



A Presidential Climate Commission Report

# 3 SECTOR CLIMATE READINESS STUDY

## Consolidated Workshop Report

March 2025

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## About the Presidential Climate Commission

The Presidential Climate Commission (PCC) is a multi-stakeholder body established by the President of the Republic of South Africa to advise the Presidency on the country's climate change response and pathways to a low-carbon climate-resilient economy and society. The PCC is guided by the Just Transition Framework, and has inter alia, achieved progress on the energy transition and climate financing. It has also been working on contextualising the Intergovernmental Panel on Climate Change's Sixth Assessment Report (AR6) Climate Resilient Development Pathways concept for the local environment, and employment and economic diversification, to ensure a sustainable low-carbon economy (IPCC, 2022). The Climate Act (22 of 2024) is explicit on the plan for a holistic effort across South Africa's spheres of government, driven by a collective leadership of major social partners and across all economic and enabling sectors.

## About the Three Sector Adaptation Readiness Study

To further enable the holistic effort, the PCC has chosen to work in three critical areas of economic focus that were selected because of their importance to the economy, their opportunity for job creation, the potential for transition, and the need for change to enable the transition to a low-carbon and climate resilient economy and society (Just Transition).

The areas are:

- The built environment,
- The water value chain, and
- The agricultural sector.

The PCC facilitates dialogue between social partners on these issues—defining the type of society we want to achieve, and detailed pathways for how to get there.

In building this society, we need to ensure decent work for all, social inclusion, and the eradication of poverty. We also need to protect those most vulnerable to climate change, including women, children, people with disabilities, the poor and the unemployed, as well as protect workers' jobs and livelihoods.

This study aims to add value to the broader PCC programme of work on climate change adaptation and resilience – and the Just Transition. It will further respond to the context of the South African climate change journey that already spans multiple decades and has highlighted some of the world's best practice examples. South Africa is also known to fall short on transformative and programmatic approaches that are needed for project scale-up, transformational change toward full mainstreaming of climate change into policy and action, and in converting high

### The PCC's 5 Focal Areas

- Creating social partnerships.
- Defining a vision of a just transition.
- Conduct analyses into climate change impacts on jobs, economy and policy.
- Monitor progress towards mitigation and adaptation goals, and a just transition.
- Engage widely with stakeholders.

(PCC, 2022)

quality policies into meaningful and sustained action.

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Transformational change that establishes adaptation readiness and enables the pathways for attaining a Just Transition, requires alignment of South Africa's various policy and regulations with climate resilience. This study's analysis of adaptation readiness has considered the strength and existence of governance structures and policy processes, and capacities, which determine whether adaptation takes place in the three areas. It examines actual experiences with adaptation and climate response planning and seeks to determine whether South Africa's systems are ready to undertake adaptation action in a transformational way.

Application of the principles of procedural, restorative and distributive justice ensures that the most vulnerable groups are protected from the negative impacts of the transition, and/or that these groups derive the benefits and opportunities that arise from the transition.

Four research questions are being addressed to evaluate readiness:

- i. What activities are underway to adapt to climate change in South Africa's water sector?
- ii. What is currently considered to be international best practice for adapting to climate change in the water value chain in developed and developing countries?
- iii. How is South Africa aligning with international best practice and where are the critical gaps?
- iv. What are the strategic enablers of the transition to a low carbon and climate resilient water value chain in terms of distributive, procedural, and restorative justice for all South Africans?

## **Authors and reviewers of this report**

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## Acronyms

AAMP	Agriculture and Agro-processing Master Plan
AFASA	African Farmers' Association of South Africa
Agbiz	Agriculture Business Chamber of South Africa
CC	Climate change
CMA	Catchment Management Agency
CCRS & IP	Climate Change Resilience Strategy and Implementation Plan
CSA	Climate Smart Agriculture
CSASF	CSA Strategic Framework
CSP	City Support Programme
DDG	Deputy Director General
DFFE	Department of Forestry, Fisheries and the Environment
DoHS	Department of Human Settlements
	Department of Agriculture, Land Reform and Rural
DALRRD	Development
DWS	Department of Water and Sanitation
ESG	Environmental, Social and Governance
EWS	Early Warning Systems
GBCSA	Green Building Council South Africa
GDP	Gross Domestic Product
HDA	Housing Development Agency
IGR	Intergovernmental Relations
IPCC	Intergovernmental Panel on Climate Change
IWRM	Integrated Water Resources Management
JT	Just Transition
KPI	Key Performance Indicator
LHWP	Lesotho Highlands Water Project
MEL	Monitoring, Evaluation and Learning
MoU	Memorandum of Understanding
MTSF	Medium Term Strategic Framework
NGOs	Non-governmental organisations
NT	National Treasury
PCC	Presidential Climate Commission
PLAAS	Institute for Poverty, Land and Agrarian Studies
PPP	Public-Private-Partnership
SADC	Southern African Development Community
SALGA	South African Local Government Association
SANBI	South African National Biodiversity Institute
SAPS	South African Police Service
SPLUMA	Spatial Planning and Land Use Management Act
WEFE	Water-Energy-Food-Ecosystem Nexus
WRC	Water Research Commission

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## 1. Introduction

The Presidential Climate Commission is undertaking a study of the climate adaptation readiness of the water value chain, the agriculture sector, and the built environment. The study is being guided by South Africa's Just Transition Framework. The objective is to work with relevant stakeholders to establish what needs to be put in place to accelerate adaptation readiness, and to secure consensus on transformative climate resilient development pathways.

Sector reports for the three sectors have been developed, which acted as a foundation for stakeholders to discuss the critical issues, raise gaps and validate the recommendations made in three stakeholder workshops. A synthesis report followed to underpin the synthesis workshop, which served as a final stakeholder workshop for this project.

Key issues and associated recommendations related to adaptation readiness were provided to participants to guide the discussion in the workshops. These are captured in the four research questions to evaluate readiness (see box on the right). They are also elaborated in a series of recommendations and key take away points elaborated below.

### Study Research Questions

- i. What activities are underway to adapt to climate change in South Africa?
- ii. What is currently considered to be international best practice for adapting to climate change in developed and developing countries?
- iii. How is South Africa aligning with international best practice and where are the critical gaps?
- iv. What are the strategic enablers of the transition to a low carbon and climate resilient pathway in terms of distributive, procedural, and restorative justice for all South Africans?

The underlying themes underpinning these workshops were trying to understand which indicators were appropriate to unpack and assess the impact of climate resilience and adaptation readiness and hence be able to develop appropriate responses. The following themes evolved from the sector workshops, which in turn underpinned discussions in the synthesis workshop on priorities and pathways towards transformative and adaptation-ready:

- i. Cooperative governance;
- ii. Financing and resourcing mechanisms; and
- iii. Delivery capacity

*Monitoring, evaluation, learning and impact assessments (MELIA) is the fourth key theme that emerged from the sector workshops and is discussed in more detail in this project's Synthesis Report.*

### Structure of the report

This report presents an overview of the thematic focus, run of play, outcomes, and key takeaways from the three sector workshops. As well as the synthesis workshop. Beginning with the Water Value Chain, the second, third, fourth and fifth chapter are each dedicated to a specific workshop, while the final chapter provides a cross-sectoral synthesis, and concluding remarks.

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## 2. Water Value Chain Workshop

### About the workshop

The PCC water value chain and climate adaptation readiness workshop was held in Pretoria on 29<sup>th</sup> October 2024 between 09h00 and 14h00, in partnership with the Department of Water and Sanitation (DWS). The workshop sought to bring together strategic representatives from South Africa's social partners including from the key sectors that directly or indirectly enable or impact the water value chain. A stakeholder participation register is available in Appendix 1D while Appendix 1C contains the concept note and agenda, including speakers, for the workshop.

### 2.1. Scene setting

Following an introduction from the workshop moderator, Pam Yako, Deborah Mochotlhi, Deputy Director General (DDG), DWS, gave a keynote address on climate change and water. The workshop and draft report were supplemented by the DWS's updated strategy.

The DDG emphasised the importance of cooperative governance, and translating science into action for climate resilience in South Africa's water value chain. She made reference to adaptation measures being adopted in key water management areas, notably the Vaal-Orange system (these two rivers and their tributaries cover the largest drainage basin in South Africa) and the Limpopo-Olifants system (the northern most water management area in the country which represents part of the South African portion of the Limpopo River Basin, a closed water system<sup>1</sup> shared by South Africa with Botswana, Mozambique and Zimbabwe). The agriculture sector is also integral to the water value chain and adaptation readiness efforts need to engage this critical sector. The DDG alerted the participants to the DWS updated climate change strategy, currently with the Minister for signature, and concluded with a reminder of the urgent need to build climate resilience.

Dhesigen Naidoo, PCC Senior Advisor Adaptation, set out the PCC's objectives for the adaptation readiness study highlighting that this workshop was integral to the overall three sector study (alongside those for agriculture and the built environment). Mr Naidoo explained that the *"PCC is tasked with realising the ambitions of South Africa's climate and developmental legislation and regulations and seeks a social compact and consensus towards pathways for just climate responsiveness, and an expanded implementation base, or team"*. The overarching objective of the study and this workshop is to support a climate resilient water sector that empowers development in South Africa, in a just manner.

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<sup>1</sup> The basin is considered closed because most of its 27 sub-basins are in deficit and are categorised as 'very stressed' from Kapangaziwiri et al. 2021. Towards the quantification of the historical and future water resources of the Limpopo River Basin. Water Research Commission (WRC). Available at: [https://www.wrc.org.za/wp-content/uploads/mdocs/2439\\_final.pdf](https://www.wrc.org.za/wp-content/uploads/mdocs/2439_final.pdf)

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## Workshop format

The keynote and scene setting were followed by a panel discussion (moderated by Dr Gabriel Lekalakala (then DWS), with Dr Tendai Sawunyama (SA Hydrological Society, and Senior Manager, Inkomati-Usuthu Catchment Management Agency (CMA)), Dr Brilliant Petja (Water Research Commission (WRC)), Prof Mike Muller, and Commissioner Janse Rabie (Agri SA) as panellists), presentations on the DWS updated climate change strategy (delivered by DWS representative, Mr Salagae), and the PCC adaptation readiness water value chain report (delivered by Belynda Petrie and Ruth Beukman), and group work. Two breakout groups discussed cooperative governance, and transformative finance topics respectively. Dr Sylvester Mpandeli and Nandha Govender presented group work outcomes to plenary before Commissioner Dr Shafick Adams provided a workshop synthesis and the workshop was closed by the moderator.

The next section presents the highlights of each workshop segment and concludes with the key workshop outcomes.

### 2.2. Workshop highlights

#### Panel discussion – water and climate governance

Janse Rabie, Agri SA provided an agriculture perspective, noting that this sector is the largest user of water in the country, primarily from commercial agriculture, and that water is a major challenge for the sector. He observed that water is very political, evidenced through water allocation issues, while 'water is also life'. Building trust within the water value chain and between sectors and water users is essential.

