



**NEPAD Networks of Centre of Excellence in Water Sciences PHASE II**

**A C E W A T E R 2 P r o j e c t**

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**WATER and COOPERATION within the ZAMBEZI River Basin**

**(WACOZA)**

**WATER GOVERNANCE, COOPERATION  
AND INFORMATION SYSTEMS**

**Inception Report**

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**NEPAD Networks of Centre of Excellence in Water Sciences  
PHASE II  
ACE WATER 2 Project 2016-2019**

**Water and COoperation within the ZAmbezi River Basin  
(WACOZA)**

**WATER GOVERNANCE, COOPERATION AND INFORMATION  
SYSTEMS  
Inception Report**

**Report Prepared for:**

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# 1. INTRODUCTION

The Water and Cooperation within the Zambezi River Basin (WACOZA) initiative terms of reference are defined within the project: “The African Networks of Centres of Excellence on Water Sciences PHASE II (ACE WATER 2)” that aims at fostering sustainable capacity development at scientific, technical and institutional level in the water sector. The project supports twenty (20) AU-NEPAD African Network of Centres of Excellence (CoEs) in Water Sciences and Technology organised in three regional networks, in conducting high-end scientific research on water and related sectors in order to provide effective scientific and educational support to governments. The project is implemented in partnership between UNESCO, in charge of the human capacity development component, and the JRC that coordinates the scientific component and leads this project.

In the framework of the project scientific component, the SANWATCE (Southern Africa Network of WATER Centers of Excellence) identified the Zambezi River Basin as a case study area because it is highly representative of Southern Africa River Basins in terms of water management (quality and quantity), agriculture-food security and energy issues. The transboundary Zambezi River Basin (ZRB), the fourth widest one in Africa (after the Nile, Niger and Congo) poses many challenges from a perspective of Water-Energy-Food-Ecosystem (WEFE) nexus issues, including among others: hydropower, reservoir multipurpose optimisation and release management, rain-fed and irrigated agriculture development, impact of land use and agricultural practices (including livestock and fisheries), role of ecosystem services (natural parks, wetlands), pressures on resources due to population increase and climate variability/change and extreme events risks (drought and flooding).

## 1.1. Project Background and Context

The current ACEWATER2 Terms of Reference addresses WEFE nexus interdependences and evaluates sustainable bridging-gap solutions, based on state-of-the-art reviews and scientific analysis. A set of activities, with contributions from and supported by the ZAMCOM Water Information System (ZAMWIS) and leading to its further improvement, will be further developed for implementation in regional scientific institutions and countries. This system will provide a scientific baseline, as well as scenarios and tools for decision making regarding water, energy and agricultural management within the river basin.

In particular, this Terms of Reference describes the work to be implemented in the field of WATER GOVERNANCE, COOPERATION AND INFORMATION SYSTEMS (Ref. Ares(2017)5290626 - 30/10/2017, associated with Document Ref. Ares(2017)5654185 - 20/11/2017) in order to develop a manual of guidelines on best practices in water governance at river basin level, focusing on water permits and accountability.

The current specific actions are to be implemented collaboratively, taking into account scientific competencies in the current work package, belonging a specific Centre of Excellence, the others members of SANWATCE working in the same (scientific) field and the JRC, in achieving effective cooperation with key regional stakeholders.

## 1.2. Goal and Scope of the Study

The work package goal is to enhance cooperation and governance in water resources management in the Zambezi River Basin at a basin level by consolidating information and data and analysing these and other factors that support the enhancement of basin-wide governance and cooperation. Potential flashpoint issues will be flagged for attention and matters of mutual agreement highlighted and celebrated.

The project will seek to identify agreed intervention measures and negotiation approaches to resolve disagreements and disputes; as well as what common country management and control instruments would be appropriate and effective in enhancing governance, cooperation, control and oversight within the river basin to yield the desired benefits for all from concept to practice at national and basin scales.

### 1.3. Objective of the Report

Briefly, the objective of this report is to:

- detail the conceptual framework and table of contents of the manual on guidelines,
- indicate data availability,
- identify issues, challenges and possible solutions,
- describe overall planning of the work to be implemented.

## 2. METHODOLOGY

This work package will report on river basin scale water governance characterisation of the Zambezi River Basin, based on literature reviews and available data sources. The deliverables will be:

- a Manual on best practices in water governance at river basin level, focusing on water uses, accountability, stakeholders' involvement and participations, including case studies; and,
- Capacity Building material for tailored training events.

All work will be undertaken in close and effective cooperation with the Joint Research Centre, in charge of the overall coordination of the work package on Water Governance, Cooperation and Information Systems.

