

Meeting the challenges of equity and sustainability in complex and uncertain worlds:

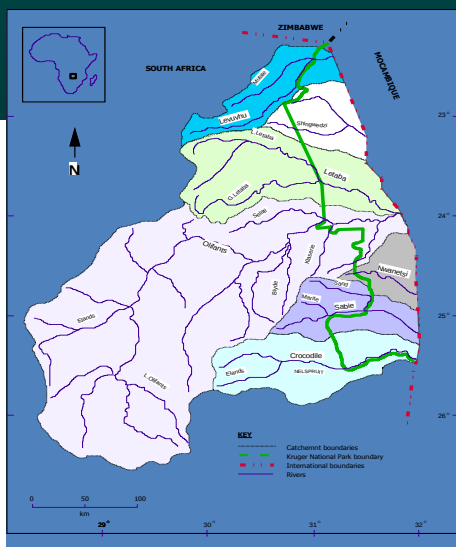
The emergence of IWRM in the eastern rivers of South Africa



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Introduction

- Explore water governance reform as it evolves in South Africa
- Taking place in an increasingly **complex, dynamic and unpredictable world**
- Requires **governance across “boundaries”** -
...co-operation and horizontal governance
 - Explore emerging issues in eastern South Africa

Global Responses

Societal responses to water scarcity - responds in three progressive steps.

First, Attempts to **get and store more water** water.

Second, Realizes that it has to **conserve water** to get more use out of every drop, e.g. efficiencies in agriculture.

Third, Society begins to realize that it **must do things differently** with the water it has

Global Responses....

Agenda 21's freshwater management guidelines (

**Integrated water
resources development
and management;**

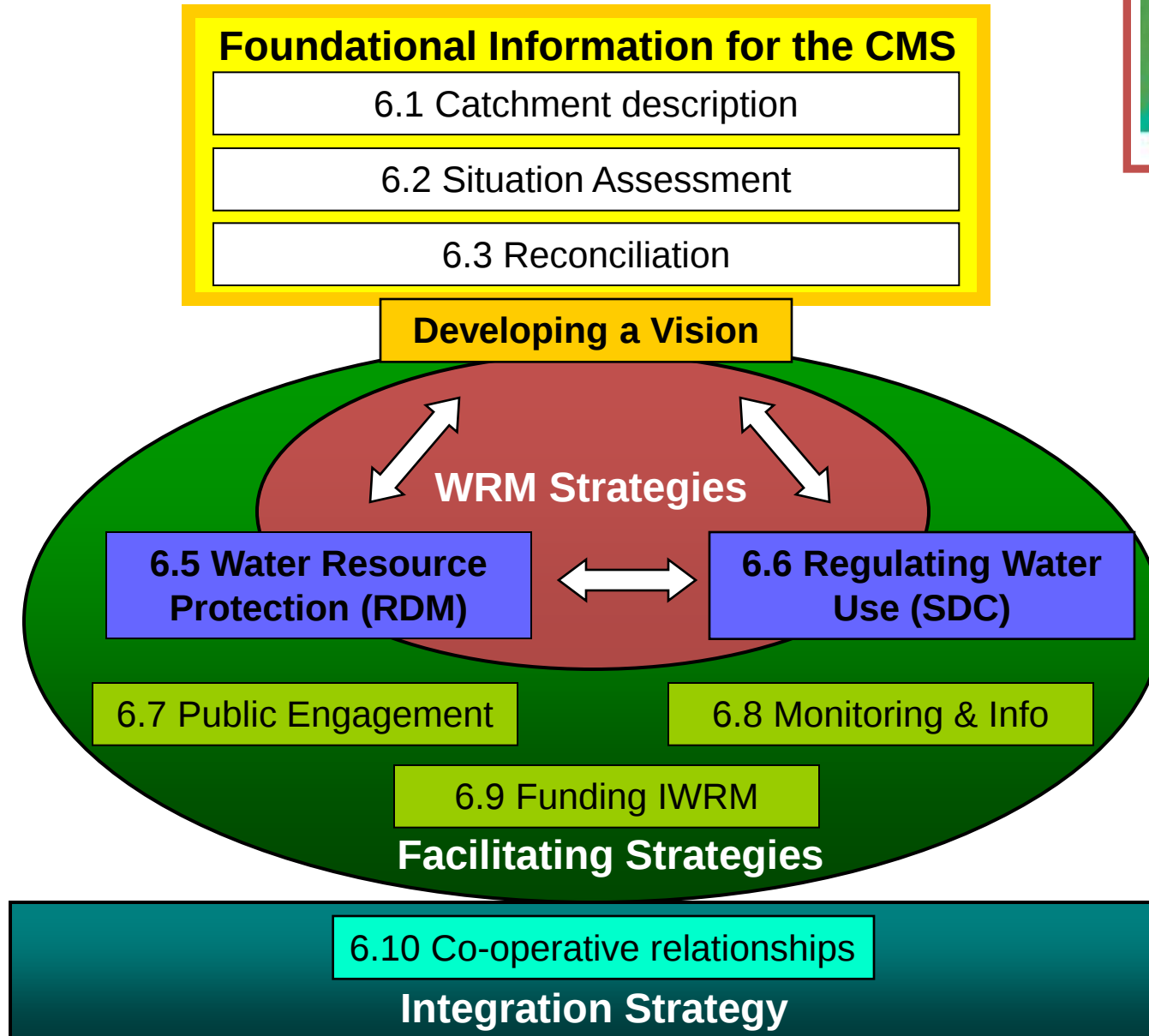


"a philosophy, a process and a management strategy to achieve sustainable use of resources by all stakeholders at catchment, regional, national and international levels, while maintaining the characteristics and integrity of water resources at the catchment scale within agreed limits"

Hence...

