

# CRIDA in action: Stakeholder buy-in and capacity building

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*Kruger to Canyons Biosphere Reserve*  
*South Africa*



### Climate Risk Informed Decision Analysis (CRIDA)

Collaborative Water Resources  
Planning for an Uncertain Future

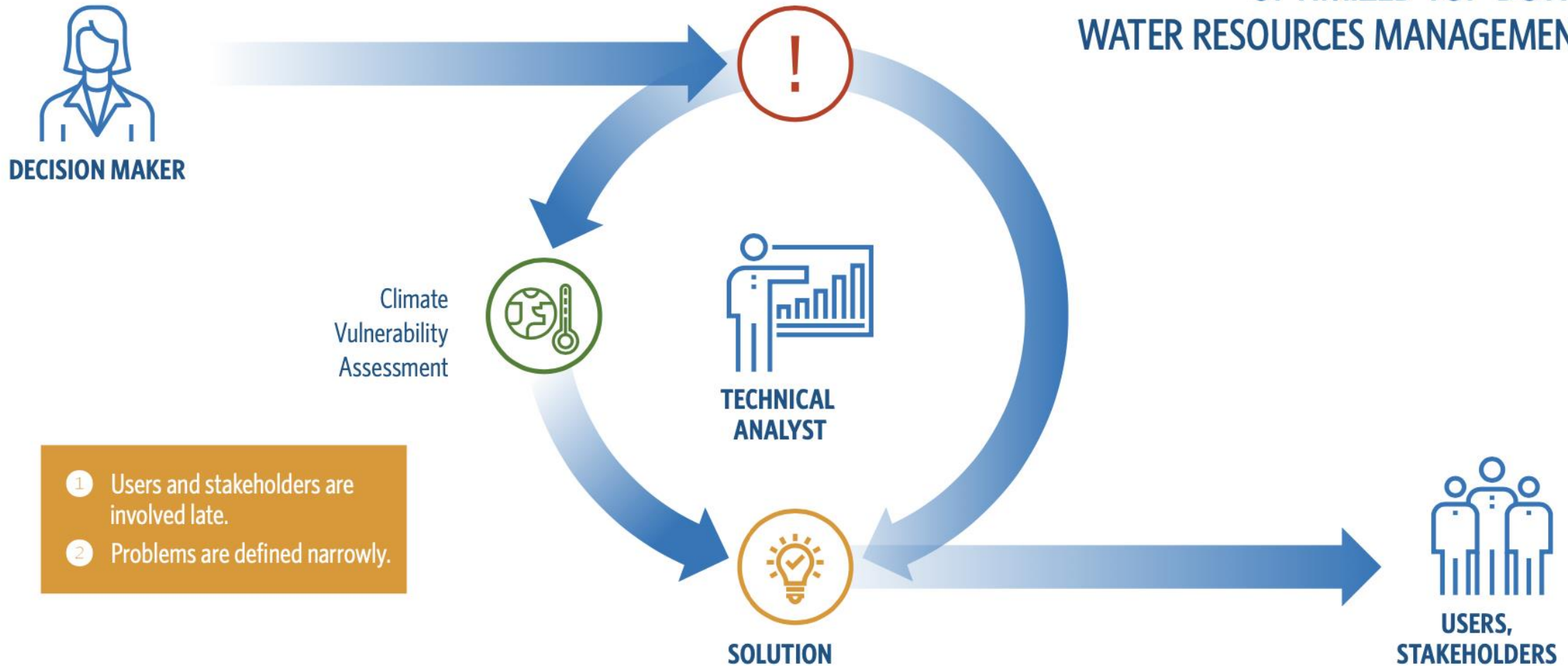


The **Climate Risk Informed Decision Analysis (CRIDA)** was established in 2018 to support Member States to bring Climate Change Adaptation to the local level through a bottom-up approach, actively involving local stakeholders.