The project approach, methodology and planning is described in this Inception Report which details the work package scope, objectives, scientific activities and overall work plan. Activities will be focused at the Zambezi River Basin scale, in order to provide spatially continuous coverages over the entire basin, integrated by regional WEFE relevant case studies, according to ZAMCOM priorities.

Scientific research outcomes will contribute to scientific capacity building activities to be delivered as workshops along the duration of the project. Training will engage AU NEPAD SANWATCE, AMCOW, ZAMCOM and other African Basin authority experts and related national authorities under the boundaries of the ACEWATER2 project budget. Within this framework, material will be developed for trainings, as well as participation in ACEWATER2 workshops, to be organized by the EC-JRC.

All the project outcomes, both in terms of scientific reports, capacity building and training materials will be delivered to ZAMCOM as support of the SANWATCE, in the framework of the ACEWATER2 project. Synergies and cross-cooperation with ongoing research programs and projects will be pursued, also from the JRC within the WEFE Nexus initiative.

The work is foreseen to be only desk-based for a total of 19 working days, organised in two phases as follow:

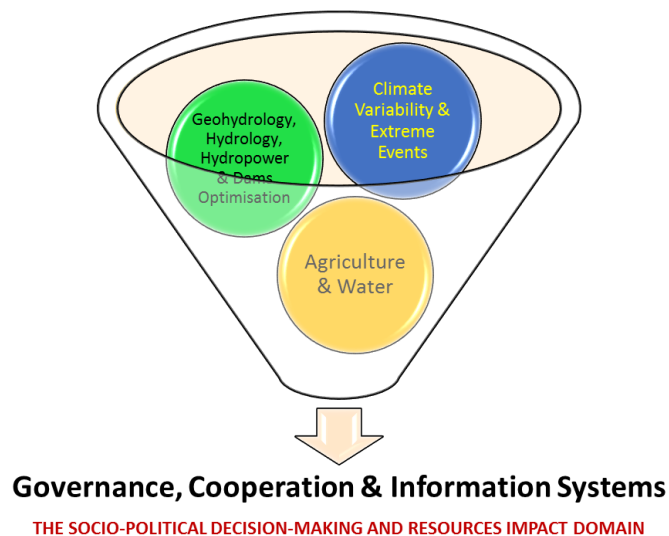
1. **Inception phase** (due 1 month after the contract signature, work load: 4 working days): this is to review the documentation related to the ZRB scientific component,

including data issues, and plan and organise the following phase (Milestone: WG.M0); and,

2. **Study phase** (total work load: 15 days): this phase is to develop and produce the Manual and related presentation (due 30 November 2018, Milestone WG.M1).

## 2.1. Conceptual Framework

This work package is a synthesis one having linkages with all other work packages in the project whose outputs, upon consolidation, will provide the objective scientific basis for overall governance, cooperation and engagements among stakeholders and role-players within the Zambezi River basin (Figure 1). For example, potential flashpoint water resource management issues among or between the basin states will be scientifically and objectively analysed and findings tabled as the basis for independently facilitated negotiations and to support joint consensus decision-making.



The envisaged outcome from the work-package will be to:

- enhance governance and cooperation,
- enable meaningful engagement and decision-making; and,
- provide a neutral and objective foundation for meaningful outcomes using scientifically validated information.

These will be the value-add proposition of this work package. Furthermore, the work package from an overall project perspective, will not attempt to provide “stand-alone” outcomes and interventions. The work will be undertaken in a manner that seeks to ensure alignment and linkages with current ZAMCOM initiatives and activities, particularly ZAMWIS, seeking to



enhance the overall and collective impacts of all interventions. It is for this reason that engagements with **key ZAMCOM role-players and stakeholders will be preferred and required.**

The envisaged stakeholder engagement approach, including SANWATCE partners where necessary, is as follows:

- face-to-face meeting with the ZAMCOM collective grouping to understand the collective expectations;
- separate one-on-one engagements (not necessarily face-to-face, although this is preferable; but rather skype or video-conference if facilities exist) with key individuals representing each basin state for country perspectives and expectations; and,
- feedback sessions individually and collectively at the conclusion of the project. In all likelihood, the collective feedback session will be presented at the 2018 ACEWater Annual Meeting with ZAMCOM representatives in attendance.

