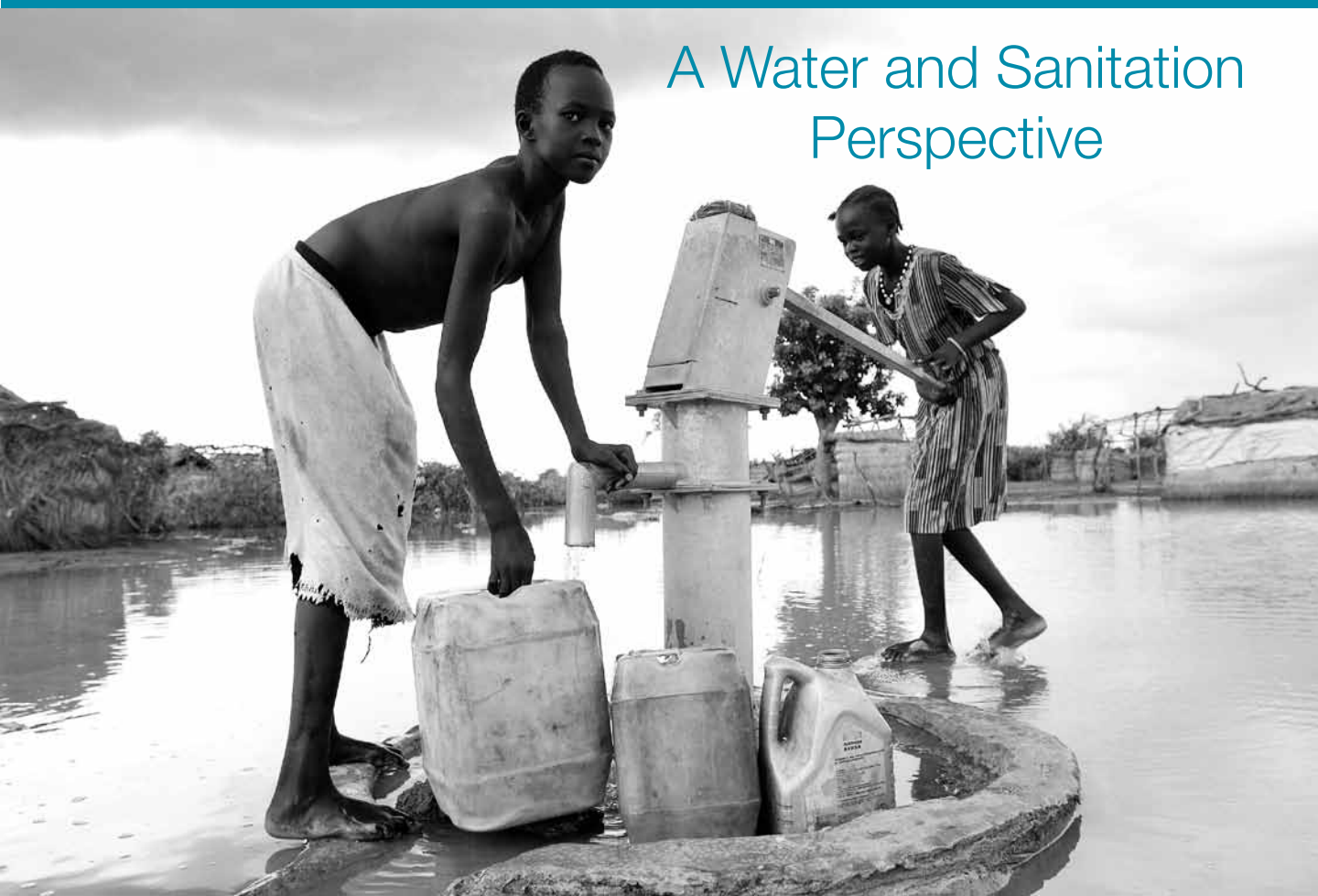




Economic Commission for Africa

**Progress Report on the Implementation of Regional and International Agendas, including NEPAD and other Special Initiatives, in the Southern Africa Development Community (SADC) Subregion:**

## A Water and Sanitation Perspective





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# A Water and Sanitation Perspective



# Foreword

This report examines progress made by the Southern Africa subregion on the Millennium Development Goals (MDGs) target on safe drinking water and basic sanitation, against the backdrop of political commitments, governance structures established and actions taken. It also discusses the nexus between water and sanitation, poverty, health, agriculture, food security and gender. The MDGs represent the resolve of the international community to eliminate the scourge of poverty through taking various actions, including improving access to water and sanitation. Statements of commitment, like the 2008 Sharm El Sheik Summit statement, and frameworks such as the SADC Protocol on Shared Watercourses, often are not followed by the commitment of resources and actions needed to realize the potential contribution to poverty reduction that water management can make. To underpin global goals and help refine policies over time, progress needs to be monitored. The status reported in this report represents a valuable tool to this end.

It is a disturbing fact that billions of people worldwide still lack access to water and sanitation. The ambitious goals that have been set to eradicate extreme poverty may never be fully realized without acknowledging and confronting this fact. The international community has long been aware of the close relationship between development and access to water and sanitation. To help support action and policy making in this area, UNECA Office for Southern Africa has produced this report on the achievement so far in the countries of the subregion.

Policy-makers need quantitative information and analysis to make critical decisions regarding the welfare of their citizens. With this in mind, we have exploited the 2010 JMP Report to quantify the number of people that lack access to water and sanitation. The report indicates that unless existing policies are reformed, the targeted public health benefits of improved water supply and basic sanitation, including reduction in the mortality rate attributed to water-borne diseases, morbidity or case rate of water-borne diseases, and debility or on-the-job inefficiency of efforts, living conditions for millions of people in the subregion may not improve significantly in some countries by the 2015 MDG target date. This points to an unsustainable

and unacceptable future that needs to be urgently addressed. We must start taking corrective measures from today.

We hope that the report will raise awareness at the highest level of government and help to support policy making and action in the subregion. But not only that, as expanding access to water and sanitation will require participation from many other actors, at the regional, national and local levels and from the international community and private sector. We also hope that non-governmental actors will see the report as an impetus to complement efforts of governments in providing water and sanitation in their respective administrative areas of operation.

Sizo MHLANGA (Mr)  
Officer-In-Charge

# Acknowledgement

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The data and information used were compiled and analyzed by the Senior Regional Adviser on Integrated Water Resources Management, Mr. Johnson Oguntola, who authored the Report. The exercise was accomplished under the overall supervision of the Officer-in-charge (OIC) of the office at the time, Mr. Emile Ahohe. Comments of several other professional colleagues who with the OIC commented on the first draft are gratefully acknowledged. These SRO-SA professional team members include Sizo Mhlanga (Senior Economic Affairs Officer), Matfobhi Riba (Ms), Keiso Matashane-Marite (Ms), Jack Jones Zulu, Jean-Luc Mastaki Namegabe, Maame Agyeben (Ms), all of whom are Economic and Social Affairs Officers.

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# List of acronyms

AMCOW	African Ministers' Council on Water
AWF	African Water Facility
ANEW	African Network on Water
CAADP	Comprehensive African Agricultural Development Programme
CICOS	Commission Internationale du Bassin Congo-Oubangui-Sangha
ECCAS	Economic Community of Central African States
ERU	Equitable and Reasonable Use
FAO	Food and Agriculture Organization of the United Nations
GDP	Gross Domestic Product
ICE	Inter-Governmental Committee of Experts
ITCZ	Inter-Tropical Convergence Zone
IWRM	Integrated Water Resources Management
JMP	Joint Monitoring Programme
JPOI	Johannesburg Plan of Implementation
LCBC	Lake Chad Basin Commission
MDG	Millennium Development Goal
NBA	Niger Basin Authority
NBI	Nile Basin Initiative
NEPAD	New Economic Partnership for African Development
OIC	Officer-In-Charge
PRSP	Poverty Reduction Strategy Paper
RBO	River Basin Organization
REC	Regional Economic Community
RISDP	Regional Indicative Strategic Development Plan
RSAP	Regional Strategic Action Plan
RWSSI	Rural Water Supply and Sanitation Initiative
SADC	Southern Africa Development Community



SIF	Special Investment Fund
SRO-SA	Subregional Office for Southern Africa
TVA	Tennessee Valley Authority
UNICEF	United Nations International Children Education Fund
VBA	Volta Basin Authority
WSCU	Water Sector Coordinating Unit
WSS	Water Supply and Sanitation
ZACPLAN	Zambezi Action Plan for Environmentally Sound Management
ZAMCOM	Zambezi Watercourse Commission

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# General Context

## Purpose of report

The purpose of this report is to take stock of progress achieved by the member countries of the Southern African Development Community (SADC) with respect to the Millennium Development Goals (MDGs) target on safe drinking water and basic sanitation and to sensitize countries to make necessary policy reforms and interventions for improved service coverage.

## Southern Africa Development Community (SADC)

The Southern Africa Development Community (SADC) is a Regional Economic Community (REC). It was established in 1992 and its economic and social development objectives include:

- Promote sustainable and equitable economic growth and socio-economic development that will ensure poverty alleviation with the ultimate objective of its eradication;
- Achieve sustainable utilization of natural resources and effective protection of the environment.

