

# ***Strengthening the Community of Practice working on the integration of water-related ecological infrastructure and built infrastructure in South Africa's Water Management Areas***

Joanne Douwes, Margaret McKenzie, Ian Preston, Nomzamo Mncube  
Urban Earth

Report to  
the Water Research Commission  
As part of the Ecological Infrastructure for Water Security Project

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Water Research Commission  
Bloukrans Building, Lynnwood Bridge Office Park  
4 Daventry Street  
Lynnwood Manor  
PRETORIA

[hendrickm@wrc.org.za](mailto:hendrickm@wrc.org.za) or download from [www.wrc.org.za](http://www.wrc.org.za)

This is the final report of project 'Strengthening the community of practice working on the integration of water-related ecological infrastructure and built infrastructure in South Africa's Water Management Areas' (WRC project no. C2023/2024-01558).

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# Executive Summary

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## Catchment Management Agencies in the context of water resources management

The National Water Act (No. 36 of 1998) provides for the establishment and modification of institutions to assist the National Department of Water and Sanitation (DWS) in fulfilling its core mandate. Since the National Water Act was promulgated, Catchment Management Agencies (CMAs) have been part of the intended institutional landscape and are aimed at decentralising integrated water resource management. Currently, South Africa is divided into six Water Management Areas, with six corresponding CMAs. CMAs play a critical role in facilitating sustainable and equitable access to water for all, which includes coordinating the activities of water users and water management institutions within Water Management Areas. CMAs are therefore critical role-players in the institutional landscape of water resources management in South Africa.

## Project background

The Ecological Infrastructure for Water Security (EI4WS) Project is an ongoing project that is being implemented by the Development Bank of South Africa (DBSA) and executed by the South African National Biodiversity Institute (SANBI). It has the long-term goal of integrating biodiversity and ecosystem services into planning, finance, and development in the water sector to improve water security. A critical component of the EI4WS project is to strengthen the institutional capacity and operational governance of Catchment Management Agencies.

The current research project **“Strengthening the community of practice working on the integration of water-related ecological infrastructure and built infrastructure in South Africa’s Water Management Areas”** acknowledges the many challenges facing the CMAs and aims to develop recommendations for a sustainable community of practice that can facilitate capacity-building and learning within and across the CMAs. This investment in CMA institutions is seen as critical in supporting the effective management of water resources and the longer-term protection and management of ecological infrastructure.

There are four deliverables for the project. The **Situational Assessment Report** used interviews and desktop research to unpack learning priorities for the CMAs, learning mechanisms to address these priorities and considerations for a future Community of Practice for the CMAs. Following the Situational Assessment, **two stakeholder learning events** were convened to build on and refine the outcomes of the Situational Assessment Report (**Learning Event One**) and test what a future Community of Practice could look like (**Learning Event Two**). The current **Recommendations Report** consolidates the research and outputs associated with each of the deliverables and informs recommendations to the WRC on how to advance the establishment of a Community of Practice for the CMAs.

## Priority learning areas for the CMAs

The Situational Assessment highlighted a number of challenges facing the CMAs. Through the course of the project, these were further prioritised and refined to focus on the following:

- *Governance*: Learning priorities ranged from CMA establishment challenges (e.g. clarifying the roles and responsibilities of the Board and Executive; and facilitating staff transfers from DWS to CMAs) to improved knowledge/information management (e.g. the need to update the CMA 'starter pack'), building strategic partnerships for implementation and developing Catchment Management Strategies.
- *Revenue collection*: Capacity building is needed across a number of areas including tariff setting and billing for water services, how to apply the waste discharge charge and how to calculate the Public Interest Subsidy. A priority for the future Community of Practice is to share learnings around the data systems and processes needed to validate and monitor water use. Options for decentralising water user payments and improving water metering and enforcement are also learning priorities.
- *Alternative sources of funding*: In the context of a declining revenue base, exploring alternative sources of funding and the processes and systems that need to be in place to facilitate funding applications and the receipt of funding, are a priority for CMAs.
- *Stakeholder engagement*: A focus for many CMAs is how to develop a stakeholder database and engagement strategy to strengthen relationships with stakeholders and partners in the landscape. Another priority is to continue discussions around how to develop a Catchment Management Strategy that is based on community-level engagement and includes the protection and management of ecological infrastructure.
- *Water resource management and ecological infrastructure*: Key learning areas include monitoring and enforcement, particularly in relation to water quality and illegal activities such as pollution and dumping.
- *Data systems*: It is critical that CMAs strengthen data systems for allocating water and tracking water use to inform more accurate tariff setting and billing.

There is significant internal expertise within the CMAs to contribute to learning on these priorities but external inputs are also needed, depending on the learning topic.

## Conceptualising the Community of Practice

*The need for a Community of Practice*: There was agreement across participants that a learning-focused community of practice is needed for the CMAs. Such learning is critical in helping CMAs to be optimally effective in managing water resources, protecting biodiversity and improving livelihood opportunities in their landscapes.

*Prioritising the roles and functions of a Community of Practice*: In its early phases, the role of the Community of Practice will be focused on facilitating practitioner and partner networking, building foundational knowledge, facilitating focused learning exchanges and building a knowledge repository. The functions of the Community of Practice should extend to include a focus on building a 'shared services' model across the CMAs and using the Community of Practice to strengthen the 'common voice' of CMAs around specific policy and legislative issues.

*Initial participants*: Through discussion at the learning events, participants agreed that the Community of Practice should be focused on learning *between the CMAs*. However, they

emphasised that an important focus of the Community of Practice should be to develop CMA capacities around stakeholder engagement, strengthening Catchment Management Forums and partnering for implementation. This would help strengthen stakeholder engagement and existing catchment-based communities of practice.

*Initial convening of the Community of Practice:* There was broad support for the Water Research Commission to be the initial convener of the Community of Practice. The WRC expressed willingness to play this convening/secretariat role but emphasised that CMA leadership would be needed to oversee this work and decide what the Community of Practice should focus on. It was proposed that, in the absence of a CMA CEO Forum (which may still be convened once all the CMAs are operational), an interim 'reference group' is established for this purpose. The willingness of the WRC to take on this role is significant in that it will allow the Community of Practice to be established and sustained in its initial years. This 'anchor' role, which is often lacking in such initiatives, is foundational to the current and future success of the Community of Practice.

*Initial resourcing of the Community of Practice:* CMAs will fund their own participation in Community of Practice events and will take on the responsibility and costs associated with hosting Community of Practice events on a rotational basis. Once the Community of Practice is operational, the WRC secretariat role will likely be expanded to include elements of fund-raising for Community of Practice activities and learning exchanges.

*Alignment with other communities of practice:* There is a need to track progress related to the re-establishment of the CMA CEO Forum to assess what role (if any) this platform would play in the longer-term story of the CoP. Other opportunities exist to work with DWS on a knowledge repository website and to partner with organisations such as the Association of Water and Sanitation Institutions in South Africa to expand learning.

*Design and operational considerations* - Community of Practice learning events should focus on a combination of policy, sharing CMA experiences (including deeper dive case studies where needed) and networking opportunities. The intention is for the Community of Practice to be structured as a combination of online and in-person events, with learning exchanges facilitated that include field visits wherever possible. Careful consideration also needs to be given to event logistics such as the distribution of invitations, time allocated for learning sessions, and venue accessibility when planning Community of Practice events.

## **A proposed work programme**

A suggested work programme and phasing of priority activities and roles/functions of the Community of Practice is included at the end of the Report. The work programme is proposed in phases, with the assumption that a review will be undertaken at the end of Phase 2 (approximately 3 years after launch), which will inform the way forward for Phase 3 of the 5-year period of the WRC's potential convening role for the Community of Practice. Phase 1 will focus on establishing the basic functions of the Community of Practice, initiating learning around priority areas, establishing the cadence of the Community of Practice convening and agreeing on a collective vision for the Community of Practice. Phase 2 will focus on progressing the functions of the Community of Practice to include additional learning exchanges (e.g. focused on the youth), advancing the shared services and common voice functions of the Community of Practice, exploring additional funding to support Community of Practice activities and the work of the CMAs

and establishing regular monitoring and evaluation of the Community of Practice to reflect on progress against the original vision and objectives.

The mid-term review should focus on: what has worked and what hasn't worked in the Community of Practice; the roles that need to be performed and resourced to ensure that the Community of Practice functions effectively; costs associated with implementing the Community of Practice; and longer-term options for the future 'home' of the Community of Practice. This assessment should help inform the work programme for Phase 3.

Immediate next steps include the need for the WRC to seek internal support to move forward with the Community of Practice and appoint a coordinator. There is also a need to facilitate interim conversations to maintain CMA interest and project momentum around the future Community of Practice.

## List of Acronyms

Acronym	Definition
AWSISA	Association of Water and Sanitation Institutions of South Africa
BOCMA	Breede-Olifants Catchment Management Agency
CBO	Community-Based Organisation
CEO	Chief Executive Officer
CMA	Catchment Management Agency
CMF	Catchment Management Forum
CMS	Catchment Management Strategy
COGTA	Department of Cooperative Governance and Traditional Affairs
CoP	Community of Practice
DBSA	Development Bank of South Africa
DFFE	Department of Forestry, Fisheries and Environment
DWS	Department of Water and Sanitation
EI4WS	Ecological Infrastructure for Water Security
GIS	Geographic Information System
IAP	Invasive Alien Plant
ICT	Information and Communications Technology
IUCMA	Inkomati-Usuthu Catchment Management Agency
LOCMA	Limpopo-Olifants Catchment Management Agency
MTCMA	Mzimvubu-Tsitsikamma Catchment Management Agency
NGO	Non-Governmental Organisation
PUCMA	Pongola-uMzimkulu Catchment Management Agency
RQO	Resource Quality Objective
SAAFWUA	South African Association for Water User Associations
SALGA	South African Local Governments Association
SANBI	South African National Biodiversity Institute
SEA	Sustainable Energy Africa
UEIP	uMngeni Ecological Infrastructure Partnership
VCF	Value Creation Framework
VOCMA	Vaal-Orange Catchment Management Agency
WARMS	Water Authorities Management System
WMA	Water Management Area
WRC	Water Research Commission

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<b>Reference Group</b>	<b>Affiliation</b>
Roderick Juba	Water Research Commission
John Dini	Water Research Commission
Lesego Gaegane	Water Research Commission
Jen Zungu	South African National Biodiversity Institute
Pearl Gola	South African National Biodiversity Institute
Nomalungelo Ndlovu	South African National Biodiversity Institute
Sinegugu Zukulu	South African National Biodiversity Institute
Mercy Mosupye	Department of Water and Sanitation
Nkosi Mkhize	Department of Water and Sanitation
Sharon Pollard	Freshwater Research Centre
Jessica Cockburn	Rhodes University
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# 1 Project Background

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This chapter first provides context to the role of Catchment Management Agencies (CMAs) in water resources management in South Africa. It then locates the current research project within the broader Ecological Infrastructure Project, a component of which is aimed at building the institutional capacity of the CMAs to facilitate effective management of water resources and ecological infrastructure.

## 1.1 Catchment Management Agencies in the context of water resources management

### 1.1.1 THE HISTORY OF CMA ESTABLISHMENT

The National Water Act (No. 36 of 1998) provides for the establishment and modification of institutions to assist the National Department of Water and Sanitation (DWS) in fulfilling its core mandate, namely, the development, protection, conservation, and allocation of water resources, and regulation of water and sanitation services and water use (DWS 2023a). Since the National Water Act was promulgated, CMAs have been part of the intended institutional landscape and are aimed at decentralising integrated water resource management, including water use management (Munnik 2020).

In the National Water Act, it is envisioned that the whole of South Africa will be divided up into a series of Water Management Areas and that each water WMA will have its own Catchment Management Agency (DWS 2023a). Since the promulgation of the National Water Act in 1998, the number of WMAs (and thus the number of CMAs) has changed several times. Currently, South Africa is divided into six WMAs, with corresponding CMAs, as reflected in Figure 1 and Table 1: Inkomati-Usuthu CMA; Breede-Olifants CMA; Vaal-Orange CMA; Limpopo-Olifants CMA; Mzimvubu-Tsitsikamma CMA; and the Pongola-Mtamvuna/Umzimkulu CMA (DWS 2023a).

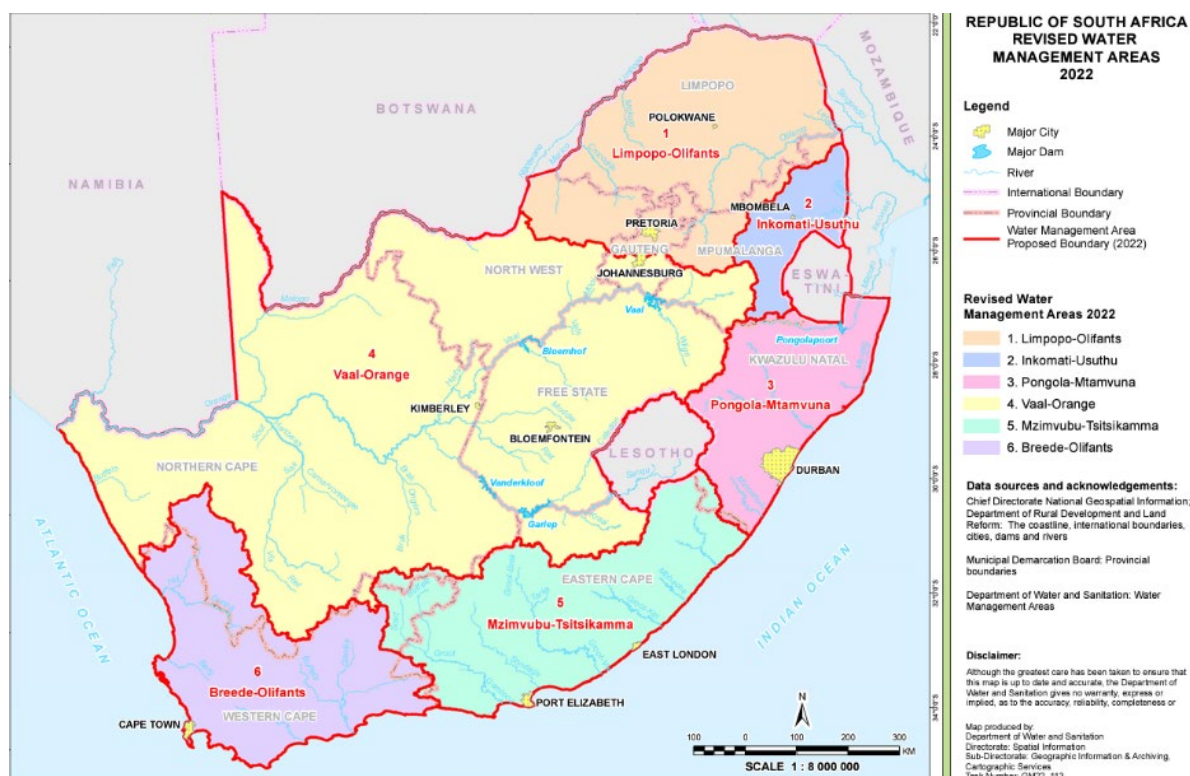


Figure 1: South Africa's six Water Management Areas, as of 2022 (DWS 2023a)

Table 1: A summary of the state of establishment and context for each CMA

CMA	STATUS OF BOARD ESTABLISHMENT	CMA CONTEXT
<b>Inkomati-Usuthu CMA</b>	A new board was appointed in 2023.	The Inkomati-Usuthu Water Management Area (WMA) consists of four main catchments (Sabie/Sand, Crocodile, Komati, and Usuthu), which support economic activities such as strategic water supply (DWS 2023a), forestry, and irrigation (IUCMA 2023b) in major cities like Mbombela. The Usuthu catchment supports a complex water supply system which includes supplying Eskom and the Sasol Secunda Complex. Given that some of its sub-catchments are shared with Mozambique and Eswatini, the IUCMA operates with international water management bodies such as the ARA Sul (Mozambique) to ensure transboundary integrated water resources management (DWS 2023a).
<b>Breede-Ofilants CMA</b>	The board was appointed in Oct 2007 (BOCMA 2023).	The Breede-Ofilants WMA covers most of the Western Cape Province as well as small parts of the Eastern and Northern Cape Provinces. It includes four large rivers and their catchments, namely, the Breede, Berg, Gouritz and Olifants Rivers (BOCMA 2023). Cape Town and George fall within this WMA.

CMA	STATUS OF BOARD ESTABLISHMENT	CMA CONTEXT
<b>Vaal-Orange CMA</b>	The board was appointed by Cabinet on 15 November 2023 (The Presidency 2023) with an effective date of appointment of 1 <sup>st</sup> December 2023.	The Vaal-Orange CMA manages the Vaal-Orange WMA, which is by far the largest WMA in South Africa, covering the northwestern part of the country (DWS 2022b). The Vaal River supports the industrial and mining activities in and around Gauteng Province and supplies water to 60% of the country's economy and 45% of the population (DWS 2022b). The Orange River is a critical system in Southern Africa and several transfer schemes originate from it, including the Lesotho Highlands Water Project (where it is known as the Senqu River). The Orange River also plays a transboundary role with Lesotho, Botswana, and Namibia. The Vaal River is a major tributary of the Orange River.
<b>Limpopo-Olifants CMA</b>	The board has not been appointed but the process is underway.	The Limpopo-Olifants WMA represents the South African part of the Limpopo Basin which is shared with Botswana, Zimbabwe, and Mozambique. It is a semi-arid region with economic activity mainly centred on livestock farming and irrigation, with increasing mining operations (DWS 2022a). Major urban areas include Polokwane, Pretoria, and parts of Johannesburg. It is estimated that more than 51.5% of South Africa's gross domestic product originates in this WMA (DWS 2022a).
<b>Mzimvubu-Tsitsikamma CMA</b>	The board has not been appointed but the process is underway.	Most of the Mzimvubu-Tsitsikamma WMA falls within the Eastern Cape Province and is relatively well endowed with water resources. However, at times of water shortage, it is mostly the western parts of the WMA that are affected (including Gqeberha). Most of the water resource infrastructure development has been in the west of the WMA (linked to Gqeberha and irrigation schemes in the Fish and Sundays River catchment areas) (DWS 2014).
<b>Pongola-Umzimkulu CMA</b>	The board was appointed by Cabinet on 15/11/2023 (DWS 2023b), with an effective date of appointment of 1 <sup>st</sup> December 2023.	Almost all the Pongola-uMzimkulu WMA is within KwaZulu-Natal Province. It shares international borders with eSwatini, Mozambique, and Lesotho, so the PUCMA needs to ensure transboundary integrated water resources management (PUCMA 2024). The major rivers in the Pongola-uMzimkulu WMA are the Pongola, Mhlathuze, Mkuze, Mfolozi, Thukela, uMngeni, Mvoti, Mkomazi, Mzimkulu and Mtamvuna Rivers (PUCMA 2024). The uMngeni River is a critical source of water for the port city of Durban on the east coast of KwaZulu-Natal.