Dr Tendai Sawunyama, SA Hydrological Society, and Senior Manager, Inkomati-Usuthu Catchment Management Agency (CMA), brought in the issue and threat of flash floods which require immediate responsiveness. He highlighted that the CMAs are too reactive and that they do not have clear response strategies in place. It will be important to figure out how climate response strategies can benefit from indigenous knowledge, while capacity building and awareness raising will be important elements of success.

Dr Brilliant Petja, Water Research Commission (WRC), emphasised the success of water governance at the national level over the past 15 years, particularly in terms of the development and rollout of a range of climate change response strategies across the sectors and sub-sectors of government. However, he noted that with the increase in frequency of extreme disaster events, there is a greater need to zone in on impact areas and empower those communities and local governments to respond to disasters. Dr Petja also drew attention to the fact that communities have already

**"Water is a long term business. We need to be looking 30 years ahead".**

**- Prof Mike Muller**

begun developing local strategies for climate resilience, but that with government partnership this can be scaled up significantly. Finally, he stressed that partnering with local government

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and communities *early* can help ensure that climate resilience is ensured in the long-term.

Prof Mike Muller highlighted that water is a long-term business. We need to be looking 30 years ahead to survive. He pointed out that South Africa's National Water Act is still hailed internationally and emphasised the importance of the Lesotho Highlands Water Project to South Africa's water security. Prof Muller's perspective on climate change is that it is distracting us from the key issues at hand, being climate variability, which is "huge", necessitating more emphasis on hydrology, and water governance. He further felt that expecting local government to play a key role in water governance and security is not worth pursuing.

Interaction with workshop participants added important nuance to the panellists' perspectives. Dhesigen Naidoo, PCC Adaptation Lead emphasised the realities of climate change. We are not setting up a competition between climate change and water investments. Rather, water is one of the "first victims" of climate change and there is no example of a situation where climate change is drawing away from water resources. Variability and climate change are closely interrelated. Considering these phenomena independently of each other has become a discussion of the past.

Dr Mpandeli, WRC, also pushed back on Prof Muller's climate change perspective, while agreeing that the focus on resolving governance issues is critical. He argued that treating climate change as a silo is not aligned with contemporary science and thinking.

**"Climate change is changing the way we do business and approach development".**

**- Dr Sylvester Mpandeli**

Climate change is changing the way we do business and approach development and therefore necessitates nexus approaches.

A participant from the floor (representing DWS), brought in the transboundary perspective, highlighting how important transboundary river basins are to national water security. He discussed important instruments and platforms available to South Africa (and the region) such as the SADC Revised Protocol on Shared Watercourses (2000) and the SADC Water Ministers Forum. The Protocol emphasises the equitable use of water resources, using the guiding principles of Integrated Water Resources Management (IWRM) and takes account of geographic and climatic factors, as well as the socio-economic demands of SADC Member among the SADC Member States for protection, management and use of the many shared watercourses in Southern Africa. Increasing beneficiation is a key objective. Contributing to the climate resilience of our transboundary water resources should be integral to water and climate governance in South Africa. A master's student, Angola, enquired as to whether or not the river basin agreements in place in Southern Africa address water allocations, and climate resilience<sup>2</sup>.

Dr Sawunyama indicated a scenario where Mozambique was not getting enough water in terms of a river basin agreement, pointing out that dams are sometimes built

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<sup>2</sup> Most of the agreements were ratified prior to climate change becoming a firm item on the regional water agenda. The Regional Water Policy (SADC) is currently being revised to address this alongside other key issues (e.g. groundwater). Water allocations are addressed in some regional agreements but national sovereign interests are a paramount underlying principle.

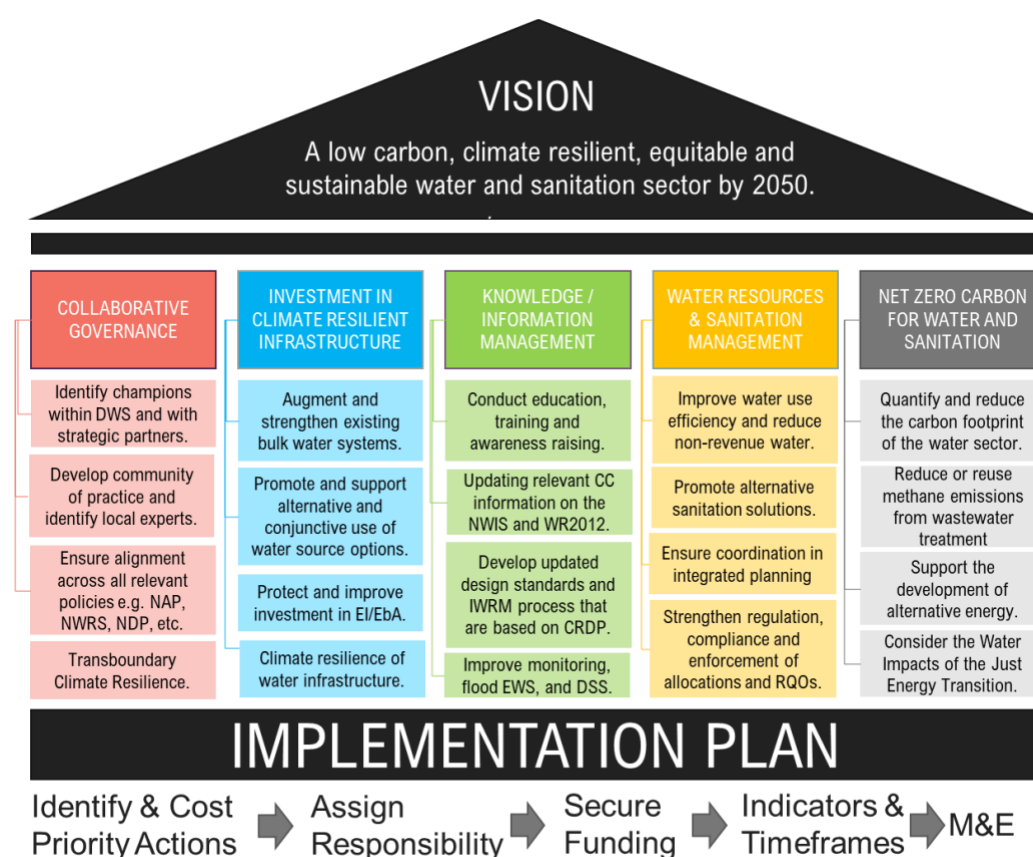
for allocation purposes rather than for flood control, and that allocation issues raise serious intergovernmental challenges.

Dr Lekalakala concluded the panel discussion noting cooperative governance, nexus approaches and transboundary water and cooperation as being the priority components of adaptation readiness for the water value chain.

### DWS Presentation - Updated Climate Change Strategy

The presentation on the draft strategy is available in Appendix 1B. Water governance was highlighted as the cornerstone of adaptation readiness and climate resilience, as reflected in Figure 1 below.

Figure 1. Snapshot of the National Climate Change Response Strategy for the Water and Sanitation Sector



Source: DWS, 2022

The updated strategy divides the country into seven hydro-climatic zones, ensuring that interventions can be tailored to specific local challenges, whether in drought-stricken or flood-prone regions. Key pillars include cross-sector collaboration, investment in climate-resilient infrastructure, conservation and knowledge sharing.

The DWS noted that consultations held between November 2023 and January 2024 with government, academia, civil society and international agencies informed the updated strategy.

### OneWorld presentation: PCC Water Value Chain Paper

The presentation is available in Appendix 1A. It captures the key aspects of the full report which assesses adaptation readiness in the water value chain. The report seeks

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to guide cooperative efforts on climate resilience metrics, governance, climate financing, capacity building and social equity. The presentation emphasised the story of inequalities of water and sanitation access that has emerged from the study's research and consultations. This is coupled with governance issues, unmaintained infrastructure, avoidable water losses, and how this undermines readiness for climate change adaptation. Investments trickle, rather than flow, to where they are most needed.

The report identifies four key conditions for transformative climate response in the water sector:

- **Making local governments more capable and accountable:** Municipalities need to be better equipped and held responsible for managing water resources. Climate change considerations should be fully integrated into planning, budgets and government grants at all levels.
- **Getting businesses more involved in funding solutions:** More private investment is needed to support ecosystems and economic development equitably. The "polluter pays" principle should be applied, making heavy water users and polluters contribute more.
- **Better partnerships between stakeholders:** Improved coordination between government, NGOs, private companies and financial institutions. Focus on fairness and restoring ecosystems when making decisions.
- **Enhanced monitoring and learning:** Tracking transformational changes, implementing research findings and involving communities in data collection are essential for sustainable progress.

Four pathways towards a climate resilient water value chain were also presented:

- Just policy reform
- Sustainable finance
- Technology and innovation
- Integration (WEFE Nexus)

### Group work

As indicated, two breakout groups discussed cooperative governance, and transformative finance, respectively. The key discussion points are summarised per group topic below.

#### Transformative finance

- Critical to partner with the private sector, for example on biogas and other initiatives that save water use in the energy and agriculture sectors. The private sector has an important strategic role to play alongside government in the water value chain. Good examples are available, for example wastewater plants in Namibia developed and managed in partnership with the private sector.
- We have a lot of policy and plans. Key is to change the way we are doing things because of climate change. The way in which we are managing water in South Africa is problematic.

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- South Africa has a conducive enabling environment for financial institutions; however, we need to evolve a model that will bring inclusive benefits, ensure/incentivise climate resilience and that ensures that the state plays a role, particularly in protecting infrastructure from climate shocks.
  - Market based incentives are important, while climate change adaptation must be a significant financing priority.

### **Cooperative governance**

- South Africa's institutions are weak and need to be strengthened; communications also need to be strengthened, particularly between spheres of governance, and between sectors.
- We need an integrated approach for implementing and managing the Water-Energy-Food-Ecosystem (WEFE) nexus. The leaders and champions of this approach need to be identified and elevated.
- Social inclusion and addressing inequalities in the water value chain is critical and urgent. The question is how we bring people along, and how we address diversity, equity and inclusion. Partnerships and participatory approaches<sup>3</sup> are key in this regard. Information needs to be appropriately packaged and locally disseminated.
- The regulators in the water value chain also need a cooperative governance mechanism as they must work towards common climate resilience and water governance objectives.
- Early Warning Systems (EWS) need to be strengthened, and these are not the same as early warning communications or notifications.
- Municipalities are key but currently under distress (no solutions were put forward by this group on the municipal conundrum).

