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Toward a regional response to climate change

*- Transboundary aspects of
adaptation to Climate Change*

***A DFID funded Regional Climate Change Programme
for the SADC region***



Appreciating your financial, social and ecological assets

*DWF Transboundary Water Cooperation Workshop,
Denmark, 1st & 2nd December 2008*

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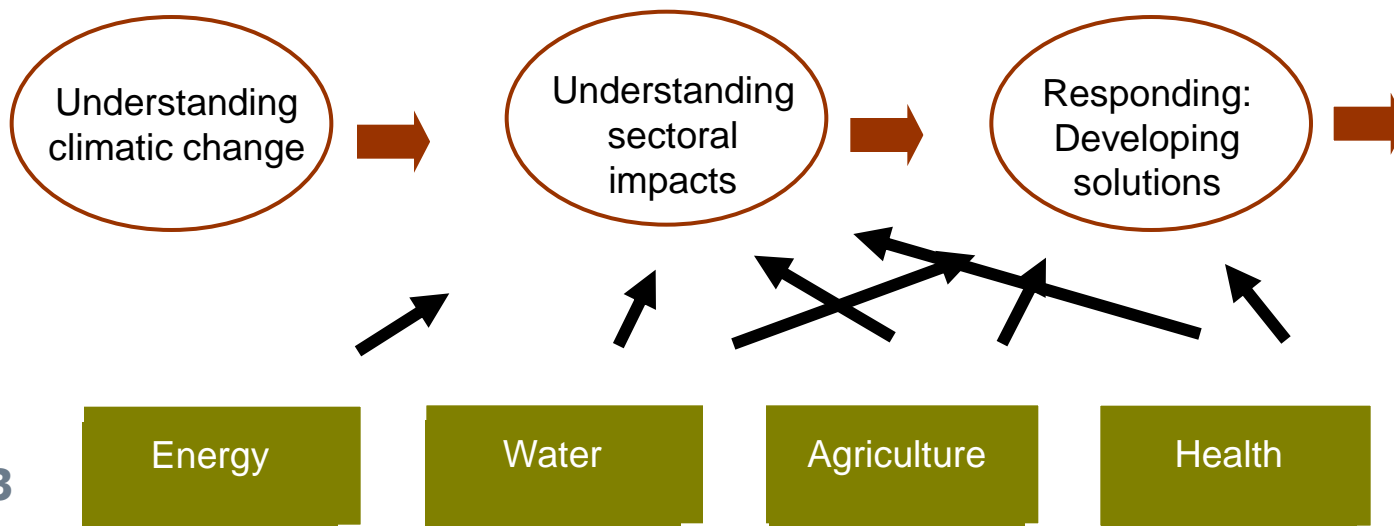
- Why a regional programme?
- Water issues in SADC - Context
- CC and water management in SADC - a pivotal issue - building climate resilient economies
- ZAMCOM and the Zambezi - status quo
- A Kafue case study?
- Risk-based transboundary adaptive management (the adaptive management cycle)
- Water and climate - security issues for southern Africa?



Shared water resources, transboundary water management and migration of people are sensitive political issues even without climate change...



- ❑ Regional responses defined by political boundaries and secular interests
- ❑ Common institutional arrangements are few
- ❑ Need collective lobbying for international funding
- ❑ Leverage economies of scale - common info and responses
- ❑ Platform and structures to respond to transboundary issues (e.g. shared water resources)
- ❑ Identify transboundary 'hotspots' and migration of people



Ensure environmental stability - **water**
Eradicate extreme poverty and hunger - **food security**
Combat HIV, malaria and other diseases - **health**

SADC countries are fast becoming water constrained economies with climate change further impacting water degradation



Spatial development in SADC

Many SADC centres of economic development are located on watershed divides - Johannesburg, Gaborone, Harare, Windhoek, Dar - all water scarce cities

Development cornerstones in southern Africa

- Social stability
- Political stability
- Foreign Direct Investment

Water resource availability and allocation will destabilise these cornerstones: water degradation - quality (reduced dilution capacity) and quantity **result in water constrained economies** (adapted from Turton, 2008)

population density; urbanization/migration;
climatic conditions: reduced rainfall, increase in
extreme events, changes in rainfall patterns,
inadequate institutional arrangements
- cannot cope with complexity



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"The Zambezi basin is the most significant and most impacted basin in terms of climate change in the region and yet our response is probably the weakest" - Zambezi Basin Forum, Nov 08



Transboundary institutional arrangements are bound by national political interests and can constitute a barrier

QuickTime™ and a
TIFF (Uncompressed) decompressor
are needed to see this picture.