- First and foremost, IWRM is a **process** not an end in itself
- **Transformative** in nature as it provides the foundation for a **fundamentally different** way of managing water water resources
- Guided by **principles**

THE STRATEGY FRAMEWORK

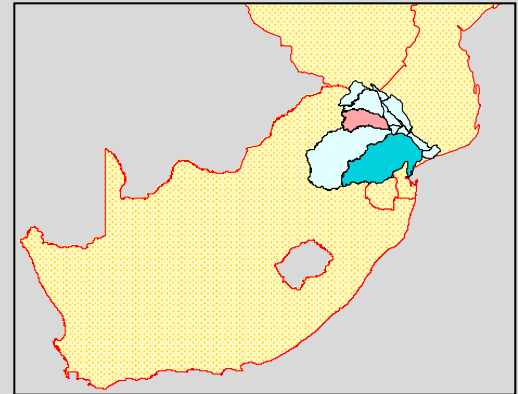


Shared Rivers Initiative:

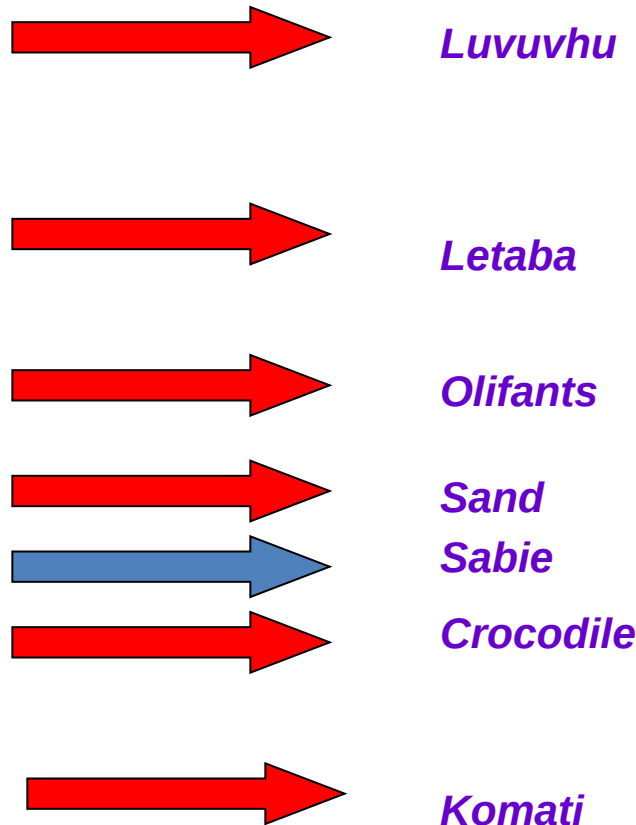
Praxis of IWRM

Enquiry into factors that constrain or enable meeting our commitment to sustainability in rivers of the lowveld (the Reserve)

