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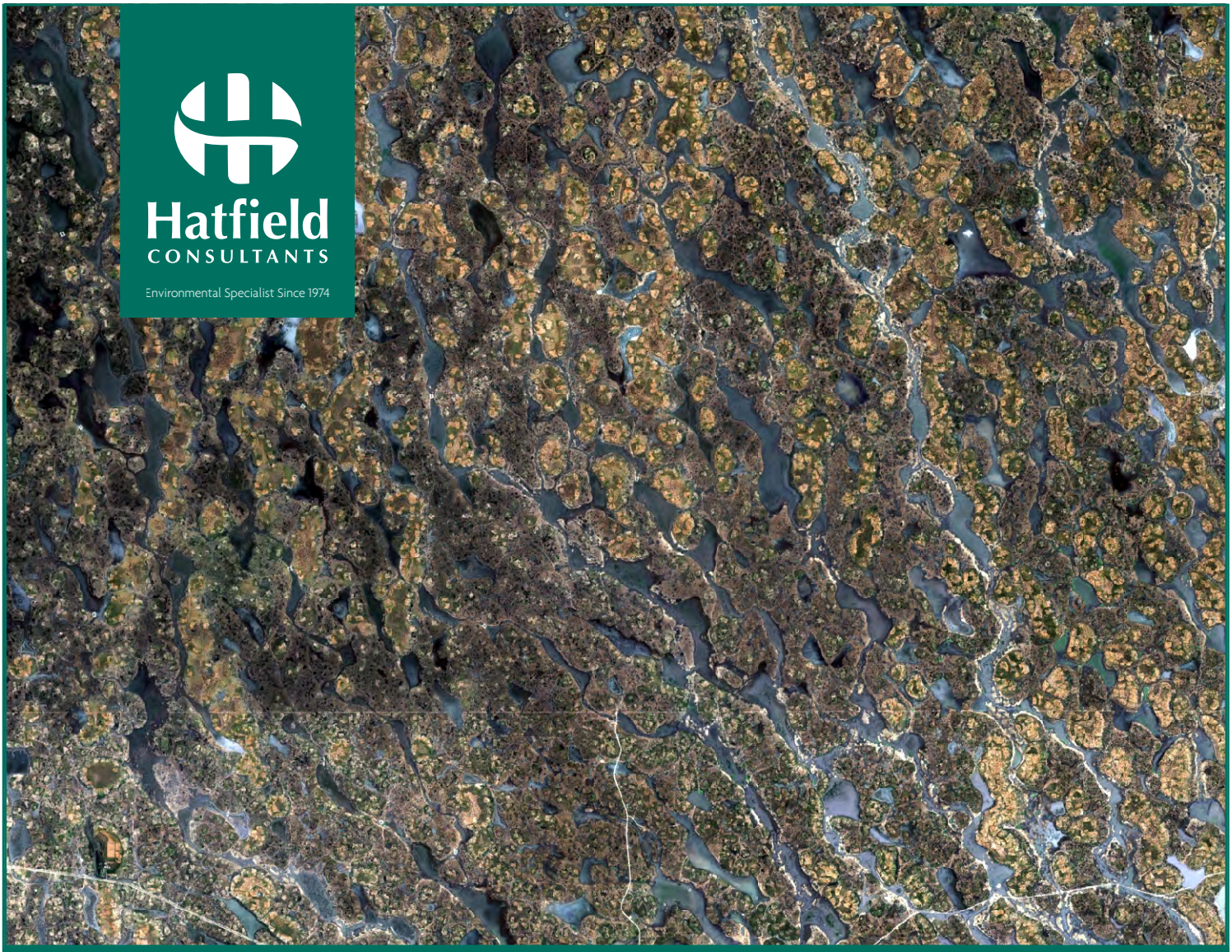

CUVECOM Consultancy

Scoping Study for Enhancement of Transboundary Water Management in the Cuvelai River Basin

Report 1: Institutional Development, Stakeholder Consultations, and Recommendations

May 2017 **Version 3.0**

Prepared for:

GIZ Transboundary Water Management in SADC Programme
Gaborone, Botswana

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CUVECOM CONSULTANCY
SCOPING STUDY FOR ENHANCEMENT OF TRANSBOUNDARY WATER MANAGEMENT IN THE CUVELAI RIVER BASIN

REPORT 1:
INSTITUTIONAL DEVELOPMENT STAKEHOLDER CONSULTATIONS AND RECOMMENDATIONS

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AfDB	African Development Bank
BGR	Bundesanstalt für Geowissenschaften und Rohstoffe
BMA	Basin Management Approach
CPTC	Commissao Permanente da Bacio do Rio Cunene
DRWS	Directorate of Rural Water Supply
DWA	Department of Water Affairs (Namibia)
DRM	Disaster Risk Management
GABHIC	Gabinete para a Administracao da Bacia Hidrográfica do Rio Cunene
GEF	Global Environment Facility
GIZ	Gesellschaft für Internationale Zusammenarbeit
GWP	Global Water Partnership
ICT	Information and Communications Technologies
IWRM	Integrated Water Resources Management
masl	Metres above sea level
MAWF	Ministry of Agriculture, Water and Forestry
MINAMB	Ministry of Environment (Angola)
NamWater	Namibian Water Corporation
NBI	Nile Basin Initiative
QAQC	Quality Assurance / Quality Control
RBMP	River Basin Management Plan
RBO	River Basin Organisation
RCM	Regional Climate Model
RCP	Representative Concentration Pathways
RSAP	Regional Strategic Action Plan
RWP	Regional Water Policy
SADC	Southern Africa Development Community
SAP	Strategic Action Plan
UNISDR	United Nations Office for Disaster Risk Reduction

ACKNOWLEDGEMENTS

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EXECUTIVE SUMMARY

The Cuvelai River Basin is a transboundary river basin, shared between the countries of Angola and Namibia. The Cuvelai River is endorheic – draining inland, rather than to the ocean – and on its journey from its source in the Angolan Highlands, it exhibits unique drainage patterns seen nowhere else on Earth. Except for the drainage channels in the Cuvelai and Mui sub-basins in Angola, the Cuvelai River is ephemeral – flowing only in response to rainfall events – and the western portion of the basin is characterised by a broad landscape of interconnected channels known as iishana (singular – oshana). This broad, almost level landscape is also prone to extensive flooding, following high intensity or prolonged rainfall events. These rainfall events are contrasted with long periods of low or absent rainfall, resulting in drought conditions. Northern Namibia and Southern Angola are home to large populations, with settlements spread across the entire region, concentrated in the iishana region, and in villages around the border region. Significant formal and informal cross-border trade in goods and services contribute to livelihoods of many basin dwellers, and transboundary grazing by livestock and other migratory practices are widespread as cultural and social ties across the political boundary are strong. The national business languages are English (Namibia) and Portuguese (Angola), but most basin dwellers share dialects of a common language – Oshikwanyama.

To ease water scarcity and improve water supply in the Cuvelai River Basin, the governments of Angola and Namibia have cooperated on the development of the Kunene Transboundary Water Supply Project, which sees abstraction of water from the Cunene River in Angola at Calueque Dam, which is then transferred over the border into Namibia via a canal, and into the Cuvelai River Basin, and on to Oshakati, where it is treated to augment existing supplies, and redistributed across the region to various towns and villages. Water from this system is also transferred back over the border to Ondjiva in Southern Angola. This project supplements vulnerable water supplies in both countries, and is the basis for an already cooperative environment between the countries of Angola and Namibia.

The agreement to establish the Cuvelai Watercourse Commission (CUVECOM) was signed by the Government of the Republic of Angola and the Government of the Republic of Namibia, in Windhoek, Namibia, in September 2014. The Agreement establishes, the definitions, the scope of the agreement, and the objectives and functions, structure and powers of the Commission. Following the signing of the agreement, small steps have been taken to move forward, but the current project is intended to catalyse action, and support concrete, tangible steps toward the development and implementation of the Commission.

This volume of the Scoping Report for Enhancement of Transboundary Water Management in the Cuvelai River Basin includes a summary of stakeholder consultations undertaken with key basin stakeholders, and provides a series of recommendations based upon information gaps identified during the Rapid Assessment (Report 2), priorities identified by the stakeholders and lessons learned from other river basins.

RBOs are established through agreements that, through a series of articles, and supported by a set of definitions, clearly lays out the purpose, nature and operations of the institution. While based on the same basic principles, as described above from the SADC Protocol on Shared Watercourses, each RBO agreement is different; reflecting the individual institutional, governance, biophysical and hydro-climatic conditions within the basin in question. This report discusses the phases of RBO development – initiation, establishment and development and operation, placing CUVECOM firmly in the initiation

phase, and maps out the requirements for operationalisation, through the establishment of an interim secretariat, and sustainable financing mechanisms. The CUVECOM agreement (2014) establishes the primary configuration of the RBO, lead by a Council of Ministers and Technical Committee. These should be supported by an Interim Secretariat, and be informed by technical task teams comprising members from both member states.

While the parties have expressed the need for an operational RBO, the greatest challenge facing CUVECOM will be sustainable financing, as it will be difficult to sustain the secretariat and undertake technical programmes should sustainable revenue not be consistent. The major problem being that opportunities for leveraging revenues from bulk water users are limited, as there are no major industrial water consumers (hydropower, bottling, mining, etc) in the basin.

Stakeholder consultations were conducted throughout late March 2017, with workshops held in Luanda and Ondjiva, Angola; and Ondangwa, Namibia. The stakeholder consultations informed participants about CUVECOM, the consulting project being undertaken, and the process that would be conducted that day. The main aim of these workshops was to mine stakeholder perceptions of priorities from a grass-roots level, which resulted in the following list:

- Climate Smart Agriculture;
- Disaster Risk Management;
- Early Warning Systems;
- Floodwater Harvesting;
- Information Sharing and Knowledge Management;
- Stakeholder Participation;
- Technical Programme Coordination;
- Water Management Infrastructure; and
- Water Supply.

Recommendations for operationalisation of CUVECOM based upon data and information gaps identified during the Rapid Assessment and priorities identified during the stakeholder consultation process and literature view are broken down into institutional and technical issues, as listed below:

- **Institutional**
    - Institutional configuration and technical coordination through CUVECOM;
    - Stakeholder Engagement;
    - Sustainable Financing; and
    - Knowledge Management and Information Sharing.
- **Technical**
    - River Basin Assessment and planning;

- Monitoring infrastructure;
- Groundwater;
- Disaster Risk Management;
- Physical Water Management Infrastructure; and
- Socio-Economic Assessment.

DISTRIBUTION LIST

The following individuals/firms have received this document:

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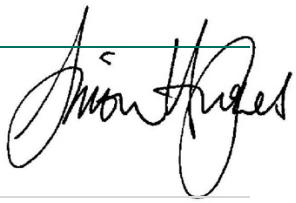
Thomas Schild	GIZ	1	X	1	X

AMENDMENT RECORD

This report has been issued and amended as follows:

Issue	Description	Date	Approved by	
1	First version of the CUVECOM Consultancy Report	2017-04-19		
			Grant Bruce Project Director	Simon Hughes Project Manager
2	Second version of the CUVECOM Consultancy Report: Stakeholder Consultations and Recommendations	2017-05-01		
			Grant Bruce Project Director	Simon Hughes Project Manager
3	Third version of the CUVECOM Consultancy Report: Stakeholder Consultations and Recommendations	2017-05-03		
			Grant Bruce Project Director	Simon Hughes Project Manager

1.0 INTRODUCTION AND RATIONALE

The Cuvelai River Basin is a transboundary river basin, shared between the countries of Angola and Namibia – see Figure 1. The Cuvelai River is endorheic – draining inland, rather than to the ocean – and on its journey from its source in the Angolan Highlands, it exhibits unique drainage patterns seen nowhere else on Earth. Except for the drainage channels in the Cuvelai and Mui sub-basins in Angola, the Cuvelai River is ephemeral – flowing only in response to rainfall events – and the western portion of the basin is characterised by a broad landscape of interconnected channels known as iishana (singular – oshana). This broad, almost level landscape is also prone to extensive flooding, following high intensity or prolonged rainfall events. These rainfall events are contrasted with long periods of low or absent rainfall, resulting in drought conditions.

Northern Namibia and Southern Angola are home to large populations, with settlements spread across the entire region, concentrated in the iishana region, and in villages around the border region. Significant formal and informal cross-border trade in goods and services contribute to livelihoods of many basin dwellers, and transboundary grazing by livestock and other migratory practices are widespread as cultural and social ties across the political boundary are strong. The national business languages are English (Namibia) and Portuguese (Angola), but most basin dwellers share dialects of a common language – Oshikwanyama – further emphasising the cultural unity of the area.

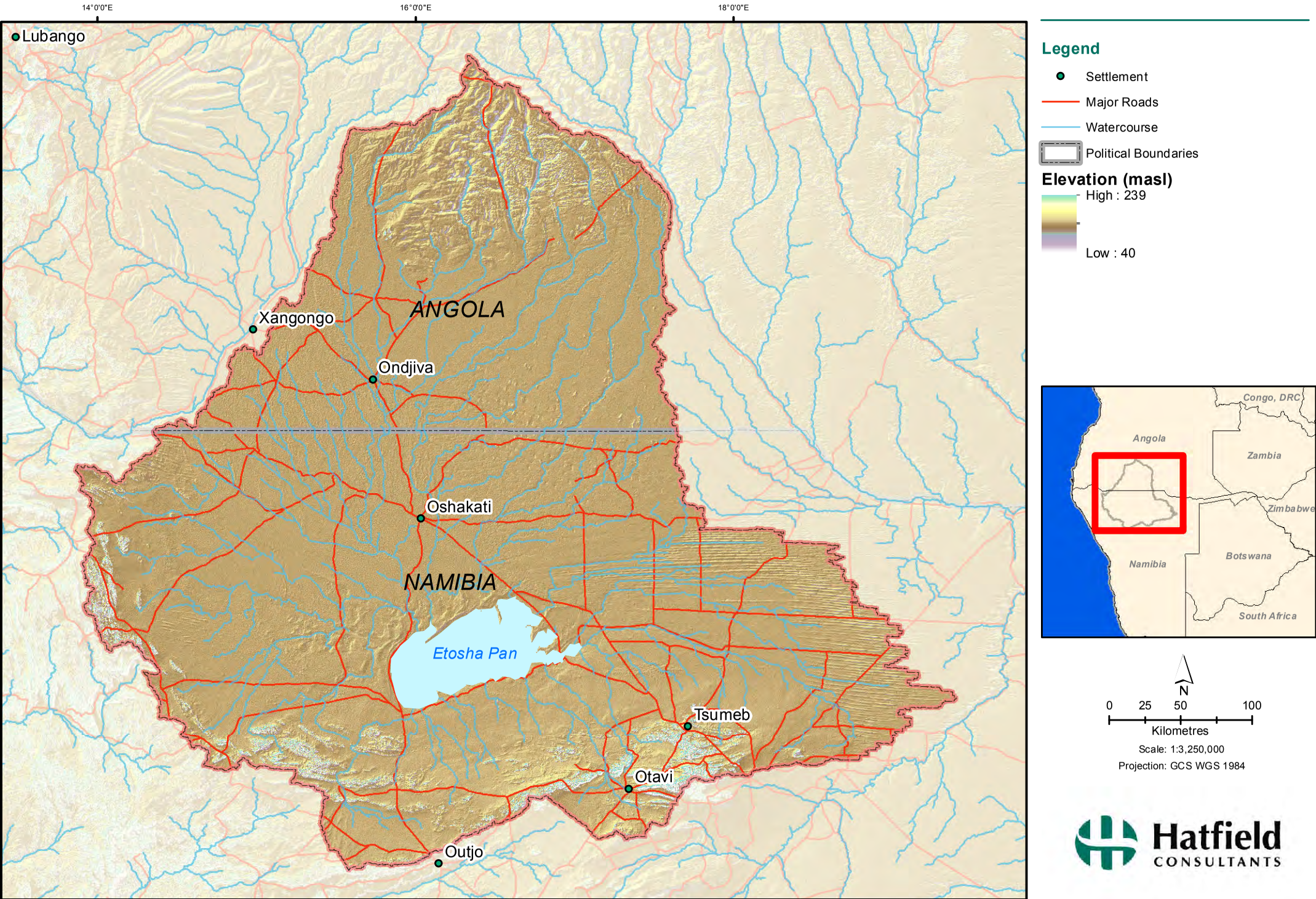
The climate of the region is largely semi-arid to arid in the central characterised by sporadic and highly variable rainfall patterns, and subsequent droughts and floods. The northern portion of the basin, sees considerably more rainfall, with perennial rivers in two of the upstream sub-basins, originating in the highlands of southern Angola. To ease water scarcity and improve water supply in the Cuvelai River Basin, the governments of Angola and Namibia have cooperated on the development of the Kunene Transboundary Water Supply Project, which sees abstraction of water from the Cunene River in Angola at Calueque Dam, which is then transferred over the border into Namibia via a canal, and into the Cuvelai River Basin, and on to Oshakati, where it is treated to augment existing supplies, and redistributed across the region to various towns and villages. Water from this system is also transferred back over the border to Ondjiva in Southern Angola. This project supplements vulnerable water supplies in both countries, and is the basis for an already cooperative environment between the countries of Angola and Namibia.

The people of the Cuvelai River Basin exist in a state of permanent vulnerability – a state driven by constantly changing environmental conditions, exacerbated on a community, household and individual by limited means to survive and cope with the cycles of floods and droughts.

The overall intention of CUVECOM is to establish an institution that contributes to improving the water availability, management and vulnerability situation in the Cuvelai River Basin.

The agreement to establish the Cuvelai Watercourse Commission (CUVECOM) was signed by the Government of the Republic of Angola and the Government of the Republic of Namibia, in Windhoek, Namibia, in September 2014 (see Appendix A1 of this report), hereafter referred to as the Agreement. The Agreement establishes, among other things, the definitions, the scope of the agreement, and the objectives and functions, structure and powers of the Commission. Following the signing of the agreement, small steps have been taken to move forward, but the current project is intended to catalyse action, and support concrete, tangible steps toward the development and implementation of the Commission.

FIGURE 1 - The Cuvelai River Basin.



On behalf of the German and the British government, GIZ is commissioned to support the institutionalisation of CUVECOM and has contracted Hatfield Consultants to undertake this consultancy, referred to as the CUVECOM Consultancy; designed to develop a **Scoping Report for Enhancement of Transboundary Water Management in the Cuvelai River Basin**.

This report is the first of two, summarising outcomes from the consultancy, intended as a summary of a parallel stakeholder engagement process that aimed to inform interested and affected parties about the project and CUVECOM itself, identifying priorities from the stakeholder-level, and a series of recommendations for technical and institutional programmes for CUVECOM moving forward.

1.1 PROJECT OVERVIEW

The **Scoping Report for Enhancement of Transboundary Water Management in the Cuvelai River Basin** was initiated to provide strategic inputs to the operationalisation of the Commission, through an evaluation of available information on the basin and its inhabitants – identifying information gaps and management challenges/opportunities, and priorities identified by stakeholders.

The project comprises three main components:

- Stakeholder Consultations with participants from the Cuvelai River Basin;
- Rapid Assessment of the Cuvelai River Basin; and
- Evaluation of the SADC Flood Atlas for flood forecasting in the Cuvelai River Basin.

The outcomes of the Scoping Report for Enhancement of Transboundary Water Management in the Cuvelai River Basin are broken down into two main reports:

- **Report 1** – this document; providing institutional context for operationalisation of a River Basin Organisation (RBO), summarising the findings of the stakeholder consultations, and presenting recommendations for
- **Report 2** – Rapid Assessment and Flood Forecasting System Assessment.

The purpose of this document is outlined below:

- Provide institutional context and background to the establishment of RBOs;
- Review the elements that comprise sustainable financing for a RBO;
- Summarise the stakeholder consultations processes undertaken during March 2017, including priorities identified by participants; and
- Present a series of Institution and Technical recommendations, which will contribute to the operationalisation of CUVECOM and pave the way for a sustainable, and relevant RBO that can contribute to transboundary management of the Cuvelai River Basin.

It is structured as follows:

- Introduction and Rationale
- Institutional Context;
- Sustainable Financing;

- CUVECOM Stakeholder Consultation Process;
- Institutional Recommendations;
- Technical Recommendations;
- Summary of Recommendations;
- Conclusion; and
- Works Cited.

1.2 ASSUMPTIONS

Assumptions made in this assessment were based on available information. Conclusions were limited by a lack of information and data in both countries; however, in general sufficient data and information sources were accessed to conclude the study, and to identify priority issues for CUVECOM. It is the opinion of the consultant that the limitations of documentation, data and information is a combination of **existence** – whether data exists at all – and **access/availability** – whether it is possible to obtain the required sources. Therefore, it is assumed that documentation, data, and information identified and accessed during this study represents most of what is accessible, considering clear requests were issued to both delegations for all relevant sources to be provided to the consultant.

This situation points directly to the urgent need for the establishment of a multi-lingual knowledge sharing platform, and a need for consistency in data collection methods and efforts across administrative boundaries.

