A collaborative effort towards implementing IWRM: a southern African perspective

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1. Background

Mainland southern Africa comprises the following countries that are part of the Southern African Development Community (SADC): Angola, Botswana, Democratic Republic of Congo, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe. The SADC region lies between latitudes 5° N to 35° S and longitudes 10° to 40° E. It is therefore a very extensive area, with tremendous variability in climate, topography as well as socio-economic systems. Average annual rainfall varies from 4,000mm in the north to less than 50mm in south-western parts of the region. There are strong seasonal variations in rainfall, with most countries having only one rainy season. The region includes the equatorial rain forests of the Democratic Republic of the Congo, and deserts in Namibia and Botswana. A large part of the region is semi-arid and is prone to extreme meteorological events. Severe droughts have hit the region frequently over the last two decades, and extreme floods hit the region in two consecutive years, 2000 and 2001, and affected particularly Mozambique and Malawi.

SADC region has 15 major river basins which are transboundary or watercourses shared by two or more countries. They range from the large Congo River Basin (3,800,000 square kilometres) to Umbeluzi River Basin (5,500 square kilometres). The Zambezi River Basin (1,400,000 square kilometres), covers eight SADC member states. Even the small Umbeluzi River is shared by Mozambique and Swaziland. It is estimated that about 70% of the water resources in the SADC region are shared by more than one country. Thus one of the characteristic features in the region, is shared watercourse systems, with complex water rights and potential conflicts over utilization of the shared resources (SADC, 2003).

The last column of Table 1 derived from Pallett (1997) illustrates the availability of surface water runoff in selected river basins in the SADC region. These figures are indicative of the prevailing climate in each river basin and show that the Congo River Basin in the wettest whereas the Limpopo, Okavango and Orange are the driest.

**Table 1**: Mean annual runoff of selected river basins in Southern Africa.

<table>
<thead>
<tr>
<th>River Basin</th>
<th>Basin area (km²)</th>
<th>River length (km)</th>
<th>Mean Runoff at mouth (10⁶ m³ yr⁻¹)</th>
<th>Annual mouth Unit runoff (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Congo</td>
<td>3 800 000</td>
<td>4 700</td>
<td>1 260 000</td>
<td>330</td>
</tr>
<tr>
<td>Cunene</td>
<td>106 500</td>
<td>1 050</td>
<td>5 500</td>
<td>52</td>
</tr>
<tr>
<td>Limpopo</td>
<td>415 000</td>
<td>1 750</td>
<td>5 500</td>
<td>13</td>
</tr>
<tr>
<td>Okavango</td>
<td>570 000</td>
<td>1 100</td>
<td>11 000</td>
<td>19</td>
</tr>
<tr>
<td>Orange</td>
<td>850 000</td>
<td>2 300</td>
<td>11 500</td>
<td>13</td>
</tr>
<tr>
<td>Save</td>
<td>92 500</td>
<td>740</td>
<td>7 000</td>
<td>76</td>
</tr>
<tr>
<td>Zambezi</td>
<td>1 400 000</td>
<td>2 650</td>
<td>94 000</td>
<td>67</td>
</tr>
</tbody>
</table>
The renewable freshwater resources of the SADC region are enormous, averaging some 1,400 billion cubic metres a year. With a population of approximately 190 million (1997), per capita annual renewable freshwater resources average 7,370 cubic metres (equivalent to about 20,000 litres/person/day). However, this seemingly favourable water situation masks the tremendous variability in availability of the water resources. Due to climatic factors and level of water resources development, water is unevenly distributed in time and space in the region. There is a high degree of seasonal variation in rainfall and stream flows, even in a single country. In addition, water is generally not available in places of highest water demand. For example, there are abundant water resources in the northern parts of the region (including Congo DR, northern parts of Zambia and Angola); but these are also areas of least water demand. Highest water demands are in southern and south-western parts of the region (northern parts of South Africa, and most of Namibia and Botswana). This high variability in availability of water resources has led to localized deficits in water; consequently water is increasingly becoming a limiting factor for socio-economic development in SADC. Other characteristics of the water sector in SADC include: low coverage of urban and rural water supply and sanitation services leading to high incidence of water-borne diseases; rapidly growing and urbanizing populations, leading to growing water scarcity and increasing water pollution; generally very low water-use efficiency in irrigated agriculture; degraded watersheds and deteriorating water quality; and the importance of hydropower to the regional economy (SADC, 2003).