### **Synthesis remarks**

Commissioner Dr Shafick Adams provided the following synthesis remarks:

- The time to act is now
- Good governance that addresses both climate variability and climate change is key; without good governance, investments will not flow. The sector needs to calculate risk as a function of climate hazards and levels of exposure, and the level of the sector's climate resilience in the face of climate risk.
- We need to clarify what we mean by a community; the term is loosely used.
- Municipalities deal with bulk water which in turn does not cater for groundwater. Groundwater is not adequately understood or managed,

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<sup>3</sup> Participatory approaches refer to inclusive, community-driven methods that actively engage all (but especially local) stakeholders in decision-making, planning, and implementation processes. In South Africa, these approaches emphasise the integration of local knowledge and perspectives to enhance adaptation readiness. A key element of the participatory approaches described here is citizen science, which would involve communities and individuals in data collection, monitoring, and analysis, ensuring that adaptation strategies are grounded in both scientific research and lived experiences. This definitional outline has been informed by the extensive outputs of this project's widespread stakeholder consultation process.

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including in the context of climate resilience. Does bulk water drive or reduce inequality?

- The involvement and inclusivity of municipalities are key elements, but we need to talk their language. Climate change is not articulated among the top 10 risks facing municipalities.
  - A systems approach – that is cross sectoral – is critical in defining what an ideal cooperative governance model looks like for South Africa's water value chain. The water and sanitation stream needs to be considered as a whole.

### 2.3. Key workshop outcomes

This section captures the key workshop outcomes, synthesised from its segments.

#### **Strengthen our institutions, particularly local government**

- Climate risks are not perceived by municipalities to rank among their top 10 priority risks, which therefore makes it difficult to prioritise climate response
- Pressing governance issues eclipse climate change issues, and there is a need to combine good governance with addressing climate variability
- Bring together the regulators
- Bulk water does not deal with groundwater; a revised approach to bulk water needs to be considered

#### **Cooperative water governance and WEF Nexus institutional arrangements**

- An integrated approach is critical
  - Partnerships that bring together mandated and non-mandated functions
  - Participatory approaches and effective, inclusive and local dissemination
- Mainstream climate resilient water security, as affected by CC, into the Medium-Term Strategic Framework (MTSF) targets, bearing in mind that "water is a long-term business" that should be looking 30 years ahead
- Partnerships and scale, along with innovation and technology are essential ingredients for adaptation readiness
- A transboundary focus is critical for climate resilience and water security, necessitating:
  - Closely cooperative transboundary governance
  - An institutional mechanism for investing in transboundary water along the lines of the Lesotho Highlands Water Project (LHWP)
- Water should be treated as a business rather than a basic service, but the role of state is key in terms of ensuring social justice across the water value chain
  - Threat is financial; water cannot self-finance
  - The approach to running water should be predicated on business principles and operational standards to be more efficient. This will enable better provisioning basic water and sanitation services.

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## 2.4. Concluding remarks

An overhaul of how the water value chain is construed, governed, managed and financed is needed because of climate change and the risks it brings to already threatened governance frameworks. All actors need to get out of the current financial comfort zone. Ambition is lacking in the water investment horizon. With this, it will be critical to distinguish between collaboration and partnerships, and to define partnerships more precisely, in the context of accelerating adaptation readiness.

Accelerated and coordinated efforts are sorely needed. This is not least because of the urgent need for greater equity among the consumer base. Differentiated water consumption assessments and understanding is important in this regard, as is the rapidly increasing obligation to service the informal / subsidised populations in South Africa.

## 3. Agriculture Workshop

### About the workshop

This workshop was held on 27<sup>th</sup> November in the Protea Fire and Ice Hotel, Menlyn in Pretoria from 09:00 to 14:00. It was attended by delegates covering a wide range of stakeholders. A stakeholder participation register is available in Appendix 2E while Appendix 2D contains the concept note and agenda, including speakers, for the workshop.

The workshop focused on following critical issues facing the agricultural sector in adapting to climate change: governance, equity and partnerships; the Agriculture and Agro-processing Master Plan (see Appendix 2B for the presentation on AAMP) and the Climate Smart Agriculture Strategic Framework; capacitation and resourcing especially at the provincial level; the Just Transition and agrarian reform; building research capacity; monitoring, evaluation, and learning especially in respect of developing a suitable climate change methodological framework.

The PCC reached out to strategic representatives from various social partners, including from the key sectors that enable or impact agriculture in one way or another. Participation was sought from key government departments - Departments of Agriculture, Land Reform and Rural Development, Cooperative Governance and Traditional Affairs, Forestry, Fisheries and the Environment, National Treasury, Water and Sanitation, National Planning Commission, and Provincial Departments of Agriculture.

In addition, participation from key research institutions was solicited: Agriculture Research Council (ARC), South African National Biodiversity Institute (SANBI), the Water Research Commission (WRC), and University based agriculture research centres. The various agricultural associations: AgriSA; Agricultural Business Chamber of South Africa (Agbiz); African Farmers' Association of South Africa (AFASA), National Agriculture Marketing Council – were also brought into the orbit of discussion. A variety of financial institutions were invited but none were able to be present. Finally local community based agricultural/land associations within civil society engaged in building resilience in the sector were also consulted.

### 3.1. Workshop overview and insights

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## Workshop format

The workshop was moderated by Ruth Beukman. The structure of the workshop was overwhelmingly consultative and oriented to discussion. Contextual inputs came from the PCC secretariat (Dhesigan Naidoo), the National Agriculture Marketing Council/AAMP task team (Dr Solly Molepo), and SANBI (presented on its behalf by Belynda Petrie).

A high-level interactive panel discussion, moderated by Belynda Petrie, and between four experts – Prof Stephanie Midgley (Western Cape Government), Prof Ben Cousins (PLAAS), Dr Sylvester Mpandeli (WRC), and Dr Mantoa Kgapohla (Mpumalanga government) – set the scene, and was followed by an open discussion with participants from the floor.

A short input on the sector report recommendations by Prof Mike Morris opened the way for participants to break into three working groups to focus, respectively, on discussing issues of cooperative governance, transforming finance, and monitoring and evaluation. The results of the working groups were brought back into a plenary discussion for assimilation into a future synthesis.

## Key issues facing agriculture in dealing with climate change

The sector report set out the following key issues which formed the evidence basis for the workshop. The prioritisation of the agriculture sector stems from its intrinsic value to all aspects of South Africa's economy and society, which is increasingly compromised by the impacts of climate change in an historically agriculturally arid and water stressed country. Water is often the conduit for the impacts of climate change through increasing temperatures and heat stress, seasonal rainfall variability and droughts and floods. These impacts manifest on agricultural productivity, income generation and food security - all critical levers for socio-economic development, poverty alleviation and employment and livelihood.

**Governance:** The report argued that climate change impacts on agriculture, multiplied by water and land stress, are significant for all farmers, especially vulnerable smallholder and household producers. These lack access to inputs and finance, rely heavily on rainfall, often farm on marginal land, and have a high dependence on government enabled support. The sector's governance and institutional arrangements fall short of addressing what is required to deal with climate change impacts. Consequently, food security is exacerbated. The historically inherited dualistic nature of the sector means that many vulnerable farmers largely operate outside of agriculture value chains, have low access to markets, inputs and technology, and finance, and have limited access to extension services and support. Moreover, climate change responses, especially climate smart agriculture technologies and practices, are not integral to the agriculture sector's Masterplan.

The agriculture sector research paper for this study found that land reform processes in South Africa have been concerned more with restitution than facilitating the urgent need to grow the commercially oriented smallholder farmer sector as well as supporting market-oriented household subsistence farmers. This perspective was confirmed by several experts consulted for the study and by Prof Ben Cousins on the expert panel in the Agriculture Workshop. This is in a context where the state's capacities to support vulnerable farmers and producers to adopt ecosystem-based adaptation and climate smart agriculture practices and technologies are

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inadequate. Hence only the large, richer farmers have the resources to put in place the required adaptive readiness measures. Unless this is remedied the dualistic nature of the agriculture sector will be exacerbated.

**For us to be ready for climate adaptation, we really need to bring the farmers back into the driver's seat, so that as we plan for them [...] they are also part of the decision-making [process].**

**- Dr Mmantoa Kgaphola**

*Capacitation and resourcing:* Smallholder and household producers lack knowledge, resources and capacities to respond effectively to climate change. Nor is government's bifurcated policy framework well placed to provide this. It has institutionally separated agricultural growth and development plans from a comprehensive climate change response framework. Yet farmer support needs capacitation on optimal climate

response solutions and implementation, and rebuilding of partnerships between stakeholders. Extension services are not going where they needed most and are not climate responsive. National government's attempt to revive extension services is uneven across the different provinces and is not conducive to welcoming other actors (e.g. cooperatives and NGOs) who could assist. Traditional land tenure arrangements do not facilitate smallholder household subsistence farmers to secure financial and other resources to adapt to climate change. The sector as a whole also needs bulk infrastructure support (effective transport, flood resilient roads etc.) to enable farmers and agri-businesses to access domestic and export markets.

**Monitoring, evaluation & learning:** Currently there is no system in place to progressively and incrementally monitor and learn from progress on the agriculture sector's response to climate change and its level of readiness to adapt in a transformational manner. All farmers, especially smallholder and household producers who are the most vulnerable to the impacts of climate change, need information on how to respond to the impacts of climate change which they experience primarily through rainfall variability, temperature rise and heat stress, droughts, and floods. Policy makers need information on how all farmers are adapting, how and why vulnerable farmers are struggling, or simply not adapting, and what their needs are. All this is required to inform iterative policy responses and the design and adaptation of support mechanisms. Financiers need information on farmer needs and risks vis-a-vis climate change to inform lending and investment policies and products.

This translated into the following key messages and recommendations reported to workshop participants:

- *Climate change impacts affect ALL farmers. The institutions to address them are inadequate. Food security, Gross Domestic Profit (GDP) and jobs are threatened.*
- *Climate smart technologies and practices are not integral to the AAMP Masterplan and the CSASF is not part of the AAMP & DoA. A single clear government policy and framework is required which mainstreams climate change strategies and the importance of the WEFE nexus.*
- *The sector's dualism means vulnerable farmers (household and smallholder, and medium size producers) are excluded/struggle to access value chains, market access, inputs finance, technology, extension services and depend on inadequate government support.*

- Land reform has focused on restitution rather than growing small holder commercial and market-oriented smallholder household farmers.
- Water, energy, food & ecosystems are inextricably entwined which necessitates an integrated sustainable management approach
- Government has not invested in adaptation to counter CC. Only large, wealthy farmers have been able to substantially invest in climate adaptive measures. Hence climate adaptation ready finance has to be mobilised.
- There are inadequate techniques to monitor progress in countering CC impacts and we lack a coherent, comprehensive and inclusive, monitoring, evaluation and learning (MEL) framework to monitor progress on sectoral transformational change across the WEFE Nexus.
- Ecosystem-based Adaptation approaches (nature-based solutions) are critical for giving meaning to the WEFE nexus and its implementation. EbA is an ecosystemic solution for addressing water scarcity in that it enables farmers, the biggest water-user group, to put water back into the system. EbA enables the climate resilience of smallholder and household producers, and further increases food and nutrition security.

