



6th SADC RBO Workshop - Proceedings & Workshop Report

Birchwood Hotel,
Johannesburg, South Africa October
15th – 17th, 2014



Contents

1. Introduction and background	4
1.1 Workshop objectives and expected outcomes	4
1.2 Opening remarks	5
1.2.1 SADC Secretariat	5
1.2.2 International Cooperating Partners	5
1.2.3 AMCOW Secretariat	6
1.2.4 Department of Water and Sanitation, South Africa (Guest of Honour and Host)	6
1.3 Key Note - Disaster Management and RBOs	6
1.4 Introduction of SADC/RBOs Video Series and Group Photo	7
2. Reports and Update from RBOs	8
2.1 OKAKOM	8
2.2. ORASECOM	10
2.3 ZAMCOM	12
2.4 Other RBOs (LIMCOM, Buzi/Save/Ruvuma/CUVECOM and Incomati/Maputo)	13
2.5 Questions, comments and remarks	14
3. SADC Update on Ongoing Activities	15
3.1 Climate change mainstreaming project – Water Financing	15
3.2 Gender mainstreaming in the SADC Water Sector	16
3.3 USAID/RESILIM – Regional Support to improve resilience from water related disasters	18
3.4 Question and Comments	18
3.5 Panel Session	19
4. Flood Risk Management and RBOs	22
4.1 Local and Indigenous Knowledge for coping with water related disasters	23
4.2 SADC Programmes to address water related disasters	24
4.3 SADC Disaster Risk Reduction Mechanisms and Response (Regional, RBO and National levels)	25
4.4 SADC Met Programme implemented through SADC Climate Services Centre	26
4.5 SADC HYCOS Project for disaster risk reduction products implemented through Climate Services Centre	27
4.6 Breakaway Groups – Lessons Learnt, Challenges and Best Practices	27
4.6.1 Feedback on breakout groups and key messages	27
4.7 CRIDF - Catalysing water infrastructure development to improve resilience	31
4.8 Panel Session – Disaster Risk Reduction	32
5. Consultation on RSAP IV	35

5.1 Summary of RSAP & EOP (Status and Evaluation/Review) and Policy Harmonisation in Member States	35
5.2 RSAP IV Concept and Development Timeline	36
5.3 Consultation Groups – Breakaway Sessions	36
6. SADC Synthesis and Way Forward	45
6.1 Summary Phrases:	45
6.2 Key observations and Messages: FRM & RBOs	45
6.3 Role of RBOs in relation to DRR	46
6.4 Way forward	46
6.5 Workshop Evaluation	47
6.6 Closing Remarks	47

1. Introduction and background

River Basin Organisations (RBOs) have been increasingly involved in documenting the river basins and providing the public with a better understanding of each basin as an integrated system. This becomes particularly important in an environment where climate changes cut across national boundaries and river basins are being overwhelmed by the various impacts of climate change such as floods and droughts. Given the foregoing, there is a real need for all RBOs to share experiences with regards to their abilities to plan effectively and be better prepared for those calamities. This is aligned with the disaster risk reduction and management (DRR/M) which entails planning, preparation and effective response. The ultimate aim is to enhance coordination amongst the various institutions towards the same goal which is aimed at optimising the resilience of countries and river basins to natural disasters related to climate variability.

The workshop is the 6th in a series of workshops successful held in various countries within the SADC region. The last workshop (the 5th) was held in June 2012 in Harare Zimbabwe. The theme for the 5th workshop was "Monitoring the Implementation of the Protocol on Shared Watercourses". It has therefore become imperative to update the information and assess the work since then, hence, the 6th workshop.

1.1 Workshop objectives and expected outcomes

In order to enhance the readiness to floods and climate change impacts within the RBOs, the 6th workshop was initiated. The theme for the 6th workshop was "**Strengthening Regional Cooperation and Resilience in Water Related Disasters**". Key RBOs such as LIMCOM, ORASECOM, OKACOM, ZAMCOM, CICOS and other River Basins in SADC and beyond presented on their on-going activities, particularly with regards to Flood Risk Management (FRM) and Drought Risk Management (DRM) as well as the challenges faced. The specific objectives of the 6th workshop and the expected outcomes are outlined in the table below.

Specific Objectives and Expected Outcomes	
Specific Objectives	Expected Outcomes
<ul style="list-style-type: none"> • To provide an overview of the Disaster Risk Reduction in the form of Floods and Droughts in order to better understand what ground has been covered in these Disaster areas. • To give an update of ongoing activities as well as the challenges encountered in every river basins with regards to flood/drought risk management • To provide some relevant tools for FRM/DRM in the SADC RSAP III and their applicability in the present context • To provide key elements of FRM/DRM at the macro, meso and micro levels • To share experiences (success stories and challenges encountered) amongst RBOs • To identify the key recommendations going forward • To provide input to the next phase of the SADC Water Programme (RSAP IV) 	<ul style="list-style-type: none"> • Acquire a better understanding of the situation and the failures aspects to be addressed • Propose SADC regional best practices • Provide appropriate support to the RBOs where needed • Key elements of the 4th Phase of the SADC Water Programme (RSAP IV)

1.2 Opening remarks

After the registration process for the delegates, the workshop facilitator Mr Hastings Chikoko welcomed the delegates. Mr Chikoko also outlined the ground rules and key issues/notices as follows:

- That there are translation channels for three SADC languages (English, French and Portuguese)
- Reminded delegates that the use of mobile telephones within and during workshop proceedings is not permissible
- That during question/comments time, the questions should be succinct

The next process was the delivery of opening remarks. The opening remarks were headlined by the SADC Secretariat, the International Cooperating Partners (ICPs), AMCOW Secretariat and the Guest of Honour, the Director General of the Department of Water and Sanitation, South Africa. The key opening remarks from each of the representatives of the aforementioned organisations is briefly outlined below.

1.2.1 SADC Secretariat

The opening remarks for the SADC Secretariat were delivered by Engineer Remigious Makumbe. Some of the key highlights from his remarks include the following:

- The workshop is characterised by multi-stakeholders
- That the SADC Secretariat is the information broker
- The Zambezi Commission (ZAMCOM) with 8 riparian states and considered the big brother of RBOs in the SADC is now functional, and domiciled in Harare
- Climate change is real and is here, with huge implications on water and food security
- RBOs are economic brokers in the future, where only 10% of SADC hydro potential is currently tapped...the region is sitting on huge potential
- RBOs should adjust their political and economic scope to address relevant issues and needs
- The buzz word within the region and RBOs should be implementation, implementation and implementation.

Engineer Makumbe acknowledged and thanked GWPSA and others who facilitated and arranged the workshop logistics. His parting shot was more succinct in highlighting the importance of collaboration within the region, thus *'Working alone you can go far...working together we can go further!'*

1.2.2 International Cooperating Partners

Joachim Schmidt delivered the opening remarks on behalf of the ICPs. He basically delivered four key messages in his opening remarks.

- i. Firstly, he **congratulated** SADC and all the delegates present for convening the Water Reference Group, reviewing the RSAP III and the Protocol. He highlighted that the Protocol helped build a cooperative environment within the region especially as a conflict-stopping tool.
- ii. Secondly, he **re-assured** the region that there is and will be continued support from ICPs. Indicated that there are 22 known ICPs supporting RBOs in the SADC region and contributing an estimated 250 million euros. Moreover there is a shift of support towards RBOs and rising support by ICPs to climate change. Importantly, ICPs follow and support regional strategies.
- iii. Thirdly, he **urged** everyone in the region not to rest on past achievements BUT to leverage on such successes going forward. Underscored that water resources in the region will increasingly come under pressure from increased demand, continued population growth and climate change. Proposed strategies for addressing the challenges include sharing good practices

(through the workshop and other platforms), provide recommendations on how to strengthen instruments of cooperation and act together through cooperation in emergencies. Remarkably, he also urged the region to take action on the attention given to water in the region by raising the profile of water through capacity development.

- iv. Finally, he **invited** participants to make good use of Day Three of the workshop programme focusing on RSAP IV to take a holistic view of the SADC Water Sector building on the Protocol. He further invited the participants to take a very active part in future strategy especially the principle of subsidiarity.

1.2.3 AMCOW Secretariat

The opening remarks for the African Ministerial Conference on Water (AMCOW) Secretariat was delivered by Charles Nganguoe. Key highlights from the opening remarks include:

- Water is at the centre of socio-economic development in the continent
- The continent needs water as an instrument to reduce poverty
- SADC has an excellent place within Africa and Ministers of Water in Africa
- He highlighted that lessons from the workshop deliberations will be shared with other African countries
- As a continent we should work together for the post 2015 agenda
- Thanked the ICPs for supporting the region and continent in a sustainable manner in managing transboundary programmes
- Also thanked the Germany Government for support to the water sector in Africa and to AMCOW Secretariat

1.2.4 Department of Water and Sanitation, South Africa (Guest of Honour and Host)

Mme/madam Lindiwe Lusenga, the Deputy Director General in the Department of Water and Sanitation, South Africa delivered the opening remarks on behalf of the Director General and the honourable Minister, who were attending to other pressing commitments. Important messages from her opening remarks included the following:

- The issues of water are important to the citizens of the 14 Member States
- The region and water sector cannot keep on producing documents...so much has been done, what remains now is to implement
- In so doing, the learning point is not to forget the experiences of the ordinary people...especially the indigenous knowledge aspects
- The Ministers of Water in the region should meet regularly, given that elections come and go, and this results in staff changes. Hence, meeting often will assist in addressing this challenge

The final key message was more profound, where Mme Lusenga stated that *'we are the hope of the ordinary citizens of our region...and hope is water!'*

1.3 Key Note - Disaster Management and RBOs

Key note speech by Dr Johan Minnie, President of Disaster Management Institute of Southern Africa (DIMISA). The presentation highlighted some key messages on disaster management and the role of RBOs in the region. A summary of the key points from the presentation is provided below

- Disaster management (DM) is everybody's business
- That there is mutual influence between DM and River Basin Management
- The role of RBOs in DM is mainly on 'planning, preparation and response'

- Real DM in RBOs entails positive planning, comprehensive preparedness and anticipatory response
- DM places huge responsibilities on RBOs and the water sector

Dr Minnie also outlined some key challenges to DM. Indicated that **communication** is one of the most outstanding challenges in DM. There is a constant problem with information dissemination, how it is packaged, how it is distributed, how it is received and interpreted by the community members worried about their livelihoods. Despite this challenge, he noted that RBO's provide a good vehicle for information sharing on disaster risk, even though the various River Basins are understandably at different levels of development in terms of their RBOs. And downstream sharing of information is not difficult.

The second challenge relates to **investment in risk reduction**. Dr Minnie remarkably stated how quickly money flows during disasters and how that flow slows to a trickle when there is no immediate threat. Consequently, investment in risk reduction means investment in interventions that influence the construction of disaster risk. Such investments can include infrastructure for flood risk reduction and water resource management, such as dams, storm water defences and access points to ground water in dry conditions. Other investments could include capturing local and indigenous knowledge about risk reduction measures that have worked in the past. Significantly, investment in risk reduction also mean investing in advocacy and education, not only of the public but also of decision-makers who need to be convinced of the merit of considering disaster risk in development and land-use decision.

Climate change is the third challenge to DM. The region is facing increased frequencies of severe weather events and that requires a planned and carefully thought out response. To this end, there is some remarkable effort being done through and by the regional approach of SADC with the Climate Services Centre that combines meteorology, hydrology and disaster management. Clearly, there is a relationship between the climate change challenge and the communication challenge which is founded in the need to have information in order to plan positively, prepare comprehensively, and respond in an anticipative, pro-active manner. Dr Minnie suggested that one of the strategies might entail RBOs working more closely with disaster management bodies to quantify the localised impacts of climate change.

Dr Minnie also pointed out that disasters are not natural. His argument was that as humans we get in the way of nature or tinker with nature and then blame nature when we get hurt. So disasters, even those we call "natural disasters" are disasters attributable to human activities and vulnerability. Hence, recommended that RBOs should be focusing not only on water and where it goes or does not go, but also on people and what they do and where they go!

In his concluding remarks for the key note presentation, Dr Minnie reiterated that "**River Basin Management is Disaster Management**".

1.4 Introduction of SADC/RBOs Video Series and Group Photo

Dr Msibi (SADC Secretariat) introduced the video session where he indicated that there were six videos available, one for the whole SADC and one each for five RBOs. The SADC video was basically a precursor to the other five. Dr Msibi further announced that the other videos were scheduled to be viewed during the course of the workshop, some in-between sessions and others during dinner. After the announcement by Dr Msibi, the participants were ushered to the garden for a Group Photo.