With specific reference to access to water and sanitation, Table 2 provides the population size, proportion urbanized and levels of access to safe water and sanitation facilities by the urban and rural populations of each mainland SADC county in 2000.

**Table 2.** Population size and proportion of urbanised and levels of access to safe water and sanitation facilities by the urban and rural population in mainland SADC countries in 2000.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Angola</td>
<td>12.903</td>
<td>31</td>
<td>69</td>
<td>15</td>
<td>34</td>
<td>8</td>
</tr>
<tr>
<td>Botswana</td>
<td>1.693</td>
<td>64</td>
<td>100</td>
<td>91</td>
<td>91</td>
<td>41</td>
</tr>
<tr>
<td>DRC</td>
<td>52.046</td>
<td>29</td>
<td>37</td>
<td>23</td>
<td>23</td>
<td>4</td>
</tr>
<tr>
<td>Lesotho</td>
<td>2.156</td>
<td>25</td>
<td>65</td>
<td>54</td>
<td>53</td>
<td>36</td>
</tr>
<tr>
<td>Malawi</td>
<td>10.778</td>
<td>14</td>
<td>80</td>
<td>32</td>
<td>52</td>
<td>24</td>
</tr>
<tr>
<td>Mozambique</td>
<td>19.980</td>
<td>35</td>
<td>17</td>
<td>40</td>
<td>53</td>
<td>15</td>
</tr>
<tr>
<td>Namibia</td>
<td>1.739</td>
<td>37</td>
<td>87</td>
<td>42</td>
<td>77</td>
<td>32</td>
</tr>
<tr>
<td>South Africa</td>
<td>43.265</td>
<td>49</td>
<td>80</td>
<td>40</td>
<td>79</td>
<td>50</td>
</tr>
<tr>
<td>Swaziland</td>
<td>0.928</td>
<td>32</td>
<td>61</td>
<td>44</td>
<td>66</td>
<td>37</td>
</tr>
<tr>
<td>Tanzania</td>
<td>33.744</td>
<td>25</td>
<td>67</td>
<td>45</td>
<td>74</td>
<td>62</td>
</tr>
<tr>
<td>Zambia</td>
<td>9.191</td>
<td>43</td>
<td>64</td>
<td>27</td>
<td>75</td>
<td>32</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>13.109</td>
<td>43</td>
<td>90</td>
<td>69</td>
<td>90</td>
<td>42</td>
</tr>
</tbody>
</table>

Source: (Ashton and Ramasar, 2002)
The above table illustrates the challenges that the socio economic development poses to the SADC region in order to improve the livelihoods of populations in both urban and rural areas. It also suggests that a high level of investment will be associated with providing safe water and sanitation to the SADC region. Achieving the MDGs is clearly a daunting task for most of SADC countries given the backlog in such services, especially in rural areas.

2. **Integrated Water Resources Management in the SADC region: a challenge**

Following the Rio and Dublin conferences in 1992, the concept of Integrated Water Resources Management (IWRM) was formulated as a recommended approach to dealing with the challenges posed by managing and developing water resources. IWRM is defined as ‘a process that promotes the co-ordinated development and management of water, land and related resources in order to maximise the resultant economic and social welfare on an equitable manner without compromising the sustainability of vital ecosystems.’ (GWP, 2000). It is based on the following four Rio/Dublin principles:

1. Fresh water is a **finite and vulnerable resource**, essential to sustain life, development and the environment;
2. Water development and management should be based on a **participatory approach**, involving users, planners and policy-makers at all levels; and
3. **Women play a central role** in the provision, management and safeguarding of water;
4. Water has an economic value for all its competing uses and should be recognised as an **economic good**.

