to this, the severe loss of vegetation cover as a result of environmental degradation gives to some of the major rivers a characteristic of floods rather than rivers; the waters flowing to the lakes transport huge amounts of siltation/sedimentation that threatens to kill them as their depths become shallower by the year.

The African water problem is also exacerbated by climate change. For instance, according to Benneth (1991), global warming may reduce the Nile waters supply rapidly. Bleier (1997:15) predicted that “over the next 20 to 40 years, global warming will reduce Nile Waters by as much as 25 percent<sup>1</sup>” (cited in El-zain,

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<sup>1</sup> Other prediction model (see Shapland 1997: 90), however, estimated that the Nile flow will reduce by 8 % to 0.4 by the year 2025 (cited in El-zain, 2000: 20).

2000). Similarly, the World Atlas of Desertification indicates that in some parts of the Nile Basin “rainfall has decreased by 10 to 30 percent per year while temperature has increased by half to one degree Celsius in the year between 1939 and 1989” (UNEP, 1992 cited in Mateos 1997: 411). Mateos (1997: 411-412) similarly noted that “according to the objective reality of the Nile Basin the natural hydrological cycle is seriously disrupted” and added that desertification is expanding at the rate of “about 100 km each year.”

Improper use of our natural resources has exposed vast areas of the continent to risk of desertification. For instance, Ethiopia’s Rift Valley lakes are threatened with extinction if the exploitation of the water resources continues as usual. (T. Ayenew: March „2007). To make things worse, flower industries are moving their business into some of the RV lake shores since the last three year.

Many of the African river and lake basins are transboundary in character involving several countries, for instance the Nile Basin sheds 10 countries inhabited by 300 million people. The non-existence of adequate international legal framework to govern multi-country water basins has given rise to diverse policy approaches from national governments which ignores that these watersheds form one common resource which needs to be managed collectively to the benefit of all those inhabit such basins. Unfortunately, the ‘Us- Them’ mentality has prevailed until recently, which formed an obstacle for management of the resource between upstream and down stream countries/regions as interdependent entities. As a result the potentials of such basins remain

underdeveloped, which is manifest by the pervasive poverty the inhabitants of such basins or watersheds experience. Worse, this has led to the speculation of water wars in Africa by some pessimistic observers.

An important aggravating factor of the water crisis in Africa is the underdevelopment of both institutional and human capacity to manage and oversee the development of our water resources. Training institutions to form our water resource professionals are inadequate and those trained are not kept in the national institutions that lead the efforts of water sector development. This hemorrhage of human resource contributes a lot to institutional instability and loss of institutional memory and expertise and undermines inter-generational transfer of knowledge.

Poverty and the consequent low level of savings mean that Africa's capacity to invest in its water development infrastructure, institutions and human resources is very limited. Even those limited infrastructures are affected by recurrent conflicts, institutional and political instability poor management and maintenance of water infrastructure and even corruption. For instance several dams' projects, under the Derg regime costing over 600 million USD remained suspended for over a decade since 1988; they are to be revived only since the adoption of Ethiopia's new 15 years water sector policy in 1999.

Africa's development partners' contribution to invest in the water sector is timid and patchy. Though meeting the MDGs goals hinges very much upon investments in the water sector, the flow of resources to the water sector is dismally inadequate. Despite the rhetoric of commitment

by the donors to the MDGs agenda, the commitment of the donors looks doubtful, based on the records of performance to date. No wonder then that meeting the MDGs for most African countries by 2015 is simply impossible (UNDP, 2006).

### *Africa ready to face up the water crisis?*

The water challenges for Africa in the next few years are daunting and numerous: The MDGS goals call for reduction of the proportion of people without access to safe water by 50 percent by 2015. The African Water Vision, aims to increase the size of irrigated areas by 50 per cent before 2015. To meet increased demand from agriculture, hydropower, industry, tourism and transportation, the Vision suggests the need to increase the development of our water resources by 10% in 2015 and 25% in 2025. We need to manage more effectively droughts, floods and desertification and restore the environment through allocation of sufficient water for environmental sustainability and the conservation of watersheds.

In the recent past, in response to the enormity of these challenges there has been a concerted effort to develop policies and programmes and accelerate investment in all aspects of water resource management and development in Africa. Many policy initiatives were taken at the continental level such the Africa Water Vision 2025 developed jointly by the Africa Union, UN Economic Commission for Africa and the African Development Bank. The African Development Bank Group's Water Initiative and Integrated Water Resources Management

(IWMI) Policy, the Rural Water Supply and Sanitation Initiative (RWSSI), the African Water Facility (AWF), The New Partnership for Africa's Development (NEPAD) Water Resources Management Program are other initiatives on water policy.

The African Ministers' Council on Water (AMCOM) are demonstrating their commitments to the African vision by launching their own domestic water resources development policies and strategies. Besides, Africa is committed to the Johannesburg Plan of Implementation of the World Summit on Sustainable Development, namely, "to halve, by the year 2015, the proportion of people who are unable to reach or to afford safe drinking water" by such means as the promotion of "affordable and socially and culturally acceptable technologies and practices". These commitments pose important challenge to all stakeholders (Donkor, 2003).

At the continental level, NEPAD endeavours to provide the overarching framework for directing water resources' development efforts to achieve the strategic goal of ensuring water security across the whole continent. NEPAD is trying to implement its water and sanitation infrastructure development program with a view to enhancing regional integration. It has prepared a 5-year Short-Term Action Plan (STAP) which includes the development of national integrated water resources management (IWRM) policies; mitigation of floods and droughts; meeting basic needs, and management of trans-boundary water resources. The STAP implementation has focused on seven river basins, namely, the Rivers Niger and Senegal in West Africa; River Congo and

Lake Chad in Central Africa; River Nile in East Africa; and Rivers Zambezi and Okavango in Southern Africa.

