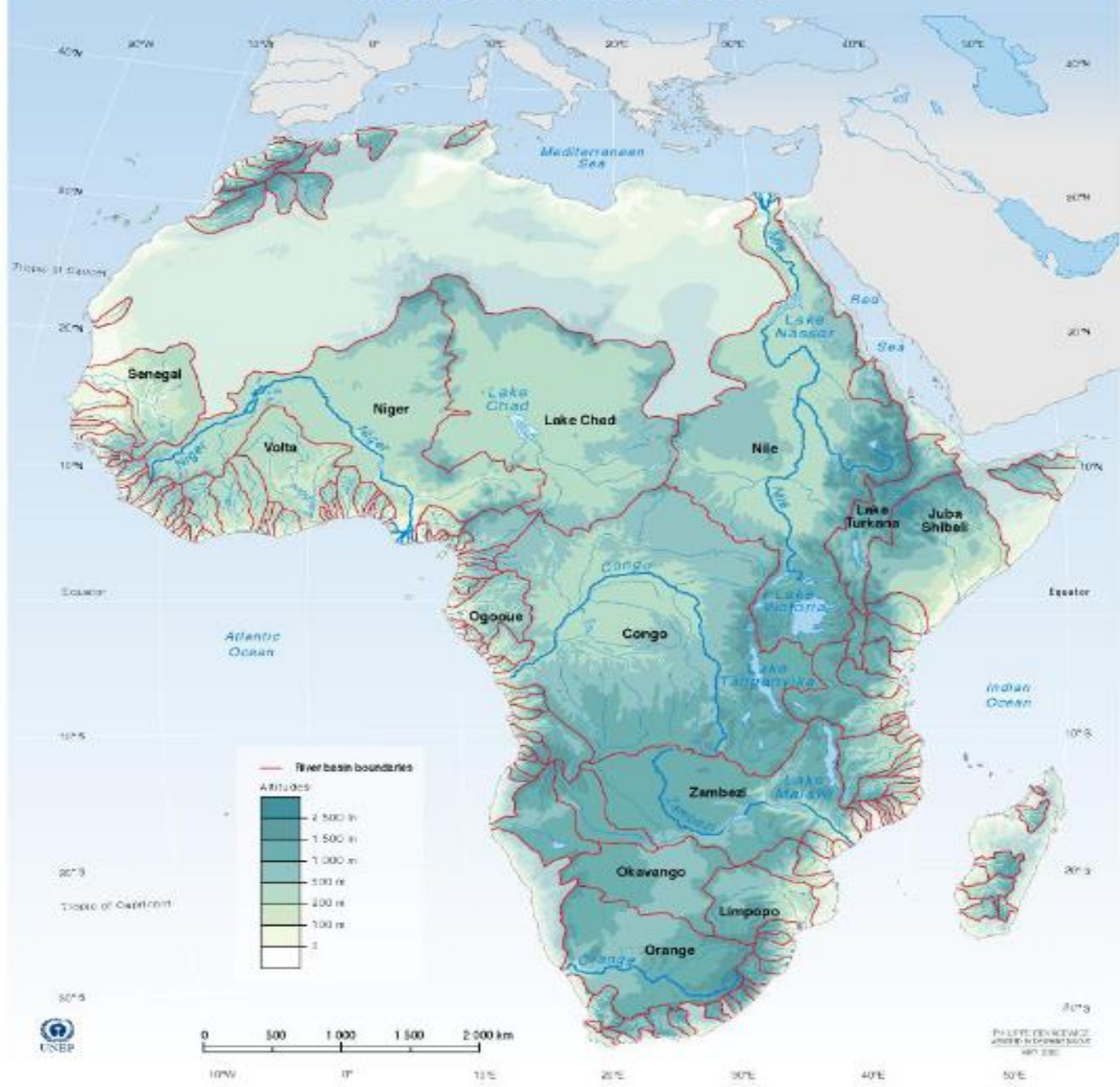


Africa Water Investment Programme (AIP) Technical Workshop on Project Preparation

*Challenges and opportunities in Preparation of
Transboundary River Basin Climate Resilient Water Projects
– Experiences from the Orange Senqu River Basin*