These principles are relevant in the southern African context given (Boroto, 2004):

1. The prevailing semi-arid climate and the seasonal and temporal variability of rainfall which make of freshwater an extremely finite and vulnerable resource in Southern Africa
2. The need to involve communities and other stakeholders in decision making in order to promote the sense of a common resource that needs to be managed responsibly.
3. The fact that in both rural and urban areas, women are responsible for all household chores associated with water and should therefore be given a voice in the management decisions. Figure 1 shows a woman fetching water in a drying river pond in the Zambezi River valley.
4. The need to recognise that water is not only an important input in most economic activities which comes with a cost, but that is at the same time essential to human dignity. Thus, it is not only an economic good, but also and mainly, a social good which should be made accessible to populations.

**Figure 1.** Woman fetching water in a drying pond in the Zambezi River valley.

![Picture by RJ Boroto (2003)](image)
IWRM seeks to achieve a balance between economic *efficiency*, social *equity* and *environmental* sustainability (Figure 2). These are commonly known as the 3 Es. The need for this balance is relevant in southern Africa given that:

- The region is still developing and water has to play a key role in unlocking economic development.
- The majority of the population still need to gain access to safe water and sanitation and most people cannot afford to pay for the true cost of water.
- The competition for water among sectors should not overlook the need to protect the environment not only for its own intrinsic value but also for the benefit of future generations.

**Figure 2:** The IWRM Framework (GWP, 2000)

Achieving this balance in a coordinated manner requires a framework which consists of three main components:

1. An enabling environment consisting of policies and laws that are centered on IWRM.
2. Institutional roles at central and local levels, the promotion of public–private partnerships and the recognition that water has to be managed at a river basin level.
3. Management instruments that will assist institutions in the discharge of their functions. Such instruments are to be used in information gathering, in the assessment of the resource and in developing allocation tools.

### 3. Regional response to IWRM: the SADC Protocol on shared watercourses

One key characteristic of the SADC region is the 15 river basins that are shared by several countries most of which are located within the SADC region. Only the Congo and the Nile River are shared with other countries outside the SADC region. Table 3 provides the details of these 15 river basins together with their respective co-basins states.
Managing these shared rivers calls for an approach that reduces the opportunity for conflicts and encourages collaboration for sharing the benefits associated with the development of the resource.

**Table 3:** Shared Rivers in the SADC Region

<table>
<thead>
<tr>
<th>No</th>
<th>River Basin</th>
<th>Number of States</th>
<th>Basin States</th>
<th>Basin Area (km²)</th>
<th>River length (km)</th>
<th>Mean annual runoff (mm³/a) (at the mouth of the river)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Buzi</td>
<td>2</td>
<td>Zimbabwe, Mozambique</td>
<td>31,000</td>
<td>250</td>
<td>2,500</td>
</tr>
<tr>
<td>2</td>
<td>Congo</td>
<td>9</td>
<td>Burundi, Rwanda, Central African Republic, Tanzania, Camerooon, Congo, DR Congo, Zambia, Angola</td>
<td>3,800,000</td>
<td>4,700</td>
<td>1,260,000</td>
</tr>
<tr>
<td>3</td>
<td>Cunene</td>
<td>2</td>
<td>Angola, Namibia</td>
<td>106,500</td>
<td>1,050</td>
<td>5,500</td>
</tr>
<tr>
<td>4</td>
<td>Cuvelai</td>
<td>2</td>
<td>Angola, Namibia</td>
<td>100,000</td>
<td>430</td>
<td>Ephemeral</td>
</tr>
<tr>
<td>5</td>
<td>Incomati</td>
<td>3</td>
<td>South Africa, Swaziland, Mozambique</td>
<td>50,000</td>
<td>480</td>
<td>3,500</td>
</tr>
<tr>
<td>6</td>
<td>Limpopo</td>
<td>4</td>
<td>Botswana, South Africa, Zimbabwe, Mozambique</td>
<td>415,000</td>
<td>1,750</td>
<td>5,500</td>
</tr>
<tr>
<td>7</td>
<td>Maputo</td>
<td>3</td>
<td>South Africa, Swaziland, Mozambique</td>
<td>32,000</td>
<td>380</td>
<td>2,500</td>
</tr>
<tr>
<td>8</td>
<td>Nile</td>
<td>10</td>
<td>Tanzania, Burundi, Rwanda, Kenya, Uganda, D R Congo, Eritrea, Ethiopia, Sudan, Egypt</td>
<td>2,800,000</td>
<td>6,700</td>
<td>86,000</td>
</tr>
<tr>
<td>9</td>
<td>Okavango</td>
<td>4</td>
<td>Angola, Namibia, Zimbabwe, Botswana</td>
<td>570,000</td>
<td>1,100</td>
<td>11,000</td>
</tr>
<tr>
<td>10</td>
<td>Orange</td>
<td>4</td>
<td>Lesotho, South Africa, Bostwana, Namibia</td>
<td>850,000</td>
<td>2,300</td>
<td>11,500</td>
</tr>
<tr>
<td>11</td>
<td>Pungue</td>
<td>2</td>
<td>Zimbabwe, Mozambique</td>
<td>32,500</td>
<td>300</td>
<td>3,000</td>
</tr>
<tr>
<td>12</td>
<td>Rovuma</td>
<td>3</td>
<td>Tanzania, Malawi</td>
<td>155,500</td>
<td>800</td>
<td>15,000</td>
</tr>
<tr>
<td>13</td>
<td>Save</td>
<td>2</td>
<td>Zimbabwe, Mozambique</td>
<td>92,500</td>
<td>740</td>
<td>7,000</td>
</tr>
<tr>
<td>14</td>
<td>Umbeluzi</td>
<td>2</td>
<td>Swaziland, Mozambique</td>
<td>5,500</td>
<td>200</td>
<td>600</td>
</tr>
<tr>
<td>15</td>
<td>Zambezi</td>
<td>8</td>
<td>Angola, Namibia, Botswana, Zimbabwe, Mozambique</td>
<td>1,400,000</td>
<td>2,650</td>
<td>94,000</td>
</tr>
</tbody>
</table>