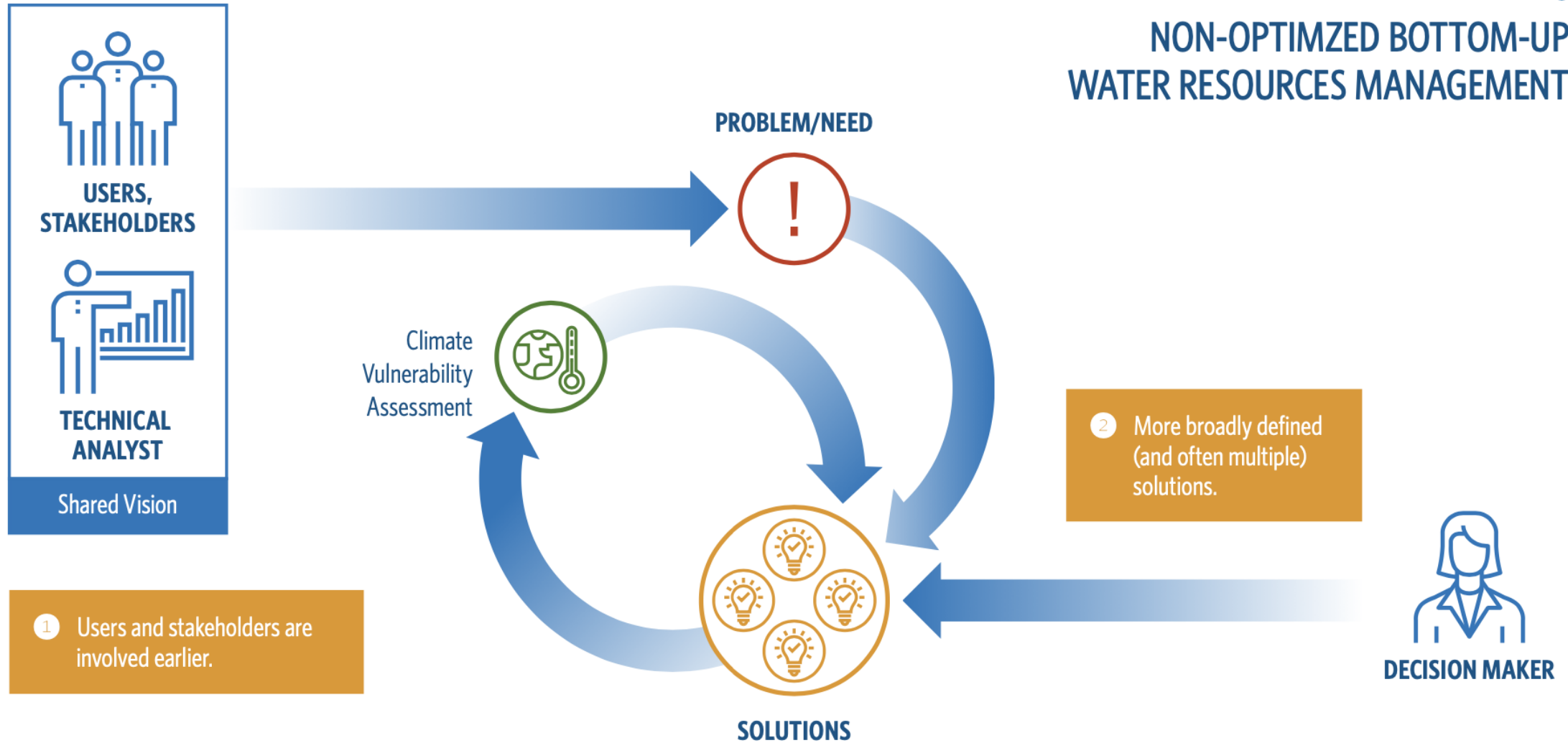
<https://en.unesco.org/crida>

There is a clear need to make climate change adaptation a **Collaborative Process**

## OPTIMIZED TOP-DOWN WATER RESOURCES MANAGEMENT

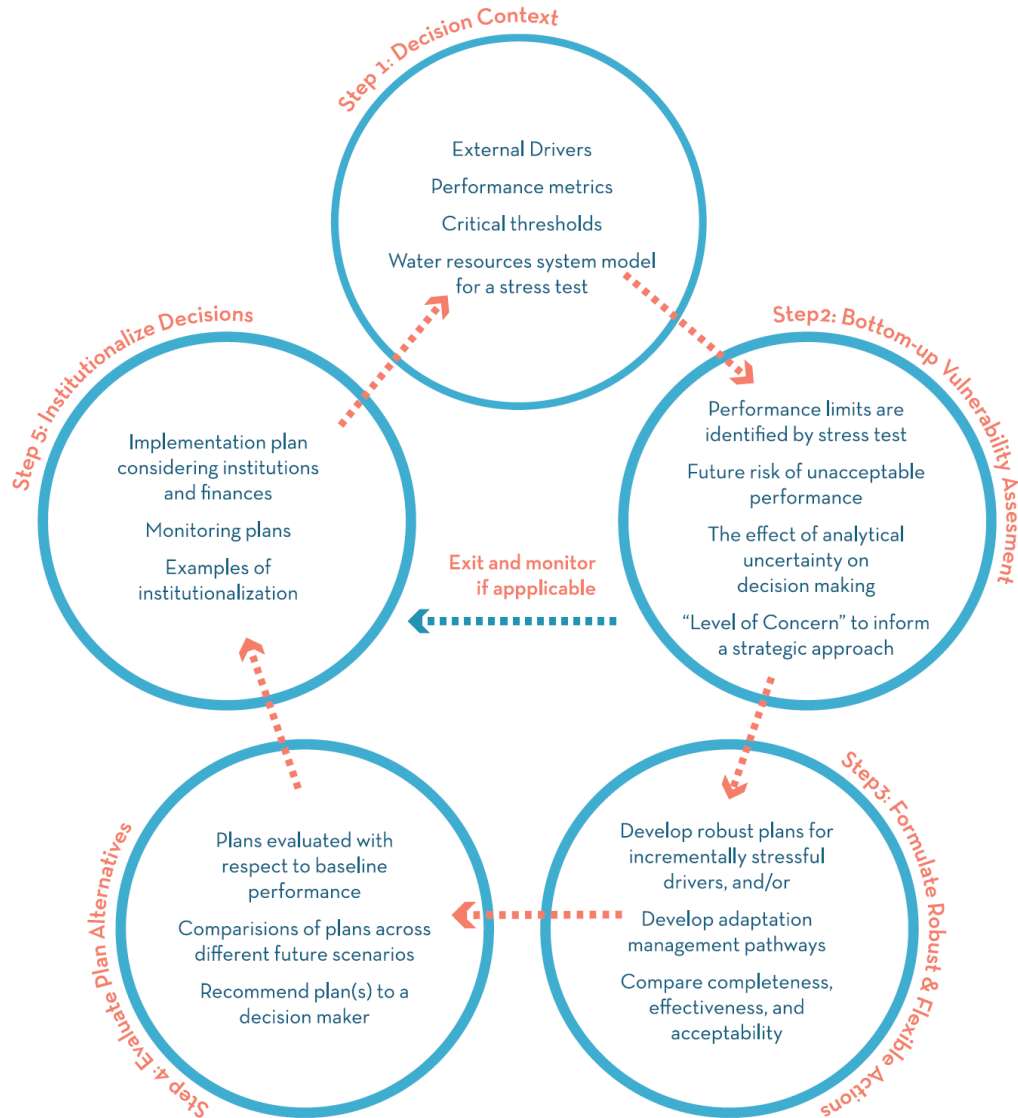


## NON-OPTIMIZED BOTTOM-UP WATER RESOURCES MANAGEMENT



# CRIDA puts stakeholder engagement front and center

## At what stages do we engage them?



CRIDA	Stakeholder Engagement Phase
	Planning
Step 1	Establish decision context
Step 2	Understand risks & identify solutions
Step 3	
Step 4	Review plans
Step 5	
	Decision making and implementation



# Capacity building as a tool to engage stakeholders – an example

## First CRIDA Training in Southern Africa



A **Climate Risk Informed Decision Analysis (CRIDA) course** was held in 2019 for all countries in Southern Africa, sparking new projects and initiatives.

### Important outcomes:

- UNESCO **Biosphere Reserves** were identified to be particularly well placed to act as ‘Laboratories for Climate Change Adaptation’ and to demonstrate bottom-up approaches through active stakeholder engagement.
- **Three new projects** were established in the region
- A clear need for further **capacity building, hands-on training** (materials) and **case study development** was established.