2. Reports and Update from RBOs

Phera Ramoeli of the SADC Secretariat presented the broader SADC overview on support to RBOs. He (Dr Ramoeli) pointed out some key highlights on support to RBOs. Key messages from the presentation include:

- The SADC has the largest number of shared water courses, where 15 are in the region while the Nile and Congo River Basins are shared with other regions
- 70% of water resources available in the region occur in shared water courses
- The Zambezi, was the first shared water course, 1987, through ZACPRO II, and now ZAMCOM
- The Protocol on Shared Watercourses was ratifying and adopted by most Member States, and mandated SADC to be involved in management and support to River Basins
- The Protocol also makes provision for the RBOs and harmonisation of the instruments
- SADC plays a key role in the establishment and strengthening of RBOs; as well as acting as a broker for conflict prevention and resolution
- Several RBOs have been established and are functional with Secretariat in place
- SADC intervention to the RBOs varied from one basin to another, for example, in the Zambezi, SADC provided support from the start to full establishment; while in other basins, SADC provided support on transboundary diagnostics and plans
- On RBO support, six events (workshops) to develop tools and ideas on sharing and managing the shared resources were held

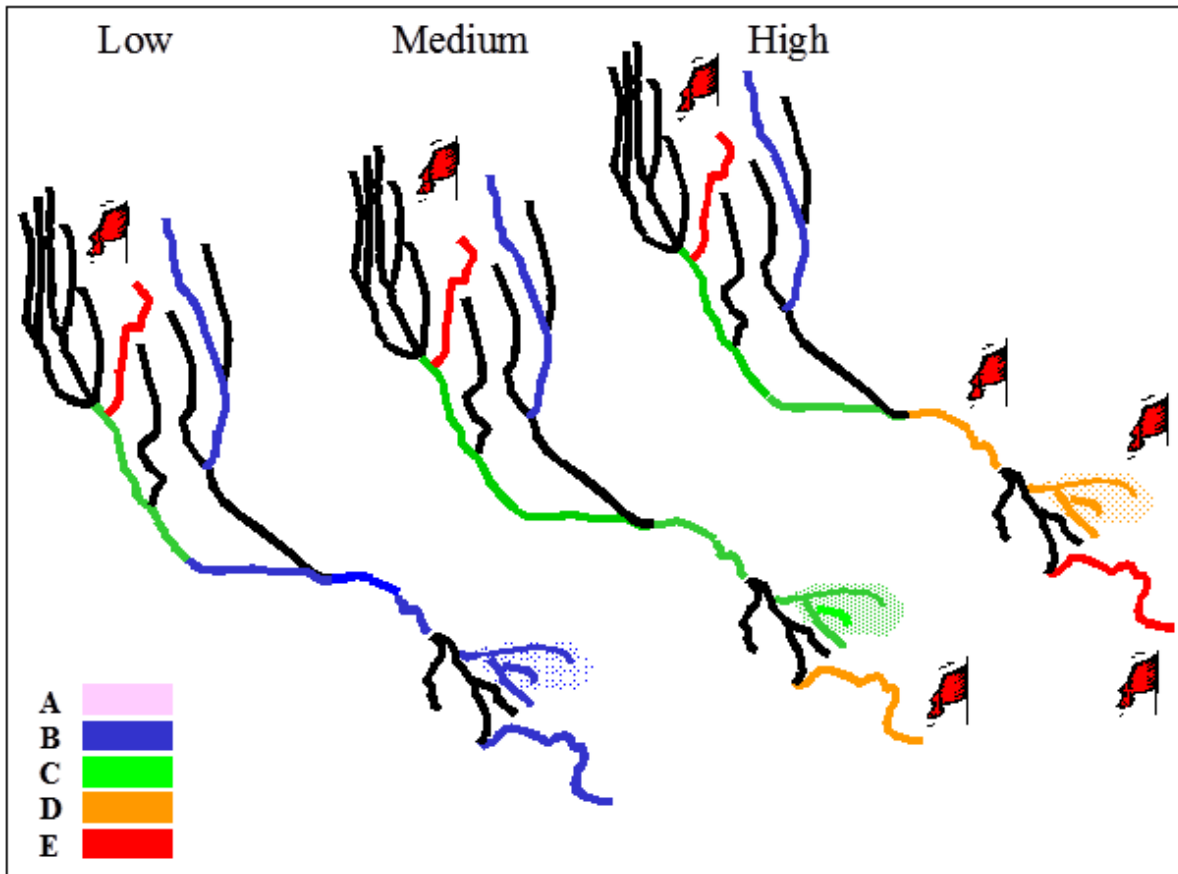
In conclusion, Dr Ramoeli reiterated the fact that joint planning and management of shared rivers is an imperative. He also underscored that the principle of reasonable and equitable use of shared water resources is part of the instruments of the Protocol. Finally, he concluded that the value of support to RBOs is manifested in the peace that is prevailing in the region as well as the poverty reduction efforts underway in the different basins. Remarkably, he summed up that RBOs are a potential socio-economic growth area for the region. The session was **chaired by Angola**.

2.1 OKAKOM

Dr Ebenizario Chonguica, the OKAKOM Executive Secretary presented. The presentation provided a full overview of the activities, programmes and processes within OKAKOM. From the detailed information provided, a summary is provided below.

The Transboundary Diagnostic Analysis (TDA) Process - The project commenced in 2007 and closed at the end of August 2010 after an extension of four month. A follow-up took place from September 2010 to February 2011 with the TDA being published and publicly launched in May 2012 in Luanda Angola. The major accomplishments under the TDA included: 70 OKACOM meetings over 17 years; 80 background studies by regional scientists; ground-breaking integrated flows analysis methodology; and support from GEF-UNDP-FAO.

Integrated Flow Assessment Process - Understanding of impacts of flow modification on ecological dynamics, socio-economic and livelihood conditions, and macro-economics of the basin. This entailed scenario planning to assist in arriving at a concept of acceptable development space, and negotiation tool for managing trade-offs within the RBO. The figure below shows the response curves and flow stats brought together in the DSS.



- A Natural
- B Largely natural
- C Moderately modified
- D Largely modified
- E Critically modified

The results indicated in the figure above show a progressive decline from Low to High scenarios.

Hot Spots and Issues in OKAKOM – The Angolan floodplains, the Cuito catchment and the Delta were identified as the key hot spots raising issues regarding the balance between biodiversity and abundance vis-a-vis maintaining social services and cohesion.

TDA Areas of Concern and Drivers	
Concern	Drivers
<ul style="list-style-type: none"> • variation and reduction of hydrological flow • changes in sediment dynamics • changes in water quality • changes in the abundance and distribution of biota 	<ul style="list-style-type: none"> • population dynamics • land use change • poverty • climate change

The main outcomes of the TDA study is that it provides a knowledge base for informed planning, management and decision making.

The SAP and Key Features – Key features of the SAP entailed the following:

- Negotiated policy document
- Endorsed at the highest level of all relevant sectors

- Establishes clear priorities and commitments for action to resolve the priority problems identified in the TDA
- Undertaken prior to projects for development of technical assistance, capacity-building, or investment
- Sets out specific actions for implementation

Other notable highlights from the presentation included the following key points:

- The use of full multi-disciplinary team in each country
- Use of existing structures provided TTT, ISC and NCU services
- Process driven by OKACOM
- Close links with other initiatives including GEF National BD project
- Baseline knowledge -- owned by the riparian states
- OKACOM in the process of developing a 'Climate Change Adaptation Initiative'

Dr Chonguica also highlighted that the key challenge is the ability to develop an action programme that is relevant, has visible impacts (ecosystem and livelihoods) and is sustainable. The opportunities that are available include

In conclusion, the TDA product was a joint investment and benefits all riparian states through availability of information, sound basis for planning and capacity building (research capacity improved in all countries). However, Dr Chonguica raised a very important point when he remarked that 'RBOs are faced with political issues, noting that politicians are less interested in areas outside their constituency. Hence, his plea for SADC to engage with Member States to relax the issue of sovereignty regarding key aspects of RBO cooperation.

2.2. ORASECOM

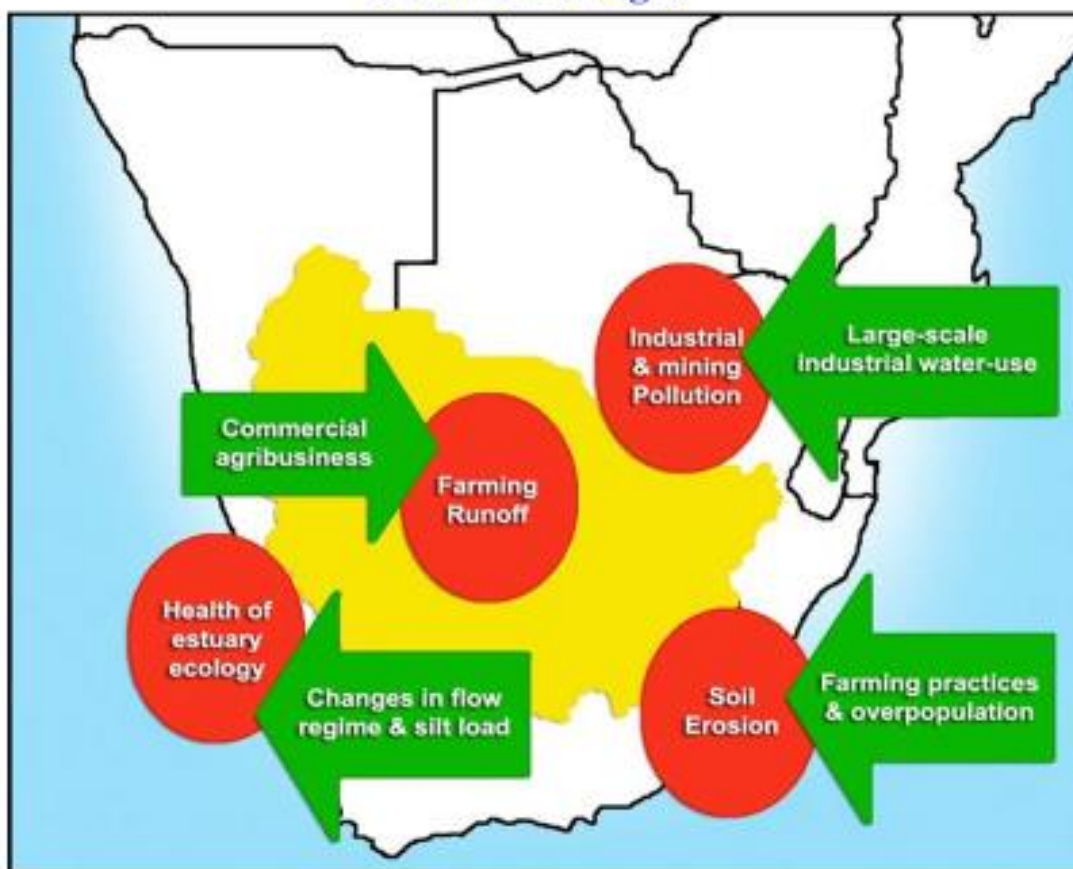
Dr Lenka Thamae, the Executive Secretary of ORASECOM presented the overview and update of the basin. Dr Thamae started by providing the profile of the basin covering key statistics such as population, basin area, rainfall and average natural run-off among other attributes. The presentation also provided the key economic sectors in the basin ranging from commercial agri-business, mining and petro-chemicals production to water trading and transfers.

Basin challenges in the ORASECOM are summarised as follows:

- Water scarcity, which will be compounded by climate change.
- Defining equitable allocation and benefit sharing with limited available water resource.
- Effectively involving stakeholders at basin level e.g. given asymmetry of capacities (including access to information and water planning skills) among stakeholder groups in basin.
- Ensuring consistency in delegations and maintaining institutional memory.
- Asymmetry in capacities at national level.
- Exploring innovative partnerships and continuing to leverage funding for priority programmatic areas remains an ongoing effort.

These challenges mean that the Orange-Senqu basin is facing severe water stress within fifteen years. Already, water in the basin is heavily used, and increasing pollution challenges are being experienced in various stretches of the river. The challenges and drivers are further illustrated in the figure below.

Basin Challenges



Dr Thamae further highlighted that the ORASECOM programme of work includes thirty areas clustered into six themes of:

- Institutional and organizational strengthening;
- Specific capacity building on shared watercourse management;
- Development of a shared information system;
- Enhancing ORASECOM communication and awareness building;
- Specific transboundary projects and studies; and
- Promoting conservation and environmental strategies and policies.

However, the medium term and pressing target is to consolidate a basin wide integrated water resources management plan.

ORASECOM'S Joint Basin Survey, 2010 - was modelled on a similar survey of the Danube River done by the ICPDR. The planning of JBS-1 was undertaken by a 'Core Team' made up of 2 experts from each Member State and supported by specialists from the ICP supported programmes. Joint Basin Survey had five main elements: Aquatic Ecosystem Health; Water chemistry; POPs and metals; Inter laboratory benchmarking and public events at five sites.

Basin Level Integrated Water Resources Management Plan 2015 to 2025 – The Plan is very important for ORASECOM. The plan is envisaged to provide the following advantages to the basin:

- A single tool for ORASECOM to plan its activities towards agreed goals (short/medium/long-term goals).