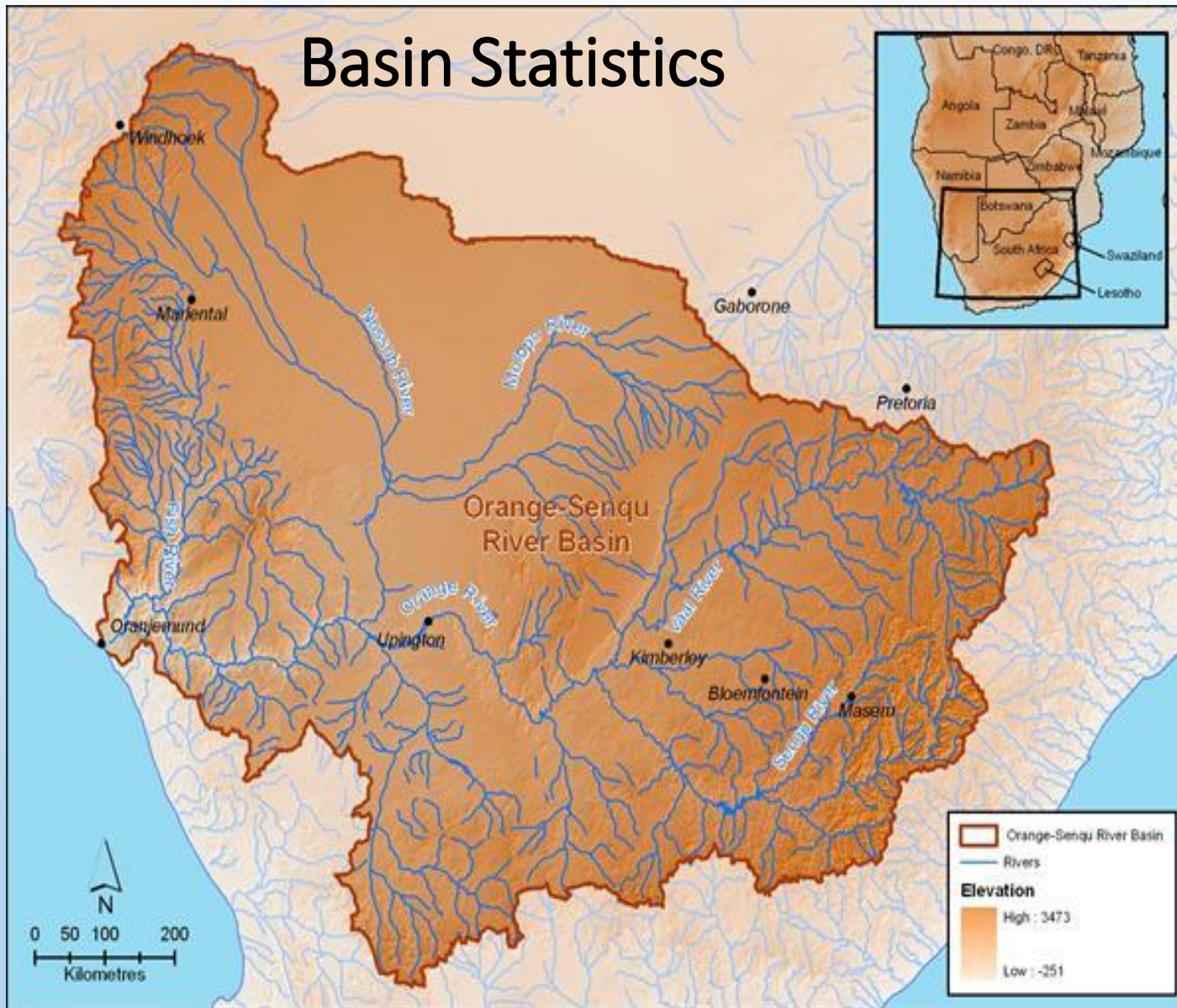
Midrand, 20th September 2018
Lenka Thamae – Executive Secretary
ORASECOM
www.orasecom.org

The Major River Basins of Africa



Source: Aaron T. Wolf et al., 1996; Revanga et al., Watersheds of the World, World Resources Institute (WRI), Washington DC, 1998; Philippe Rekawicz, *Atlas de poche*, Livre de poche, Librairie générale française, Paris, 1996 (revised in 2001).

Basin Statistics



1. Basin Area : 1 million sq km.
2. Rainfall : 1800mm in Lesotho highlands to 45mm at River mouth.
3. Population: 19 million (Earle et al. 2004).
4. Average annual natural runoff : 12,000 mill. cub. metres less than half the natural flow reaches the river mouth on the Atlantic Ocean.
5. Basin States: Botswana, Lesotho, Namibia and South Africa.