Given the scene depicted by this table and given the scarcity of water in most of the region, the possibility of conflicts over the development and utilization of water resources was increasingly becoming a threat. However, this doom picture has been avoided by the formulation of the SADC Protocol on Shared Watercourse Systems in 1995 and the establishment of a dedicated water sector in August 1996.

Boroto R.J., A collaborative effort towards implementing IWRM: a southern African perspective. International Conference on IWRM. Kyoto, 6-9 December 2004
Ramoeli (2002) recounts the process of the formulating of this protocol: The SADC Protocol on Shared Watercourse Systems was the first sectoral protocol to be developed by the Community. Its history goes back to 1993 when SADC was implementing one of its basin-wide programmes, the Zambezi River Basin System Action Plan (ZACPLAN). This was initially implemented as one of the ZACPLAN projects (ZACPRO 2) which aimed to establish a basin-wide legal and institutional framework to facilitate environmentally friendly sound management of the Zambezi River basin. In the process of negotiating the agreement for the establishment of the Zambezi River Commission (ZAMCOM) by the riparian state of the basin. SADC felt that, instead of developing a single legal instrument for river basin management, it should rather first develop a region-wide legal framework on which all river basin instruments should be based. As a result of this decision, a process of negotiation was initiated in 1993 to formulate the Protocol on Shared Watercourse Systems. The Protocol was subsequently adopted and signed by 10 member states: Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe in 1995 in Johannesburg, South Africa. Mauritius signed the Protocol when it became a member of SADC in 1996.

The protocol underwent a process of consultation and negotiation to address the concerns of some of the member states. Negotiations took place between 1997 and 1999. The process was further supported by ‘national water week workshops’ in which the Protocol and its implication for implementation were the main subjects of discussion. The Protocol amendment process was further influenced by developments in international law, particularly the adoption by the United Nations of the Convention on the Law of the Non-Navigational Uses of International Watercourses (the UN Watercourse Convention) in April 1997. This led to the Revised SADC Protocol on shared Watercourses which is better aligned with the UN Watercourse Convention with regard specifically to environmental protection, planned measures, and compensation for harm caused.

The Revised SADC Protocol on Shared Watercourses was adopted by a SADC Summit of Head of States and Government at an ordinary summit meeting in Windhoek, Namibia in August 2000. It was then open to signature and subsequent ratification by member states. It has been signed by member states by June 2001 and had to come into effect after ratification – according to the law governing their respective countries - by two thirds of the signatory member states. This took happened in 2003 when Tanzania ratified the Protocol.