### 1.1.2 MANDATE AND FUNCTIONS OF THE CMAS

The National Water Act provides that a CMA (which is a catchment-based organ of the state) will have 'inherent powers' and initial functions by virtue of establishment. Additional powers and duties can be delegated or assigned by the Minister of Water and Sanitation (DWS No date). The initial functions of a CMA are to: investigate and advise interested parties on the protection, use, development, conservation, management and control of the water resources in its Water

Management Area; develop a Catchment Management Strategy<sup>1</sup> and promote the alignment of applicable development plans with this strategy; coordinate the related activities of water users and water management institutions within its WMA; and promote community participation in its functions. CMAs also play a critical role in facilitating sustainable and equitable access to water for all (Republic of South Africa 1998). This is achieved by working with Water User Associations (WUAs) and Irrigation Boards (IBs) and engaging, supporting and building capacity among previously disadvantaged farmers and water users on water-use licences and obligations in relation to the water resource (CLCB 2021). A CMA is a body corporate and is therefore able to enter contracts for supplies and levy charges to cover the cost of its functions.

The process of evolution of a CMA begins at the Proto-CMA stage, when functions are decentralised, and roles and responsibilities are delegated from the National Department of Water and Sanitation (DWS) to the proto-CMA. At this stage, the proto-CMA is responsible for water use management and coordination functions but not for water use authorisations or Resource Directed Measures. Proto-CMAs fall within the structures of the DWS regional offices, with DWS playing the role of the CMA in such instances (CLCB 2021). Over time, the proto-CMA is intended to build relationships in the catchment and consolidate and strengthen its capacity to undertake its water resource management functions. It is during this consolidation phase that additional water use management responsibilities might be delegated by the Minister, and staff seconded from the DWS are formally transferred to the CMA. The full establishment of the CMA involves the delegation of responsible authority functions, including the ability to authorise, license and regulate water use. These delegated powers may be withdrawn at the direction of the Minister of DWS<sup>2</sup>. CMAs are also responsible for billing and collecting water use charges (DWS No date). Some of these functions may be delegated to the WUAs (CLCB 2021).

CMAs are therefore critical role-players in the institutional landscape of water resources management in South Africa and need to be appropriately capacitated to deliver on the mandate that has been assigned to them.

## 1.2 The Ecological Infrastructure for Water Security Project

The Ecological Infrastructure for Water Security (EI4WS) Project is an ongoing project that is being implemented by the Development Bank of South Africa (DBSA) and executed by the South African National Biodiversity Institute (SANBI) in partnership with the Department of Forestry, Fisheries and Environment (DFFE), the Department of Water and Sanitation (DWS), the Water Research Commission (WRC), and a range of other partners. The long-term goal of the EI4WS Project is to integrate biodiversity and ecosystem services into planning, finance, and development in the water sector to improve water security. The EI4WS has three components, the third of which focuses on:

*Improving the integration of biodiversity and ecosystem services into the water value chain through social learning, credible evidence, and knowledge management.*

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<sup>1</sup> A Catchment Management Strategy provides a framework for managing water resources within the WMA and the principles for allocating water to existing and prospective water users.

<sup>2</sup> In January 2015, the two existing CMAs (the Inkomati-Usuthu CMA and the then Breede-Gouritz CMA) were granted a list of delegated powers by the DWS (Munnik 2020). However, in December 2015, the then Minister of Water and Sanitation withdrew some of the mandated powers (Munnik 2020).



This third component is being implemented by the WRC, and it aims to (1) deepen capacity in existing organisations and networks in the water and biodiversity sectors, and (2) strengthen institutional capacity and operational governance of Catchment Management Agencies (CMAs) in South Africa to support the evidence-based resourcing and implementation of ecological infrastructure interventions. The effective functioning of CMAs is a critical component of the EI4WS project, given that some of the functional responsibilities covered in the project (such as the development and enforcement of Catchment Management Strategies) can only be implemented by the CMAs (CLCB 2021).

The current research project **“Strengthening the community of practice working on the integration of water-related ecological infrastructure and built infrastructure in South Africa’s Water Management Areas”** falls under the second of the two aims. The project acknowledges the many challenges facing the CMAs, including that most have only recently been established. The core focus of the project is, therefore, to develop recommendations for a sustainable community of practice that can facilitate capacity-building and learning within and across the six Water Management Areas (WMAs) in South Africa so that existing and future CMAs are better able to fulfil their operational mandates. This investment in CMA institutions is seen as critical in supporting the effective management of water resources and, ultimately, the longer-term protection and management of ecological infrastructure. A community of practice for the CMAs could also provide a mechanism to help mainstream other components of the EI4WS Project that are of relevance to the CMAs, for example, the Pricing Strategy for Raw Water Use Charges. Figure 2 provides an overview of the project timeline and key deliverables.

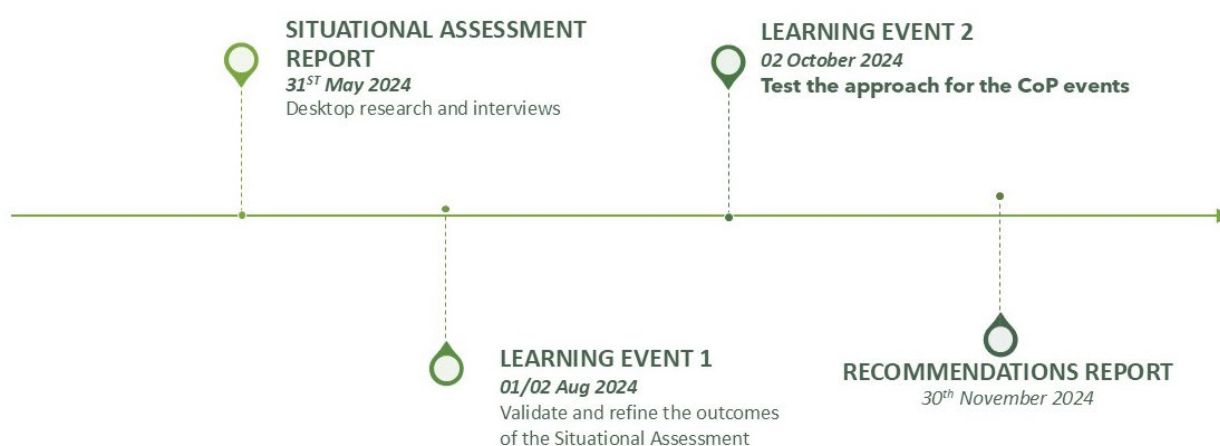


Figure 2: An overview of the project timeline and key deliverables

The **Situational Assessment Report** used interviews and desktop research to unpack additional context and learning priorities for the CMAs, learning mechanisms to address these priorities and considerations for a future Community of Practice for the CMAs. Following the Situational Assessment, **two stakeholder learning events** were convened to build on and refine the outcomes of the Situational Assessment Report (**Learning Event One**) and test what a future Community of Practice could look like (**Learning Event Two**). The purpose of this **Recommendations Report** is to consolidate the research and outputs associated with each of the deliverables and inform recommendations to the WRC on how to advance the establishment of a Community of Practice for the CMAs.



The Research Lead for the project was Dr Roderick Juba from the Water Research Commission. The WRC contracted Urban Earth to undertake the research activities. The Urban Earth team consisted of Jo Douwes (Project Leader), Margaret McKenzie (Community of Practice Advisor), Ian Preston (Researcher) and Nomzamo Mncube<sup>3</sup> (Researcher).

A project reference group was established by the WRC to oversee and provide guidance on the research project and its outcomes. Organisations represented in the reference group included the South African National Biodiversity Institute (SANBI); the Breede-Olifants CMA; the Pongola-uMzimkulu CMA; the Department of Water and Sanitation; the WRC; the Freshwater Research Centre; the World Wildlife Fund; the Department of Forestry, Fisheries and the Environment; and Rhodes University. The reference group was convened on three occasions during the project period and these discussions provided critical guidance on the project and its outcomes.

The Learning Events were attended by a range of stakeholders (Annexe 1) from the CMAs and related sectors, and the discussions were therefore rich and collaborative. Each event monitored the attendance of women and youth, with women being well represented at both learning events<sup>4</sup>.

The structure of this Recommendations Report is summarised in Figure 3.

#### Chapter 2: Methodology

- The chapter provides details on the research questions. It also outlines the approach adopted for each component of the research project and provides links to the deliverable reports.

#### Chapter 3: Additional CMA context in South Africa

- The chapter provides additional context to CMAs in South Africa to help frame the subsequent chapters in the Report.

#### Chapter 4: Learning Priorities for the CMAs

- The chapter outlines the learning needs highlighted by CMAs and then summarises the priorities that could be the focus of future Community of Practice events.

#### Chapter 5: Conceptualising the Community of Practice

- The chapter considers what a 'community of practice' is, before summarising the research outputs relating to: the role of the Community of Practice, initial participants, initial convening and resourcing responsibilities, and design considerations when operationalising the Community of Practice.

#### Chapter 6: Summary of Recommendations

- The chapter summarises the recommendations emerging from the previous sections in the report.

#### Chapter 7: Next steps to establish the Community of Practice

- The final chapter provides practical suggestions on the next steps to establish a Community of Practice. It proposes a high-level work programme to guide immediate next activities and a phasing of roles for the Community of Practice.

Figure 3: A summary of the chapters in this report

<sup>3</sup> It should be noted that Ms Nokwanda Gumede was part of the Urban Earth team until the end of April 2024. During this time, she assisted with the interview phase of the Situational Assessment.

<sup>4</sup> The WRC and SANBI are active in their efforts to promote the participation of women and youth in research projects. At Learning Event One, 43% of participants were women and 21% youth. At Learning Event Two, 42% of participants were female and 17% youth.

## 2 Research questions and methodology

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The key objective of the research project was to **strengthen an emerging community of practice that will enable collaboration, co-learning, and co-creation across CMAs at the nexus of built and ecological infrastructure for water security**. To achieve this objective, the research questions were framed as follows:

- What are the priority learning needs of the CMAs?
- What expertise (internal to the CMAs and external) exists to support the co-learning process?
- What learning and knowledge-sharing platforms already exist to support the CMAs in their work?
- What role could a Community of Practice play in addressing the learning needs of the CMAs?
- How should the Community of Practice be structured and organised to facilitate the necessary collaboration and co-learning?

The approach adopted for each of the project deliverables, to respond to the research questions, is described below.

### 2.1 Situational Assessment

The purpose of the Situational Assessment was to document, through a combination of desktop research and stakeholder interviews, the current status of the CMAs, their achievements, priorities and challenges, to assess the need for a Community of Practice and inform what role this might play in supporting the CMAs to fulfil their mandate.

Primary and secondary data collection was undertaken through desktop research and stakeholder interviews. The interviews engaged with individuals in strategic (e.g. board member, chief executive officer) and operational (e.g. senior manager and technical specialist) positions across the CMAs, other government and public entities (including representatives from the DWS involved in the establishment of the CMAs), and non-state actors involved in catchment management (e.g. NGO representatives), to gather diverse perspectives on the research questions. Participants were also given the option of providing written responses via Microsoft Forms. The respondents who participated in the research are summarised in Table 2.

Table 2: Verbal and written interview responses received across different categories of participants

Category of respondent	Organisations represented	Interviews	Written responses
CMA Strategic	Breede-Olifants Mzimvubu-Tsitsikamma Pongola-Umzimkulu	2	1
CMA Operational	Breede-Olifants Inkomati-Usuthu Limpopo-Olifants Pongola-Umzimkulu	5	1
Government and public entities	Department of Water and Sanitation eThekweni Municipality SANBI	4	1
Non-state actors	Duzi-uMngeni Conservation Trust (DUCT) Environmental & Rural Solutions (ERS) Lewis Foundation World Wildlife Fund (WWF)	4	0
Sub-total		15	3
TOTAL RESPONSES		18	

Figure 4 provides an overview of how the interview questions were framed. Questions were modified slightly depending on the category of the interview respondents.

Introduction	<ul style="list-style-type: none"> <li>To understand the <b>work you do</b>.</li> </ul>
Work being done by the CMAs	<ul style="list-style-type: none"> <li>To understand the <b>work</b> that is already being done and <b>future priorities</b>.</li> <li>To explore the role of <b>ecological infrastructure</b> in the work of the CMAs</li> <li>To clarify the major operational <b>challenges</b></li> <li>To understand the role of <b>non-state actors</b> in the work of the CMAs</li> </ul>
Existing learning and knowledge sharing	<ul style="list-style-type: none"> <li>To examine existing <b>activities/platforms/training</b> and their usefulness in facilitating learning and sharing across the CMAs.</li> </ul>
The potential role of a community of practice	<ul style="list-style-type: none"> <li>To hear perspectives on what kind of <b>community of practice</b> might be most helpful in facilitating learning within and across WMAs/CMAs, what this would need to <b>focus</b> on and who would be <b>involved</b>.</li> </ul>

Figure 4: An overview of the interview questions posed to participants in the Situational Assessment phase of the project

Data analysis was undertaken in two ways. Firstly, a summary of each interview was developed by the Project Lead and used as the basis for undertaking an initial assessment of the key messages emerging from the interviews. Secondly, the Dedoose application<sup>5</sup> (Dedoose 2023), was used to

<sup>5</sup> Dedoose is a qualitative data analysis and mixed methods research platform.

capture ideas from the participant interviews in relation to: the challenges and achievements of the CMAs; existing platforms and practices for learning; and the potential value of a Community of Practice to support the CMAs through additional learning and sharing opportunities.

The Situational Assessment provided important insights into the current status of the CMAs, their achievements, priorities and challenges, and what role a Community of Practice might play in supporting the CMAs to fulfil their mandate. The Situational Assessment also documented previous and current activities and forums that have facilitated learning within and between CMAs so that this experience could be used to inform decisions regarding a future Community of Practice.

The full Situational Assessment Report has been added as an attachment to this report.

## 2.2 Learning Event One

**Learning Event One** was an in-person workshop held on Thursday, 1 August and Friday, 2 August 2024 at the WRC's offices in Pretoria. It was convened to test, with relevant stakeholders, the learning priorities of the six CMAs and the ideas emerging from the Situation Assessment so that a clear concept for a sustainable future community of practice could be co-developed by the participants and the WRC (Figure 5). Learning Event One was also used to test practical approaches that could be used within a Community of Practice event to facilitate networking and create space for learning and knowledge sharing.

The purpose of Learning Event One was therefore to:

- Facilitate networking opportunities between participants
- Verify the learning priorities emerging from the Situational Assessment and develop a deeper understanding of specific challenges in these learning areas
- Confirm the priority role and focus of a Community of Practice and
- Consider how to move forward with establishing and resourcing the Community of Practice.



*Figure 5: Learning Event One workshop participants engaging in discussions on the four emerging learning priorities*

The design of Learning Event One was informed by the 'Value Creation Framework' (VCF). The VCF allows for observation and evaluation of social learning processes by looking at the immediate, potential, applied, realised and transformative or reframing value of social learning. It has been used by the WRC within the EI4WS project to assess the social learning and change that has happened within this work (Lotz-Sisitka and Cockburn 2023) and provided a helpful framework to design the facilitation plan and discussion questions for Learning Event One. A summary of the workshop agenda is included in Table 3 and the full facilitation plan is included in Annexe 2.

The outcomes from the Situational Assessment were used as the starting point for the workshop discussions. The workshop evaluation focused on the workshop content, delivery and impact and included questions framed in line with the Value Creation Framework.

Table 3: A high-level overview of the agenda for Learning Event One

TIME	SESSION
DAY ONE	
08:30-09:00	Arrival and networking
09:00-09:20	Welcome and Purpose of the day
09:20-09:50	Participant introductions and networking
09:50-10:30	Overview of the Project and the Situational Assessment outcomes
11:00-11:45	Sharing CMA stories and experiences
11:45-12:15	Identifying Learning Priorities
13:15-14:30	World Café discussions on Learning Priorities
14:30-14:50	Prioritising the role of the Community of Practice
14:50-15:20	Mapping other communities of practice
15:20-15:30	Next steps
15:30-16:00	Networking
DAY TWO	
09:00-09:15	Introductory 'check-in' exercise
09:15-09:45	Recap of the previous day's discussions
09:45-10:15	Participant focus of the Community of Practice
10:30-11:15	Thinking about the way forward for the Community of Practice
11:15-11:45	Final reflections
11:45-12:30	Completion of research and evaluation survey
12:30-12:45	Next steps, thanks and closure

Feedback from participants at Learning Event One was used to inform the design of Learning Event Two.

## 2.3 Learning Event Two

**Learning Event Two** was an in-person workshop held on Wednesday, 2 October 2024 at the WRC's offices in Pretoria. It was designed to test the learning focus and implementation approach for future Community of Practice events. The design and agenda of **Learning Event Two** were informed by inputs from a small advisory working group that was nominated during Learning Event One<sup>6</sup> to provide guidance to the research team.

<sup>6</sup> The advisory group consisted of voluntary representatives from the WRC, IUCMA, and LOCMA.



The purpose of Learning Event Two was to:

- Facilitate networking opportunities between participants to strengthen collaboration
- Facilitate effective learning and knowledge sharing between participants
- Test approaches for future Community of Practice events and
- Identify additional learning priorities for the Community of Practice

Key considerations for planning Event Two included:

- *Framing the event around priority learning areas identified in Learning Event One:* Common themes emerging in discussions included the need for learning engagements on water tariffs and water pricing, alternative funding models for CMAs, and engaging stakeholders more effectively. The development of Catchment Management Strategies was also consistently highlighted as a mechanism to facilitate improved catchment planning, stakeholder engagement and ecological infrastructure investment.
- *Drawing on internal expertise:* Given the short timeline before Learning Event Two, it was important to plan the event using internal expertise from the CMAs and supporting organisations. This was supplemented with inputs from external organisations, in this case, the DWS.
- *Testing approaches:* A primary purpose of the second learning event was to test diverse ways of engaging and facilitating discussions, for example through the use of panel inputs, question-and-answer sessions, and group discussions.
- *Logistics:* The WRC venue in Pretoria worked well for participants for Learning Event One and was therefore used again as the venue for the second event.

Table 4 provides an overview of the agenda for Learning Event Two. In the sub-sections that follow, further details are provided on how the workshop's design was intended to address each of the above-mentioned objectives for the event: facilitating networking opportunities; facilitating effective learning and knowledge sharing between participants; testing approaches for future Community of Practice events; and identifying additional learning priorities for the Community of Practice. A more detailed Facilitation Plan was developed and is included in Annexe 3 for reference.

