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An overview of Water for Growth and Development in South Africa

J. Mtolo [South Africa]

Water for Growth and Development signals a shift from earlier supply and demand driven approaches, through the period of concerted water service delivery to this sharply-focused response to current and future socio-economic demands and issues of water security. The new focus/thinking strongly emphasize the issue of “Bringing water to the forefront of development planning” which means that all economic and development planning must be influenced and guided by an assessment of water availability. A critical point for consideration is: Water is seldom the primary driver and catalyst of economic development in many instances; however, it can be a severe constraint to development initiatives in many parts of our country. Its availability, or potential availability, is therefore a crucial factor in all development planning initiatives and processes (whether local, regional / provincial or national) in the country.

Introduction

Water for Growth and Development (WFGD) is the clarion call for a radical change to the way water is managed in South Africa. The WfGD heralds a new era in the Department of Water Affairs and Forestry (DWAF) and water sector approach to the way in which water is managed in an optimal and sustainable manner.

WFGD is a critical response that seeks to mobilize a collective and sharply focused effort to address the rapid-paced current and future socio-economic development needs of the country. In the process of addressing South Africa's needs, WFGD serves to ensure that South Africa's prestige and reputation as a world leader in the realm of water management remains undiminished.

The purpose of this paper is to highlight South African Historical background which led to the way water is managed (climate, geography, politics & legislation, constitution and water users), WFDG vision and guiding principles, water and social development, women and water, social poverty risks, water allocation reform and addressing WFGD at macro and micro perspectives. Even though WFGD includes both economic growth and social development but this paper will zoom in to social development part for it to be relevant to Multiple Use Services Symposium

Historical background and context

It is important to briefly reflect on some of the historical “drivers” that have influenced the water management and development priorities in the country.

Climate

South Africa has an uneven rainfall regime, high evaporation rates and approximately 9-year wet and dry climatic cycles. There is a high level of unpredictability within these 9-year cycles with extreme weather events (droughts and floods) that have serious impacts on human life and property.

As the 30th driest country in the world, the country's annual average rainfall (at 470 mm) is almost half the world average of 860 mm. Furthermore, as a largely summer rainfall country 80% of the rainfall occurs during five summer months of the year. The only exception is the coastal area of the Western Cape region

which experiences winter-rainfall. A further exacerbating factor is that our net precipitation rates are in the negative resulting in reduced run-off into our rivers.

Together, these climatic factors place South Africa as the 11th country with the least annual renewable water per person in a 1999 assessment carried out by the UNDP based on 1955 and 1990 figures with projections for 2025. In addition to this, a further complication is the increasing impact of climate change; superimposed on the existing challenge of climate unpredictability.

Geography

Water distribution in South Africa mirrors the mean annual rainfall patterns in the country. There is a wet eastern seaboard which becomes progressively drier towards the central and western parts of the country. Overall, the country is described as being semi-arid.

The historical and political ideologies and legacies of Colonialism and Apartheid contributed to the skewed and differentiated human settlement patterns evident in large parts of the country, even today. Historical human settlement patterns did not appear to be affected and driven by the semi-arid nature of the country. Accordingly, these settlement patterns did not follow conventional trends of taking place where water was in abundance, but followed prevailing economic development patterns. This was agriculture and mining in the early- to mid-1900's; and later increased mining, urban & industrial developments that took place in locations unable to supply growing water demands for these activities and the human settlements around them. Government approved large investments in infrastructure to support agricultural water use and further infrastructure investments to support the industrial and urban centres located away from available water resources.

History, politics and legislation

Political ideologies and developmental considerations were translated into the prevailing legislation of their time. In the water sector, the Irrigation Act of 1912 reflected the agricultural needs and character of the country's economy during this period. This was repealed and replaced by the Water Act of 1956 which took cognizance of the changing developmental state of the country – that is, increased mining, industrial and urban water needs. This act underwent a substantial revision and amendment in 1984 to deal with the unprecedented and unanticipated extent to which mining, industrial and urban activities were impacting on water resources.