Figure 2. Excerpt from SANBI presentation (presented on their behalf by Belynda Petrie) on Ecosystem-Based Adaptation approaches

## Why Ecosystem-based Adaptation



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### 3.2. Key workshop outcomes

Participants overwhelmingly agreed with the thrust of the report. They reinforced a number of issues, provided nuance to some, and added a few more that needed consideration. These outcomes are summarized below:

- Our approach to climate adaptation readiness has to maintain a balance between the need to achieve food security and increase production whilst simultaneously maintaining climate resilience and adaptability. The lessons from some examples provided by both large and small farm holders demonstrate that this can be done through sustainable climate resilient efficient farming practices.
- A climate smart agricultural policy needs to bring the ~250 000 market-oriented smallholder household producers into the 'fold' along with the process of developing a substantial group of small-scale commercial farmers. Both these groups must be given land, support and resources to succeed, including some form of security of tenure. This will require breaking with a land reform process focused solely on land restitution, which has provided land but not resulted in increased food production. The DoA must embrace an agrarian reform model aimed at developing, supporting and expanding a substantial small scale commercial and market-oriented farmer class.
- Climate informed science is increasing rapidly and closing the knowledge gap. The problem is that this is not filtering down to farmers especially small-scale farmers who do not have their own resources. If these small-scale farmers are not provided with knowledge, training and support (including but not only financial) to adopt climate smart practices which is appropriate to operating in a climate change world they will be set up to fail.
- A climate adaptive agricultural policy will require an integrated approach, mainstreaming a climate strategy framework, based on EbA and climate smart agriculture, into the AAMP, breaking silo mentalities, and creating a robust partnership between government departments and farmers. As one panellist summed it up:

**What's lacking in our thinking in the rural sector of South Africa, is changing the agrarian structure in our country to give many more opportunities to many more people.**

- Prof Ben Cousins

**We are moving into a phase of accelerated climate change, which we didn't expect. It's not linear. We are moving into extreme and possibly dangerous territory. And we are going to rely more and more on our scientists to help us negotiate what that means on the ground.**

- Prof Stephanie Midgley

*"Farmers of all sizes have to be taken out of the passenger seats where they are simply beneficiaries of government largesse and given a rightful place in the driving seat of developing climate ready policy and ensuring its implementation".*

- Government needs to balance climate responsiveness with the requirements of the Just Transition. This involve adopting a common but differentiated

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strategies which will include balancing food security needs, increasing agricultural production, and developing inclusive, evidence-based policy.

- Government departments at all levels need to be recapacitated, extension services augmented and expanded (to include traditional authorities, professional farmers, effective cooperatives, and NGOs), and officials need to be trained in climate smart technologies and practices.
- The WEFE nexus is crucial. But this requires government moving out of their siloed departments and adopting an interdisciplinary nexus approach which is collaborative in respect of implementation, based on partnerships between relevant departments as well as between the public and private sector. This requires cooperation at the highest level (Ministers and DGs), transversally established indicators, as well as agreed Memorandums of Understanding (MoUs) and Key Performance Indicators (KPIs) to create accountability.
- It was widely agreed by workshop participants that the EbA approach encompasses the ecosystemic solution needed to address justice, the nexus, climate change, and water security issues facing the country. Participants recommended that government adopt this approach to accelerate readiness.
- The public and private financial sector has to be engaged in order to provide much needed funds for farmers to secure climate smart technologies and be trained in climate smart farming practices.
- In order to ensure long term sustainability young people must be brought into a climate readiness agenda which requires bringing climate change into school curricula to extend education and knowledge.
- Current agricultural statistics are inadequate to deal with climate readiness. Hence the research institutions must be provided with adequate funding to develop appropriate monitoring and evaluation technologies and frameworks. If this is not done progress cannot be measured and learning, both within the research community and farmers, will consequently not occur.

### **Synthesis remarks**

Commissioner Janse Rabie (Agri SA) synthesised some key issues in his closing comments. He stressed that South African agriculture is one the least government supported sectors internationally. Dualism is a massive problem in terms of food security. This needs to change and it is accepted by the commercial farmers associations. It is not only the commercial agriculture sect that makes a substantial contribution to the country, and we should not underestimate the contribution of subsistence farmers to food security, especially through informal markets.

Going forward he stressed the important role of evidence based science for decision making, the need to focus on local granular aspects and impacts of climate change, the importance of adopting an ecosystems approach, placed a strong emphasis on getting the right knowledge to small scale farmers, the need to tackle development and protection of small scale farmers, and finally that it was important to go beyond talking and throwing ones weight into ensuring that implementation takes place.

### **3.3. Concluding remarks**

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Creating partnerships between the public sector, the farming community, and ancillary support institutions is critical if climate adaptive readiness is to be created and an inclusive path to a just transition is ensured. This has to result in a strategic policy framework and implementation plan for agriculture that mainstreams climate change. Inclusivity will only be successful if a new approach to agrarian reform is constructed which focuses on supporting and growing small scale farmers and market-oriented household producers. Part of this process requires providing them with security of tenure to enable them to seek finance and overcome those transitional land tenure constraints they experience.

Capacitation of the departments of agriculture at the national and provincial level is critical. Unless farmers received the required support, including up to date climate smart technologies and farming practices, they will be unable to adapt to climate change impacts and small farmers will be set up for failure.

Finally, without an up-to-date monitoring and evaluation system, backed by evidence-based science, we will not be able to monitor and track progress and hence learn from any mistakes in creating an adaptive climate ready agricultural sector.

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## 4. Built Environment Workshop

### About the workshop

The PCC Built Environment and Climate Adaptation Readiness Workshop was held in Johannesburg on 28 November 2024 between 09h00 and 14h00. There were ~60 attendees. The intention of the workshop was to bring together key stakeholders, strategic representatives and role players in the built environment sector to inform and provide perspectives and input into the work done on the readiness of the built environment sector for climate adaptation. The work prepared on the adaptation of the built environment sector was contained in a Literature Review, Sector Report and Sector Report Summary which had been distributed to participants beforehand. A stakeholder participant register is available in Appendix 3D while Appendix 3C contains the concept note and agenda, including speakers, for the workshop.

### 4.1. Scene setting

The workshop was jointly moderated by Ruth Beukman and Belynda Petrie from OneWorld Sustainable Investments. Following an introduction to the workshop and an exercise to get a sense of attendees and their representation, Dhesigen Naidoo the Adaptation Lead from the PCC set the scene.

Mr Naidoo identified that the built environment was not a homogenous sector but that it is a complex space where numerous actors participate in contributing to what manifests as the built environment. Consequently, the built environment discourse allows engagement around many interrelated aspects such as technology in the built environment, economic city structures and the regulatory environment. The built environment – and its development by numerous actors – therefore has the power to give effect to the Just Transition. He identified that the workshop was integral to the broader work being done simultaneously in three key economic sectors – the Water Value Chain, Agriculture and the Built environment. The overarching objective of the adaptation readiness study and the workshop has been to support a climate resilient built environment in South Africa – in a manner that supports a Just Transition from a fossil fuelled economy.

### Workshop format

The welcome, introductions and scene setting were followed by :-

- A High-Level Panel discussion moderated by Belynda Petrie. The panel was comprised of Neville Chainee (Housing Development Agency (HDA)); Seth Maqetuka (Human Settlements National Treasury City Support Programme (NT CSP)); Letsepa Pakkies (National Treasury Intergovernmental Policy and Planning); Dorah Kiki (South Africa Local Government Association (SALGA) Senior Advisor), and Lisa Reynolds (CEO of the Green Building Council of South Africa (GBCSA)).
- A presentation on the Draft Human Settlements Climate Change Strategy and Implementation Plan (CCS&IP), by Hlengiwe Maila – Director National Department of Human Settlements.

- Group work: Three breakout groups, respectively, discussed cooperative governance, transformative finance and urban informality in relation to built environment adaptation. Abi Godsell, Hlengiwe Maila and Seth Maqetuka presented the group work outcomes to the plenary group.
- Dumisani Nxumalo gave a workshop synthesis, and the workshop was closed by the moderator.

The next section presents the highlights of each workshop segment and concludes with the key workshop outcomes.

## 4.2. Workshop highlights

### Panel discussion – People Centred Climate Resilience of South Africa's Built Environment

Belynda Petrie identified that the enabling environment for the built environment is not adaptation ready. In this regard cooperative governance, urban informality and finance are key issues that are impediments to climate adaptation readiness. Focussed responses from panellists were then invited.

Neville Chainee identified that not all government attempts at transformative adaptation and inequity have been unsuccessful in the past but the interaction interface with people and government needs attention as this has deteriorated in recent years. Intergovernmental relations, public-private-partnerships (PPPs) and such interaction spaces need attention to increase both the pace and effectiveness of solutions.

Neville Chainee also noted, after questions from the floor, that in respect of the just transition we need to actively embrace informality. He also cautioned that we need to be careful that regulations designed to overcome specific problems do not end up having unintended consequences for the just transition. As an example, he cited how the new spaza shop regulations are working against micro businesses that are desperately needed in informal areas and as part of the informal economy.

**We need to be careful that regulations designed to overcome a problem do not end up having unintended negative consequences.**

- **Neville Chainee (paraphrased)**

Dorah Kiki in responding to the role of municipalities and the role of SALGA in capacitation of municipalities for climate change, noted the multiplicity of challenges that municipalities face. In this regard partnerships with the private sector and other spheres of government are going to be necessary to enhance capacity. She further noted the strong relationship between communities, the environment and cities and that this needs to be carefully handled to ensure that communities are protected.

After questions from the floor Dorah Kiki noted that partnerships with the private sector (e.g., insurance companies, weather services) are important for early warning systems when there are natural disasters. In addition, PPPs can assist in projects and programmes that will enhance adaptation. SALGA assists municipalities by profiling best practices and scheduling think-tanks for interactions around important topics such as climate change.

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Seth Maqetuka, in relation to what exists that can be improved to assist adaptation of the built environment and human settlements, noted that there are many positive initiatives taking place. He emphasised however, that they are not being adequately upscaled to have an effective impact. Contributing to the inability to upscale positive pilots and initiatives is that there is a lack of a supportive regulatory environment. He also noted that in high density informal settlements there are positive community driven initiatives (such as reblocking) where communities at their own initiative take actions to improve their quality of life. Government and regulations need to be able to respond at the same pace as community needs to collectively improve people's lives.

In relation to the empowerment of communities Seth Maqetuka noted that there are many facets of empowerment (e.g., financial, cultural, decision making) and that communities need a greater role in planning, conception, decision making, regulation, and allocation of resources. Resources need to be provided for areas such as training, communication skills and the like to truly respond to the need for empowerment. This requires trust and a mind shift change amongst bureaucrats. Communities have resources, ingenuity and commitment that are not recognised and that can benefit the sustainable development and climate response agenda.