- Concerns..Olifant's flows...
- 2005 – stopped flowing for 33 days

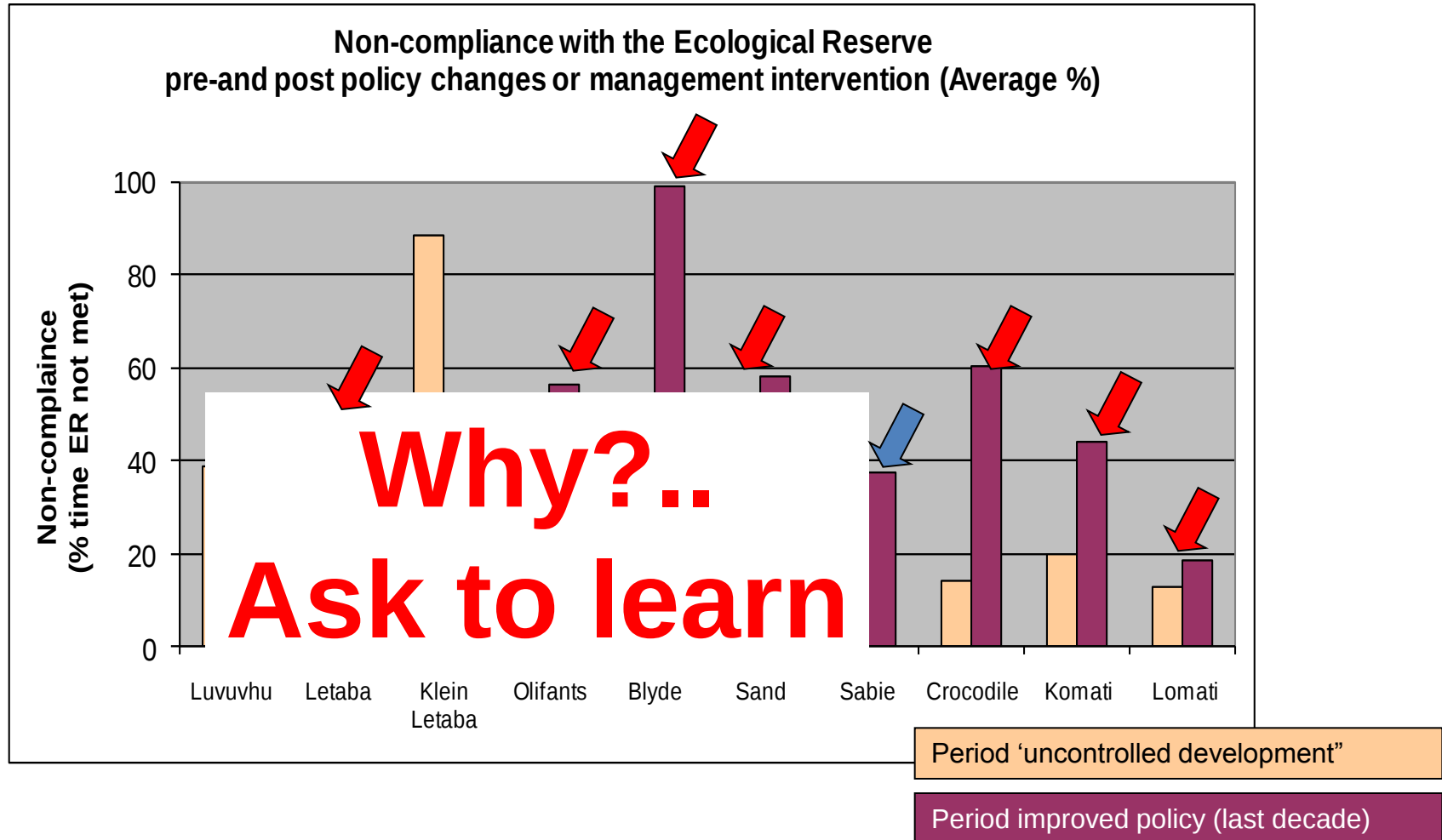


Major changes in all systems



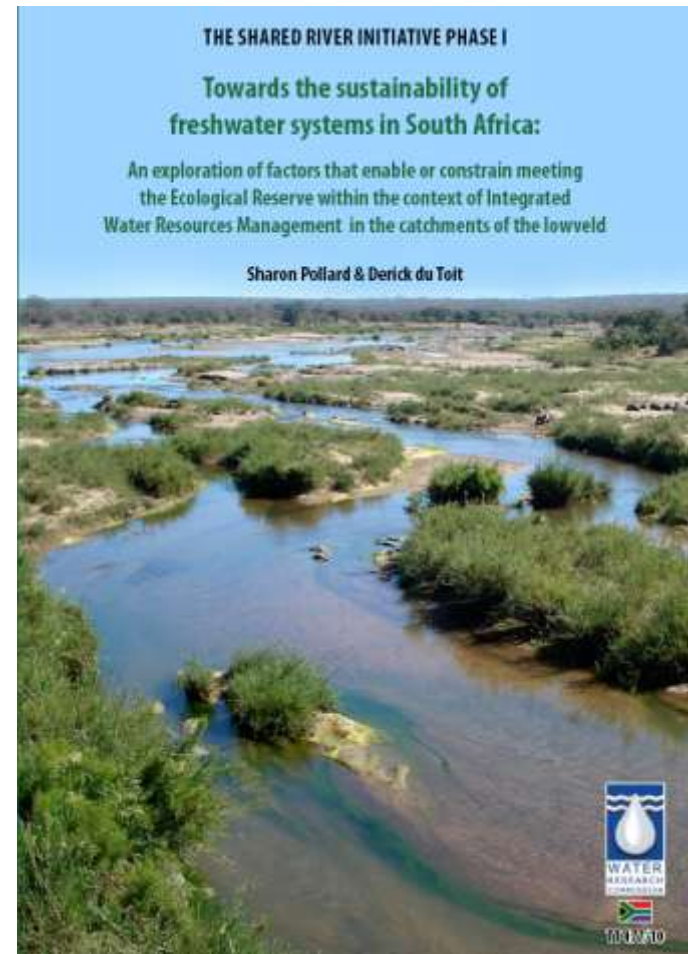
Benchmark for sustainability is the Reserve (EWR)

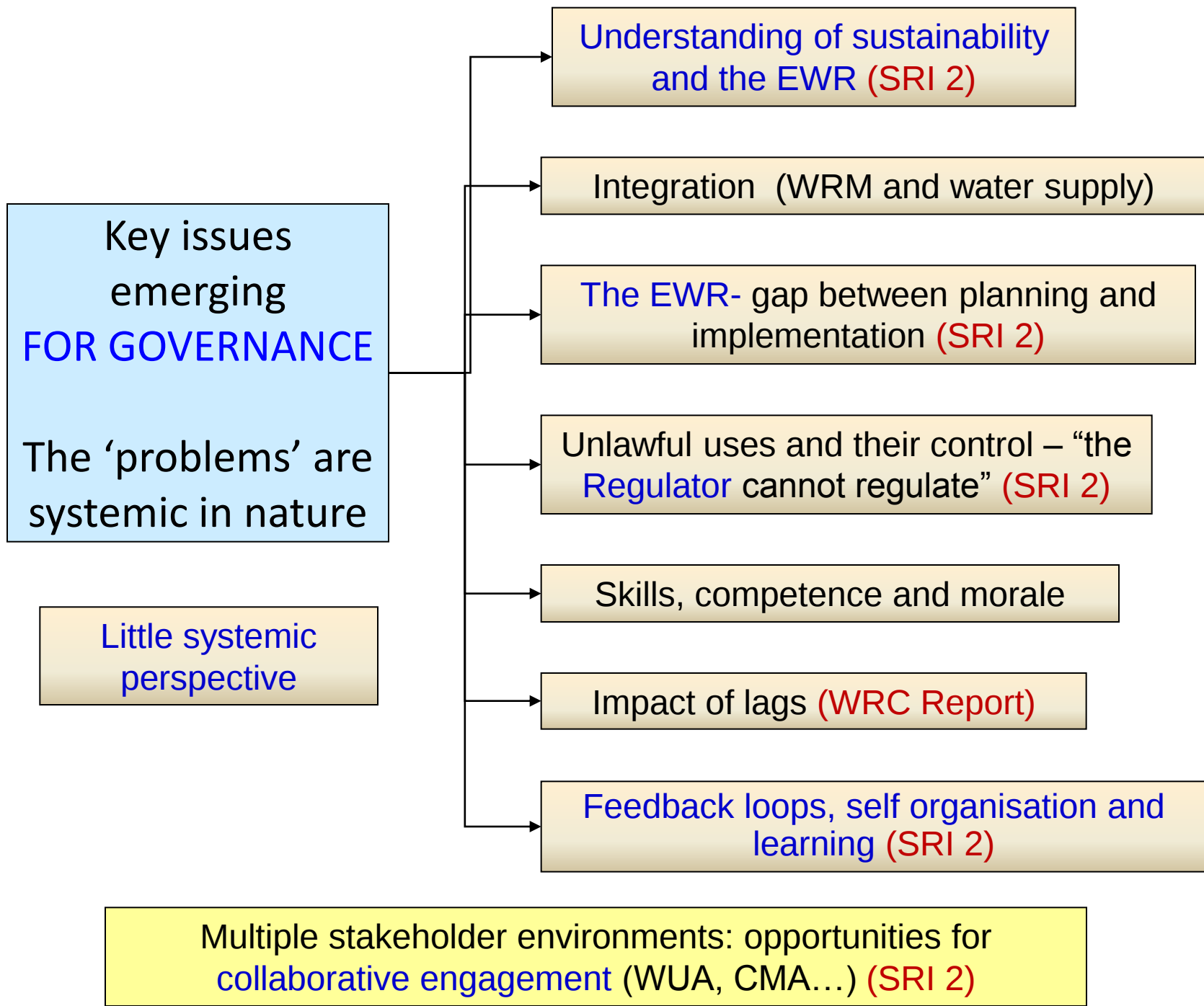
Summary: Incidence of compliance with ER flows (pre and post NWA)