Please note that the river basin adjacent to the Cuvelai River Basin to the west is spelled ‘Cunene’ in Angola and ‘Kunene’ in Namibia. Throughout this document, attempts are made to use the correct reference when referring to the river in different countries. When referring to the basin it is referred to as **Cunene**.

2.0 INSTITUTIONAL CONTEXT

This section of the report provides context to the establishment and operationalisation of River Basin Organisations (RBOs), which will become the backdrop for moving CUVECOM from the status of cooperative discussion, and agreement, to a functioning and operational transboundary water management institution, with appropriate configuration and governance structures.

2.1 RIVER BASIN ORGANISATIONS

Transboundary river basins are, by definition, river basins that straddle the political boundaries of two or more sovereign nations. If there are mutual institutional, economic or social benefits associated with working together towards common goals related to water management in a basin, this is usually undertaken through a River Basin Organisation (RBO). They are established primarily to facilitate equitable and reasonable utilisation of water resources; prevention of significant harm from water or land management activities upon water resources, and prior notification of planned developments (SADC, 2010).

RBOs are established either as temporary joint technical committees - bodies intended to serve a specific project or programme; interim institutions – established as a precursor to a formalised RBO; permanent joint technical committees – providing a vehicle for long-standing cooperation on a single issue, or set of focused issues; or a transboundary RBO. They are set-up in response to specific political/institutional needs, or in response to demands of stakeholders (Global Water Partnership 2012).

As policies and legal instruments that govern quantification, rights, distribution and allocation of water resources are established at a national level (GWP/INBO 2009), the role of an RBO is to advise the parties on courses of action, and interventions, with respect to transboundary water management (including water resource allocation, water quality, and impoundment), resolution of transboundary resource conflicts, negotiations on inter-basin water transfers, infrastructure developments, and environmental flows. Beyond the multi-country perspective, the status of the RBO is enshrined in the core principles of the SADC Protocol on Shared Watercourses (2001), stating the basin or riparian states of shared watercourse systems shall without prejudicing their sovereignty, equitably share use and access to water resources – surface and sub-surface. This equitable sharing must take into consideration factors and issues including the biophysical and hydro-climatic characteristics, the socio-economic conditions, shared use implications, existing and future uses of water resources, and agreed standards.

Across the SADC region – where all major watercourses are shared by two or more countries (Watkins 2006) - RBOs have been established to cooperate on river basin/watercourse planning to balance water user needs with resource availability/allocation, and coordinate efforts with respect to water related hazards (floods, droughts, etc.) (Global Water Partnership 2012). While different RBO's are substantially different from one another in terms of biophysical conditions, hydro-climate, socio-economic circumstances, number of member states, mix of surface water and groundwater, and capacity, each basin has had to address the question of financing. Independent of the configuration and size of the basin, and the needs and demands of the member states, sustainable financing is not isolated to the day-to-day administration and operation of the RBO; financing must also cover technical programmes that must inevitably be undertaken to understand and address key issues facing water resource managers in the basin.

2.2 SADC PROTOCOL ON SHARED WATERCOURSES

The SADC Protocol on Shared Watercourses states the following objects for RBOs:

- To develop a **monitoring policy** for shared watercourse systems;
- To **promote the equitable utilisation** of shared watercourse systems;
- To formulate **strategies for the development** of shared water course systems; and
- To **monitor the execution** of integrated water resource development plans in shared watercourse systems.

The Protocol states that the purpose and function of RBOs shall be as follows:

- *With regard to National Water Resources Policies and Legislation:*
    - *Harmonisation of national water resources policies and legislation; and*
    - *Monitoring compliance with water resource legislation and, where necessary, recommending amendments thereto and the introduction of new legislation.*
- *With regard to Research, Information and Data Handling:*
    - *Collecting, analysing, storing, retrieving, disseminating, exchanging and utilising data relevant to the integrated development of the resources within shared watercourse systems and assisting member States in the collection and analysis of data in their respective States;*
    - *Reviewing the provisions of National Development Plans relating to the water course systems;*
    - *Designing and conducting studies, research and surveys relating to the environmentally sound development and management plans for shared watercourse systems;*
    - *Stimulating public awareness and participation in the sound management and development of the environment including human resources development; and*
    - *Promoting in accordance with the national development plans of the Basin States, the formulation of integrated master plans for shared watercourse systems.*
- *With regard to Water Control and Utilisation in shared watercourse systems:*
    - *Recommending regulation of the flow and drainage;*
    - *Promoting measures aimed at flood and drought mitigation;*
    - *Recommending and promoting measures to control desertification, soil Erosion and sedimentation;*
    - *Monitoring the utilisation of water for agriculture, domestic, industrial and navigational purposes;*

- *Monitoring the establishment of hydro-electric power installations;*
- *Monitoring the generation of hydro-electric power; and*
- *With regard to Environmental Protection.*

- *Promoting measures for the protection of the environment and the prevention of all forms of environmental degradation arising from the utilisation of the resources of the shared watercourse systems:*
  - *Assisting in the establishment of a list of substances whose introduction into the waters of a shared watercourse system is to be banned or controlled;*
  - *Promoting environmental impact assessments of development projects within the shared water-course systems; and*
  - *Monitoring the effects on the environment and on water quality arising from navigational activities.*

- *With regard to Hydro-meteorological Monitoring Programme:*
  - *Promoting a hydro-meteorological monitoring programme in consultation with other SADC sectors.*

Essentially, the SADC Protocol on Shared Water Courses guides Member States to equitably share transboundary water resources through the application of IWRM principles, supported by the establishment of RBOs and sharing of information.

2.3 RBO AGREEMENTS

RBOs are established through agreements that, through a series of articles, and supported by a set of definitions, clearly lays out the purpose, nature and operations of the institution (SADC, 2000).

While based on the same basic principles, as described above from the SADC Protocol on Shared Watercourses, each RBO agreement is different; reflecting the individual institutional, governance, biophysical and hydro-climatic conditions within the basin in question.

2.4 PHASES OF RBO DEVELOPMENT

While the focal areas and dynamics of each RBO are defined by the specific institutional and biophysical setting of each basin, there are recognised stages of development for RBOs – a continuum of sorts – (Hooper 2006):

1. **RBO initiation phase –** establishment of dialogue between the parties, resulting in Memoranda of Understanding, identification of interim secretariat, roles and responsibilities and initial contributions from Member States;
2. **RBO establishment and development phase –** where the RBO is formalised, with a permanent secretariat in one of the riparian states, and the preparation of a strategic river basin planning document - Transboundary Diagnostic Analysis (TDA), Strategic Action Plan (SAP) or River Basin Management Plan (RBMP); and

3. **RBO full operation phase** – projects emanating from the planning document are being implemented, and tangible results are available to decision-making.

A fourth stage is possible, which includes the joint development and financing of mutually beneficial water management infrastructure. (Ruthenberg & Arntzen 2016).

CUVECOM is currently with Phase 1 of this continuum, with the agreement signed, but the location of an interim secretariat, roles and responsibilities, and the funding agreement yet to be determined. As there is already significant cooperation on the Kunene Transboundary Water Supply Project, it could be said that elements of additional stages are already being addressed to some extent.

2.5 RBO ESTABLISHMENT

The SADC Guidelines for Strengthening River Basin Organisations establishing present the RBO establishment process illustrated in Figure 2, and described below in terms of developmental stages. These guidelines were designed with the intention of shortening the learning-curve for new RBOs being established in the SADC region.

Figure 2 RBO establishment and development process.

Source: (SADC, 2010)

2.5.1 Establishment Process

The establishment process includes the following steps:

- **Conceptualisation** – identification of main issues of mutual concern, defining the need and drivers for cooperation;
- **Negotiation** – Development of a draft agreement, consulting with political structures, and obtaining legal review.
- **Establishment** – signing and ratification; and

- **Operationalisation** – appointing staff, formulation of issues and designing financial sustainability model.

CUVECOM is currently at the Operationalisation stage.

2.5.2 Watercourse Agreement

The Watercourse Agreement includes the following elements:

- **Preamble** – stating the purpose and drivers behind the agreement,
- **Establishment** – desire of the parties to establish the joint body, outline the legal status it will assume, and the objectives, functions and powers;
- **Governance** – outline the governance structures;
- **Obligations** – specify the obligations of the parties, in terms of projects, information and data exchange, financing mechanisms and notification mechanisms
- **Legal Arrangements** – identifying mechanisms for dispute resolution, accession withdrawal, dissolution, force majeure, amendment, language, and when it will enter into force.

Except for financing mechanisms, these elements are all covered within the CUVECOM agreement. The parties will need to determine whether an amendment will later be required to the agreement to formalise the financial mechanisms.

2.5.3 Organisational Structure

Organisational structure essentially determines whether a River Basin Commission, a Joint Water Commission/Joint Technical Committee, or a Joint Water Authority is needed for the co-management of the water resources of the Cuvelai River Basin. The parties have essentially already decided that they wish to establish an RBO – CUVECOM.

2.6 GENDER AND RBOS IN SADC

It is widely recognised that men and women have different and largely unequal access to water and water-related services and resources, combined with different and largely unequal access to roles in decision making frameworks related to water (SADC, 2014). Guided by various declarations, policies, and protocols, supported by toolboxes and guidelines, SADC is committed to promoting gender equality throughout the IWRM institutional landscape, supported by the following key definitions, as adapted from SADC (2010):

- **Gender** - the socially constructed differences between women and men, which can change over time and vary within a society and from one society to the next;
- **Gender Equality** – a paradigm where women and men, and girls and boys enjoy equal rights, and equal access to opportunities, outcomes, resources;
- **Gender Equity** - fair and reasonable distribution of benefits, rewards and opportunities among women, men, girls and boys;

- **Gender Mainstreaming** - the process of identifying and addressing gender gaps, making women's, men's, girls,' and boys' concerns and experiences integral to the design, implementation, monitoring and evaluation of policies, programmes and projects;
- **Gender Machinery** - national structures with the mandate of executing and monitoring gender and related policies and programmes, in line with national, regional and international commitments;
- **Gender Management System** - institutional structures, mechanisms and processes established within existing organisational frameworks to guide, plan, monitor, and evaluate the process of mainstreaming gender to achieve greater gender equality and equity, within the context of sustainable development;
- **Gender Sensitive** - acknowledging and considering the specific gender needs of men and women at all levels of planning, implementation, monitoring and evaluation; and
- **Sex Disaggregated Statistics** - the collection and separation of data and statistical information by sex to enable comparative analysis.

2.6.1 Gender Mainstreaming

Guidelines for Gender Mainstreaming (SADC, 2010), supported by a SADC Handbook on Mainstreaming Gender in the Water Sector (SADC, 2014) provide key guidance on mainstreaming gender in IWRM through the Gender and Development Framework (GAD), where gender is integrated into management approaches and processes, rather than a stand-alone feature or project. This is achieved through the establishment of strategies that integrate women's and men's concerns and perspectives into design, implementation, monitoring and evaluation of IWRM projects, and identifying gender-oriented programming and targets, intended to track and address areas of discrimination and reduce gender-based inequalities in water resources management and sustainable development.

The SADC Guidelines for Gender Mainstreaming in RBOs (SADC, 2010) propose the following targeted actions:

- **Creating an enabling environment:**
    - Committing to inclusive goal setting by securing commitments from high-level policy makers within Member States of RBOs;
    - Reviewing institutional frameworks and incorporating gender perspectives into institutional aspects of the RBO, usually through the implementation of a gender audit, which will help determine the effectiveness of gender approaches in the RBO's activities;
    - Engaging in a visioning process to jointly determine the nature of a gender inclusive multi-stakeholder process, while identifying and agreeing upon goals and targets for actions to achieve the vision;
    - Developing and adopting a gender sensitive institutional frameworks and policies, supported by appropriate results monitoring frameworks; and

- Develop a gender action plan to operationalise and mainstream gender policies and strategies, with gender specific strategic objectives to support the achievement of the RBO's vision, supported by clear targets and budgets to support these actions.

- **Raising awareness and building gender mainstreaming capacity within the RBO structures:**
  - Provide training on project development, implementation, and monitoring and evaluation at all levels, including gender sensitisation, capacity development and leadership;
  - Develop and implement capacity development programmes, which includes training courses on gender planning and gender analysis for RBO staff, basin commissioners or technical advisory committees and all technical staff; and
  - Develop capacity for gender analysis at practical levels throughout relevant line ministries.

- **Using a gender approach in executing the RBO' s key water resources management functions:**
  - Executing key water resources functions using a gender approach, supported by the following actions:
    - Collection of gender sensitive data;
    - Work with women and men at all levels of stakeholder engagement to understand how men's and women's roles impact water resources and their management;
    - Utilise participatory methods, sensitive to gender, to determine participants in water programmes and institutions, and identify beneficiaries, who is negatively affected, and how;
    - Establish beneficiaries of investments in water services, and how is excluded;
    - Ensure that investment decisions and technology choices are gender-sensitive;
    - Develop information systems that enable transparent reporting on gender –based data, which can be utilised to support gender-sensitive decision-making and management of water resources; and
    - Promote self-empowerment through management frameworks that recognise, and utilise skills and expertise held by women and men.

- **Consulting and incorporating the voices of poor men and women in multi-stakeholder dialogue processes and in decision making:**
    - Conduct gender and stakeholder analysis to establish the needs and priorities of marginalised groups, providing information on power imbalances and inequalities among stakeholders.
    - Generating opportunities for all stakeholders in water management policies and activities, by identifying barriers to participation by all levels of stakeholders of both genders, and integrating priorities for all groups;
    - Building capacity development by promoting inclusive structures that integrate the capacities and contributions from all levels of stakeholders, from local communities to national governments.
- **Mainstreaming gender in the project cycle through the following activities:**
    - Conducting gender analysis
    - Formulating programme/project objectives, outcomes, outputs and activities that address the needs and concerns of women, and men, including a broader commitment for changing institutions or institutional structures that currently constrain gender equality. Such programmes and projects should consider the financial and human benefits each intervention will bring to women and men, understanding stakeholder perceptions of costs, benefits, practicality and acceptance.
    - Identifying assumptions and risks, focusing on any barriers to equality, and risks that may intentionally or unintentionally promote gender imbalance.
    - Implementing programmes that ensure gender balance at all levels;
    - Develop and implement monitoring and evaluation frameworks that integrate gender sensitivity, and ensure that all programmes are implemented in ways that promote gender equality; and
    - Reporting on progress of action plans and programmes, identifying successes and challenges of promoting gender equality at all levels.

(SADC, 2010) identifies nine key entry points for gender mainstreaming within water resources management:

- Stakeholder participation;
- Water allocation;
- Pollution control;
- Monitoring;
- Financial management;
- Drought and flood management;

- Information management; and
- Basin planning.

As CUVECOM is a fledgling RBO, there will immediate opportunities to balance gender through participation of women in roles throughout of these aspects of water resources management. However, the challenge will be participation across these aspects utilising existing, legacy staffing availability, which may already include gender imbalance. Therefore, while attempting to address gender balance through these elements of water management, it will be important to ensure that gender-balanced capacity development and training programmes are in place within the various line-ministries supporting CUVECOM in Angola and Namibia.

3.0 SUSTAINABLE FINANCING

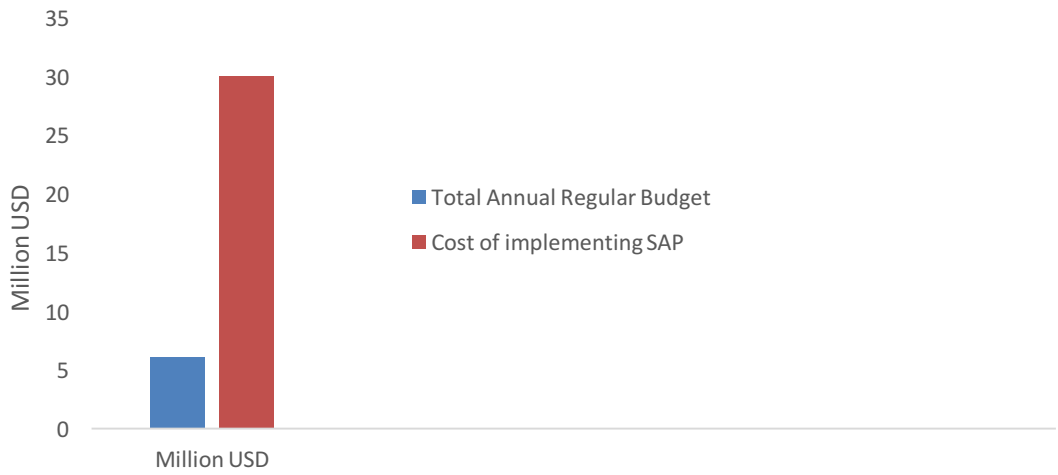
Despite the importance of the technical and institutional cooperation that will be realised through CUVECOM, development of a sustainable financing framework will be the single most important aspect of the early stages of work for the Commission. Henkel, et al. (2016) propose four dimensions of financing that provide essential perspectives on RBO sustainability:

- **Sufficiency** of funding;
- Degree of **self-financing**;
- **Reliability** of financing; and
- **Resilience** of the organisation from a financial perspective.

Each of these dimensions add clear perspective to the importance of addressing financial models as early in the process as possible. Sufficiency is a clear first step – does the budget available match the operation costs, and programme of work for the period in question? Degree of self-financing refers to the portion of the budget that is continuous; coming directly from government coffers, or from fees; rather than temporary or transient sources, such as donor funding. Reliability of funding means the level to which the RBO can depend upon contributions being paid, whatever the source. And, finally, resilience refers to ability of the institution to weather fluctuations or unreliability in funding flows. This is usually addressed through financial reserves (Henkel, Schüler, Carius, & Wolf 2016).

It is also important to differentiate between operational or regular budget, and programmatic or implementation budget. The operational budget covers the day to day running costs for the RBO – rent, salaries, Information and Communications Technologies (ICT) requirements, travel, allowances, etc. – allowing the body to function effectively. The programmatic budget provides financial support to technical programmes that further the cause of the RBO (Henkel, Schüler, Carius, & Wolf 2016). The difference between regular budget and programmatic budget is brought into stark relief when examining the example of OKACOM's regular budget from 2011 to 2016 in comparison to the cost of implementing the Strategic Action Plan over the same period, as illustrated in Figure 3.

Figure 3 OKACOM regular budget vs budget to implement the SAP over a five-year period.



Source: (Henkel, Schüler, Carius, & Wolf 2016)

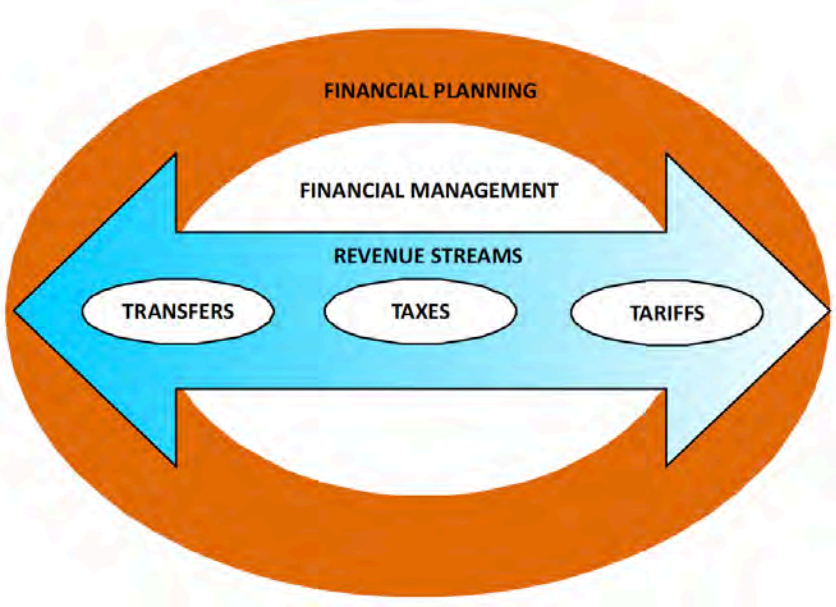
For finances to be sustainable, there is a need for accountability and transparency, which ultimately begins with effective budgeting and accounting, and is carried forward supported by monitoring and evaluation frameworks. These functions are critical to the sustainability of the institution.

Without accepted fiduciary standard and measures and regular reporting, member state contributions, levees and donor funding will be compromised, as all sources will require accountability.

3.1 FINANCIAL SUSTAINABILITY

The SADC Guidelines for Strengthening River Basin Organisations: Funding and Financing Guideline document (SADC, 2010) provides guidance for developing RBOs in terms of financial development, planning and sustainability, as illustrated in Figure 4.

Figure 4 Holistic funding concept for RBOs.



Source: (SADC, 2010)

3.1.1 Financial Planning

The first step towards establishing a financially sustainable RBO is development of a detailed financial plan for the institution, which outlines the mission and objectives, specifies financial requirements, and explores opportunities for sustainable funding opportunities, which in turn supports the development of a funding strategy.

3.1.2 Revenue Streams

As an RBO is being established, the relevant revenue streams identified by in the Guidelines for Strengthening River Basin Organisations: Funding and Financing Guideline (SADC, 2010) are as listed in Table 1.