Lisa Reynolds in looking at the role of the private sector in transformative adaptation highlighted that the GBCSA works with government for development to be more sustainable in particular through the green building certification process. She also noted that government and private sector collaboration has improved over the recent past however there is a disjuncture between regulation and implementation. She further recognised that the Climate Change Act can enhance further necessary collaboration. A key area for attention is in the quality of construction particularly in the formal subsidised sector. Importantly she noted that “to build a house badly takes the same amount of time and costs the same as building a house well.”

**“To build a house badly takes the same amount of time and costs the same as building a house well.”**

**- Lisa Reynolds, CEO, GBCSA**

In responding to how the private sector can be more proactive, Lisa Reynolds identified that reporting and keeping a climate responsive lens top of mind in all aspects of development such as urban planning, procurement, design and construction, is important.

Letsepa Pakkies in looking at the fiscal system for an adaptation ready environment noted the constrained national fiscus but indicated that much is happening from a policy, regulatory and funding perspective to assist the country to address adaptation and mitigation challenges. He further noted that 96% of grants from National Treasury are built environment grants comprising more than 24 conditional grants. Conditional grants are being reviewed by National Treasury and there is a focus on adaptation. Grant beneficiaries will have to respond to climate change imperatives and the intergovernmental grant system will be very useful in advancing the climate change and justice agenda. Insofar as municipalities are concerned, accountability and capacity constraints are important considerations that require support and there is a

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need for a differentiated approach to municipalities based upon the needs and capacity of the municipality.

He further indicated that National Treasury recognises that the private sector is a resource and can provide necessary skills and expertise in navigating challenges. In this regard incentives and participatory approaches can play a role.

National Treasury is conducting important revisions to the disaster response funding with more funding advocated as well as making disaster funding more easily released,

**We must overcome siloed approaches by government through more integrated approaches and the recognition that aspects of development and servicing are inextricably interrelated.**

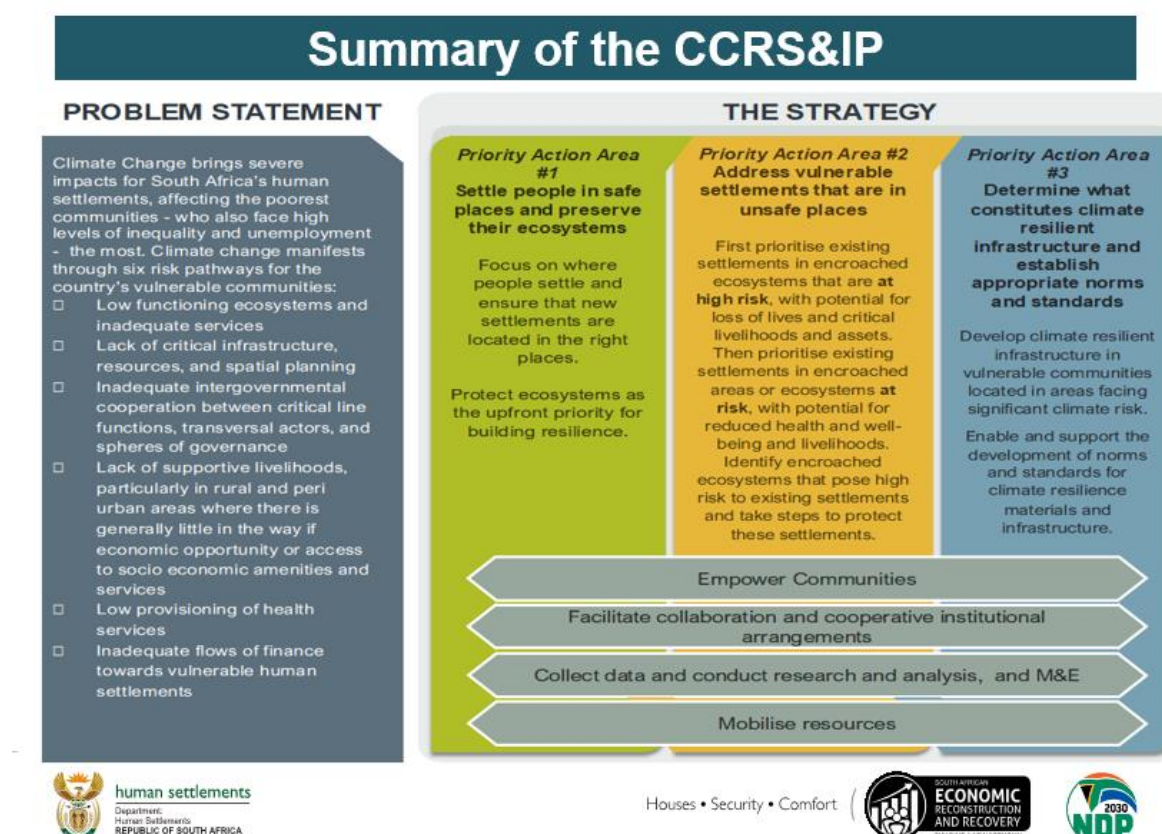
**- Letsepa Pakkies (NT)**

targeted, and data driven. Finally, Letsepa Pakkies noted that whilst funding is being addressed there are many other avenues of improvement needed. Chief amongst these is the need to overcome siloed approaches by government through more integrated approaches and the recognition that aspects of development and servicing are inextricably interrelated.

### **DoHS Presentation – Draft Human Settlements Climate Change Strategy and Implementation Plan**

Hlengiwe Malia's presentation on the draft strategy is available in Appendix 3B. The importance of a Human Settlements Climate Change Strategy was emphasised particularly because the poor are most impacted by Climate Change and the Just Transition is important.

Figure 3. Excerpt from DoHS Presentation – Summary of CCRS&IP



The strategy specifically locates healthy ecosystems as the primary vehicle for building the climate resilience of informal settlements as well as lower income subsidised housing developments.

The strategy has identified three priority action areas:

- The prioritisation of addressing vulnerable settlements that are settled in unsafe and high- risk environments.
- The identification of measures to ensure that people are settled (informally or formally) in safe places and that ecosystems are preserved.
- The determination of appropriate norms and standards for the adaptation of the built environment.

Four cross cutting interventions are identified to enable these areas:

- Empower communities with agency and networking capacity for climate resilient human settlements.
- Establish strong intergovernmental and societal institutional arrangements.
- Mobilise financial resources and adequate flows of finance.
- Collect data, conduct M&E and conduct further research and analysis

### OneWorld presentation: Built Environment Paper

The presentation is available in Appendix 3A. It captures the main messages of the full report which assesses adaptation readiness of the built environment.

These are as follows:

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- The built environment in South Africa starkly displays the disjuncture between the poor and the wealthier. The poorer communities and the areas where they live are much more vulnerable to slower onset climate changes as well as extreme events. The adaptation readiness of the sector will continue to be severely hampered until the inequalities are addressed.
  - The poor in South Africa are most impacted by climate change impacts on the built environment even though they contribute least to climate change.
  - The collaboration potential between private sector, government and civil society is not appreciated or capitalised upon for adaptation
  - Limited financing for the built environment indicates low readiness for adaptation. A just transition is directly dependent on how funding is prioritised and allocated in developments.
  - Attempts by Government to overcome and improve the built environment have been inadequate to address the mounting backlogs in housing and infrastructure as well as the poor quality of built environments, particularly in the formal subsidised and informal areas.
  - Urbanisation (68,3% in 2022) and informality are increasing. Informal settlements, micro developers and informal systems fall outside the formal control system designed to protect people from hazards and loss of life (e.g., floodlines, tip sites, health regulations). A challenge is to find interventions that can enhance the justice, resilience and adaptability of the “illegal” informal settlements where the poorest and most vulnerable live.
  - Implementation happens at local government level and capacity and competence limitation consequences are not identified or well understood
  - Government is not aligned in a coherent climate change response and there is a need for coordination of the climate adaptation effort. Cross sectoral alignment is critical between and within spheres.

The presentation also highlighted the importance of the Just Transition in the built environment and the significance of the WEFE Nexus approach to dealing with climate change adaptation and the built environment. In addition, the necessary conditions for transformative climate responses in the built environment were highlighted.

These preconditions for transformative adaptation responses are as follow:

- Intergovernmental cooperation and nexus approaches which must impact policy and legislation, and institutional arrangements.
- Cross sectoral cooperation and partnerships where all sectors of the economy and society involved in the built environment need to cooperate and collaborate.
- Municipal governance and capacity which must include the informal sectors of the economy and society
- A climate centred fiscal environment where climate change is fully integrated into planning, budgeting and the intergovernmental grant system

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## Group work

Three breakout groups discussed three key questions relating to cooperative governance, transformative finance and urban Informality respectively. The key questions and discussion points raised by the groups and as was reported back to the plenary group are summarised below.

### *Group 1: Cooperative governance*

#### **What are the necessary conditions of successful cooperative governance for adaptation readiness?**

- Transversal platforms are needed for engagement
- Overlaps and duplication in government silos need to be overcome – the Department of Forestry, Fisheries and the Environment (DFFE) can be the coordination lead for climate change work
- Stakeholder identification is needed up front
- Private sector is an important role player along with government
- The IDP should be more integrative in processes
- Green issues cannot be retrofitted in development- climate change must be part of conception and design
- Entities must be capacitated to engage effectively
- Communities know what they need - need assessments allow better results
- Climate change policies must be enforced
- We need to understand the interconnectedness of all the issues affecting resilience including processes, people and functions
- People must know and understand what funding is available and how to access it
- Language and communication must be simple and meaningful for effective cooperation

### *Group 2: Transformative finance*

#### **What are the optimal financial arrangements and mechanisms for enabling an adaptation ready Built Environment?**

- Adaptation requires a mind shift
- Entry level housing needs to attract external investment, and attention needs to be paid by government to this area
- Banks need to join the finance need with new thinking about risk assessment
- Appropriate regulations for those most in need, need to be devised
- Unemployed youth are an untapped resource for development
- Packaging project for funding is a gap needing intermediaries / people responsible for project packaging
- A long term Just Transition finance mechanism is to be implemented
- Social housing funding model can be tweaked to decrease end user costs and there are a variety of people/institutions that can do this

### *Group 3: Urban Informality*

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## What are the priority Climate Resilient Development Pathways for the Built Environment?