Results

- All rivers are non-compliant with the ER
- Why? Reasons vary: BUT...
 - Do NOT implement equity and sustainability
(when are we going to implement the Reserve?)
 - Dependent on water reform and IWRM =
 - Collective contribution and synergies of a number of strategies, plans and practices

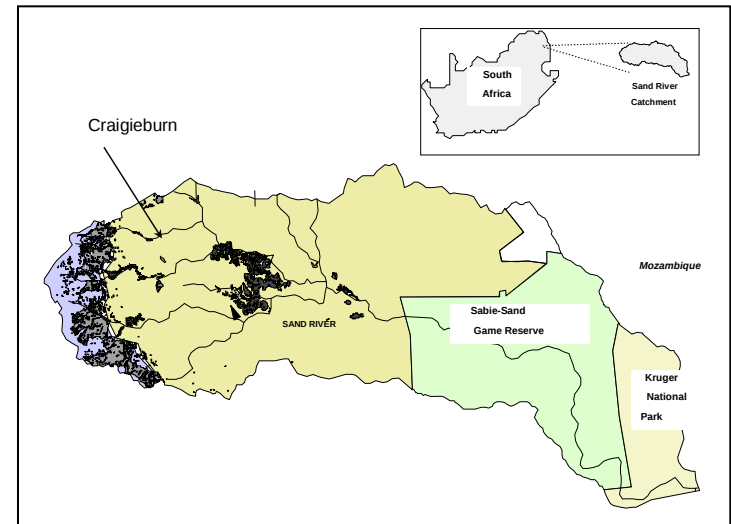




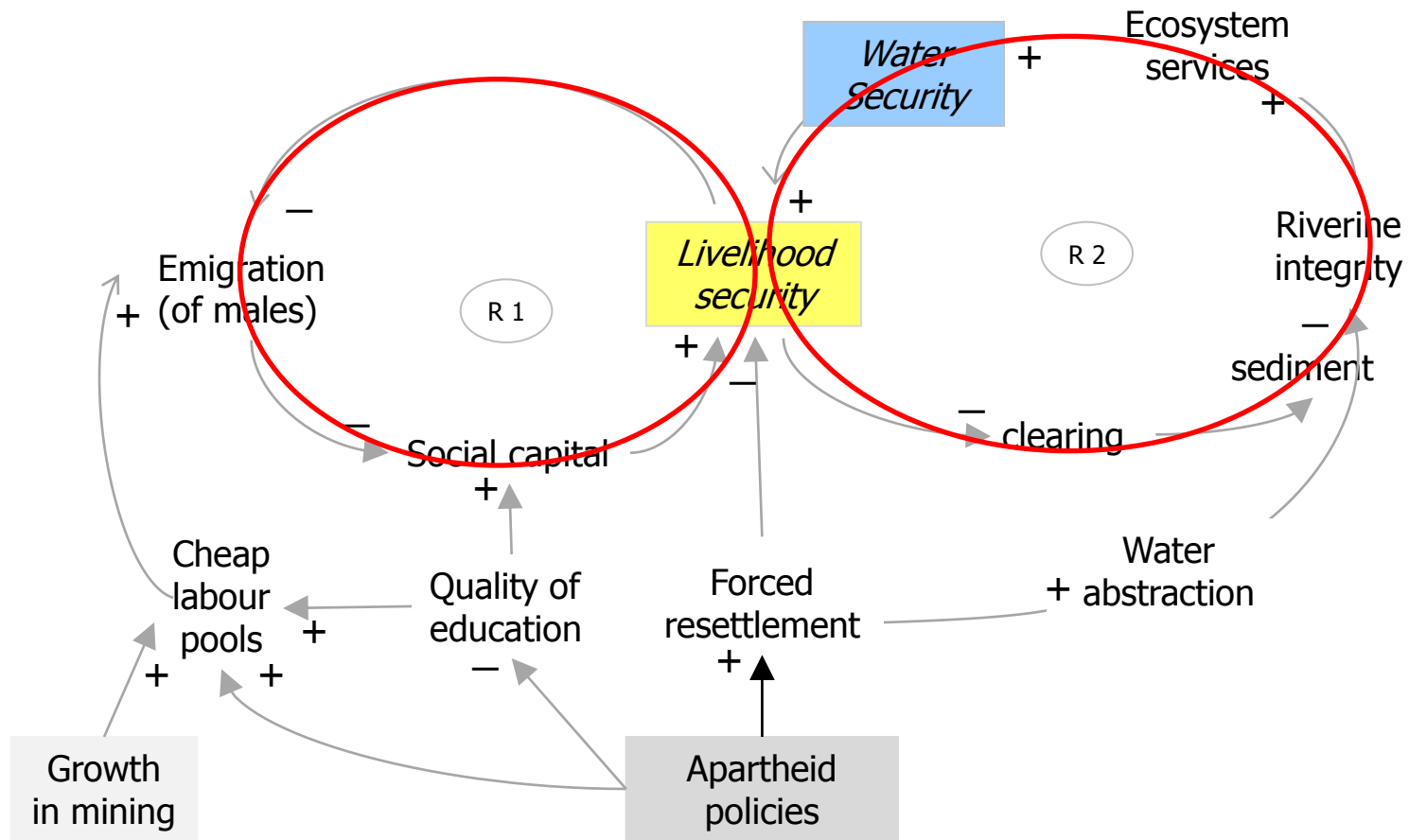
Systemic view – systemic governance

“Solve the problem”