Table 4: High-level Agenda for Learning Event Two

TIME	SESSION	PRESENTER/INPUTS
08:30 – 09:00	Arrival and Registration	
09:00 – 09:15	Welcome and Overview	WRC
09:15 – 09:30	Introductions	Participants
09:30 – 10:45	Understanding the new Water Pricing Strategy and its implications for CMAs	DWS
10:45 – 11:15	Tea	
11:15 – 12:15	Navigating the development of stakeholder-led Catchment Management Strategies	PUCMA
12:15 – 13:15	Sourcing alternative funding	Participants
13:15 – 13:45	Lunch	

TIME	SESSION	PRESENTER/INPUTS
13:45 – 14:45	Hearing from CMAs	Participants
14:45 – 15:15	High-level reflection on Learning Event Two	Participants
15:15 – 15:30	Workshop Evaluation	Participants
15:30 – 15:45	Thanks, closure & next steps	WRC
15:45 – 16:15	Networking	Participants

#### *Facilitating networking opportunities between participants to strengthen collaboration*

To achieve this, participants were asked to introduce themselves and share their specific areas of interest in relation to the Learning Event. This exercise was designed to encourage conversation around shared or new topics of interest and identify any emerging questions that could inform future learning priorities for the Community of Practice. As an additional networking activity during the 'Hearing from CMAs' session, participants were invited to write down the current challenges faced by their CMAs and then indicate if they had expertise or experience that could assist in addressing any of the challenges identified by other CMAs. This helped facilitate knowledge sharing and possible assistance from the CMA network.

#### *Facilitating effective learning and knowledge sharing between participants*

Several learning priorities emerged from the previous learning event: governance, revenue collection, alternative sources of funding, and stakeholder engagement. With the support of the advisory group that was established during Learning Event One, these priorities were refined into three topics for discussion during Learning Event Two: (1) The implications of the new Water Pricing Strategy for CMAs; (2) Developing a stakeholder-led Catchment Management Strategy and (3) Sourcing alternative funding for CMAs. Learning Event Two was structured to draw from a range of expertise that included DWS and PUCMA representatives. A 'brainstorming' session was facilitated to collate existing knowledge on alternative sources of funding for CMAs. A session was also included to provide the new CMAs with a platform to share the challenges they are currently facing.

#### *Testing approaches for future Community of Practice events*

The workshop was designed to test various methodologies and workshop session formats that could be implemented in future Community of Practice events. Several approaches were tested, including formal presentations such as those delivered by PUCMA and the DWS. These presentations were designed to explore both policy-level and implementation-focused learning areas. In addition, the brainstorming session that was facilitated during the session on 'Sourcing Alternative Funding for CMAs', was explored as a method to encourage interactive dialogue and learning across the CMAs. Another approach tested was the 'Hearing from CMAs' session, which aimed to identify future learning priorities and facilitate networking and the sharing of expertise within the group. These approaches were evaluated by the participants to determine their effectiveness and suitability for future Community of Practice events.

#### *Identifying additional learning priorities for the Community of Practice*

Throughout the discussions and presentations, the focus was on identifying additional learning priorities (or nuances on priorities previously identified) that had not emerged during the



Situational Assessment or Learning Event One. These were consolidated after each of the session discussions and were also captured from the event Evaluation.

The outputs from Learning Event Two helped to refine the learning priorities and design considerations for the future Community of Practice.

## **2.4 Consolidating Recommendations**

The Situational Assessment and learning events were used to consolidate the research findings into practical recommendations to the Water Research Commission regarding the purpose, learning focus and design considerations for a Community of Practice that would be most beneficial in supporting and strengthening the CMAs to deliver on their mandate. The Recommendations Report (this document) includes a high-level work programme with suggestions on how this might be phased in over an initial three- to five-year period to take the Community of Practice concept forward into implementation.

### **3 Additional context to CMAs in South Africa**

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The current chapter provides additional context to the CMAs in relation to their funding models, the role of non-state actors in their work and existing learning and knowledge sharing across CMAs. It also explores the extent to which ecological infrastructure is being considered as part of the water value chain. This context is important in helping to frame subsequent chapters that focus on the learning priorities identified by CMAs and the conceptualisation of the Community of Practice as a mechanism to address these.

#### **3.1 Funding model for the CMAs**

The two main sources of funding for CMAs are water use charges and parliamentary allocations through DWS. A CMA is also entitled to obtain funds from any other lawful source in order to carry out its business (DWS No date). There are three possible scenarios relating to water use charges and level of financial support to CMAs (DWS 2022b):

- a) No financial support – CMA remains viable through funding from water use charges.
- b) Augmentation grant – This is the operating subsidy that DWS transfers to the CMA to cover revenue lost because of the water price capping for non-domestic water users.
- c) Public interest operating subsidy – This is a DWS transfer for functions performed by the CMA that are in the public interest (e.g. community participation, capacity building and water allocation) rather than for direct water user benefit.

There are a number of challenges with the application of current water use charges. These include the fact that charges for waste discharge are currently not levied, and water use charges are only applied to and collected from users who are registered (DWS No date). In a context where the number of unregistered users is still high, this creates challenges for implementing the CMA functions with inadequate income. Budgets from the National Treasury are also under increasing pressure due to national fiscal restrictions (National Treasury 2023). The funding of CMAs is made more complex as their work serves both the public interest and specific water users. The new Water Pricing Strategy serves as the key enabler for ongoing fiscal funding for the public benefit dimension and recent work led by the WRC provides a scientifically defensible starting point for engagement with the National Treasury on the quantum of this subsidy (Walsh et al, 2022). This is critical in ensuring an appropriate level of fiscal support to the CMAs, given that the revenue generated from water use charges is insufficient to fully fund all aspects of CMA operations.

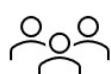
Given these financial sustainability challenges, the established CMAs have recognised the need to explore different revenue options, identify alternate sources of funding and ensure cost containment where possible (IUCMA 2023a). A significant priority for many of the CMAs interviewed is also to increase the number of water users who apply for licences and are registered as water users within the WMA.

#### **3.2 The role of non-state actors in the work of the CMAs**

There is acknowledgement amongst the CMAs of the importance of engaging with non-state actors in the catchment landscape to achieve their mandate of integrated water resource management. As one interview participant emphasised:

*'It is important to form partnerships with other institutions to leverage the work being done. For instance, there is a good programme for removing alien vegetation, which is a critical area, however, the CMA does not have a large budget for this work. It is, therefore, important to be able to support and collaborate with organisations involved in this work.'* (Participant P6)

The areas of engagement between CMAs and non-state actors are summarised in Figure 6 and outlined further below.



#### **Forums**

e.g. Catchment Management Forums and Water User Associations – information sharing, capacity development.



#### **Universities**

For research and the development of water resource management modules for students



#### **Partnering for implementation**

Local partners assist with implementation e.g. water quality monitoring and Invasive Alien Plant (IAP) clearing. In some cases they coordinate catchment-level partnerships that can support implementation.

Figure 6: An overview of the areas of engagement between CMAs and non-state actors

### **3.2.1 CATCHMENT MANAGEMENT FORUMS<sup>7</sup>**

Catchment Management Forums (CMFs) serve as an important interface between a CMA and the stakeholders within the catchments for which it is responsible (CLCB 2021; IUCMA 2023b). These provide a platform to share information, for example on water quality, water use authorisations that have been issued and the processes to follow to apply for a water use license. They also provide an opportunity to raise awareness around other aspects of water resource management relating to pollution and illegal dumping. The intention is for the CMFs to be led by catchment representatives and for the CMA to play a secretariat role in supporting these. In the Inkomati-Usuthu CMA, for example, the CMF convenes quarterly meetings. These meetings focus largely on communicating issues relating to water use authorisation and providing support to new farmers (IUCMA 2023a). In addition to the CMFs, platforms such as the WUAs and estuary management forums, are other examples of forums that exist to support engagement across stakeholders and sectors.

### **3.2.2 IMPLEMENTATION AND RESEARCH PARTNERS**

Many non-governmental organisations (NGOs) and community-based organisations (CBOs) play a significant role in supporting the work of the CMAs, for example through water quality monitoring and invasive alien plant removal programmes. Some are also central in establishing resource/relational hubs within the catchments to help align and support the work of the stakeholders working there. The uMzimvubu Catchment Partnership (in the Mzimvubu-Tsitsikamma WMA) and Amanzi ethu Nobuntu (in the Pongola-uMzimkulu WMA) are examples of such hubs. Not only do these initiatives help provide implementation coordination in terms of

<sup>7</sup> Note: One interview participant highlighted that the term now being used is 'Catchment Stewardship Forum'. For the purposes of this report, the more widely known term 'Catchment Management Forum' is used.

water resource activities that are underway, but they also provide an opportunity for CMAs to stay abreast of what is happening in the catchment and connect with and support implementation partners. A major challenge for these implementation partners, however, is that they are often unclear on how best to support the CMAs, given the institutional uncertainties and the resulting absence of clear plans and implementation priorities in some CMAs.

A number of the CMAs are also working to strengthen relationships with local tertiary institutions to build capacity in the water resource management sector and undertake the necessary research to support their work.

### 3.3 Ecological Infrastructure and the Water Value Chain

Ecological infrastructure for water security is a relatively new concept that is not well understood in the water sector. Work is therefore needed to unpack the concept for practitioners and make it more accessible to them (Mponwana et al. 2023). Despite the importance of managing and investing in ecological infrastructure for water security (SANBI 2022), this was only occasionally highlighted as a priority by the interview participants. For example, as one interview participant shared:

*'We understand that the removal of invasive alien plants is the cheapest and most efficient way to release water and make it available for other uses.'* (Participant P8)

However, there was a broader sense among some catchment management partners (external to the CMAs) that there is limited understanding within the CMAs of the link between nature and water resources and mostly an insufficient allocation of funds for ecological infrastructure work.

As a result, CMAs need support to manage, monitor and protect water resources to ensure that there is sufficient water available of adequate quality to fulfil all water rights and water uses that are allocated by licence. Water rights include the 'Reserve', which makes provision for the right of all people to have water for their basic needs and the rights of aquatic ecosystems to function (CLCB 2021; Republic of South Africa 1998; DWS 2023a; Palmer et al. 2002). The importance of securing the Reserve was highlighted by one interview participant, while others acknowledged the importance of invasive alien plant removal as a critical catchment management intervention to contribute towards water security, despite this not always being seen as a priority.

*'Issues around ecological infrastructure and issues around alien plants and their impact on water balance and all that stuff (are) nice to have, and when budgets started to get tight, those were the things that fell by the wayside. There's a need for greater internal capacity, greater understanding, and dedicated roles within each of those CMAs that are looking at ecological infrastructure, catchment management and strategic water source areas.'* (Participant P11)

### 3.4 Existing Learning and Knowledge Sharing across CMAs

A number of initiatives are in place, or have previously been in place, to support learning and knowledge sharing across the CMAs. Some have focused on capacity development and training on specific issues, some have been in the form of forums and similar platforms for engagement, while others have focused on consolidating existing knowledge resources so that these are easily

available for those who need to access them. An overview of existing learning and knowledge-sharing activities is provided in Figure 7. Further details on each of these can be found in the full [Situational Assessment Report](#).



Figure 7: An overview of existing learning and knowledge-sharing activities

Of particular relevance is the CMA CEO Forum which was established as part of the Dutch-funded 'Kingfisher Programme' and subsequently discontinued (CLCB 2021; Munnik 2020). This learning and advisory platform provided an opportunity for CEOs and Acting CEOs to meet and discuss various matters relating to water management, including compliance and monitoring water use. It also helped clarify and synthesise the roles of the CMA governance board and management (Verkerk, Tosserams, and Kachieng'a 2016). One interview participant commented that this CMA CEO Forum was responsible for compiling lessons learned and best practices from the existing CMAs and indicated that the intention is to reinstate this forum once all the CMAs have been established. As one interview participant highlighted:

*'From the governance side, we had established a Chief Executive Forum which was responsible for compiling lessons learned and best practices from existing CMAs so that they can share the information with new CMAs. This process is on pause, and we are currently waiting for all the CMAs to be operational, so we can reignite the forum.'*  
(Participant P16)

During the learning events, the re-establishment of the CMA CEO Forum was highlighted as a potential future platform to oversee the Community of Practice and its activities.

## 4 Learning areas for CMAs

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This chapter begins by providing an overview of the challenges articulated by stakeholders during the Situational Assessment and Learning Events. It then focuses on the learning areas that were identified as priorities before providing a high-level indication of where expertise already exists to help address these learning needs.

### 4.1 An overview of the challenges experienced by CMAs

The operational challenges faced by the CMAs include the following:

#### 4.1.1 ESTABLISHING THE CMAS

One of the most significant operational challenges for many of the CMAs is the delays experienced in fully establishing the six CMAs. There have been a number of reasons for these delays, including political interference; the lack of continuity and ownership of decisions; a lack of understanding of integrated water resource management at the ministerial and senior official levels; a lack of understanding of the ideology behind the decentralisation of water resource management and the role of the CMAs; and financial constraints due to *inter alia* the lack of revenue resulting from non-payment by water users and many water users not being registered (CLCB 2021; Munnik 2020). At the time of finalising this report (November 2024), all the CMAs had progressed from the Proto-CMA stage but were still grappling with establishing boards, effecting staff transfers from DWS, developing Catchment Management Strategies and engaging with revenue collection and financial management.

#### 4.1.2 FINANCIAL CONSTRAINTS AND REVENUE MANAGEMENT

Non-payment by water users, the inability to implement the waste discharge charge as stipulated in the Water Pricing Strategy, and the fact that the water use tariffs are insufficient to cover the operational expenses of the CMAs, have reduced the ability of the established CMAs to recover costs relating to the delivery of water services (IUCMA 2023a; CLCB 2021). This is compounded by the perception that the National Treasury's financial support for CMAs is decreasing each year, and that there is an expectation at the level of national government that CMAs will ultimately need to be financially self-sufficient. CMAs also face challenges in calculating the public interest subsidy amount that is payable by the National Treasury for certain of the CMAs' activities and are unclear on how to treat 'Historically Disadvantaged Individuals' in relation to setting and collecting tariffs.

As many interview participants highlighted, revenue collection challenges are compounded by high levels of illegal water use and inadequate registration of water users. Historical data discrepancies have also contributed to failed debt recovery, and the Water Authorisation Registration Management System (WARMS), which houses the water user data and is being implemented by the DWS through the CMAs, has performance issues relating to updating information and quality control. Property ownership data, for example, cannot be tracked which makes it difficult to collect revenue (IUCMA 2023a) and participants highlighted the need to integrate property ownership registers with revenue collection systems to ensure that billing targets the correct land owner. Improved data systems for resource validation and monitoring are also critical. As one interview participant commented:



*'One of the biggest challenges is revenue collection, which is the primary source of funding for the CMA. The CMA's water users are not keen on paying their water use charges. The CMA is short of its revenue collection targets by millions of Rands. The culture of non-payment is a serious challenge.'* (Participant P14)

An additional aspect of the financial challenge highlighted by some interview participants within the CMAs is that senior managers do not always understand all the water resource management mandates that need to be budgeted for. For some CMA functions, this can result in insufficient budget being motivated for.

Given these challenges and the costs associated with delivering on operational mandates and supporting previously disadvantaged water users as part of the transformation of the water sector (CLCB 2021), the CMAs are increasingly being required to explore alternative funding options to supplement the revenue they receive. This can come through partnering with organisations for implementation or securing external funding and technical support for components of work (like ecological protection and management) that are often under-funded. However, for many CMAs, the challenge lies in understanding what funding sources are available, how to access these, and what financial and institutional systems need to be in place to facilitate the receipt of funds.

#### **4.1.3 STAKEHOLDER ENGAGEMENT**

Catchment stakeholders play an important role in either supporting or undermining the work of the CMAs and therefore building the capacity of stakeholders to understand issues relating to water resource management and licensing was seen by interview participants as a critical area of focus. This is exacerbated by the fact that the technical work is specialised and not all stakeholders understand the water value chain and the processes relating to this. As two interview participants highlighted, this is particularly important for those who have previously been excluded from water access and management and who now need to be integrated into systems and processes:

*'The CMA needs to build the capacity of the historically disadvantaged individuals in the WMA so that they become aware of the processes involved in applying for a water use license.'* (Participant P14)

*'We need a road map saying that the first thing that we need to tackle is governance. The second thing that we need to tackle is land use and human settlements. The third thing that we need to tackle is water supply and educating our communities about it. The fourth thing that we need to tackle is water conservation. These are the fundamentals. We need to integrate the role of communities into the road map because we cannot do it without communities.'* (Participant P17)

Stakeholder engagement also needs to include local municipalities, which are often ill-equipped to manage wastewater treatment works and monitor groundwater, two functions that have a significant impact on the water resources within the CMAs. However, there can be confusion among stakeholders about the role of the CMA in relation to DWS and local municipalities. The challenge of wastewater treatment was highlighted by one interview participant as follows:

*'Inadequate wastewater treatment is the biggest challenge in South Africa and the Pongola-Umzimkulu CMA in terms of the resulting water-quality impacts on the country's water resources.'* (Participant P17)

Carefully planned social learning processes can build capacity and strengthen relationships and trust between stakeholders and the CMA. However, such processes take time and are not easy to coordinate and implement. The development of Catchment Management Strategies (a requirement for all CMAs) provides one opportunity to secure stakeholder input on catchment management issues and responses. A specific focus on engaging with local communities and local knowledge systems is an important part of such processes, particularly in relation to the management of ecological infrastructure. Catchment Management Forums (where these are functioning adequately) also provide a platform to build awareness and address challenges of water access and licensing in specific catchments. However, as one interview participant highlighted, the removal of the reimbursement policy for those attending the CMF meetings has compromised the ability of many stakeholders to attend regularly.

*'How are community members, especially those who have poor backgrounds and who attend two or three-hour meetings without being catered for, expected to contribute meaningfully and be incentivised to continue attending meetings?'* (Participant P10)

Developing stakeholder databases and a clear stakeholder engagement strategy can assist CMAs in building the necessary relationships with actors in their landscapes. A focus on facilitating the inclusion of women and youth in stakeholder engagement processes is also critical.

#### **4.1.4 WATER RESOURCE MANAGEMENT (COMPLIANCE MONITORING AND ENFORCEMENT)**

Catchment management is continually compromised by illegal access and use of water. These include diverting rivers, digging boreholes and avoiding registering their water use. Pollution and illegal dumping are also increasingly problematic. Monitoring and enforcing compliance are essential roles of the CMAs but are challenging given the scale of the area for which the CMAs are responsible. As two interview participants commented:

*'Some inspections are being done, but a lot more needs to be done as far as enforcement is concerned and taking action to deal with non-compliant water-use activities... A lot more needs to be done in terms of prosecutions. Prosecution against the biggest polluters, the illegal miners, the illegal dumpers. That is where we really need to focus. Enforcement, enforcement, enforcement!'* (Participant P17)

*'When people in the water management area start facing climate change and water shortages, they start to be creative, by, for example, diverting rivers illegally, building dams illegally, or very deep boreholes. These actions don't allow for surface and groundwater systems to be balanced across the water management area. We have to increase our monitoring and law enforcement capacity to ensure that even during times of water shortages, we continue to ensure that those who are using groundwater in the WMA can continue to be able to, and this is very, very complex.'* (Participant P8)



In terms of monitoring Resource Quality Objectives (RQOs), resource and budget cuts have meant that DWS and CMAs are limited in the number of sites they can monitor. Investment into the monitoring of river health, wetlands, and restoration interventions therefore falls to others (Mponwana et al. 2023). This is problematic in terms of maintaining the integrity of the natural resource base. In some cases, there are opportunities to partner with other organisations to strengthen water quality monitoring through citizen science monitoring programmes.