# Biosphere Reserves as Observatories for Climate Change Adaptation in Southern Africa

# Regional Be-RESILIENT Project




Be  
**Resilient**  
BIOSPHERE RESERVES  
CLIMATE CHANGE OBSERVATORIES

## Biosphere Reserves as Observatories for Climate Change Adaptation in Southern Africa

- Targeted SDGs



- Duration:** 36 months      **Donor:**  Government of Flanders
- Launch date:** July 9<sup>th</sup> 2020
- Objective:** Biosphere Reserves in Southern Africa are recognized as **Observatories for Climate Change Adaptation** and act as drivers of change and demonstration learning sites for **sustainable development** and **disaster risk reduction**



Map of Targeted areas



# Biosphere Reserves as Observatories for Climate Change Adaptation in Southern Africa (Be Resilient Regional Project)



Understanding the **impact of Climate Change on Biosphere Reserves** in Southern Africa

Identification of **possible adaptation actions**

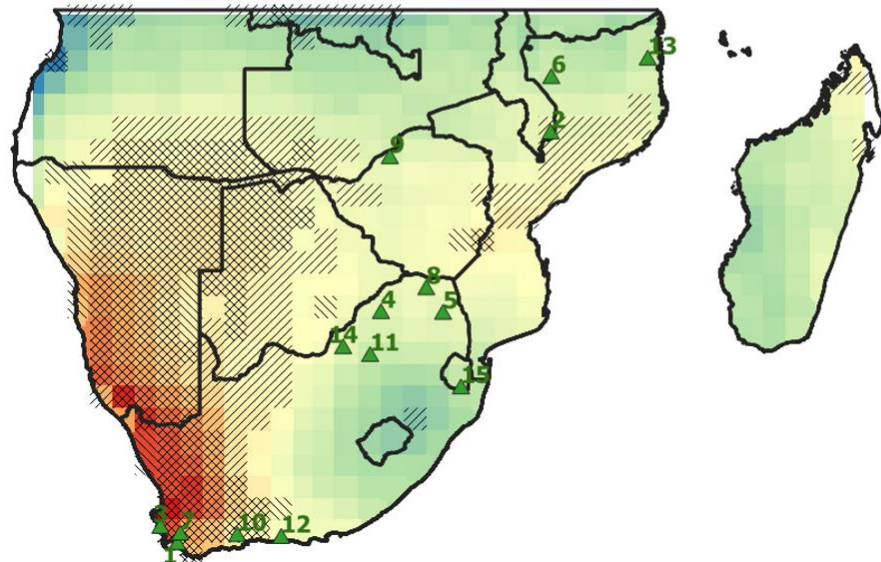
Need to develop **CRIDA case studies in targeted Biosphere Reserves**

SSP5-8.5 scenario (Climate Change Signal)

Rainfall from October-April

Period 2070-2099

Common grid: 111 km

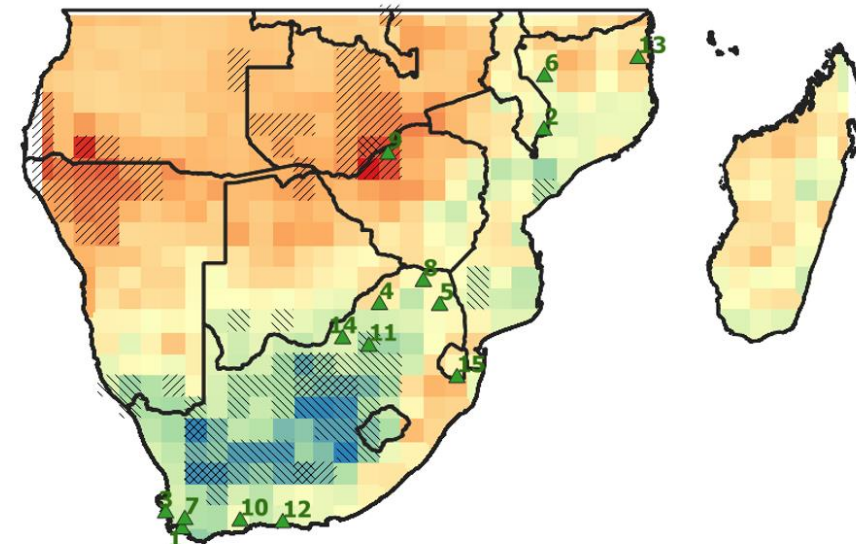


SSP5-8.5 scenario (Climate Change Signal)

Maximum length of the dry spells May-September

Period 2070-2099

Common grid: 111 km





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Hydrological Programme



**Flanders**  
State of the Art



# / Be Resilient South Africa

Addressing Climate Risk and Building  
Adaptive Capacity in South Africa's  
Biosphere Reserves

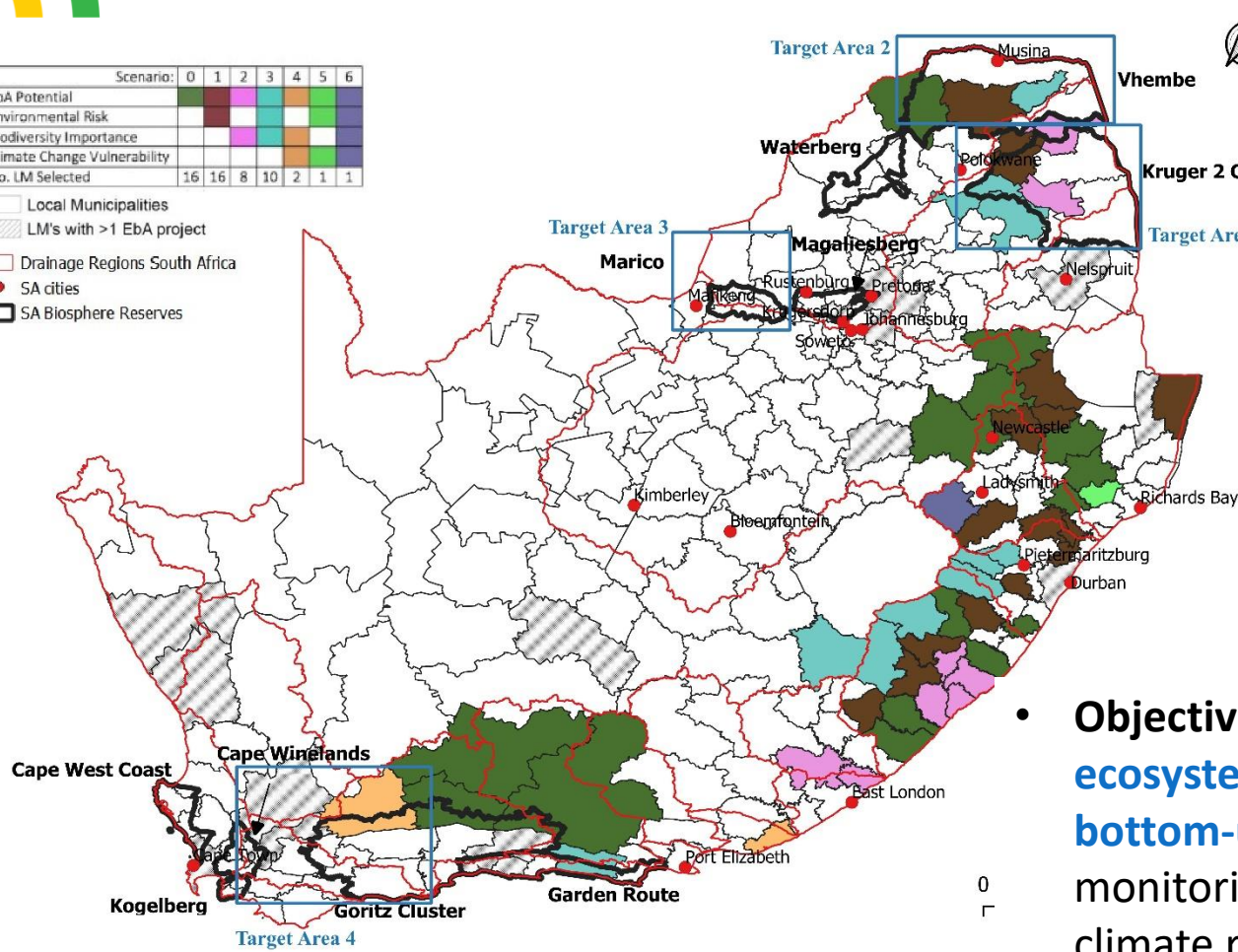
# Climate Change Adaptation Project in South Africa