Table 1 Applicable revenue streams for sustainable financing.

Funding Option	Type
Grants	Transfer
Funds	Transfer
Member state contributions	Taxes
Payments for services	Tariffs
Public Private Partnerships	Tariffs

Source: (SADC, 2010).

3.1.3 Financial Management

The SADC Guidelines for Strengthening River Basin Organisations: Funding and Financing (SADC, 2010) identifies a series of interventions for RBOs for financial management:

- Establishment of a financial management and governance system;
- Preparation of annual budgets;
- Establishment of formal accounting systems;
- Formulate and implement control and accountability procedures; and
- Adopt standardised and formal financial reporting mechanisms.

The proposed steps provide the parties and all involved in the operational management of the RBO with transparency, and clear roles and responsibilities with respect to financial management. Such regulations and operational guidelines will build and support confidence between the parties and the RBO, and any business partners – donors, private sector business, etc, which in turn will support further investment.

3.2 SOURCES OF FINANCING

Financing for operational and programmatic budgets of RBOs include two main sources:

- Donor funds;
- Revenues.

Typically, the majority of RBOs, particularly those in southern Africa, have been donor-supported, through multi-lateral transboundary water management programmes. While this often allows significant progress to be made towards IWRM, it also creates a dependency that once established is difficult to change, unless deliberately programmed to eventually be phased-out from the outset. Hence, donor-only or majority-donor support should be viewed as unsustainable financing, since although relatively consistent in the past, donor spending can be influenced by source-country political and social conditions, or changing development priorities or approaches. Should multilateral funding be withdrawn from large donor-dependent RBOs, the vacuum such a withdrawal would leave behind is often difficult to fill using other sources of funding; meaning that operational and programmatic budgets would both be at risk. Identifying non-donor, sustainable and mixed financing sources from the outset reduces the risk to the institution. Donor support in establishing the RBO should not affect the long term financial

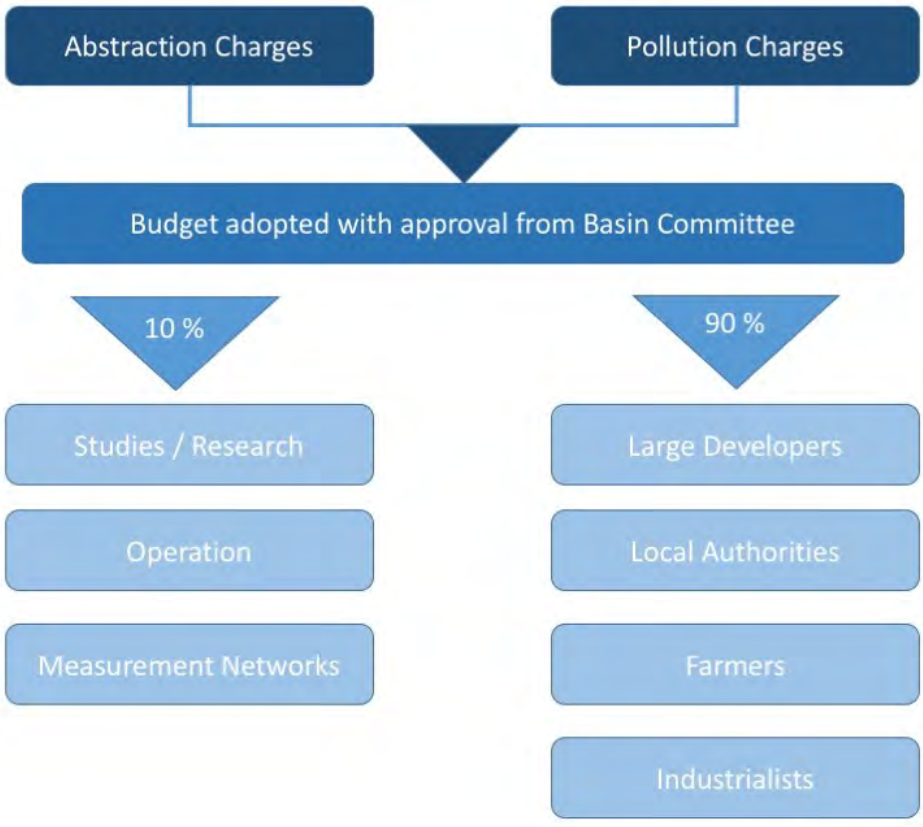
sustainability of an RBO, as long as the support is short-term, and focused on developing capacity and strategic planning activities. Hence, sustainable financing should focus primarily on revenue-based sources. GWP/INBO (2009) identifies three key sources of revenue to support support sustainable financing:

- **Taxes** – government contributions from the national tax-base;
- **Tariffs** – levees paid by direct and/or indirect water users, including the polluter-user pays concepts; and
- **Transfers** – fees for water transfers.

The 'three T's' are standard sources of revenue-based financing for RBOs. Government contributions are increasingly common in the SADC region (GWP/INBO, 2009). The Orange-Senqu River Commission (ORASECOM) was government financed at an operational level from the outset, with all countries paying contributions up-front. The Permanent Commission for the Okavango-Cubango River Basin (OKACOM) also migrated to government contributions from the tax-base once donor support was programmed-out, but it quickly became clear that these sources were insufficient. Hence, a mixed revenue-based funding model is being explored – with sources such as tourism or ecosystem service levees being considered.

One financing option, enshrined in French Water Law since 1964, known as the Polluter-User Pays Principle, allows the recovery of levies or water charges by water agencies – river authorities, water utilities, or RBOs - on abstractions (volumetric use), or discharges that impact water quality (pollution); either on modifying the water regime that must then be managed by the agency.

Figure 5 The Polluter-User Pays Principle.



Source: Adapted from (GWP/INBO 2009).

Options for levies in the Cuvelai include the following options:

- Abstractions - water users;
- Ecosystem Services;
- Tourism Levies; and
- Polluter-pays from polluting industries;

Migration away from donor dependence has become a priority for many larger RBOs, in response to shifting geographic and thematic priorities within large multilateral donor agencies, and increasing limitations in international development spending from many nations following economic recession. In 2013, the Nile Basin Initiative (NBI) initiated a programme to increase member state contributions and the reduce dependency of NBI and its regional centres on donor funding, as a percentage of core budget (USD $3.8M). This migration from only 48 %-member state funding to over 100 % by 2018 is illustrated in Table 2.

It must also be noted that levies and charges must be developed and implemented in a collaborative and sensitive manner, so as not to jeopardise relations with business, and deter investment in the region.

Table 2 Increase in member state contributions to NBI from 2013 to 2017 and percent core cost coverage.

	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018
Nile-SEC	90,000	90,000	145,000	145,000	200,000
NELSAP-CU	47,037	47,037	79.074	79,074	111,111
ENTRO	114,000	148,000	182,000	216,000	150,000
Total (in USD)	**1,826,370**	**1,962,370**	**2,968,740**	**3,104,740**	**4,111,110**
Core cost coverage	**48 %**	**52 %**	**78 %**	**82 %**	**108 %**

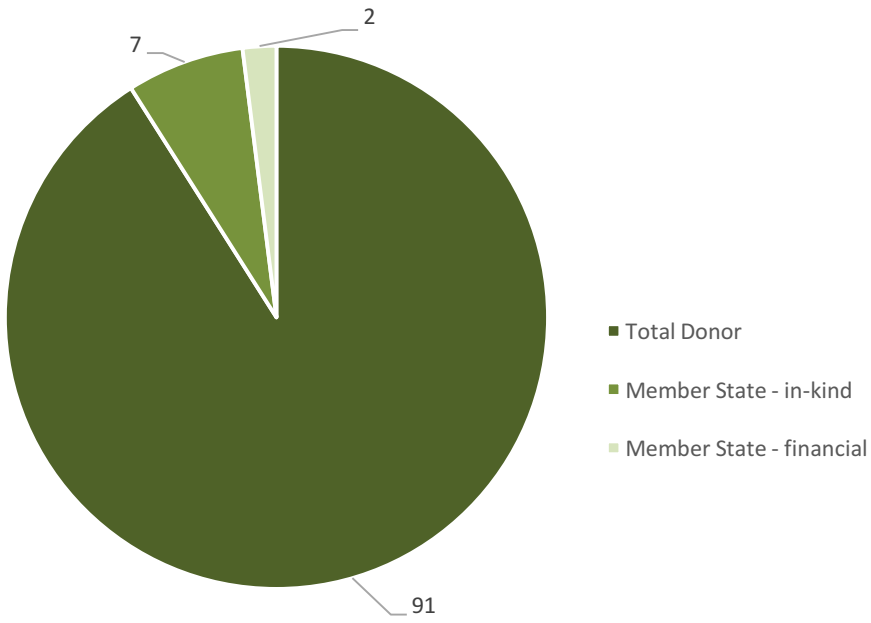
Source: (Henkel, Schüler, Carius, & Wolf 2016)

3.3 IN-KIND CONTRIBUTIONS

An often-over-looked element of financing is in-kind contribution. While sometimes difficult to track, and account for, in-kind contributions play a role in RBO support, particularly in early stages of development, when delegation costs and time are covered by member states: salaries are paid by member states, but instead of attending to regular duties, the officers are assign to RBO/technical committees, etc. A cost that is also rarely considered is that the officer in question, when engaged in RBO activities, is not undertaking their regular duties.

Exploring the financing of the NBI and its component institutions using data from 2011, Henkel, et al. (2016) identified that seven percent of financing came from member state in-kind contributions, compared to 91 % from donor funding, and two percent member state financial contributions – Figure 6.

Figure 6 In-kind and financial contributions of NBI members (percentage; 1999–2011).



Source: (Henkel, Schüler, Carius, & Wolf 2016)

3.4 INDICATORS FOR FINANCIAL SUSTAINABILITY

With the intention of assessing financial sustainability of a range of RBOs from around the world, with specific focus on Africa and international bench-marks, Henkel, et al. (2016) developed a series of indicators against which the RBOs could be measured:

- Total expenditure;
- Regular budget (adopted);
- Development funds;
- Ratio of regular budget to development funds;
- Share of staff cost in adopted regular budget;
- Country contributions:
    - Total contributions;
    - Regular budget; and
    - Commitment to regular budget.
- Coverage rate (% of committed contributions);
- In-kind contributions;
- Other sources of funding; and
- Cost sharing arrangement.

Development of realistic budgets will mostly be forward-looking, utilising budget estimations for operational and technical work. However, access to compiled financial information for projects conducted to date would provide a method of cross-checking proposed budgets. The development of operation budgets for CUVECOM could also be supported by compiled financial information for meetings conducted to date, including all in-kind contributions. This will help the parties understand the resources that will be needed for regular session meetings of the Commission; and information on salaries and remuneration packages from across other RBOs would further assist in the assessment of operational requirements.

3.5 LESSONS LEARNED FROM OTHER BASINS

While often de-emphasised in favour of technical and institutional requirements, identification of sustainable financing frameworks for RBOs from the outset is a critical element that must be addressed during the establishment of RBOs. This fact is reinforced by lessons learned from across the region and around the world, and underpinned by set of guidelines for RBO development.

Categories of lessons learned focus on the following aspects:

- Institutional establishment; and
- Financial sustainability.

While all adhering to the Dublin Principles of Integrated Water Resources Management (IWRM), and guided by the SADC Protocol on Shared Watercourses (as Revised; SADC 2000) each RBO established in the SADC region has been founded at different times, with varying mandates, priorities, and operational models. Agreements have been amended as time has passed, responding to internal lessons learned, and the changing needs of the parties. For example, ORASECOM was established with the apex body below ministerial level, which may have allowed technical and institutional advancement, has meant that the responsible ministers have requested the amendment of the agreement to elevate the upper-most decision-making platform to be at ministerial level (Ramoeli, 2017).

Several RBOs in the SADC region have potential to generate revenue through the application of levees to water uses. For example, tariffs can be applied to hydropower utilities, producing power on large rivers within shared river basins to contribute to operational and technical programmes of RBOs. The Zambezi River Authority applies such levees to support the running of the Authority. Equally, ecosystem services and tourism levees can be applied to tourism operators in the Okavango Delta, to support OKACOM; and other large users of water, such as bottling facilities, breweries, power stations, and other large water-using industrial facilities can provide revenues to support other RBOs.

The challenge for CUVECOM is identifying a probable source of sustainable income that is not so sensitive to levees being applied that the revenue generation renders the business unsustainable. This will be challenging in the Cuvelai River Basin, as due to water scarcity, water-intensive industries are largely absent, and tourism generates limited local-income in the area.

3.6 ALIGNMENT OF AVAILABLE FINANCING WITH OPERATIONAL AND PROGRAMMATIC BUDGETS

It is critical to emphasise that budgets allocated for the to-day-to day operational running of CUVECOM, including technical/institutional programmatic activities, must align with available funds. This reality

underlines the need to complete strategic and financial planning activities for CUVECOM before further progress can be made. These interlinked activities are required to ensure operational and programmatic financial sustainability of CUVECOM. They will allow the Commission to establish annual operational budgets; and, from prioritisation processes - guided by following sections and internal discussions within the Commission - develop realistic and achievable technical programmes that fall within available financial resources.

4.0 CUVECOM STAKEHOLDER CONSULTATION PROCESS

During March 2017, a series of stakeholder consultations were undertaken in Angola and Namibia, as follows:

- **Angola**
    - 2017-03-27, Hotel Tropico, Luanda, including 16 participants; and
    - 2017-03-29, Villa Okipale, Ondjiva, including 16 participants.
- **Namibia**
    - 2017-03-30, Ondangwa Country Lodge, including 44 participants.

The programme of each consultation followed a similar format, with minor variations in response to the stakeholder preferences:

- Welcome from the host agency;
- Round-table introductions;
- Introductory remarks from GIZ Transboundary Water Management in SADC;
- Project overview presentation from the consultant;
- Stakeholder presentations, introducing their mandates, the nature of their involvement in the Cuvelai River Basin, and any challenges and opportunities they foresee for the CUVECOM;
- A participatory process to determine a series of priorities for CUVECOM to consider moving forward; and
- Concluding remarks from the host agency and GIZ.

Detailed participant lists are provided in Appendix A1, listing the agencies represented, their contact details, and the gender of each participant.

The primary intention of the workshops was to allow stakeholders to establish and elaborate their roles in the basin, and put forward their contributions for consideration in future technical and institutional programmes. The processes were not guided by the consultant, and the priorities are transcribed as stated during the workshops.

4.1 PARTICIPATORY PRIORITISATION PROCESS

The stakeholder consultation prioritisation participatory process was conducted as follows:

4. Stakeholders selected priority areas – this was conducted in a range of ways:
    - **Verbal consensus** – the group discussed it amongst themselves;
    - **Card-sorting** – stakeholders wrote three priorities on three separate cards, which were then collaboratively clustered into priority areas; and
    - **Facilitated discussion** – a facilitator lead a process to select priority themes, using the discussions stakeholder presentations from the morning as a starting point.

5. The Prioritisation process elicited a range of responses from the assembled stakeholders, which were then discussed in smaller groups, guided by a set of 'framing questions':
    - Title for the theme;
    - What is needed to address this priority?
    - Who are the key stakeholders?
    - What data and information is needed to support progress in this area? and
    - Is any work being done in this area in the Cuvelai River Basin at the moment?
6. At the end of each discussion session, the groups nominated a spokesperson, who then reported back to the assembled stakeholder group.

The results of each discussion are summarised in Table 3.

Figure 7 Stakeholders selecting priority areas at the Ondjiva workshop.

4.2 STAKEHOLDER PRIORITISATION RESULTS

Table 3 presents the results of the Stakeholder Prioritisation Participatory Process.

Table 3 Stakeholder participatory process results.

Summary of Consultation of Stakeholders on Priorities for CUVECOM, Luanda, Ondjiva, and Ondangwa					
	Title	Necessary to address priority	Stakeholders	Information needed	Work being done
Group 1 Theme 1 Location: Ondjiva Date: 29 March 2017	▪ Information sharing	▪ Interact with the different beneficiaries (communities) and players in different/ various sectors on how to engage with the project	▪ Communities along the basin ▪ Min of Agriculture, Energy and Waters, Min of Environment, Hospitality industry and tourism, INAMET (Instituto Nacional de Meteorologia e Geofísica), Administrations, Ministry for Family and Advancement of Women (Ministério da Família e Promoção da Mulher), Institutions of Higher Learning, Civil Protection, IDA (Institute for Agrarian Development [Instituto de Desenvolvimento Agrário]), EDA (Agrarian Development Stations [Estações de Desenvolvimento Agrário]), Traditional Authorities	▪ Areas susceptible to catastrophes ▪ Affected populations ▪ Affected livestock ▪ Affected farm land ▪ Availability of water ▪ Infrastructures	▪ Xangongo-Ondjiva Water Supply Project ▪ Água para Todos (Water for All) Programme ▪ Development of Resilience to Climate Project (MINAMB) ▪ Angola-Namibia Integrated Resilience Project (PIRAN) – FAO ▪ Integrated Programme to Combat Hunger and Poverty – Municipal Administrations
Group 1 Theme 2 Location: Ondjiva Date: 29 March 2017	▪ Use of Water Resources	▪ Create infrastructures for the use of water resources (dams, boreholes, levees, canals) ▪ Studies and planning of water systems for the supply and management of said systems ▪ Water transfers (Cunene River and Okavango River to Cuvelai River)	▪ Institutions of higher learning ▪ Consultancy firms ▪ Farmers ▪ Beneficiary communities	▪ Target populations ▪ Livestock ▪ Soils ▪ Annual occurrences ▪ Seasonal activities	▪ None
Group 2 Theme 1 Location: Ondjiva Date: 29 March 2017	▪ Climate-Smart Seeds	▪ Study of the region's soil-climate characteristics ▪ Financial resources ▪ Technical and material means	▪ Communities within the areas concerned	▪ Soil and climate characteristics ▪ Crop varieties	▪ Crop diversification projects are under way in the Mukolongodjo area
Group 2 Theme 2 Location: Ondjiva Date: 29 March 2017	▪ Construction of Water Management Infrastructure	▪ Preliminary viability study ▪ Financial resources ▪ Technical and material means	▪ Communities within the areas concerned ▪ Ministry of Construction (Public Works)	▪ Information from the local communities ▪ Hydrological information ▪ Geographical and topographical terms of reference	▪ Construction of levees in the Luvale, Mukolongodjo and Mupa settlements (politically "communes")
Group 3 Theme 1 Location: Ondjiva Date: 29 March 2017	▪ Infrastructure for the Use of Water Resources along the Basin	▪ Identification of the areas of implementation ▪ Dialogue with local authorities and communities ▪ That there be financing ▪	▪ Governments of Angola and Namibia ▪ Population of the Cunene and Northern Namibia	▪ Number of beneficiaries ▪ Technical mapping of the water resources ▪ Risk zones	▪ None
Group 4 Theme 1 Location: Ondjiva Date: 29 March 2017	▪ Channelling of water courses	▪ Studies and projects	▪ Energy and Water, Agriculture, Environment, Municipal Administrations, civil society, INAMET (Instituto Nacional de Meteorologia e Geofísica) ▪	▪ Historical hydrological background of the area, knowledge of the water courses of each area of the basin	▪ Study and project for the redirecting or transfer of water flows
Group 4 Theme 2 Location: Ondjiva Date: 29 March 2017	▪ Early Warning System	▪ Installation of a comprehensive information service in the basin	▪ Energy and Water, Agriculture, Environment, Municipal Administrations, civil society, INAMET (Instituto Nacional de Meteorologia e Geofísica)	▪ Survey of settlements, mobilisation of communities to protect equipment, and training of equipment operators	▪ Yes, a number of early warning systems have been put in place by Development Workshop and Civil Protection at a number of settlements in the basin
Group 1 Location: Luanda Date:26 March 2017	▪ Sectoral Coordination	▪ Information sharing ▪ Coordination mechanisms ▪ GABHIC to unite government responses and liaise with Gov. Namibia.	▪ All levels of government and stakeholders from national to local, NGOs and CSOs.	▪ Meteorological information ▪ Socio-economic data ▪ Demographics	▪ NA

Table 3 (Cont'd.)