#### **4.1.5 LACK OF UNDERSTANDING OF THE ROLE OF ECOLOGICAL INFRASTRUCTURE IN THE WATER VALUE CHAIN**

As indicated previously, although most interview participants acknowledged the contribution of ecological infrastructure to water security, others highlighted that there is a need to strengthen understanding among the CMAs of the link between nature and water resources. There are opportunities to include the protection of ecological infrastructure in Catchment Management Strategies and through strengthening relationships and implementation partnerships with actors in the catchment landscape. These ideas were reiterated in the subsequent learning events.

#### **4.1.6 SKILLS AND CAPACITY DEVELOPMENT**

The CMAs are responsible for managing vast geographic areas including multiple catchments that have different catchment management characteristics. Ensuring sufficient skills and capacity within the CMA is therefore an important area of focus. Capacity constraints do exist amongst the management and staff of some of the CMAs owing to a lack of understanding of integrated water resource management and the role of the CMA (CLCB 2021). This was echoed by interview participants who commented that many senior managers do not understand the operational aspects of water resource management and that this affects their ability to oversee the work and allocate budgets strategically.

*'Lack of understanding of the impact of work and what you want to achieve. For example, it is sometimes felt that the finance unit should direct funds to areas where the CMA has significant achievements. However, this is not the case. One of the challenges is that of groundwater and it is being overlooked.'* (Participant P7)

CMA board members should also be included in capacity development activities, as some experience similar challenges in terms of their knowledge and experience. Some CMAs also lack specific technical capacities. In such instances, consultants may be brought in to do this work, but this undermines the ability of CMAs to build up the datasets and capacity to manage and track this work themselves. Opportunities to share expertise across CMAs, through exchange or temporary secondment, were raised by participants during the learning events as something to explore further as part of the Community of Practice.

#### **4.1.7 TRANSFORMATION OF IRRIGATION BOARDS AND SUPPORTING EMERGING WATER USERS**

A significant objective in the water sector is the transformation of water systems to ensure that previously disadvantaged populations have access to water and are involved in its management in line with the goals of sustainable use and equitable access to water for all (CLCB 2021). Part of the transformation process involves support to, and engaging with, previously disadvantaged farmers and local water users to ensure better water resource management (CLCB 2021). Another aspect

is the transformation of Irrigation Boards (IBs) to Water User Associations (WUAs). However, many of the CMAs are struggling to support this transformation in a comprehensive and meaningful way. Some highlighted the budget challenges in this regard, with CMAs finding it difficult to balance the needs of the transformation agenda, with the inadequate revenue base in their areas. Some also highlighted the importance of strengthening validation and verification processes so that the available water resources are better understood, and water can be allocated in a way that supports water reform. As one interview participant explained:

*'You can't reform unless you understand if either the water allocation it's saturated or there's a perception that it's saturated. Perhaps those who're sitting with water use licences no longer irrigate as much as the licence allows them to.'* (Participant P8)

#### **4.1.8 BUILDING IMPLEMENTATION PARTNERSHIPS**

There is currently insufficient recognition of the need to build and support existing catchment partnerships, which can play a significant role in supporting implementation in catchments. In some cases, strategic partnerships can also support CMAs in accessing alternative funding. From the perspective of a number of the non-state actors, there is a significant role that CMAs could play in supporting existing partnerships and connecting these across different geographies to facilitate improved collaboration and more efficient use of resources for catchment investment. As one interview participant highlighted:

*'I don't feel like a CMA can be operational. The CMA almost needs to be this big umbrella body that is enabling ... It is about having a mandate for the CMAs to find and support those functional hubs without restricting them or dictating to them, but providing them with guidance, resources, etc. This is powerful and, I think, a lot could happen through such a mandate... If those local relational hubs could be fed into the CMAs or a national CMF or whatever other platforms are relevant, then, I think that could be very powerful because it's almost like the ground is not getting up to where the ears could be hearing.'* (Participant P15)

#### **4.1.9 DATA**

Data systems were consistently highlighted as foundational to resource validation and monitoring and tracking the operations and expenditure of CMAs against specific activities. Participants also emphasised the importance of CMAs having an Information and Communications Technology (ICT) Strategy that considers the ICT enterprise architecture and specific objectives related to data collection, protection and use that mirrors the organisation's objectives. Given the important data that is housed within CMAs, it is also critical for CMAs to put in place relevant security measures to protect that data from cyber-attacks. The sharing of data across stakeholder groups also remains a challenge, including the sharing of data between the DWS and the CMAs and accessing water quality data from municipalities.

#### **4.1.10A SUMMARY OF THE CHALLENGES FACED BY CMAS**

The challenges articulated by CMAs during the Situational Assessment and in subsequent learning events are summarised in Figure 8. The 'Governance' learning area was flagged in Learning Event One and was added to the list of challenges identified during the Situational Assessment. This

summary of challenges provides an important starting point for identifying learning priorities for the future Community of Practice.

CMA establishment	Funding/ revenue management	Stakeholder engagement
<p><b>Situational Assessment challenges</b></p> <ul style="list-style-type: none"> <li>• Delays in establishment</li> <li>• Declining stakeholder trust</li> <li>• How to progressively take on additional mandates (from DWS)</li> </ul> <p><b>Additional challenges identified</b></p> <ul style="list-style-type: none"> <li>• Support is needed in relation to establishing the governing board, clarifying roles and responsibilities across the CMA Board and Executives, and facilitating engagement with stakeholders</li> <li>• Support needed on how to effect staff transfers from DWS to the CMA <ul style="list-style-type: none"> <li>• Need for standardisation of procedures across CMAs</li> </ul> </li> </ul>	<p><b>Situational Assessment challenges</b></p> <ul style="list-style-type: none"> <li>• Insufficiency of water use tariffs</li> <li>• Non-registration of water users and non-payment</li> <li>• Inability to implement waste discharge charge – capacity building needed</li> <li>• Performance issues with water user data systems</li> </ul> <p><b>Additional challenges identified</b></p> <ul style="list-style-type: none"> <li>• Better strategy needed for tariff determination and revenue collection, including how to take into account Historically Disadvantaged Individuals when setting and collecting tariffs</li> <li>• How to accurately quantify the public interest subsidy</li> <li>• The billable quantities of water are declining (e.g. climate change reduces the available water; and some users do not pay) and this impacts revenue <ul style="list-style-type: none"> <li>• Need to consider alternative funding options, including the mechanics of applying for and managing funding, and ensuring institutional and financial systems are set up to 'accept' such funding.</li> </ul> </li> </ul>	<p><b>Situational Assessment challenges</b></p> <ul style="list-style-type: none"> <li>• Need to engage stakeholders effectively and raise awareness on value of the water resource and water use compliance processes.</li> <li>• Absence of a reimbursement policy undermines engagement in the CMFs</li> </ul> <p><b>Additional challenges identified</b></p> <ul style="list-style-type: none"> <li>• Importance of indigenous knowledge and involvement of the youth <ul style="list-style-type: none"> <li>• Transboundary activities and collaboration</li> </ul> </li> <li>• Importance of stakeholder database and stakeholder management plan</li> <li>• Sustaining stakeholder interest and engagement is a critical challenge</li> <li>• Establishment of sustainable Catchment Management Forums is a priority</li> </ul>
Water resource management and ecological infrastructure	Skills/ capacity development	Transformation of Irrigation Boards
<p><b>Situational Assessment challenges</b></p> <ul style="list-style-type: none"> <li>• Illegal water use and difficulties with monitoring and enforcement <ul style="list-style-type: none"> <li>• Limited ability to monitor Resource Quality Objectives</li> </ul> </li> <li>• Inadequate understanding of the role of nature in the water value chain</li> </ul> <p><b>Additional challenges identified</b></p> <ul style="list-style-type: none"> <li>• The importance of bringing local communities on board regarding priority ecological infrastructure</li> <li>• Need to understand more about IAPs (identification &amp; management)</li> <li>• Need improvements in, and greater support for, water quality monitoring</li> <li>• Important to integrate ecological infrastructure into the Catchment Management Strategy <ul style="list-style-type: none"> <li>• Consider incentives for protection of ecological infrastructure</li> <li>• Improve understanding of the country's State of Rivers</li> </ul> </li> <li>• Dealing with illegal river pollution and dumping</li> </ul>	<p><b>Situational Assessment challenges</b></p> <ul style="list-style-type: none"> <li>• Capacity is sometimes lacking at senior management and board level to understand operations</li> <li>• Insufficient training for CMA staff</li> <li>• Shortage of specific capacities</li> </ul> <p><b>Additional challenges identified</b></p> <ul style="list-style-type: none"> <li>• This area needs to consider a focus on the Human Resources section of the CMAs</li> <li>• The need to develop a 'shared services' model that can facilitate the exchange of expertise across CMAs and help access services that are relevant to all CMAs, in more efficient and cost-effective ways.</li> </ul>	<p><b>Situational Assessment challenges</b></p> <ul style="list-style-type: none"> <li>• Budget challenges - CMAs need to support emerging farmers and facilitate IB transformation to WUAs, with an inadequate revenue base</li> </ul> <p><b>Additional challenges identified</b></p> <ul style="list-style-type: none"> <li>• No specific additions received</li> </ul>

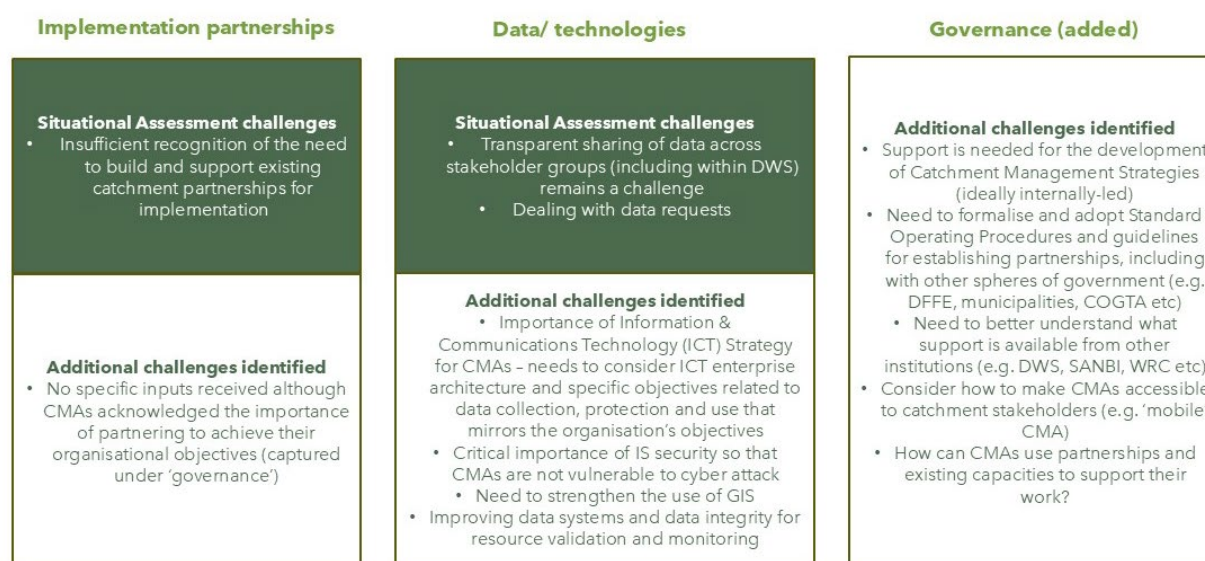


Figure 8: A summary of the challenges highlighted by the CMAs during the Situational Assessment and the learning events

## 4.2 Focusing on the emerging learning priorities

Given the breadth of challenges identified, participants were asked to prioritise these during Learning Event One and provide additional details on specific learning needs and where/how these could be addressed (Figure 9). Additional insights gained during Learning Event Two have also been incorporated into this list of priorities. Importantly, some learning areas emerged consistently through the project as cross-cutting issues for the Community of Practice to address. For example, resolving challenges related to data systems and data collection and analysis is central to a range of issues such as revenue collection, monitoring water resource quality and stakeholder engagement. In such instances, these cross-cutting themes have been captured under the relevant learning area. The learning area related to 'Water resource management and ecological infrastructure' was added to the list of priorities developed during Learning Event One, given the frequency with which participants raised issues related to this during both learning events.





*Figure 9: Learning Event One participants engaging with the original challenges identified by the CMAs, adding to these, and then prioritising areas for future learning*

Table 5 summarises the priority learning areas that emerged across the Situational Assessment and the learning events.

Table 5: A summary of CMA priority learning areas

Learning Area	Description of learning priority	Possible activities/ exchanges to facilitate learning
<b>Governance</b>	<ul style="list-style-type: none"> <li>• Clarifying roles and responsibilities of the Board and CMA executives.</li> <li>• How to effect staff transfers when the CMA is established.</li> <li>• Standardisation of operating procedures across CMAs.</li> <li>• Updating the CMA starter pack (tools, policies etc).</li> <li>• How to develop an insourcing model for the development of Catchment Management Strategies (CMS).</li> <li>• Developing a 'Shared Services' model for CMAs.</li> <li>• How to build and sustain strategic partnerships successfully (e.g. with government sectors and other implementers in the landscape).</li> </ul>	<ul style="list-style-type: none"> <li>• Lessons can be learnt from existing CMAs.</li> <li>• The Vaal-Orange pilot for CMS development could be a good starting point.</li> <li>• Establish a shared policy voice to influence, interpret and implement policies.</li> </ul>
<b>Revenue collection</b>	<ul style="list-style-type: none"> <li>• Capacity development on tariff setting and billing for water services so that this is done accurately. This needs to include consideration of how to take into account Historically Disadvantaged Individuals when setting and collecting tariffs.</li> <li>• Capacity development is needed on how to apply the waste discharge charge.</li> <li>• Support is needed to quantify the public interest subsidy.</li> <li>• Understanding what data systems and processes (including data collection) are needed so that resource validation and monitoring are more accurate.</li> <li>• How to engage with DWS and others to motivate for the simplification of the revenue collection system and the alignment of this with other systems (e.g. the landowner register) that can help monitor and enforce payment.</li> <li>• Decentralisation of payments and how to do this (e.g. decentralisation to Water user Associations).</li> <li>• Improving water metering and enforcement.</li> </ul>	<ul style="list-style-type: none"> <li>• Public interest subsidy: The WRC has undertaken work to help CMAs to quantify this and there is sufficient knowledge to begin engaging with the National Treasury in a more concerted way. This could be the subject of an online learning event.</li> <li>• Many CMAs do not have adequate data systems in place and this undermines allocations, monitoring and revenue collection. This is an important area for learning from CMAs who have established good data management systems.</li> <li>• Engagement with DWS to explore whether there is flexibility to innovate to simplify the revenue collection system.</li> <li>• Documentation of case studies where decentralised payments are happening.</li> <li>• Activities that explore innovative technologies for water meter readings.</li> </ul>

Learning Area	Description of learning priority	Possible activities/ exchanges to facilitate learning
<b>Alternative sources of funding</b>	<ul style="list-style-type: none"> <li>•What sources of alternative funding are available? How can the funding landscape (including existing partnerships) be mapped?</li> <li>•How can these funding sources be accessed?</li> <li>•What are typical donor requirements linked to different funding sources?</li> <li>•Capacity building is needed on how to develop a funding proposal in line with the CMAs' vision and strategic priorities.</li> <li>•Understanding what financial and institutional systems need to be in place to facilitate the flow of funding, and what agreements are needed.</li> <li>•Understanding what additional institutional implications need to be considered (e.g. Human Resources, Finance, Legal, etc.) and how can Corporate Services be part of the funding journey from the start of the process to access funding.</li> <li>•How to sustain alternative sources of funding and funder interest.</li> <li>•Is a Special Purpose Vehicle an appropriate mechanism to facilitate such funding flows?</li> <li>•How does one address possible 'conflict of interest' issues with funders?</li> </ul>	<ul style="list-style-type: none"> <li>•Learn from entities that have done this successfully before.</li> <li>•Need to do a 'deep-dive' on case studies where this has been done before so that the detailed mechanics of what is required can be better understood.</li> </ul>
<b>Stakeholder engagement</b>	<ul style="list-style-type: none"> <li>•How to engage with local communities and indigenous knowledge systems (particularly around ecological infrastructure)</li> <li>•Developing a stakeholder map and database.</li> <li>•How to develop a communication strategy and convene stakeholders.</li> <li>•How to engage with, support, and sustain Catchment Management Forums.</li> <li>•Understanding the needs and interests of stakeholders and what will facilitate them being able to engage/ participate effectively.</li> </ul>	<ul style="list-style-type: none"> <li>•Development of stakeholder engagement guidelines, including best practices for community involvement</li> <li>•Build CMA capacity on the complexity of stakeholder engagement and how to do this well.</li> </ul>
<b>Water resource management and ecological infrastructure</b>	<ul style="list-style-type: none"> <li>•Incorporating ecological infrastructure into Catchment Management Strategies</li> <li>•Engaging local communities to help manage and monitor the ecological infrastructure and the quality of the water resources.</li> <li>•Illegal pollution and dumping – how can this be monitored and prosecuted?</li> </ul>	<ul style="list-style-type: none"> <li>•There would be value in sharing experiences across the CMAs.</li> </ul>

These learning priorities will help to inform the learning programme for the future Community of Practice.

### 4.3 Existing expertise to support knowledge exchange and learning

During the learning event workshops, CMAs highlighted that expertise exists *within* the CMAs to help facilitate broader learning. A summary is included below of the areas of expertise highlighted by participants. The italicised items emerged from the second learning event and indicate which individuals and CMAs could assist with specific issues.

#### Governance:

- Processes on CMA governance (BOCMA)
- Partnering with other entities (BOCMA)
- Organogram development for CMAs (BOCMA)
- Human Resource issues e.g. occupational health and safety (IUCMA)
- Building relationships with other CMAs and sharing learnings (LOCMA)
- Development of Catchment Management Strategies (VOCMA and PUCMA)
- *Updating of guidelines for CMS development - Eustathia, DWS*

#### Revenue collection and management:

- Revenue collection (BOCMA)
- Account queries management (MTCMA)
- Exploring alternative funding mechanisms (BOCMA and SANBI)
- *Using CMA assets on the balance sheet for borrowing funds (DWS)*
- *Unbundling raw water tariff collection - Lehlohonolo Nyabanyaba DWS*
- *Incentive mechanisms to assist in improving revenue collection and encouraging users to pay - Nicolette Mhlanga-Ndlovu, IUCMA and Dorris Maumela (LOCMA)*

#### Stakeholder engagement:

- Establishing and sustaining Catchment Management Forums (LOCMA)
- Broadening stakeholder engagement (VOCMA)
- *Involvement of community members in natural resource management (SANBI)*

#### Ecological infrastructure:

- Budgeting to incorporate green projects (BOCMA)
- Invasive alien plant clearing (BOCMA)

#### Data/Technology:

- GIS capabilities (BOCMA)
- Security and data warehousing (IUCMA)
- Use of satellite systems and drones to monitor water quality (BOCMA)

#### Water resource management

- Workshops on water use licensing (MTCMA)
- Piloting of Resource Quality Objectives (VOCMA)
- Verification and validation of the water resource (IUCMA)
- Preparation for compulsory licensing (BOCMA)



- Development of water balance models (IUCMA)
- Dealing with acid mine drainage (VOCMA)

### **Skills development**

- Establishing knowledge partnerships with universities (IUCMA)
- Working with municipalities to build capacity (PUCMA)

These insights will help guide possibilities for focused learning exchanges and will help identify CMA inputs for future Community of Practice events.