## Addressing Climate Risk and Building Adaptive Capacity in South Africa's Biosphere Reserves: Towards Sustainable Water and Ecosystem Management

Scenario:	0	1	2	3	4	5	6
EbA Potential	Green	Light Green	Yellow	Orange	Red	Dark Red	Black
Environmental Risk	White	Light Green	Yellow	Orange	Red	Dark Red	Black
Biodiversity Importance	White	Light Green	Yellow	Orange	Red	Dark Red	Black
Climate Change Vulnerability	White	Light Green	Yellow	Orange	Red	Dark Red	Black
No. LM Selected	16	16	8	10	2	1	1

- Local Municipalities
- LM's with >1 EbA project
- Drainage Regions South Africa
- SA cities
- SA Biosphere Reserves



- **Targeted areas:**
  - Kruger to Canyon Biosphere Reserve
  - Vhembe Biosphere Reserve
  - Marico Biosphere Reserve
  - Cape Winelands Biosphere Reserves

• **Duration:** 36 months

• **Donor:** Government of Flanders

- **Objective:** Enable pilot areas in South Africa to **develop effective ecosystem-based adaptation pathways to climate change using a bottom-up, participatory approach**, and by implementing effective monitoring and early-warning tools to proactively manage increased climate risks



# Comprehensive Resilience Building in the Chimanimani and Chipinge Districts of Zimbabwe



## Overall objectives of the project

- ❑ to **enhance water resources and ecosystem services management** in response to the uncertainty of future climate change
- ❑ to **reduce the vulnerability of communities** in the Chimanimani and Chipinge Districts to natural disasters, such as floods, droughts and landslides
- ❑ Establish a **new Chimanimani Biosphere Reserve to ensure long term resilience building to climate change using CRIDA**

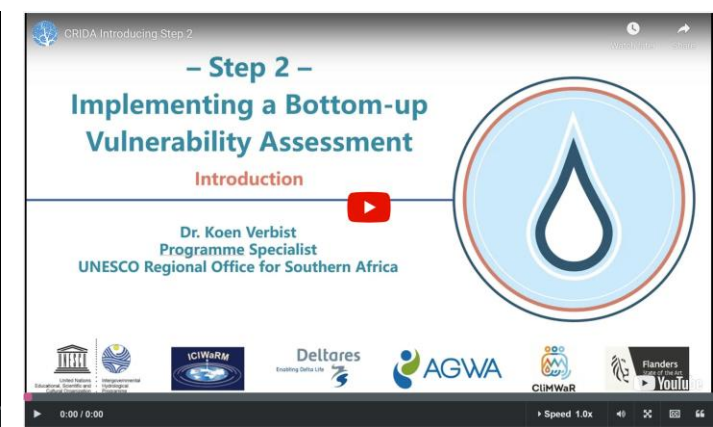
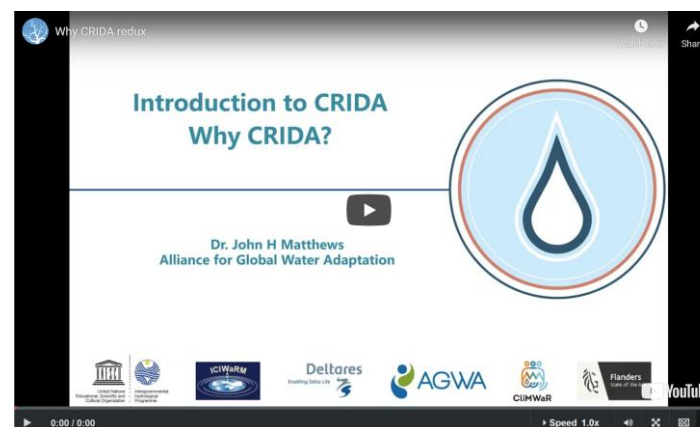


A **CRIDA online course** was developed in 2020, reaching **840 learners from 114 countries**.

A **Spanish and English** version of the CRIDA course will be relaunched in **March 2022**.

The Open Learning platform has reached **10 000 learners** through **14 online courses** in 1 year time