- Informality should be seen as an alternative to formality rather than the opposite
- There needs to be an integrated approach as well as a vision of what a sustainable urban environment is so that all can work towards a common vision
- Knowledge sharing with all stakeholders and people on the ground is important including skills transfer, youth empowerment and local community involvement in solutions
- Children can be part of early warning systems
- Monitoring mechanisms as well as technology-based monitoring to join communities with government (South African Police Service (SAPS), Health etc) can be introduced
- Solutions must be context specific
- Planning must be participatory
- The application of norms and standards must be relooked at to be appropriate for informal housing and settlements

### Synthesis remarks

Dumisani Nxumalo provided the following synthesis remarks:

- The climate impacts in sub-Saharan Africa and South Africa are escalating and unavoidable, backed up by science.
- We must learn from lessons and good practices and build on achievements
- The review of the conditional grants is important, and Treasury support is necessary the work being done by Human Settlements
- Knowledge sharing and integration of silos is important
- The pace of our climate response must increase
- Nodal point financing to support interconnectivity is important
- We are learning that we can improve the current system to become more resilient
- Water and agricultural land have a direct impact on the built environment – the interconnectivity is important

### 4.3. Key workshop outcomes

This section captures the key workshop outcomes as synthesised from the above workshop segments.

- There is a consistency across the sectors. The built environment, agriculture and water value chain reveal similar gaps in the readiness of the sectors for adaptation.
- The built environment is not a separate sector but is the space where the climate change impacts, and the just transition responses play out.
- We have to understand the reality and continued existence of informality in our country, and this will increase. This requires embracing the informality and integrating it into our responses and solutions to climate change. We also need

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to harness the value of the informal sector. People are poor but not without agency, knowledge, capacity and ability.

- The private sector can pay for itself and climate mitigation however there is a large social component relevant, because of the duality of South African society, where the private sector could do more- particularly in the informal sector.
- Government alignment is crucial for coordinated and effective responses to climate change. Alignment is necessary to reduce wasteful resources on multiple stream sectorally trying to deal with the same problems.
- A monitoring and evaluation process is important to determine the effectiveness of solutions and the Environmental, Social and Governance (ESG) framework to measure commitment is a useful tool.

#### 4.4. Concluding remarks

A paradigm shift is necessary in relation to how the built environment is conceptualised, governed, and financed. This includes its relationship with other key sectors such as water, energy and agriculture (the WEFE Nexus). The breadth and impact of the built environment is vast and climate change in the built environment brings considerable risk to populations, property, infrastructure and natural ecosystems. Consequently, all role players, government, private sector, communities, researchers, educators and others need to join forces to recognise the urgency for action and act collaboratively to effectively adapt to climate change.

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## 5. Synthesis Workshop

### About the workshop

The PCC Adaptation Readiness Synthesis Workshop was held in Johannesburg on 20 March 2025 between 09h00 and 13h30 in a hybrid format. There were ~80 in person attendees. A significant number of people registered to attend online; however technological challenges curtailed their participation.

The intention of the workshop was to bring together key stakeholders, strategic representatives and role players from across the three project sectors, and transversal institutions, to inform and provide perspectives and input on the adaptation readiness synthesis findings. The synthesis work on adaptation readiness was contained in project sector Literature Review, Sector Reports and Sector Report Summaries. A stakeholder participant register is available in Appendix 3D while Appendix 3C contains the synthesis workshop concept note and agenda, including speakers, for the workshop.

### 5.1. Scene setting

The workshop was moderated by Pam Yako on behalf of OneWorld Sustainable Investments. Following an introduction to the workshop, Ms Dorah Modise, Executive Director of the PCC set the scene.

Ms Modise outlined the workshop purpose and objectives, emphasising the importance of the three project sectors to the people and economy of South Africa, and the need for alignment on transformative pathways, and inclusive, effective and just adaptation. She highlighted the immediate and future impacts of climate change and noted the particular vulnerability of black women. Ms Modise highlighted that governance in silos, poor resourcing mechanisms, and weak institutional capacities hinder our ability to build resilience and implement adaptation solutions effectively, particularly at a local level and referenced the PCC's Just Transition Framework, published in 2022, and its premise on the need for procedural, restorative, and distributive justice, ensuring that no one is left behind.

Ms Modise identified key issues and recommendations from the research as being the need for cooperative governance and partnerships, finance and investment for adaptation, municipal capacity and implementation, and monitoring, evaluation, learning, and impact assessments (MELIA). Efforts are needed across all four of these areas to strengthen South Africa's adaptation readiness. Ms Modise concluded with a clear call to action to participants to prioritise actionable solutions that address governance gaps, financing bottlenecks, and capacity challenges, before acknowledging World Water Day on 22<sup>nd</sup> March, and offering thanks for efforts and participation.

### Workshop format

The welcome, introductions and scene setting were followed by:

- Presentation on the synthesis analysis outcomes by Belynda Petrie, OneWorld (see Appendix 4A for the presentation)
- Panel discussion moderated by Mr Dhesigen Naidoo of the PCC. The panel was comprised of: Ms Deborah Mochotlhi, DDG, Department of Water and Sanitation; Dr Msizi Myeza, CEO Council for the Built Environment; Mr Mike de

Klerk, Agriculture Economics Researcher; Commissioner (Cllr.) Kenalemang Phukuntsi, Tswelopele Local Municipality; and Dr Brilliant Petja, Research Manager, WRC.

- Group work: three breakout groups respectively discussed cooperative governance, delivery capacity, and Adaptation Readiness Resourcing. Dawn McCarthy, Mike Morris, and Dumisani Nxumalo presented the group work outcomes back to plenary.
- Commissioner Makoma Lekalakala gave a workshop synthesis and provided closing remarks.

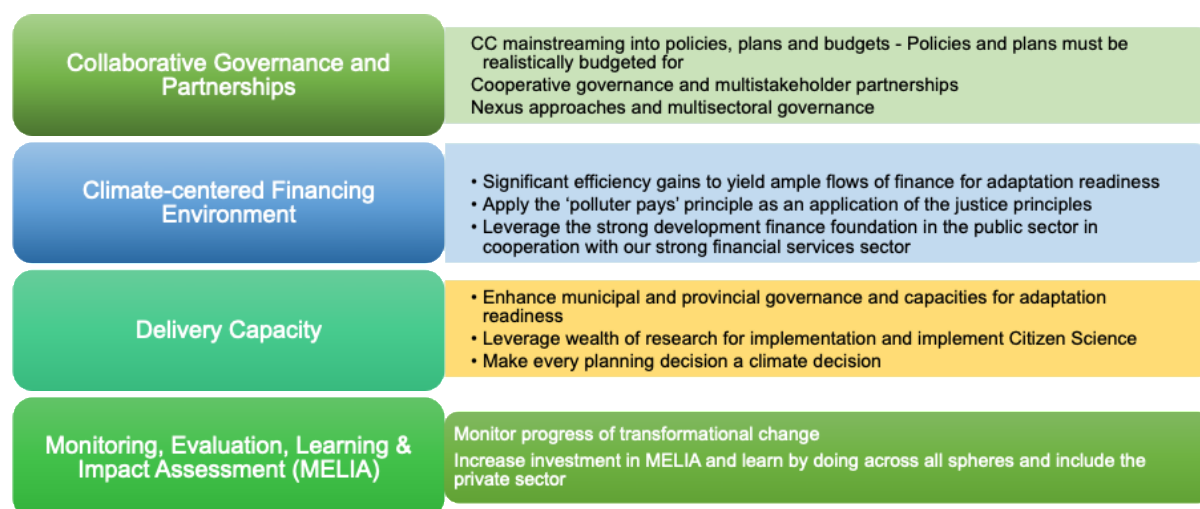
The next section presents the highlights of each workshop segment and concludes with the key workshop outcomes.

## 5.2 Workshop highlights

### Synthesis Report Presentation

Belynda Petrie highlighted that overall, there is a large gap between South Africa's needs and its state of adaptation readiness, highlighting that social inequalities, reflected in the triple challenge of poverty, inequality and unemployment, greatly increase the vulnerability of marginalised population groups. She identified the necessary conditions of successful adaptation readiness, outlined in the Figure below.

Figure 4. Necessary conditions



The three interconnected and underlying aspects of enhanced readiness in South Africa were articulated as being:

- Systemic transformation, with fundamental changes to the dominant development paradigm and associated power structures that address traditional norms and values, and world views, governance, and the flow and distribution of power and resources;
- Water Energy-Food-Ecosystem Nexus as an overarching strategy for building inclusive climate resilience; and
- Ecosystem-based adaptation (EbA), or nature-based solutions to complement hard engineering solutions for positive societal and developmental outcomes.

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The presentation went on to highlight key findings, and examples of possible pathways from each of the project sectors, before concluding that although there is an ongoing body of work across South Africa on climate change adaptation, efforts are by and large being undermined or even thwarted by the country's lack of cooperative governance, a financing environment that is not adaptation ready, low delivery capacities, and fragmented MELIA. Ms Petrie reemphasised the need for systemic transformation towards just adaptation readiness.

### **Panel discussion – Expert Reflections of the Synthesis Report Outcomes**

The moderator introduced the panellists, before Mr Naidoo facilitated a highly engaged panel discussion. The panellists were invited to respond to the synthesis presentation from the perspective of each of their sectors, or areas of work.

Ms Mochotlhi articulated water security as being the biggest issue, noting that South Africa's land issues are also important. She reinforced the synthesis presentation point that poor infrastructure is exacerbating the impacts of climate change and further cited human resource/capacity issues as a significant constraint, while highlighting that government is serving people that were not included in service provisioning pre democracy in 1994. Of serious concern is that people who lack adequate water and sanitation are also often the people most affected by flood events. Ms Mochotlhi highlighted the challenge of the difficult environment we are currently in, being one of cost containment and reduction. Although we are not yet adaptation ready, DWS does however have a pathway in the form of the department's approved climate change strategy, which is focused on cooperative governance and partnerships. This panellist emphasised the need to engage, identify vulnerable areas, and assess and respond. It will be important to influence the municipalities to factor resilience building into their Integrated Development Plans (IDPs), to prevent any building within the 1:100 year flood line, and to conduct meaningful MELIA. Spheres of government, particularly local government, need to show the footprint of climate change in their budgets. Ms Mochotlhi concluded that the water sector is heading in the right direction, with serious challenges to overcome.

Dr Petja emphasised the need for self-sustaining approaches, including protecting our ecosystems and encouraging climate resilient land uses that also bring about positive socio-economic outcomes. He noted water efficiencies as being the basis for implementing the WEF Nexus as a way of dealing with climate change in a sustained manner. Dr Petja pointed out that South Africa has enough of a foundation to adopt the Nexus and to promise a climate resilient society. However, we need to accelerate with urgency.

Dr Myeza's starting point was that the built environment has not yet accepted climate change as a reality. The built environment is made up of professionals who have not yet mainstreamed climate change into their work and methodologies. There is a code of conduct that needs to be more agile, but there are three key issues that must be addressed:

- procurement of infrastructure is a stumbling block
- we keep rebuilding climate damaged infrastructure according to the same specifications as before, even when that infrastructure has been damaged, for example by a flood

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- urban planning is not addressing urban sprawl and problematic spatial planning.