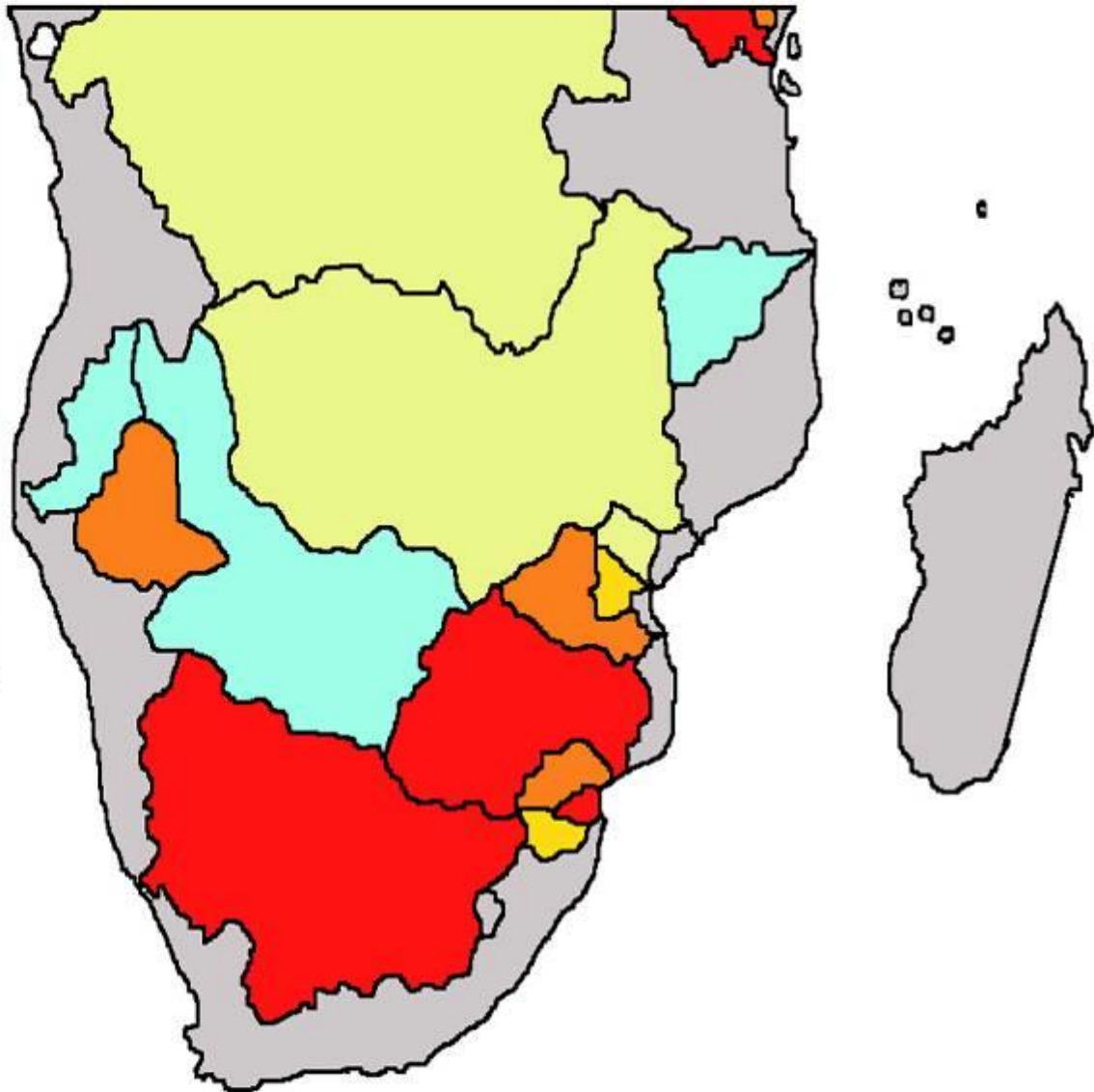
Data Sources:
Digital Elevation Model - CGIAR SRTM Database
Rivers - UNDP/GEF
Dams/Waterbodies - UNDP/GEF

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Orange-Senqu sources in highlands of Lesotho at around 3000 metres above mean sea level (alpine wetlands “sponges”) – very important for sustaining flows especially in dry season and during drought periods.