Summary of Consultation of Stakeholders on Priorities for CUVECOM, Luanda, Ondjiva, and Ondangwa

	Title	Necessary to address priority	Stakeholders	Information needed	Work being done
Group 2 Location: Luanda Date: 26 March 2017	▪ Common Framework for Development - As an Entire Basin Including Strategic Planning	▪ Involvement of Stakeholders through national workshops at all levels. ▪ Approval at Commission level ▪ Transboundary Diagnostic Analysis	▪ Public institutions ▪ CSOs ▪ NGOs ▪ Traditional leadership ▪ Research institutions	▪ Institutional data ▪ Biophysical data ▪ Socio-economic data	▪ CUVECOM dialogue to date, but limited action so far.
Group 3 Location: Luanda Date: 26 March 2017	▪ Sustainability of Projects in the Cuvelai River Basin	▪ Centralisation of data ▪ Information Sharing ▪ Training of local staff ▪ Implementation of actions that can be taken when needed ▪ Coordination	▪ Communities ▪ Local authorities/government ▪ National government ▪ CSOs ▪ Research	▪ Leadership ▪ Translation ▪ Simple message development ▪ Information on solutions applicable to commission ▪ Rural upwards, rather than downwards to rural ▪ Orgnisation of responses ▪ Coordinating body ▪ Data on water extractions, transfers to Xangongo, ▪ Readings of transfers from Cunene to Cuvelai	▪ Question and Answer: ▪ Q1. Centralisation of data? Asking because earlier in the day it was not recommended. A1. The term centralisation has negative connotations ▪ Q2.Sustainability? General or financial? A2. Multisectoral stakeholder engagement should make decisions on financial sustainability. A2. One other thing to think about would contribute to sustainability is receiving local proposals, not top-down. Grassroots approach can be very effective. A3. (UNICEF) Continuity planning is very important. ▪ Need to consider financial sustainability from the outset.
Group 3 Location: Luanda Date: 26 March 2017	▪ Financial Sustainability of CUVECOM	▪ Coordination between the governments to ensure no gaps or duplication ▪ Need to spend less to do more ▪ Institutional memory must not be lost through consultants and project-oriented mentality. ▪ Common platform to coordinate projects – through CUVECOM ▪ Adequate finances and regulated/coordinated approach ▪ Who is defining contracts? ▪ Need for coordination entity – CUVECOM? ▪ Project and programme coordination must occur through CUVECOM ▪ River Basin Management is not linear – there are multiple aspects, which all needed to be adequately financed.	▪ CUVECOM ▪ Ministry of Agriculture ▪ MINEA ▪ Ministry of Environment	▪ Project and programme requirements ▪ Institutional requirements	None
Group 1 Theme 1 Location: Ondangwa Date: 31 March 2017	▪ Water Supply	▪ Water harvesting ▪ To address the distraction of water infrastructure by flood, and the vandalism of water infrastructure by people and wild animals.	▪ MAWAF, ▪ NAM Water, ▪ Traditional Authority, ▪ Regional Council and Local Authority, ▪ Ministry of Environment and Tourism, ▪ Community-based organisation	▪ Awareness creation on water supply ▪ Training the community ▪ Information on water management ▪ Water inventory ▪ Desalination of underground water ▪ Statistics of population (people and animals) with regard accessibility to water	▪ Yes, the basin management committees and water point committees are established. ▪ Practical examples of water desalination plants are constructed at Akutsima and Amalika, Omusati region.

Table 3 (Cont'd.)

Summary of Consultation of Stakeholders on Priorities for CUVECOM, Luanda, Ondjiva, and Ondangwa					
	Title	Necessary to address priority	Stakeholders	Information needed	Work being done
Group 1 Theme 6 Location: Ondangwa Date: 31 March 2017	▪ Policy Harmonisation	▪ To ensure that the agreed policies between the two countries are implemented and monitored. ▪ The responsible ministries should spearhead the implementation of these policies.	▪ Angola Government ▪ Namibian Government ▪ CUVECOM	▪ Explore the existing laws and regulations in this regard	▪ The establishment of Water resource management Act no. 11 of 2013, 6. ▪ Water and sanitation Policy of 2008 ▪ National Sanitation Policy
Group 2 Theme 6 Location: Ondangwa Date: 31 March 2017	▪ Information Sharing and Knowledge Management	▪ Exchange programme, continuously networking platforms, documentation, publication and dissemination with a clear translation through media and language translation; and ▪ Accessibility of information and knowledge resources.	▪ CUVECOM, ▪ Basin Management Committees, ▪ NGOS, ▪ Ministry of Environment, ▪ line ministries, ▪ Traditional Authorities, ▪ Churches, and ▪ Regional Councils	▪ Documentation ▪ Articles ▪ Case studies that are verified	▪ Awareness raising campaigns; ▪ Seminars; ▪ Reports; and ▪ Strategic Plans. ▪
Group 2 Theme 2 Location: Ondangwa Date: 31 March 2017	▪ Coordination of Sustainable Development Projects and Programmes	▪ Coordination body to be established, consisting of all stakeholder groups; ▪ Finance ▪ Willingness of stakeholders through awareness raising; ▪ Monitoring and Evaluation	▪ Regional council, ▪ line ministries, ▪ traditional authorities, ▪ NGOs, ▪ Community members, ▪ churches, ▪ local authorities and ▪ roads authorities	▪ Policies and regulations, survey data, disaster risk management data, climate data, maps and GIS, institutional profiles.	▪ Establishment of basin support officers; and ▪ Disaster Risk Management Committee
Group 3 Theme 8 Location: Ondangwa Date: 31 March 2017	▪ Research	▪ Identify research topics and ensure that there are the necessary skills to carry out these research activities.	▪ Educational institutions, ▪ line ministries, ▪ local authorities, ▪ NGOs	▪ Need to review literature already in place and existing research that has been performed to date.	▪ Literature, books and pamphlets about the Cuvelai.
Group 3 Theme 3 Location: Ondangwa Date: 31 March 2017	▪ Financial Sustainability of CUVECOM	▪ Two governments under the line ministries should have budgets allocated for the sustainable financing of the commission.	▪ The Namibia Governments through the Ministry of Agriculture, Ministry of Water and Forestry, ▪ The Angolan Government through the Ministry of Water & Energy, NGOs, Parastatals and Private Entities.	▪ Need to list authentic activities and associated costs. ▪ Background information about the Cuvelai River Basin.	▪ Awareness and information sharing forums were done. ▪ Construction of earth dams were also done in certain areas. ▪ The NGOs that funded.
Group 4 Theme 1 Location: Ondangwa Date: 31 March 2017	▪ Flood Early Warning	▪ Monitoring systems; ▪ Experts in hydrology; ▪ Communication system; ▪ Cooperation between stakeholders	▪ Ministry of Agriculture, Water and Forestry; ▪ Ministry of Information and Communication Technologies; ▪ Local authorities; ▪ Traditional authorities; ▪ Ministry of Education; ▪ Regional councils	▪ Water level data; ▪ Velocity and acceleration of water; and ▪ Literature review of flood.	▪ Warning messages are communicated through radios, TV and community meetings by hydrologists.
Group 4 Theme 9 Location: Ondangwa Date: 31 March 2017	▪ Stakeholder Participation	▪ Platform; ▪ Finances; ▪ Awareness; and ▪ Identification of focal persons.	▪ Local authorities; ▪ Consistency offices; ▪ Traditional authorities; ▪ Farmers unions; ▪ Ministry of Information and Communication Technologies; ▪ Angola ▪ Ministry of Education	▪ Water use and management data; and ▪ Source of water information.	▪ Annual stakeholder forums are in place and convened; and ▪ Stakeholder consultation workshops.

Table 3 (Cont'd.)

Summary of Consultation of Stakeholders on Priorities for CUVECOM, Luanda, Ondjiva, and Ondangwa					
	Title	Necessary to address priority	Stakeholders	Information needed	Work being done
Group 5 Theme 5 Location: Ondangwa Date: 31 March 2017	▪ Disaster Risk Management	▪ Data; ▪ Committee; ▪ Technological advancement; ▪ Policy formulation; ▪ Funds.	▪ Office of the Prime Minister; ▪ Regional Council; ▪ Traditional authorities; ▪ Local authorities; ▪ Media; ▪ Namibian Defence Force; ▪ Namibian Police; and ▪ NGOs.	▪ Flood data; ▪ Drought data; ▪ Temperature; ▪ Humidity; and ▪ Population density.	▪ Flood early warning devices have been installed in streams; and ▪ Regional disaster risk management committees have been established.
Group 5 Theme 10 Location: Ondangwa Date: 31 March 2017	▪ Health Education and Awareness	▪ Data; ▪ Information materials; ▪ Funds; and ▪ Human resources.	▪ MOHSS; ▪ MIT; ▪ MOE; ▪ Regional Council; ▪ NGOs; ▪ Community Based Organisations; and ▪ Traditional authorities.	▪ Target populations; ▪ Communications networking; and ▪ Size of area to be covered.	▪ School visits.

4.3 STAKEHOLDER CONSULTATION SUMMARY

Through the above process, and presentations made by the various stakeholders during the introductory sessions, a series of common themes revealed themselves. The list below is presented alphabetically:

- Climate Smart Agriculture;
- Disaster Risk Management;
- Early Warning Systems;
- Floodwater Harvesting;
- Information Sharing and Knowledge Management;
- Stakeholder Participation;
- Technical Programme Coordination;
- Water Management Infrastructure; and
- Water Supply.

Apart from Climate Smart Agriculture and Floodwater Harvesting, these subjects were raised and discussed in all workshops. Climate Smart Agriculture was only discussed in Luanda and Ondjiva, and Floodwater Harvesting was raised in both basin-workshops (Ondjiva and Ondangwa), but it is felt that both are important subjects to cover, especially Floodwater Harvesting. As the workshops followed directly a flood event, this issue was more present than ever in peoples' minds. However, this subject would have been raised at any time, as they witness huge volumes of water during floods, then long periods of drought, wishing they had access to technologies to harness and impound these waters for utilisation later.

Figure 8 Stakeholders discussing the priority areas during the Ondangwa workshop.

4.4 PRIORITIES IDENTIFIED BY STAKEHOLDERS

The priorities identified by the stakeholders can be grouped into two thematic areas:

Institutional

- **Information Sharing and Knowledge Management** – establishing effective communication protocols and a platform for sharing and developing knowledge products;
- **Stakeholder Participation**- establishing and developing a forum for stakeholder participation and consultation within the basin; and
- **Technical Programme Coordination** – ensure that all technical programmes are coordinated through the commission, ensuring that funding allocated for technical activities is spent effectively, and that no duplication or non-strategic activities are occurring.

Technical

- **Climate Smart Agriculture** – research and implementation of cropping practices and seed varieties that are resilient to climate variations;
- **Disaster Risk Management** – management and mitigation of flood and drought risks;
- **Early Warning Systems** – development and implementation of an effective transboundary flood early warning system;
- **Floodwater Harvesting** – development of infrastructure and processes for collecting, storing and managing floodwaters for re-use later;
- **Water Management Infrastructure** – development of water management structure in the basin, including dams, levees, boreholes/well-fields, canals, etc through coordinated efforts to ensure that decisions take into consideration transboundary water resource management issues – surface and groundwater; and
- **Water Supply** – the design, development and co-management of inter-basin and transboundary water transfer schemes.

Figure 9 Stakeholders discussing the priority areas during the Luanda workshop.

5.0 INSTITUTIONAL RECOMMENDATIONS

The recommendations included in this section are a qualitative synthesis of the outcomes from the Lessons Learned from other RBOs following discussions with SADC Water Division (Section 3.5), the Priorities identified by stakeholders, and preliminary findings of the Rapid Assessment process (Report 2). They are intended to provide practical direction to CUVECOM as an institution, and guide next steps towards activation and operationalisation of CUVECOM as a RBO, whilst remaining within the financial means of the Commission.

The institutional recommendations carried forward from the stakeholder consultations and Rapid Assessment (see Report 2) are elaborated below.

5.1 CONFIGURATION OF CUVECOM

The CUVECOM Agreement (2014) presents the framework necessary to establish the constitutional structure of CUVECOM. Utilising the SADC Guidelines on Establishment of River Basin Organisations, and priorities identified during the stakeholder consultation process, it is possible propose the nature of the Secretariat, and Technical Task Teams, which will oversee and steer technical programmes.

The CUVECOM Agreement of 2014, included as Appendix A1 in this report, establishes the following key elements:

- **The purpose of the Commission** – advise the parties on equitable and reasonable utilisation, sustainable development and the efficient integrated management of the water resources of the Cuvelai watercourse. This shall be attained through the following functions:
    - Collection, evaluation and dissemination of data and information to support the implementation of the agreement;
    - Development of early warning systems against extreme events;
    - Take measures and arrangements to determine the long-term safe yield of water resources in the system;
    - Undertake joint research to support the sustainable development of the water resources, including construction, operation and maintenance of water works and infrastructure;
    - Promote, support, coordinate and harmonise management of shared water resources;
    - Advise the parties on planning, management, utilisation, development, protection and conservation of the Cuvelai watercourse;
    - Advise the parties on measure to avoid disputes and conflicts over the planning, management, utilisation, development, protection and conservation of the Cuvelai watercourse;
    - Foster awareness among basin inhabitants on the equitable and reasonable utilisation, and efficient management and sustainable development of the water resources of the Cuvelai watercourse;

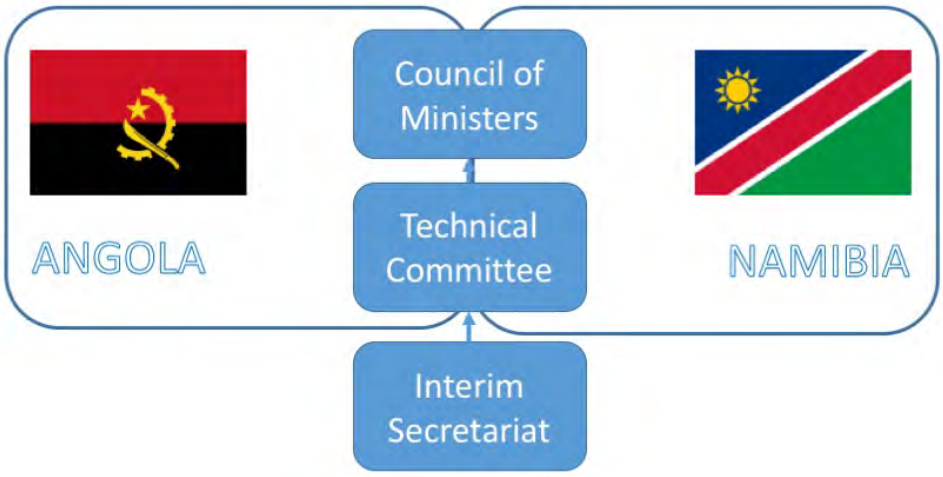
- Cooperate with SADC and other national and international institutions, as necessary;
- Promote and assist in the harmonisation of national water policies and legislative matters; and
- Undertake other functions and duties as assigned by the parties at their discretion.

- The institutional **configuration, functions, responsibilities and powers of the Commission** - Council of Ministers, Technical Committee, and Secretariat;
- The **obligations of the parties in terms of cooperation** and support, avoidance of significant harm (as specified in the SADC Protocol), exchange technical data and information, provision of notice to the other party if planning of projects, programmes or activities that may cause significant adverse effects upon the other party;
- Obligations in terms of **preservation of the headwaters** environment, management and control pollution sources and hazards to human safety, prevention and management of alien species;
- Provides preliminary introduction of how **emergency situations** should be addressed;
- Frameworks for **resolution of disputes**, including obligations for notification, mediation, appointment, powers, authority and nature of dispute resolution tribunals;
- Recognition of **existing agreements** between Angola and Namibia;
- **Financing of the Commission** activities, including official meetings, budgetary compositions, and the nature of contributions;
- **The languages of operation –** namely English and Portuguese;
- **Mechanisms for amendments**; and
- **Mechanisms for dissolution** – should such a situation arise.

Following are recommendations for the configuration of CUVECOM, based on the contents of the CUVECOM Agreement (2014), lessons learned from other river basins, and technical requirements in response to the priorities identified by stakeholders throughout the basin.

Figure 10 provides an overview of the proposed configuration of the CUVECOM, with the Council of Ministers supported by a Technical Committee, who in turn should be supported by an Interim Secretariat (as discussed in the following section).

Figure 10 CUVECOM Configuration.



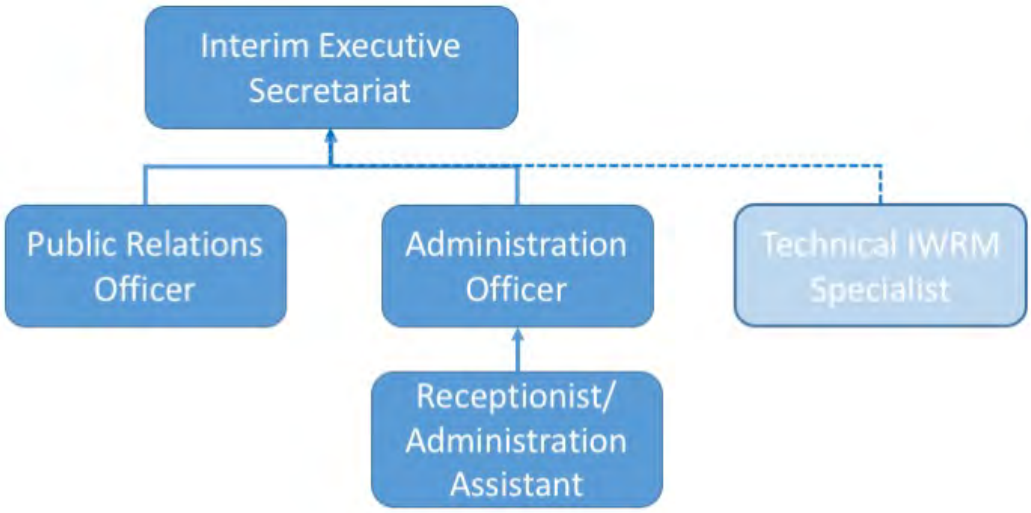
5.1.1 Interim Secretariat

To avoid establishing an unsustainable financial burden from the outset, and limiting strain on human resources within ministries in Angola and Namibia, it is proposed that an Interim Secretariat is established with a minimal staff complement; not seconding staff from Ministries:

1. Interim Executive Secretary;
2. Receptionist/administration assistant;
3. Administration officer; and
4. Public relations and communication specialist.

With a possible technical (IWRM) specialist added in future, should financial resources allow.

Figure 11 Proposed structure for the CUVECOM Interim Secretariat.



It is also recommended that establishment of the Interim Secretariat continues in Oshakati. This will continue to provide access to reliable energy and telecommunications technologies, access to air and

road links, as well as accommodation and conferencing facilities. This arrangement could be reviewed should the Interim Secretariat be replaced by a Permanent Secretariat. The Interim Secretary would need a full command of English, Portuguese, and Oshikwanyama. It must be noted that this is an **Interim Secretariat**, wherein the parties will establish the location, need, direction and requirements for a **Permanent Secretariat**.

5.1.2 Technical Task Teams (TTTs)

Based upon the priorities identified during the stakeholder consultations, it is proposed that the following technical task teams are established:

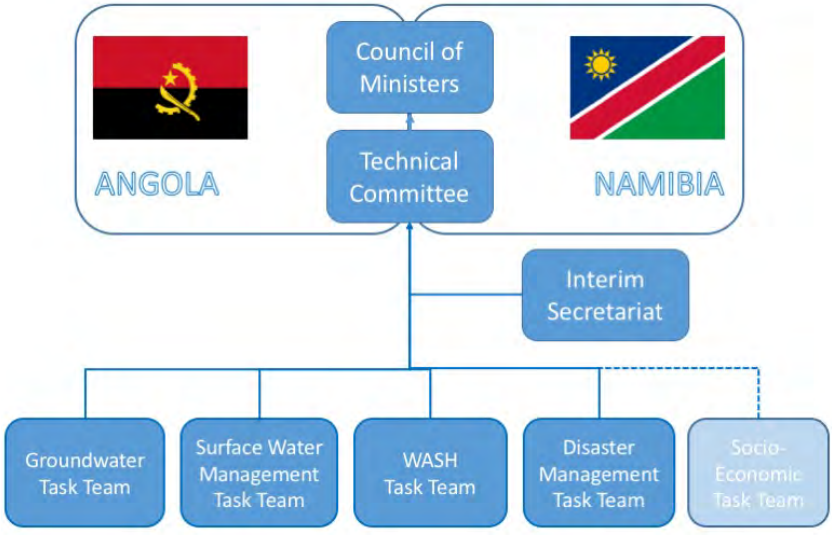
- **Groundwater Task Team** – coordinating groundwater projects and initiatives within the basin, between the parties;
- **Surface Water Management Task Team** – addressing water infrastructure, supply and management;
- **Water, Sanitation and Health (WASH) Task Team** – focusing on issues of sanitation and health; and

  Disaster Management Task Team – addressing early warning and DRM

The TTTs will comprise representatives from the Ministry of Energy and Water in Angola, and the Ministry of Agriculture, Water and Forestry in Namibia, and sub-ordinate departments, depending upon the focal area. The TTT will include a minimum of three members from each country, and a maximum of five. The TTTs will meet independently of the Technical Commission and prior to ordinary session meetings, to undertake steering and review of technical projects, and prepare feedback for the Technical Commission and Council of Ministers.

Should CUVECOM become financially sustainable, a **Socio-Economic Task Team** – addressing stakeholder coordination and socio-economic studies (including gender and poverty) – should be considered.

Figure 12 Proposed Technical Task Team Configuration.



5.1.3 Delegation representation to CUVECOM

The above proposed structure of CUVECOM will require the commitments summarised in Table 4 in terms of the Council of Ministers, Technical Committee, Interim Secretariat and Task Teams.

Table 4 CUVECOM Institutional Requirements.