Cllr Phukuntsi, who also wears a Commissioner, and a SALGA hat gave a very candid perspective on the state of local government in terms of its adaptation readiness. Local government is where everything happens, yet most municipalities are under stress. She concurred with the synthesis presentation that local government cannot tackle the climate change problem alone, and that it needs capacitation and much better cooperative governance. There are numerous gaps and challenges, for example, the District Development Model has gaps in implementation. Institutional capacities are inadequate to effect planning implementation. Small municipalities are particularly challenged. Moreover, municipalities must deal with external interferences with arrangements often being made outside of government, for local government. At the same time the economy is not growing, and many people are unemployed. Municipalities are expected to collect payments for services from people that do not have jobs, and the Equitable Share Grant is not sufficient to cover the infrastructure investments needed. Corruption is a major, compounding issue. Moving forward, we need an intergovernmental relations system that can address all these issues. Service delivery capacity is often compromised by these issues, and this affects the climate resilience of communities. Communities find it hard to talk about climate change when their most pressing need is service delivery. In conclusion, we need a thriving local government to build climate resilience.

Mike de Klerk articulated his agreement with the synthesis findings and recommendations for the agriculture sector and emphasised that the focus of his inputs is on vulnerable farmers who lack access to important information and resources. The extension system is not well resourced or capacitated and simply cannot address the needs of all farmers; the extension officer to farmer ratio does not allow for this. While we need to strengthen the extension system, this costs money that SA does not have, and the economy is not growing. Solutions lie in pulling in the private sector who have better resources as well as climate change knowledge, which they need to survive as commercial farmers. However, the commercial sector needs to see the business opportunity, but land tenure issues are stymying smallholder producers from participating in such opportunities. Tenure reform is needed; no one is going to invest in a farmer who may not have access to the land in a year's time. East Africa provides excellent examples of cooperative solutions that work, and which demonstrate that statutory tenure needs to emerge from traditional tenure. This region also demonstrates strong community mobilisation models through credit and saving schemes. These are dominated by women and can also be leveraged as information platforms that mobilise knowledge.

Mr de Klerk emphasised the importance of ethical leadership and good governance – and the high need for effective community mobilisation in South Africa's agriculture sector.

Comments and questions were taken from the floor, to which the panellists responded, as summarised below:

- The intergovernmental relations system is not effective, and yet it is provided for in the Constitution.
- Does capacity building include civil society or only Government? Civil society is closer to the ground.

- What is the role the media can play in getting the climate change message out, for example television and movies on the issue?
- People want to pay for services; however, they are questioning what they are paying for (low delivery, corruption, etc), Municipal offices need to do the right thing at the right time. We have been in democracy for 30 years but have not received any benefits.
- Climate change is a reality and cannot be ignored in terms of the rights of citizens. Community gardens are for example developed in schools, but then officials come in and take over the cleared areas for own use.

Responses:

- Community gardens have been shown to be effective, for example in the City of Joburg. However, the example raised from the floor is an example of the great need for ethical leadership.
- The IDP review process is an example of poor IGR. Municipalities are responsible for developing IDPS. During the process, national and provincial officials visit the municipalities to influence the process, without understanding the context. Community authorities often don't participate; the Office of the Speaker is charged with the responsibility of ensuring that ward councillors engage with communities, but this responsibility is not always followed through. All local government officials and community representatives have a responsibility for closing the gaps in the IGR system.
- Building institutional capacities is foundational. Coupled with knowledge, this will help build intersectoral relationships. With this, it is important to question the relevance of some of the established associations.
- The overarching objective should be to build the resilience of municipalities, and to invest in aging and unmaintained infrastructure.
- Language barriers exist, and communicating in appropriate languages is important. In short, language matters.
- Climate change is an important lever for building institutions, while bringing in climate resilient infrastructure is also key. South Africa needs to capitalise on non-revenue water.
- There is significant room for improvement in how government engages with communities. Cooperative governance is an approach that gives us hope on how to transition to adaptation readiness. The issues we face in this regard are overwhelming but are not insurmountable.

Mr Naidoo concluded the panel discussion with the observation that "this is a conversation that has a long way to go".

### **Group work**

Three commissions were convened, one for each of the cooperative governance, delivery capacity, and resourcing mechanisms topics. The key questions and discussion points raised by the groups and as was reported back to the plenary group are summarised below.

#### *Group 1: Cooperative governance*

This group addressed the following questions:

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- i) What are the key adaptation readiness (AR) elements that must be addressed through cooperative governance?
  - ii) What needs to be put in place to enable AR cooperative governance and who needs to action these?
  - iii) How should the principles of justice be applied in implementing these pathways?

The below captures this group's integrated outcomes in key themes:

- **Accountability of leadership** across the various governance structures is critical
- There is a serious **trust deficit** in the public sector and amongst communities which must be addressed
- **Is the IGR still relevant** in the context of such a deep breakdown of services? If potholes cannot be repaired at the most local level for example?
- **Effective devolution of power** must occur with jurisdiction and mandate around water if adaptive resilience is to be tackled.
- This requires substantial **capacity building** of institutions, officials and community representatives at all levels. Education is an important tool and driving force which should be harnessed.
- **Civic education** involving officials and communities is critical in this process. Government officials must have their role as servants of the public embedded in their daily practice.
- **Consultation and participation with communities** and citizens is critical but they are tired of such processes if they lead nowhere.
- **Community media** can play an important role in raising awareness amongst ordinary people. Need to have an engagement with radio stations as well as the film and television industry. These are important mediums to get through to ordinary people.
  - We must communicate climate change and adaptive resilience content in a way that can be properly received and understood by all community members
- **Continuity in planning** is absent because of the shuffling of elected executive member at the local government level as well as municipal executive staff. Make plans and a new Mayor or town clerk throws it out to start all over again.
- **Gender and people living with disability** must be present in representatives to ensure these issues are embedded in local government climate planning.
  - Meaningful inclusion is critical because women and children are affected by disasters in the worst way.
- How do we think about settlements and rezoning, and ensuring the implementation of the regulations around **SPLUMA**, this is a critical issue to take account of.
- **Research and development** is important for economic growth and climate resilience. SA cannot reindustrialise if we don't ignite innovation in our economic and social processes. This is important in short- and long-term planning.

- **Misinformation and mixed messages** plagues discussion around climate change and has to be confronted. Even those with the right information tend to mislead people by the manner in which they present it. The direction of the just transition is being communicated poorly (for example decarbonisation) and this doesn't help with advocating for adaptive resilience.
- **Representation is problematic at municipal level.** There is a serious lack of accountability
- Need a **review of the regulatory environment** and its communication in a language people can understand.
- **Corruption** has become a pandemic and unless this is tackled the trust deficit in governance will never be overcome.

### *Group 2: Delivery capacity*

This group addressed each questions sequentially. The questions and groups discussion summaries are captured below.

#### **Question 1: What are the priorities for strengthening delivery capacities for AR?**

On the first, question, which explored **priorities** for strengthening delivery capacity in the pursuit of adaptation readiness, participants identified a common vision as central. Without a common vision, any action towards enhancing delivery capacity will remain fractured, siloed, and isolated from related work. This was in line with comments from both labour and faith partners in the session, who called for clearer roles in both government and civil society more broadly when it comes to the mandates and responsibilities of those working towards a more adaptation ready South Africa.

On the same question, colleagues working on the ground in farmer cooperatives stressed that climate change is in many ways still a buzzword, and not easily communicated to, or dealt with in, informal and rural communities. A better enabling environment is needed to facilitate knowledge dissemination and ensure that this knowledge is *simplified*, in turn aligning with justice aspects of the just transition.

Underpinning much of the discussion was an emphasis on the criticality of education and research institutions. Education on climate change, adaptation, and adaptive thinking, particularly from a young age, can ensure that future productive players are capacitated to tackle the challenges of climate change with a strategic mindset.

In achieving this, participants unanimously agreed that a sound monitoring, evaluation and learning framework (which is context specific, and geographically relevant) must be in place. Not only does this allow for the tracking of progress, but it also ensures data generation which can in turn motivate financing for future adaptation programmes.

#### **Question 2: Identify the pathways and actors for strengthening adaptation readiness delivery capacity**

On the second question, exploring **pathways and actors** for strengthening delivery capacity, participants identified a range of key players – including NGOs, neutral intermediaries, community-based organisations (CBOs), and youth.

CBOs were highlighted due to their strong and direct interface with local communities. CBOs are aware of, and work within, the realities of many of the poorer and more

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vulnerable people living in South Africa, and this gives them unique insights into the needs of those people, and the best strategies to address those needs.

Neutral intermediaries were identified as important role players due to the vested interests which may characterise government and private sector partners. Neutral intermediaries can act to navigate the deeply complex environment inherent in climate change adaptation processes, and further, help communicate these issues without the biases that emerge when actors have specific agendas. Related to this, participants acknowledged that multi-sectoral partnerships, and multisectoral responses more broadly, would be a fundamental mechanism for realising transformational change. This aspect drew attention to the overarching necessity of cooperative governance.

Finally, youth were also identified as key drivers of change, not least because they are future change makers, but also because they are already driving change in their own way by undertaking important translation work of difficult climate change concepts for their local communities (itself an important contribution to principles of justice).

**Question 3: How should the principles of justice – procedural, restorative and distributive - be applied?**

The final question of the session – on **identifying and applying the three principles of justice** – was the most fluid in that it referred back to many of the items already discussed. For example, the need to simplify language, and ensure that those who need or want to are able to both communicate in, and understand, the language of climate change. Without this, delivery capacity cannot be enhanced in any just manner and may well be stalled completely.

Labour participants reiterated the importance of decent work in the pursuit of adaptation readiness. Although delivery capacity must be improved and made adaptation ready, workers must be given the opportunity to engage in decent, fair and safe working environments.

MEL was raised again, however in the context of accountability to ensure that elected leaders and others in power can be held accountable for delivery or failure to deliver. Underpinning this idea was the importance of ethics in government in South Africa and how this should be re-introduced.

Finally inclusion, and the identification of the most vulnerable was unanimously acknowledged as fundamental to the just transition, and any action which seeks to enhance transformational change towards adaptation. However, nuance emerged when it was noted that the “missing middle” continue to suffer when the focus is exclusively on the poorest. Many South African's live pay check to pay check. This group is often overlooked because so many people are destitute. Therefore a comprehensive and inclusive approach to identifying *all* those in need is fundamental to achieve a properly *just* transition.