The original Protocol (1995) was based on the following principles:

- Respect of sovereignty of member states in the utilization of shared watercourses
- Application of the rules of general customary international law, community of interest and equitable utilization
- Mainstreaming a proper balance between development and environmental protection and conservation
- Co-operation in joint projects and studies
- Information and data-sharing
- Equitable and reasonable utilization of shared watercourse system
- Use of discharge and abstraction permits or licences
- Obligation to notify about emergency situations, protection against pollution and the use of installations for peaceful purposes.

The Protocol proposed an institutional framework necessary for the effective implementation of its different provisions. The Protocol proposed the following institutions:

- A monitoring unit as part of the Co-ordinating Unit (in the absence of a dedicated water sector, this unit was meant to be situated in the SADC Environment and Land Management Sector (SADC-ELMS)
- River basin commissions between basin states in respect of each drainage basin (e.g. the Zambezi River Basin Commission (ZAMCOM)) and
- River Basin authorities or boards of each drainage basin

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The framework was further changed when integration of SADC progressed to the extent that a dedicated Water Sector was established. This sector later became the Water Division under the newly established Directorate of Infrastructure and Services, following SADC restructuring and the clustering of the 13 sectors into four directorates.

The Revised Protocol addresses the following issues:

- Definition of terms and concepts (such as the concepts of watercourse and basin);
- Alignment with the UN Convention on the Law for the Non-Navigational Uses of Shared Watercourses;
- Provision for environmental protection; and
- A clarification of the role of river basin institutions and their relation to SADC structures.

In the spirit of the (Revised) Protocol, co-operation among co-basin states is increasingly taking place in various forms. The following initiatives bear testimony to this:

- The establishment of the Orange-Senqu Commission (Orasecom) between the governments of Botswana, Lesotho, Namibia and South Africa. The commission is functional and is currently strengthening its institutional set up. At a bilateral level, the Lesotho Highlands Development Authority (LHDA) is a joint undertaking between Lesotho and South Africa.
- The Okavango River Commission (Okacom) between the governments of Angola, Botswana and Namibia. The commission is also functional and interacts with stakeholder groups through projects such as ‘Every river has its people’.
- The IncoMaputo agreement was signed at the World Summit on Sustainable Development in September 2002 in Johannesburg between the governments of Mozambique, South Africa and the Kingdom of Swaziland. Joint studies are underway and joint development projects such as the Komati Basin Water Authority (KOBWA) have been undertaken by Mozambique and South Africa.
- Four agreements were signed during the international meetings on shared watercourses in the SADC region that took place in Maputo from 24 to 27 November 2003 (SARDC, 2003):
  - One agreement on the Limpopo River Basin - but was only signed by Mozambique and South Africa. Zimbabwe and Botswana could not sign until the agreement has been approved by their parliaments.
  - One agreement was signed on managing Lake Niassa, and the sub-basin of the Shire River, shared by Mozambique, Malawi and Tanzania.
  - A further accord sets up a joint commission between Malawi and Mozambique on water resources of common interest.
  - The final agreement signed was for financing the preliminary phase of a joint study on the Maputo River, the countries concerned being Mozambique, South Africa and Swaziland.

After 2003, the Limpopo River Commission (LIMCOM) and Zambezi River Commission (ZAMCOM) were further established, though at the time of writing, some of their member states have not yet signed them.

It worth noting that the DRC and Tanzania share the Congo and Nile River with other states outside of the SADC region and for whom the provisions of the (Revised) Protocol would not apply, even if most concerns are addressed by those provisions drawn from international agreements such as the UN Convention on the Non-Navigational Uses of Shared Watercourses.

The revised Protocol as described above is in itself a case of IWRM at a regional level and was inspired by the Dublin and Rio conferences. An illustration of the challenges that the implementation of IWRM at shared river basin level for the Zambezi River is discussed by SARDC (2003). Despite the activities related to the Zambezi River basin through ZACPLAN and the fact that the Protocol originated from ZAPRO 2, a project of ZACPLAN, the Zambezi River Commission (ZAMCOM) has not yet been established. This demonstrates that IWRM in practice is not a straight forward concept. Good progress has nevertheless been achieved and ZAMCOM should come into being soon.