	Members			Status
	Angola	Namibia	Total	
Council of Ministers	1	1	2	Council
Technical Committee	3	3	6	Committee
Interim Secretariat		1	1	Interim
Interim Secretariat Support Staff		3	3	Contract
Groundwater Task Team	2	2	4	Task Team
Surface Water Management Task Team	2	2	4	Task Team
WASH Task Team	2	2	4	
Disaster Management Task Team	2	2	4	Task Team
Socio-Economic Task Team*	*2*	*2*	*4*	*Task Team*

* To be added in future, if financial sustainability is achieved.

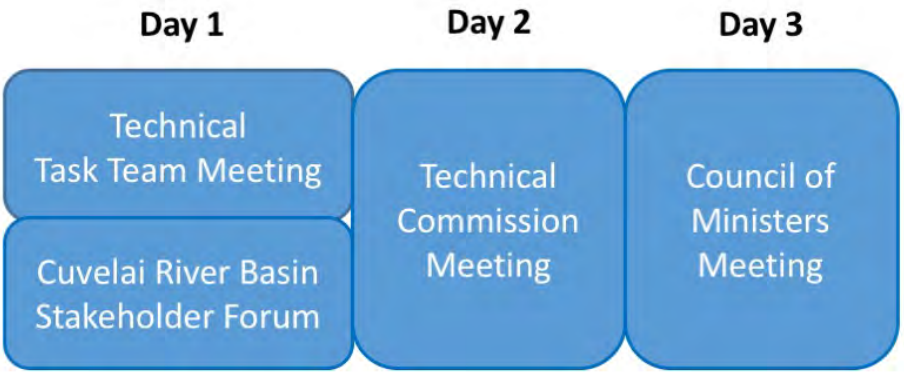
5.1.4 CUVECOM Calendar

Using other RBOs as a reference, it is proposed that CUVECOM hold two Ordinary (scheduled) sessions per year, one in Angola and one in Namibia. Extraordinary sessions would be held in response to specific issues. The schedule for the meetings would be as illustrated in

Figure 13 Proposed schedule for CUVECOM ordinary session meetings.

Should the Cuvelai River Basin Stakeholder Forum be established as proposed (see following section), perhaps as an annual event to reduce financing commitments, the stakeholder forum would be held in parallel to the Technical Task Team Meeting (Day 1) and the outcomes would be presented to the Technical Commission on Day-2 to discuss and then carry forward to the Council of Ministers on Day-3.

Figure 14 Proposed schedule for CUVECOM ordinary session meetings, with the Cuvelai River Basin Stakeholder Forum.



5.1.5 Technical Coordination and Strategy

The operational establishment of CUVECOM will support and foster technical coordination of activities in the Cuvelai River Basin, limiting duplication of effort, and providing opportunities to maximise funding through harmonised undertakings. Coordination of technical programmes and activities was identified as a pivotal role for CUVECOM during stakeholder workshops; addressing technical programme strategy and action planning to ensure that work is not duplicated, and gaps are not left. Coordination at this level also ensures that there is integration between projects, facilitating access to data and information, and ensuring that activities are harmonised and complimentary. Furthermore, such coordination would reduce the amount of 'one-country-only' activities taking place, allowing the growth of basin-wide perspectives and understanding.

The foundation for technical coordination in a transboundary river basin is a basin management strategy (Global Water Partnership, 2012), usually covering a ten to twenty-year period, identifying long-term goals and key targets, and direction for the basin, looking forward. This strategy then provides the basis for the development of a detailed three to six-year basin management plans (Global Water Partnership, 2012). Such a strategy allows for the gathering and integration of the following key data and information at a national and basin-wide scale:

- Water management policies and institutional frameworks;
- Context, types, scale and severity of water and land resources management problems;
- General and water-specific development goals and objectives;
- Level of economic development of the basin;
- Understanding and development of capacity of water managers and institutions to manage natural resource issues; and
- An understanding of the financial resources available during the period of the strategy.

(Global Water Partnership, 2012)

A successful basin management strategy should include the factors adapted from (GWP TEC, 2004):

- A clear understanding of water resources in the basin;
- Agreement on goals, objectives and targets;

- Scenarios to be discussed and developed with stakeholders;
- Coordination of priorities and actions for all stakeholders;
- A framework for decision-making and approval;
- Linkage of basin strategy to broader development goals, and national and regional development plans and processes;
- Anticipation of capacity development needs;
- Develop a full understanding of the socio-economic landscape, including aspects of gender and poverty;
- Engage stakeholders through a constructive and accepted platform or mechanism;
- Allocate human and financial resources to the planning process; and
- Establish milestones and a realistic schedule for implementation of key actions.

5.1.5.1 Monitoring and Evaluation

A critical component of technical coordination is Monitoring and Evaluation (M&E), which provides a structured and agreed framework for progressively and systematically monitoring progress of programmes, and supports transparency and accountability of any institution, especially one with multiple funding bodies. To this end, a M&E framework should be developed for CUVECOM, utilising a set of collaboratively identified and agreed indicators and targets, reflecting IWRM best practices, progress towards implementation of the SADC Regional Water Policy, and institutional objectives.

5.2 CUVELAI RIVER BASIN STAKEHOLDER FORUM

A stakeholder forum or advisory group can provide an independent, third-party perspective on water management issues (Global Water Partnership, 2012), carrying forward issues from grassroots level to the Commission, from the Commission to the communities, and provide a platform for dialogue for all levels of engagement.

Based on the active response during the stakeholder consultation process of this project, and requests during these sessions to be included in the process, it is strongly recommended that CUVECOM consider establishing a Basin-Wide Stakeholder Forum (BWSF), following models established by other river basin organisations, such as OKACOM during the '*Every River Has It's People'* project.

The Basin Wide Forum for the Cubango-Okavango River Basin was established in 2001 under the *Every River Has It's People* project, creating a platform for representation by stakeholders at the basin-level. The Country Forum Members, who represented ten communities in each of the three basin states – Angola, Botswana, and Namibia - met twice a year at a national level, and once a year at a basin-level, sharing experiences to obtain and retain a synoptic view of the basin from hydro-climatic and socio-economic perspectives. This mechanism provided the necessary information and understanding to help formulate knowledge-based community livelihoods and environmental action plans (OKACOM, 2017).

The establishment of a Cuvelai River Basin Stakeholder Forum, through which the Commission could establish and maintain dialogue with basin stakeholders, would be an extremely valuable contribution to transboundary water management in the Cuvelai River Basin. It would enable grassroots issues to be formally and effectively communicated to the Commission for integration into work plans, whilst also

providing an essential communication channel to communities, for the Commission for sharing key information on all aspects of water, land and disaster risk management.

It is recommended that the Forum would meet twice a year at a national level, and basin-wide, holding dialogue with the Commission at the end of their session, annually. The Forum should include community leaders from Sub-basin authorities in Namibia, municipal authorities in Angola, traditional leadership, regional representatives from national departments of water, NGOs, CSOs, and where relevant, private sector representation. Dialogue within the basin (national, and basin-wide) would likely be in the vernacular language, but reporting, including those to the Commission, would be in English and Portuguese.

At their first meeting, the Forum would develop and approve a Terms of Reference, to guide their process, and formalise the platform.

This forum would provide a mechanism for a wide range of stakeholders to interact with CUVECOM, through a formalised and constructive process and interaction mechanism, enabling the following key success factors for community participation in transboundary river basin management:

- Enable transparent representation of all levels of stakeholders at the basin-scale;
- Help distinguish between information, consultation, participation and empowerment;
- Gain a balance of involvement – not involving all, and not involving only a few;
- Support and foster ownership of basin action plans through community participation;
- Provide supporting coordination mechanisms for all levels of action plan implementation; and
- Provide an opportunity for capacity development in all stakeholder groups.

(Global Water Partnership, 2012)

Such a forum would require a Terms of Reference, which would include the following components:

- **Purpose** – the general purpose of the Forum;
- **Duties** – what the Forum exists to achieve;
- **Accountability** – who the Forum is accountable to, and who they report to;
- **Forum leadership** – who would chair the Forum, and the leadership, including mechanisms for election, tenure, arrangements for deputisation, etc;
- **Membership** – who the members of the Forum are, and their roles within the basin and the Forum;
- **Declaration of interests** – determination of the types of interest groups within the Forum;
- **Meeting frequency** – how frequently the Forum will meet;
- **Meeting organisation** –the process for organising
- **Reporting** – how the Forum will report on its outcomes and the process for interfacing with the Commission, and out to the wider stakeholder groups;
- **Standing agenda items** – generic agenda items to be discussed at each meeting; and

- **Regular review of ToR** – the process and frequency with which the ToR of the Forum are reviewed.

An example outline of a ToR is provided in Appendix A2.

A final critical factor that must be addressed with respect to Stakeholder Engagement is that should a Cuvelai River Basin Stakeholder Forum be established, how it will be funded. While the activities will not incur substantial costs, it must be recognised that meetings do require a venue, and honoraria for travel and accommodation for participants travelling from long distances. While budgets for these meetings could be supported by donors during initial iterations, to establish the forums and their operations, sustainable financing for this initiative will be important to ensure that it can be sustained into the future. Suggestions for financing include the following proposals as individual or co-financing options:

- National contributions from government;
- Private-sector sponsorship; and/or
- International civil society or philanthropic foundations;

Initial meetings could rely on national government contributions, but a combination of private-sector-sponsorship and international civil society foundation funding should be sought in the longer term.

5.3 SUSTAINABLE FINANCING

Based upon the need to achieve financial sustainability as early as possible in the formalisation of CUVECOM, whilst also leveraging technical assistance from key donors, and introducing revenue-based contributions as early as possible, the proposed funding model for CUVECOM should integrate the following key principles:

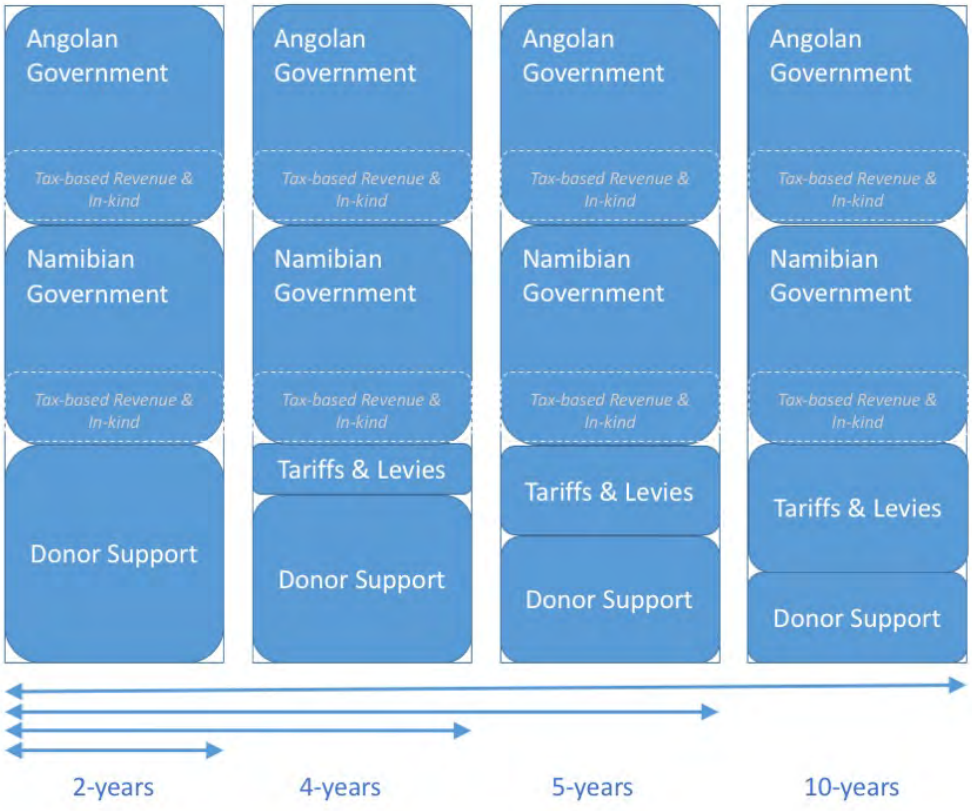
- **Government (tax-based) revenue** contributions should also be introduced from the outset, with budgets clearly communicated following strategic and financial planning stages, and responded to with confirmed commitment from member states;
- **Donor funding** should be sought for key institutional development and support early in the operationalisation of CUVECOM, phasing-down to minimal contributions where possible, or focused on specific projects. Donor should not be expected to cover operational budgetary items. These would be provided as in-kind contributions, or co-financed by member states. It must be noted that while measurable impact has always been a focus for many international cooperating partners, there is increasing focus on this aspect of donor contributions, which will need to be factored into all CUVECOM programmes if donor funding is sought; and
- **Revenue-based tariffs** should be explored from commercial sectors from the outset, no matter how small. This would include tourism levees, and payments for ecosystem services. It is recognised that at this stage, such contributions would be restricted by the limited presence of water or ecosystem service-dependent industries. Revenue-based tariffs and other innovative financing mechanisms, such as trust funds will be challenging due to this constraint.

This model is illustrated in graphical form in Figure 15, showing the consistent in-kind and tax-based revenues need from national governments, initial inputs from donors for establishment of technical

programmes, and the contributions that will be needed from more novel forms of revenue generation – tariffs and levees.

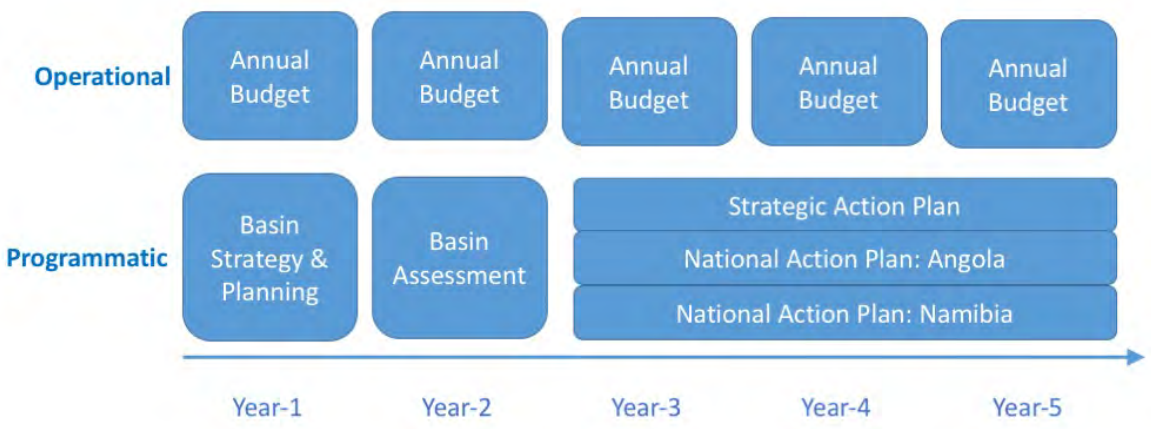
The most significant challenge facing CUVECOM is the identification of an innovative and sustainable source of tariff-based income that can contribute approximately 20 to 30 % of operational costs moving forward. As far as the consultant can establish, there are no large water-related businesses, or utilities operating in the Cuvelai River Basin that could be engaged for such payments. Furthermore, locally-based tourism in the basin is limited, with most funds remaining over-seas, or centralised in Windhoek.

Figure 15 Financial model for CUVECOM.



An example of budgeting requirements for the first five years of operation and programming for CUVECOM is illustrated in Figure 16 – not 'to proportional'. Annual requirements should be relatively consistent, with modest inflationary adjustments. The programmatic requirements should be kept modest, with the first two years focused on strategy, planning and assessment, laying the groundwork for SAP and NAP development and implementation.

Figure 16 Example five-year budget for CUVECOM.



5.3.1 Financial Planning for CUVECOM

In terms of financial planning, CUVECOM will need to establish a series of short and medium term financial plans, to frame and guide financial sustainability, moving forward.

5.3.1.1 Short-term Plans

- Document detailed operational budgetary requirements;
- Estimate technical programme budgets, based on preliminary assessments associated with the strategic basin planning;
- Utilise the preceding inputs to develop a financial plan for the Commission, with financial targets and indicators, including the various financial sustainability contributions identified above;
- Establish financial reporting protocols, based on best practices from other RBOs, and other relevant international financial institutions, to support open and transparent financial management and reporting; and
- Establish a preliminary monitoring and evaluation framework for financial sustainability.

5.3.1.2 Medium-term Plans

- Develop a detailed financial planning framework, including identification and arrangement of levy charges with various business users; and
- Based on rigorous financial management and reporting, CUVECOM should develop annual financial statements, which should be publicly available, on the Commission's website.

Example of financial strategy from OKACOM

To reduce reliance on funding from donors, OKACOM is increasing Member States' contributions to approximately USD 400,000, which in 2010 was thought to be enough to cover annual operational costs (SADC, 2010). This is also being augmented by the establishment of a Trust Fund, to attract philanthropic and other larger funding donations.

5.4 KNOWLEDGE MANAGEMENT AND INFORMATION SHARING

A key issue identified by stakeholders during consultations was sharing of information and access to documentation and information about the basin – Knowledge Management. Knowledge management is often perceived to be an Information and Communication Technologies (ICT) solution, or approach; whereas it is often only really supported by ICT (Subashini, Rita, & Vivek, 2012). Knowledge management, in its purest form, is an institutional cultural activity or paradigm within an organisation or entity. It is driven by a need to have access to knowledge and information, and requires stakeholder institutions to adjust their view of information management from **retention to sharing**.

5.4.1 Knowledge Platform

A key next step for CUVECOM will be to establish a temporary knowledge and information repository, providing public access to all key literature and technical resources, in English and Portuguese. This could be achieved through the implementation of a simple website, which could be administered through a Content Management System, supported by an integrated Document Management System. This would be an inexpensive mechanism for sharing information, but would need to be supported by a concerted effort by both delegations to source, and upload all available content. This can be converted into a formalised website, river awareness kit, or other knowledge platform later.

5.4.2 Information sharing

Knowledge management has been established a success factor for RBOs, with the effective cataloguing, organising and sharing of data, information and knowledge contributing significantly to the river basin dialogue (Hughes, et al., 2010). Once adopted as an approach or strategy, knowledge management also encompasses an approach to the preparation and dissemination of knowledge. How is knowledge captured, stored, shared and disseminated? This speaks to the need consider preparation of knowledge products that communicate key issues at all stakeholder levels. This will become an important component of information sharing, as identified by stakeholders, as it will enable the Commission to communicate key issues through a formalised, and agreed process.

Moving forward, it will be prudent to explore the establish of a Geographic Information System at the Commission, which will store all relevant spatial data. The GIS can later be supported by Decision Support Tools and Models. However, these activities would be integrated into mid-term objectives and projects, and could be developed and managed by an academic institution in the interim period.

5.4.3 Naming conventions

As the Cuvelai River Basin encompasses a large geographic area, including two countries, two former colonial languages, and numerous vernacular languages, there is a substantial degree of variation in naming of common or shared resources. As CUVECOM is developed into a full coordinating body for technical and institutional activities in the Cuvelai River Basin, it will become increasingly important to agree upon and formalise technical and institutional terms, to develop a shared understanding of the basin.

Formalised naming should be recommended for all technical and institutional projects coordinated by or associated with CUVECOM as a standard operating procedure, initiated within knowledge management and information sharing activities.

6.0 TECHNICAL RECOMMENDATIONS

The technical recommendations put forward by this consultancy project respond to the information gaps identified in the Rapid Assessment (Report 2), and the outcomes of the stakeholder process. The following sections integrate technical recommendations with institutional recommendations, the main technical focal areas are as follows:

- Monitoring infrastructure;
- Groundwater resource quantification and exploitation assessment;
- DRM – floods/drought; and
- Floodwater harvesting feasibility.

6.1 RIVER BASIN ASSESSMENT AND PLANNING

A critical first stage in the sustainable development and co-management of the Cuvelai River Basin will be the development of a detailed river basin assessment, designed to provide a comprehensive overview of the entire river basin, and a strategic basin management or action plan. The nature of the assessment will be largely determined by funding processes, since funding/donor agencies have different requirements and processes. UNDP/GEF follows the Transboundary Diagnostic Analysis (TDA) process, whereas GIZ utilises the Monograph approach. However, in general terms, this process should follow development of a basin management strategy, providing the information necessary to development and implement the Basin Management or Action Plan, and guide technical development moving forward.

A River Basin Assessment will likely include the following primary components:

- Detailed inventory of literature and data available for the Cuvelai River Basin;
- Detailed assessment of the biophysical, socio-economic, institutional and technical aspects of the basin;
- Development of detailed thematic technical programmes;
- Development of comprehensive capacity development programmes;
- Establishment a knowledge management platform to share results; and
- Provision of recommendations and strategic and national action plans for both member states.

A river basin assessment is a substantial undertaking, requiring the allocation of significant funds and human resources. Table 5 provides a series of examples of basin-wide studies across the SADC region, including the funding agency, cost and duration.

Table 5 Examples of other basin assessments.

Basin	Type of Study	Funding agency	Cost (USD)	Duration	Year
Orange-Senqu	Transboundary Diagnostic Analysis (TDA)	UNDP-GEF	38,365,500*	6 years	2015
Limpopo	Monograph	GIZ, AusAID, UKAid	1,735,000	2 year	2012
Cubango-Okavango	Transboundary Diagnostic Analysis (TDA)	USAID	12,000,000	3-years	2011

* GEF grant USD 6,300,000, remainder was country and other ICP co-financing.