## 5 Conceptualising the Community of Practice

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The previous chapter summarised the learning priorities that were highlighted by the CMAs for the future Community of Practice. The current chapter first outlines what a 'community of practice' is, before considering how the CMA Community of Practice might be conceptualised and structured. The latter focuses specifically on the role and functions of the Community of Practice, how this will be convened and resourced, and what design factors should be considered when operationalising the Community of Practice.

### 5.1 What is a community of practice?

A community of practice is generally understood to be a group of people who share a common concern, interest, passion or challenge and who come together regularly to address these and learn from one another, for example through sharing best practices and building new knowledge to advance the work they are doing (Wenger-Trayner and Wenger-Trayner 2015; ERLC 2016a; Conn 2024). Participants in a community of practice engage in a process of collective learning to learn how to do something better, (Wenger-Trayner and Wenger-Trayner 2015; ERLC 2016a; Conn 2024). This intentionality can help participants to build social ties and break down silos by connecting people, providing a shared context, enabling dialogue, stimulating learning, capturing and sharing existing knowledge and experiences, introducing collaborative processes, generating new knowledge, and helping participants to organise around intentional actions that produce tangible results (ERLC 2016b). 'Practice' refers to participants of the community who put their knowledge, learning and ideas into action, and then bring their discoveries back to the community of practice to help improve the knowledge of the collective. (Wenger-Trayner and Wenger-Trayner 2015; ERLC 2016a; Conn 2024). This can add significant value to individuals and their organisations, for example through problem-solving, time-saving, and innovation (ERLC 2016b).

Similar ideas and values were described by participants in relation to a potential Community of Practice (or community of *learning* and practice, as suggested by one participant) for the CMAs. An interview participant summarised this as follows:

*'A Community of Practice is people with a common vision working in a similar space and trying to achieve similar goals. The Community of Practice would share ideas on overcoming challenges and learning from each other. It also needs resources to bring people together, a convener, (and it would be) best to meet face-to-face for more discussion opportunities.'* (Participant P1)

It was also suggested that a community of practice should help practitioners locate individuals with specific expertise who could supplement (e.g. through deployment or contracting) expertise gaps in other CMAs. Importantly, a community of practice should provide a space where people can share and obtain information and collaborate to avoid duplicating work. This will allow impact to be maximised in the relevant catchment landscapes.

*'If we don't get together and talk about what we're doing, then we're not building a cohesive picture, and this leads to less efficiency because there's probably more redundancy and more overlap of work.'* (Participant P11)

There was agreement across participants that a community of practice is needed for the CMAs (Figure 10). This need was expressed across both *new* CMAs, who are grappling with establishing and operationalising these entities, and also by the more *established* CMAs, many of whom are undergoing processes of 'un-learning' and 're-learning' as they engage with the practicalities of operationalising the complex mandate that falls to the CMAs. Such learning is critical in helping CMAs to be optimally effective in their landscapes, within the shortest times possible, so that they are able to manage the water resource effectively and sustainably in ways that benefit human wellbeing and protect the biodiversity and ecosystems upon which water security depends.



Figure 10: Learning Event One participants engage in discussions to share expertise during one of the learning events

## 5.2 Prioritising the role and functions of the Community of Practice

A number of roles and functions were highlighted by participants for the Community of Practice, with some of these being immediate priorities and others needing to be phased in once the Community of Practice has been established. These roles and functions are summarised in Figure 11 using examples suggested by participants and then outlined further below.

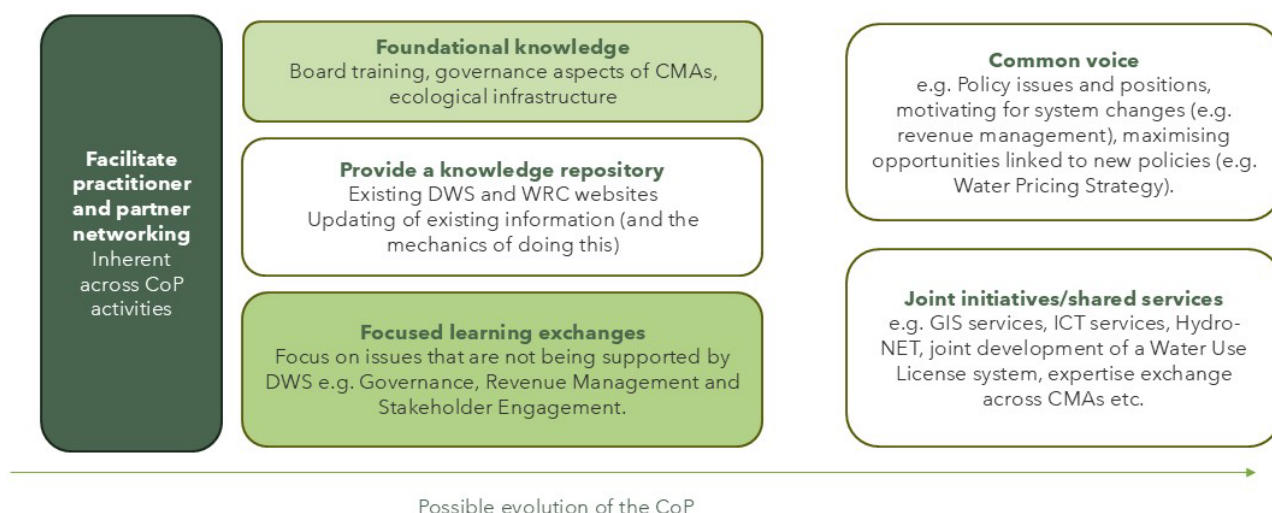


Figure 11: A summary of the priority roles for the Community of Practice, the initial focus for each of these, and the possible evolution of these roles over time

### 5.2.1 FACILITATING PRACTITIONER AND PARTNER NETWORKING

There was a need expressed by participants for the Community of Practice to facilitate improved networking across the CMAs so that individuals undertaking similar work can connect, learn and share with each other. This was highlighted by one interview participant who commented:

*'It is about the stakeholder engagement and social learning approach that other CMAs can learn from that unlocks challenges and opens up opportunities when people talk to each other and share in a transparent and honest manner. CMAs are likely not going to have enough funds to do all the things they should be doing as CMAs; therefore, stakeholder engagement and learning is critical.'* (Participant P1)

The networking function is cross-cutting and should be a focus of all other Community of Practice activities.

### 5.2.2 BUILDING FOUNDATIONAL KNOWLEDGE

This function of the Community of Practice would likely take the form of more traditional 'training' and resources to facilitate learning around aspects such as CMA establishment, stakeholder engagement and facilitation, principles of Water Resource Management, and the role of nature in the water value chain. As one interview participant highlighted:

*'If we are looking at a community of practice that develops a better understanding among the CMAs on the value of nature in maintaining water quality and quantity, that's a good thing. Just at the basic understanding level.'* (Participant P4)

### 5.2.3 FACILITATING FOCUSED LEARNING EXCHANGES

Interest was previously expressed in focused bilateral engagements across CMAs around specific learning areas. At the time of the Situational Assessment, initial priorities included revenue collection and management (including exploring alternative funding options), improving compliance, monitoring and enforcement, and strengthening stakeholder engagement. These

initial priorities were echoed in the subsequent learning event workshops, along with additional priorities that could become the subject of focused learning exchanges. Such exchanges would provide an important opportunity for learning and sharing despite the different contexts in which the CMAs operate. As one participant highlighted:

*'There is a lot of capacity development that a Community of Practice could facilitate, such as understanding water resource management within the different CMAs and how the relevant units are dealing with it. For instance, the CMAs may do licensing differently, but the value of the Community of Practice is in the water management areas, recognising the differences but learning together. This also opens up opportunities for collaboration.'* (Participant P1)

An important consideration when planning learning exchanges and broader Community of Practice events is the inclusion of field visits where possible. This was seen by participants as a way to facilitate more effective and 'hands-on' learning.

#### **5.2.4 BUILDING KNOWLEDGE REPOSITORIES**

There is a need for CMAs and other organisations to access existing information easily. This could, for example, relate to guidelines/learnings on aspects of CMA establishment, Catchment Management Strategies that have been developed by CMAs, organisational structures that have been finalised, etc. CMAs saw the value in a central repository where relevant documents could be stored, updated and easily accessed by other CMAs. It was acknowledged that there is already a lot of existing content that could be stored in such a repository and used to build capacity.

It was also highlighted that DWS currently hosts a website where several CMA-related documents can be found. However, many of these are outdated. The WRC also has a repository of water research documents on its website, but these do not cater specifically to CMAs and their functions. Options and responsibilities for setting up and managing a repository of up-to-date documents will need to be further explored. An initial priority is to engage with DWS to assess whether this could be addressed through an updated website platform. This might, for example, involve creating a dedicated 'path' on the website for CMAs and should also differentiate between information that needs to be available for public consumption and information that is aimed at CMAs specifically.

The importance of knowledge repositories and networking to support communities of practice is also seen in other successful local cases such as 'Urban Energy Support' (Box 1) which provides a portal of resources and guidelines, along with in-person capacity-building events, to support South African municipalities in the transition towards sustainable local energy development.



### **Box 1: Urban Energy Support**

Urban Energy Support (<https://www.cityenergy.org.za/>) is an information portal of relevant documents and resources, emphasising practical tools and guides to support South African municipalities in the transition towards sustainable local energy development and a low-carbon trajectory for South Africa in the context of global climate change (SEA and SALGA 2023). The portal is complemented by various online and face-to-face events attended by municipal officials, including training and capacity-building workshops.

The Urban Energy Support portal is managed by Sustainable Energy Africa (SEA) in partnership with the South African Local Government Association (SEA and SALGA 2023). SEA is a registered Not-for-Profit organisation.

The main participants in the Urban Energy Support community of practice are municipal officials who are involved in energy and electricity management and implementation. Participants benefit from access to a wide range of resources on the Urban Energy Support portal and from being able to participate in a range of face-to-face training and capacity-building events. Participating municipal officials are able to meet a wide range of their colleagues from other municipalities during these events (networking), who they can access for advice and resources.

#### **5.2.5 'COMMON VOICE'**

During the first learning event discussions, participants added two roles for the Community of Practice: 'Common Voice' and 'Joint Initiatives/Shared Services'. These additions were in recognition of the potential role of the Community of Practice in creating space for CMAs to engage with key policy and system issues and develop a common position that could be more strongly represented in relevant discussions and forums (as opposed to each CMA representing these issues separately). There is also potential for CMAs to work together and raise concerns or maximise opportunities linked to new policies/strategies. As an example, in the second learning event, participants raised common concerns about the new Water Pricing Strategy with the DWS officials who were present. These concerns included: the need for CMAs to be engaged early on regarding the Implementation Plan for the Strategy; the lack of clarity around the role of the Economic Regulator in relation to DWS in the water space; and the assumptions made by the National Treasury and the Water Pricing Strategy around the future financial sustainability of the CMAs. The Community of Practice platform could potentially provide important opportunities for such collective issues to be raised and strengthened in the future.

#### **5.2.6 'SHARED SERVICES'**

It was also acknowledged that there are instances where CMAs require similar services and could benefit from a process where one CMA procures these on behalf of the others, with costs then being shared. Examples of this would be if CMAs had a specific training need or wanted to generate operational guideline documents that would be common across all. The 'shared services' concept could also apply if expertise in one CMA was needed by another - this could be shared through some form of exchange or secondment arrangement.

Importantly, it was acknowledged that these roles and functions of the Community of Practice would need to evolve over time. The success of the 'common voice' and 'shared services' components would be dependent on a functional and sustainable Community of Practice and strong relationships across the CMAs, both of which will take time. However, it might be possible to undertake early discussions around more 'entry-level' issues in these spaces, for example relating to broad policy engagement in the case of 'common voice' and the exchange or secondment of expertise as part of building 'shared services' capacity.

### 5.3 Initial participants

An important need was expressed for a Community of Practice to focus specifically on the CMAs as primary participants. Despite the different geographies and issues facing the CMAs, the approaches they adopt are often similar and can be shared. Such a platform would therefore help to facilitate learning across the CMAs:

*'We need a CMA platform to talk amongst themselves on sharing experiences as some are advanced in their establishment.'* (Participant P10)

However, it was also acknowledged that the CMAs cannot be effective in the absence of multi-stakeholder engagement and collaboration. A suggestion from some interview participants was therefore that a Community of Practice should also include participants outside of the CMAs. This was seen to be particularly important in areas where CMFs are not playing the role of aligning and supporting the work of multiple stakeholders in the catchment. As one interview participant highlighted:

*'And it can't just involve the State. It has got to involve the catchment management forums and all the other relevant players in the system...You can't just have a community of practice for a CMA. It needs to be a community of practice for the stakeholders within a catchment context. A community of practice should involve a group of institutions and individuals with a common interest who are willing to learn from one another.'* (Participant P4)

Through discussion at the learning events, participants agreed that the Community of Practice should initially be focused on learning *between the CMAs*, with the CMAs as the main participants. However, they emphasised that an important focus of the Community of Practice should be to develop CMA capacities around stakeholder engagement, strengthening CMFs and partnering for implementation. This would help strengthen stakeholder engagement and existing catchment-based communities of practice. Organisations external to the CMAs could also be included in learning events on a more *ad hoc* basis, depending on the learning focus.

### 5.4 Initial convening and resourcing of the Community of Practice

There was broad support for the Water Research Commission to be the initial convener of the Community of Practice. The WRC expressed willingness to play this convening/secretariat role but emphasised that CMA leadership would be needed to oversee this work and decide what the Community of Practice should focus on. The WRC's willingness to take responsibility for the initial 'anchor' role to establish and convene the Community of Practice in its early stages is significant.



This role, which is often lacking in such initiatives, is foundational to the current and future success of the Community of Practice.

It was proposed that, in the absence of a CMA CEO Forum (which may still be convened once all the CMAs are operational), an interim 'reference group' is established that would include senior representatives from each of the CMAs, as well as representatives from the WRC (secretariat/convenor role) and SANBI (observer role), to provide the necessary strategic guidance for the Community of Practice. Importantly, the CMAs also suggested that additional participants be included in the Community of Practice reference group on an *ad hoc* basis when needed. Initial priorities would include the National Treasury and DFFE (Environmental Programmes). Other organisations such as the South African Association for Water User Associations (SAAFWUA) and the Association of Water and Sanitation Institutions of South Africa (AWSISA) could also be invited for relevant discussions.

It was agreed that the Community of Practice should aim for bi-annual in-person meetings, with interim meetings convened on Microsoft Teams. In-person meetings could be hosted on a rotational basis by each of the CMAs to share costs and CMAs would cover their own costs related to travel and accommodation for these events. The WRC proposed to appoint an individual in a full-time position to establish, convene and facilitate the Community of Practice. This role could, in time, extend to include fundraising for the sustainability of the Community of Practice and engaging with local and international funders that could support the work of the CMAs. This proposal from the WRC was well supported by participants.

The convening and resourcing model described above is evident in other successful communities of practice, such as the Adaptation Network (Box 2). The Adaptation Network has a dedicated 'convenor' position, with the secretariat function being hosted by different member organisations. The secretariat is supported by a strategic Steering Committee, and the Adaptation Network receives external funding to sustain its activities.

## BOX 2: The Adaptation Network

The Adaptation Network (<https://adaptationnetwork.org.za/>) is a multi-stakeholder network aimed at knowledge sharing, capacity building, policy engagement and collective learning around climate adaptation and resilience. It aims to enhance adaptive capacity and reduce vulnerability to climate change, particularly amongst the most vulnerable and marginalised communities in Southern Africa. The Adaptation Network makes a range of tools and resources available on its website to empower communities and organisations. These resources and tools support climate change adaptation efforts by communities and organisations and empower them to tackle climate change head-on. Members benefit from being able to participate in events of the network. These range from capacity-building events to events to coordinate inputs into policy processes. The network also shares funding opportunities with members and, in some cases, provides opportunities for members to bid for work to implement aspects of the Network programmes.

The Adaptation Network was established in South Africa in 2009 and is funded by a range of funders (The Adaptation Network 2024b; 2022; 2017). The coordination and administration of the Adaptation Network is done through a dedicated Secretariat, which is hosted by a member organisation selected at the annual general meeting (The Adaptation Network 2024a). the Secretariat is supported by a Steering Committee that provides strategic guidance.

## 5.5 Alignment with other Communities of Practice

Establishing a Community of Practice requires thought to be given to related initiatives that might already exist that a new community of practice could support, draw from, or align with, to avoid duplicating existing functions. Important initiatives highlighted by participants to be considered when planning for a future Community of Practice include:

- *CMA CEO Forum*: As indicated, there is an intention to re-establish this forum, which could then potentially play a stronger role in terms of convening and sustaining the Community of Practice.
- *DWS website for knowledge repository*: As indicated earlier in this report, DWS currently stores several CMA-related documents on its website. DWS would need to be part of a conversation to plan for an updated information repository for CMAs.
- *National Treasury*: The National Treasury has undertaken work on ‘shared services’ and could provide important guidance on how this future Community of Practice function could be framed and planned within the context of the CMAs and existing legislation.
- *Existing learning exchanges*: PUCMA and BOCMA are currently planning a learning exchange focused on the development of a Catchment Management Strategy and involving the youth as a key stakeholder group for CMAs. There will be important learnings to derive from this exchange, which could be important for the future Community of Practice.
- *The Association of Water and Sanitation Institutions in South Africa (AWSISA)*: AWSISA supports the interests of Water and Sanitation Institutions across the value chain in South Africa, provides an advisory role to the sector on matters relating to Integrated Water Resources Management and fosters partnerships among its members. Future interactions

between AWSISA and the Community of Practice will therefore be critical in aligning learning and collaboration opportunities.