The initial proposed draft and indicative Table of Contents for the manual is as follows:

## 1. Introduction

### 1.1 Background and Context

### 1.2 Purpose of Manual

### 1.3 User Guide / Manual Roadmap

## 2. Literature Review

### 2.1 Zambezi Basin

### 2.2 Riparian States

### 2.3 Other Relevant Comparative Basin Studies

## 3. Situational Assessment

### 3.1 Role-Players

### 3.2 Hydrological Assessments and Analyses

### 3.3 Geo-Political Landscape and Issues

### 3.4 **Policy and Legislative Frameworks and Provisions**

### 3.5 Institutional Structures (basin-, geo-political-, national-, regional, local-)

#### 3.5.1 Formal

#### 3.5.2 Informal

### 3.6 Climatic, Cultural, Socio-Economic and Socio-Political Impacts

## 4. Critical Success Factors and Fatal Flaws

#### 4.1 Risks, Concerns and Issues

#### 4.2 Current and Past Lessons Learned

#### 4.3 Recommendations (1. Proposed MER Framework and Indicators; 2. Development Scenarios and Implications; 3. Technological Support Systems– EO/techno-comms, etc)

#### 5. Conclusions and Way Forward

ANNEXURE 1 – Training/Capacity Building Materials (**How to** ... communicate, engage, facilitate and mediate; **Support and enabling systems** (what and when!) ....

ANNEXURE 2 – Institutional Recommendations (at different scales)

ANNEXURE 3 – Communications and Outreach (including information from other work-packages)

ANNEXURE 3 – Implementation Programme (prioritisation and timing of implementation interventions)

## 2.2. Approach and Workflow

Following the project inception phase and upon acceptance of this Inception Report, the work is planned to be undertaken in 3 stages of 5d each. Tasks and activities in each stage include the following:

- Task 1 - **information gathering**; literature and information review; gap analysis (5d);
- Task 2 - **stakeholder consultation** – perspectives and expectations; formulation of recommendations based on best practice and customised interventions. Preferably, these consultations will include SANWATCE partners in the process of developing their respective project work-packages (5d);
- Task 3 - **validation of recommendations**; compilation of manual and information directory and repository (5d).

It is anticipated that project work will formally commence in February 2018, subject to confirmation by the client through acceptance and finalisation of this Inception Report.

## 2.3. Limitations of the Study

The study will be undertaken at a desk-top level. Although the project design and methodologies have been adapted to suit this level of investigation, it also sought to maximise the benefit and value of the project processes and activities. Notwithstanding this, this section describes other potential project risks, concerns and issues as detailed below.

### 2.3.1. Data Availability

Following the initial preliminary investigations and at a cursory level, data availability does not appear to be a major limiting factor nor a risk at this stage of the project. However, the status of data and information and their synergies and relevance will only emerge in the course of the review process.

### 2.3.2. Other Issues, Challenges and Possible Solutions

Apart from the budget and time management constraints of the project, the only other envisaged significant issue that would have a project scope, time and cost implication is Task 2. Its impact will only manifest during implementation and the potential severity will be determined at the outset of Task 2, the formulation and validation of recommendations.

As a critical work component to ensure the outputs of the work package are meaningful, the potential consequences and implications will be tabled with SANWATCE and the EC-JRC for a decision on a way forward. Notwithstanding this, measures will be put in place to mitigate this risk through the ZAMCOM channels via SANWATCE. The impact should this risk manifest is that the work package outputs (albeit at a desktop-level,) risks producing a purely theoretical manual with limited value for relevant application and uptake by ZAMCOM and its various role-players.

### 3. WORK PROGRAMME AND DELIVERABLES

Preliminary work commenced following the ACEWATER2 Annual Meeting of 2016 where the project was conceptualised. In the course of developing the terms of reference for the WACOZA project, greater clarity emerged regarding the project structure, its work packages and the allocation of work among the centres of excellence.

Subsequently, at the ACEWATER2 Annual Meeting held from 14-17 November 2017 in Nairobi, Kenya, the technical and scientific details on implementation of this work package was presented. This included synergies, data access and sharing with the other work packages, in order to avoid overlaps and in pursuing effective and productive cooperation within the project team. This has led to the confirmation of the configuration and implementation of this work package.

Accordingly, the project milestones are as follow:

- **WG.M0 Inception Report** - to be submitted one (1) month after contract signature, which was concluded on 27 November 2017. The approval of this Inception Report will allow the payment of 1.800 Euro, corresponding to 4 days of work.
- **WG.M1 Manual and related presentation** – will be due by 30 November 2018. The approval of the final Manual on guidelines and presentation, will allow the payment of 6.750 Euro, corresponding to 15 days of work.

There will be a report every month to the JRC on project progress, problems encountered and other relevant matters. The deliverables will be sent to César Carmona Moreno, [cesar.carmonamoreno@ec.europa.eu](mailto:cesar.carmonamoreno@ec.europa.eu) and copied to the SANWATCE secretariat.