Lessons learned from the development of the ORASECOM TDA process indicate that it is important that sufficient funds allocated for the execution of the project, and the project schedule be clearly established and agreed at the outset. Specifically, the timeline for the completion of the TDA, such that sufficient time is allocated for the development of the Strategic Action Plan (SAP), and National Action Plans (NAPs). This is critically important to guarantee that political support for the SAP and NAPs is established early enough, ensuring that there are no delays implementing this strategic process (ORASECOM, 2015).

This river basin assessment will include a comprehensive assessment of water resources (surface water and groundwater), beginning with a topographic analysis to evaluate existing boundary definitions, and either accept one, or proceed with the delineation of a new boundary.

6.1.1 Strategic and National Action Plans

Once the River Basin Assessment has been conducted, a River Basin Strategy should be considered, which will result in development of a Strategic Action Plan and complementary National Action Plans for both countries. These plans will formalise objectives and goals for the basin in terms of technical, institutional and capacity development for CUVECOM. These plans will be periodically reviewed to ensure compliance with monitoring and evaluation frameworks, and in terms of direction and relevance.

6.1.2 Capacity Development

A recurring theme during all stakeholder consultations was Capacity Development, for both stakeholders and technical agencies. To ensure positive developments in this priority area, capacity development will need to be integrated into basin strategy development processes, and all strategic action planning. In addition to delivering capacity development through technical programmes, the Commission should aim to utilise the Cuvelai River Basin Stakeholder Forum to implement capacity development throughout the region on key community and household level issues, such as water harvesting and water saving, sanitation and health, and environmental education.

6.2 MONITORING INFRASTRUCTURE

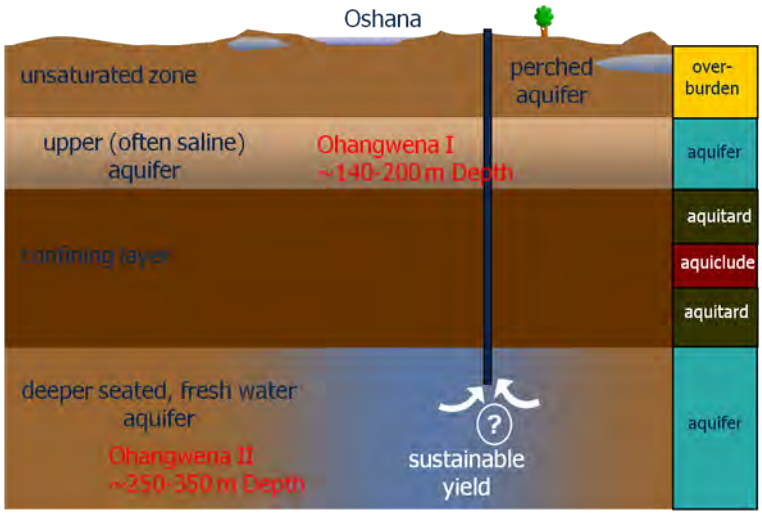
Through the stakeholder consultations and desktop research for the development of the basin profile, it became evident that a significant weakness that needs to be addressed is the lack of robust hydrological and climate monitoring infrastructure, and the management, sharing, and dissemination of data from such instruments.

To effectively co-manage the basin, the relevant management authorities need to have access to consistent time-series of hydrological (including groundwater) and climatological data. This can only be achieved through cooperative development of monitoring infrastructure and development of shared data management systems. Such data systems require formalised data and information sharing policies, agreed by all parties. These agreements must also be supported by clear and unambiguous monitoring and data management standards, to enable involved parties to effectively utilise information collected from shared monitoring infrastructure.

6.3 GROUNDWATER

Commencing in 2007, the Groundwater Management in the North of Namibia project[1] set out to utilise state of the art groundwater exploration and assessment techniques and technology to quantify the nature and extent of groundwater resources in northern Namibia – focusing specifically on the deep groundwater resources within the eastern multi-layered Ohangwena II aquifer, and in doing so, improve access to safe drinking water (BGR, 2017). While the project is due to be completed in May 2017 – Phase III of the project – preliminary findings show substantial deep groundwater resources of fresh water, with some areas requiring treatment for fluorides in places.

Figure 17 Cross-section of the multi-layered Ohangwena II aquifer.



Source: BGR 2014

Groundwater is a critical resource for the entire Cuvelai River Basin, providing the opportunity to augment water supplied by variable rainfall, surface water-based supplies, which in turn are supported by transfers from the Cunene River Basin. However, while the above-mentioned surveys and technical programmes have been conducted in Namibia, especially focusing on the quantification of deep aquifers, such as the Ohangwena II aquifer, comparable work has not been completed in Angola to complement the technical understanding gained in the south. Therefore, the overall 'picture' should be completed, so that the groundwater resources can be sustainably exploited.

One of the first technical programmes that should be considered by CUVECOM is a basin-wide geohydrological assessment, which would begin with an integration of existing groundwater knowledge and data from across the basin, followed by comprehensive groundwater studies, including aquifer

[1] Executed by the Ministry of Agriculture, Water and Forestry (MAWF) and the Federal Institute for Geosciences and Natural Resources (BGR)

delineation, identification of key recharge zones, groundwater potential, groundwater vulnerability zones, and modelling. This could be conducted as part of the river basin assessment process.

6.4 DISASTER RISK MANAGEMENT

Cycles of flood and drought have profound effects on the people, infrastructure and landscape of the Cuvelai River Basin, and Disaster Risk Management (DRM) will be a key focus for the River Basin Assessment, and strategic and national action planning moving forward.

DRM activities will need to include the following aspects:

- Preparedness;
- Management
- Mitigation; and
- Monitoring.

6.4.1 Preparedness

6.4.1.1 Early Warning

One of the most widely referenced issues discussed by stakeholders during consultations was the need for a flood early warning system, so that critical information regarding impending extreme weather events and flooding can be shared within countries and across borders, enabling local authorities and communities to prepare for the worst. It is also important that although drought operates on a different timescale to floods, the monitoring and early warning of drought conditions are considered part of early warning activities in the Cuvelai River Basin.

6.4.1.2 Planning and Capacity Development

It must be noted that preparedness is not only developing an early warning system, but also must include planning and capacity development, which will inform how early warning messages are applied, how communities respond, and the level of impact on the communities and their livelihoods.

Planning will enable communities to effectively respond, and should include, but not be limited to, the following components, as established by the UN-ISDR (2008):

- Observation capabilities – a tower, or other means of high-level viewing;
- Regular meetings to establish drills and access to first-aid, and shelter;
- Access to community radio, and preferably an AM radio, with power back-up;
- Plans to minimise environmental degradation in the communities, removal of trees and vegetation, which increase vulnerability;
- Training of all stakeholders to address gender issues;
- Sharing of skills and knowledge at household-level; and
- Education and awareness raising in schools and other community meetings.

(UN-ISDR, 2008)

A critical component of preparedness is the development and strengthening of capacity at the community-level to plan and prepare for disaster conditions (UNISDR, 2013), to minimise loss of life, damage to property and infrastructure. Hence, disaster preparedness should not only comprise early warning systems and plans, but should also be supported by a capacity development programme, to ensure that all levels of stakeholders know how to act once warnings are issued.

A final aspect that should not be ignored is the role of women in disaster risk management and response. As many households are led by women, and they feature prominently in agriculture and water supply, it will be critical to ensure that disaster risk management strategies are gender-sensitive, and women are involved in the planning and decision-making processes throughout the development and implementation of disaster risk management strategies.

6.4.2 Management

With a comprehensive DRM plan in place, CUVECOM, and it's parties, will be better placed to manage disaster events. With effective early warning and planning measures in place, local governments, civil protection groups, and communities/households will be better place to respond when warned, and ready to take action. Once early warning announcements have been made, authorities will be able to begin implementing plans, based upon the location and severity of the flood.

Efforts should be made to utilise the findings and results of the recently completed SADC Flood Atlas into the management of flood disasters. The atlas includes key information on Maximum Flood Extent (low and high likelihood), changes to this information from likely climate change scenarios, flood hazard, and populations at risk from flooding events. Figure 18 shows the four categories of flood risk information presented in the SADC Flood Atlas (SADC, 2015).

Figure 18 Four categories of flood risk information in the SADC Flood Atlas.

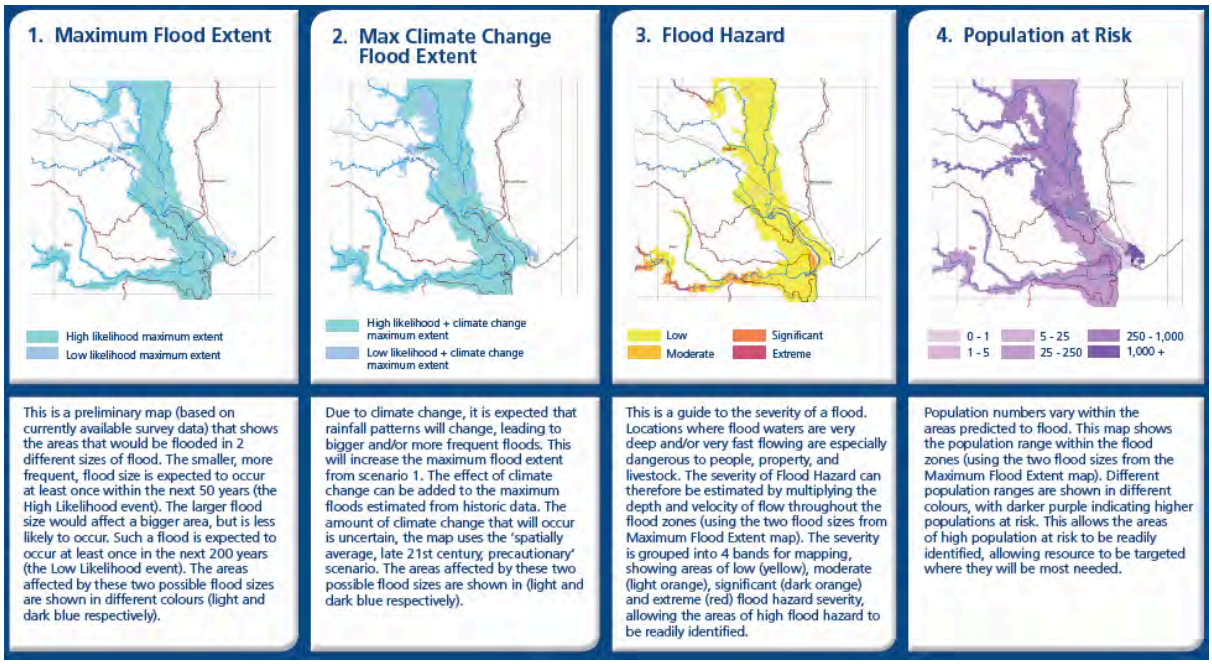
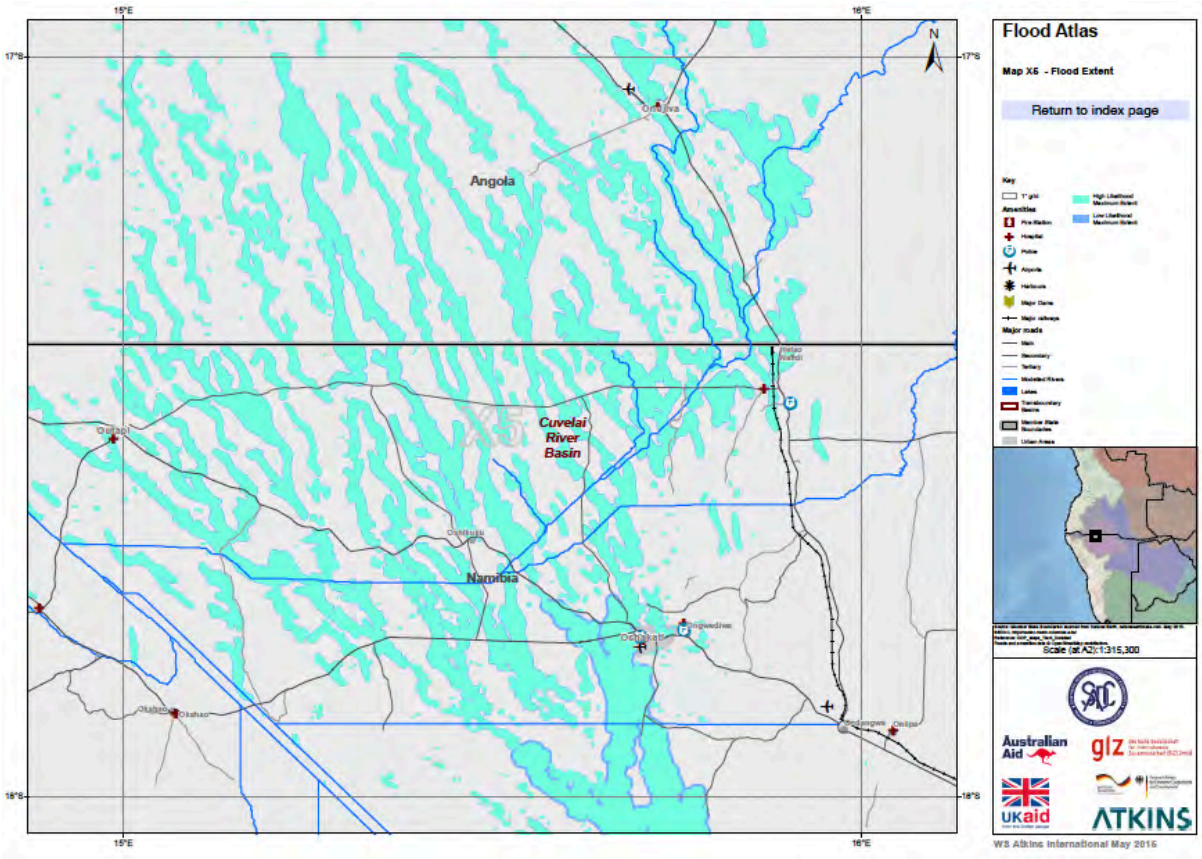


Figure 19 shows an example of the flood extent data for the iishana region of the Cuvelai River Basin, illustrating the high likelihood (1 in 50-year flood) might impact the region. These tools could prove

especially useful for development flood preparedness plans, and emergency management manuals for the basin.

The SADC Flood Atlas is evaluated in terms of methodology and applicability in the Cuvelai River Basin in Report 2: Rapid Assessment.

Figure 19 Example of flood extent for the iishana region of the Cuvelai River Basin.



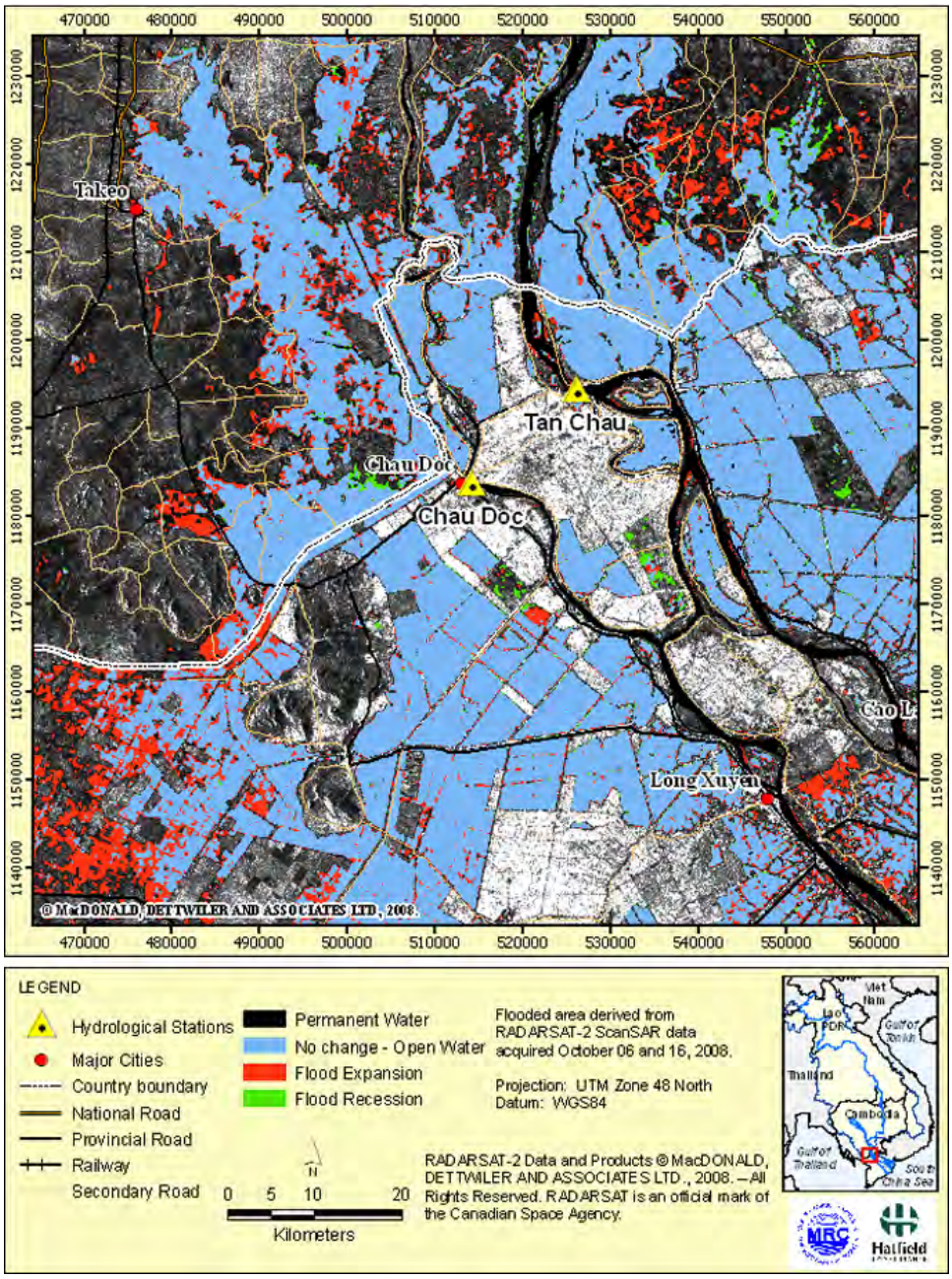
6.4.3 Mitigation

In the long-term, once a river basin assessment has been developed, the associated strategic action planning activities that follow should tackle the mitigation of flood and drought conditions; addressing how impacts can be minimised, and benefits, such as harvesting of flood waters, maximised through the development of flood protection and shelter infrastructure.

6.4.4 Monitoring

Preparedness, management and mitigation are the key steps in DRM, but developing and utilising monitoring tools, such as satellite image analysis, combined with GIS, allows authorities to closely monitor the progress of flood events. The utilisation of Synthetic Aperture Radar (SAR) remote sensing can provide powerful monitoring tools. Figure 20 shows an example of near-real-time flood monitoring in the Lower Mekong River Basin (LMRB), conducted for the Mekong River Commission (MRC). This application saw two images per week captured over the LMRB being processed, and the map products delivered to MRC within 24 hours.

Figure 20 Flood monitoring in the Lower Mekong River Basin.



6.5 PHYSICAL INFRASTRUCTURE

The River Basin Assessment will provide an understanding of the entire basin that to enable the Commission to discuss and agree on water management infrastructure needed for sustainable water management, flood defence, and drought mitigation. This can only be determined once sufficient information is available to undertake detailed modelling and analysis of topography, flows, discharges, climate variability, and water demands.

6.5.1.1 Flood and rainwater harvesting

The sustainable capture, storage and usage of flood and rainwaters must be explored in detail to understand if it can contribute to development of long-term sustainable water management strategies. Lessons learned from the CUVEWaters project provided practical groundwork for development of a full-

scale feasibility study for a regional flood and rain-water harvesting initiative, which would build upon initially successful results. Should these technologies be deemed feasible, they could be 'rolled-out' across the entire basin, providing technologies and infrastructure to support community and household-level access to water for agricultural developments (and associated economic development) and in some cases, drinking water.

6.6 GENDER AND SOCIO-ECONOMIC ASSESSMENT

Understanding the roles of women and men in water management is an important paradigm of integrated water resources management that can often be ignored. Lambrou & Piana (2006) ascert that women tend to have lower incomes and fewer opportunities than men in less-developed countries, directly impacting their ability to adapt to the effects of climate change.

Utilising statistics that reflect that over 54 percent of the agricultural labour-force in Cunene Province of Angola comprising women as an analogue for the entire basin, women make a significant contribution to agricultural productivity in the Cuvelai River Basin (UNDP, 2017). Converse to this situation, women have reduced opportunities to play an active role in decision making at all levels, from local to national. According to (Mendelsohn, Jarvis, & Robertson, 2013) the Namibian portion of the Cuvelai River Basin features considerably higher percentages of households headed by women than other parts of the country, driven mostly by men migrating to other parts of the country or other countries seeking work.