- Provides a clear scope, but with allowance for review and adaptation (M and E and reporting role of ORASECOM).
- Should enhance and clarify the purpose and role of ORASECOM and strengthen cooperation in the basin.
- Support efficient development of water resources and optimized management (especially environmental aspects, degradation, EWRs among others)

The ORASECOM RBO has also tentatively crafted the Vision, Scope and Objectives for the basin IWRM Plan. One of the central objectives of the IWRM Plan, in line with the DRR/M theme of the workshop, is to 'Maximise Security from Water Related Disasters – Clusters of Actions'. Operationalising the objective entail the following key actions:

- Developing climate change adaptation strategy for the basin
- Improve knowledge, understanding and communication of extreme events
- Mainstreaming climate proofing into design of development projects
- Mainstreaming climate proofing into drought and flood mitigation

2.3 ZAMCOM

The Executive Secretary, Dr Zebediah Phiri outlined the key outcomes and updates of ZAMCOM. He started off by briefly highlighting the long history towards the formation of the RBO from 1987 to 2011 when the ZAMCOM Agreement came into force. The development trajectory continued from the signing of the Agreement in 2011 to the interim Secretariat (2011 – 2013) and finally the establishment of the Permanent ZAMCOM Secretariat in Harare, Zimbabwe, 2014. Dr Phiri indicated that it took a remarkable 28 years of negotiations to realise the establishment of ZAMCOM.

Dr Phiri pointed out that successful transboundary management of the Zambezi River Basin presents a major test case or opportunity for cooperation in managing shared water resources for economic development and integration in southern Africa. The current status of key aspects, activities and programmes within the basin are outlined below.

Staffing, financing and office provision – The Executive Secretary appointed and in post; offices operational; riparian countries contributing to operations financially; cooperating partners on board or coming on board; and funding secured for initial three years of operation. Moreover, the organs of the Commission are also in place.

Operational guidelines, plans and information systems – The Financial Sustainability Strategy and Plan and Operational Manuals/Guidelines are being developed while recruitment of staff is in progress. Other activities in progress include the following:

- Zambezi Water Information System being upgraded to include new features
- Linkages to SADC-HYCOS FRM/DRR Project - Revitalised SADC-HYCOS stations and base stations
- Baseline and road map for improvement of DRR/FRM
- Regional flood hazard/risk atlas

Operationalising key provisions of the agreement – Work is in progress for enabling the following aspects: rules of notification and prior consultation; information exchange and sharing agreements; forecasting and early warning; decision support systems; strategic plan for water course; joint investments/programming, stakeholder participation.

The short term forecast/plan (2014 – 2017) entail having a fully operational ZAMCOM capable of discharging its mandate of planning and organising the implementation of basin-wide activities; while the long term focus is on attaining 'Equitable and reasonable utilisation of the water resources of the Zambezi Watercourse as well as the efficient management and sustainable development'.

The opportunities and challenges facing the Zambezi Basin are illustrated in the table below.

Opportunities and Challenges	
Challenges	Opportunities
<ul style="list-style-type: none"> • Financing options/sustainability and member state contributions • Very high expectations given the long gestation period – management? • Sustained confidence, trust and ownership; tension management • Keeping the various levels of decision-maker well and correctly informed on what ZAMCOM brings on the scene • Allaying “historical” fears and concerns; perception of benefits/fairness • Addressing felt needs/perceived priorities while developing strategic plan and settling down • National agendas vs basin-wide agenda – conflict? 	<ul style="list-style-type: none"> • Departure from unilateral action that may undermine the development and investment plans of one country by another to coordination, collaboration and joint programming • Realisation that the right to utilise the watercourse goes hand in hand with the duty to cooperate in its protection and development • Generally cooperative atmosphere in southern Africa • More to be gained than to be lost by working together

Dr Phiri indicated that despite the 28 year progress, the real journey for ZAMCOM has only just begun. He concluded by reiterating the ZAMCOM mandate that is to promote and coordinate the cooperative management and development of the water resources of the Zambezi Watercourse in a sustainable and climate resilient manner. Achieving that mandate is the focus of ZAMCOM.

2.4 Other RBOs (LIMCOM, Buzi/Save/Ruvuma/CUVECOM and Incomati/Maputo)

The updates on the other basins was presented by Obonetse Masedi and summarised in the table below.

RBO	Update remarks
Limpopo	<ul style="list-style-type: none"> • Institutional evolution process took too long • LIMCOM launched on 4th of July 2014 • Permanent Structures in place and hosted by Mozambique – recruitment of permanent secretariat scheduled to start in 2014
Incomati/Maputo	<ul style="list-style-type: none"> • Basin Agreement – at advanced stage with legal teams, scheduled to be signed by end of 2014. • Hosting of the Institution – Swaziland to be permanent host • Funding and Plan of action – funding secured
Ruvuma	Member States have developed an understanding to seek Technical Assistance that will assist them to kick start processes leading to the establishment of the Basin Institution.
Save/Buzi/Pungwe	<ul style="list-style-type: none"> • Member States have agreed to have one Institution • Draft Cooperation Agreement ready and is expected to be signed by mid-2015

Cuvelai	The Agreement that establishes the Cuvelai Basis Commission has just been signed and Member States are working on the Cuvecom structures
----------------	--

A participant from the Congo River Basin pointed out that the institution wanted to send a representative but due to logistical issues regarding obtaining a visa, the delegation unfortunately did not manage to attend. However, he asked for clarity as to why the Congo River Basin was not mentioned as part of the SADC RBOs like all the other basins. The chairperson apologised for the anomaly and requested Dr Msibi to address the issue. Dr Msibi indicated that as SADC Secretariat, they invited the Congo RB delegation but learnt that they were unable to attend, hence they were removed from the workshop programme. Dr Msibi apologised and promised to continue engaging the Congo RB just like other basins in the region.

2.5 Questions, comments and remarks

The chairperson opened the floor for questions, comments and clarifications from the session presentations. The questions raised and responses provided are summarised below.

Question/comment	Response
Do we have wealth in place to ensure the RBOs are financially sustainable? Are we able to reduce contributions from ICPs?	The issue of sustainability cuts across all RBOs, both established ones and those being established, hence the various RBOs in partnership with SADC are developing sustainable strategies. Core functions are and will be financed by Member States, however contributions from ICPs are still required. There are also rigorous strategies to get funding from the private sector.
Going forward, the RBOs should work closely with regional and national Meteorological partners	
Given that there is a committed budget from riparian countries to fund the RBO, are they contributing equal amounts? What operations are they funding?	Riparian Member States contribute equal amounts to finance the core-operational requirements of the basin. However, progress has been made in developing a financial strategy to address this.

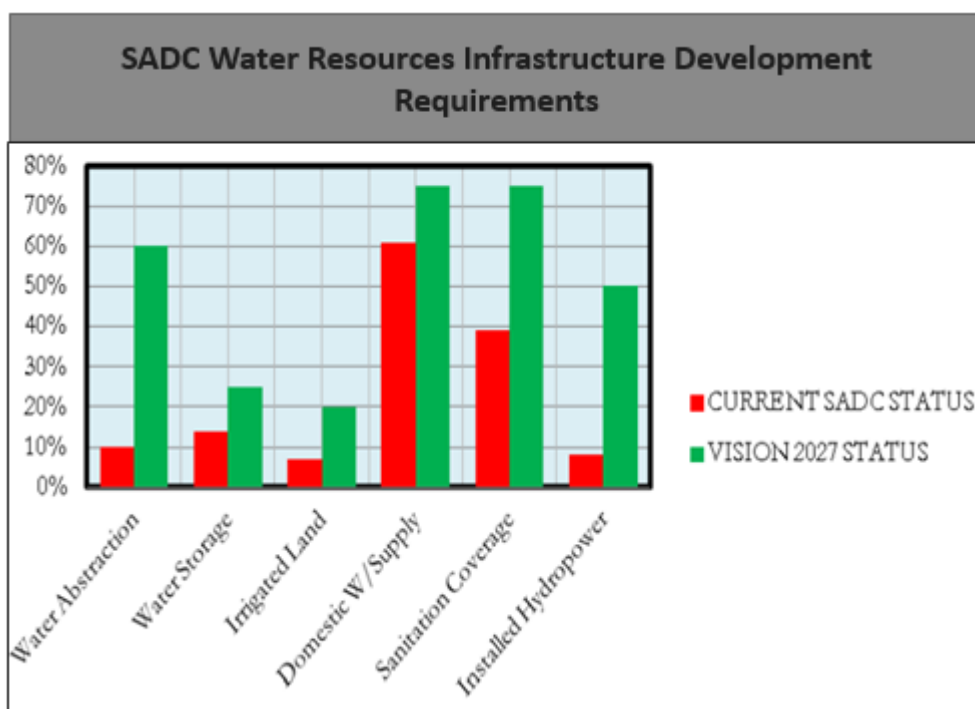
3. SADC Update on Ongoing Activities

The presentations and discussions covered under this section are from ‘Session 3’ chaired by Madam Duduzile Twayi from the Department of Water and Sanitation, South Africa.

3.1 Climate change mainstreaming project – Water Financing

Ms Barbara Schreiner presented and raised important issues. Insights from the presentation were drawn from “Financing water resources management and development in SADC” project where 14 country studies were carried out. A Draft Regional Synthesis was developed as the key outcome from the study.

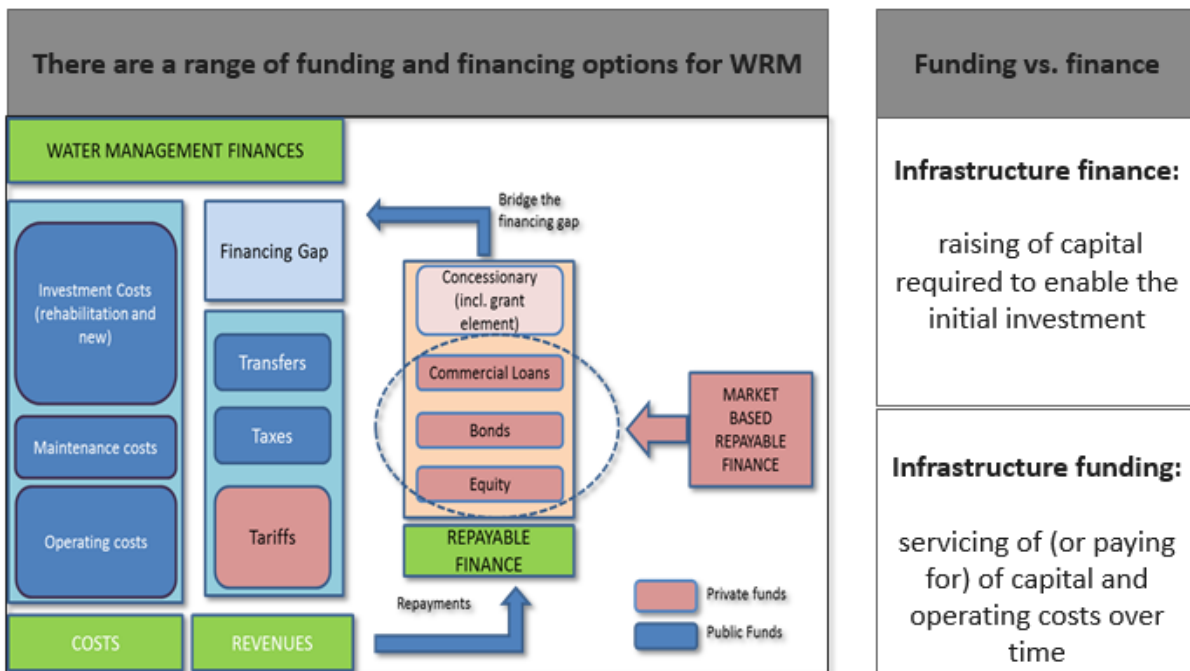
The Regional Integrated Development Master Plan (RIDMP) for the water sector (2012) portrays the 2027 vision and current status of infrastructure in SADC as depicted in the figure below.



Key observations on funding water resources management & governance in SADC include:

- Demonstrating value for money in WRM is more challenging than with water resources infrastructure.
- Water resource activities are constrained by the income that can be raised from users, fiscus and development assistance
- WRM often functionally and financially linked to water resources infrastructure operations
- Opportunities for development assistance may contribute to a lack of financial realism by entities
- Funding requirements for WRM increase with increased water stress and economic development

Financing and funding options for WRM are summarised in the figure below



Opportunities for financing infrastructure vary according to sector.

The key highlights from the presentation are summarised as follows:

- Water resources governance has the potential to decrease the amount or risk of externalities associated with water resources
- Water resources development and management is ultimately paid for by one of three parties - tariffs/charges, taxes or transfers!
- Focus on the basic operational costs of water management that benefit users directly
- High economic/population growth in SADC – Increased water infrastructure needed. Funding requirements for WRM increase with increased water stress and economic development
- Demonstrating value for money in WRM is more challenging than with water resources infrastructure - need to make this argument to finance and economic ministries
- New sources of finance are available - sovereign funds, IFI, private investment
- Mechanisms for financing infrastructure follow stages of development - least developed = ODA while most developed = commercial capital
- Opportunities for development assistance may contribute to a lack of financial realism by entities

Concluding the presentation, Ms Schreiner emphasised the following key points:

- Government economic planners are responsible for the allocation of taxes to achieve developmental goals, and thus these insights revolve around financial support and the use of government guarantees for water resources investment
- Development institutions influence government planners and water managers through technical support and development assistance, so its application should be strategically applied.