Unfortunately, the 1956 Water Act was based on British and European water law and was inappropriate for the South African situation where there was approximately eight-times less water. It was also based on the Roman-Dutch principles of riparian rights (which linked land and water ownership), public and private water and surplus and normal flows. The latter principles resulted in many difficulties in effectively managing water resources in their entirety, as well as entrenching skewed land ownership and water access only to the minority white population in the country.

The transformation of this inequitable access and basic needs supply of water to the majority of black and women South Africans, especially in rural areas, became the primary focus of South Africa's democratic government after 1994. Water legislation was again revised in its entirety and the National Water Policy of 1997, Water Services Act of 1997 and National Water Act of 1998 were promulgated in accordance with the 1996 Constitution of South Africa and its Bill of Rights.

The Constitution, sustainable development and Water for Growth and Development

Given the significant strides that have been made in addressing the basic water needs of South Africans since 1994, underpinned by the country's Constitutional injunctions and a range of very progressive and sophisticated policies and programmes, the WfGD represents the new generation of "thinking and doing" that seeks to elevate progress to the next level.

This next level challenges conventional thinking and approaches to water management and requires greater attention in collaboration and integration in purpose and action, inter- and intra-sectorally, towards common and shared outcomes with benefits for all. Accordingly, the WfGD gives further credence to the DWAF slogan of "some for all together, forever". This slogan echoes the themes of equity, efficiency and sustainability in the protection, use, development, conservation, management and control of water resources which are the central pillars of the country's water legislation.

An important consideration within the legislative and policy frameworks is the attention that must be given to both macro- and micro- socio-economic and planning elements. Significantly, equal importance is given to all issues, irrespective of whether these impact at a household (micro) or national (macro) level.

Thus, in summary, while the progress between 1994 and 2004 was primarily in the legislative, policy and water services sector (focusing on water supply); since 2004, the focus has shifted to policy implementation, addressing the sanitation backlog and issues of social justice in the allocation and re-allocation of water (WAR) – that is, moving people “beyond domestic water use to uses for productive, economic purposes”.

Water use and contribution to employment and GDP

Irrigated agriculture remains the largest water user in the country (approximately 60%) but accounts for only 8.5% of total employment and contributes 3% towards GDP. On the other hand manufacturing which uses 5% of total water withdrawals employ about 14% of the workforce and contribute 18.4% to GDP. The same figures for mining are 3% water use 3.1% employment and 6.6% GDP. It is due to this increasing sectoral competition that water sector needs to be firm in terms of balancing water allocation.

The vision and principles for Water for Growth and Development

The Vision underpinning Water for Growth and Development is a robust, accountable and people-centred water sector, which ensures that water security supports social transformation and economic growth without compromising environmental integrity. Water security is defined as “reliable availability of an acceptable quantity and quality of water for production, livelihoods and health, coupled with an acceptable level of risk of high social and economic impacts of unpredictable water events” (Grey and Sadoff, 2005).

This vision is supported by a number of principles. The ‘Fundamental Principles and Objectives for a New Water Law for South Africa’, drafted in 1996 and reflected in the 1997 White Paper on a National Water Resources Policy for South Africa and the 1998 National Water Act, are still applicable in the context of ensuring Water for Growth and Development. The following additional principles also apply:

- All economic and development planning must include an assessment of water availability and effluent management.
- Decisions regarding the use of water must balance the economic, social and environmental dimensions of water.
- Decisions regarding the use of water must focus particularly on poverty eradication and social justice.
- Water investment should give equal emphasis to the maintenance and refurbishment of the current asset base, and the development of new infrastructure.
- Priority should be given to optimizing efficient use and productivity to obtain more value per unit of water
- Sound management and use of local resources, including groundwater, should be prioritized before accessing more distant resources.
- Institutional reform should tailor the institutional arrangements of the water sector to fit more closely with the capacity to deliver

Sustainable service provision and water management rests on a strong partnership between citizens and government, with mutual accountability.

Water and social development

South African water policy recognizes both the social and economic value of water and therefore, the role of water in socio-economic development. Safe, reliable and adequate access to water and sanitation is essential in achieving the Millenium Development Goals, including those that seek to eradicate extreme hunger and poverty, reduce child mortality, and combat a range of diseases. While attainment of the MDGs is a social objective in and of itself, ensuring better health and nutrition through the provision of water and sanitation will, in turn, lead to greater productivity with associated economic benefits. Greater economic benefits, if appropriately distributed and shared, will, in turn, lead to poverty reduction, and improved standards of living.