Basin Challenges – Water Stress



Climate – temperature change

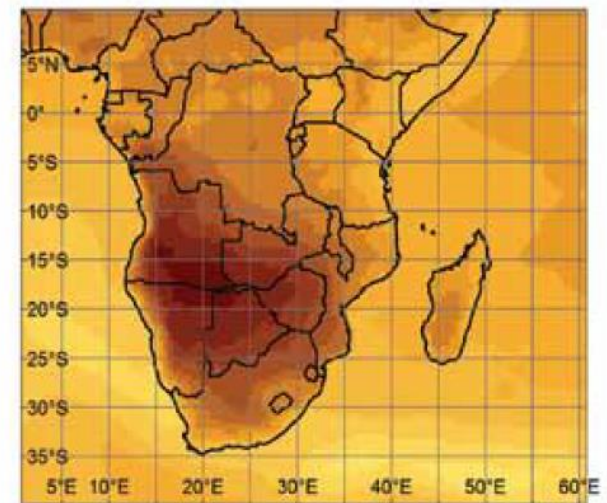
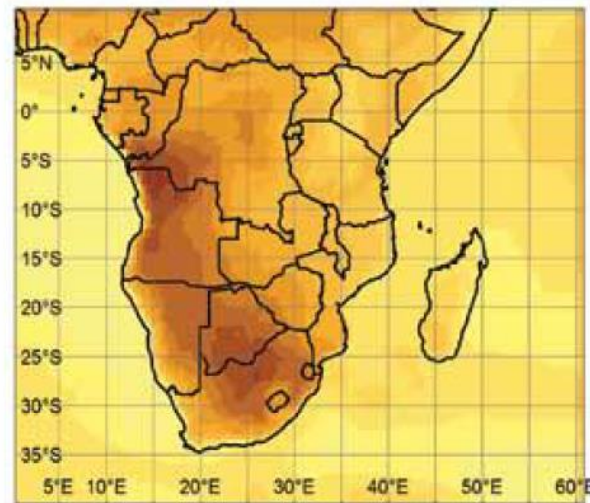
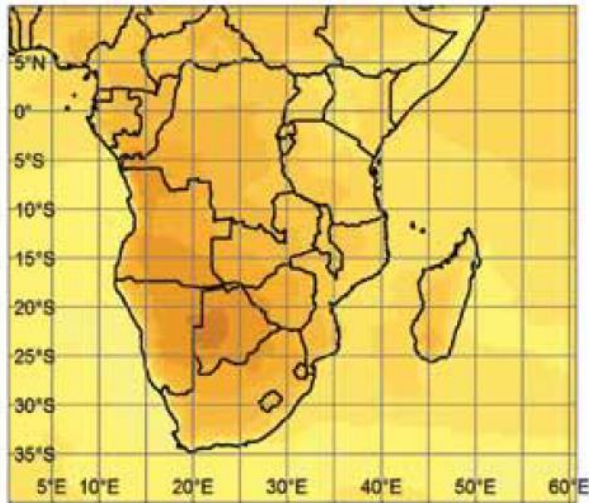
By 2050

Projected change in mean annual maximum temperature based on 6 dynamically downscaled GCMs