- Reduce forestry
- Injaka Dam
- Bulk water infrastructure
- Some operating rules
- Fix irrigation canals



- Water stress
- Poverty and biodiversity problems



Special session Wednesday !

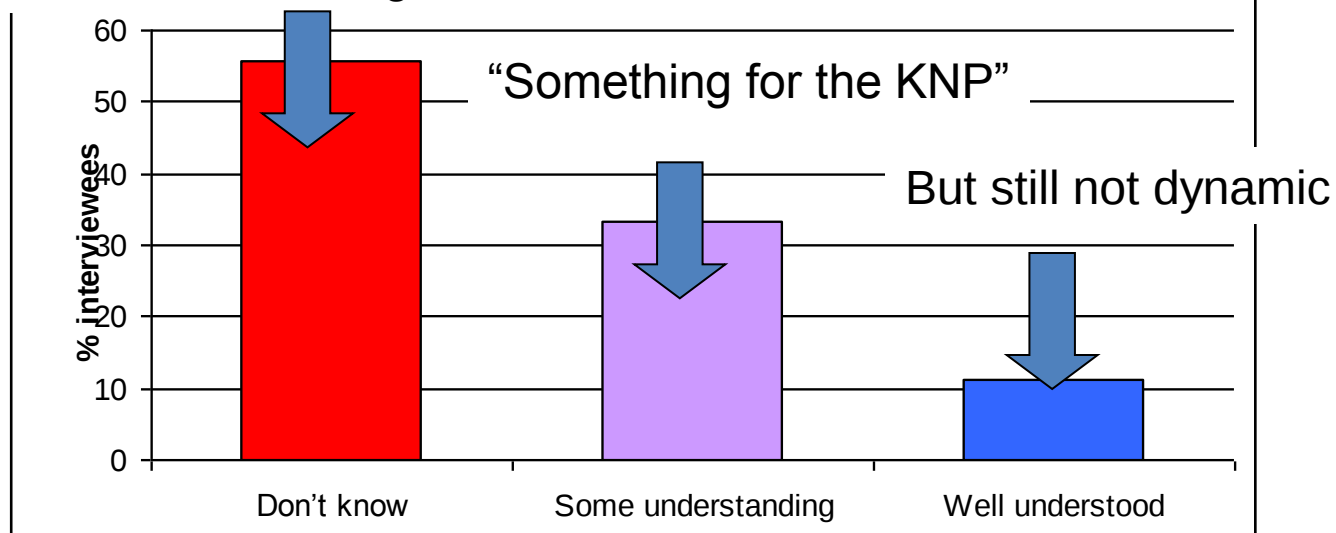
Understanding of Reserve

“The Reserve.....something that National DWAF does”

“The Reserve stands in the way of efficient licencing”

“The Reserve- never heard of it”