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4. Regional response to global initiatives: the WSSD resolution

During the World Summit on Sustainable Development (WSSD) in Johannesburg in 2002, countries agreed to develop IWRM and Water Efficiency Plans by 2005. The WSSD target of the Plan of Implementation adopted by WSSD calls for all countries to: “Develop integrated water resources management and water efficiency plans by 2005, with support to developing countries”

The text talks about “national/regional strategies, plans and programmes with regards to integrated river basin, watershed and groundwater management”

The IWRM/WE plans serve two purposes:

- Instrument to mainstream water in national economy and development
- Instrument to help achieving the Millennium Development Goals (MDG’s) by 2015: on poverty, hunger, health and environment, including water supply and sanitation.

The following actions outline the steps that a country may take to put in place a National IWRM Plan. The number of steps and the depth of the work will depend fully on the individual countries present stage of progress towards IWRM. Some of the components may already be quite advanced (GWP, 2004).

1. **Raise awareness about IWRM and build political will and support for the process.** It is not easy to embark on an IWRM transformation process. As IWRM challenges existing ways of doing things, the first step is to build awareness and understanding of the needs for change among decision-makers and practitioners. Building a broad consensus and understanding about what reforms are needed and how they can be implemented is an essential part of the process. The Vision to Action process as well as the WSSD has helped to do this in many countries. Identification of a national “champion” or key senior person responsible for completing the plan and with adequate resources is an important first step in the process.

2. **Ensure a framework for broad stakeholder participation.** Partnerships and strong multistakeholder groups and fora for participation in the development of National IWRM Plans are essential partly due to the cross-cutting nature of IWRM. An IWRM plan should not be an isolated exercise of a water department. It has to involve all the important governmental and non-governmental stakeholders in the water sector. Broad participation and communication with all stakeholders is essential in the process that builds understanding and mobilises the actors.

3. **Overview of on-going activities that the IWRM plan can build on.** Several important elements, useful activities and documents will be in existence already and preparing a plan is very unlikely to start from scratch. Among these could be Sector Reform Plans, proposals for legal reform, Water Action Plans, partnership development activities, ongoing capacity building at water institutions etc. The IWRM Plan process can greatly benefit from such related processes.

4. **Identify and prioritise the water resources management issues and challenges** to be dealt with, and establish a consensus and common understanding of these among the stakeholders. Balancing human livelihood and development needs with the sustainable use of the resources is the final aim of the process.

5. **Identify Water Resources Management Functions** required to deal with the priority issues. Functions could comprise, formulation of policies for international co-operation on transboundary waters, water allocation and wastewater discharge permits, water resources assessments, monitoring, enforcement, mediation, training and access to information.

6. **Identify of management potentials and constraints** at all levels, central, local and community levels based on the functions required to handle the main water resources issues

7. **Prepare strategies and plans for the IWRM framework** in terms precise actions and processes needed to improve and supplement the policies, legislation and financing – the framework of rules by which

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water is managed, and the institutional roles and capacities of those who manage as well as, and the management instruments that they will use. For the delivery of water and sanitation services, set guides for balancing public/private sector involvement, amending regulatory frameworks accordingly and identifying financing and tariff options.

8. **Ensure adoption at the highest political level.** An IWRM plan will typically suggest actions that go well beyond the resort area of a particular ministry or department, and it may propose changes to central government institutions. It is therefore essential that it be adopted at the level where inter-ministerial co-ordination takes place.

9. **Initiate capacity building.** Once the IWRM framework has been planned, high priority areas for capacity development within existing institutions can be identified. The process of preparing plans should itself be seen as a capacity building learning-by-doing process and whilst external experts may be needed to provide support the process should be well founded within local expertise.

10. **Prepare portfolio of implementation projects and a financing strategy of the plan.** The planning has to be followed rapidly by implementation in order to become useful. The planned changes in institutional structures, human resource development, improved knowledge and a capability to use the appropriate management instruments will have to be implemented together with changes flowing from water services reforms. The Plans will have budgetary and legal implications and proposal documents setting out the required changes and likely costs should be included in the plan. This should allow budget allocations/changes to be made and help in the consideration of any support required from external funding agencies and donors.