3.2 Gender mainstreaming in the SADC Water Sector

The Team Leader on 'Gender Mainstreaming' in the Water Sector in SADC, Dr Mercy Dikito-Wachtmeister presented. She highlighted that through various enabling acts and instruments such as

the SADC Treaty of 1992 and the SADC Gender Protocol (2008), SADC Policy Framework for Gender Equality, SADC committed itself to:

- Provide for the empowerment of women,
- Eliminate discrimination and to achieve gender equality and equity through gender responsive legislation, policies, programmes and projects

In line with the gender policy provision, in water sector, SADC launched a gender mainstreaming in Transboundary Water Management (TWM) project from 1 August 2013. The project is funded by BMZ (German Foreign Ministry), DFID and DFAT (AusAid) and implemented by GIZ. The project aims to address the gap between gender roles and water management policy and practice in TWM. Moreover, the project further aims to address issues of social exclusion in the region. To achieve its goals, the project focuses on applying the numerous instruments developed by the SADC Gender Unit.

Box 1: Gender Mainstreaming (GM), TWM and RSAP III

- GM project is component of the Transboundary Water Management (TWM) Programme (2005 – 2015)
- TWM is one of the programmes under SADC’s RASP III
- Gender integral aspect of RSAP III for Integrated Water Resources Development and Management
- The GM Project supports implementation of Priority Intervention 6.5 under Programme 6 of the RSAP III
- SADC Water Policy of 2005 recognises centrality of gender roles in water management
- SADC Policy states: All SADC water institutions shall implement the principles, goals and objectives of gender mainstreaming in their administration and implementation

Dr Dikito-Wachtmeister pointed out that the Project’s theory of change is that mainstreaming gender in the water sector contributes to women’s empowerment thereby further contributing to efficient, effective, equitable and sustainable management of water resources.

Project’s Strategic Focus	
Level	GM Project intervention/role
Regional level	The GM Project supports the SADC Gender Unit and the Water Division to sensitize policy makers on gender aspects & capacity building on GM of water specialist at Ms and RBO. Also supporting the SADC WD and GU to develop a gender disaggregated data collection and reporting system
Basin level	The GM Project supports River Basin Organisations (RBOs) to mainstream gender in their programmes and operations including mainstreaming of gender balanced stakeholder engagement in IWRM planning
Local level	The GM Project supports communities in a basin to design small scale infrastructure projects with a maximum benefit to both men and women

Progress achieved on GM Project entail the following key highlights:

- Establishment of Gender Focal Points in 15 SADC Member States
- Organising for Training of Trainers Course in November 2014
- Gender Mainstreaming in ORASECOM IWRM Plan
- GM Manual of Tools to support SADC Water Sector

- Gender disaggregation of data & information with endorsement from WRTC

3.3 USAID/RESILIM – Regional Support to improve resilience from water related disasters

Dr Nkobi Moleele started the presentation by highlighting the importance of Resilience in the Limpopo Basin under the rubric RESILIM. He pointed out that RESILIM is particularly important in light of climate change, demographic changes and the globalisation of economic systems in that it will help to improve transboundary management and resilience in the Limpopo Basin. Improving resilience is achieved through reduction in vulnerability and heightened conservation of biodiversity by adopting robust governance systems and structures.

The key issues facing the Limpopo Basin include:

- Water quality
- Restoring degraded land
- Protecting ground water, and
- Diversification of livelihoods.

Some of the initiatives undertaken to address the key challenges entail the following:

- Charcoal trials in addressing the water hyacinth problem – where a pilot project is underway that produces charcoal from water hyacinth
- Marula oil production to diversify livelihoods for some communities in the basin
- TFCA focus starting with the Great Limpopo TFCA.
- Mangrove ecosystem restoration and conservation – through the valuation of mangrove ecosystems near the estuary of the Limpopo.

3.4 Question and Comments

The chairperson opened the floor for questions and comments emanating from the session. The questions and responses are summarised in the table below

Question/Comment	Response
Comment made that there is an international workshop/seminar on 'Climate and Gender' in Geneva which might be of interest to the region	
How do we achieve economic efficiency and equity within the framework presented?	There are indeed concerns with utilising economic efficiency as a sole criteria especially given the significant differences between South Africa and other countries.
On economic efficiency, how do you balance user-pay systems with human rights issues?	In South Africa, we have not communicated enough the differences between free basic water and free water, hence it becomes a challenge balancing achieving efficiency with human rights when information is not readily available.
Commenting on gender mainstreaming – the real work is converting colleagues	Gender focal points do not signify that they are the only options, the focal points were nominated by the SADC directors and they will facilitate linkages with Member

first, it is an in-house effort because GM is still treated as a side-issue	States, where hopefully, colleagues will also appreciate GM.
How valid and reliable is the localisation of international models used in the RESILIM project given the complexities and dynamics at the local level?	We tried to take care of the challenges of localising the model by downscaling it to local levels to tease out the range of impacts. Not easy BUT doable.

3.5 Panel Session

The facilitator (Mr Chikoko) introduced the panel session and the panellists: Maria (Director Namibia), Dr Minnie (DIMISA), Dr Chonguica (OKAKOM), Dr Phiri (ZAMCOM) and Dr Dikito-Wachtmeister. The facilitator started by asking some key questions and then solicited responses from the panellists before shifting to the whole plenary.

The facilitator highlighted that some critiques are saying that 80% of the money for DRR/M is primarily spent on recovery and not anticipatory response. He asked the panellists the following two questions:

1. What are the three to four important things that could improve our understanding in the basins?
2. How can we make a case for DRR?

Dr Minnie responded first by stating that in terms of understanding, first we need to know what is going on. For that to happen, there is clearly a need to capture day-to-day events in order to create a picture, a pattern, a history. Currently a lot of data is lying around but not shared, hence, data mining and sharing need to happen soonest if we are to improve our understanding. Moreover, there is also need to quantify the risks and how to prioritise. This can be achieved through participatory research appraisals and participatory GIS. That will enable sound investigation of the variables to reduce the hazard and how to increase impact of the interventions. One possible intervention is infrastructure, so it is important to compare possible impact of different infrastructure in reducing disaster.

On infrastructure investment - the facilitator indicated that it is hard to convince investors to come into the water space, what should and can be done? Dr Minnie again responded that what is required is to compile a list of development plans and their contributions to the environment, then shoot down the bad investment options. A DRR practitioner from Namibia indicated that what is required is to mainstream DRR in RBOs similar to gender mainstreaming. This is particularly important because if care is not taken to reduce disaster risk, the region risk losing all the benefits from development plans, no matter how good.

On integration of Island Member States – Bartolomeo from Madagascar (DRR Director) remarked that being an Island, Madagascar does not share borders with other Member States, so with all these interventions happening on the main continent, how can Island Member States be integrated since we are also part of SADC? The facilitator posed the question to Engineer Remigious Makumbe of the SADC Secretariat. Eng. Makumbe responded that Island Member States have been prioritised by SADC especially in terms of infrastructure. But for DRR, the best SADC can do is provide capacity building such as best practices where information sharing plays an important role.

On governance in relation to DRR – Does the region have the requisite institutions for DRR? Where are the strengths? Where are the weaknesses? First responses came from Phera Ramoeli (SADC Secretariat) who stated that most RBOs are in the early stages of formation although their constitutions provide for some form of early warning systems, for example ZAMCOM. ZAMCOM has infrastructure such as dams for hydro-power. The concern is power yet the infrastructure helps as a

buffer to avoid disaster. It was further highlighted that what is required is a synchronised system to address DRR. Existing examples in the region, particularly the Zambezi, is the SADC HYCOS, where ZAMCOM is changing the system so that it can be useful as an early warning tool. Most importantly, however, what is required is implementation.

With special reference to governance, it was stated that what is required is to expand the stakeholder framework to include DRR in the RBOs and their plans. The take home message was that there is room to improve especially after the introspection in light of DRR/M.

The facilitator asked the panellists if what the SADC Secretariat said, in responses to the earlier questions, resonate with the panellists, the majority of whom are on the ground in the RBOs? He further asked 'what are the things that you prioritise as an RBO on the ground?'

Dr Chonguica responded that he agreed with Phera. He went further to state that what is needed is to improve climate science within the region and RBOs. Good climate science will provide early warning systems that are correct, what is not wanted is to predict drought or disaster and warn communities, only for the disaster not to happen, when that happens, it is like shooting one's own foot. Dr Chonguica further challenged the notion that every disaster is bad, rather, he argued that what is required is to contextualise disasters, given that there is need for periods of high water and periods of low water. What is critical is how those cycles of feast/famine or drought/floods are managed well.

Dr Phiri (ZAMCOM) added that although there are hundreds of issues that need to be addressed, the key basic issue remains effective and efficient WRM. He further stated that institutions have to also be effective and functional to handle disasters. Of what use is information if it is embedded in a bad institution? He quipped that such information will be of limited use, hence sustainability of institutions together with good communication can make a huge difference.

The facilitator opened the floor for another round of questions and comments. He asked, what else needs to be done? Contributions from the floor included the following:

- What space has been created for communities to take ownership of the various initiatives?
- Most of what has been said to improve preparedness has been scientific but very little on how to integrate indigenous knowledge.
- RBOs should look within the region before going elsewhere for solutions because these initiatives are already there in the region, only that they are not institutionalised.
- Regarding capacity, focus should be on both individual and institutional capacity when dealing with disaster at both regional and local level. What is required is clarity of roles and responsibilities between partners. Disaster preparedness can only realistically happen when institutions talk to each other, when there is healthy collaboration.

The facilitator posed another round of questions. How do we address RBOs to effectively deal with DRR? What sort of legal frameworks are there to support RBOs? When you plan, do you plan with the ordinary person in mind or do we just plan within our departmental boundaries?

Maria (Director with DWA Namibia) responded that there are Natural Disaster management Policies. The only challenge is that the policies are based on political and administrative boundaries yet disasters such as floods transcend such boundaries on the one hand, while RBOs operate on basin level. Regarding mainstreaming DRR, linking national DRR with transboundary level, Namibia shares its flood plans and information with Angola on Cuvelai. What is required is support with information and other enabling resources for DRR interventions.

The facilitator asked Dr Dikito-Wachtmeister, what is required to ensure women and youths play their roles in response to DRR? What space has been created for these groups?

Dr Dikito-Wachtmeister responded through highlighting some key points or issues in addressing the question. The key points in her response include:

- What is still missing is the mainstreaming of gender in DRR, often, the heterogeneity within our communities is forgotten
- Need to get the key institutions ripe for gender mainstreaming through capacity building for GM. Here, it is not only formal institutions BUT also informal institutions as well
- Considering and understanding the needs and voices of the poor and marginalised should be central in designing gender responsive early warning systems. More importantly, it is better to learn from past experiences going forward.

The final round of questions, comments and suggestions was opened for discussion by the facilitator. He asked for final burning contributions on what else needs to be done? The

contributions were varied as illustrated below:

- There is need to support RBOs through collaborative platforms especially regarding capacities and allocation of roles and responsibilities
- Stakeholders as Member States and as SADC, let us not forget the private sector. Also there is need to create capacity within education institutions, through education there is room to create capacity
- Data is at the centre of activities in DRR, there is an assumption that data is available yet it is widely known that it comes at a cost. The message is that one cannot share something that is not available. It is important to include data costs in DRR
- Reflecting on the various DRR presentations and disaster management, water quality is a potential disaster.
- With regards to gender and the water sector within SADC, at what is the current status on gender and where do we want to go?
- One possible solution is to associate RBOs to Pan African organisations in a formal way to foster collaboration.

The final remarks were provided in an attempt to provide some answers to the questions raised as follows:

- Regarding the current status on gender – currently translating the gender sector specific initiatives. Countries in the region are at different stages, where some are way advanced and others are lagging behind.
- There will always be a cost to DRR and it is something to always think about
- DRR practitioners should work with RBOs in DRR as trusted advisors
- RBOs should and can call on governments for almost everything they want...after all, they are government institutions
- DRR should be handled at both down- and up-stream
- Level of creating enabling environments varies within the region and by country and RBO

4. Flood Risk Management and RBOs

A general overview of water related disasters in the region was presented by Dr Phera Ramoeli. He provided a synopsis of the types of water-related disasters ranging from floods, windstorms, and landslides to droughts and mudflows. Pointed out that there are up to 15 River Basins in the region, where 8 countries share one River Basin (the Zambezi) and one country (Mozambique) has as many as 9 shared basins. Dr Ramoeli also highlighted that flooding disasters in the region often lead to destruction of infrastructure, impact vulnerable populations the most, affect economic development, often lead to loss of livelihoods and are exacerbated by climate change. The figure below shows the number of populations impacted by flooding disasters in the region

	Country	Highest occurrence of affected people in a flooding event	Year of event
1	Angola	331,700	2004
2	Botswana	138,776	2000
3	Congo, D.R.	78,000	1999
4	Lesotho	100,000	1987
5	Madagascar	No data found	--
6	Malawi	500,000	2001
7	Mauritius	No data found	--
8	Mozambique	4,500,000	2000
9	Namibia	350,000	2009
10	Seychelles	1,237	1997
11	South Africa	65,000	1987
12	Swaziland	272,000	2000
13	Tanzania	201,543	1993
14	Zambia	1,400,000	2007
15	Zimbabwe	266,000	2000
		8,204,256	

Source: EM-DAT / PreventionWeb (WHO, UNISDR)

Outlined the causes of floods ranging from heavy, episodic and localised rainfall; poor land use management practices; and associated soil erosion to lack of integrated management of upstream dams and wetlands.