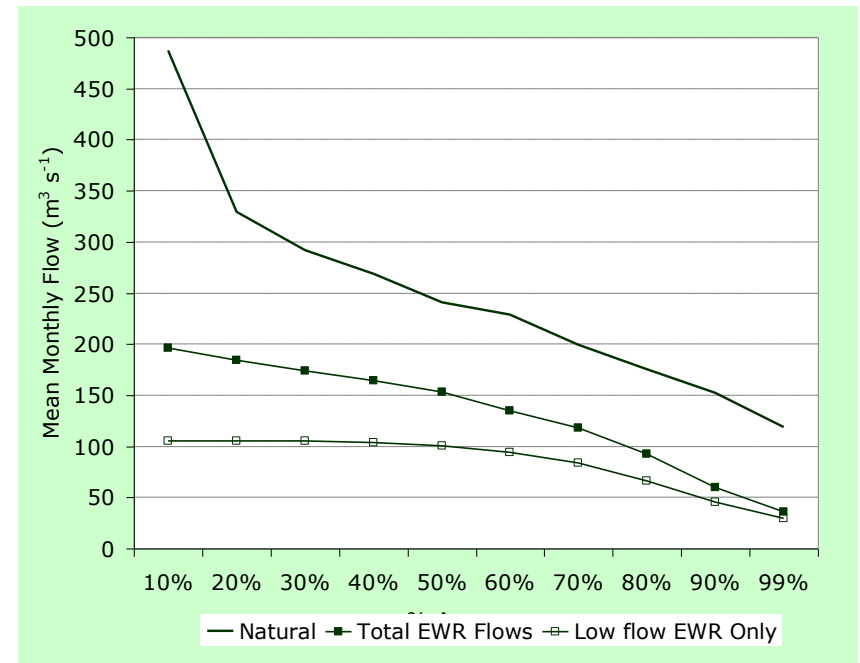
This includes the regulator



LIMPOPO: Most either not heard of Reserve or saw it as allocation for KNP

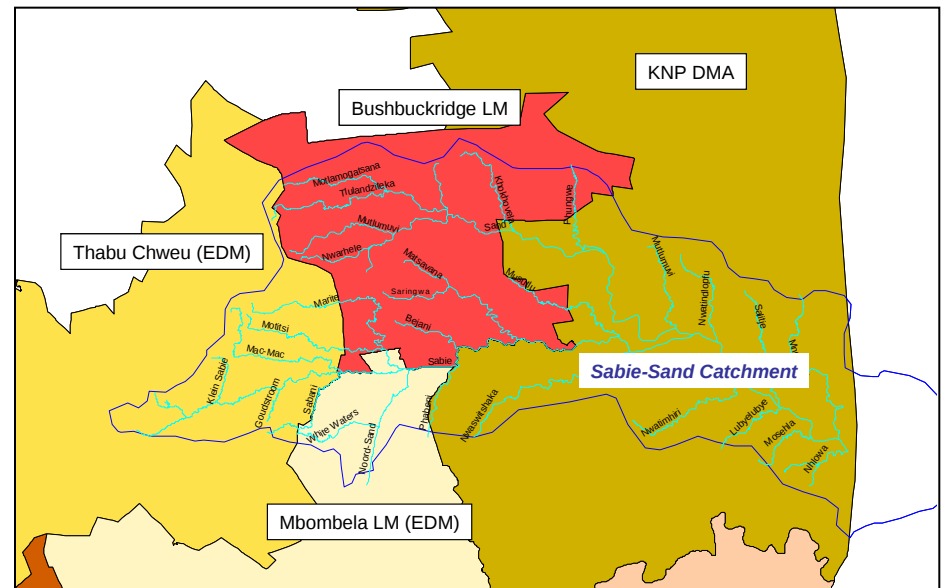
The Reserve- gap between planning and implementation

- Challenging to operationalise
- WR managers struggle to work with outcome
- Default to a **minimum flow**
- Notable attempts are being made:
 - Letaba
 - Crocodile



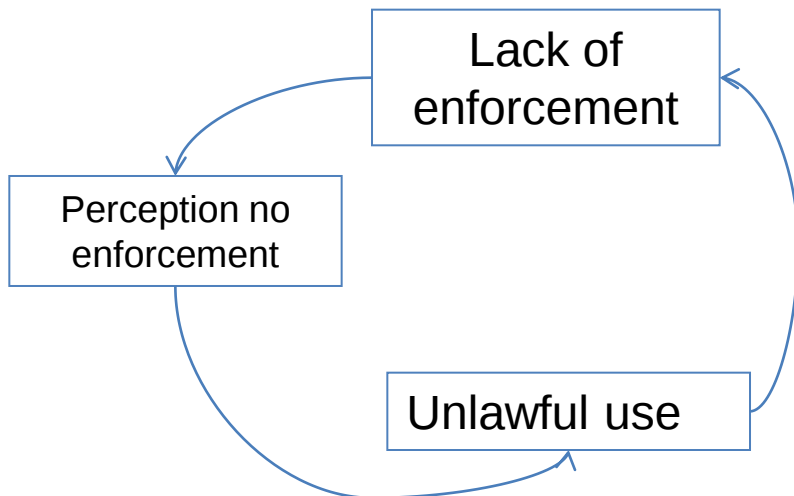
Integrating WRM and water supply/ use

- Legal requirements to take into account water availability (WSA)
- Almost total lack of integration
- Lack of harmonisation between planning instruments
- Some exceptions –
- Poses one of major challenges to IWRM and sustainability
- Especially NB due to different spatial boundaries



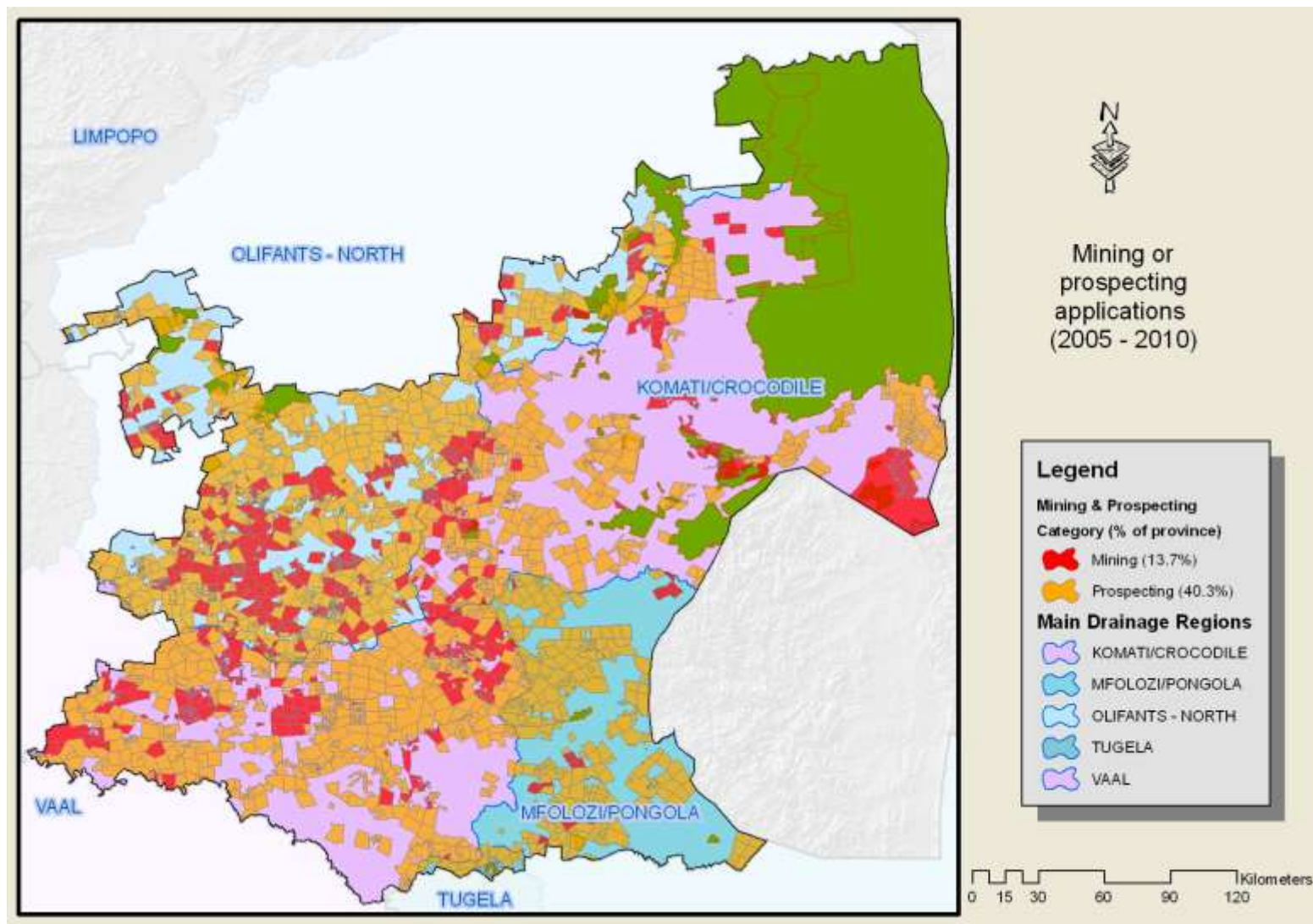
Unlawful uses and their control – “the Regulator cannot regulate”