<https://openlearning.unesco.org/>



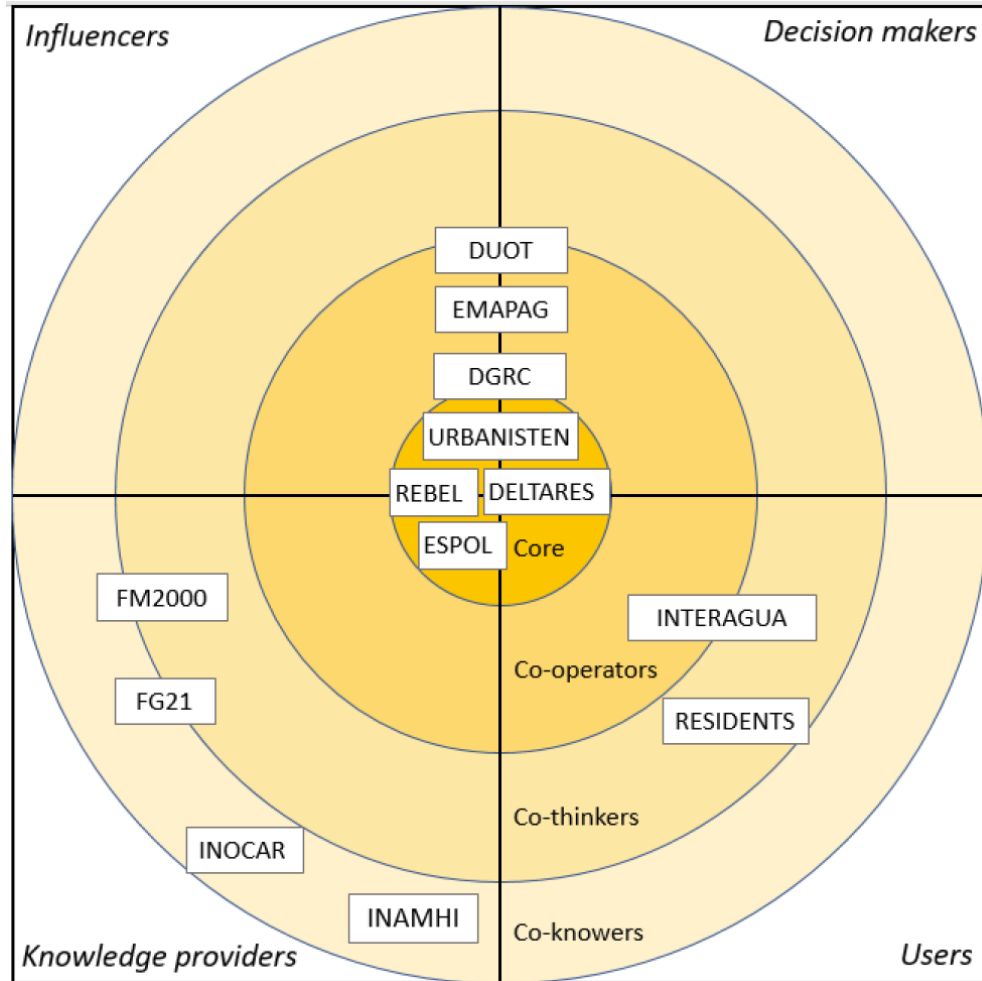
## Guidelines for defining stakeholder roles

CRIDA	Stakeholder Engagement Phase	Core team	Decision makers	System users	Knowledge providers	Influencers
	Planning	Establish engagement	Inform analysis	Inform analysis	Inform analysis	Keep informed
Step 1	Establish decision context	Develop system model, receive input	Co-decide	Inform analysis	Inform analysis	Provide feedback & input
Step 2	Understand risks & identify solutions	<i>Vuln. Analysis</i>				
Step 3		Communicate & receive feedback	Co-decide	Review & provide feedback	Review & provide feedback	Review & provide feedback
Step 4		<i>Develop plans</i>	Inform analysis	Inform analysis	Inform analysis	
Step 5	Review plans	<i>Evaluate plans</i>		Inform analysis	Inform analysis	
		Communicate & receive feedback	Review & provide feedback	Review & provide feedback	Review & provide feedback	Review & provide feedback or keep informed
	Decision making and implementation		Decide & communicate	Keep informed or co-decide		Keep informed