Emphasised the need for a paradigm shift from 'relief and response' to 'disaster management'. Flood risk management and response entail the key features illustrated in the table below

<ul style="list-style-type: none"> • Real-time Hydro-Met data collection systems • Flow Forecasting (flood) • Emergency planning and management. <ul style="list-style-type: none"> ○ The Hyogo Framework for Action 2005–2015 (ISDR, 2005) highlights the central role for emergency planning in ensuring that a flood event does not become a flood disaster. 	<ul style="list-style-type: none"> • Flood hazard and risk mapping • Early warning systems • Disaster response plans • Infrastructure management • Effective land controls and building codes • Flood Models
--	--

In conclusion, Dr Ramoeli presented the SADC Legal framework

Box 2: SADC Legal Framework

SADC Treaty

Protocol on Politics, Defence and Security Cooperation – Article 2 states that a specific objective of the **Organ on Politics, Defence and Security Cooperation** shall be to “enhance regional capacity in respect of disaster management and co-ordination of international humanitarian assistance.”

Revised Protocol on Shared Watercourses (2000)

Article 4.3 Management of Shared Watercourses. Article 4.3 requires States parties to enter into consultations concerning the joint management of a shared watercourse, including the establishment of a joint management institution.

Article 4.4 Prevention and Mitigation of Harmful Conditions. States parties are required to jointly take all appropriate measures to prevent or mitigate conditions that may be harmful to another riparian, whether resulting from natural causes or human conduct.

Article 4.5 Emergency Situations. States parties must notify other States and international authorities when an emergency situation originates in their territory and provide the relevant information so all States can cooperate to prevent, eliminate, and/or mitigate the harmful effects of the emergency.

Protocol on Health (1999) - Article 25 on Emergency Health Services and Disaster Management states Parties shall: (i) co-operate and assist each other in the co-ordination and management of disaster and emergency situations; (ii) collaborate and facilitate regional efforts in developing awareness, risk reduction, preparedness and management plans for natural and man-made disasters; and (iii) develop mechanisms for co-operation and assistance with emergency services.

4.1 Local and Indigenous Knowledge for coping with water related disasters

Dr Simelane started by stating boldly that ‘...the state of scientific understanding of the key global systems that affect global warming remains relatively immature...’ This makes the study on indigenous knowledge, perceptions and lived experiences of local people necessary and an imperative. Indigenous knowledge is developed and adapted continuously to gradually changing environments and passed down from generation to generation and closely interwoven with people’s cultural values. Indigenous knowledge, which emerges as a result of the people’s close relationship with the environment, is also the social capital of the poor. He underscored that indigenous knowledge is local, experiential, holistic, and oral.

Combining local indigenous knowledge systems and practices (LIKSP) with conventional scientific forecasts could contribute to the building of more robust mitigation and adaptation measures to climate variability and change. Studies were conducted across the SADC region and the traditional calendar was explored as a key methodological tool to reflect climate change.

With regards to indigenous perceptions of climate change, results indicated a general consensus that:

- Weather was becoming increasingly difficult to predict;
- Wet seasons were now predominantly characterized by late onset of rains;
- Rainy seasons are shorter;
- Rainfall distribution is skewed;

- Intense rainstorms are more frequent;
- Hail and drought now occur more frequently and within the same season and
- Uncharacteristically long dry spells are a more common occurrence.
- Climate change and the associated loss of some indicators for weather prediction from the areas of origin are threatening indigenous knowledge forecasting systems.

In terms of response strategies, indicators for a poor season trigger households to:

- Start looking of extra avenues for food, including sending out search parties (kusunza).
- Harvesting non-timber forest products food and marketing
- Looking for appropriate seed varieties with high chances to pull through the drought or preparing basins.

The smallest unit of response in rural communities was the household and not an individual. From household, it then radiates to village and/or community scales where there is a lot of influence and dependence from outside the household.

Coping mechanisms entail – Movements across agro-ecological zones, in different seasons; and a combination of many activities.

Post Trauma Strategies – included abandoning upper fields and moving to lower fields, vlei margins

For RBOs, the utility of indigenous knowledge in DRR entail the following:

- Sensitise water resource managers, river basin organisations (RBOs) about the knowledge and practices so that these knowledge and practices can be institutionalized.
- Formal water basin authorities/ structures should take into cognizance local practices and build on them.
- Cooperation between water, forestry and land use planning (agriculture, environment).
- Need to recognise traditional leaders and the role they can play in building climate resilience.

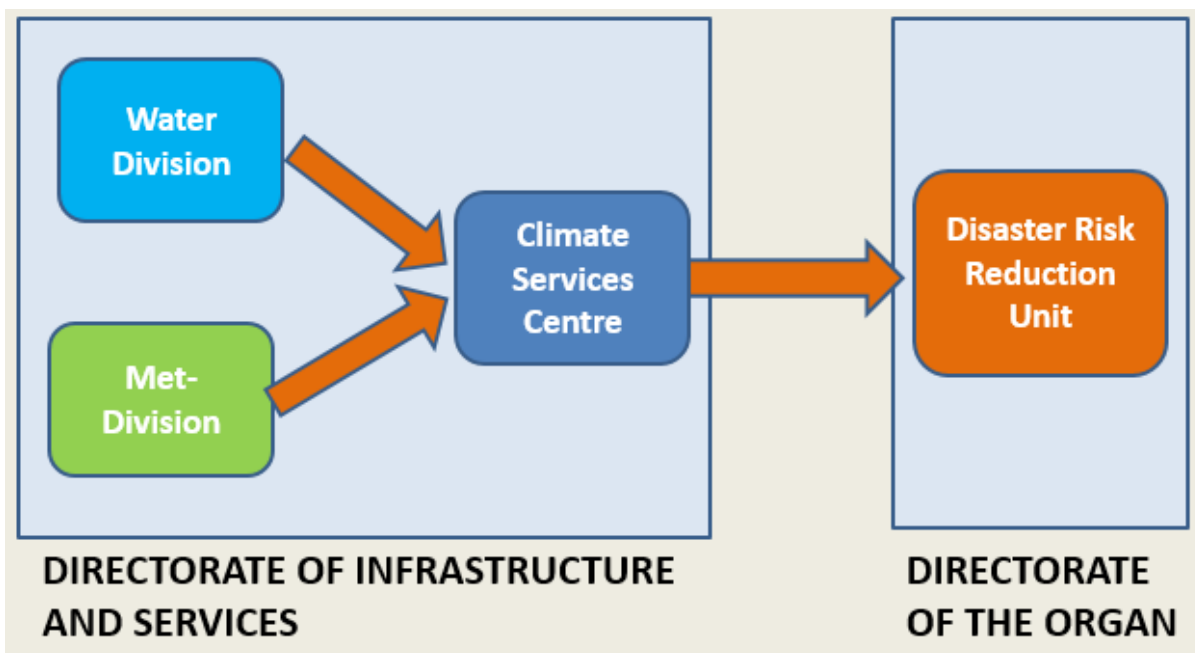
Concluding, Dr Simelane reiterated three key points as illustrated below:

- The knowledge is typical and belongs to peoples from specific places with common cultural and social ties.
- Indigenous knowledge reflects how such forms of knowledge address local problems and solutions that are context specific.
- A careful amalgamation of indigenous and foreign knowledge would be most promising.

4.2 SADC Programmes to address water related disasters

Dr Msibi stated that all the Water Related DDR interventions are part of the implementation of the CCA Strategy within SADC. Furthermore, the CCA Strategy indicates the level at which interventions take place, that is, regional, river basin or national. The strategy also indicates at which Stages of disaster occurrence the interventions will address from preparation (before) to response (during) and recovery (after).

Dr Msibi also indicated that SADC has an institutional structure to enhance DRR. The institutional structure is provided in the figure below.



SADC Programmes to Enhance Disaster Management entail:

- Programmes/Projects are independently funded but integrated (Planning & implementation)
- Water, Meteorology, Disaster Risk Reduction
- Avoid duplication and increase efficiency
- Benefit from data between Met & Hydro and Human resources
- Operate above economies of scale supporting all RBOs
- Create better understanding of the needs DDR Agencies
- Use existing SADC Dedicated institution for sustainability

4.3 SADC Disaster Risk Reduction Mechanisms and Response (Regional, RBO and National levels)

Dr Masamvu highlighted that the implementation of DRR/M is guided by the internationally accepted framework – the (HFA) Hyogo Framework for Action (2005-2015). A new DRR Framework due to be adopted in 2015. The HFA has five key themes outlined as follows:

1. Institutional strengthening
2. Risk identification
3. Knowledge management
4. Reducing underlying risk factors
5. Preparedness for response

Dr Masamvu pointed out that hazards and disasters mainly hydro-meteorological, transboundary and multi-sectoral (DRR mainstreaming in all sectors), hence the need for coordination to ensure information sharing to inform EW and response.

DRR/M in the SADC Region is summarised in the table below.

<ul style="list-style-type: none"> • DRR/M Units exist at national and regional levels – operate according to the HFA framework, but at different 	<ul style="list-style-type: none"> • Most programmes implemented at national levels: regional unit deals with transboundary and cross-cutting issues (harmonisation of
--	---

<p>levels. Provide overall coordination of DRR/M</p> <ul style="list-style-type: none"> • Multi-sectoral national and sub-regional platforms for coordination and mainstreaming • DRR policy frameworks and strategies in place • Legal frameworks, with clear mandates and responsibilities, developed 	<p>programmes/implementation; facilitate training, sharing of best practices and experiences; EW and information sharing; coordination of regional response to disasters)</p> <ul style="list-style-type: none"> • Regular consultation forums with MS – pre-season planning meetings, post-season lessons learnt workshops
--	--

Dr Masamvu provided some key messages going forward. These ranged from the need to consult and collaborate with NDMA's in RBO States and the relevant SADC Secretariat institutions to avoid duplication; assessing and prioritising hazards, risks and disasters in RBOs, and building risk profiles; and quantifying the magnitude of risk; to quantifying disaster losses to justify need for investments in DRR; and collaborating and share expertise, data and information with other mandated government institutions, universities and research institutions.

4.4 SADC Met Programme implemented through SADC Climate Services Centre

Presented by Dr Faka. SADC CSC is mandated to contribute to the early warning and mitigation of adverse impacts of severe extreme weather and extreme climate events on key socio-economic sectors of all the countries in the SADC region. To this end, the principal goal of the SADC CSC are to contribute to the reduction of negative impacts of adverse weather and climate conditions such as drought, floods and other extreme events on sustainable socio-economic development.

The review of emergencies from 2000-2012 (RIASCO, 2013) indicates that the Southern Africa region is under sustained pressure, both environmentally and socially. The findings show that 37 out of 47 international humanitarian emergencies were associated with an identifiable environmental shock/stressor, while ten events could be linked respectively to socio-political triggers and epidemics.

Regarding the current status of hydro-informatics - Data scattered in many agencies; data not effectively used in decision making; observational network seriously impaired and limited technical capacity to analyse data.

SADC River Basins Database - Data Types outlined in the table below

<p>I. Hydro-graphic (digital elevation map (terrain); hydrographic river/lake network);</p> <p>II. Land use (urban areas; regional growth centers; settlements; large scale agricultural developments; forests; wetlands; national parks; etc.);</p> <p>III. Hydro-meteorological (rainfall/temp/evaporation/solar radiation/etc.; river stage and discharge; rating curves; flood and drought prone areas; borehole data; ground water table levels; etc.);</p> <p>IV. Agricultural (soil types and stratification; agricultural areas by crop type; yields; cattle farms; aquaculture ponds; etc.);</p> <p>V. Environmental and ecological (sediment and pollution loads; water</p>	<p>VI. Existing and potential infrastructure and development projects (transportation system; electrical grid; water and waste water treatment plants; water distribution systems; sewer systems; reservoirs and hydropower facilities; irrigation systems; levies; industrial and agricultural well fields; pumping stations; etc.);</p> <p>VII. Administrative and population (province and territory boundaries; urban areas tribal and ethnic groups; population density and composition; education and income levels; public health statistics; health centers/hospitals; etc.).</p> <p>VIII. Socioeconomic data (main industries; trade; current and future water and</p>
---	---

quality of rivers, lakes, wetlands, and aquifers; ecosystem and biodiversity data; etc)	energy use and availability; other socio-economic indicators; etc.)
---	---

4.5 SADC HYCOS Project for disaster risk reduction products implemented through Climate Services Centre

Presented by Obonetse Masedi. Having completed Phase I and Phase II, the main objective of Phase III is to - integrate HYCOS with climate services and develop products that minimise the negative impacts of climate change on the societies and economies of Southern Africa by addressing DRR and FRM; directly contribute to the Hyogo framework for action; demonstrate the value of HYCOS and capacity support.