## 5.6 Design and operational considerations for future Community of Practice events

### 5.6.1 STRUCTURING LEARNING SESSIONS

The following considerations will be important when planning future Community of Practice events:

- *Focus on priority learning areas*  
Important insights have been gained regarding the learning priorities for CMAs (see Chapter 4 of this Report) and Community of Practice events should focus on building learning and capacity in relation to these.
- *Plan for a combination of policy-focused and experience-based learning sessions*  
During Learning Event Two, the combination of a policy-level discussion (focused on the new Water Pricing Strategy) and experience-based inputs (focused on the development of a Catchment Management Strategy) worked well. This approach could be considered moving forward. However, it is important to allow sufficient time for discussions after such inputs.
- *Include 'deep dive' case studies*  
Participants highlighted the importance of moving beyond discussions and starting to implement the ideas that have been repeatedly raised in workshops. This will require that future learning events allocate time for 'deep dives' on relevant topics so that CMAs can benefit from the more in-depth actions and lessons learned from other CMAs. The 'alternative funding' discussion was one such example.
- *Plan for a combination of in-person and online events*  
For more focused engagements on specific topics, in-person events (in some cases between two or three CMAs only) were favoured for learning. These could be alternated with online events covering topics of broad relevance to all CMAs. Importantly, participants highlighted the value of field trips in facilitating learning and practical engagement on specific topics.
- *Hear from CMAs across the experience spectrum*  
A recurring theme from the discussions and evaluations was the value of hearing directly from experienced CMAs so that the knowledge and successes of the older CMAs can be leveraged to support and mentor newer CMAs. This needs to be accompanied by inputs from the newer CMAs so that their challenges and successes can also help inform the actions of others.
- *Invite additional contributors*  
Although participants acknowledged the wealth of expertise that exists within the CMAs, they also emphasized the importance of including external stakeholders such as the

National Treasury, municipalities, the Department of Cooperative Governance and Traditional Affairs (COGTA), South African Local Governments Association (SALGA), Water Boards, and experts in relevant fields to enrich the discussions. These will need to be determined based on the topic/s for discussion. For example, for future discussions on 'alternative funding', there were suggestions to invite donors who can speak to their funding approach and requirements. The value of this approach was seen in the rich discussions that followed the input from DWS on the new Water Pricing Strategy during Learning Event Two.

- *Support the new CMAs*

Sessions that focus on practical guidance and best practices can help new CMAs.

- *Create space for networking*

The learning events tested various methods to facilitate networking, including networking-focused participant introductions and sufficient time for lunches and afternoon teas to facilitate informal networking. In the first Learning Event, there were also structured opportunities for group work, and this approach could be used in future events to increase opportunities for more direct and project-focused engagements between CMAs.

## 5.6.2 LOGISTICS

The following logistics considerations will be important for future events:

- *Event invitations*

The number of participants at the second learning event was higher than that for Learning Event One. This was achieved through a combination of distributing the invitation to both CEOs/Acting CEOs and those who had participated in Learning Event One (previously the invitation was distributed to the CEOs/Acting CEOs only, with a request for them to identify appropriate attendees); and including a request in the invitation for participants to extend the invitation to other colleagues who would benefit from the discussions. This approach of extending invitations directly to a core group of 'founder participants' and requesting that this be distributed to sector-relevant individuals should be considered for future Community of Practice events.

- *Allocate sufficient time for the learning event and individual sessions*

Although most participants seemed satisfied with a one-day workshop event, others felt that some of the sessions later in the day (for Learning Event Two) were rushed and that there would have been value in a two-day event. This would be something to consider for future events. An option would be to use the second day for 'deeper dive' discussions that allow CMAs to engage more directly and in more detail around a specific topic. CMAs could then choose whether to stay on if relevant. In terms of the length of the workshop sessions, these were designed to be at least 1 to 1 ½ hours in duration for Learning Event Two, with instructions given to presenters to limit their inputs to 20-25 minutes. This did allow for significant discussion, but some participants felt that even more time could have been allocated.

- *Consider the venue's accessibility and size*  
The WRC venue in Pretoria was generally well-received, although some participants raised concerns about cramped seating, insufficient power outlets, and limited parking options. This was more problematic for Learning Event Two when participant numbers were higher.
- *Communicate clearly on catering*  
Some participants felt that there were too few meat options. This needs to be balanced with the growing awareness of the importance of plant-based diets for environmental sustainability. For future events, the reasons for such decisions could be communicated more clearly to participants.

## 6 Final Recommendations

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The following recommendations represent a summary of the ideas that have emerged through this project in relation to the purpose, focus and functioning of a Community of Practice for the Catchment Management Agencies.

### *The Need for a Community of Practice*

It is recommended that:

- A Community of Practice is established that facilitates learning and the exchange of knowledge and expertise across CMAs to assist them in fulfilling their mandate.
- The Community of Practice focuses initially on the CMAs as core participants, with additional secretariat and observer roles in the Community of Practice being fulfilled by the WRC and SANBI, given their leadership role in the EI4WS project. Entities such as the National Treasury, DFFE, the South African Association of Water User Associations (SAAFWUA), the Association of Water and Sanitation Institutions of South Africa (AWSISA) and others should be encouraged to participate as and when the focus of Community of Practice events aligns with their areas of interest and/or expertise.
- The Community of Practice actively facilitates the inclusion of women and youth in relevant events and engagements and tracks their participation. As an example, a youth-focused learning exchange could be arranged between catchments where young people are actively involved in managing and monitoring water resources.

### *Convening the Community of Practice*

It is recommended that:

- The critical importance of having an 'anchor' point to establish and sustain the Community of Practice is recognised.
- The Community of Practice is initially convened by the WRC, which will play a 'secretariat' role for the first three to five years to build momentum and embed the learning programme.
- The WRC motivates for the appointment of a full-time Community of Practice convenor within the WRC, and funded by the WRC, to help establish and convene the Community of Practice in its initial phases.
- The WRC's Community of Practice convenor is initially responsible for planning and convening the Community of Practice, with later responsibilities including fundraising to support additional activities and the sustainability of the Community of Practice. Additional responsibilities could also include providing support to the CMAs to draft common positions on policy and legislation (related to the 'common voice' function of the Community of Practice) and to procure shared services. These additional responsibilities would need to be further discussed.
- The potential role of the CMA CEO Forum (once re-established) is considered in relation to the longer-term home and sustainability of the Community of Practice. Should this not be appropriate at that time, broader consideration will need to be given to the ongoing 'anchor' role that will be needed to sustain the Community of Practice.
- As an interim measure until the Community of Practice has been launched, the WRC hosts at least one learning event for the CMAs to retain the momentum that has been generated through the current project. This could, for example, focus on how to calculate the Public Interest Subsidy, which is an area where the WRC has direct expertise.

### *Providing strategic direction for the Community of Practice*

It is recommended that:

- The strategic direction and focus of the Community of Practice is determined by a Reference Group comprised of senior CMA representatives, DWS, the WRC (in a convenor role) and SANBI (in an observer role). Other institutions such as the National Treasury, DFFE, SAAFWUA and AWSISA could be included in the Reference Group on a strategic needs basis, depending on the focus of upcoming learning events.

### *Role/functions of the Community of Practice*

It is recommended that:

- In its early phases, the role of the Community of Practice is focused on facilitating practitioner and partner networking, building foundational knowledge, facilitating focused learning exchanges and building a knowledge repository.
- The functions of the Community of Practice include a focus on building a 'shared services' model across the CMAs and using the Community of Practice to strengthen the 'common voice' of CMAs around specific policy and legislative issues. In the early phases of the Community of Practice, entry-level conversations could be convened to support these functions. For example, agreeing on how to share and/or second expertise between CMAs or procuring common training for CMAs could be a starting point for strengthening the 'shared services' model. Collective engagement of the CMAs on new policies could be a starting point for the 'common voice' function, which might grow over time to focus on developing more formal CMA positions in response to specific policies, legislation and related issues.
- An additional and immediate function of the Community of Practice is to advocate for an updated information portal that would include resources such as an updated starter pack and guidelines for CMAs. An initial conversation with DWS is needed to assess their role in updating existing documents and providing the required platform on their existing website.

### *Learning Priorities for the Community of Practice*

It is recommended that:

- Priority (initial) learning areas for the Community of Practice are in the areas of governance, revenue collection, sourcing alternative funding, stakeholder engagement and water resource management. Within these broad areas, immediate focus areas should include:
  - *Governance*: Establishing a CMA Board; clarifying roles and responsibilities for the Board and CMA executives; effecting staff transfers from DWS to CMAs; and exploring options to share and/or second expertise between CMAs.
  - *Revenue collection*: Capacity building on the application of the waste discharge charge and the calculation of the Public Interest Subsidy.
  - *Alternative sources of funding*: Exploring detailed case studies where CMAs have successfully secured alternative sources of funding.
  - *Stakeholder engagement*: Facilitate learning around how to develop a stakeholder database and an engagement strategy to strengthen relationships with stakeholders and partners in the landscape and build an understanding of the importance of the water resource and payment for water use. Another priority will be to continue discussions around how to develop a Catchment Management Strategy that is based on community-level engagement and includes the protection and management of ecological infrastructure.



- *Water resource management and ecological infrastructure:* Monitoring and enforcement particularly in relation to water quality, and illegal activities such as pollution and dumping.
  - *Data systems:* Strengthening data systems for water allocations and tracking water use to inform tariff setting and billing.
- Attention is given within the Community of Practice and its learning priorities, to building the capacity of CMAs to partner more effectively with relevant organisations in their catchment landscapes (e.g. local government, NGOs, CBOs, private sector etc), given that partnerships play a critical role in aligning efforts within the catchment, expanding implementation (often in focus areas that are not the strength of CMAs) and accessing funding.
- The Community of Practice is used as a platform to engage on specific legislation and policies emanating from the national government and with implications for CMAs. Initial priority conversations could be The Implementation Plan associated with the new Water Pricing Strategy (DWS) and the financial sustainability of the CMAs (National Treasury).
- The Community of Practice draws significantly on the expertise and learning that already exists within the CMAs but also draws on external expertise from relevant government departments and partner organisations when needed.

#### *Resourcing the Community of Practice*

It is recommended that:

- CMAs fund their own participation in Community of Practice events and the responsibility and costs associated with hosting Community of Practice events are shared between the CMAs on a rotational basis.

#### *Fundraising for the Community of Practice*

It is recommended that:

- Once the Community of Practice is operational, the WRC secretariat role is expanded to include elements of fund-raising for Community of Practice activities and learning exchanges.
- This fundraising responsibility extends to include engagements with local and global funders (e.g. the Blue Deal project, the Green Climate Fund etc) that can support the Community of Practice itself, as well as the work of the CMAs.
- The responsibility for fundraising ultimately transitions to the entity that will house the Community of Practice on a longer-term basis.

#### *Structuring Community of Practice learning events*

It is recommended that:

- Broader Community of Practice learning events focus on a combination of policy, sharing CMA experiences (including deeper dive case studies where needed) and networking opportunities. Bilateral learning exchanges on focused topics should also be considered, as should the inclusion of field trips where relevant.
- The Community of Practice is structured as a combination of online and in-person events, with learning exchanges facilitated on a bilateral basis (or as needed) focused on specific topics that require more detailed sharing and exchange than can be accommodated in a broader event. In the context of in-person learning exchanges, field trips should be included wherever possible to facilitate more effective learning and sharing.

- Careful consideration is given to event logistics such as the distribution of invitations, time allocated for learning sessions, and venue accessibility when planning Community of Practice events.
- Further consideration is given to how to structure Community of Practice events to cater for the needs across the spectrum of CMAs from those that are newly established to those that have been operational for many years. This could, for example, be accommodated through a combination of broad learning events for all CMAs, focused for example on policy issues affecting all, with more focused learning exchanges structured to meet CMA-specific needs.

### *Monitoring and evaluation*

It is recommended that:

- Once launched, objectives are defined for the Community of Practice so that progress towards these can be monitored on a regular basis.
- The Value Creation Framework continues to be used as a way of assessing the social learning and change taking place as part of the Community of Practice.
- A mid-term assessment is undertaken to determine the progress of the Community of Practice and consider its longer-term institutional location and resourcing.

## 7 Next steps to establish the Community of Practice

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A summary of immediate next steps is outlined, along with a high-level work programme that indicates how the learning activities, roles and functions of the Community of Practice might evolve over time.

The following activities should be prioritised in the period prior to the official launch of the Community of Practice:

- *WRC to seek internal support to move forward with the Community of Practice:* The WRC intends to use the outcomes and recommendations from the current project to motivate for the WRC to convene a Community of Practice to support the CMAs. This will include motivating for and establishing a full-time position to coordinate this process from 2025. Early discussions within the WRC have already been convened in this regard.
- *Appointing a Community of Practice coordinator:* If the WRC secures support internally to move forward with the Community of Practice, a critical next step will be to develop a job description and advertise and appoint a Community of Practice coordinator. It will be necessary to clearly define the responsibilities of this role and its strategic importance. The job would have multiple roles including acting as a strategic link, coordinating the Community of Practice, facilitating the meetings of the Community of Practice, and fundraising at a later point.
- *Facilitating interim conversations to maintain CMA interest and project momentum:* It is proposed that the WRC convene at least one interim learning meeting prior to the launch of the Community of Practice to sustain the momentum and interest that has been generated through this project amongst the CMAs. Suggested learning focus areas for these interim conversations would be:
  - Exploring the option of a Special Purpose Vehicle to support CMAs with implementation and fundraising (to be organised with AWSISA, the proponents of this model).
  - Unpacking the Public Interest Subsidy: The WRC has undertaken research to understand the Public Interest Subsidy and how it is calculated. A conversation that unpacks the basic principles related to this, could be initiated with the CMAs, acknowledging that this would need to be developed further once CMAs have the relevant mechanisms in place to track their operating costs and activities effectively.
- *Future work of the Community of Practice:* Once the Community of Practice has been established and resourced, there are several actions that will follow. These include convening the Community of Practice reference group, engaging in discussions around items emerging from the learning events (e.g. relating to the DWS document repository) and planning the substantive focus of future events, drawing from the learning priorities and existing expertise that have been identified by the CMAs.

A suggested work programme and phasing for priority activities and roles/functions of the Community of Practice is provided in Table 6. The work programme is proposed in phases, with the assumption that a review will be undertaken at the end of Phase 2 (approximately 3 years after launch), which will inform the way forward for Phase 3 of the 5-year period of the WRC's convening role for the Community of Practice. Table 6 outlines a work programme for the first two phases. Additional narrative on the assessment process that will need to be undertaken at the end of Phase Two, to inform Phase Three, is included after the table.

It is important to note that this proposed work programme is indicative only and is based on the feedback received during the course of the project. This proposed work programme will need to be deliberated on and further refined once a Community of Practice Coordinator has been appointed. However, the proposed work programme is intended to provide a starting point for these discussions and the development of a comprehensive work programme for the future Community of Practice for the CMAs.

Table 6: A proposed work programme for priority activities and roles/functions of the Community of Practice

Activities	Community of Practice Phase 1: Establish	Phase 2: Advance and evolve
<b>Convening the Community of Practice</b>	<ul style="list-style-type: none"> <li>•WRC to play a secretariat and convening role for the Community of Practice.</li> <li>•Bi-annual virtual and in-person meetings to be convened.</li> </ul>	<ul style="list-style-type: none"> <li>•WRC to play a secretariat and convening role for the Community of Practice.</li> <li>•Bi-annual virtual and in-person meetings to be convened.</li> <li>•Introduction of bilateral learning exchanges.</li> <li>•The role of the Community of Practice Coordinator could, over time, expand to include fundraising and providing support to CMAs to develop common policy positions and procure shared services.</li> </ul>
<b>Providing strategic direction for the Community of Practice</b>	<ul style="list-style-type: none"> <li>•WRC to request nominations from CMAs for representation on the Community of Practice Reference Group (CEOs or their representatives) to provide strategic guidance on Community of Practice priorities.</li> <li>•WRC Community of Practice Coordinator to convene the Reference Group and agree on a Terms of Reference for this group.</li> <li>•Community of Practice Reference Group to be convened to agree on an initial work programme and learning priorities.</li> </ul>	<ul style="list-style-type: none"> <li>•Community of Practice Reference Group to be convened, at least twice each year to guide the learning priorities and activities associated with the Community of Practice.</li> </ul>
<b>Functions of the Community of Practice</b>		
<b>Facilitating networking</b>	Facilitate networking.	Facilitate networking.
<b>Building foundational knowledge</b>	Build foundational knowledge (e.g. on governance aspects of establishing CMAs)	Build foundational knowledge (e.g. on the role of ecological infrastructure in the water value chain)
<b>Facilitating focused learning exchanges</b>	<ul style="list-style-type: none"> <li>•Identify priority learning exchange needs across the CMAs and the expertise that exists within and outside of the CMAs to support these.</li> <li>•Reflect on lessons learned from other bilateral exchanges (e.g. between BOCMA and PUCMA).</li> <li>•Initiate one learning exchange as a pilot case.</li> </ul>	<ul style="list-style-type: none"> <li>•Facilitate additional bilateral learning exchanges as needed.</li> <li>•Facilitate at least one learning exchange between target groups (e.g. youth) across two catchments.</li> </ul>
<b>Building knowledge repositories</b>	<ul style="list-style-type: none"> <li>•Community of Practice Coordinator to engage with DWS and others to agree on a platform for the CMA knowledge repository.</li> </ul>	<ul style="list-style-type: none"> <li>•Additional CMA documents (e.g. Catchment Management Strategies, Human Resources guidelines, etc.) to be sourced and uploaded.</li> <li>•Agree on roles and responsibilities for updating and adding documents to the document repository platform.</li> </ul>

Activities	Community of Practice Phase 1: Establish	Phase 2: Advance and evolve
	<ul style="list-style-type: none"> <li>•DWS materials (including the CMA starter pack) to be updated and uploaded onto the platform (DWS and CMA are responsible for updates)</li> </ul>	<ul style="list-style-type: none"> <li>•Ensure ongoing maintenance of the platform and documents.</li> </ul>
<b>'Shared services'</b>	Facilitate initial discussions on shared services, with a focus on: <ul style="list-style-type: none"> <li>•The mechanisms required to facilitate the exchange and/or secondment of expertise between CMAs</li> <li>•CMA training for proposal writing (to secure funding)</li> </ul>	Progress the shared services discussions at Community of Practice events to explore other opportunities such as: <ul style="list-style-type: none"> <li>•Shared data services</li> <li>•Joint development of funding proposal</li> <li>•Development of stakeholder engagement (or other) guidelines for CMAs.</li> </ul>
<b>'Common voice'</b>	Facilitate initial discussions focused on: <ul style="list-style-type: none"> <li>•Emerging policy and legislative issues affecting all CMAs.</li> <li>•Engaging with the National Treasury on other revenue-generating activities that are possible for CMAs.</li> </ul>	Strengthen the role of the Community of Practice in reflecting a 'common voice' for CMAs by developing common positions on specific policy and related issues, for submission to the relevant parties.
<b>Learning priorities for Community of Practice activities</b>		
<b>Governance</b>	Focus on: <ul style="list-style-type: none"> <li>•Aspects of CMA establishment, for example, staff transfers from DWS</li> <li>•Clarifying and aligning roles and responsibilities of the Board and CMA executives.</li> <li>•Developing stakeholder-led Catchment Management Strategies (including a focus on local knowledge systems, youth and ecological infrastructure).</li> </ul>	Focus on: <ul style="list-style-type: none"> <li>•Building and sustaining strategic partnerships with communities and implementation partners in catchments.</li> <li>•Strengthening other CMA functions such as Human Resources and Information and Communications Technology.</li> </ul>
<b>Revenue collection</b>	Focus on: <ul style="list-style-type: none"> <li>•Building capacity on tariff setting and billing. This should include a focus on the data systems and data collection processes that are needed to inform water allocations and improve understanding of CMA costs and generating bills.</li> <li>•Follow-up conversations with DWS on the Implementation Plan for the new Water Pricing Strategy.</li> </ul>	Focus on: <ul style="list-style-type: none"> <li>•Capacity development on applying the waste discharge charge.</li> <li>•Capacity development to calculate the Public Interest Subsidy (assuming data collection systems have been established in Phase 1).</li> <li>•Options for decentralising payment systems for water users.</li> <li>•Innovative technologies for water meter readings and other mechanisms to track water use.</li> </ul>
<b>Alternative sources of funding</b>	Focus on: <ul style="list-style-type: none"> <li>•'Deep dive' sessions using examples where CMAs have had success securing funding. Deep dive sessions should focus on the details of the funds that were sourced, how this was done</li> </ul>	Focus on: <ul style="list-style-type: none"> <li>•Building CMA capacity to map existing partners and actors in the landscape and leverage these in strategic ways for additional support and, potentially, funding.</li> </ul>