- For example, only 2 inspectors for the whole of Mpumalanga to regulate water use

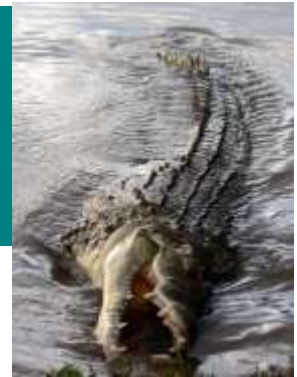


**Important role of
Self regulation**

Certain sectors problematic



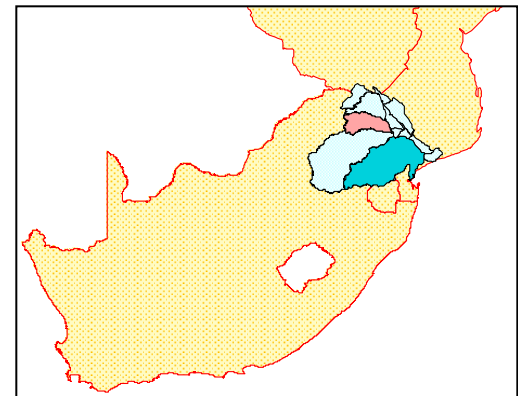
Praxis of IWRM: Olifants



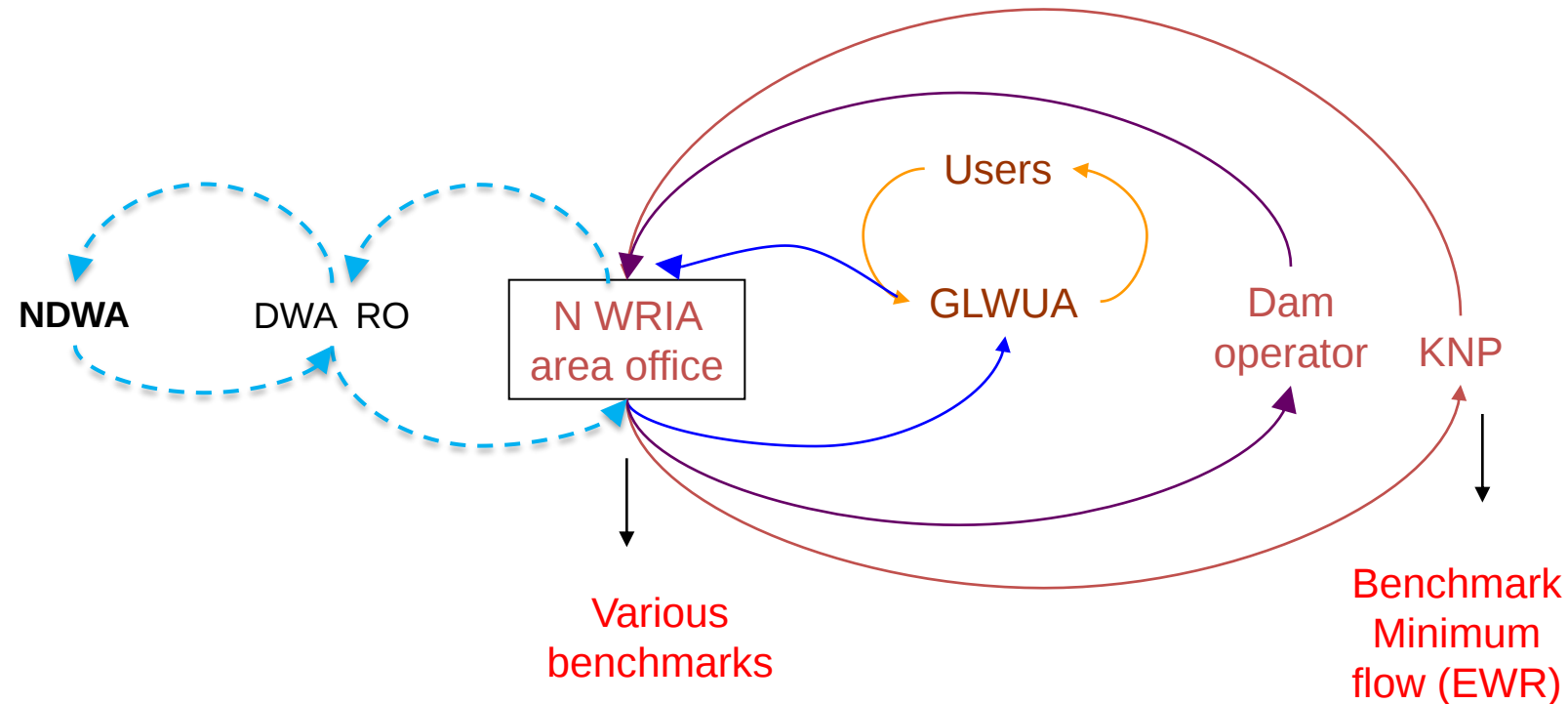
Olifants –

- No systemic view of the situation
- No CMA (3 years late)
- Praxis largely uninformed by NWA
- Disconnected practices
- **Almost total lack of leadership (accountable, tenable)**