With many households headed by women across the basin, playing a significant role in economic development through agriculture, and a social role through household leadership, it could be said that women play a unique role in the basin, involved in all levels of social and economic development, but are perhaps under-valued in decision-making process – a situation that requires attention. However, these hypotheses require confirmation through scientific survey and assessment. Therefore, it will be important to understand the following key aspects of water resources management in the Cuvelai River Basin, so that gender inequalities in transboundary water resources management can be addressed at the planning stage of water management in the basin, shedding light on the true nature of the role of gender in managing water resources in the Cuvelai River Basin:

- How does decision making processes integrate the perspectives of both men and women?
- Are there differences in how effectively and completely these perspectives are incorporated?
- How can women's perspectives and participation in decision making be elevated?
- How is gender equality ensured within stakeholder consultations?
- How are the benefits from capacity development efforts shared among men and women?
- How are women affected differently during floods and droughts?
- As women are often the key stakeholder at a household level, how can women's participation in the preparation of projects be elevated?

The Rapid Assessment (Report 2) demonstrated that limited information is available on this issue, beyond household-level sampling undertaken for the Angolan portion of the Cuvelai River Basin. While this data, supported by census data, can provide indications of house-hold income and other poverty paradigms, it is still difficult to establish a full understanding of gender and water, at a basin scale. Therefore, there is a need to undertake a detailed socio-economic survey and assessment for the

Cuvelai River Basin, including the collection of gender-disaggregated water data, to enable decision-makers to develop a better understanding of gender issues and ensure they are integrated into strategies for CUVECOM related to project planning and execution. While the main role of CUVECOM with respect to gender will be to support the role of women in decision-making in water resources management at all levels, rather than addressing gender issues at household level, it will be important for the RBO to obtain a complete picture of gender and vulnerability across the basin, so that CUVECOM can better inform the parties during development of technical and institutional programmes.

The detailed socio-economic survey and assessment for the Cuvelai River Basin, should include the additional parameters, which will enable gender experts to undertake gender analyses, poverty analyses, and vulnerability analyses, with the following indicator topics:

- Water Governance;
- Safe drinking water, sanitation and hygiene;
- Decision-making and knowledge production;
- Vulnerability and risk management;
- Transboundary water resources management; and
- Water for income generation for industrial and agricultural users, including unaccounted-for labour.

The detailed sub-indicators for these indicator categories are included in Appendix A3.

7.0 SUMMARY OF RECOMMENDATIONS

Table 6 is a summary of the above recommendations, using the following aspects:

- **Value**, as a measure of the value of the activity or process to CUVECOM;
- **Feasibility** as a measure of how complex a task is, technically or institutionally;
- The **Impact** is the activity will have on the operationalisation of CUVECOM;
- **Timeframe**, or how long the activity or process would take to conceive and undertake;
- The financial **Cost** to implement the activity or process; and
- **Priority** as the perceived need or urgency for the activity or process.

All assessments in this table are qualitative and focused on their contribution towards operationalisation of CUVECOM.

Table 6 Recommendations Summary.

Category	Value	Feasibility	Impact	Timeframe	Cost	Priority
Institutional						
Establishment of CUVECOM Interim Secretariat	High	High	High	Short	Moderate	High
Cuvelai River Basin Stakeholder Forum	High	Moderate	High	Medium	Moderate	Medium
Sustainable Financing Framework	High	High	High	Short	Moderate	High
Knowledge Management & Information Sharing	High	High	High	Short	Low	High
Technical						
River Basin Assessment and Planning	Moderate	Moderate	Medium	Medium	High	Medium to Low
Monitoring Infrastructure	High	Moderate	High	Long	High	Medium
Groundwater	High	Moderate	High	Short to Medium	High	High
Disaster Risk Management	High	High	High	Short to Medium	High	High
Physical Infrastructure	High	Moderate to Low	High	Long	High	Medium
Gender and Socio-Economic Assessment	Moderate	Moderate	Medium	Medium	High	Medium

8.0 CONCLUSIONS

After contextualising the institutional requirements for a RBO, and providing initial guidance on sustainable financing, this report summarises findings of stakeholder consultations undertaken in early 2017. These findings, along with results of the Rapid Assessment (Report 2) and lessons learned from other RBOs in SADC provide guidance for the operationalisation of CUVECOM.

CUVECOM will be developed based on political support and technical necessity to improve surface water and groundwater management, monitoring, and sustainable exploitation in the Cuvelai River Basin. CUVECOM will also contribute to disaster management, monitoring and mitigation, however developments need to be aligned with available financial resources. The key issue for CUVECOM to address during operationalisation of the Commission and establishment an Interim Secretariat, is a model to ensure a sustainable financial future. Most of the funding will need to come from government investment at an operational and ongoing programmatic level, but donor support (technical and financial) will be required, at the outset and during technical and institutional programmes. Tariffs and levees should also be explored – tourism, water users, etc – but there is currently limited potential for accessing funding from such sources, mostly due to the limited water supplies.

Beyond financial sustainability, institutional programmes should concentrate on coordination of activities to reduce duplication, and maximise available funding, stakeholder forums, and sharing of information and knowledge.

Technical programmes should focus on complete quantification of the groundwater resources in the basin; cooperative hydrological and climatological monitoring; flood and rainwater harvesting and management, and flood and drought-oriented disaster management and early warning.

9.0 WORKS CITED

BGR. (2017). *Groundwater Management in the North of Namibia*. Retrieved 03 01, 2017, from BGR: http://www.bgr.bund.de/EN/Themen/Wasser/Projekte/laufend/TZ/Namibia/ceb_fb_en.html

Global Water Partnership. (2012, 01 01). *River Basin Organisations*. (G. W. Partnership, Producer, & Global Water Partnership) Retrieved 02 15, 2017, from Global Water Partnership IWRM Toolbox: http://www.gwp.org/en/ToolBox/TOOLS/Institutional-Roles/Creating-an-Organisational-Framework/River-basin-organisations/

GWP TEC. (2004). *Catalyzing Change: A handbook for developing integrated water resources management (IWRM) and water efficiency strategies.* Global Water Partnership Technical Advisory Committee. Stockholm: Global Water Partnership.

Hughes, S., Johnston, E., Bruce, G., Vogel, H., Qwist-Hoffmann, P., & Meinier, B. (2010). Orange-Senqu River Awareness Kit: Supporting Capacity Development. In A. Earle, A. Jägerskog, & J. Öjendal (Eds.), *Transboundary Water Management: Principles and Practice.* London & Washington: Earthscan.

Lambrou, Y., & Piana, G. (2006). *Gender: the missing component of the response to climate change.* Food and Agriculture Organisation of the United Nations (FAO), Gender and Population. Rome: FAO.

Mendelsohn, J., Jarvis, A., & Robertson, T. (2013). *A Profile and Atlas of the Cuvelai-Etosha Basin.* Windhoek: Raison and Gondwana Collection.

OKACOM. (2017, 01 01). *Basin Wide Forum Page*. (OKACOM, Producer, & OKACOM) Retrieved 04 07, 2017, from OKACOM: http://www.okacom.org/okacoms-work/partners-and-projects/partners/communities/basin-wide-forum

ORASECOM. (2015). *Terminal Evaluation Report for the UNDP GEF Project Development and adoption of a Strategic Action Programme for balancing water uses and sustainable natural resource management in the Orange-Senqu River transboundary basin.* ORASECOM.

Ramoeli, P. (2017, 04 13). Pers Comms. *interview with the Acting Director of SADC Infrastructure and Services Directorate, and head of the SADC Water Division.* Gaborone, Botswana: Personal communication.

SADC. (2000, 08 07). *DOCUMENTS & PUBLICATIONS Revised Protocol on Shared Watercourses (2000).* Retrieved 04 13, 2017, from Southern African Development Community: http://www.sadc.int/documents-publications/show/1975

SADC. (2010). *Guidelines for Strengthening River Basin Organisations.* Southern African Development Community. SADC.

SADC. (2010). *Guidelines for Strengthening River Basin Organisations: Funding and Financing.* SADC, Water Division. Gaborone: SADC.

SADC. (2010). *Guidelines for Strengthening River Basin Organisations: Mainstreaming Gender in RBOs in SADC.* Southern African Development Community. Gaborone: SADC.

SADC. (2014). *DC Handbook on Mainstreaming Gender in the Water Sector.* Southern African Development Community, Infrastructure and Services. Gaborone: SADC.

SADC. (2015). *Integrating SADC HYCOS into flood risk management stratgies that support regional disaster risk reduction.* Southern African Development Community, I&S. Gaborone: Southern African Development Community.

Subashini, R., Rita, S., & Vivek, M. (2012). The Role of ICTs in Knowledge Management (KM) for Organizational Effectiveness. *Global Trends in Information Systems and Software Applications*, 542-549.

UNDP. (2017). *Promoting climate-resilient development and enhanced adaptive capacity to withstand disaster risks in Angolan's Cuvelai River Basin.* UNDP Angola. Luanda: UNDP.

UN-ISDR. (2008). *Disaster Preparedness for Effective Response Guidance and Indicator Package for Implementing Priority Five of the Hyogo Framework.* United Nations secretariat of the International Strategy for Disaster Reduction (UN/ISDR). New York: United Nations.

UNISDR. (2013). *Disaster risk reduction in Africa: Status report on implementation of Africa regional strategy and hyogo framework for action.*

APPENDICES

Appendix A1

The CUVECOM Agreement

AGREEMENT

BETWEEN

THE GOVERNMENT OF THE REPUBLIC OF ANGOLA

AND

THE GOVERNMENT OF THE REPUBLIC OF NAMIBIA

ON THE
ESTABLISHMENT OF
CUVELAI WATERCOURSE COMMISSION
(CUVECOM)

PREAMBLE

The Government of the Republic of Angola represented by Ministry of Energy and Water and The Government of the Republic of Namibia represented by Ministry of Agriculture, Water and Forestry. (Jointly hereinafter referred to as the "Parties" and in the singular as a **"Party"),**

CONSIDERING the relative paucity of the water resources in the Southern African Region

RECOGNISING the importance of the mutually shared and extremely scarce water resources of the Cuvelai Watercourse;

BEARING IN MIND the principles of regional economic integration and cooperation advocated in the Treaty of the Southern African Development Community (SADC);

CONSCIOUS that collaboration between the Parties with regard to the development of water sources of common interests could significantly contribute towards the peace, security, welfare, mutual benefit and prosperity of their people;

RECALLING the modern principles and norms reflected in international and regional water law respectively embodied in the Convention on the Law of the Non-Navigational Uses of International Watercourses adopted by the United Nations General Assembly and the Revised Protocol on Shared Watercourses in the SADC Region;

COMMITTED towards the realisation of the principles of integrated water resource management, sustainable resource utilization and the preservation of the natural environment;

DESIROUS to extent and consolidate the existing tradition of good neighbourliness, friendly relations and close cooperation between the parties by promoting the coordinated and sustainable development of all the resources of the Cuvelai Watercourse;

HEREBY agree as follows:

ARTICLE 1
DEFINITIONS

In this Agreement, unless the context otherwise indicates -

"Budget" means resources, funds of the Commission available at any given time for implementation of programmes, projects and activities of the Commission as provided for by Article 16 of this Agreement;

"Commission" means the Cuvelai Watercourse Commission established in terms of Article 3 of this Agreement (hereinafter called the "Commission" or "CUVECOM");

"Council" means the Council of Ministers established in terms of Article 6 of this Agreement;

"Cuvelai Watercourse" means the system of surface and ground waters of the Cuvelai consisting by virtue of their physical relationship a unitary whole, flowing normally into a common terminus, the Etosha Pan;

"Emergency" means a situation resulting suddenly either from natural causes or from human conduct and causing or posing an imminent threat of causing serious harm to the Cuvelai Watercourse or to a Party

"Equitable and reasonable utilization (ERU)" means equitable and reasonable utilization as provided for under Article 3 (7) (a) and (b), and Article 3 (8)(a) and (b) of the SADC Protocol;

"Executive Secretary" means the Executive Secretary provided for in terms of Article 10 of this Agreement;

"Party/Parties" means the Governments mentioned in the Preamble from which this Agreement has entered into force;

"SADC" means the Southern African Development Community;

"SADC Protocol" means The Revised Protocol on Shared watercourses in the Southern African Development Community, adopted in August 2000;

"Secretariat" means the Secretariat established in terms of Article 10 of this Agreement;

"**Technical Committee**" means the Technical Committee established in terms of Article 8 of this Agreement;

"**Tribunal**" means the Tribunal of the SADC established in terms of Article 14 of the Treaty of the Southern African Development Community, adopted in 1992;

"**Significant harm**" means non-trivial harm capable of being established by objective evidence without necessarily rising to the level of being substantial.

ARTICLE 2
SCOPE OF THE AGREEMENT

This Agreement shall apply to the Cuvelai Watercourse as defined in Article 1 hereunder.

ARTICLE 3
ESTABLISHMENT OF THE CUVELAI WATERCOURSE COMMISSION

3.1 The Parties hereby establish and undertake to maintain the Cuvelai Watercourse Commission (hereinafter referred to as the "**Commission**" or "**CUVECOM**") in accordance with the provisions of this Agreement.

3.2 The Commission shall be an international watercourse organisation, with legal personality, in accordance with the legal systems of each of the Parties. The legal capacity of the Commission is limited to the powers and actions that are strictly necessary for the achievement of the objectives and functions of this Agreement.

3.3 In the absence of an agreement to the contrary, nothing in this Agreement shall affect the rights and obligations of a Party arising from other agreements in force prior to the date this Agreement comes into force for such a Party.

3.4 The headquarters of the Commission shall be determined by the Council at its first ordinary session .

ARTICLE 4
OBJECTIVE AND FUNCTIONS OF THE COMMISSION

4.1 The Commission shall serve as an advisor to the Parties on matters relating to the equitable and reasonable utilization, sustainable development and efficient management of the water resources of the Cuvelai Watercourse and shall perform

such other functions pertaining to the integrated water resources management in the Cuvelai Watercourse as the Parties may agree to assign to the Commission.

4.2 To that end the Commission shall have the following functions:

a) collect, evaluate and disseminate all data and information on the Cuvelai Watercourse as may be necessary for the implementation of this Agreement;

b) establish joint early warning systems against extreme events (floods, droughts and other disaster situations);

c) take measures and arrangements to determine the long term safe yield of the water sources in the Cuvelai Watercourse;

d) carry out jointly or separately research and investigations with regards to the development of the Cuvelai Watercourse, including any project or construction, operation and maintenance of any water works;

e) promote, support, coordinate and harmonise the management and development of the water resources of the Cuvelai Watercourse;

f) advise the Parties on the planning, management, utilization, development, protection and conservation of the Cuvelai Watercourse as well as on the role and position of the Public with regard to such activities and the possible impact thereof on social and cultural heritage matters;

g) advise the Parties on measures necessary for the avoidance of disputes and assist in the resolution of conflicts between the Parties with regard to the planning, management, utilization, development, protection and conservation of the Cuvelai Watercourse;

h) foster greater awareness among the inhabitants along the Cuvelai Watercourse of the equitable and reasonable utilization and the efficient management and sustainable development of the resources of the Cuvelai Watercourse;

i) co-operate with the institutions of SADC as well as other relevant international and national organisations where necessary;

j) promote and assist in the harmonization of national water policies and legislative measures;

k) carry out such other functions and responsibilities as the Parties may assign from time to time.

ARTICLE 5
ESTABLISHMENT OF ORGANS OF THE COMMISSION

5.1 In order for the Commission to discharge the functions entrusted to it, the following organs are hereby established:

a) The Council of Ministers;
b) The Technical Committee; and
c) The Secretariat.

5.2 other organs may be established as necessary

ARTICLE 6
COUNCIL OF MINISTERS

6.1 The Council shall comprise of at least one Minister responsible for water resources management and development from each of the Parties, and shall be the policy and decision making organ of the Commission.

6.2 The Council shall meet once annually in ordinary session on rotational basis in the territory of one Party and may meet in extraordinary session at the request of any of the Parties. The extraordinary session of the Council shall be held at a venue confirmed by the Executive Secretary of the Commission in consultation with the Chair.

6.3 The chair of the Council shall be held in turns by each Party for a period of twelve months. The first hosting country of the first ordinary session shall chair the meeting and remain chairperson until the next ordinary session.

6.4 The Chairperson, in consultation with the other Party or as directed by the Council may invite observers to observe the Council meetings whenever deemed necessary.

6.5 Decisions of the Council shall be by consensus and shall be recorded in writing.

6.6 The Council shall adopt its own rules of the procedure.

ARTICLE 7
FUNCTIONS AND POWERS OF THE COUNCIL

7.1 The functions of the Council shall be to:

a) adopt policies and decisions and provide other necessary guidance on the promotion, support and coordination of the effective management, sustainable development, reasonable and equitable utilisation of the water resources of the Cuvelai Watercourse;

b) oversee the implementation of the plans, programmes and projects of the Commission;

c) approve the budgets of the Commission;

7.2 The powers of the Council shall be to:

a) appoint an Executive Secretary of the Commission;

b) appoint the members of the Technical Committee;

c) conclude agreements with the Parties, and / or on behalf of the Parties, enter into agreements or any other arrangements wither other States, institutions or international organisations;

d) allow representatives of non-Parties or international organisations to attend its meetings as observers and determine the terms and conditions for such attendance;

e) evaluate programmes and projects with regard to the Cuvelai Watercourse and where necessary conduct or commission studies for purposes of evaluating, harmonising or co-ordinating such programmes or projects;

f) entertain, address and resolve differences or disputes arising in connection with the interpretation or implementation of this Agreement, referred to it by any of the Parties, the Technical Committee, the Secretariat or any Party and

make recommendations to the Parties with a view to arriving at an amicable settlement thereof;

g) appoint commissions of enquiry where necessary;

h) decide on the course of action to be taken in the event of non-compliance with the provisions of this Agreement; and,

i) decide on any other matter referred to it by the Technical Committee or the Secretariat.

ARTICLE 8
THE TECHNICAL COMMITTEE

8.1 The Technical Committee shall comprise of no more than three delegations from each Party and /or such number of advisors/experts as each Party may determine.

8.2 The Technical Committee shall meet once annually in ordinary session, before the ordinary session of the Council and may meet in extraordinary session at the request of the Secretariat or one of the Parties through the Secretariat.

8.3 The Technical Committee shall be chaired by the Parties on the rotational basis and the persons so chairing shall function in such capacities until the next annual ordinary session.

8.4 Decisions of the Technical Committee shall be by consensus and shall be recorded in writing.

8.5 The quorum for meetings of the Technical Committee shall be four members (two delegates from each Party).

ARTICLE 9
FUNCTIONS AND POWERS OF THE TECHNICAL COMMITTEE

9.1 The functions of the Technical Committee shall be to:

a) implement policies and decisions of the Council and such other tasks as may be assigned by Council from time to time;

d) recommend the plans, programmes and projects to be developed and implemented by the Secretariat to the Council for approval;

e) propose the appointment of the Executive Secretary to the Council and develop the terms and conditions of his or her service or employment;

f) recommend the annual budget of the Commission before the beginning of the financial year to the Council for approval;

g) recommend the annual accounts of the Commission to the Council for approval;

h) appoint independent external auditors and fix their fees and remuneration at the beginning of each financial year according to terms and conditions defined by the Council;

i) adopt staff and financial rules, and rules of procedure for the organs of the Commission according to terms and conditions defined by the Council ;

j) determine in accordance with the financial rules, the annual contribution of each Party towards the budget of the Commission according to terms and conditions defined by the Council ;

k) develop the Strategic Plan for the Cuvelai Watercourse and present it to the Council for approval;

l) develop and propose for consideration and approval by the Council, rules of application to facilitate Equitable and Reasonable Utilisation (ERU) of the Cuvelai Watercourse, including and not limited to:

i. establishing strategic hydrometric stations on the Cuvelai Watercourse to capture the relevant hydrological data;

ii. developing and establishing early warning systems against extreme events (floods, droughts and other disaster situations) and procedures to sound alarms for such events; and,

iii. instituting a monitoring mechanism for water abstractions and intra watercourse transfers;

m) formulate recommendations on matters for decision by the Council;

n) appoint the technical personnel of the Secretariat; and,

o) take action on the recommendations and reports of the Secretariat.

9.2 The powers of the Technical Committee shall be to:

a) make recommendations to the Council on the implementation by Parties of the Cuvelai Watercourse Agreement;

b) make recommendations to the Council on the harmonisation of the water laws and policies of Parties;

c) make recommendations to the Council on the definition by Parties of the role and position of the Public in respect of the planning, utilization, development, protection and conservation of the Cuvelai Watercourse and the possible impact thereof on social and cultural heritage matters;

d) establish ad hoc or standing working committees, comprising representatives from Parties as may be necessary for the implementation of this Agreement;

e) make recommendations to the Council on the standardised methodology to be adopted by Parties for collecting, processing and disseminating data and information with regard to all aspects of the Cuvelai Watercourse;

f) make recommendations to the Council with regard to contingency plans by Parties for responding to emergency situations;

g) draft rules of the procedure for organs of the Commission for approval by the Council; and,

h) assign tasks to, and supervise the Secretariat.