In order to achieve its objectives, SADC shall:

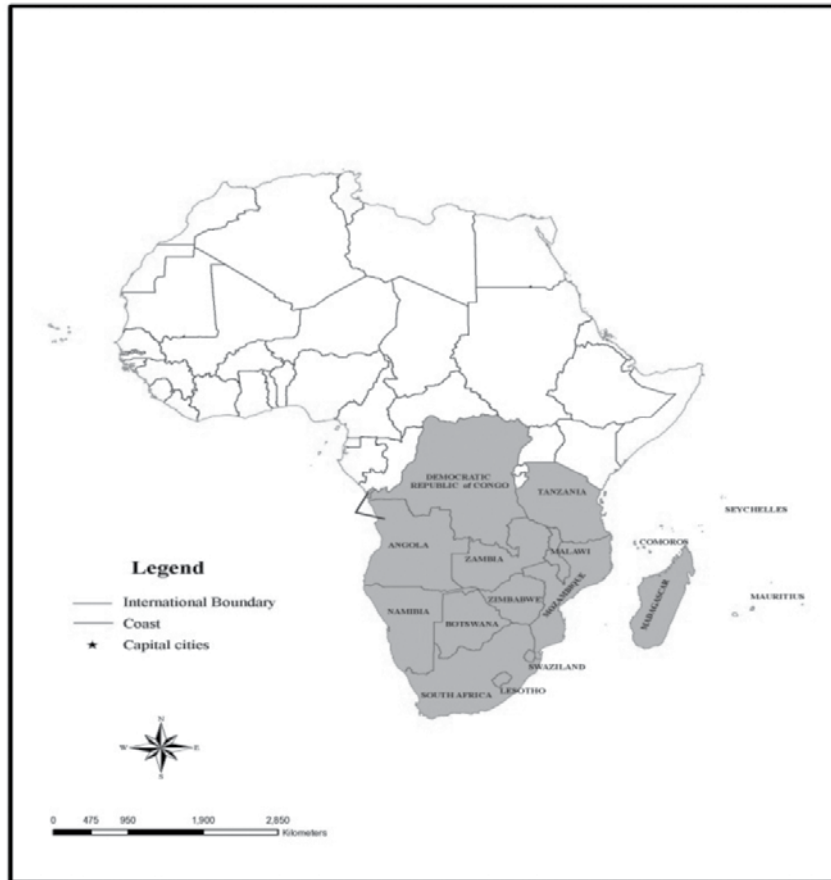
- Create appropriate institutions and mechanisms for the mobilization of requisite resources for the implementation of programmes and operations;
- Secure international understanding, cooperation and support, and mobilize the inflow of public and private resources into the region.

As indicated in Figure 1, SADC currently consists of 15 member States. Table 1 contains information on area, population, economic wealth, water resource endowments and development. The subregion is inhabited by an estimated total population of about 264.4 million (2008 estimate, excluding Seychelles).

In terms of land area, the Democratic Republic of Congo (DRC) is the largest country and Lesotho, Malawi, Mauritius, Seychelles and Swaziland have the smallest land areas. The main population centres in the subregion are DRC, South Africa and Tanzania. The economic wealth of the subregion is located

mainly in South Africa, but per capita Gross Domestic Product (GDP) is highest in Seychelles, Botswana, South Africa and Mauritius. At the other end of the scale, DRC, Madagascar, Malawi, Mozambique and Zimbabwe have per capita GDP of less than US\$700 or less than \$2 per day. Access to safe water in urban centres ranges from 57 per cent in Madagascar to 100 per cent in Botswana, Mauritius, Namibia, Seychelles and South Africa. Access in the rural areas ranges from 26 to 90 per cent. The national averages for access range between 40 and 100 per cent.

**Figure 1**  
Location Map of the SADC Region



## Water availability

Precipitation is the primary source of freshwater in the subregion, with an average annual precipitation over the entire subregion amounting to 9.9

trillion cubic metres ( $9,906.1 \times 10^9 \text{ m}^3$ ) of water. The distribution of this resource by country is shown in Table 1 and Fig. 2. Annual precipitation can be highly variable and withdrawal levels can also fluctuate widely. The same area can experience drought in one year and floods in the next. On the other hand, the proportion of the precipitation that actually flows as renewable surface water in rivers in the subregion amounts to 2.3 trillion cubic metres ( $2,314.1 \times 10^9 \text{ m}^3$ ) per annum or less than a quarter (the estimate of 650 billion cubic metres attributed to Chenje and Johnson (1996), quoted in Beekman (2003), most probably did not account for DRC, Madagascar and Mauritius). DRC receives the highest amount of rainfall and also has the highest total annually renewable freshwater resources, followed by Angola. Botswana receives the highest amount of international inflows from other countries, followed by Namibia and Mozambique.

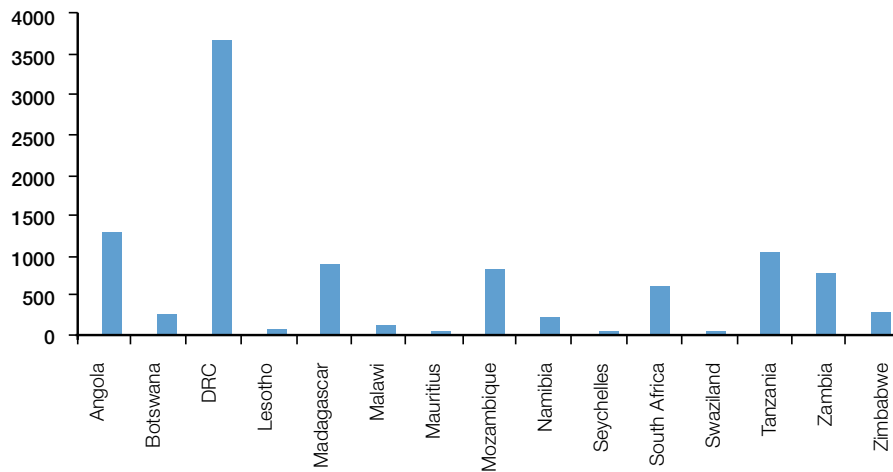
**Table 1**  
Vital National Statistics of the SADC member States (Source: FAO Aquastat)<sup>1</sup>

Country	Area	Pop	GDP	GDPc	TaWS	UaWS	RaWS	Prec	Trw	DR	Trw/ Cap	Dsc	Trw	Trw/ Trw	InrP	TAI	Hpp
Angola	124670	15941	58547	3440	51	62	39	1258.8	148		9284	4.47	0.35	0.24	3700	80	150
Botswana	58173	1765	11781	6263	96	100	90	241.8	12.24	80.4	6935	0.38	0.194	1.58	13	1.439	
DR Congo	234486	57549	8955	144	46	82	29	3618.1	1283	29.9	22294		0.36	0.03	7000	10.0	636
Lesotho	3035	1795	1600	798	78	93	74	23.9	3.022		1684	2.82	0.05	1.65	13	2.637	
Madagascar	58704	18808	7326	372	39.89	57.32	34.96	888.2	337		18112	0.493	14.96	4.44	1517	785	61
Malawi	11848	12884	3552	255	76	96	72	140	17.28	6.6	1341	0.043	1.01	5.84	162	56.39	
Mauritius	204	1245	6363	5038	100	100	100	4.2	2.751		2210	0.093	0.725	26.35	33	21.222	
Mozambique	79938	19792	7752	363	42	71	26	827.2	217.11	53.8	10970	64.474	0.63	0.29	3072	118.12	1141
Namibia	82429	2031	6740	3250	93	99	90	235.3	17.715	65.2	8722	0.709	0.3	1.65	47	7.573	143
Seychelles	46	81	728	8665	100	100	0.9				0.00097		0.0123		1	0.26	
South Africa	121909	47432	277581	5833	93	100	82	603.9	50	10.4	1054	28.5	12.496	24.96	1500	1498	189
Swaziland	1736	1032	2942	2569	60	87	51	13.7	4.51	41.5	4370	0.585	1.042	23.1	93	49.86	
Tanzania	94730	38329	41900	901	55	81	46	1012.2	96.27	12.7	2512	4.196	5.184	5.38	29400	184.33	153
Zambia	75261	11668	11363	953	58	90	41	767.4	105.2	23.8	9016	106	1.74	1.65	523	55.387	764
Zimbabwe	39076	13010	3418	255	81	98	72	270.5	20	38.7	1537	103	4.205	21.03	366	173.513	502
Total	986245	243362	450548					9906.1	2314.098			315.764	48.2583		47440	3043.731	3739

1. Area: Country's land area (x 1000 ha.); Pop: Population (x 1000 inhabitants); GDP: Gross Domestic Product (x 106 US\$ per annum); GDPc: Per Capita GDP (US\$ per annum); TaWS: Total population with access to improved drinking water sources (%); UaWS: Urban population with access to improved drinking water sources (%); RaWS: Rural population with access to improved drinking water sources (%); Prec: Average annual precipitation (x 109 m3 per annum); Trw: Total annually renewable water resources (x 109 m3 per annum); DR: Dependency ratio on transboundary rivers (%); Trw/Cap: Total renewable water resources per capita (m3 per annum); Dsc: Total dam storage capacity (x 109 m3); Tww: Total water withdrawal (x 109 m3 per annum); Tww/Trw: Total water withdrawal as percentage of total renewable water resources (%); InrP: Irrigation potential (x 1000 ha.); TAI: Total area irrigated (x 1000 ha.); Hpp: Hydropower production.