The social value of water is often harder to quantify than its economic value and, as a result, the social benefits of water, such as its impacts on health, dignity, food security, basic livelihoods and cultural and religious traditions are not always given their fair weight by decision-makers. The challenge is for water management to take place in a framework that balances social, economic and ecological value.

A key thrust of the Water for Growth and Development is to ensure that water contributes to social transformation and the social development of historically marginalized groups and individuals and currently vulnerable members of the population.

South Africa has a high and widening gap between rich and poor, and despite being classified as a middle income country, over 40% of the population live in poverty. The areas of deepest poverty remain the former homelands. Addressing the provision of water to poor households, both for domestic purposes and productive purposes, is an integral part of water for growth and development. A number of challenges must be met. The first is a reconsideration of the amount of water provided to poor households. The extremely high prevalence of HIV and AIDS in South Africa adds urgency to this review. People living with HIV and AIDS, and those who care for them, require good quality water, accessible sanitation facilities, and sufficient water for protecting health in the face of compromised immune systems. There is an argument to be made that the current Free Basic Water (FBW) amount is insufficient for households affected by HIV and AIDS and that it should be increased. A policy revision needs to be conducted to determine whether the volume of FBW should be increased and how best to fund and implement a revised policy.

A second is the implementation of water allocation reform. The water allocation reform programme is intended to correct historical injustice and ensure more equitable distribution of raw water according to race and gender. An important part of this includes the roll out of the rainwater harvesting programme, the rehabilitation of existing irrigation schemes, and the investigation of appropriate technology such as treadle pumps to bring water to poor households and communities for food gardening and micro enterprise development. Provision of water for food gardening and for small business development (e.g. brick making and hair salons) has the potential to contribute significantly to poverty eradication. Provision of household food from food gardens can free up a large portion of social grants. In the context of HIV and AIDS, improved nutrition is an important contribution to household well-being. The roll-out of the rainwater harvesting programme in the Umzimvubu pilot area will enable small scale development to take place while larger programmes are under investigation

DWAF will drive a national programme to encourage what is termed Schedule 1 use - use of water for domestic food gardens, watering household livestock and micro enterprise development. As part of this, DWAF will drive the roll out of the rain water harvesting programme, and will seek financial support from the private sector and National Treasury to further enhance this programme.

Women and water

Amongst the poor, it is women who bear the brunt of poor services - the work of fetching water, with backache from carrying heavy containers, time costs of queuing, the added work of caring for sick family members, the indignity of bad sanitation, safety risks after dark. It is women who benefit most from good services. Water for productive purposes can contribute significantly to easing the burden of the poorest of women in caring for their families.

Social-poverty risks

Water scarcity, unreliable supply, and limited access to water are predominantly felt by the poor - inadequate water supply is both a cause and a result of poverty. There are two aspects to the social risks associated with water. The first relates to water for domestic purposes. The poor are vulnerable to lack of domestic water or poor quality water due to their limited resources to adapt. Unless appropriate mechanisms such as Free Basic Water are in place, the poor use a disproportionate proportion of their income on water for domestic purposes. Water failures may result in the poor having to buy water from those with better access. A reliable and affordable basic domestic supply has significant impacts on household well-being.

Where water systems deteriorate or fail, poor people resort to increasingly inadequate local water resources or expensive vendor arrangements, while more affluent households may make alternative arrangements and take their water from non-municipal sources such as boreholes or bottled water. This compounds the impacts on the poor by reducing the income streams to municipalities for sustainable operation and network development, further compounding the downward spiral of water supply.

Water for productive purposes is often either expensive (in urban areas where potable water is used) or not supplied (in the under-developed rural areas), impacting on the ability of the poor to raise themselves out of the poverty trap. A small amount of water for productive purposes can considerably reduce vulnerability and hunger by allowing the development of food gardens or micro enterprises such as brick making, ice making and so on.