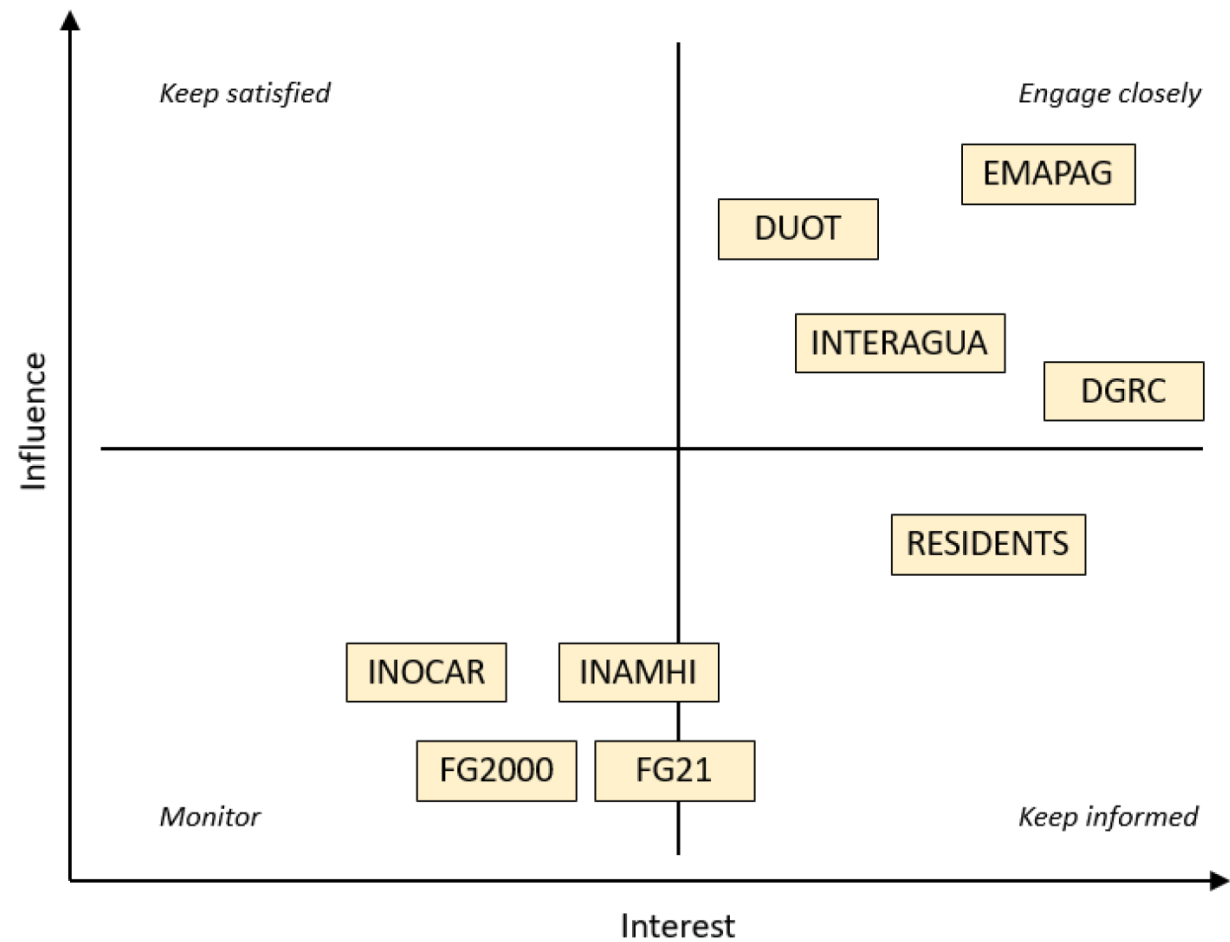


## Guidelines for defining stakeholder roles

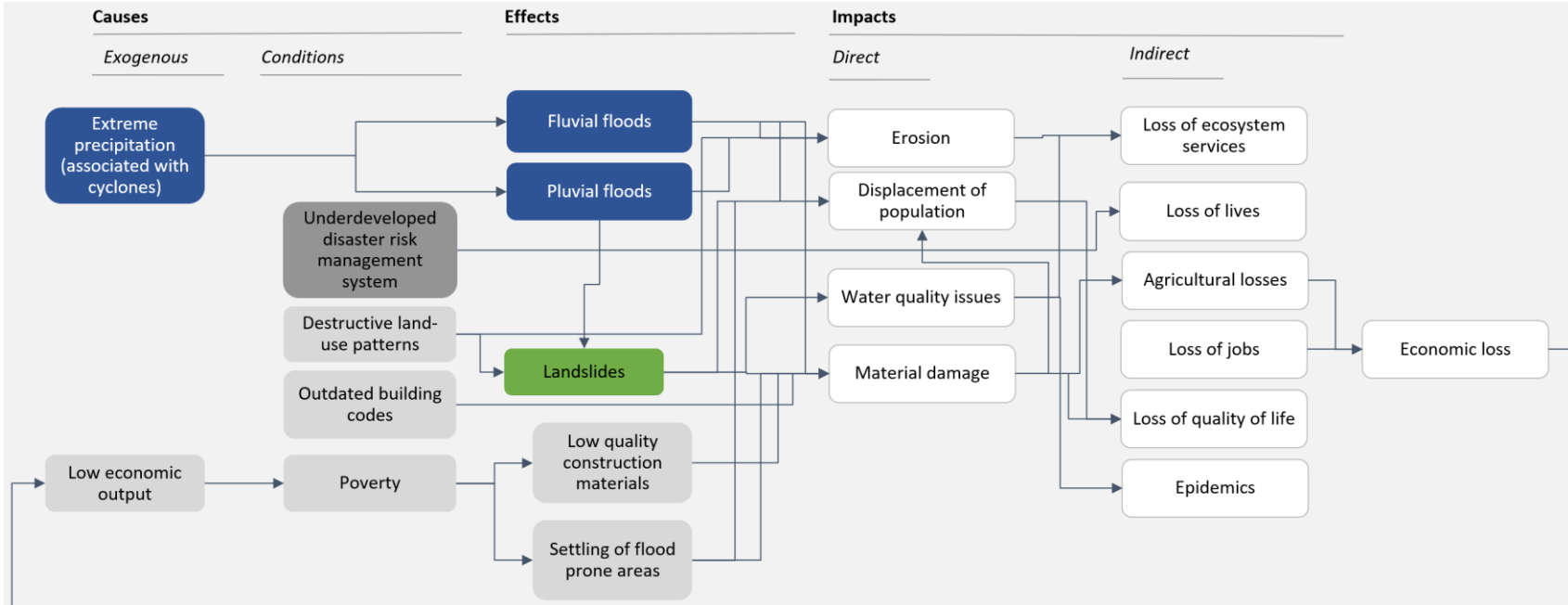
### Who to involve?



### How to involve?



## Guidelines for defining CRIDA Step 1: The Decision Context – ‘What keeps you awake at night?’



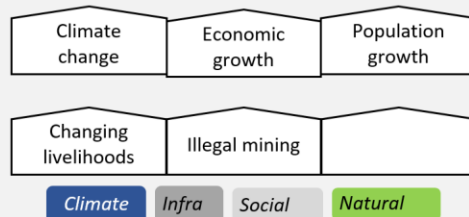
### The Systems Diagram to define:

- Causes
- Effects
- Impacts
- External drivers
- Other relevant factors

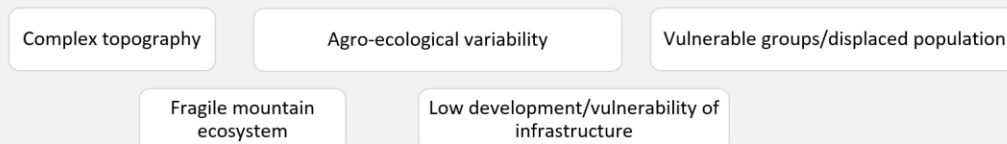
### Used in Stakeholder Meetings:



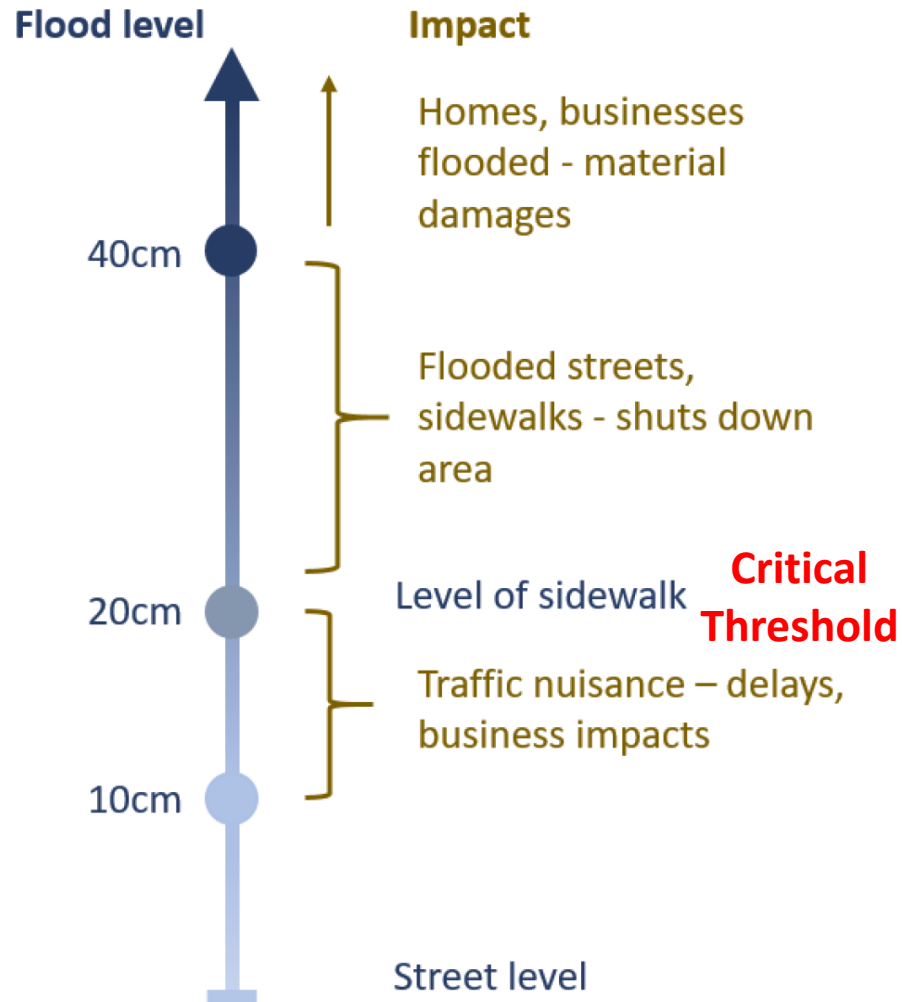
#### Exogenous pressure/ changes



#### Other relevant factors

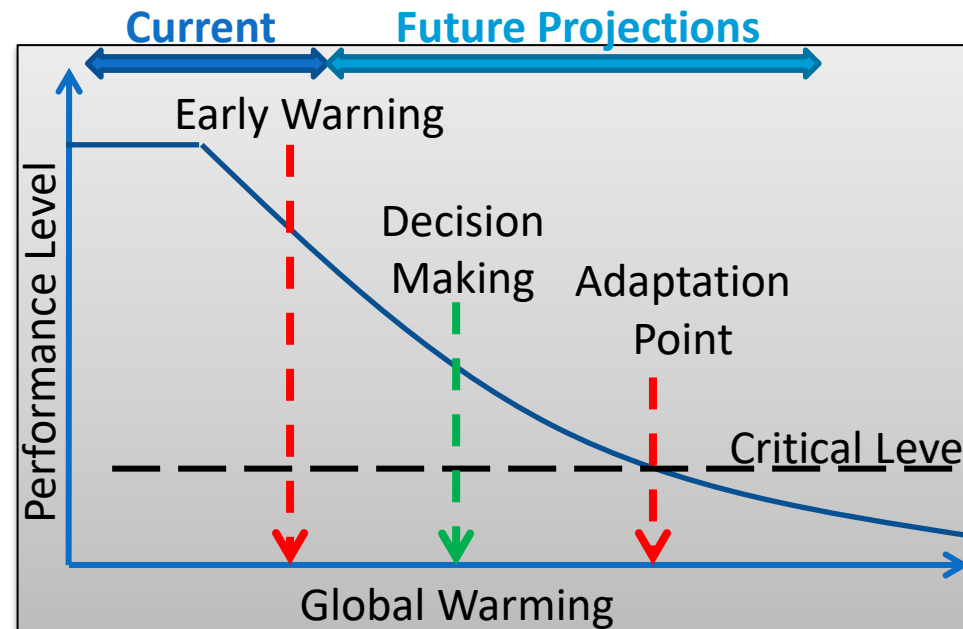


How to **translate** climate change impacts to ‘what keeps stakeholders awake’



Defining **Performance indicators** and **Critical Thresholds** allows to:

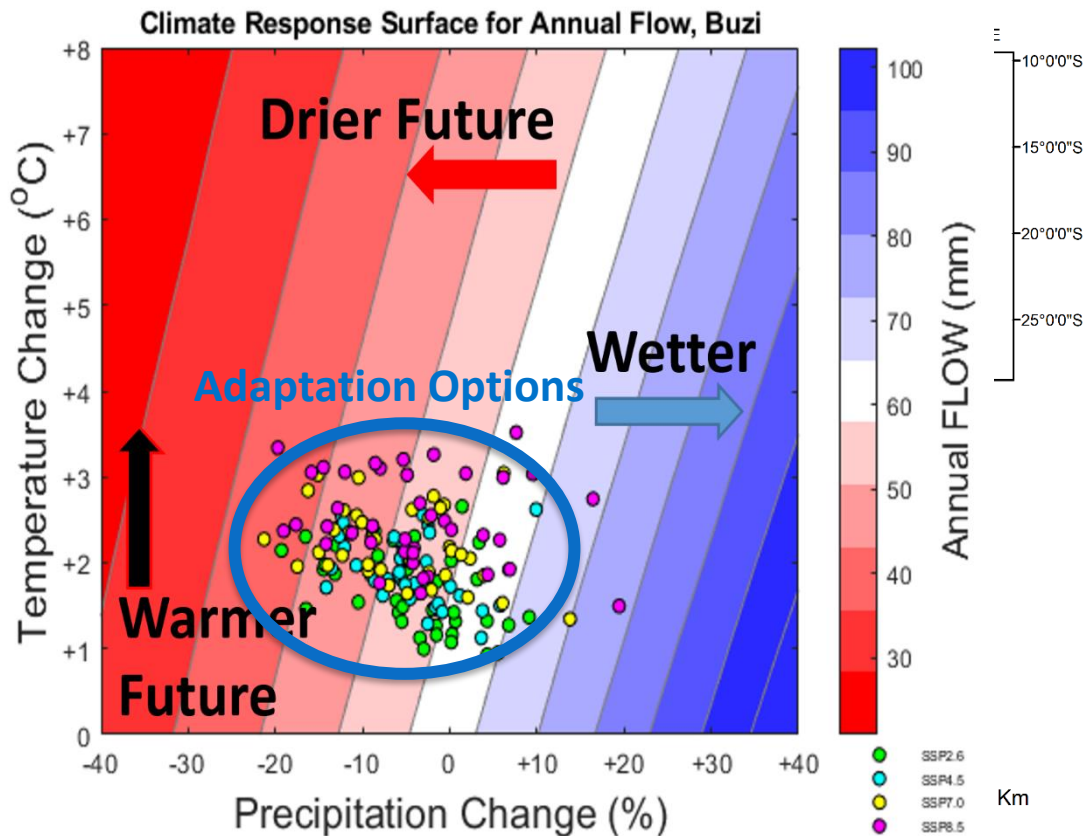
- Translate climate change impacts to what matters to stakeholders
- Make it ‘tangible’
- ‘**Stress Test**’ current conditions using plausible future scenarios
- Test **Adaptation Pathways** to identify most effective solutions
- Define ‘**Adaptation Tipping Points**’