**Figure 2**

Rainfall Distribution (Total precipitation in billion cubic metres)



Data Source: FAO Aquastat

Rainfall patterns over the entire subregion are largely governed by the position of three systems: the Inter-Tropical Convergence Zone (ITCZ) near the Equator, high-pressure cells south of latitude 20° south, and cold fronts at the southern tip of the continent. Annual rainfall is highest near the Equator and along the east coast, decreasing southwards and westwards. It ranges from 100 mm in the western parts to 1,500 mm in the eastern parts. Potential evapotranspiration exceeds average annual rainfall in most parts of the region. An average of 65 per cent of all rainfall evaporates soon after it has fallen. However, evaporation is much lower in relatively cooler and more humid areas, but can get as high as 83 per cent in Namibia (CSIR, 2003). Average annual groundwater recharge figures for the subregion are reported to range from 1 to 15 per cent of average annual rainfall.

Lesotho, Malawi, South Africa and Zimbabwe are among countries experiencing water stress. Most countries of the subregion are below the threshold for vulnerability where this is taken as a ratio of 0.2, i.e. use amounts to 20 per cent of renewable water resources. The exceptions are Mauritius (0.26), Swaziland (0.23) and Zimbabwe (0.21). In terms of available storage dam capacity, most countries are seen as vulnerable to climate change. The exceptions are Lesotho (93 per cent) and South Africa (57 per cent) while data is not sufficient to assess Zambia and Zimbabwe. Tanzania has the biggest irrigation potential in the subregion and completed irrigation schemes are located in South Africa and Madagascar. The concentration of aggregate totals of existing hydropower capacities is located in Mozambique,



Zambia, DRC and Zimbabwe.

There are 18 international river basins and watercourses in the SADC subregion, where downstream countries benefit from the water inflow from upstream countries. These include the Congo River Basin shared by nine countries including Democratic Republic of Congo, Angola, Tanzania and Zambia. The Nile Basin is shared by nine countries including Tanzania. The Zambezi River Basin is shared by eight countries: Zimbabwe, Zambia, Mozambique, Botswana, Namibia, Angola, Malawi and Tanzania. Other major internationally-shared rivers are the Orange, Okavango, and Limpopo Rivers. The Zambezi and Limpopo rivers flow into the Indian Ocean, the Orange and Congo rivers flow into the Atlantic Ocean, the Okavango River drains internally (terminating in the Okavango Delta) and the Nile flows out of the region to drain into the Mediterranean Sea.

Water availability in the Orange River Basin is already at a critical level and is near “closure” (which means that most of its available water is being used) due to over-development. Attention should be given to pollution of water resources due to gold mining in South Africa, copper mining in Zambia and changes in land use, which give rise to deforestation.

SADC countries share some internationally-shared lake basins: these include Lake Victoria Basin to which Kenya, Tanzania and Uganda have riparian access (however, the Lake Victoria Basin Commission also includes Burundi and Rwanda as members although they do not have access to its shores). Lake Tanganyika is shared by Burundi, DRC, Tanzania, Zambia and Rwanda (a non-riparian member). The Malawi/Nyasa Lake Basin is shared by Malawi, Mozambique and Tanzania. And finally, the Kariba Reservoir is shared by Zambia and Zimbabwe as riparian resource owners, and Angola, Botswana and Namibia as non-riparian co-users.

Eleven out of the 15 SADC member countries (Angola, Botswana, DRC, Lesotho, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe) share at least one transboundary groundwater aquifer with other countries.

# Highlights of international commitments on sustainable development bearing on water and implications for Southern Africa

## Overview

The first global conference on the environment was the United Nations Conference on the Human Environment held in Stockholm, Sweden, in June 1972. This gave prominence to the urgent need to respond to the problem of environmental deterioration and water constituted a side issue at the conference. The first truly global conference to concentrate on freshwater was the United Nations Water Conference that took place in Mar del Plata, Argentina in March 1977. The focus of the conference was on development, agriculture, drinking water and sanitation. A Global Consultation on Safe Water and Sanitation subsequently took place in New Delhi, India in September 1990 and gave attention to drinking water and sanitation, integrated water resources management (IWRM), financing, institutional aspects and the role of women.

The International Conference on Water and the Environment was held in Dublin, Ireland, in January 1992 to prepare for the Rio conference (see below). The Dublin conference highlighted sustainability as a key issue and identified four principles for achieving sustainability: freshwater as a finite and vulnerable resource, water as an economic and social good, a participatory approach, and the role of women. The United Nations Conference on Environment and Development, held in Rio de Janeiro, Brazil, in June 1992, both reconfirmed the Dublin principles and emphasized the protection of ecosystems and need for integrated planning and management of river basins. The Agenda 21 action plan was an outcome of the conference and stressed development of strategies and action programmes for transboundary waters as well as improved coordination between global organizations and programmes.

The Millennium Development Goals (MDGs) are derived from the United Nations Millennium Declaration adopted by all 189 Member States at the Millennium Summit in September 2000, in which world leaders committed themselves to address peace, security, development, human rights and fundamental freedoms as a package. The MDGs constitute a bold resolve to address basic human needs. In this regard, all stakeholders have constantly

to track the provision of the material infrastructure which provides goods and services to satisfy those needs of economic agents which originate from physical and social requirements. The Secretary General's Report, "*Road map towards the implementation of the United Nations Millennium Declaration*" (document A/56/326), released in 2001, sets out the blueprint and timetable for future implementation of the Millennium Declaration.

The World Summit on Sustainable Development held in Johannesburg, South Africa, from 26 August to 4 September 2002, recognized that poverty eradication, changing consumption and production patterns and protecting and managing the natural resource base for economic and social development are overarching objectives of sustainable development, and essential requirements for achieving it. The Johannesburg Declaration on Sustainable Development welcomed the focus on the indivisibility of human dignity and resolved, through decisions on targets, timetables and partnerships, to increase access speedily to such basic requirements as clean water, sanitation, adequate shelter, energy, health care, food security and the protection of biodiversity. It pledged "we will work together to help one another gain access to financial resources, benefit from the opening of markets, ensure capacity building ... to banish underdevelopment forever". Finally the summit undertook to strengthen and improve governance at all levels for the effective implementation of Agenda 21, the MDGs and the Johannesburg Plan of Implementation (JPOI), which resulted from the summit.

## **Concrete actions taken by the International Community, Africa and SADC**

### *International level*

The international community has long advocated institutional development to manage the world's international waterways and, during the twentieth century, has given considerable attention to developing and refining the principles of shared management. The Institute of International Law in 1911 published the Madrid Declaration on the International Regulation regarding the Use of International Watercourses for Purposes other than Navigation. The Madrid Declaration outlined certain basic principles of shared water management, recommending that co-riparian states establish permanent joint commissions and discouraging unilateral basin alterations and harmful modifications of international rivers. The International Law Association expanded on these guidelines and developed the Helsinki Rules of 1966

on the Uses of Waters of International Rivers, which was later negotiated into the 1997 UN Convention on the Law of the Non-Navigational Uses of International Watercourses.

These widely-accepted international freshwater management principles guided most African States in the establishment of institutions for cooperation and management of major shared water resources on the continent. Several factors, including hydrologic, economic and political incentives and disincentives, are known to influence cooperation on the development, use, management, conservation and protection of international river basins. External factors, usually not included in the agreements, also play an active role in the formation and application of those agreements in Africa. Both internal and external factors are drivers for the formation, objectives and operation of the existing River Basin Organizations (RBOs). Internal drivers are the goals or objectives contained in the transboundary waters agreements, while external drivers are those factors not explicitly contained in the agreements but which nevertheless wield substantial influence in the formation and orientation of treaties.

The existing RBOs in Africa have set four broad objectives, namely: joint management of shared water resources (e.g. Lake Chad Basin Commission); water resources development for hydropower and agriculture (e.g. Organisation pour la Mise en Valeur du fleuve Sénégal, Organisation pour la Mise en Valeur du fleuve Gambie and Zambezi River Authority); sustainable development and environmental protection (e.g. Lake Victoria Basin Commission); and water allocation (e.g. Nile Basin Initiative). In addition, other external factors including the concept of hydraulic mission, geopolitics, cultural ties, international environmental agendas and the global concerns with water conflicts have all influenced the formation of the existing RBOs.

External facilitation may be required to forge any meaningful cooperation, both for identifying hydrologic, economic and political incentives and payoffs for cooperation, and also for attracting funding for projects that can justify such cooperation.

### *Continental level*

Since the Millennium Summit in 2000 and the adoption of the MDGs, renewed efforts were made to bring African water crises and challenges from the margins to the mainstream of the national and regional agendas

for sustainable economic and social development, with special attention and priority to the MDGs target for safe drinking water and basic sanitation.