Project status is summarised briefly as follows:

- Assessment of Hycos stations completed
- Consultations with MS continuous
- Procurement processes for stations to be revitalized has commenced
- Preliminary maps for the atlas identifying hot spots have been produced
- Consensus on two hot spots
- Show casing of community based climate change activities

Project funding	Project Management
<ul style="list-style-type: none"> • Euro 2.5 Million • More funding requested in view of the vulnerability of the Region due to the peculiarities of climate change 	<ul style="list-style-type: none"> • Project Steering Committee • Role of RBOs • Role of SADC Climate Services Centre

4.6 Breakaway Groups – Lessons Learnt, Challenges and Best Practices

Five Groups were identified and tasked with addressing two questions each. Results from the five groups are presented in section 4.6.1 below

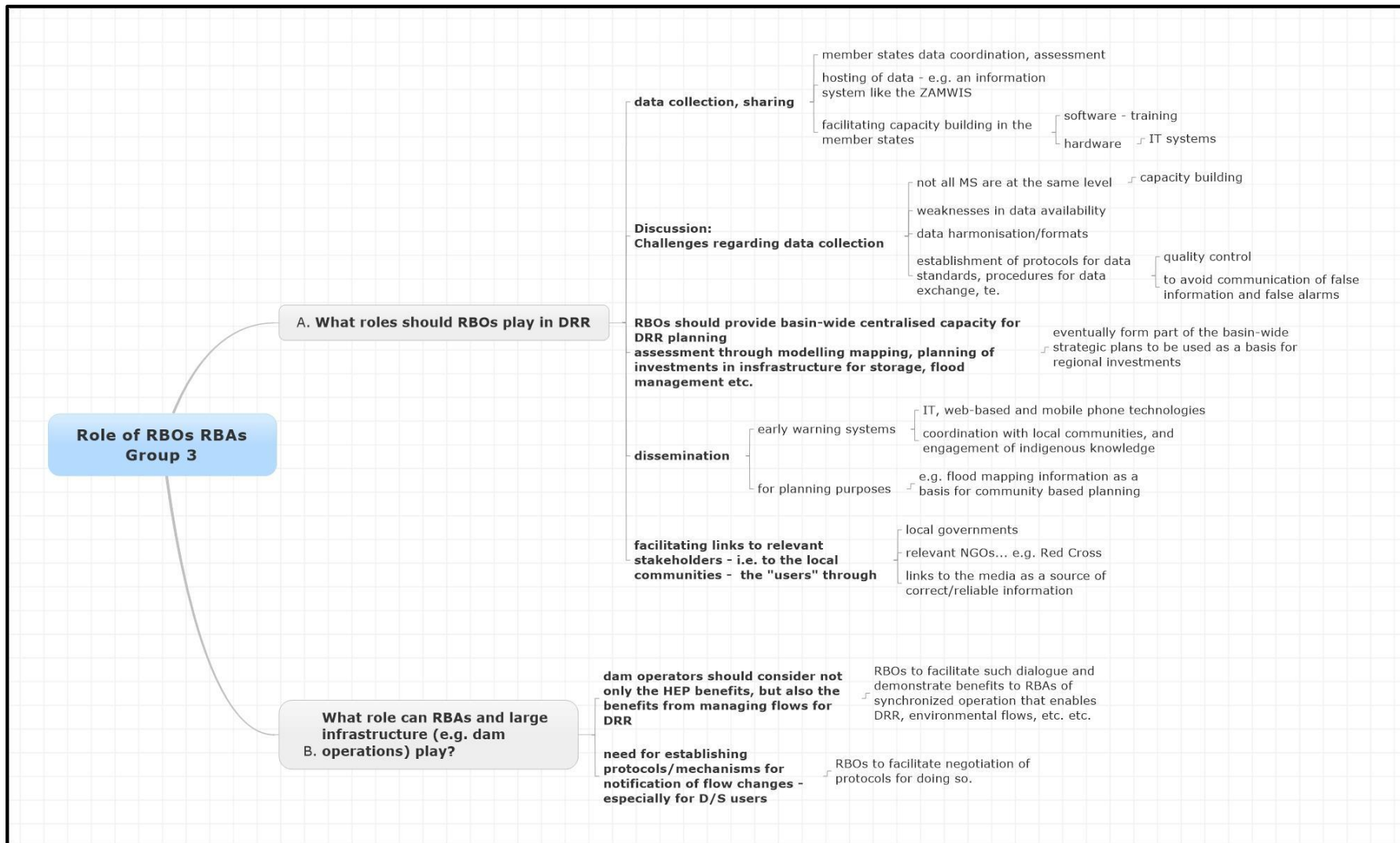
4.6.1 Feedback on breakout groups and key messages

Results and key messages from the 5 Groups are presented in the table below.

Group	Role of RBOs in DRR	Role of RBAs and Large Infrastructure Operators in DRR
1	<p>Data Collection - Coordinate procurement of equipment and maintenance of hydro-meteorological stations. Water quality parameters be included. Example could be developing guidelines on minimum requirements of equipment; facilitate quality control of data being collected e.g. minimisation of data gaps; common trans-boundary network be established at RBO level for DRR purposes; keep track of meteorological events that could result in Disaster risks; mobilise resources for establishment, operation and maintenance of trans-boundary network</p>	<ul style="list-style-type: none"> • Hazard assessment and mapping of flood prone areas • Flood and flow forecasting and information dissemination • Help with issues of communication especially with respect to dam operation synchronisation in view of the fact that infrastructure was in the first to meet a certain purpose which may conflict with DRR • Implement social responsibilities e.g. Collaborate in accommodating DRR measures, establish corporate emergency preparedness plans, invest in early warning systems such as markers of flood lines along the river system downstream in community areas (examples of ZRA was used as the current best practice) • Establish linkages with RBOs and DRR agencies/centres/authorities
	<p>Information Dissemination and Access - Advice Member states on issues related to DRR; Coordinate information dissemination across borders Data and products be uploaded on media such as websites, mobile telephone services, journals, etc. for easy and timely access and use by communities; Host data repository and database at RBO offices; Facilitate agreed RBO data and information; Sharing Protocol/guidelines which include DRR data and information; Coordinate processing of data to usable format/product ready for use by communities including for modelling. Data products be in layman's language. Facilitate harmonisation of policies, information prod e.g. preventing building of properties in flood zones Facilitate data and information sharing among riparian states, including encouragement of active involvement of local authorities Organise workshops for awareness raising</p>	
	<p>Capacity Building - Facilitate training of member states officials on use, management, maintenance, and operation of information systems; Member be strengthened to be able to collect data; Contribution of data collected by large infrastructure operators be negotiated and utilised for DRR purposes; Facilitate sharing of expertise, information across political borders; Mandate and more resources be revised accordingly and provided to RBOs.</p>	
2	<ul style="list-style-type: none"> • Develop data sharing protocols • Be given the mandate of operations and maintenance of monitoring stations, including the HYCOs stations • harmonise measuring and assessment units across borders • establish coordination mechanisms with key stakeholders eg Met Department that is usually housed in a different ministry 	<ul style="list-style-type: none"> • RBA can disseminate near real-time information (early warning) • Erect sustainable, flood control structures • Prepare flood disaster preparedness plans in their area of operation
4	No data???????	
5	Role of RBOs in DRR in SADC Programmes & other DRR initiatives	On how to integrate Island Member States into SADC DRR Programmes
	<p>Supporting Data Collection - Coordinate their countries to ensure their data is in the same format; Development of standard protocols /format and guidelines for data collection, data</p>	<ul style="list-style-type: none"> • Island states should deal directly with SADC in DRR programme

<p>analysis/interpretation; Use as repository of data collected by riparian states and disseminate the information; Supporting capacity and infrastructure around data collection Capacity building on data collection.</p>	<ul style="list-style-type: none"> • IS are already integrated...only Madagascar was lagging behind • Programmes should be targetted towards the IS taking into the • Setup an institution such as the Benguela Current Large Marine Ecosystem System (which covers countries in West Africa down to Namibia) which resulted in formation of Benguela Current Commission. • Should be the Indian Large Marine Ecosystem that covers the Island States
<p>In improving access to data/information from HYCOS or other information System - Supporting capacity and infrastructure to standardise data collection platforms; Create data base at RBO level which can be easily accessed by riparians/users; Disseminating information in different formats through existing structures; Create awareness on implications of DRR in the countries esp. at transboundary level; Need for realign of RBO platforms/ communication strategy to align with SADC DRR lens; SADC and RBO play a role in operation and maintenance of HYCOS systems/ stations that are part of EWS; RBOs should interact (sensitization) with other sectors dealing with DRR and attend regional meetings on DRR.</p>	
<p>In timely dissemination of DRR Products - RBO's should support the development of DRR products in 3 languages & indigenous knowledge to improve communication; Accessibility to site is a challenge and consider right technology; RBOs should take advantage of technology improvements; mobile phone messaging; Work with service providers (network providers) to ensure timely communication of info on DRR – tailor made messages for DRR; Take into consideration the limitations of the various RBOs (various stages of development).</p>	
<p>In determining of the nature of products - Packaging of products for DRR should be continuously reviewed for improved effectiveness for consumer consumption; Participate in the development of DRR products in other forums so that products meet their needs; and Building upon indigenous knowledge so as to influence products that are developed.</p>	

Group 3 Presentation



Comments/questions from the floor included the following:

- Regarding protocols on data sharing within the region, what are some of the experiences, obstacles and challenges?
- Island Member States and land locked MS both have specific needs. Land locked MS states particularly face challenges regarding access to ports for export and import
- How do we bring on-board the Island MS, is it just water or fresh water? Is the SADC WD doing something about the UN Water Laws of the Sea (UNCLS) convention?

Responses included the following:

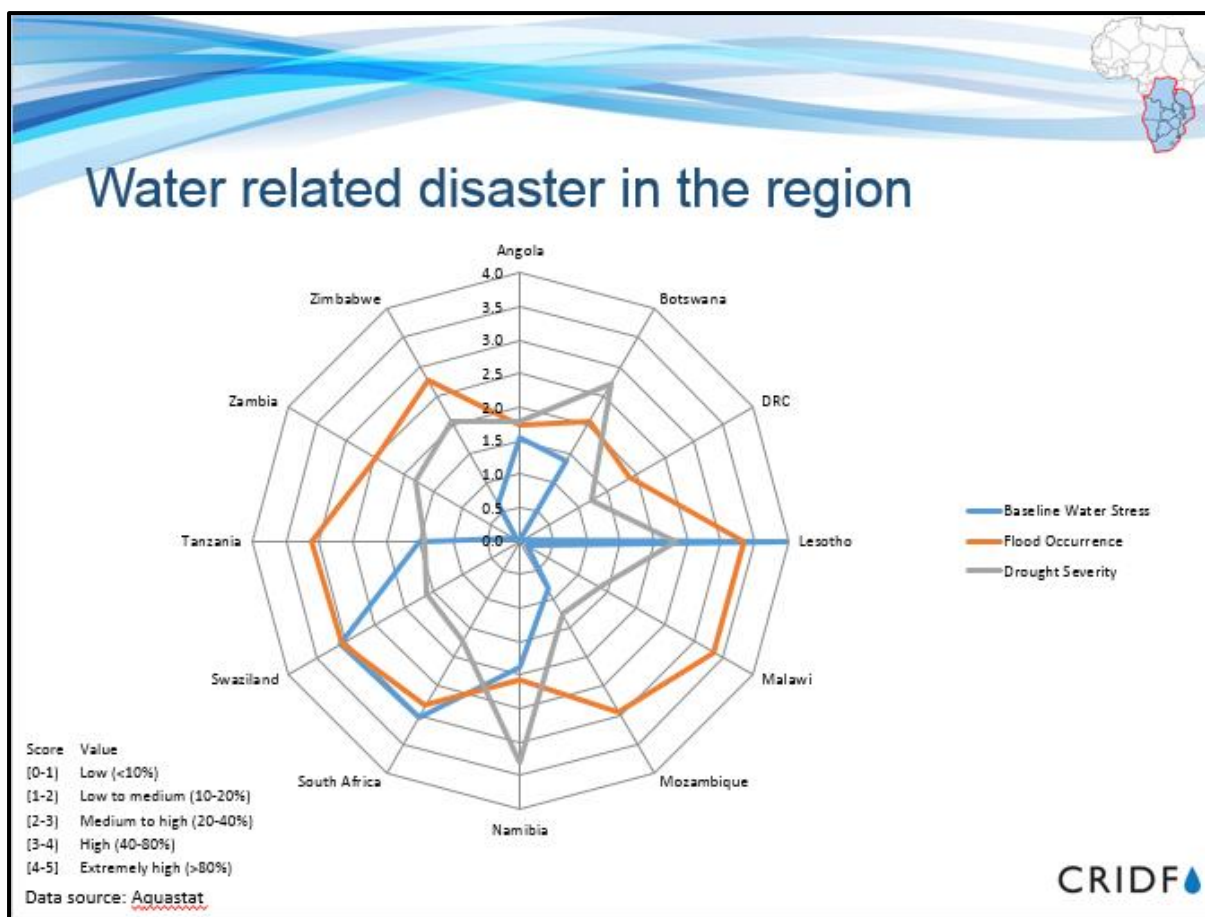
- The recommendations from the session will end up in the report
- Signing of the SADC Protocol covers most of the fundamentals. For SADC, leveraging on financial resources, SADC prefers that action be closer to Member States. However, that does not mean MS should provide shopping lists
- Regarding Oceanic States/Island MS, they have particular needs. In terms of vulnerability, they are very vulnerable, and are far away from each other so that hampers rapid response to disasters. SADC liaises with the three Island MS under the rubric of the Indian Ocean Oceanic States, where some programmes are especially ring-fenced to cater for their needs. It is a mutual beneficial to empower Island MS given that the continental MS stand to benefit from early warning systems from the Island MS.