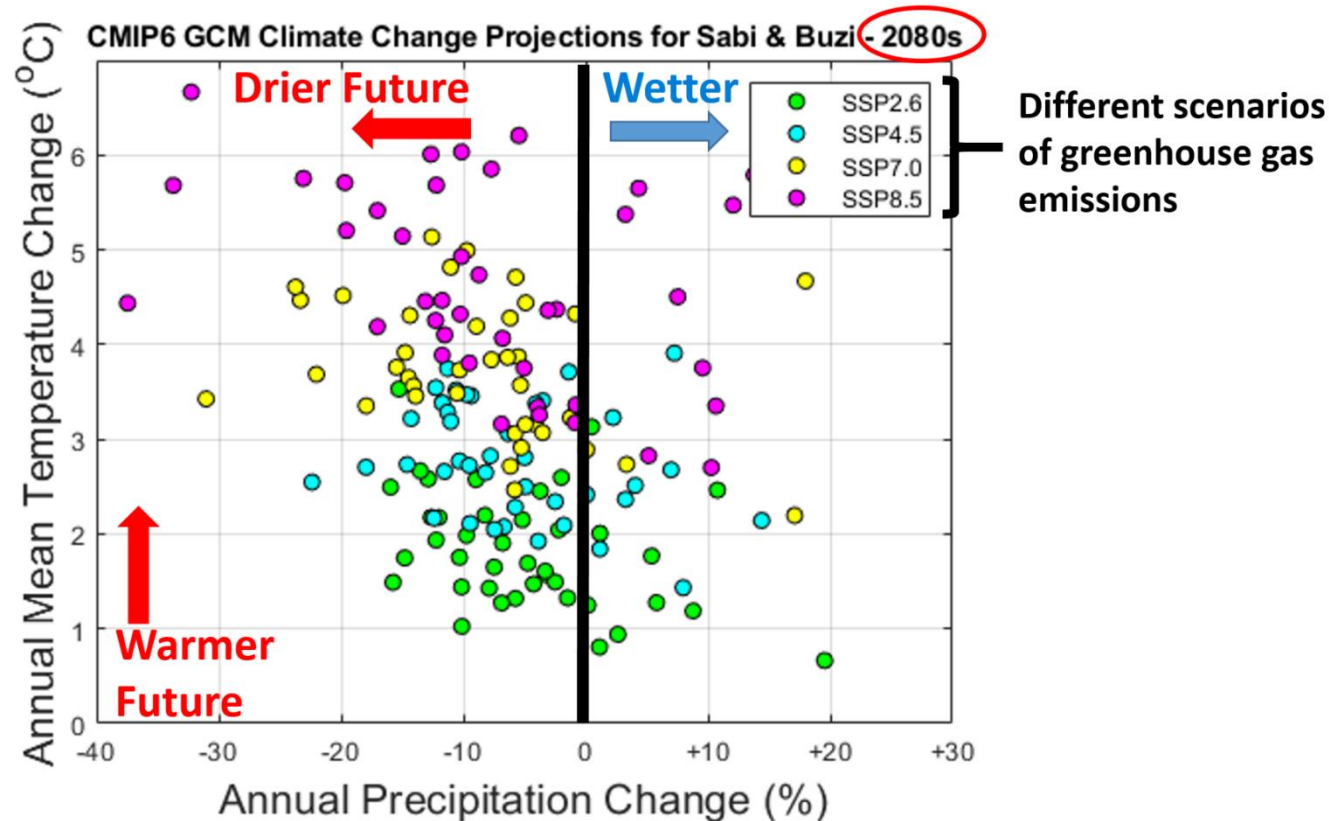


## Example: A climate stress test for the Buzi and Save Rivers in Zimbabwe

Translating climate impacts to **Performance indicators** and **Critical Thresholds**

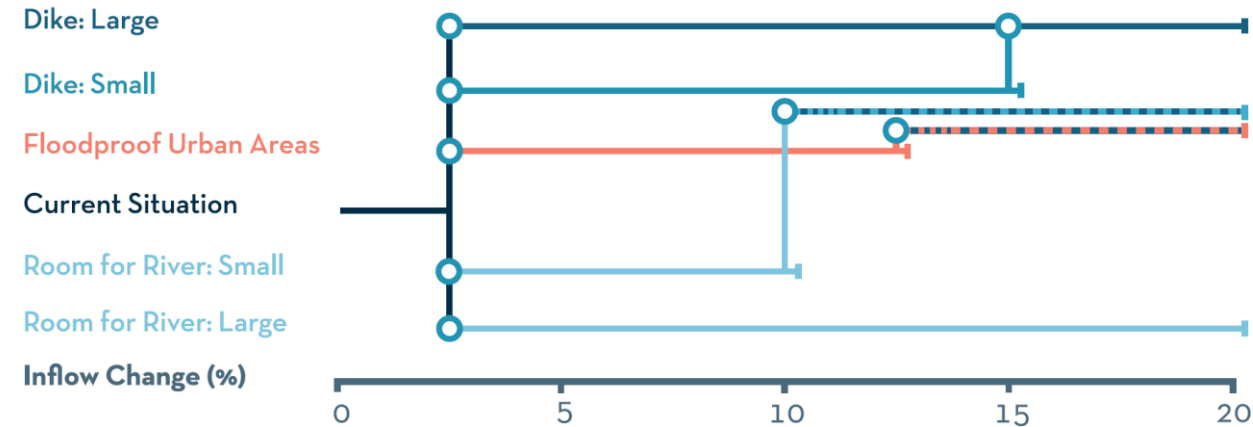


Climate Projections showing **warming** and mostly **drying** conditions





Engaging stakeholders in the five Biosphere Reserves will start in November 2021 to define the **decision contexts** and to identify **adaptation options** to build **adaptation pathways**



**Different approaches** will be tested simultaneously, which will likely lead to further innovation, e.g.

- Involving **Collaborative Governance frameworks** and asymmetric stakeholder relations (large enterprises as well as informal settlements)
- Evaluating the use of **Payment for Ecosystem Services** (PES) schemes as part of CRIDA, such as Water Funds in the Biosphere Reserves
- Optimizing for both **water security and ecological indicators** to ensure co-benefits
- Involving financial institutions to support **funding schemes of climate-proof solutions**





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## More information:



[en.unesco.org/crida](https://en.unesco.org/crida)



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*Kruger to Canyons Biosphere Reserve  
South Africa*