The African Water Vision 2025 was adopted by African stakeholders at the World Water Forum in 2000, endorsed by the Pan-African Conference on Water and Sanitation and presented to the 2004 extraordinary Summit of African Heads of States on Agriculture and Water in Sirte, Libya. It provides “a vision of Africa where there is an equitable and sustainable use and management of water resources for poverty alleviation, socio-economic development, regional cooperation, and the environment”. A Framework for Action to achieve the vision was developed with a major undertaking to meet urgent water needs and strengthen the investment base for the desired future outcome on water. The vision indicates the need for a minimum investment of \$20 billion per annum to meet the basic needs in water supply, sanitation, food, energy and other economic, social and environmental uses (75 and 70 per cent access to improved water supply and sanitation respectively by 2015, and 95 per cent for access to both improved water supply and sanitation by 2025; 100 per cent increase in irrigated area by 2025; 25 per cent of hydropower potential developed by 2025).

At the meeting of African Water Ministers in Abuja, Nigeria, in April 2002, an “Abuja Ministerial Declaration on Water - a Key to Sustainable Development in Africa” was adopted. Priority concerns and actions needed for equitable and sustainable use of water resources in Africa were set out. The African Ministers’ Council on Water (AMCOW) was established to “strengthen intergovernmental cooperation in order to halt and reverse the water crisis and sanitation problems in Africa” as one of the priorities. Since 2002, and especially during the last few years, AMCOW, with its partners and other stakeholders, has organized major forums for dialogue on African water issues and launching of several initiatives. Ministers of Water from around the continent attended the 2003 Pan-African Implementation and Partnership Conference on Water where they identified meeting basic needs, providing water for food security, protecting ecosystems and livelihoods, and managing risks as among the key water management goals and priorities for Africa for at least the next decade.

The African Development Bank implemented a Rural Water Supply and Sanitation Initiative (RWSSI) with the objective of accelerating access to water supply and sanitation services in rural Africa, to attain 80 per cent coverage for an estimated investment of \$14.2 billion. The African Water Facility (AWF) was also established to facilitate the availability of financial

resources to build Africa's water infrastructure, institutions and management capacity to meet the targets and goals of the African Water Vision 2025 and the MDGs. The Comprehensive African Agricultural Development Programme (CAADP) framework was developed by the New Partnership for Africa's Development (NEPAD) to address issues of agricultural sector growth, rural development and food security by promoting investment to increase the area under irrigation to 20 million hectares by 2015 and to improve efficiency of rain-fed agriculture.

### *Water resources management challenges and constraints in Africa*

Water resources management is mostly on the concurrent legislative list in African countries. Transboundary waters agreements are signed between countries. However, policy decisions rarely consider the needs, desires and aspirations of the basin inhabitants, even when the opposite riverbanks share more commerce, common culture and regional ties with each other than with their respective heartlands. The power structure of the RBOs often reflects political and economic imbalances among members.

Implementation of accords is generally left to the discretion of the signatory parties rather than being unequivocally programmed into an agreement. At both national and subnational levels, mechanisms rarely exist for public participation. Only recently have entities come onto the scene such as the African Network on Water (ANew), a grouping of non-governmental organizations interested in water issues. Ensuring full participation of African States in forging cooperation on water resources management at basin level remains a big challenge. This is where the issue of appropriate mechanism becomes relevant. Two other important issues are the financial contributions of basin States to RBOs and free riding.

There were external drivers behind the formation of the RBOs and therefore they might be considered to have benefited from experiences in other parts of the world. Since the advent of the Tennessee Valley Authority (better known as "TVA") in 1933, the world has known a model for comprehensive river basin development and management. There are still many deficiencies that need to be addressed in the treaties or conventions or agreements establishing the existing RBOs. Conflicting interests of internal and external drivers as well as the changing priorities and interests of the donor countries, who were instrumental in the formation of the RBOs, are reasons for the deterioration of RBOs. The deterioration makes African countries face increasing water scarcity and the threat of desertification, hunger and poverty.

## *National and river-basin level cooperation on water resources management in Africa*

Water resources management in African countries at the national level generally vests ownership of the resource in the national governments. In turn the governments established ministries and departments that administer and enforce the provisions of the water legislation. The ministries and departments are responsible for putting in place robust management systems for water resources assessment and to oversee the water uses to ensure that water allocations and permits are well managed. On the other hand, cooperation around international rivers is piloted at the level of governments, either within the framework of joint commissions or within especially-established RBOs.

The Zambezi river basin experience illustrates difficulties in achieving this.

The Zambezi river basin is the largest shared river course in Southern Africa (1.3 million km<sup>2</sup> in catchment area, about 113 billion m<sup>3</sup> annual runoff and 40 million inhabitants), shared by 8 out of 15 countries in the SADC region. SADC is responsible for implementing the 1987 Agreement on the Zambezi Action Plan for Environmentally Sound Management of the Common Zambezi River (ZACPLAN) with 19 projects. However, a basin-wide regulatory institution is yet to be formed to enhance cooperation and coordinate development activities within the basin<sup>2</sup>.

Four riparian countries (Angola, Mozambique, Botswana and Namibia) constituting 32.8 per cent of the catchment area and 17 per cent in runoff yield, have endorsed and ratified the agreement signed in Kasane, Botswana, in July 2004 to establish the Zambezi Watercourse Commission (ZAMCOM)<sup>3</sup>. An additional three countries (Malawi, Tanzania and Zimbabwe) representing another 25.5 per cent of the catchment area and 35 per cent of runoff yield, have also signed the draft agreement but are yet to ratify it<sup>4</sup>. If and when these three additional riparian countries finally ratify the draft agreement, the result could be a partial coalition for cooperation covering 58.3 per cent of the total catchment area and 52 per cent of the runoff yield. However, Zambia, the most hydrographically active part of the

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<sup>2</sup> A Press Release dated 6 May 2011 announced the establishment of an Interim Secretariat for the Zambezi Watercourse Commission as well as ratification of the agreement by a fifth member State. The ZAMCOM IS as it is called is to coordinate the riparian States and solicit their support towards the establishment of a permanent secretariat and other requisite organs of the Commission after six of the eight riparian States ratify the agreement. The Norwegian government is financially supporting the first year of the IS operations while each of the eight member States was reported to have pledged financial support to its annual running cost.

<sup>3</sup> Seven out of eight countries signed the agreement at Kasane in 2004.

<sup>4</sup> The analysis done in this document precedes the ratification of the agreement by a sixth member State.

basin and covering 41.7 per cent of the total catchment area and 48 per cent of total runoff yield, has neither signed nor ratified the draft agreement yet. The ZAMCOM Agreement says the agreement comes into effect 30 days after two thirds of all the member States listed in the agreement deposit their ratification instruments with the Executive Secretary of SADC.

Although 70 per cent of Zambian territory lies within the Zambezi basin, this country justifies its non-endorsement of the draft agreement because existing national water resources legislation, including the ZRA Act, considers all the water resources found within the national sovereign territory as national resources over which the country has exclusive rights. Both the ZAMCOM Agreement and the Revised SADC Protocol on Shared Watercourses refer to principles of equitable and reasonable use (ERU) of water resources and the rules for application of ERU for entitlements of water resources are yet to be clarified by a Technical Committee which is to be established.

Zambia considers this detrimental and incompatible with the current level of socio-economic development in the country. Rather than contributing to the development of a comprehensive basin-wide strategic plan, as prescribed by the ZAMCOM Agreement, it opted to work with Zimbabwe in developing joint plans for that part of the Zambezi river basin common to the two countries. However, Zambia's Cabinet has approved a recently-drafted amended Water Act<sup>5</sup> and forwarded it to Parliament for final debate and enactment. For this reason, the realization of integrated basin-wide management practices in the Zambezi River basin still remains a distant vision, with the riparian countries continuing to implement different and diverging policies and plans<sup>6</sup>.

### *SADC Revised Protocol and Regional Strategic Action Plan*

The ZACPLAN predated the SADC Protocol on Shared Watercourses and the 1995 Protocol was actually one of the outputs of the ZACPLAN. The Protocol on Shared Watercourses in SADC was revised in 2000 and is the main instrument from which SADC derives the power “to foster closer cooperation for judicious, sustainable and coordinated management, protection and utilization of shared watercourses and advance the SADC agenda of regional integration and poverty alleviation”. One of the ways identified in the Protocol for achieving the objective is to “promote and facilitate the establishment of shared watercourse agreements and shared watercourse institutions for the management of shared watercourses”. The

5 An Integrated Water Resources Management Bill was presented in Parliament in October 2010.

6 The SADC Water Portal indicates that Zambia has promised to sign the Agreement.



Protocol also charged the SADC Water Sector Coordinating Unit with the responsibility to “keep an inventory of all shared watercourse management institutions and their agreements on shared watercourses within the SADC region”.

The Water Sector Coordinating Unit (WSCU) of SADC developed a Regional Strategic Action Plan for Integrated Water Resources Management (RSAP-IWRM), which all SADC countries adopted in 1998, in addition to the ZACPLAN. The RSAP-IWRM represents a component of the overall Regional Indicative Strategic Development Plan (RISDP), which is SADC’s long-term strategy for economic development. A mid-term review report in 2004 indicated that the success of RSAP-IWRM projects to a large extent reflected the degree to which the projects aligned with the changing agenda and priorities set by the international donor community, since these projects are mainly funded by donors. According to the report, this fact more than any other had impeded the ability of SADC to implement a well-coordinated and integrated programme towards achieving the original goals of RSAP-IWRM.