Calls for a basin wide climate adaptation plan (ZAPA) - to augment Zambezi IWRM plan and the Zambezi Investment Plan

Recommended establishment of a Zambezi Basin Trust Fund

ZAMCOM to be established March 2009 - Interim Secretariat established last week

Support for a Kafue case study on climate risk

Eight SADC countries and about 40 million people

CC in the Kafue - an RCCP case study

Hydropower, protected areas and vulnerable wetlands, dry land and irrigated agriculture, large dams, vector borne disease (livestock & human)

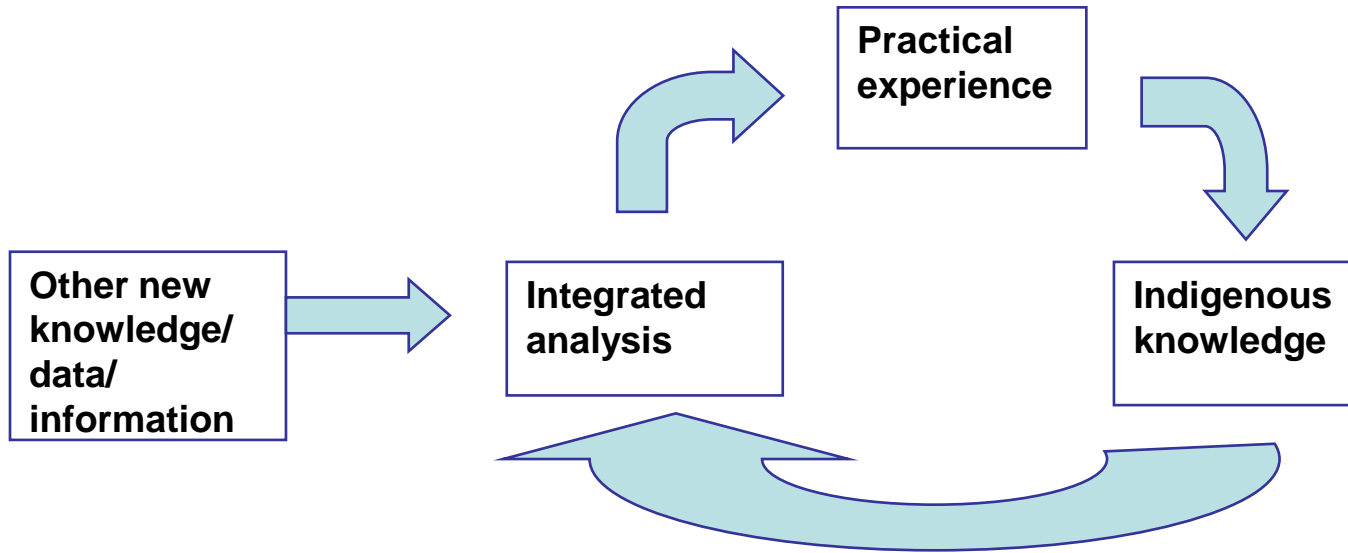
- Access indigenous knowledge
- Integrate with Climate and scientific assessments & disseminate information
- Prioritise adaptation options - feasible financial proposals
- Apply adaptive management - key stakeholders

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Entrenching adaptive management into development cycles and processes can facilitate the integration of CC responses