Activities	Community of Practice Phase 1: Establish	Phase 2: Advance and evolve
	<p>and the financial and institutional systems needed to facilitate the flow of funding.</p> <ul style="list-style-type: none"> <li>• Information sharing on funding avenues and options – This should include input from DWS on international partnerships and technical support that are available through existing relationships at the national government level.</li> </ul>	<ul style="list-style-type: none"> <li>• Developing a CMA funding proposal that is aligned with the strategic vision of the CMA.</li> </ul>
<b>Stakeholder engagement</b>	<p>Focus on:</p> <ul style="list-style-type: none"> <li>• Sharing lessons on how to establish and sustain an effective Catchment Management Forum and other relationships with catchment management stakeholders.</li> </ul>	<p>Focus on:</p> <ul style="list-style-type: none"> <li>• Building CMA capacity to develop a communication strategy to raise awareness of catchment issues and stakeholder responsibilities (e.g. in terms of water use licensing and payments).</li> <li>• Transboundary collaborations and engagement.</li> </ul>
<b>Managing the water resource and ecological infrastructure</b>	<p>Focus on:</p> <ul style="list-style-type: none"> <li>• Building foundational knowledge on ecological infrastructure and how this can be considered within the context of CMSs, water quality monitoring and landscape management.</li> <li>• Explore mechanisms for monitoring the natural resource e.g. technologies, partnerships and citizen science options.</li> </ul>	<p>Focus on:</p> <ul style="list-style-type: none"> <li>• Mechanisms to monitor and address illegal pollution and dumping.</li> <li>• Securing partnerships and/or funding to strengthen investments in ecological infrastructure.</li> </ul>
<b>Resourcing the Community of Practice</b>	<ul style="list-style-type: none"> <li>• WRC to cover the costs for the secretariat/ convening function.</li> <li>• CMAs to fund their own travel.</li> <li>• CMAs host learning events (on a rotational basis) to cover the costs of venue and catering.</li> </ul>	<ul style="list-style-type: none"> <li>• WRC to cover the costs for the secretariat/ convening function.</li> <li>• CMAs to fund their own travel.</li> <li>• CMAs host learning events (on a rotational basis) to cover the costs of venue and catering.</li> <li>• Should additional funding be sourced, this could be used to expand participation in learning events and/or support additional bilateral learning exchanges.</li> </ul>
<b>Fundraising for the Community of Practice</b>	<ul style="list-style-type: none"> <li>• WRC to provide internal resources to appoint a Community of Practice convenor.</li> <li>• WRC's Community of Practice Coordinator role to expand to include elements of fund-raising for Community of Practice activities and learning exchanges.</li> </ul>	<ul style="list-style-type: none"> <li>• Community of Practice Coordinator continues to source funding to support CoP activities and learning exchanges.</li> <li>• The fundraising role expands to include funding options that could be beneficial in supporting the work of the CMAs.</li> </ul>
<b>Monitoring and evaluation</b>	<ul style="list-style-type: none"> <li>• Agree on a collective vision for the Community of Practice, strategic objectives and monitoring metrics.</li> <li>• Undertake regular monitoring and evaluation (at least once per year), combined with Community of Practice event assessments guided by the Value Creation Framework.</li> </ul>	<p>Undertake regular monitoring and evaluation (at least once per year), combined with Community of Practice event assessments using the Value Creation Framework as a guide.</p>

### Work programme - Phase Three

At the end of Phase Two, a mid-term assessment (after approximately three years) will need to be conducted. This should consider the following:

- What has worked and what hasn't worked in the Community of Practice?
- The roles (e.g. convenor) that need to be performed to ensure that the Community of Practice functions effectively.
- Costs associated with implementing the Community of Practice.
- Longer-term options for the future 'home' of the Community of Practice (i.e. beyond the initial 5-year period of the WRC convening role).
- Longer-term fundraising priorities and responsibilities for exploring funding options.
- The work programme for Phase 3, including the steps needed to transition the work from the WRC into a longer-term and sustainable location.
- The role of the CMA CEO Forum in relation to the Community of Practice, should this forum have been re-established.

The outcomes of the assessment should be used to inform the work programme for the final phase of the WRC's five-year convening role for the Community of Practice.

## Reference List

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- BOCMA. 2023. "Request For Proposal (RFP): Development Of A Catchment Management Strategy For The Breede-Olifants Water Management Area." [https://breedegouritzcma.co.za/Tenders/BGCMA-2023-01\\_RFP.pdf](https://breedegouritzcma.co.za/Tenders/BGCMA-2023-01_RFP.pdf).
- CLCB. 2021. "Strengthening Institutional Capacity and Operational Governance in Catchment Management Agencies (CMA) for Ecological Infrastructure." Centre for Local Capacity Building. <https://www.wrc.org.za/wp-content/uploads/mdocs/3003%20final.pdf>.
- Conn, Lisa. 2024. "What Is A Community Of Practice? (And Why You Need One)." *Forbes*. January 18, 2024. <https://www.forbes.com/sites/lisaconn/2024/01/18/what-is-a-community-of-practice-and-why-you-need-one/>.
- Dedoose. 2023. "Home | Dedoose." 2023. <https://www.dedoose.com/>.
- DWS. 2014. "Establishment and Development of a Catchment Management Agency in the Mzimvubu to Tsitsikamma Water Management Area (Draft Business Case)." Department of Water and Sanitation, Republic of South Africa. <https://www.dws.gov.za/IO/Docs/CMA/CMA/EC%20CMA%20Business%20Case%20Draft%203-1.pdf>.
- . 2022a. "Business Case for the Limpopo-Olifants Catchment Management Agency." Department of Water and Sanitation, Republic of South Africa. [https://www.dws.gov.za/IO/Docs/Annexure%20E-Final%20Limpopo-Olifants%20CMA%20Business%20Case\\_February%202022%20v4.pdf](https://www.dws.gov.za/IO/Docs/Annexure%20E-Final%20Limpopo-Olifants%20CMA%20Business%20Case_February%202022%20v4.pdf).
- . 2022b. "Business Case for the Vaal-Orange Catchment Management Agency." Department of Water and Sanitation, Republic of South Africa. <https://www.dws.gov.za/IO/Docs/Business%20Case%20for%20the%20Vaal-Orange%20Catchment%20Management%20Agency.pdf>.
- . 2023a. "National Water Resource Strategy 3." Approved. Pretoria, South Africa: Department of Water and Sanitation. [https://www.dws.gov.za/Documents/Gazettes/Approved%20National%20Water%20Resource%20Strategy%20Third%20Edition%20\(NWRS3\)%202023.pdf](https://www.dws.gov.za/Documents/Gazettes/Approved%20National%20Water%20Resource%20Strategy%20Third%20Edition%20(NWRS3)%202023.pdf).
- . 2023b. "Water and Sanitation Appoints Board Members of Catchment Management Agencies." Official Information and Services. November 23, 2023. <https://www.gov.za/news/media-statements/water-and-sanitation-appoints-board-members-catchment-management-agencies-23>.
- . No date. "Overview of Catchment Management Agencies." In *Governing Board Training Manual*. Department of Water and Sanitation. <https://www.dws.gov.za/IO/Docs/CMA/CMA%20GB%20Training%20Manuals/gbtrainingmanualchapter3.pdf>.
- ERLC. 2016a. "What Is a Community of Practice?" *Community of Practice* (blog). 2016. <https://www.communityofpractice.ca/background/what-is-a-community-of-practice/>.
- . 2016b. "Why Communities of Practice Are Important." *Community of Practice* (blog). 2016. <https://www.communityofpractice.ca/background/why-communities-of-practice-are-important/>.
- IUCMA. 2023a. "Annual Report 2022/2023." RP 286/2023. Mpumalanga: Inkomati-Usuthu Catchment Management Agency. [https://ueptyltd.sharepoint.com/:b:/s/WRCWaterCommunityofPractice/EZv9Vp5\\_aB9Fj2p\\_hG7CZOcUBnuAdmFmKjTEOUWGqoN4fgw?e=uhCVUU](https://ueptyltd.sharepoint.com/:b:/s/WRCWaterCommunityofPractice/EZv9Vp5_aB9Fj2p_hG7CZOcUBnuAdmFmKjTEOUWGqoN4fgw?e=uhCVUU).
- . 2023b. "Catchment Management Strategy 2023-2028." Inkomati-Usuthu Catchment Management Agency. <https://ueptyltd.sharepoint.com/:b:/s/WRCWaterCommunityofPractice/EcvfdltRuqNPmPEsVWLLUKgBWUBmfwcrrwWiexd0SfxKZg?e=ntFczy>.

- Lotz-Sisitka, Heila, and Jessica Cockburn. 2023. "Supporting Social Learning and Knowledge Management Within the Ecological Infrastructure for Water Security Project." Water Research Commission. <https://www.wrc.org.za/wp-content/uploads/mdocs/2988%20final.pdf>.
- Mponwana, Maletje, Cyril Mbatha, Heila Lotz-Sisitka, Reuben Thifulufhelwi, and Mzukisi Kuse. 2023. "Participatory Course to Activate Ecological Infrastructure for Water Security Learning Networks." Water Research Commission. <https://www.wrc.org.za/wp-content/uploads/mdocs/3098%20final.pdf>.
- Munnik, V. 2020. "The Reluctant Roll-out of Catchment Management Agencies: Assessing the Key Risks and Consequences of Delays in Finalising Institutional Arrangements for Decentralised Water Resource Management." 2943/1/20. Pretoria, South Africa: Water Research Commission. [http://www.wrc.org.za/wp-content/uploads/mdocs/2943\\_final.pdf](http://www.wrc.org.za/wp-content/uploads/mdocs/2943_final.pdf).
- National Treasury. 2023. "Budget 2023: Budget Review." National Treasury. <https://www.treasury.gov.za/documents/national%20budget/2023/review/FullBR.pdf>.
- Palmer, C. G., R. Berold, W. J. Muller, and P. A. Scherman. 2002. "Some, For All, Forever - Water Ecosystems and People." *Water Research Commission Report No TT176/02*, Pretoria. <http://www.wrc.org.za/wp-content/uploads/mdocs/TT%20176%20complete.pdf>.
- PUCMA. 2024. "Draft Catchment Management Strategy for the Pongola to Mtamvuna Water Management Area." Unpublished Draft. Pongola-Umzimkulu CMA.
- Republic of South Africa. 1998. *National Water Act, No 36 of 1998*. [https://www.gov.za/sites/default/files/gcis\\_document/201409/a36-98.pdf](https://www.gov.za/sites/default/files/gcis_document/201409/a36-98.pdf).
- SANBI. 2022. "Ecological Infrastructure for Water Security Project Factsheet: Demonstrating How Investing in Ecological Infrastructure Can Improve Water Security." SANBI Factsheet Series. Pretoria, South Africa: South African National Biodiversity Institute.
- The Presidency. 2023. "Statement on the Cabinet Meeting of 8 December 2023." December 8, 2023. Vaal Orange Catchment Management Agency which was concurred by Cabinet on the 15 November 2023.
- Verkerk, Alexander, Anne-Marie Tosserams, and Paskaliah Kachieng'a. 2016. "Significant Change Stories: Partnerships between South Africa and the Netherlands on Decentralised Water Management." VNG International. <https://www.vng-international.nl/wp-content/uploads/2016/12/Final-LGCP-KF-booklet-1.pdf>.
- Walsh, Kim, van Niekerk, Brendon, and Msutu, Thembele. 2022. "Revision of the Pricing Strategy for Water Use Charges: Public Interest Functions of Water Resource Management Activities." Water Research Commission.
- Wenger-Trayner, E., and B. Wenger-Trayner. 2015. "Introduction to Communities of Practice." June 2015. <https://www.wenger-trayner.com/introduction-to-communities-of-practice/>.

## Annexes

### Annexe 1: Project participation list

PARTICIPANT NUMBER	ORGANISATION	LEARNING ONE	EVENT	LEARNING EVENT TWO
1	Inkomati-Usuthu CMA	Yes		No
2	SANBI	Yes		No
3	Department of Water and Sanitation	Yes		No
4	Limpopo-Olifants CMA	Yes		No
5	Breede-Olifants CMA	Yes (Online)		No
6	Department of Water and Sanitation	Yes		Yes
7	Vaal-Orange CMA	Yes		Yes
8	Mzimvubu-Tsitsikamma CMA	Yes		Yes
9	Urban Earth	Yes		Yes
10	Breede-Olifants CMA	Yes		Yes
11	SANBI	Yes		Yes
12	Urban Earth	Yes		Yes
13	Water Research Commission	Yes		Yes
14	Department of Water and Sanitation	No		Yes
15	Inkomati-Usuthu CMA	No		Yes
16	SANBI	Yes		No
17	AWSISA	No		Yes
18	Limpopo-Olifants CMA	Yes		No
19	SANBI	No		Yes
20	Department of Water and Sanitation	No		Yes
21	Urban Earth	Yes		No
22	Department of Water and Sanitation	Yes		Yes
23	Department of Water and Sanitation	Yes		No
24	Vaal-Orange CMA	Yes		No
25	Department of Water and Sanitation	Yes		Yes
26	Department of Water and Sanitation	No		Yes
27	Inkomati-Usuthu CMA	No		Yes

PARTICIPANT NUMBER	ORGANISATION	LEARNING ONE	EVENT	LEARNING EVENT TWO
28	Inkomati-Usuthu CMA	No		Yes
29	Pongola-uMzimkulu CMA	Yes (Online)		Yes
30	Urban Earth	Yes		Yes
31	Vaal-Orange CMA	Yes		No
32	Lepelle Northen Water	No		Yes
33	Umgeni-uThukela Water	No		Yes
34	SANBI	Yes		Yes
35	Umgeni-uThukela Water	No		Yes
36	Lepelle Northern Water	No		Yes
37	AWSISA	No		Yes
38	Water Research Commission	Yes		Yes
39	Vaal-Orange CMA	Yes		No
40	Department of Water and Sanitation	No		Yes
41	Mzimvubu-Tsitsikamma CMA	No		Yes
42	Mzimvubu-Tsitsikamma CMA	Yes		Yes
43	SANBI	Yes		Yes
44	Vaal-Orange CMA	No		Yes
45	Rand Water	No		Yes
46	Water Research Commission	Yes		No
47	Pongola-uMzimkulu CMA	No		Yes
48	Vaal-Orange CMA	Yes		No
49	Rhodes University	Yes		No
50	Vaal-Orange CMA	No		Yes
51	Department of Water and Sanitation	Yes		No
52	Department of Water and Sanitation	No		Yes



## Annexe 2: Facilitation Plan for Learning Event One

This annexe shows the Facilitation Plan for Learning Event One.

### Purpose of the workshop is to:

- Validate (and refine) the findings of the Situational Assessment (including the challenges facing the CMAs).
- Explore how focused learning between CMAs could assist in addressing these challenges.
- Agree on the role of a potential Community of Practice, priority learning needs, the participants to the Community of Practice, and how the Community of Practice will operate during its initial phase.
- Facilitate networking and information sharing between participants.