*Group 3: Resource mechanisms*

This group held an integrated discussion around its three questions, and captured their responses under each question, as follows:

**Question 1: What are the priorities for strengthening delivery capacities for AR?**

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- Climate change is cross cutting. Therefore, we must prioritise breaking down silos within departments, between different levels of government, between government and stakeholders (including private sector and communities)
  - Adaptive resilience interventions will be most effective if plans and projects cascade down the various levels of government on focal issues
  - Invest in adequate and appropriate communication to grassroots community level. This means using language that is understood by ordinary people
  - Invest in capacitating and expanding weather and climate infrastructure to ensure proper monitoring and prediction
  - Invest in expanding disaster risk activities, prediction and monitoring so that don't just count the bodies but rather predict and plan beforehand for extreme events. Disaster management must be capacitated and directed clearly towards adaptive resilience. Disabled people have specific needs and appropriate pathways must be created especially when dealing with extreme events.
  - Early warning systems are crucial to avoid climate impacts across the board. Need to allocate resources, invest in them, and prioritise warning with early planning.
  - Invest in sustainable infrastructural materials and building practices rather than using same conventional materials and practices. This will assist in avoiding repetitive reconstruction which breaks down when next extreme event occurs.
  - Investment in water is crucial. This has a long term and short-term investment focus. Long term is investing in expanding, repairing and maintaining water infrastructure system. Short term is providing adequate access to water for communities in need – e.g. tankers, JoJo tanks, etc.
  - Investment in climate education at school levels is crucial. Need to mainstream climate and adaptive resilience into curriculum at primary and senior levels. This will not only create a more aware next generation but children as best way to spread knowledge into communities in a an easily understandable manner.
  - Invest in effective waste removal at municipal level to stop overloading of landfills street rubbish and dumping etc which impact climate change. Proper waste removal services in short term will allow for next steps of embedding a recycling culture in communities and creating an effective institutional programme of recycling in long term. Incentivising communities for recycling would also help. Such investment will allow for more effective adaptive resilience.

**Question 2: *Identify the pathways and actors for strengthening AR delivery capacity***

- Have to create specific funding mechanisms to strengthen adaptive delivery capacity. Means that have to ensure planning and policy goes hand in hand with resource budgeting.
- CBOs and NPOs can play an important role but this requires providing non-conditional financing for them to access. Non conditional refers to payback and not accountability and transparency. For example, the lottery funds could have a special climate change pillar for CBOs/NPOs to access

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- In terms of public private partnerships, CBOs can play a critical in public/private/DFI relationships. Can help in raising finance, accessing finance, and implementing climate programmes at local level.
  - CBOs and communities need information on where funds are so they can be accessed. Having a one stop climate change department or office at the local level would assist greatly.
  - Alternative funding vehicles are:
    - a) JET international programs,
    - b) domestic PPP relationships,
    - c) tapping private sector finance but this also requires setting a value proposition to go beyond corporate social responsibility,
    - d) partnering with DFIs, local community savings and credit associations/schemes can be harnessed also.
  - Corruption obstructs all pathways and ethical leadership at all levels is critical.

***How should the principles of justice – procedural, restorative and distributive – be applied?***

- Justice has to be simplified. Depends on communication in simple terms. People understand fairness as equal to justice and will respond appropriately.

The Moderator noted the commonalities, such as education, between each group, observing that these constitute the core approaches for addressing adaptation readiness. Among the common, or overlapping solutions noted were:

- Capacitation of institutions and integrated approaches
- Civil education
- Significantly strengthened/revamped cooperative governance and IGR
- Transforming the current, dominant development paradigm.

Commissioner Lekalakala provided a closing summary and remarks before closing the workshop. She noted the strong connection between the solutions put forward in the workshop and the Climate Change Act. In particular, the Act promotes intergovernmental cooperation and sets up a framework and process for this. The Commissioner highlighted the need for urgency, noting that community climate resilience building needs are not being met, yet climate change is happening. She concluded that South Africa's foundation is strong for accelerating adaptation readiness; South African society is resilient, innovative, and committed, paving the way for the just transition to a climate resilient economy and society that protects people, secures livelihoods, and provides a sustainable future.

### 5.3 Concluding remarks

In conclusion, the synthesis workshop confirmed the synthesis analysis findings, and augmented the recommendations through rich discussions, and specific recommendations. The discussions were candid but constructive, enabling a consensus building environment and thus, progress towards transformative solutions. These will be integrated into the study's synthesis report.

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## 6. Synthesis outcomes and conclusion

The main outcome of the for project workshops (and the preceding focus group discussions and expert interviews) is that readiness to respond to climate change in the country is very low relative to the extent of the need and urgency. The issues of justice are paramount in this regard. A constant theme emerging from all three workshops is that of duality in South Africa's society and economy, manifesting in different ways:

- In the **water value chain**, water stress is highly unequally distributed in society and economy, and yet water is widely acknowledged as being everybody's business. Water quality is a compounding issue, with scarce water resources contaminated by industrial and mining effluents, as well as poor sanitation infrastructure that is not able to withstand the additional pressures of climate change, such as a flood event.
- South Africa's **agriculture sector** exhibits a stark duality characterised by a well-developed, commercial (predominantly white) sector alongside a largely subsistence (predominantly black) smallholder and household producer sector, a legacy of apartheid policies that continues to shape the sector's dynamics.
- Societal disparities are starkly manifested in the **built environment**, where government interventions have been inadequate, and where apartheid era spatial planning approaches continue to prevail today.

**No matter the sector under discussion, indigent populations are the most vulnerable to the impacts of climate change.** Their resilience and ability to cope with the impacts of climate change is compromised by the nation's persistent triple challenges of poverty, inequality, and unemployment. Adaptation readiness must be accelerated as a priority for South Africa with an intentional and funded focus on applying the principles of justice:

- For example, applying **the 'polluter pays' principle** to intensive water users that contaminate water and land resources is a form of **distributive justice**, especially if collected pollution taxes are ringfenced towards climate resilient infrastructure development and addressing infrastructure backlogs, particularly in vulnerable communities.
- A further example emerged from the Built Environment workshop through a panellist that was explicit and eloquent in the need for empowering communities to strengthen their agency in community development initiatives. It is a **procedural injustice** that development as well as service delivery is misaligned with community needs because mandated institutions fail to learn from communities, reflect, and adjust their course of action.

Common specific pathways for accelerating readiness emerged in each of the three areas of economic focus. Much of these can be generally applied across South Africa's economy and society and are briefly summarised as follows:

- **Adaptation ready cooperative governance** is the starting point, and is also needed to unleash finance, another common pathway. Partnerships and collaboration are central to establishing a climate responsive enabling environment. Of utmost importance is breaking down the silo mentality which characterises the way government departments operate. Partnerships include

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cooperative relationships between the public and the private sector. Stakeholders showed consensus on adopting – and implementing – the WEFE – and health - nexus as a gateway for climate resilience. Partnerships and cooperative governance are foundational to implementing the nexus approach.

- **Adaptation ready finance follows effective cooperative governance.** Put another way, cooperative governance is a necessary condition for ensuring adequate predictable, and targeted flows of finance for climate responsiveness. Finance is also an important means for addressing justice. For example, ringfencing relevant financial streams towards addressing investment backlogs that impede the path of justice is a transformative approach (a deviation from the usual approaches of managing financial resources in South Africa) and applies the principle of distributive justice.
- **Adaptation ready delivery capacity is critical pathway**, highlighting the urgent need to confront and resolve the local governance crisis and the capacity constraints of municipalities. These institutions are the local face of the state, provide basic services and facilitate local economic development. South Africa's local government institutions must be afforded the means of implementing the principles of the just transition while accelerating adaptation readiness. Every planning decision should be a climate decision. Municipalities are also key – if not the only – actors in addressing informality, and enabling the meaningful inclusion of South Africa's growing informal economy and communities into what we currently perceive to be the mainstream economy. Informality, whether referring to informal settlements, or smallholder and household producers, is here to stay and must be confronted with intentional plans and strategies taking account of its own dynamic rather than treating it as a sequential stage on the road to formality. Unless this is done, it is unlikely that climate adaptive knowledge will be able to be absorbed and applied by members of the informal economy, and enable them to adapt to the needs of a climate responsive economy and society.
- Lastly, we need to **monitor, evaluate and learn, including through impact assessments** that allow for reflection and corrective courses of action. Knowledge and information is absolutely critical to enabling a climate-ready economy and society. Unless we know where we are, what progress has been made, and what failures we need to learn from, we cannot deem ourselves a climate-ready society.

**Integration is an underlying theme.** The workshops highlighted this as a need in multiple ways:

- Nexus approaches, particularly the **WEFE nexus** is an overarching climate adaptation strategy, that through managing trade-offs and optimising the synergies between the nexus sectors, is understood to yield positive social outcomes. Considering the principles of justice, it is clear that trade-off decisions would need to take serious consideration of the unequal distribution of nexus resources across society and the economy. Importantly, addressing adaptation readiness in nexus ways would break down the silo mentality that dominates policy making, planning and budgeting in South Africa.

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- An integrated MELIA system is required across sectors, including transversal departments, and incorporating participatory approaches, is essential to reviews, reflections and corrected actions.
  - An integrated body of knowledge and research on climate change responses – inclusive of practices and technologies – is necessary for addressing the strong but fragmented knowledge base in South Africa that is currently difficult to access.

The insights gained from the sector workshops are relevant across South Africa's economy and society. The three economic focus areas of water, agriculture and the built environment are interconnected, reflecting the WEFE nexus. Because of their criticality to the economy, to job creation, and to the just transition, the lessons learned from these sectors should inform all of South Africa's adaptation readiness and just transition efforts – which will rely on systemic transformation that brings about fundamental changes to the dominant development paradigm and associated power structures. Key is the question of how this is accomplished by bringing people along, and how we address diversity, equity and inclusion in the transition process.

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## Appendices

### Appendix 1: Water Value Chain Workshop Materials

*Appendix 1A: OW Water Value Chain Presentation*

*Appendix 1B: DWS Climate Change Strategy*

*Appendix 1C: Water Value Chain Workshop: Concept Note and Agenda*

*Appendix 1D: Water Value Chain Workshop: Stakeholder Register*

### Appendix 2: Agriculture Workshop Materials

*Appendix 2A: OW Agriculture Presentation*

*Appendix 2B: Presentation on the Agriculture and Agro-processing Master Plan (AAMP)*

*Appendix 2C: SANBI Ecosystem Based Adaptation (EbA) Presentation*

*Appendix 2D: Agriculture Workshop: Concept Note and Agenda*

*Appendix 2E: Agriculture Workshop: Stakeholder Register*

### Appendix 3: Built Environment Workshop Materials

*Appendix 3A: OW Built Environment Presentation*

*Appendix 3B: NDHS – Draft Human Settlements Climate Change Strategy and Implementation Plan*

*Appendix 3C: Built Environment Workshop: Concept Note and Agenda*

*Appendix 3D: Built Environment Workshop: Stakeholder Register*

### Appendix 4: Synthesis Workshop Materials

*Appendix 4A: OW Synthesis Presentation*

*Appendix 3B: Synthesis Workshop: Concept Note and Agenda*

*Appendix 3C: Synthesis Workshop: Stakeholder Register*