4.7 CRIDF - Catalysing water infrastructure development to improve resilience

Climate Resilient Infrastructure Development Facility (CRIDF) presented by Eng. Leonard Magara. Key messages included the following:

- Disaster impacts rise with climate change, poor planning and poverty
- The costs of extreme weather are stunning and growing
- CRIDF projects come from the Regional Infrastructure Development Master Plan (RIDMP) 'Maseru List' River Basin Organisations (ORASECOM,ARA-Centro, ZINWA) and other SADC programmes –SWCSP, GIZ TWM
- CRIDF projects are demand driven and within a climate change context - pursuing a specific strategy in each basin – different means of improving climate resilience

The figure below shows a web-diagram illustrating water related disasters in the SADC region.



Some of the on-going projects by CRIDF include:

- Zambia Climate Change Adaptation Project
- Reducing drought and flood vulnerability through innovation Mayana, NAMIBIA
-

4.8 Panel Session – Disaster Risk Reduction

The Panel consisted of delegates from SADC Secretariat (Dr Masamvu and Dr Faka), Zimbabwe (Eng. Ndiweni), Mauritius (???) , Lesotho (???) and CRIDF (Charles).

Discussion Questions/comments	Responses
‘What concrete things do we need to do going forward? Let us prioritise, 3 to 4 things? Dr Masamvu	<ul style="list-style-type: none"> • Ensure that programmes, projects and activities address real needs at grassroots level. Unfortunately if relying on donor funding the script is already there, so it becomes important to go to the grassroots and address issues there; • Make sure programmes build capacity at regional, national and sub-national levels so that when donor funding end, the programmes can continue • MS governments should increase funding to RBOs for sustainability instead of too much dependence on donor funding

What should we do going forward (Charles)?	<ul style="list-style-type: none"> • Echo the same sentiments about grassroots, we are here to serve communities. • Need to get information across, how do we use mobile telephones to get information across, how do we engage private mobile telephone operators? • What are the things that we can do and that are right? • Donors have conditions, let's work in ways that meet their requirements and still be of benefit to what we want to achieve.
Does this resonate with you (to the floor)?	There is need for some concrete evidence of actions, the worry is that we have painfully short memories. What happened, what did we do, and how did what happen inform what we did next?
What is it that is close to your heart (to the floor)?	We have an obligation to forge interaction across many levels. Need to ensure appropriate strategies. Big issue coming out is lack of coordination across levels.
	In most RBOs within SADC, there is huge infrastructure but operated independent of each other by MS. There is need to synchronise.
What practical things are we going to do?	Data is important especially during floods, real time data. Quality assurance is also needed. Technical people tend to take back seats while politicians and activists take centre stage during disasters yet if technical people grab the opportunity in those times, chances are very high the right messages will be communicated. The question is, how do we become proactive especially for institutions such as SADC and RBOs?
	Information about DRR/M has some level of authority such that it should be packaged to have the same accuracy regardless of medium of communication
What are the three priority things required to aid integration and coordination (Dr Faka)?	To integrate is to work together! Processing of data is second level, need to gather data into a regional data bank so that it can be processed to provide early warning systems. Thirdly, need to work together to disseminate the information and get the intended results.
How are we doing in terms of sharing data? What we would like to see is mainstreaming of DRR in programmes, projects and activities	Met services in the region sell data to survive, they do not get required support from governments. So sharing data becomes a challenge, a financial resources challenge.
	Listening to the panellists, the impression is that MS should share data, yet the quality of data is not up to standard. First, there is need to harmonise the approaches starting at national level then regional level. There is simply no political will!

Are we flogging a dead horse? I there political will?	<ul style="list-style-type: none"> • True, sometimes there is lack of political will, however, as technicians if we work together, we can improve the data • Political will is there and capacitated, it is entirely up to the sectors to build these capacities and structures at their level. It is basically about building relations and the value chain.
If there is no harmonisation at national level, the regional level is a shell. What priority and practical things can we do at national and local levels?	It is important to note that when talking about regional level, we are also talking about national. What is required is an appropriate audit of the monitoring networks to ensure they collect appropriate data

Some more questions and comments also included the following:

- RBOs do not necessarily have to take the lead in everything, rather, should select what we can do. Some of the people ready and equipped to act regarding disasters are actually the military. So let us take note that there are other agencies better placed to handle some disasters than RBOs.
- Given the importance of the Protocol on Peace and Security, to what extent are we preparing or engaging our stand-by (reactive) forces for SADC? A good example is the Ebola epidemic where the USA deployed the mobile military unit to respond to the challenge. To what extent are our forces in the same mode?
- The strategic SIPO has an operational plan within the region to enhance DRR. To this end, all the military and other uniformed people do have a plan within the region. However, it is important to note that DRR is a humanitarian and civilian function but it is true that when disaster occurs, it is the military that reacts/responds first. SADC is trying to engage them.
- The problem is with technocrats, not the military, are the research institutions and universities in the region capacitated? Another issue is that of retention of trained staff, how do we ensure that happens?
- There should be specific SADC interventions for Island MS. Currently most Island MS rely on other international organisations to learn best practices on DRR.
- Research community is generally not rewarded for development work BUT get rewarded for knowledge generation.

Concluding remarks for the panel session include the following key highlights:

- Given that it was indicated DRR is demand driven, at what point does it become supply driven?
- Disaster is everybody's business, it should be inculcated in people's daily lives
- How do we convince the people who hold the purse strings that it is good investment to fund monitoring systems at regional, national and local level?
- Important to note that it takes time to mobilise dormant structures into action when disaster strikes. However, pro-activeness is very important and should be the focus going forward.
- The real challenge is how to strengthen DRR issues.

5. Consultation on RSAP IV

5.1 Summary of RSAP & EOP (Status and Evaluation/Review) and Policy Harmonisation in Member States

Phillip Beetlestone presented. Provided some feedback on the RSAP and EOP Mid-Term Review (MTR) comments. The MTR general comments and findings are summarised in the table below

MTR General Comments	Main MTR Findings
<ul style="list-style-type: none"> • Unique programme which is delivering well with a small and remarkably committed team; • Important and useful programme, and should be continued • Created a strong policy, legal, regulatory and institutional framework for IWRM • Helped build co-operative environment for TWRM&D and platform for • Unique in Africa and possibly elsewhere • Contributed to development of technical skills in region • Beginning to show tangible infrastructural development benefits • Challenges remain • There are areas for improvement 	<ul style="list-style-type: none"> • RSAP is very ambitious and complex, with too many projects • The programmes lack a programmatic M and E mechanism • Lack of capacity within the WD and also in MS and RBOs • Inadequate communication between SADC WD and MS • There is lack of clarity in the roles and responsibilities of RSAP institutions (SADC WD, MS, RBOs, etc.) regarding implementation • The restructuring of SADC significantly disrupted the performance of the SADC water sector

Box 3: MTR Recommendations

1. Prioritization of the RSAP III Implementation plan
2. Capacity of the SADC Water Division - Core functions (Protocol), Non-core (Projects)
3. Modes of Delivery (Roles, Responsibilities, & Subsidiarity) - Increase the IAs involvement in the RSAP IV
4. Financial Capacity - Improve sustainability of the programme
5. M & E system / Reporting - Output focused need to reorient to outcome focused (TOC)
6. RSAP IV - Must be a consultative process; Structure of the RSAP IV should not be a repeat of RSAP I, II or III; and Not as Ambitious.
7. Communication - Need to raise the profile of the protocol and WD, improve information dissemination mechanisms

The EOP findings and recommendations are provided in the table below

EOP Findings	EOP Recommendations
<ol style="list-style-type: none"> 1. Has provided the legal framework for water resources management - Does not need to be revised 	<ol style="list-style-type: none"> 1. Capacity of the SADC Water Division - Core functions (Treaty, Protocol), Non-core (Projects)

<ol style="list-style-type: none"> 2. Protocol plays a significant roles in supporting the development of water resources at transboundary basin level 3. Most organs / SWIs to implement the protocol are established and at various levels of functioning 4. Need to provide guidance on the Articles and Special Provisions 5. Attracted financing of the water sector 6. Still a way to go to develop joint management of TB watercourses and infrastructure development 7. Issue of gender remains a challenge in water sector 	<ol style="list-style-type: none"> 2. Need to develop common methodologies and procedures to support implementation of Protocol - Develop common interpretation (i.e. notification requirements) 3. Clarifications of roles for implementation - SADC WD, RBOs, IAs 4. Develop M and E framework - Baseline, indicators of progress, level domestication 5. Address areas of asymmetry
---	--

5.2 RSAP IV Concept and Development Timeline

Brief presentation by Dr Msibi. He stated that the contributions by the workshop delegates was the first input to the process. Also pointed out that the Mid Term Review of RSAP III and Evaluation of the Implementation of the Protocol are key guiding documents. Moreover, further consultations will be done at Member States level through the SADC Water Weeks. The timeframe provided for the process covers the period October 2014 – September 2015 with the First Draft anticipated by June, 2015.

Regarding the nature of expected input from the Workshop, Dr Msibi outlined a few key points:

- Focus is on what should be done as regional interventions
- Should further indicate the level of effort/responsibility
- Cognisant that RBOs are at varying levels of development, hence the process will be done basin by basin within their frameworks.

5.3 Consultation Groups – Breakaway Sessions

The facilitator coordinated the selection of delegates to the 6 Groups focusing on key thematic issues. The Six Groups and the Thematic Areas of Focus were outlined as follows:

- **Group 1:** RBO Establishment and Strengthening – chaired by Dr Lenka Thamae
- **Group 2:** Capacity Building and Awareness Creation – chaired by Dr Jean-Marie Kileyshe Onema
- **Group 3:** Infrastructure and CC Resilience – chaired by Dr Jefter Sakupwanyana
- **Group 4:** Water Supply and Sanitation/ Ground Water – chaired by Michelle Rapotsanyane
- **Group 5:** Water Economics and Financing – chaired by Dr Christopher Munikasu
- **Group 6:** Water Resources Management and Environment – chaired by Dr William Chipeta

The key outcomes from the group discussions are compiled in the tables below.

Group 1: RBO Establishment and Strengthening

Interventions (RBOs Establishment & Strengthening)	Responsibility Level						Remarks (Please indicate your justification and your suggestion on who should do what at RBO or Member State Level)
	Direct Implementation	Implementation through an Agent	Facilitation & Coordination	Honest Brokering	Resource Mobilisation	Management Oversight	
1. RBOs Establishment							It seems like all river basins in SADC have some form of cooperation through JWC/JPTC/TPTC focusing on rivers of common interest amongst countries which is a sufficient condition as per the Protocol. So NO further Intervention in this area is perceived. Is this Remark correct? Yes, the first part of the statement is correct however there are interventions required in terms of encouraging them to establish River Basin Commissions.
2. RBOs Strengthening							
2.1 Moving from JWC/TPTC/JPTC → River Basin Commissions			X		X	X	Which river basins are targeted and likely in the next 5 years? Incomati, Maputo, Kunene, etc. The JWC/TPTC/JPTC does not necessarily give way to the Commission. Linkages and harmonization needs to be established at basin wide level. In cases of conflict during the process Honest Brokering may be required.
2.2 Enhancement of RBOs without Secretariat to establish Secretariats			X		X		Which river basins are targeted and likely in the next 5 years? CUVECOM, LIMCOM Some form of interim Secretariat could be created whilst funds are being mobilized (secondment)
2.3 Development of Guidelines for Protocol Implementation (e.g. planned measures)	X						Which specific areas in the Protocol? Is it just for the planned measures or entire Protocol? Especially the following: Information Sharing Equitable and Reasonable Utilisation Dispute Resolution
2.4 Confidence Building among member states	X		X	X			

Interventions (RBOs Establishment & Strengthening)	Responsibility Level						Remarks (Please indicate your justification and your suggestion on who should do what at RBO or Member State Level)
	Direct Implementation	Implementation through an Agent	Facilitation & Coordination	Honest Brokering	Resource Mobilisation	Management Oversight	
3. Sharing of best Practices	X	X	X		X		Encourage SADC RBO exchange programmes Information sharing among Executive Secs and technical committees