Besides, presently there are many regional basin wide organizations such as the Nile Basin Initiative, the Chad Basin Commission, the Senegal River Commission, and the Niger Basin Authority which aspire to achieve socio-economic development by managing their water basin as common property. However, at the moment these river basin organizations are far from achieving their stated objectives due to various reasons.

### ***Facing the water crisis: Rhetoric versus Reality***

It is commendable that African leaders and decision-makers are putting their acts together and are developing continental, regional and national level policies in order to address the challenges posed by the impending water crisis. If anything having a coherent policy framework and pooling the knowledge about Africa's water resources and constraints together is a big step forward. In my modest view, however, there remain big gaps to be overcome in order to translate these policies into sustainable actions.

However good they may be African water sector policies and strategies are developed without involving the public, with the exception of South Africa (F.A. Folifac, March 2007). In developing policies, those who would be affected most, especially women and the youth, need to be involved. Policy making process in Africa remains the prerogative of the politicians with the support of

experts, many of who are expensive foreign consultants. If policies are to be put in practice, broad participation of the public should be encouraged. For the participation to be effective, sufficient information and analysis needs to be provided so that the peoples' participation would be more effective. Effective participation by the public in policy formulation will increase the ownership of the policies by the citizens, but also enhances the accountability of the decision-makers to the public. African governments and continental institutions should do particular efforts to engage the African citizens and mobilise them to take collective actions. Mobilisation of the public to find local solutions should be given a priority in that people make the requisite adaptation to withstand, say, the adverse consequences of climate change. By encouraging the principle of subsidiarity, - to take actions at the lowest level possible where they are most effective, - governments should support decentralized local action with resources, expertise and action research. Without such paradigm shift, the volumes of policy documents will accumulate dust at worst, and will only serve to be endlessly quoted by researchers and academics at best.

Similarly, the MDGs targets and whether or not they are being met is the main talking points between donors and developing countries at the moment, including African<sup>2</sup>. However, the idea of the MDGs and what they entail are not at all known to the public and there is no public awareness and mobilisation to implement and monitor them at the local and community level. Given the strong

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<sup>2</sup> Whether or not pursuit of meeting the MDGs targets is the best strategy to address African poverty is debatable.

link between water and the MDGs, lack of awareness by the public is a very serious gap. Indeed many of civil servants who are expected to implement the MDGs programmes and meet the targets remain largely unaware what they are and how they would be met.

Although many initiatives to promote interdependence among countries with common river basins have been undertaken, as mentioned earlier, these efforts are far from conclusive. For instance, despite over a decade of its existence and a number of encouraging moves to build confidence among the riparian countries under the NBI, there is still no comprehensive treaty to govern the collective utilization of the Nile waters. While negotiations are underway, the lower stream countries notably the Sudan and especially Egypt are busy building expensive and potentially irrational infrastructures to divert water out of the Nile basin to the Sinai desert and through the Toshca canal to the western Egyptian desert. Besides, unlike their neighbour Israel, which has developed drip irrigation to save water, Egyptians make little or no move to change their tradition of open irrigation system, which contributes to the loss of billions of cubic meters of water per year.

If the water policies and strategies are to be effective, governments and other actors need to identify best practices across the continent and from elsewhere including disseminate effective water saving technologies as widely as possible. These include: using drip irrigation and water sprinkling to avoid loss through evaporation, using recycled water for irrigation, using dual pipes for pure and impure water, for example to use

roof water harvesting to flush toilets, use toilets that do not use water and recycle human waste as organic fertilizer, reduce water wastage by progressive high pricing of water, support rain water harvesting techniques in rural areas, etc.

Again, comprehensive treatment of the limitations to translate policy into effective action is beyond the scope of this brief expose.

### ***The water crisis and the implication for the churches***

The churches in Africa have played a leading role in providing safe drinking water, sanitation, and health care, especially to the rural poor. On the global level, the WCC (the World Council of Churches) and the Ecumenical Water Network advocate underlining water as an undeniable right and by condemning the unethical character of commercialization of water as a commodity that constrains the poor from accessing it and thus denying their God given right to life. They also underline the need for a balanced management of the eco-system and the problem of climate change in a way that sustains the integrity of creation. The Ecumenical Water Network and their publications posted on their website serve as important forum to promote a debate on water and water policy from the ecumenical perspective.

The ecumenical bodies would no doubt will continue to intensify the water policy dialogue and advocacy on water at the global level, while those at the grassroots will continue with projects that provide tangible benefits

to the poor by improving their quality of life through water and sanitation projects.

I would, however, like the churches at the grassroots to go one step further: to mobilise their followers so that they take up the water issue into their own hands, and challenge the policy makers and donors to deliver on their policies and the MDGs pledges. The water issue and addressing the impending water crisis is too important to be left to politicians, and should be the responsibility of each and every African citizen. This would start, for instance, by raising awareness about the challenges of the water crisis, the environmental degradation, climate change, and some of the solutions meant to be provided by the MDGs and the policy frameworks such as the Africa Water Vision 2025.

I believe the churches have the resources, the capacity, and the especially the moral authority and trust from their followers to play this critical role. Through the interfaith dialogue, they could also reach out to other faiths to follow suit. It is my hope that this conference would lay the foundation for such a move.

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