**Table 1. Summary of project activities, deliverables and anticipated delivery target dates**

No.	ACTIVITY	OUTPUT	TARGET DATE
1	Inception Phase	Inception Report	15 December 2017
2	Task 1 - information gathering; literature and information review; gap analysis	(i) Literature and Report Inventory (ii) Manual Chapters 1-3	31 March 2018
3	Task 2 - stakeholder perspectives and expectations; formulation of recommendations based on	Manual Chapters 3-4	30 June 2018

	best practice and customised interventions		
4	Task 3 - validation of recommendations; compilation of manual and information directory and repository and	Completed Manual (draft and final) and presentation	30 September 2018
5	Project Close-Out	Final submissions and contract closure	30 November 2018

In accordance with the project milestones and the tasks shown in Table 1, the project deliverables are the following:

- WG.1.1 Manual on best practices in water governance at river basin level, focusing on water uses, accountability, stakeholders involvement and participations, including case studies; and,
- WG.1.2 Capacity Building material in the form of an MS-Powerpoint presentation.

## 4. PROJECT ASSUMPTIONS

This section summarises some of the key project considerations and assumptions, as follows:

- a. **Level of Detail** – the project will be undertaken at a desk-top level. All deviations and exceptions will be agreed with client before any work is commenced at the more detailed level, following an assessment of the impact on project scope, time and cost;
- b. **Internal and External output reviews (versions 0, 1 and final)** – the client will undertake all project internal reviews. Any external reviews will be at the discretion of the client;
- c. **Contractual Matters** – have been concluded on 27 November 2017 and forms the basis for this project work package;
- d. **Budget, Finances and Invoicing** – will be in accordance and are as detailed in the contract of 27 November 2017;
- e. **Deliverables and Sign-Off** – are described in Section 3 of this report; and,
- f. **Project Close-Out** – also described in Section 3 of this report and as per the contractual conditions.

## 5. CONCLUSION

ZAMCOM have recognised the benefits of cooperation and this is articulated in the preamble to the ZAMCOM Agreement where it is stated that, as the transboundary nations linked by the Zambezi River Basin they are **“Conscious of the advantages of regional cooperation with regard to the utilisation and development of [the] common water resources and the significant contribution which such cooperation could make towards the peace and prosperity of the Southern African region.”**

Furthermore, there is a body of good work that has established the benefits of cooperation as an enabler. Such benefits are multi-fold, documented and include the following:

- **“Peace dividends”** – resulting from a continuing and expanding open dialogue, problem solving and conflict-avoidance/resolution processes facilitated by ZAMCOM’s institutional arrangements
- **Poverty reduction** – through catalysing investments in improved, coordinated and sustainable water resources management and development – including the benefits of coordinated operation of new and existing water infrastructure
- **Increased regional economic benefits** through economies of scale from transboundary cooperation
- Regional approaches enabling **optimal planning and development of water-related infrastructure** to increase regional benefits and reduce costs
- Development and agreement of **basin-wide joint investment programmes** moving beyond unilateral or bilateral approaches with more limited benefits
- Enabling **co-ownership of infrastructure** with shared benefits and costs
- **Jointly addressing external threats** to the region – such as the negative impacts of climate change
- Increased **energy security** through jointly investing in hydropower production
- Increased **food security** through increased agricultural production from new irrigation
- Increased **employment opportunities** resulting from all types of investments in developing and managing the river basin
- Increased resilience supporting economic growth through **reduced exposure to floods and droughts**, and through investments in adaptation to climate change
- New and existing **water supplies secured** for domestic and industrial demands
- **Environmental flows** agreed and ensured in the Zambezi delta and other environmental hot spots
- **Tourism and mining** contribution to development jointly supported and increased
- **Fisheries production** enhanced through improved joint management and catalytic investments

There are water governance and diplomacy envisaged outcomes for the Zambezi Basin which will include:

- ***Tools and models*** on participatory approaches on water governance
- ***Institutional networking*** on water governance, including management of data repositories
- ***Focus topics/questions*** (Africa-relevant):
  - Identify barriers and opportunities offered by different water governance practices in Africa
  - Gather information on African participatory experiences
  - Evaluating framework for impact of methodologies and tools used

Finally, in reflecting on the above ZAMCOM statements, the initial cursory investigations indicate a good and solid foundation upon which this work package will seek to build. Its purpose will be to add value to current and future water governance and cooperation initiatives and activities throughout the Zambezi River basin, ideally at all the basin scales.