*The role of the UN Economic Commission for Africa (ECA) in water resources management in Africa.*

The UN Economic Commission for Africa (ECA) has been an active player in water resources management in Africa, particularly through activities geared towards catalyzing cooperation among African countries for the resolution of issues on water resources management at national and river-basin levels. Such activities include the provision of regional advisory services and technical assistance to the national governments and to inter-governmental organizations such as the RBOs, the RECs and the African Union. Recent examples of ECA interventions in the area of catalyzing cooperation around water resources management in Africa include:

*Technical support to the RECs:*

ECA has provided technical assistance to the African RECs directly through regional advisory resources available at the headquarters as well as through its subregional offices located in the five African subregions. Such technical assistance includes the ongoing support to the Economic Community of Central African States (ECCAS) on its quest to transform the existing Commission Internationale du Bassin Congo-Oubangui-Sangha (CICOS) into a veritable RBO for the integrated water resources management

(IWRM) of the Congo Basin. CICOS was initially established by four out of the more than ten riparian countries of the Congo basin. Another example is the ongoing support through training and assistance to SADC countries on the implementation of the revised Protocol on Shared Watercourses in SADC, as well as on meeting the MDGs target on safe drinking water and basic sanitation.

#### *Direct technical support to the RBOs:*

The ECA is a privileged development partner to all the existing RBOs. Regional advisory services are regularly put at the disposal of requesting RBOs on technical issues such as the equitable allocation of internationally-shared water resources, environmental impact assessment of planned water resources projects and assessment of downstream ecological flows, integrated water resources management, installing hydrological and hydro-geological data collection networks, flood and drought management, and financial resources mobilization. The Niger Basin Authority (NBA), Nile Basin Initiative (NBI), Volta Basin Authority (VBA) and the Lake Chad Basin Commission (LCBC) are examples of beneficiary RBOs in this regard. The ECA assisted the LCBC in preparing the technical presentation to the Round-Table Conference on Lake Chad in 2005 and in organizing a workshop to draw up guidelines for projects on inter-basin water transfer in Africa.

#### *Technical support to the African Union (AU):*

The ECA regularly provides support to the African Union Commission on issues relating to water. It also has a coordinating role vis-à-vis other UN agencies involved in water-related activities in Africa and has used this to form a grouping known as “UN-Water/Africa”, whose secretariat is permanently domiciled at the ECA, to mobilize other UN agencies to assist the AU. The most recent example of this commitment was the preparation of documents for the AU Summit on Water and Sanitation, held in Sharm El Sheik, Egypt (24 June to 1 July 2008). In 2002, the UN-Water/Africa Group mobilized the African Ministers responsible for water to form the African Ministers’ Council on Water (AMCOW). AMCOW constitutes a cooperation forum for all African Ministers responsible for water issues and has now been recognized as a Specialized Technical Committee (STC) of the AU responsible for formulating policy on water resources in Africa. All issues on water in Africa are now channeled to AMCOW for resolution, and the UN-Water/Africa Group, coordinated by ECA, does all technical and analytical work on issues to be addressed by AMCOW.

## Progress on the MDGs target on water and sanitation

*Goal 7: Ensure environmental sustainability. Target 10 and JPOI: “Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation”.*

### *Framework*

The original Millennium Development Goal 7, Target 10c, called on countries to “Halve, by 2015, the proportion of people without sustainable access to safe drinking water”. Two years later at the World Summit on Sustainable Development in June 2002 in Johannesburg, South Africa, the world also committed to halving by 2015 the proportion of people without access to basic sanitation.

Among all the development challenges targeted by the MDGs, Target 10 on halving the proportion of people without access to safe drinking water and basic sanitation services is striking first because of the relationship water supply and sanitation have to overall economic development, human health and equity, and second because of the shared understanding of human responsibilities to one another. Meeting the water and sanitation target is vital in terms of the poverty, gender and health objectives of the MDGs and has significant impact on other goals.

On the linkage between water and poverty, most definitions of poverty are based at least in part on access to basic water and sanitation services. Improved access to domestic water supply and sanitation brings considerable economic benefits at the household level. When the poor rely on inadequate water and sanitation services, these can damage their health and cause high health costs relative to income, an increase in morbidity and decreased ability to work. Furthermore, sufficient water supply is critical to the success of many household-based micro-enterprises.

Concerning health, water-related diseases are the most common cause of illness and death among the poor, and for children in particular. A dramatic increase in the number of poor people with access to clean water and adequate sanitation services is needed to achieve the MDGs goals targeting child mortality and major diseases. The vicious cycle of poverty and ill-health is endemic among the poorest. Poverty renders women and men ill-equipped to protect them and their children from biological pathogens and chemical hazards or to seek treatment for illness. Their poor health, impaired

ability to work and high health costs entrench them more deeply in poverty (Swedish Water House Policy Briefs NR 1). The UNICEF model in Figure 3 identifies poor water and sanitation and inadequate health services as the underlying causes of child malnutrition, death and disability at household or family level, among other causes.

The UNICEF framework has the attraction that it encompasses food availability, household income, care, health and other basic needs (as well as far broader “societal level” causes), therefore both holding some intuitive sense and including the mandates of the different United Nations agencies which are expected to cooperate over nutrition, which creates the possibility for a joint “policy network”. This approach argues further that the critical period for individuals’ lifelong nutritional security is from conception to 5 years old and therefore “the most critically vulnerable groups are developing fetuses, children up to the age of three and women before and during pregnancy and while they are breast-feeding, care of mothers and others for young children, access to water and sanitation, hygiene knowledge, and HIV/AIDS”.

**Figure 3**  
A UNICEF Model of Nutrition Security (UNICEF, 1998)

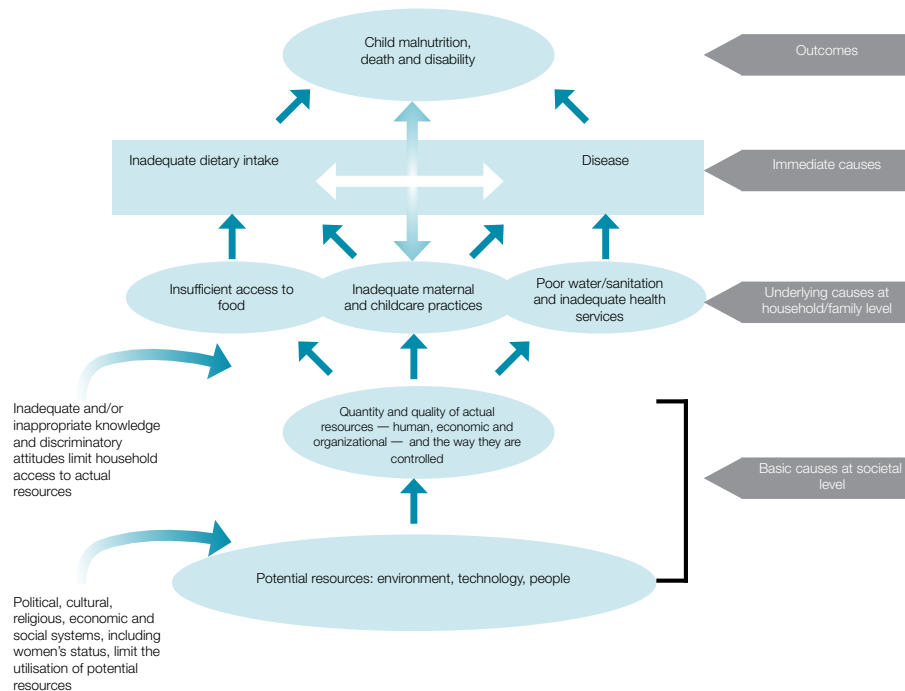
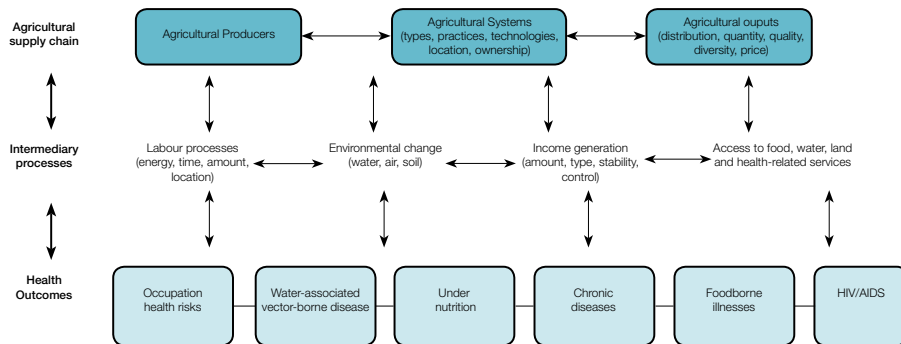


Figure 4 shows a model for agriculture and health interactions in low- and middle-income countries that specifically identifies producers as

well as agricultural outputs in the food chain and demonstrates the two-way interactions that link to access to water as well as to water-associated vector-borne diseases. There is also a virtual water component of trade in agricultural commodities.

**Figure 4**  
Model of Agriculture and Health Interactions in Low-and Middle-Income Countries



Source: Hawkes, Corinna, and Marie Ruel (2006).