### Participants:

- DWS, WRC and SANBI
- Representatives from CMAs (ideally strategic and operational)
- Urban Earth team (Facilitation)

## Day One

Day 1				
Time	Item	Description	Responsible	Materials
08h30 - 09h00	Arrival	Registration and tea	Urban Earth (UE) IP and NM	Attendance Register
09h00 - 09h20 (20 mins)	Welcome and Purpose of the Day	<ul style="list-style-type: none"> <li>• Official welcome - Prof Stanley Liphadzi (Group Exec: RDI)</li> <li>• Provide project context and links to other work that has been done</li> <li>• Include mention of the potential role of the WRC in the initial phases of the Community of Practice - Roderick Juba (RJ) (15 mins)</li> <li>• The importance of this work in the context of the Ecological Infrastructure for Water Security Project - Jen Zungu (JZ) (5 mins)</li> <li>• RJ to introduce the Urban Earth team and hand over</li> </ul>	SL (WRC) RJ (WRC) JZ (SANBI)	

Day 1				
Time	Item	Description	Responsible	Materials
09h20 - 09h50 (30 mins)	Participant Introductions and Networking Exercise	<p>Who's in the room? Hands up – CMAs, WRC, other organisations (5 mins)</p> <p>Facilitate exercise for 20-25 mins</p> <p>Quick-Fire Questions in Pairs: Each participant is to have a template page/s with questions to complete for each individual they meet. The idea is to engage with one individual and then move on to someone else who is free. Meet as many as possible within the timeframe (aim to meet at least four other people).</p> <ul style="list-style-type: none"> <li>• What is your name?</li> <li>• What is your organisation?</li> <li>• What is your role in your organisation?</li> <li>• What would you most like to learn from other CMAs?</li> <li>• What is something interesting that your CMA is working on?</li> </ul>	UE (JD)	Quick-Fire Questions Template – Print back-to-back x 50
09h50 - 10h30 (40 mins)	Overview of the Project and Situational Assessment Outcomes	<ul style="list-style-type: none"> <li>• Brief summary, focusing on the purpose of the research and outcomes (challenges/achievements; the role of Community of Practice; the focus of Community of Practice) - 15 mins</li> <li>• What Learning Event One will aim to achieve in relation to what has come out of the Situational Assessment - 5 mins</li> <li>• Thato to introduce the Value Creation Framework and its linkages to the purpose of the day - 5 mins</li> <li>• Questions of clarity - 15 mins</li> </ul>	Jo Douwes (JD) and Thato Madiba (TM)	Projector, Laptop, extension cable, HDMI, VGA cables, HDMI to VGA adaptor
10h30 - 11h00	TEA			

Day 1				
Time	Item	Description	Responsible	Materials
11h00 - 11h45 (45 mins)	Sharing Our Stories	<p>CMA story-sharing exercise.</p> <p><u>Introduction of the exercise</u> (5 mins)</p> <p>Individuals who are from the same CMA should work together to consolidate their thoughts. Individuals who are not from the CMAs could spread themselves across the CMAs to add thoughts/questions.</p> <p><u>Discuss questions and record</u> (in whatever way makes sense) (20 mins)</p> <p>The exercise will focus on the following questions (<i>questions to be shared with the CMA participants ahead of the Learning Event for preparation</i>):</p> <ul style="list-style-type: none"> <li>• Where is our CMA now? (in terms of establishment and processes/projects)</li> <li>• What is our vision for our CMA?</li> <li>• What one or two main things do we need to learn or innovate in order to achieve that vision?</li> <li>• What resources (e.g. learnings, expertise, relationships, tangible resources) can we offer other CMAs to support them?</li> </ul> <p><u>Feedback from CMAs</u></p> <ul style="list-style-type: none"> <li>• 3-minute feedback from each CMA – one aspect of vision, one area for innovation and one resource that can be shared with other CMAs.</li> </ul>	UE (Facilitator: JD)	<p>Slide with questions</p> <p>Flipchart paper and coloured permanent markers per group + sticky notes</p> <p>Larger cards for MMcK additions</p>

Day 1				
Time	Item	Description	Responsible	Materials
11h45 - 12h15 (30 mins)	Identifying Learning Priorities	<p><b>Identify learning priorities</b> through a prioritisation exercise based on the challenges articulated by the CMAs in the Situational Assessment component of the research (and also having considered the areas for innovation shared by CMAs in the previous session).</p> <ul style="list-style-type: none"> <li>Reminder of the learning priorities emerging from the Situational Assessment</li> <li>Consider the learning priorities that emerged from the 'Sharing our stories' session (to what extent were these aligned/different) (5 mins) - MMcK's cards to be added to the wall</li> <li>Voting exercises on the Learning Priorities - Each participant will be given four sticky dots, to distribute across their priorities (10 mins)</li> <li>Brief discussion on outcomes: Do the priorities seem like the right ones? Are there any surprises? (15 mins)</li> </ul>	UE (Facilitator: JD)	<p>Template - 2 challenges /achievements per page</p> <p>Printouts (A1 x 1 of each), sticky dots</p>

Day 1				
Time	Item	Description	Responsible	Materials
12h15 - 12h30 (15 mins)	Introduction of World Café/Small Group Discussions on Specific Topics	<p>Explaining the World Café discussions that will happen after lunch to the participants.</p> <p><b>Unpacking the Learning Priorities</b> (<i>emerging from the previous exercise</i>)</p> <ul style="list-style-type: none"> <li>Nominate a lead/rapporteur for each group (4 groups in total). Discuss the questions (below) and record the main ideas.</li> <li>Shift to another group (participants will only shift to three of the four groups). Rapporteur to remain behind and summarise ideas to the incoming participants who then build on those ideas.</li> <li>Feedback - Each rapporteur shares the top three ideas emerging from discussions.</li> </ul> <p><b>Learning priority 1</b> (<i>emerging from the previous exercise</i>):</p> <ul style="list-style-type: none"> <li>What changes do we want to see in our CMA to achieve this 'learning priority'?</li> <li>Why is this important?</li> <li>What do we need to learn to get there?</li> <li>How could a Community of Practice help us get there?</li> </ul> <p><b>Learning priority 2</b> (<i>Same questions as above</i>)</p> <p><b>Learning priority 3</b> (<i>Same questions as above</i>)</p> <p><b>Learning priority 4</b> (<i>Same questions as above</i>)</p>	UE (Facilitator: NM)	<p>Slide with questions</p> <p>Slide with guidance for rapporteurs</p>
12h30 - 13h15	LUNCH	<b>Team to think about group setup and priorities at each station</b>		

Day 1				
Time	Item	Description	Responsible	Materials
13h15 - 14h30 (75 mins)	World Café/Small Group Discussions on Learning Priorities	<ul style="list-style-type: none"> <li>Round 1 (25 mins)</li> <li>Round 2 (20 mins)</li> <li>Round 3 (15 mins)</li> <li>Write the 3 most important points on cards (1 idea per card) - emphasise that notes are being captured by the UE team and there is no need for feedback to be comprehensive.</li> <li>Feedback by the rapporteurs (2-3 mins each)</li> </ul>	UE (Facilitator NM)  UE team - one team member per group to listen to discussions (Participant to act as rapporteur)	Flip chart stand, Flip chart paper, Permanent markers
14h30 - 14h50 (20 mins)	Mechanisms for learning: Prioritising the role of the Community of Practice	<ul style="list-style-type: none"> <li>This would build on the learning priority discussions and could be done through another voting exercise with sticky dots (Four roles were identified in the Situational Assessment: Facilitate networking; Build foundational knowledge; Build a knowledge repository; and Facilitate learning exchanges),</li> <li>Discussion/reflection on the outcomes of the voting exercise.</li> </ul>	UE (Facilitator MMCK)	Template (4 options on one page) - print 3 Communities of Practice A1 Sticky dots

Day 1				
Time	Item	Description	Responsible	Materials
14h50 - 15h20 (30 mins)	The Sustainability of the Community of Practice: Mapping Other Communities of Practice	<p>Participants to initially reflect individually on the questions below (under Step 1) and record ideas on larger note pages. This will be followed by a plenary discussion to consolidate the inputs. (Intro 5 mins)</p> <p><i>Step 1 (5 mins)</i></p> <ul style="list-style-type: none"> <li>• With the above learning priorities and Community of Practice roles in mind, are there similar communities of practice to be aware of? (potential duplication and/or need for alignment?)</li> <li>• Who is involved in these Community of Practices?</li> <li>• What role are these communities of practice playing? / What is the purpose of these Community of Practices?</li> </ul> <p><i>Step 2:</i> Participants to share their ideas and stick ideas onto a section of the wall (trying to group similar Community of Practices) (15 mins)</p> <p><i>Step 3:</i> Plenary discussion:</p> <ul style="list-style-type: none"> <li>• Which would be the important communities of practice (Max 3) with the most relevance to the current project and intended Community of Practice?</li> <li>• Are there opportunities to align?</li> <li>• What else might be needed to support the sustainability of a Community of Practice? (e.g. specific support from DWS?)</li> </ul>	UE (Facilitator: MMcK)	<p>Slide with questions</p> <p>Flipchart pages Flip chart stand, Marking pens, sticky notes (larger size), sticky dots, Prestik.</p>
15h20 - 15h30 (10 mins)	Next steps	<ul style="list-style-type: none"> <li>• High-level overview of tomorrow's agenda</li> <li>• Who is not here that should be?</li> <li>• Return name tags</li> <li>• Invitation to networking (15h30-16h00)</li> </ul>	UE (Facilitator: JD)	Prepare slide
15h30 - 16h00	Networking	Tea, soft drinks, and light snacks		



## Day Two

Day 2				
Time	Item	Description	Responsible	Materials
08h30 - 09h00	Arrival	Registration and tea	Urban Earth (UE) IP and NM	Attendance Register
09h00 - 09h15 (15 mins)	Introductory 'check-in' exercise	Share with the person sitting next to you: <ul style="list-style-type: none"> <li>What stood out for you from yesterday's discussions?</li> <li>Did you learn anything new? (e.g. about a CMA, about challenges being experienced, etc.)</li> </ul> Brief plenary feedback - hear from 2-3 people	UE (Facilitator: NM)	Sticky notes, pens
09h15 - 09h45 (30 mins)	Recap of the previous day's discussions	Then a formal recap of the previous day can be done to make way for the next session. To cover the following: <ul style="list-style-type: none"> <li>What are the emerging learning priorities (and specific focus areas/questions within each of these)?</li> <li>What are participants' expectations of the Community of Practice (and how do they see it helping them to address their learning needs)?</li> <li>What mechanisms for learning are seen as being most important?</li> <li>What resources already exist to help with the Community of Practice?</li> </ul> (10 mins)           Discussion: <ul style="list-style-type: none"> <li>Is there anything else to add to the summary OR something to further refine? (15 mins)</li> </ul>	UE (Facilitator: JD)	Projector, Laptop, extension cable, HDMI, VGA cables, HDMI to VGA adaptor  Prepare slides

Day 2				
Time	Item	Description	Responsible	Materials
09h45 - 10h15 (30 mins)	Participant Focus of the Community of Practice	<ul style="list-style-type: none"> <li>Summary slide presented to show the ideas that emerged on a CMA-focused Community of Practice vs a geographic-focused Community of Practice.</li> <li>Plenary discussion and thoughts on the initial focus of the Community of Practice. <ul style="list-style-type: none"> <li>Who would be the initial priority participants in a Community of Practice?</li> <li>Is there potential for this to change/ evolve over time?</li> <li>How might geographic-focused communities of practice be supported?</li> </ul> </li> </ul>	UE (Facilitator: JD)	Flip chart stand, Flip chart paper, Marking pens Prepare summary slide
10h15 - 10h30	TEA			
10h30 - 11h15 (45 mins)	Thinking about the way forward for the Community of Practice	<p>Plenary discussion focused on the following questions:</p> <p><b>Initial lead and resourcing for the Community of Practice</b></p> <ul style="list-style-type: none"> <li>Who is well positioned to lead the Community of Practice initially?</li> <li>What would this look like and what support would be needed? (Think about learnings, skills, methods, connections, relationships, tangible resources, etc.)</li> <li>What is already available within our CMAs to support the Community of Practice?</li> </ul> <p><b>Collating ideas/suggestions for Learning Event 2</b></p> <ul style="list-style-type: none"> <li>Given the discussions that have taken place during this workshop, what should the second learning event focus on? Who should provide input? Where should it be held?</li> <li>Probe for suggestions on how we can incorporate ecological infrastructure in Learning Event 2. And, ultimately, how it can be incorporated into the Community of Practice.</li> </ul>	UE (Facilitator: MMcK)	<p>Projector, Laptop, extension cable, HDMI cable, VGA cable, HDMI to VGA adaptor, flipchart paper, coloured pens, sticky notes</p> <p>Slide with questions</p>

Day 2				
Time	Item	Description	Responsible	Materials
11h15 - 11h45 (30 mins)	Final thoughts and reflections	<p>Reflection exercise to be structured around the following questions:</p> <ol style="list-style-type: none"> <li>1. I wish...</li> <li>2. I worry...</li> <li>3. I wonder...</li> </ol> <p>(15 mins)</p> <p>Then reflect on what has come out (10 mins)</p>	UE (Facilitator: JD)	<p>Flipchart A1 paper with questions as headings; sticky notes, permanent markers, pens</p> <p>Prepare slide</p>
11h45 - 12H30 (45 mins)	Completion of event assessment for research	Thato to input if needed and then share assessment.	TM	Evaluation Forms (Thato to provide), Pens
12h30 - 12h45 (15 mins)	Next steps, thanks and closure	<ul style="list-style-type: none"> <li>Any final comments from participants.</li> <li>Next steps - LE 2, and then WRC to work with others to decide on how to take ideas forward.</li> <li>Thanks and closure</li> </ul>	RJ	Request that pens be returned
12h45 - 13h30	LUNCH			

## Annexe 3: Facilitation Plan for Learning Event Two

This annexe shows the Facilitation Plan for Learning Event Two.

### Purpose of the workshop is to:

- Test different approaches for learning
- Explore how focused learning between CMAs could assist in addressing these challenges.
- Facilitate networking and information sharing between participants.

### Participants:

- DWS, WRC AWSISA, LNW, UUM and SANBI
- Representatives from CMAs
- Urban Earth team (Facilitation)

Time	Session Title	Session Description	Facilitator and/or Inputs
08h30-09h00	Arrival and registration		Attendance Register
09h00-09h15	Welcome and recap of context	<ul style="list-style-type: none"><li>• Remind participants of the intention to develop a Community of Practice</li><li>• High-level recap of Learning Event One outcomes (including the interim role of WRC)</li><li>• Acknowledge reference group</li><li>• Purpose of LE 2 - Testing Community of Practice format/ approach</li></ul>	RJ
09h15-09h30	Introductions	<p>Speed Meeting</p> <p><i>Have participants go to a person they do not know and get to know each other for two minutes. At the end of the two minutes, the people move to a new partner. A timer will be used to alert the end of the 2 mins (people may potentially meet 7 people in the 15 mins).</i></p> <p><i>Participants can ask each other these questions:</i></p> <ul style="list-style-type: none"><li>• Their name</li></ul>	NM

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		<ul style="list-style-type: none"> <li>Which organisation they represent &amp; their role</li> <li>What they hope to gain from the workshop</li> </ul>	
09h30-10h45	Understanding the new Water Pricing Strategy and its implications for CMAs	<p>Presentation input (max 20-25 mins) to outline:</p> <ul style="list-style-type: none"> <li>A high-level overview of the new Water Pricing Strategy</li> <li>Implications for CMAs in terms of revenue; alignment of CMA functions with the Strategy; and water resource management.</li> <li>What the Strategy says about CMAs sourcing alternative funding.</li> </ul> <p>Q&amp;A Discussion</p> <p><i>[Reflection question for CMAs: What is your CMA doing to ensure maximum revenue collection within the current systems? (e.g. IUCMA has started getting tougher with water users; Lungi/Pearl - work they have been doing to see how CMAs can be better resourced through recovery of the full cost of raw water, plus exploring the waste discharge charge system)]</i></p> <p>Consolidation (if time):</p> <ul style="list-style-type: none"> <li>What did you hear/learn that will help you practically in your work?</li> <li>What questions do you still have?</li> </ul>	<p>DWS input: Margaret Majola and Lehlohonolo Nyabanyaba - Presentation</p> <p>Facilitator: JD</p> <p>Sticky notes, to be pasted onto flipchart paper, with headings</p>
10h45-11h15	TEA		
11h15-12h15	Navigating the development of stakeholder-led Catchment Management Strategies	<p>PUCMA input on stakeholder-led CMS (Presentation - 15-20 mins)</p> <ul style="list-style-type: none"> <li>What process was followed to develop the CMS?</li> <li>What were the challenges/successes in adopting this approach?</li> <li>How did PUCMA address the legal requirements to ensure that the stakeholder-led CMS was recognised?</li> <li>How can Ecological Infrastructure be incorporated into the CMS?</li> </ul>	<p>Nkosi Mkhize (PUCMA)</p> <p>Response (VOCMA)</p> <p>Facilitator: NM (JD)</p>

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		<ul style="list-style-type: none"> <li>How can the perspectives and insights from communities (particularly those in traditional authority areas) be integrated into the CMS in terms of Ecological Infrastructure (benefits derived, custodian roles etc)?</li> </ul> <p>Input from VOCMA (5 mins): Reflection on what aspects of their CMS-development process have been similar to/different from that of PUCMA.</p> <p>Plenary discussion:</p> <ul style="list-style-type: none"> <li>Q&amp;A</li> <li>Broader CMA inputs/reflections:</li> <li>What progress have other CMAs made in their own CMS development processes?</li> <li>What is going well? Where are they struggling?</li> </ul> <p><i>[Capture thoughts on flipchart and then facilitate Q&amp;A discussion]</i></p>	<p>to assist with note capturing on flipchart)</p> <p>VOCMA</p> <p>Other CMA/SANBI inputs (<i>ad hoc</i>)</p>
12h15-13h15	Sourcing alternative funding	<p>Energiser activity – Stand up if...</p> <ol style="list-style-type: none"> <li>you work for a catchment management agency</li> <li>you know all the words of South Africa’s national anthem</li> <li>you can speak more than three languages</li> <li>you have prepared a Catchment Management Strategy</li> <li>you have ever been on the Gautrain</li> <li>you have worked directly with someone from a different CMA on a joint project</li> <li>you have successfully managed to secure alternative funding for your organisation</li> <li>you have ever visited the Union Buildings</li> </ol>	JD

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		<p>Facilitated panel discussion (Team to take notes and consolidate into summary notes for participants) OR brainstorm with all participants:</p> <p>Questions:</p> <ul style="list-style-type: none"> <li>• Why is it important for CMAs to be able to secure alternative funding?</li> <li>• What types of alternative funding are available for CMAs to explore? / What opportunities could CMAs be exploring to secure alternative funding?</li> <li>• What financial/ institutional mechanisms can be used to secure funding for a Schedule 3A Public Entity under the PFMA? And what systems need to be in place to facilitate the receipt of funds?</li> <li>• Are there examples of where this is being done effectively? (e.g. BOCMA-SANBI financial transfers)</li> <li>• What are some of the challenges (including possible conflicts of interest)? And how do we address these? (e.g. guidelines, Direction from the National Treasury, etc.)</li> </ul> <p>Consolidate - what are the key outstanding questions/ issues that need further discussion?</p>	<p>Jen Zungu (SANBI)</p> <p>Lungi/Pearl - Mechanisms for coordinating funding and implementation of EI management activities (e.g. AEN - able to receive external funds and coordinate implementation across NGO network)</p>
13h15-13h45	LUNCH		
13h45-14h45	Hearing from new CMAs ( <i>can shorten this as needed</i> )	<p>Activity:</p> <ul style="list-style-type: none"> <li>• <i>What are the top 2 challenges for each CMA - framed as a question with the name of the person/CMA on the card. Record on card and stick on wall (try to group where possible)</i></li> <li>• <i>Review and others in the room to provide guidance - are there any in the room who can link up and assist? Or are there specific resources that could help? Put ideas on sticky notes against the cards that are on the wall.</i></li> </ul>	<p>Facilitator: Jo</p> <p>Coloured paper</p> <p>Sticky notes</p> <p>Flipchart paper notes</p>



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		<ul style="list-style-type: none"> <li>• <i>Plenary reflection: Where have CMAs experienced successes in the last 6 months?</i></li> <li>• <i>Are there any questions that stand out from today's discussions as priorities for future Community of Practice sessions?</i></li> </ul> <p><i>Probe around the following topics:</i></p> <ul style="list-style-type: none"> <li>• How are new CMAs dealing with issues relating to Water Use Licenses and Validation and Verification processes?</li> </ul>	
14h45-15h15	High-level reflection on Learning Event Two (can remove this if not enough time)	<p>Stop, start, carry on exercise:</p> <ul style="list-style-type: none"> <li>• Stop - what should we not do again in Community of Practice events?</li> <li>• Start - What do we need to start doing?</li> <li>• Carry on - What worked well and should continue?</li> </ul> <p><u>Group Discussion:</u>  <i>Divide participants into small groups, with each group assigned a piece of flip-chart paper. Together, they will identify actions to start, stop, or continue. The groups' collective ideas are then discussed with the entire group to reach a consensus.</i></p>	Facilitator: NM
15h15-15h30	Evaluation form		NM
15h30-15h45	Thanks, closure and way forward	Community of Practice way forward / next steps	RJ
15h45-16h15	Networking tea/snack		