Southern Africa, with the support of cooperating partners is firmly engaged on the development of these plans with most of the countries having been targeted by cooperating partners. **Table 4** summarises the current status of IWRM/WE Plans development in the SADC region:

**Table 4:** IWRM/WE Plans initiatives in southern Africa (December 2004 status)

<table>
<thead>
<tr>
<th>Country</th>
<th>Coordinating partners</th>
<th>Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angola</td>
<td>Sida/GWP</td>
<td>In principle support</td>
</tr>
<tr>
<td>Botswana</td>
<td>UNDP/GEF/GWP</td>
<td>As pilot case</td>
</tr>
<tr>
<td>DRC</td>
<td>?</td>
<td>No support identified yet</td>
</tr>
<tr>
<td>Lesotho</td>
<td>?</td>
<td>No support identified yet</td>
</tr>
<tr>
<td>Malawi</td>
<td>CIDA/GWP</td>
<td>At an advanced stage, to serve as guide for other countries</td>
</tr>
<tr>
<td>Mozambique</td>
<td>NEDA/GWP</td>
<td>Likely to start early in 2005</td>
</tr>
<tr>
<td>Namibia</td>
<td>UNDP/GEF/GWP</td>
<td>As part of a country</td>
</tr>
<tr>
<td>South Africa</td>
<td></td>
<td>Just developed a NWRS</td>
</tr>
<tr>
<td>Swaziland</td>
<td>NEDA/GWP</td>
<td>Likely to start early in 2005</td>
</tr>
<tr>
<td>Tanzania</td>
<td>UNDP/GEF/GWP</td>
<td>As pilot case</td>
</tr>
<tr>
<td>Zambia</td>
<td>CIDA/GWP</td>
<td>At an advanced stage, to serve as a guide to other countries</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td></td>
<td>Developed an NWRMS following an IWRM legislation</td>
</tr>
<tr>
<td>SADC region as a whole</td>
<td></td>
<td>No support identified for a regional integration component</td>
</tr>
</tbody>
</table>

Boroto R.J., A collaborative effort towards implementing IWRM: a southern African perspective. International Conference on IWRM. Kyoto, 6-9 December 2004
5. Opportunities and challenges

The specific context of the southern African region offers key opportunities and challenges that should be taken into consideration as part of the process of developing IWRM/WE Plans for the SADC region. These include:

- As the SADC region embarks on an era of lasting political stability given the increasing prevalence of peace (as opposed to the wars that characterized the last two or three decades), there is a need to raise the profile of water on national government budgets so that investment in water projects can unlock the socio economic development of the region.
- On-going initiatives such as those related to the implementation of the Protocol on Shared watercourses, the Regional Water Policy and Strategy which is currently being finalized.
- The existence of the SADC Vision for Water, Life and Environment (SADC &GWP SA, 2000) and the Framework for Action to achieve this Vision which is also being finalized.
- The existence of several initiatives on shared watercourses by the Global Environment Fund (GEF) on lakes Victoria, Malawi and Tanganyika as well as on rivers such as the Limpopo, Okavango and Orange Rivers.
- The need for a regional dimension to the IWRM planning process in order to achieve regional integration with the following components: (1) platform for sharing experiences; (2) standard and guidelines for IWRM/WE planning; (3) framework for monitoring progress towards the MDGs by 2015 and (4) a knowledge management framework.
- The challenges include:
  - the need to integrate water use across sectors at both regional and country levels considering opportunities such as those of virtual water, re-use of water and water demand management;
  - the recognition of the social needs for water (beyond basic human needs and considering the productive use of water for self sufficiency) in the southern African context and the call for an innovative response to the social responsibility of governments (through mechanisms such as phased subsidies or free basic allocation);
  - finding appropriate resources for dealing with each aspect of IWRM, from soft issues such as awareness raising, capacity building to information management and most critically, infrastructure development given the huge backlog in services;
  - coping with uncertainties associated with recent calamities such as climate change and HIV/Aids.

6. References

6. SADC(2003). Draft Regional Water Policy

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