The development of water resources for agriculture is a good example of how practices characterizing an agricultural system interact with intermediary processes of environment, income and labour to affect health. Irrigation, multi-purpose dams and ponds for livestock and fish can benefit health by increasing food yields and production and generating higher incomes for the producers. On the other hand, they can also create conditions suitable for propagation of insect vectors and intermediate hosts of pathogenic parasites, thus introducing or intensifying the transmission of water-related vector-borne diseases, such as malaria, schistosomiasis and Japanese encephalitis. Management of agricultural water has been shown to reduce morbidity and mortality from malaria. Other potential approaches include keeping cattle as deliberate bait and combining health interventions (such as distribution of bed-nets) with irrigation programmes.

On the other hand, Peter Svedberg (2002), argues that: (i) the FAO method of estimating prevalence of undernutrition creates a downward bias in estimates of undernourishment, (ii) “official documents from the FAO make no mention of biases”, (iii) FAO already uses data that are sufficient to use an improved method, (iv) those data create an upward bias in estimates of undernourishment, (v) the estimation of undernourishment is very sensitive to assumptions about inequality and dietary requirements, and therefore (vi) the FAO needs to replace its current model and update its data. Svedberg and others find that the net effect of these biases is to overestimate the

prevalence of undernourishment in sub-Saharan Africa relative to other developing regions, largely because national statistics underestimate food production in Africa.

With respect to gender, women have the lifelong burden of fetching water. This responsibility prevents girls from attending school and prevents women from engaging in productive work, retarding progress towards achieving the MDGs on universal primary education and gender equality.

Water Supply and Sanitation (WSS) is an important component of Poverty Reduction Strategy Papers (PRSPs) for least-developed countries, mainly as a key basic service that generally has a high priority among poor communities. Its links with the non-income dimensions of poverty are derived from: improved living environment; impact on health status, especially of women and children; possible impact on improved educational benefits; and reduction of “disproportionate burden” on women. Additional income benefits may also result from reduction in costs of health treatment, time saved from collecting water and more productive time due to a decrease in illnesses.

Improved and sustainable access to safe water and sanitation is imperative to enable some of these benefits to flow towards poverty reduction. For Sub-Saharan Africa the situation as regards “safe” drinking water access and child/maternal health is worse than for education, in comparison with South Asia, another poor region. This would suggest that Sub-Saharan Africa should give a general priority to the water and sanitation sector. In all participatory poverty assessments, water supply and sanitation have generally emerged as key priorities for the poor. Priority for the sector would need to be reflected in different ways, namely: greater investment in allocations, better institutional positioning at continental level and within central ministries, and inclusion of water supply and sanitation in macro-analysis related to public-expenditure reviews, medium-term expenditure frameworks and impact monitoring (WSP-AF, 2001).

### **Achievements on access to improved water and sanitation in Southern Africa**

Figure 5 depicts progress on access to improved drinking water supply in the subregion by country, based on the most recent World Health Organization/ UNICEF Joint Monitoring Programme (JMP Report, 2010) data, updated to 2008. Botswana and Mauritius had already passed the mark for meeting

the target in 2015. The figure shows significant progress achieved by Lesotho, Malawi, Namibia and Swaziland when compared to the status in 1990 (the benchmark year). In comparison, slight progress was achieved in Angola, Mozambique (no data for benchmark year), South Africa, Tanzania and Zambia. South Africa and Zimbabwe had already passed the 78 per cent mark for meeting the MDGs target. The progress recorded in Angola, Mozambique, Tanzania and Zambia may not be enough to place them among those countries that would meet the MDGs 2015 target on drinking water. It is doubtful if progress achieved in other SADC countries is sufficient to meet the MDGs target.

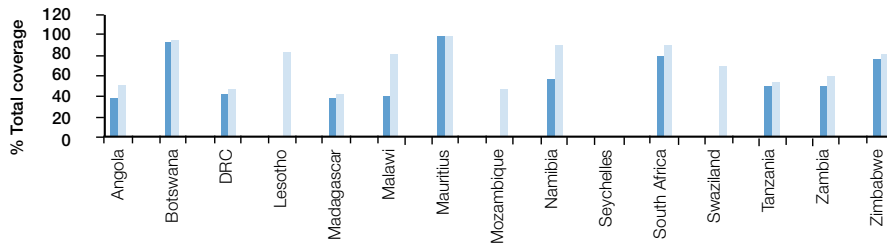
Figure 6 shows the situation with respect to sanitation: Angola, Botswana, Malawi, South Africa and Swaziland stand out with respect to efforts made since 1990, while Mauritius and South Africa had already scaled the MDGs hurdle. Other countries may still have to intensify their efforts in order to meet the MDGs target.

There was very little movement with respect to urban populations' access to improved water supply sources, as shown in Figure 7. Access in 2008 had retrogressed in DRC, Madagascar and Tanzania when compared to access in 1990 and this signifies the rapid urbanization trend in those countries. Access to sanitation in urban areas (Figure 8) also showed a good trend in many countries, but population growth hampers progress in many other countries.

The situation concerning access to drinking water in rural areas (Figure 9) was encouraging especially with respect to Botswana, Lesotho, Malawi, Mauritius, Namibia, South Africa, Swaziland and Zimbabwe, but left much to be desired in other countries. Similarly, access to improved sanitation in rural areas (Figure 10) appeared good in Malawi, Mauritius, South Africa and Swaziland, but may call for more priority in other countries.

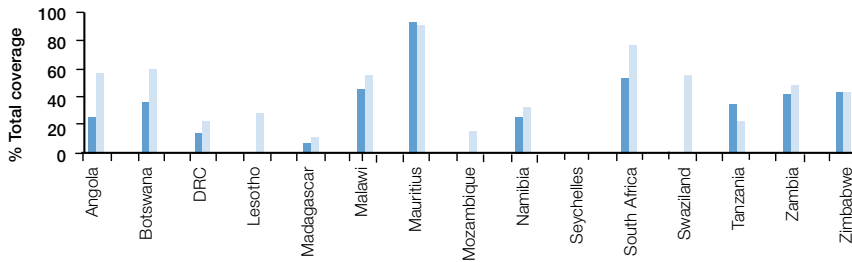
Finally, Figure 11 compares the population increase between 1990 and 2008 with the population that gained access to water and sanitation in the countries of Southern Africa. The figure confirms that the progress achieved may have fallen short of the increase in population during the period in most of the countries except for Malawi, South Africa and Angola.

**Figure 5**  
 Status of Drinking Water Coverage in SADC, 1990-2008



Source: Data from World Health Organization/UNICEF Joint Monitoring Programme (2010)

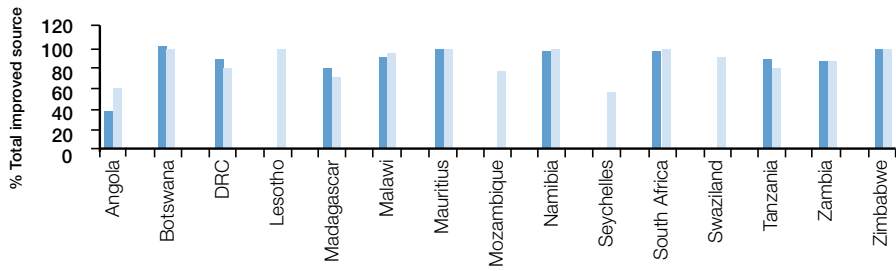
**Figure 6**  
 Status of Sanitation Coverage in SADC, Total



Source: Data from World Health Organization/UNICEF Joint Monitoring Programme (2010)

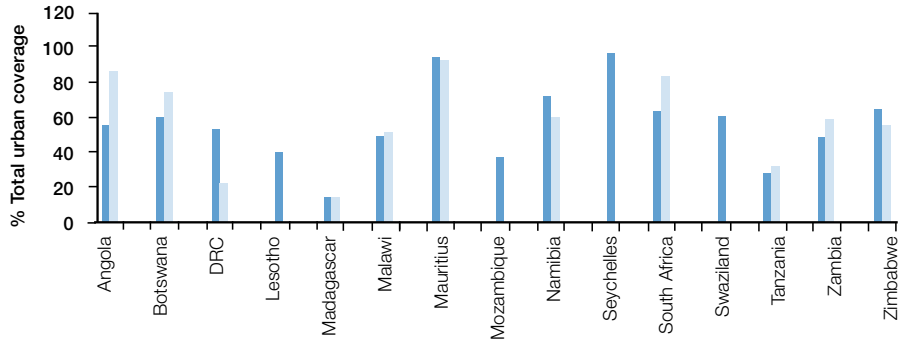


**Figure 7**  
Status of Urban Drinking Water Coverage in SADC, 1990-2008



Source: Data from World Health Organization/UNICEF Joint Monitoring Programme (2010)

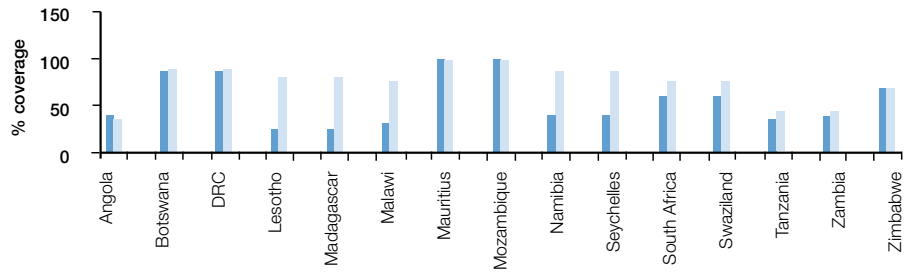
**Figure 8**  
Status of Urban Sanitation Coverage, 1990-2008