Water allocation reform

Access to, and use of water, is still highly skewed along racial lines. While government has made significant progress in providing basic water and sanitation to the poor, much still has to be done in this regard and to provide access to water for productive purposes, while there are growing calls for free basic water to be increased. Experiences from Bushbuck Ridge suggest that increasing the amount of water supplied can stimulate a range of local entrepreneurial activities from hair salons to brick-making. Many argue that 'basic needs' should accommodate the water required to support livelihoods strategies, including small scale market gardening and that affordable and sustainable mechanisms of supply should be found.

Interventions to make water available for productive use for historically disadvantaged groups, while slow, are being initiated, primarily around irrigation water for black farmers. Efforts to revitalize irrigation schemes in the ex-homelands areas are increasing. Land reform cannot deliver its intended benefits without secure water. Some agri-industries and food retailers are actively pursuing redress initiatives in their raw materials suppliers, to help support their own growth initiatives.

In some cases the water required by these redress initiatives is already available. In many cases, however, water must be found for black and women farmers and entrepreneurs. The options for making this water available are being addressed through the Water Allocation Reform programme, and may include reallocating existing water supplies, reducing assurance of supply for some existing users, increased storage (large and small) and more effective use of groundwater.

Addressing Water for Growth and Development from macro and micro level perspectives

Macro level perspective

The macro-level refers to the development and management of water resources at the level of water management areas in support of water for growth and development. This relates to water security and strategies to achieve water security. The high level panel discussion hosted by DWAF and WISA in June on Water for Growth and Development primarily addressed the macro level perspective where issues concerning water security were debated. Of significance was the need to create a minimum platform for water security which involves investment in water infrastructure and institutional capacity. Once this minimum platform is in place, a country is not only able to ensure that its communities are resilient to the destructive impacts of water (such as drought, flood, landslides, etc.) but they also have access to sufficient levels of water services to enable growth.

Micro level perspective

The micro-level perspective is the bottom-up perspective of multiple uses, where users are using their infrastructure for water for growth and development. The provision of water services that allows for these types of activities is central to the micro level perspective.

Within the high level panel discussion the following points were illustrated in terms of the micro perspective:

- Both water resource management and water and sanitation services are key to growth and poverty alleviation: It is not only water resource infrastructure that contributes to poverty alleviation and growth. Improved water resources *management and water supply and sanitation* are critical to economic growth and poverty eradication.
- Investing in water alleviates poverty: Those communities that have improved access to water and sanitation services also achieve local economic growth. There is a causal relationship between access to water supply and higher income levels.
- Water resource / development projects for productive use of water: Water resource projects that can directly benefit the poor should be promoted, such as restoring degraded water catchment areas and improving water storage for small irrigation projects. Communities should be encouraged to engage in water projects where water is used for productive purposes such as rain water harvesting for food gardens, and other development activities to improve their living conditions. This latter point has also been recognized in the various seminars on multiple use of water.

Conclusions

The timing is therefore appropriate for the WfGD to be located within this “new dynamic” and changed space in the water sector and the country, and WfGD forms part of this continuum of adaptive management in the water sector.

An understanding and appreciation of the timeline of all the initiatives undertaken within the sector and country since 1994, as well as significant milestones achieved, has been a critical point of departure in the conceptualization and planned roll-out of the WfGD.

It is also important to indicate that although the extensive nature of the WfGD may appear to reflect ALL of the DWAF business, it in fact sharpens the DWAF focus to those strategic elements that directly contribute to the changed dynamics of the country and the most important point of reference here is the changed socio-economic face of the country and its future sustainable prosperities

What is clear is that concerted action is needed from all spheres of government to ensure that any potential crisis in the water sector is avoided and that growth and development are supported, not hampered by the actions of the water sector.

It is equally clear that government will need to invest significantly in the water sector to ensure that water management supports the national growth targets. If South Africa is to maintain and provide reliable water services that support economic growth and social development, this investment will have to increase substantially.

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Contact details

Mrs. Jabu Mtolo
Chief Development Expert: Water Sector Programme Management Support
Postal Address: Dept. of Water Affairs & Forestry
P/ Bag X 313, Pretoria-South Africa, 0001
Tel: 012 336 8943
Cell: 082 875 8378
Email: Mtoloja@dwaf.gov.za