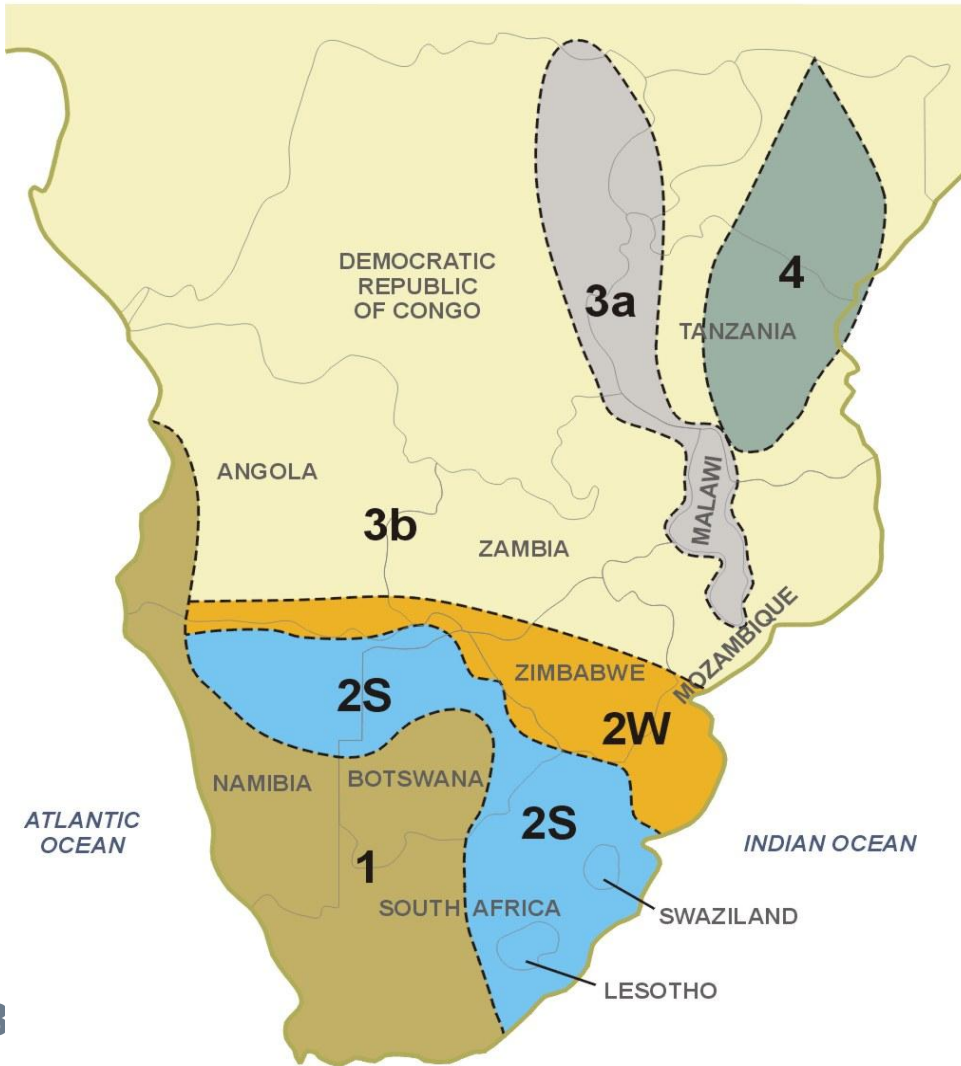


- ❑ Useful integrated information (science with socio-economic analysis)
- ❑ Experience informs Indigenous Knowledge - feeds back into analyses
- ❑ New information brings life into the process - cycle is repeated again and again - successful adaptation responses



International CC negotiations affect SADC - but we do not influence international negotiations and funding. Choosing battles by identifying critical thresholds - which systems do we need to strengthen the most?

SADC sub-regions



Region 1: <400mm; CC: Significant warming W&S; reduction in winter rainfall. Heavy g/w dependence; sparsely populated

Region 2: 400-1000mm. CC: mod temp Increase; winter drying; small decr in rain= large decrease in run-off - impact on subsistence and dryland agri. 2W: heavy dependence on subsistence agric; civil wars & Economic turmoil-weak institutions; ltd access to healthcare; malaria

Region 3: high rainfall; CC: incr in extremes Cyclones; sea level rise (Moz); mod temp incr; Decr winter rainfall, incr summer (mod); malaria endemic; pop pressure - refugees

Region 4: lower, bi-modal rainfall; links with East Africa & Malawi; incr summer rainfall, mod temp incr.