ARTICLE 10
THE SECRETARIAT

10.1 The Secretariat shall comprise:

a) the Executive Secretary;

b) such number and categories of technical personnel as may be approved from time to time by the Council; and,

c) such number and categories of supporting administrative personnel as may be approved from time to time by the Council.

10.2 The Executive Secretary, the technical and administrative personnel shall possess appropriate qualifications and experience.

10.3 The appointment of the Executive Secretary, technical and administrative personnel shall satisfy the requirements for equitable representation of the Parties and a fair gender balance.

10.4 The Secretariat shall be headed by the Executive Secretary who shall be appointed for period of four years and may be re-appointed for further period not longer than four years each.

10.5 The Executive Secretary shall:

a) appoint the supporting administrative personnel of the Secretariat in accordance with the procedures and the terms and conditions of service determined by the Council;

b) prepare and submit the annual budget to the Technical Committee for its consideration and recommendations to the Council;

c) prepare and submit a Strategic Plan to the Technical Committee for its consideration and recommendation to the Council;

d) prepare and submit annually to the independent external auditors appointed by the Technical Committee the books and accounts of the Commission;

e) prepare the ordinary and extraordinary meetings of the Council and the Technical Committee;

f) report annually to the Technical Committee on its activities as well as the programmes and projects planned, initiated or executed;

g) be responsible for the effective and efficient functioning of the Secretariat as administrative head; and,

h) perform all such other functions as the Council or the Technical Committee may from time to time assign.

10.6 The Secretariat shall:

a) be responsible for the day-today administration of the Commission;

b) provide technical and administrative services to the Council under the Technical Committee's supervision;

c) facilitate the development of a Strategic Plan, annual work programme, plans, studies, assessments and other documents required for the implementation of this Agreement for the approval of the Technical Committee;

d) collect, obtain, collate and evaluate data and information with regard to all relevant aspects of the Cuvelai Watercourse as well as disseminate all such data and information to the Parties;

e) institute research and training programmes aimed at the sustainable utilization, protection and management of the Cuvelai Watercourse;

f) advise Parties on the planning, utilization, development, protection and conservation, of the Cuvelai Watercourse as well as the role and position of the Public with regard to such activities and the possible impact thereof on social and cultural heritage matters;

g) advise the Council and the Technical Committee on the listing and the effects of substances, the introduction of which into the Cuvelai Watercourse shall be prohibited, limited, investigated or monitored by Parties, and provide guidelines for their mitigation;

h) on the request of one of the Parties and subject to the approval of the Council, plan and implement development programmes or projects with regard to the Cuvelai Watercourse;

i) develop and distribute programmes and materials aimed at fostering greater awareness among the inhabitants of the Cuvelai Watercourse on the equitable and reasonable utilization of the Cuvelai Watercourse;

j) co-operate with the institutions of SADC and others as necessary and provide such data and information as may be reasonably required and be requested by such institutions;

k) obtain financial and technical support for the implementation of programmes, plans and projects necessary for the achievement of the objective of this Agreement in accordance with the guidelines and directives provided by the Council from time to time;

l) implement the decisions of the Council and of the Technical Committee;

m) make recommendations to the Technical Committee on the harmonisation of the national water policies and laws of the Parties; and,

n) perform all such other functions as the Council or the Technical Committee may from time to time assign.

o) the Secretariat shall be the depositary of all records and decisions of the Commission.

ARTICLE 11
OBLIGATIONS OF THE PARTIES

11.1 The Parties shall give their full co-operation and support (including technical, administrative and financial) to the implementation of this Agreement and the Commission established hereunder.

11.2 The Parties shall, in their respective territories, utilise the resources of the Cuvelai Watercourse in an equitable and reasonable manner with a view to attaining optimal and sustainable utilisation thereof, and benefits therefrom, consistent with adequate protection of the Cuvelai Watercourse. The term "equitable and reasonable" shall be interpreted in line with the SADC Protocol.

11.3 The Parties shall, in utilising the resources of the Cuvelai Watercourse in their territories, take all appropriate measures to prevent the causing of significant harm

to other Party. The term "significant harm" shall be interpreted in line with the SADC Protocol.

11.4 The Parties shall exchange available information and data regarding the hydrological, hydrogeological, water quality, meteorological and environmental condition of the Cuvelai Watercourse.

11.5 A Party planning any project, programme or activity with regard to the Cuvelai Watercourse which may have a significant adverse effect upon the other Party, or which may adversely affect such Cuvelai Watercourse, shall forthwith notify the Commission and provide all available data and information with regard thereto.

11.6 Unless otherwise agreed, a Party notified as contemplated in Sub-article 11.5 of this Agreement, shall communicate its reply to the notifying Party within six months.

11.7 In the event that the implementation or execution of any planned measures is of the utmost urgency in order to save life, or to protect public health and safety, or other equally important interests as a result of an emergency situation, the Party planning the measures may immediately proceed with implementation or execution; provided that in such event a formal declaration of the urgency of the measures shall be communicated to Commission.

11.8 If so requested by an affected Party or technical experts or consultants appointed by the Commission, a Party shall provide the other Party, as well as the technical experts and consultants, with data and information that are available or obtainable on any planned project, programme or activity which may have a significant adverse effect upon the affected Party.

11.9 For the purposes of this Article, information in respect of a planned project, programme, or activity which may have a significant adverse effect upon another Party, or which may adversely affect the Cuvelai Watercourse, shall include the findings of an environmental impact assessment addressing the effects on the ecosystems of the watercourse as well as the social, cultural, economic and natural environment.

11.10 If a Party has reasonable grounds to believe that the other Party is planning a project, programme or activity which may have a significant adverse effect upon it, such Party may request the other Party planning the project, programmes or activity to comply forthwith with the provisions of Sub-article 11.5. The request shall be accompanied by a documented explanation setting forth its grounds.

11.11 The Parties shall employ their best efforts to collect and, where appropriate, to process data and information with regard to the Cuvelai Watercourse, in a manner which facilitates its utilisation by the other Parties, technical experts or consultants who may be appointed by the Commission. The Parties shall make every effort to employ a standardised form for collecting, processing and disseminating data and information, as appropriate.

11.12 The Parties shall individually and jointly take all measures that are necessary to protect and preserve the Cuvelai Watercourse from its sources and headwaters to its common terminus.

11.13 The Parties shall individually and jointly prevent, reduce and control pollution of the Cuvelai Watercourse that may cause significant harm to the Parties, including harm to the environment, or to human health or safety, or to the ecosystem of the Cuvelai Watercourse.

11.14 The Parties shall take all measures necessary to prevent the introduction of species, alien or new, into the Cuvelai Watercourse that may have a detrimental effect to the ecosystem of the watercourse.

11.15 If the Parties agree to co-operate in the planning of a project, programme or activity with regard to the use of the Cuvelai Watercourse, either jointly or by way of a continuous exchange of available data and information, and communicate timeously their respective evaluations and findings on the data and information, any specific periods of notification and reply with regard to the projects, programmes or activities shall only apply to the extent agreed to by the Parties.

ARTICLE 12
EMERGENCY SITUATIONS

12.1 For the purposes hereof, "**emergency**" means a situation resulting suddenly either from natural causes or from human conduct and causing or posing an imminent threat of causing serious harm to the Cuvelai Watercourse or to a Party or Parties and requires immediate action or attention of a Party or the Parties.

12.2 A Party shall, without delay and by the most expeditious means available, notify and promptly supply all the necessary information to the other Parties as well as the Secretariat of any emergency originating within its territory or known by it or effecting it (irrespective of the origin).

12.3 A Party within whose territory an emergency originates shall, in co-operation with potentially affected Parties and, where appropriate, the Secretariat, immediately take all practicable measures necessitated by the circumstances to prevent, mitigate and eliminate harmful effects of the emergency.

12.4 The Parties shall individually and/or jointly develop contingency plans for responding to emergencies in co-operation, where appropriate, with the Secretariat and competent institutions and international organisations.

ARTICLE 13
SETTLEMENT OF DISPUTES

13.1 Any dispute concerning the interpretation or implementation of this Agreement shall be settled amicably through consultation and negotiations between the Parties.

13.2 A Party that considers there to be a dispute has an obligation to notify the other Party that it is declaring a dispute.

13.3 Where a dispute has not been settled within one year from the date upon which consultations were requested, the Parties shall refer the matter for mediation.

13.4 The Mediator shall be appointed by agreement between the Parties within three months after the said year had elapsed.

13.5 If no agreement can be reached between the Parties about the appointment of the Mediator, a Tribunal will be appointed

13.6 The Tribunal shall comprise three members, namely

a) One person appointed by each one of the Parties plus one other person, jointly nominated by the two appointed members, to chair the Tribunal.

b) Should any one of the Parties fail to appoint a person to the Tribunal within three months, the other Party may request the President of the SADC Tribunal to appoint a person within two months of receiving the request, on behalf of the Party who failed to appoint a person.

c) If the two persons appointed to the Tribunal fail to nominate a third person, and after a period of not more than one month has elapsed since their

appointment, the Parties will jointly request the President of the SADC Tribunal to appoint a third person within two months of receiving the request.

13.7 The members of the Tribunal shall decide about the rules of procedure to be followed by the Tribunal.

13.8 The decision(s) of the Tribunal, both on procedures and substance, shall be taken by a majority vote of its members.

13.9 If the Parties do not agree on the subject matter of a dispute, the Tribunal shall determine the subject matter.

13.10 The Tribunal may, at the request of any one of the Parties, recommend interim measures of protection.

13.11 The Tribunal shall render its decision(s) in accordance with the provisions of this Agreement, and the interpretation of International and Regional Water Law.

13.12 The decision(s) of the Mediator or the Tribunal shall be submitted in writing to the Parties and shall be signed by the Mediator or all the members of the Tribunal, as the case may be.

13.13 The decision(s) of the Mediator or the Tribunal, as the case may be, shall be final and binding upon the Parties.

13.14 The Mediator or the Tribunal, as the case may be, shall determine the distribution of the costs of the arbitration between the Parties. The Parties shall bear the cost on the Mediator or the Tribunal on equal basis.

ARTICLE 14
EXISTING SHARED WATERCOURSE AGREEMENTS

The existing Agreements between Angola and Namibia on water related matters will remain in force as far as they are not in conflict with this Agreement.

ARTICLE 15
FINANCIAL ARRANGEMENTS

15.1 Each Party shall in respect of all meetings of the Commission be responsible for all costs incurred in connection with the attendance and participation of its delegation and of any person included in its delegation as an adviser.

15.2 The budget of the Commission shall be drawn from annual cash contributions by Parties; donations, grants and loans from bilateral and multilateral organizations; funds raised internally; and other sources of funding agreed to by the Council.

15.3 The contributions of the Parties to the ordinary budget of the Commission shall be determined by the Council.

15.4 Unless specified by the Council, contributions by the Parties to projects implemented by the Commission could either be in cash or in kind. In kind contributions include: staff time, experts, training facilities, services, office accommodation and equipment or any other contributions as may be agreed by Council from time to time.

ARTICLE 16
ASSETS

16.1 Property, both movable and immovable, acquired by or on behalf of the Commission, wherever their location, shall constitute the assets of the Commission.

16.2 Property acquired by any of the Parties, under the auspices of the Commission, shall belong to the Party concerned, but shall be accessible to the Commission and the Parties on an equitable basis.

ARTICLE 17
LANGUAGE

The working language of the Commission shall be English and Portuguese.

ARTICLE 18
SIGNATURE

This Agreement shall be signed by duly authorised representative of the Parties.

ARTICLE 19
RATIFICATION

This Agreement shall be ratified by the Parties in accordance with their respective constitutional procedures.

ARTICLE 20
ENTRY INTO FORCE

This Agreement shall enter into force thirty (30) after the date on which the last Party has notified the other Party through the diplomatic channel of its compliance with the constitutional requirements necessary for the implementation thereof.

ARTICLE 21
AMENDMENTS

This Agreement may be amended by mutual agreement between the Parties and the modifications shall become effective on the date of the exchange of the appropriate diplomatic instruments.

ARTICLE 22
MISCELLANEOUS

In case of doubts and omissions in the interpretation and implementation of this Agreement, the Parties will refer to the revised SADC Protocol on Shared Watercourses of 2000, as well as the rules of the UN Convention on the Law of Non-Navigational Uses of International Watercourses of 1997.

ARTICLE 23
DISSOLUTION

23.1 The Council may decide by a resolution supported by the two Parties to dissolve CUVECOM or any of its organs and determine the terms and conditions for dealing with its liabilities and the disposal of its assets.

23.2 Notification of a proposal to dissolve CUVECOM shall be given by the Party wishing to make such a proposal at least six (6) months prior to submitting it to the Council. The Council shall not decide on such proposal until a period of at least twelve (12) months has elapsed after the proposal has been submitted to it.

ARTICLE 24
DEPOSITARY

24.1 The original of this Agreement and all instruments of ratification and accession shall be deposited with the Secretariat, who shall transmit certified copies to all the Parties.

24.2 The Secretariat shall register this Agreement with the Executive Secretary of SADC Secretariat.

IN WITNESS HEREOF the undersigned representatives, being duly authorized by their respective Governments, have signed and sealed this Agreement in four original texts, two text in the English language and two text in the Portuguese language, all texts being equally authentic.

DONE at WINDHOEK **on this** 16th **day of** SEPTEMBER **2014**

.....
FOR THE REPUBLIC OF ANGOLA

.....
FOR THE REPUBLIC OF NAMIBIA

Appendix A2

Example Terms of Reference for the Cuvelai River Basin Stakeholder Forum

A3.0 STAKEHOLDER FORUM TERMS OF REFERENCE

PURPOSE: The general purpose of the Stakeholder Forum is to ensure that…..

DUTIES: The Stakeholder Forum exists to:

-

The forum will also oversee the operation of a number of specialist groups and their role will include:

-

ACCOUNTABILITY: The Stakeholder Forum is accountable to

LEADERSHIP: The forum has an elected Chair and Vice Chair to provide leadership to the forum. The Chair and Vice Chair will be elected by the forum members, through a vote, on a bi-annual basis.

MEMBERSHIP: The following will comprise membership of the Stakeholder Forum:

-

Each member organisation will be invited to send a representative, who will articulate the views of their stakeholder community. Representation will be reviewed every 2 years. Deputies can attend though they must be suitably briefed and the XXX notified in advance.

INVITED TO ATTEND: In addition to the members of the Stakeholder Forum, it may be appropriate to invite subject matted experts to provide advice, support and information.

DECLARATION OF INTERESTS: Everyone in attendance at the Stakeholder Forum must declare any actual or potential conflicts of interest; these shall be recorded in the minutes. Anyone with a relevant or material interest in a matter under consideration must be excluded from the discussion; this shall also be recorded in the minutes.

MEETING FREQUENCY: Meetings shall be held

MEETING ORGANISATION:

- Meetings of the Stakeholder Forum shall be set before the start of the financial year;
- Meeting administration and secretariat support will be provided by the
- The draft agenda shall be compiled by the meeting administrator and the Chairman in advance of the meeting;
- All final papers/reports must be submitted to the meeting administrator 7 days in advance of the meeting;
- The agenda and supporting papers shall be forwarded to each member of the Stakeholder Forum and planned attendees or invitees 7 days in advance of the meeting;

- The meeting administrator will prepare an attendance register for each meeting and ensure that the attendance/non-attendance of all individuals is correctly recorded at each meeting.

REPORTING:

-

STANDING AGENDA ITEMS:

Welcome remarks
Introductions
Election of a chair
Identification of rapporteur
Review of minutes from previous meeting
Review of Agenda
Technical Reports
Resolutions
Closing
Identification of the next meeting date
Identification of the next meeting host

REVIEW OF TERMS OF REFERENCE:

Every year, the Stakeholder Forum will conduct a review of its purpose and effectiveness, including compliance with its Terms of Reference, and propose any adjustments which may be required.

Appendix A3

Indicators for Gender Disaggregated Water Data Collection

Indicator	Sub-indicator
1. Water governance	
1.a	Number of Male/Female (M/F) paid staff in public water governance agencies, disaggregated by job category/level and decision-making capacity (and salary if available), at: national level; county/province/state level; town/village level (sample)
1.b	Number of M/F in paid and unpaid positions in local water governance formally structured entities (water users associations, etc.) at town/village level (sample); disaggregated by nature of relationship to the entity (e.g. "member", "board", "executive", "leadership", decision-making group, etc.) and types of tasks
1.c	Intensity of M/F in (sample/representative) meetings of public entity bodies sampled at national, sub-national, and local levels, including outcomes such as: ratio of contributions in decision-making meetings by women and men; percentage of decisions adopted from women's contributions in meetings
1.d	M/F perceptions of gender discrimination (or equality) regarding women's participation in decision-making entities
1.e	Number of M/F staff responsible for water issues (disaggregated by job level) in gender ministry/lead agency
1.f	Number of M/F staff responsible for gender issues (disaggregated by job level) in lead and other relevant agencies for the water sector
1.g.	Designated ministerial responsibility for gender in relation to water policies; the extent to which gender-specific agencies are included in water sector decision-making
1.h.	Presence and nature of gender sensitive training within responsible ministries/lead agencies. Participation of M/F staff
1.i.	The extent to which gender outcomes and gender-sensitive accountability indicators are included in Monitoring and Evaluation (M&E)/impact statements/benefits analyses of national-level Water, Sanitation and Hygiene (WASH)-sector projects (project proposals and/or outcomes assessments). Sample projects
1.j.	The presence and nature of gender-specific objectives and commitments (or gender strategy) in national and sector-level water policies.
1.k.	The nature and extent of gender-disaggregated data related to water and sanitation collected by responsible public entities at national and local levels (in relation to the totality of social indicators on water and sanitation collected).
2. Safe drinking water, sanitation and hygiene	
2.a	Percentage of households without water on premises, by sex of main person responsible for collecting drinking water and by type of household (using rural/urban sample)
2.b	Unpaid time spent by individual household members in supplying water, making it safe for use, and managing it (M/F informants)
2.c	M/F perceptions of the adequacy of current water supply/availability in both quality and quantity in the household2.d Percent households with access to "improved" sanitation facility, by household structure and by nature of "improved" facility
2.e	Intra-household M/F use of /access to improved sanitation facilities
2.f	M/F prioritisation of gaining access to improved sanitation facilities; willingness to allocate household budgets for such access
2.g	M/F perception of the safety of sanitation facilities that are located outside the house; identified particular safety concerns
3. Decision-making and knowledge production	
3.a	M/F participation in past decade of two major global international water meetings (and nationally significant comparable meetings): World Water week (Stockholm); World Water Forum (World Water Council); (could be topic specific or region specific)

3.b	M/F inclusion on nationally and internationally convened scientific panels and advisory boards
3.c	Gender audit of World Health Organisation/United Nations Children's Fund (WHO/UNICEF) Joint Monitoring Programme (JMP). (could be topic specific or region specific)
3.d	M/F perceptions of/knowledge of current total household use of water, by category of use and by primary use
3.e	Household member primarily responsible for managing the household water: M/F perceptions of the nature of their household decision-making process of water priorities and use M/F perceptions of the primary decision-maker on water issues within the household (if any) M/F perceptions of how intra-household conflicts related to water (if any) are resolved
3.f	M/F expressed priorities for water use within households
3.g	M/F perceptions of household gender equality in water decisions
4. Transboundary water resources management	
4.a	Number of M/F staff on transboundary water commissions (sample for pilot countries), disaggregated by job category/level and decision-making capacity (and salary, if available)
4.b	The extent to which gender outcomes and gender sensitive accountability indicators are included in M&E/impact statements/benefits analysis of transboundary agreement/ activities
4.c	The presence and nature of gender-specific objectives and commitments (or gender strategy) in transboundary agreements
4.d	Intensity of M/F participation in (sample/representative) meetings of transboundary meetings, including outcomes such as: ratio of contributions in decision-making meetings by women and men; percentage of decisions adopted from women's contributions in meetings
5. Water for income generation for industrial and agricultural uses, including unaccounted–for labour	
5.a	% irrigated farms in region under survey; % irrigated farms managed by/owned by M/F
5.b	Average size of irrigated farms run by/owned by women/men
5.c	Gendered division of labour related to irrigated farming: gender-specific tasks related to irrigated crops, by nature of tasks; gender differentiated daily time-use of household members involved in irrigated farming work
5.d	Decision-makers and participants in household-based decision-making process regarding irrigation (M/F informants/perception); decisions regarding allocation of time and financial resources; crops to be irrigated
5.e	Decision-makers and participants in community-based decision-making process (if any) regarding irrigation (M/F informants/perceptions); decisions regarding allocation of time and financial resources; crops to be irrigated
5.f	M/F perceptions of gender discrimination (or equality) regarding women's participation in decision-making in relation to irrigation
5.g	M/F access to support services for irrigation; participation in technical training; M/F access to bank loans/credit; and incentives for the development of irrigated agriculture
5.h	M/F membership in and intensity of participation in community-based irrigation communities
5.i	% of directly water-related industries managed by/owned by M/F
5.j	% M/F employees in water-related industries
5.k	Presence of women's cooperatives in water-related industries