Source: Data from World Health Organization/UNICEF Joint Monitoring Programme (2010)

**Figure 9**

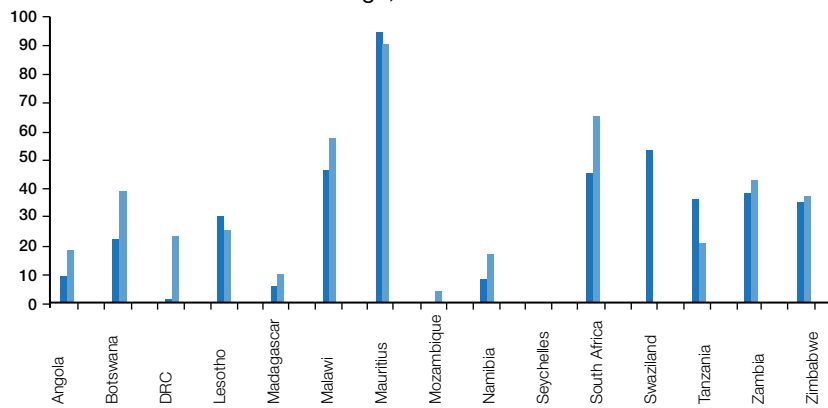
Status of Total Improved Rural Drinking Water Coverage in SADC, 1990-2008



Source: Data from World Health Organization/UNICEF Joint Monitoring Programme (2010)

**Figure 10**

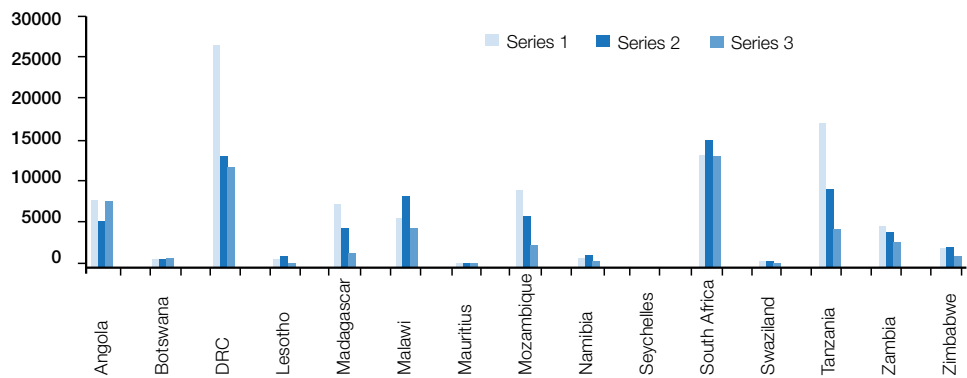
Status of Rural Sanitation Coverage, 1990-2008



Source: Data from World Health Organization/UNICEF Joint Monitoring Programme (2010)

**Figure 11**

Population Increase Compared to Population that Gained Access to Water and Sanitation



Series 1 = Population increase (x1000)

Series 2 = Population that gained access to water (x1000)

Series 3 = Population that gained access to sanitation.

Source: Data from World Health Organization/UNICEF Joint Monitoring Programme (2010)

# Main issues making access to water and sanitation services in Africa difficult

## Issues keeping access to water and sanitation low

The income and urbanization levels of countries are major drivers of access to modern infrastructure services. Middle-income countries have access rates to piped water and flush toilets that are three times as high as those found in low-income countries. More highly-urbanized countries have access rates to piped water and flush toilets that are twice as high as those found in less-urbanized countries. Relatively few African countries are in the middle-income, highly-urbanized bracket (World Bank, 2008). The excellent performance of Malawi in the previous analysis, despite its per capita GDP being less than \$2 per day, is probably attributable to its smaller land area to serve, and high priority given to water and sanitation services which may be attributed to the fact that it is one of the water-stressed countries in SADC.

High demographic growth rates provide some explanations for falling levels of coverage. Demographic growth in Africa is 3.0 per cent per year, and DRC achieves the highest growth rate in SADC (3.75 per cent per year). Moreover, urban populations in Africa are growing at 3.6 per cent per year (Mozambique records the highest growth rate in SADC at 4.19 per cent per year). A significant number of African countries are not increasing access rapidly enough to keep up with demographic growth, particularly in urban areas. Indeed, if historic rates of expansion continue, only a handful of countries can be expected to attain universal coverage by the year 2050.

Decreasing household size is another factor that frustrates expansion of coverage. The average household size in Africa is falling over time as incomes rise. Thus, the total number of households is actually growing even faster than the total population. (The estimated rates are 3.2 per cent increase each year in the number of households as opposed to 2.5 per cent in the number of people). Thus access needs to expand by 50 per cent more to maintain constant coverage rates compared to the access increase required if household size were to remain unchanged (World Bank, 2008).

Even within the group of low-income countries, there is a wide diversity of performance with respect to coverage. Countries such as Ethiopia, Kenya, Madagascar, Mali and Malawi were singled out in the JMP Report as already having relatively good rates of coverage for some services, in spite of their low

levels of income and urbanization. Another set of low-income countries – Burkina Faso, Mali, Chad, Ethiopia and Senegal – were identified as having achieved relatively high growth rates in water-supply services and were increasing the number of connections by between 5 and 10 per cent per year.

Gaps in the supply of services are just part of the explanation for low access. Millions of Africans living near networked services still lack access to them either because the services are unaffordable or because consumers prefer alternatives. Five categories of poor water consumers have been identified in urban centres and it is instructive to underscore the classification, as some of the associated attributes highlight some of the challenges for the water utilities in serving them: (i) no access or illegal access to mainstream water supply; (ii) poor quality and/or insufficient water resources; (iii) residing in informal or unplanned settlements; (iv) high-density housing; (v) difficult topography; (vi) lack of infrastructure (such as roads and postal delivery services); (vii) lack of legal status and security of land tenure; (viii) irregular income and/or wide range of levels of income.

A lack of sustainability in water and sanitation interventions has also been attributed to a lack of willingness to learn from past failures and to listen to those who have pioneered new approaches. This shows the importance of documenting good or innovative practices that can contribute to improving performance in the sector and meeting the MDGs. Different types of sustainability indicators can be used in defining such good practices, namely best practices according to process, activity or output (i.e. technology) or indicators defined by the outcome or impact that needs to be achieved in terms of coverage, health improvement, etc.

“Where to start?” is a major issue facing water supply and sanitation operators. Table 2 shows a working methodology adaptable to large-scale expansion of services in the form of a prioritization schedule, as used elsewhere:

**Table 2**

Variables for prioritizing water and sanitation services provision to settlements

General Variables	Secondary Variables	Indicators
NEED	Poverty	Household income Service coverage
FEASIBILITY		
Technical	Location Existing networks/ infrastructure Form of land tenure Settlement layout	Distance from existing network Capacity for expansion Legality of land tenure Regular plot and street layout Community organization Educational and cultural level
Social	Social structure	Cost of projects Resources of different actors Ability to pay Willingness to pay
Economic/financial	Economic/financial calculation	

Lack of political will, particularly in relation to the permanent, informal settlements in African countries, is often cited as a major reason for not making progress. This lack of political will has often been translated into the failure to address the issue of land tenure.

Affordability of infrastructure services may constitute a barrier to further expansion of access. Most African households live on very modest budgets and spend more than half of their resources on food. Even the most affluent households spend about half of their monthly budget on food; among the poorest, that share rises towards 65 per cent (World Bank, 2008). The lack of a countrywide strategy, with related policy reforms, action plans and related investment requirements in a medium-term framework, is an identified key weakness in provision of water supply and sanitation services.

### *Commercialization, private sector participation and financing issues.*

The orientation of utilities towards commercial development of urban water supply is very important. Issues to be addressed with regard to urban water supply reforms include a regulatory framework at the country level, measures to enhance “commercial orientation”, measures to ensure that the poor benefit under commercial utilities, support to build and strengthen the capacity of the private sector to participate effectively, and appropriate mechanisms to ensure commercial access to finance for the private sector.

Implementation of any water supply and sanitation action plan is also critically linked to the availability of financial resources for water supply and

sanitation as a key basic service. This requires attention to three issues, namely: priority for water supply and sanitation, and the linked expenditure ceilings emerging from the macro-planning within the medium-term expenditure framework; developing an appropriate financing mechanism that protects the priority sector allocations and links to the decentralized service-delivery mechanisms; and the need for leveraging additional community and private-sector resources.

Good assessment and monitoring of the private sector's performance in reducing poverty would be essential and would help ensure its preparedness to develop and implement relevant activities within a countrywide and sector-wide programme. Financing policies for subsidies and cost recovery linked to water supply and sanitation should make it viable to achieve countrywide agreed targets within a reasonable and nationally-agreed timeframe.

# Conclusions and Recommendations

## Conclusions

Meeting the water supply and sanitation targets of the MDGs is very critical in terms of the poverty, gender and health objectives of the MDGs and also has significant impact on other goals. Based on the data published in the JMP Report (2010), the coverage level had significantly increased in the urban areas in Lesotho, Malawi, Namibia, South Africa and Swaziland from 1990 to 2008, but efforts in other countries may have been absorbed by population growth during the same period. The main issues explaining the problems in urban coverage include: high population and urban growth rates, decreasing household size, non-affordability of services to poor consumers living in peri-urban areas, and lack of legal status or security of land tenure. The same trend was observed in respect of access in rural areas in 2008, compared to the 1990 baseline.