S: strong economies and institutions
W: weak economies and institutions

a: population pressure

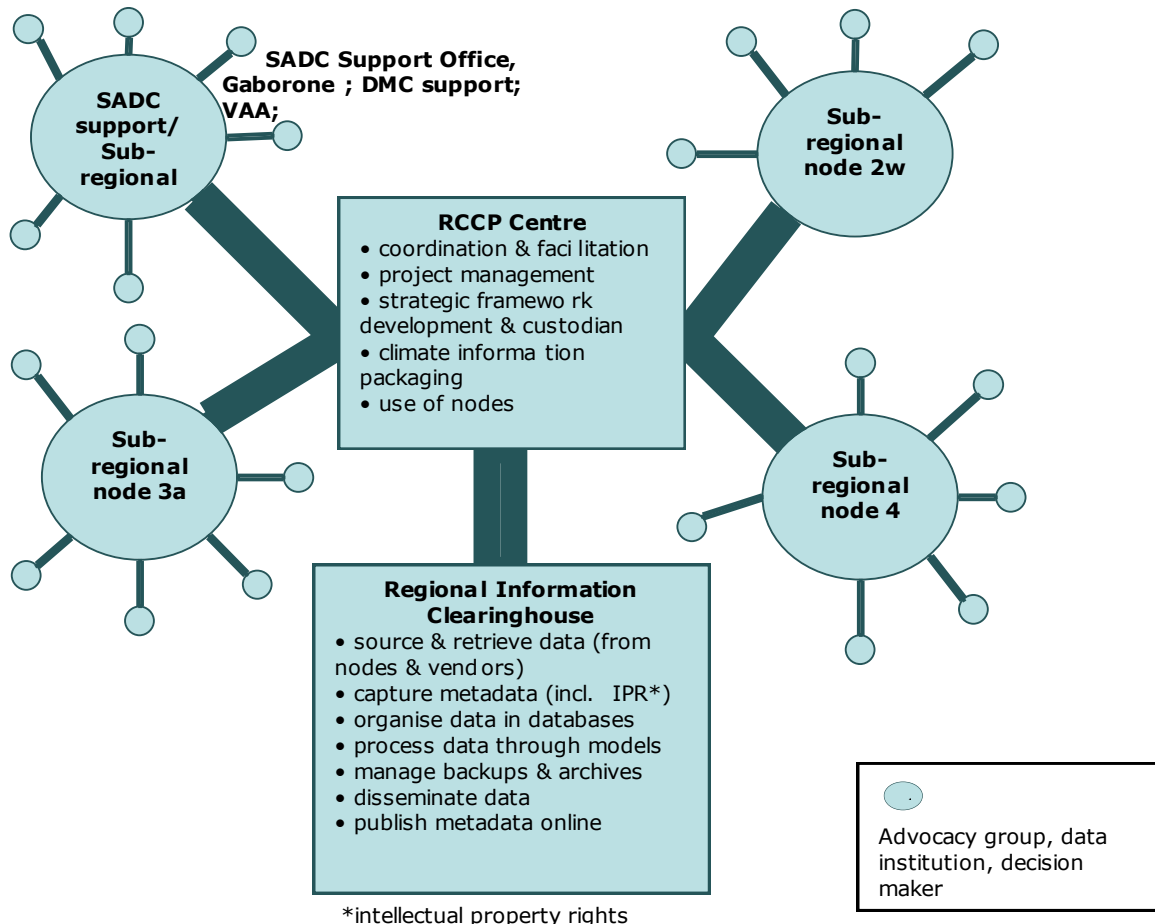
b: weak economies and poor infrastructure

The regional programme will strengthen relationships and build platforms to enable collaborative response



..enabling environment to deal with issues related to food security, water, health and energy...

Figure 1: RCCP enabling structure



Climate change will threaten regional security... do we need to analyse security issues in the context of water and CC in southern Africa?



“The SADC region should have a strong and informed voice in the global climate change adaptation processes and developments, particularly in how funding mechanisms develop. Scale is achieved at a regional rather than a national negotiating level: it will be much harder for the international community to ignore a voice representing the needs of 240 million of the world’s most vulnerable people, as opposed to say 20 million from one country” -
Position paper, Lesotho, May 2008

The SADC Multi Stakeholder Water Dialogue on Rising above the Climate Change threat toward security



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