Group 2: Capacity Building and Awareness Creation

Types of Capacity Building	Target Groups
Short-term training: <ul style="list-style-type: none"> Short courses Mentorship Programmes (Member States, SADC) Exchange programmes Acknowledge the limitations (e.g. long term impacts) Long-term training – Curriculum Development (design and development)	Youth – specific training and capacity building for the Youth On how youth can respond to climate change Media – On specific areas (e.g. reporting on climate change, water resources) to translate information into the forms that it can be accessible to stakeholders Women – Training accessible and attractive to women Capacity Building for Professionals in the field (short-term) - RBOs, Water Utilities, Municipalities, Planners, Civil Society
Areas of Capacity Need	Areas of Capacity Need
<ul style="list-style-type: none"> Climate change and uncertainty Vulnerability Assessments Build capacity on gender issues in the water sector Strengthening reporting on specific issues in the water sector (e.g. West Africa example) Water Economics (Professionals and RBOs) Capacity Building on issues that come with development of water infrastructure <ul style="list-style-type: none"> Legal issues 	<ul style="list-style-type: none"> Capacity building on policy coordination and integration at regional level Data collection and management (knowledge Management) Communication skills (e.g. use of digital media) – synthesis of information and make it available to target Resource mobilisation Resource Allocation and Benefit Shairing Environmental law and enforcement (e.g. investigation, prosecution,)

○ Social impacts	○ implementation agencies (Municipalities) and ○ enforcement agencies (police)
Awareness Creation	Capacity Building and Awareness Creation
<ul style="list-style-type: none"> • Research, compilation and packaging the reports in appropriate formats and tools (policy briefs, factsheets, journals, videos, lecture series) – targeted at regional level • Use existing structures (e.g. catchment forums or RBOs) for information dissemination • Quality assurance of the information – oversight role by SADC • Regional meetings/workshops • Establishment of regional information hubs (SADC, RBOs) 	<p>What should be the role of SADC?</p> <p>Group 2 Proposal</p> <ul style="list-style-type: none"> • Principle of SUBSIDIARITY • Using existing regional institutions (e.g. WaterNet, SARDC, GWPSA, CBNRM, SANWATCE,) • Coordination and facilitation not direct implementation – long term activities such as Curriculum Development • Through implementation agents (short-term) • Oversight role • Facilitate sharing of best practices

Group 3: Infrastructure and CC Resilience

Interventions (Infrastructure & Climate Resilience)	Responsibility Level						Remarks (Please indicate your justification and your suggestion on who should do what at RBO or Member State Level)
	Direct Implementation	Implementation through an Agent	Facilitation & Coordination	Honest Brokering	Resource Mobilisation	Management Oversight	
4. Upscaling of IWRM & Climate resilient-driven small water infrastructure projects				x	x	x	MS and RBAs are the Direct Implementers/ or through an agent
5. Joint Cross-border/transboundary water infrastructure development – Pilot			x	x	x	x	SADC just facilitates and creates an enabling environment, Implementation is through MS and RBOs
6. Water infrastructure investment promotion	x	x			x		Regional promotion will be done by SADC, If project orientated it will be through an Agent with also direct involvement of MS

7. Guidelines for project preparation and packaging, and sustainable infrastructure development	x				x		
8. Climate proofing of large water infrastructure projects (existing and new) – Pilot			x	x	x	x	SADC just facilitates and creates an enabling environment (harmonization and standardization)
9. Guidelines on mainstreaming indigenous knowledge in climate change adaptation strategies	x				x		
10. Early warning and integrated flood management systems	x	x	x	x	x	x	Early
11. Regional trans-basin water transfer studies		x			x		SADC can hire a consultant for reconnaissance studies, Implementation through RBOs and MS

Group 4: Water Supply and Sanitation/ Ground Water

Interventions (Water Supply, Sanitation & Groundwater)	Responsibility Level						Remarks (Please indicate your justification and your suggestion on who should do what at RBO or Member State Level)
	Direct Implementation	Implementation through an Agent	Facilitation & Coordination	Honest Brokering	Resource Mobilisation	Management Oversight	
1. Strengthening the water supply and sanitation sector			x				<ul style="list-style-type: none"> At RBO level Harmonization of policies for countries

							<ul style="list-style-type: none"> Agree on monitoring (pollution) plan that has transboundary nature
2. Capacity building and private sector participation in WSS			X		x		<ul style="list-style-type: none"> MS would be involved in direct implementation and also Resource Mobilization
3. Identification of regional WSS infrastructure projects			x		x		<ul style="list-style-type: none"> Direct Implementation done at MS and RBO level SADC ends at project preparation (bankability) level
4. Support to complex urban WSS projects				x		x	<ul style="list-style-type: none"> SADC involvement gives confidence to investors and pvt sector to participate in the complex schemes
5. Support to rural water supply planning and technology			x			x	<ul style="list-style-type: none"> RBO & SADC sharing of best practices
6. Implement an effective regional monitoring and reporting mechanism for WSS access		x					<ul style="list-style-type: none"> Actual work done by MS and then consolidate SADC working with RBOs SADC must ensure that the mechanisms are uniform in the region
7. Policy and institutional framework for groundwater management	x						<ul style="list-style-type: none"> MS play a pivotal role Groundwater must also come up with a protocol similar to Revised Protocol on Shared watercourses
8. Develop transboundary aquifers diagnostic analysis and action plans	x				x		<ul style="list-style-type: none"> RBO also
9. Implement two or more transboundary groundwater pilot projects	x				x		<ul style="list-style-type: none"> RBO having oversight

Group 5: Water Economics and Financing

Interventions (Water Economics & Financing)	Responsibility Level						Remarks (Please indicate your justification and your suggestion on who should do what at RBO or Member State Level)
	Direct Implementation	Implementation through an Agent	Facilitation & Coordination	Honest Brokering	Resource Mobilisation	Management Oversight	

1. Awareness raising programme on economic value of water							Direct responsibility of SADC Secretariat because it's a high level activity and applies to the whole region. <ul style="list-style-type: none"> • Applicable to policy makers and the water users.
2. Pilots on economic accounting for water							SADC secretariat spearheads the idea but implementation is at RBO and National level via an Agent i.e. Expert govt institutions or private entities with the expertise and capacity.
3. Decision Support System for EAW							<ul style="list-style-type: none"> • A technical assignment to assist in the choice of investment options and aid decision making. • Should be given to an Agent but SADC secretariat and Member states to assist in data input and resource mobilization. • Member states also responsible for validation of outputs
4. Strategy papers for water constraints and opportunity alignment with economic and social development objectives of MS, and water financing models							<ul style="list-style-type: none"> • SADC Secretariat to guide the process. • Consultants and/ or research institutions to develop the models • Member states validate the outputs.
5. Training of MS on water financing & blending of multiple streams of funding							<p>Combined MS training (groups) through an expert Agents .e.g Water net.</p> <ul style="list-style-type: none"> • Use of the developed methodologies under the water accounting projects <p>SADC secretariat coordinates and facilitates</p> <ul style="list-style-type: none"> • Leveraging on existing support programmes e.g. EU- EDF
6. Strategy for innovative development finance mechanisms for the water sector	X		X		X	X	<p>SADC leads the development of regional strategy using expert input.</p> <ul style="list-style-type: none"> • Member states adapts/ localize the strategy to their local conditions

Group 6: Water Resources Management and Environment

Interventions (Water Resources Mgt & Environment)	Responsibility Level						Remarks (Please indicate your justification and your suggestion on who should do what at RBO or Member State Level)
	Direct Implementation	Services provided Implementation through an Agent	Facilitation & Coordination	Honest Brokering	Resource Mobilisation	Management Oversight	
1. Development of integrated water resources strategies	RBO's & MS	IA	SADC Sec		SADC Sec, RBO & MS	SADC Sec	If we allocate responsibilities then the institutions must be capacitated to undertake the work and not always engage consultants. Where consultants are engaged, capacity building within those institutions should be included in the ToR
2. Dam operation and flood management	RBO's & MS		SADC Sec (flood management)	SADC Sec (dam operation)	SADC Sec, RBO's & MS	MS, RBO's	
3. SADC HYCOS integration with climate services	MS & RBO's				SADC Sec	SADC Sec	
4. Develop hydro-met products to support Flood Risk Management (FRM) and Disaster Risk Management (DRM)	MS	IA	SADC Sec		SADC & RBO's	RBO's	
5. Develop and test common methodologies for assessing water resources	RBO's, MS	IA for technical support in	RBO's & SADC Sec		MS, RBO's & SADC Sec	SADC Sec depending on level of operation. If two countries within	

Interventions (Water Resources Mgt & Environment)	Responsibility Level						Remarks (Please indicate your justification and your suggestion on who should do what at RBO or Member State Level)
	Direct Implementation	Services provided Implementation through an Agent	Facilitation & Coordination	Honest Brokering	Resource Mobilisation	Management Oversight	
		development of methodologies				RBO then RBO; If two or more RBO's then SADC, if all 15 countries then SADC	
6. Development of common methodology for assessment of environmental flows	RBO's, MS	IA for technical support in development of methodologies	RBO's & SADC Sec		MS, RBO's & SADC Sec	SADC Sec depending on level of operation. If two countries within RBO then RBO; If two or more RBO's then SADC, if all 15 countries then SADC	
7. Development of guidelines and standards for river water quality classification	RBO's, MS	IA for technical support in development of methodologies	RBO's & SADC Sec		MS, RBO's & SADC Sec	SADC Sec depending on level of operation. If two countries within RBO then RBO; If two or more RBO's then SADC, if all 15 countries then SADC	
8. Group felt that environment is not well captured – e.g. management of catchments and wetlands							

6. SADC Synthesis and Way Forward

Synthesis and way forward was provided by Dumsane Mndzebele (SADC WD). Provided a succinct summary of the key issues.

6.1 Summary Phrases:

- Good quality Data
- Timely info dissemination
- Integrated effort
- Knowledge enhancement
- More investment
- Unified vision

6.2 Key observations and Messages: FRM & RBOs

- RBO establishment and RBO strengthening is very important,
 - Developments in ZAMCOM and LIMCOM were applauded, though further work is still required
- RBOs are the best platform for planning, management and cooperation in water disasters
- Capacity building on DRR is very important (for all players):
 - Need also capacity building for gender mainstreaming in DRR, gender responsive early warning systems
- RBOs have strategic role in facilitating cross-country info sharing, including data collection and climate science
- SADC Water sector has received stable ICP support, but still needs counterpart (MS) support
- Increase in support to capacitate RBOs is anticipated from ICPs, so can play effective role in WRM & DRR
- Indigenous knowledge is vitally important in CC adaptation and DRR. There is dire need for integration of IK and Conventional scientific approaches.
 - Investment in Research on how best to do this is required.

6.3 Role of RBOs in relation to DRR

- Facilitate harmonization of data collection, processing and analyses & modeling as well as establishment of info exchange protocols
- Host basin data repository, and train MS on data collection and analysis
- Facilitate and coordinated Data and Info sharing protocols, sharing of good practices among MS and RBAs
- Facilitate access to data by MS stored by SCS and other regional data platforms
- Facilitate joint survey and data collection, for confidence building and standardized systems
- There is a need for alignment of RBOs and RBAs & MS info platforms and communication strategies
- RBAs key in real-time data collection, forecasting, early warning and communication
- More funding support needed in production of DRR products, and their dissemination
- Oceanic states are noted to be very vulnerable to disasters. SADC has ring-fenced some programmes for them, that can be taken advantage of.
- SADC benefits a lot from info on cyclones from Oceanic states' forecasts and warnings. Strengthening their DRR systems would also benefit inland SADC states even more.
- Island states can deal directly with SADC on those special issues unique to them. Joint programmes for island states are also important

6.4 Way forward

- Strengthen **collaboration with the research sector**, and have a sustainable support system for development and applied research
- Continue to **strengthen Island States DRR systems**: They have an important role to play in DRR and DRM in the region
- **Timely and accurate information** is key in DRR and DRM
- There are many players in DRR and DRM, so **strengthened integration is crucial**
- **Dam synchronizing is vitally important**, and some of RBs already have infra: Need to manage politics & conflict in dam operation objectives
- **Data quality data is a serious issue**: Needs serious attention by SADC, MS and RBOs
- For effective contribution in DRR, we need to **strengthen both RBOs and National WRM institutions**
- Put in place **strategies to convince MSs & ICPs to invest in DRR Knowledge, data and communication systems**
- Develop and implement **PROACTIVE strategies for DRR & DRM**
- **Protocol has facilitated cooperation**, has acted as conflict prevention tool, and attracted financing in water sector, but **there is still need to further provide guidance on its implementation**
- Need to **match RSAP Scope and Implementation Capacity**
- RSAP IV needs to be **developed in a consultative manner**
- RSAP IV **roles and responsibilities** of different players should **be clearly identified**

6.5 Workshop Evaluation

The workshop evaluation forms were distributed to all the delegates before the closing remarks. Delegates were requested to hand over the completed evaluation forms to the ushers and usherettes on their way out of the workshop auditorium. Further instructions were that delegates will receive the CD-ROM/Memory Stick with all the Workshop presentations after handing over their completed evaluation forms.

6.6 Closing Remarks

The closing remarks were delivered by the WRTC Chair, Mr Mawere from Zimbabwe. Mr Mawere extended sincere gratitude to SADC Secretariat and highlighted that 11 out of the 22 presentations were delivered by the SADC Secretariat. He also acknowledged wonderful facilitation by Mr Hastings Chikoko. He thanked the Host, the Government of the Republic of South Africa for excellent and warm reception as well as very good facilities. Mr Mawere also extended a vote of thanks to the ICPs for the support in convening the workshop. He concluded by thanking all the delegates for their participation and wished everyone a safe journey back to their stations. At that point, the workshop was officially declared closed.