In the case of access to improved sanitation, significant progress was achieved in urban areas in Angola, Botswana, South Africa and Swaziland, while Mauritius and Seychelles had already scaled the MDG threshold. In rural areas, access to improved sanitation is most impressive in South Africa, which is now poised with Mauritius to meet the MDGs target.

As the population growth rate makes current efforts unsustainable, more efforts need to be done to ensure that all countries in the subregion do not miss the MDGs targets, particularly by reforming policies to give the necessary priority to the water supply and sanitation sector. Appropriate institutional arrangements are needed, involving working partnerships at the country level for priming the entire institutional landscape, developing national “big pictures” on the issues, mobilizing commensurate funding from various sources, and monitoring implementation to ensure better impact.



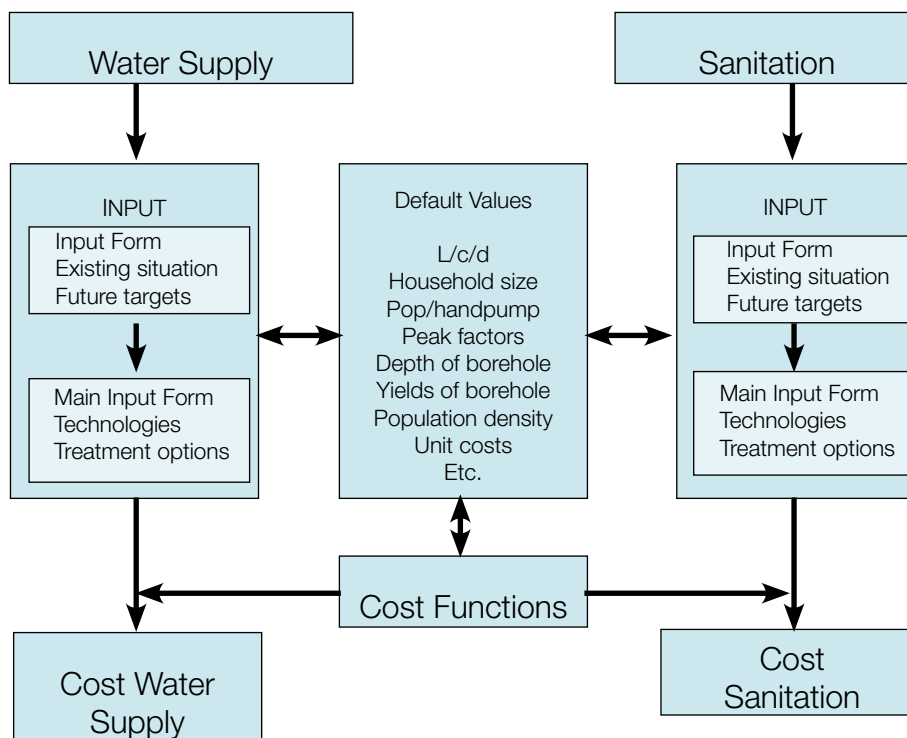
# Recommendations

## Translating political will into action through policy, strategy and costed action plans.

The sectoral ministries in charge of water and sanitation and the ministries of planning, finance and economic development need to cooperate to formulate country-level medium-term policy, strategy and detailed action plans. The action plans should include costs so they can be prioritized within the resource limits available to the various levels and processes, and so they can attract other sources of funding, including donor funding. Costing of water and sanitation action plans in a given country requires the resolution of considerable conceptual problems (Figure 12) and information constraints. Adequate information on unit costs related to different technology and standards is needed for appropriate cost estimates. In a community-based and demand-driven approach, information constraints may also relate to the likely patterns of community demand.

The absorptive capacity of the sector institutions, especially including those at the district and local levels, is critical in the development of action plans and investment requirements. Thus the chosen technology and set targets for the medium term should be feasible and achievable within the framework of sector reforms and sector institutional capacity, as enhanced by capacity-building support. This may require funding non-traditional activities, including capacity building, institutional reform, support to project development, developing sector strategies, sector monitoring and evaluation systems, and development of regulatory institutions. The scenario of investment requirements should be based on capacity-constrained targets and related action plans.

**Figure 12**  
Basic Cost Model Structure (OECD, 2005)



## Develop sustainable financing strategies or mechanisms

It is necessary to identify appropriate financing mechanisms that address the issues related to water supply and sanitation service delivery. There should be possibilities of donor funding and allocations to water supply and sanitation, as a priority sector, which must be protected in actual budget releases.

In most countries, water supply and sanitation are seen as the responsibility of local authorities under a decentralized regime. However, in most cases this is not likely to be possible for new water supply investments if there is a tradition of using subsidies for a very high share of capital costs. It would, however, be relevant that urban sanitation is generally a local authority responsibility, which also ensures that the poor get access to sanitation when commercial utilities and private-sector participation are being applied.

The local authorities in most cases do not have adequate resources to meet water supply investment needs and, even if transfers through untied block grants resolved this, local priorities would not always match nationally-

determined priorities. A second issue relates to the widespread use of social investment funds (SIFs) as a “special fund” mechanism to channel resources on a “demand-responsive basis” for small development projects planned and managed by communities. Several of the SIFs in Africa provide resources for Rural Water Supply and Sanitation on a significant scale. SIFs are relatively important and need to be given due attention in public finance allocations for priority poverty expenditure.

Appropriate mechanisms are important to protect the priority allocations for poverty reduction, particularly for the social sectors. Priority allocations and appropriate country-level mechanisms are required to protect priority expenditures as planned, both in terms of share of expenditure and in actual expenditure.

### **Leverage Additional Resources for Water Supply and Sanitation**

Even if more priority is given to the absorption capacity and other requirements of the WSS sector, public resources will simply not be sufficient to meet the requirements for States to scale-up their WSS strategies countrywide. It is, therefore, necessary to leverage limited public finance by mobilizing community and private-sector resources, especially with a focus on micro-finance and sustainable commercial financing systems.

A framework for economic regulation and tariff reforms may be required for utilities in the sector to be commercially viable. Attention is also required to develop an appropriate regulatory framework and partnership arrangements with small-scale independent service providers and community-managed systems to enable them to access micro-finance on a commercial basis.

# References

- Beekman, Hans E., and others (2003). *Vulnerability of Water Resources to Environmental Change in Southern Africa. Report for the Pan-African START Secretariat and UNEP*. CSIR. Stellenbosch, South Africa.
- Chenje, Munyaradzi, and Phyllis Johnson (eds.) (1996). *Water in Southern Africa*. SADC/IUCN/SARDC, Maseru/Harare, Zimbabwe.
- ECA, AU and African Development Bank (2000). *Africa Water Vision 2025: The Africa Water Vision for 2025: Equitable and Sustainable Use of Water for Socioeconomic Development*. UN Economic Commission for Africa. Addis Ababa, Ethiopia.
- Hawkes, Corinna, and Marie Ruel (2006). The Links between Agriculture and Health: An Intersectoral Opportunity to Improve the Health and Livelihoods of the Poor. *Bulletin of the World Health Organization*, vol. 84, No. 12, Geneva, Switzerland.
- OECD EAP Task Force Secretariat (2005). *Rural Cost Functions for Water Supply and Sanitation (EXD/PCM/EN/NMC/04/125): Technology Overview and Cost Functions*. Report no. P-60777-A-1. OECD. Paris, France.
- Svedberg, Peter (2002). Undernutrition Over-estimated. *Economic Development and Cultural Change*, vol. 51, No. 1, pp5-36. Cited in MacAuslan, Ian (2009). Hunger, Discourse and the Policy Process: How do Conceptualizations of the Problem of “Hunger” Affect its Measurement and Solution? *European Journal of Development Research*, vol. 21, No. 3, 397-418.
- Swedish Water House Policy Brief NR 1 *Investing in the Future: Water’s Role in Achieving the Millennium Development Goals* can be accessed from here [http://www.feem-web.it/nostrum/db\\_doc/SWH\\_2.pdf](http://www.feem-web.it/nostrum/db_doc/SWH_2.pdf).

UN Document A/56/326 (2001). *“Road Map” of Millennium Summit Goals Sets Out Blueprint, Timetable for Future Implementation* (“Secretary-General’s Report Signposts Road Ahead”, Press Release PI/1380, Sept. 2001). UN. New York, USA.

UNICEF (1998). *The State of the World’s Children: Focus on Nutrition*. UNICEF. New York, USA.

World Bank (2008). *Africa Infrastructure Country Diagnostics, Access, Affordability, and Alternatives: Modern Infrastructure Services in Africa*. World Bank. Washington DC, USA.

World Health Organization/UNICEF Joint Monitoring Programme (2010). *Progress on Sanitation and Drinking Water: 2010 Update*. World Health Organization. Geneva, Switzerland.

WSP-AF (2001). *Water Supply and Sanitation in PRSP Initiatives: A Desk Review of Emerging Experience in Sub-Saharan Africa (SSA)*. Water and Sanitation Programme, Africa. Nairobi, Kenya.