Almost total lack of governance
feedback loops



Letaba: Emerging self-organisation and feedback loops



Leadership, self-organisation and multi-scale feedbacks

loops
for water governance

Returning to the issue concept of IWRM and why is it different

Where is this happening?

- Moving from managing in silos to managing as a whole: **Systemic view**
- **Provide support for this - governance**
- Dealing with change: Managing in **complex environments**
- Managing with people: **Learning (stakeholders)**
- Managing towards a **vision**
- **Distributing benefits**: Sharing a resource based on principles
- Building **sustainable futures**



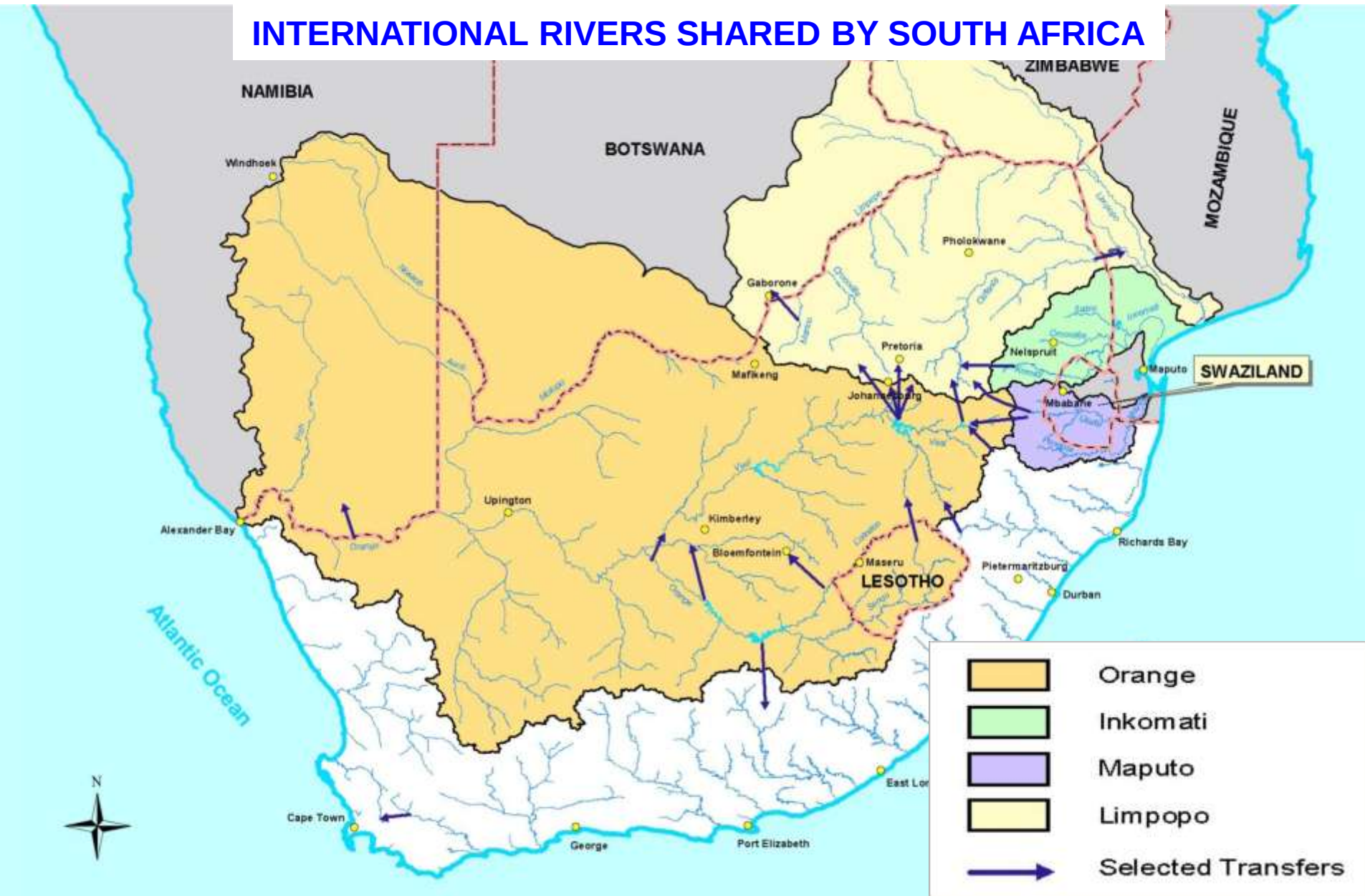
Conclusions

- Meeting commitments – requires transformation of policies and practices
 - Systems thinking
- Move beyond naïve, single cause and effect- “implement the Reserve”
- Progress will vary – lags are inherent
- It requires a systemic response i.e. predicated on a **bundle of strategies**
- Guided by **principles**
- *Participatory and representative platforms for collective action and learning*
- Cases where this is improving – or not - offer useful lessons



Systemic approaches require us to think beyond borders

INTERNATIONAL RIVERS SHARED BY SOUTH AFRICA



This is the Amazon:
2000 km upstream -22 kms wide



In 2008 the Amazon dried up some 1000
km upstream