10th percentile

Median

90th percentile



degrees C per annum



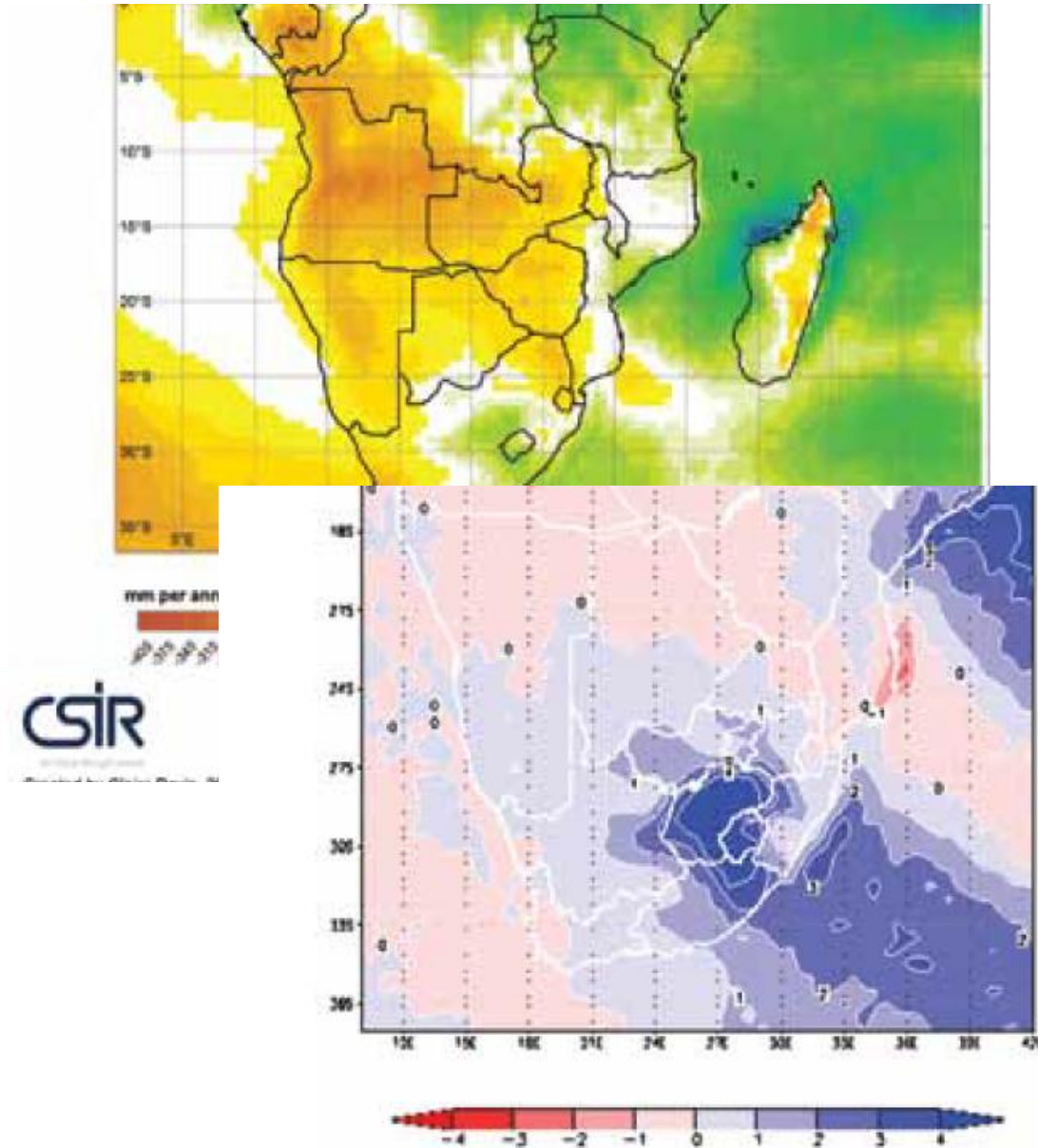
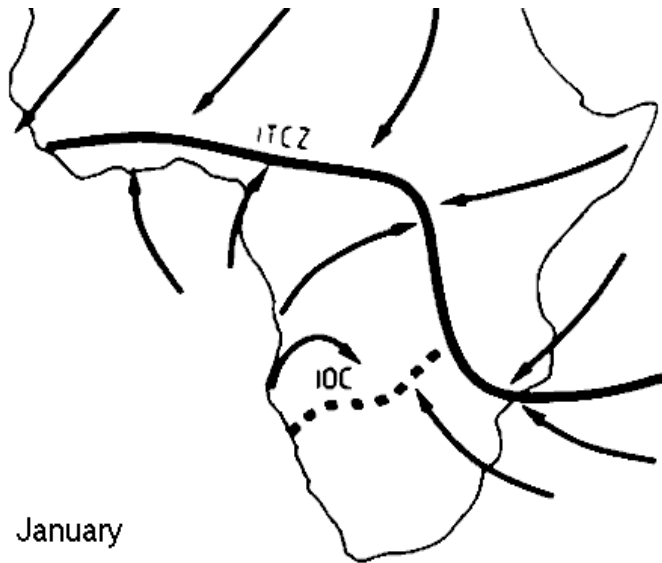
CSIR

our future through science

Created by Claire Davis, 2011

Climate – precipitation change

By 2050



Reservoir Storage in the Orange-Senqu Basin

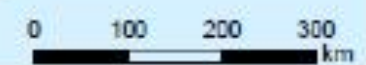


Legend

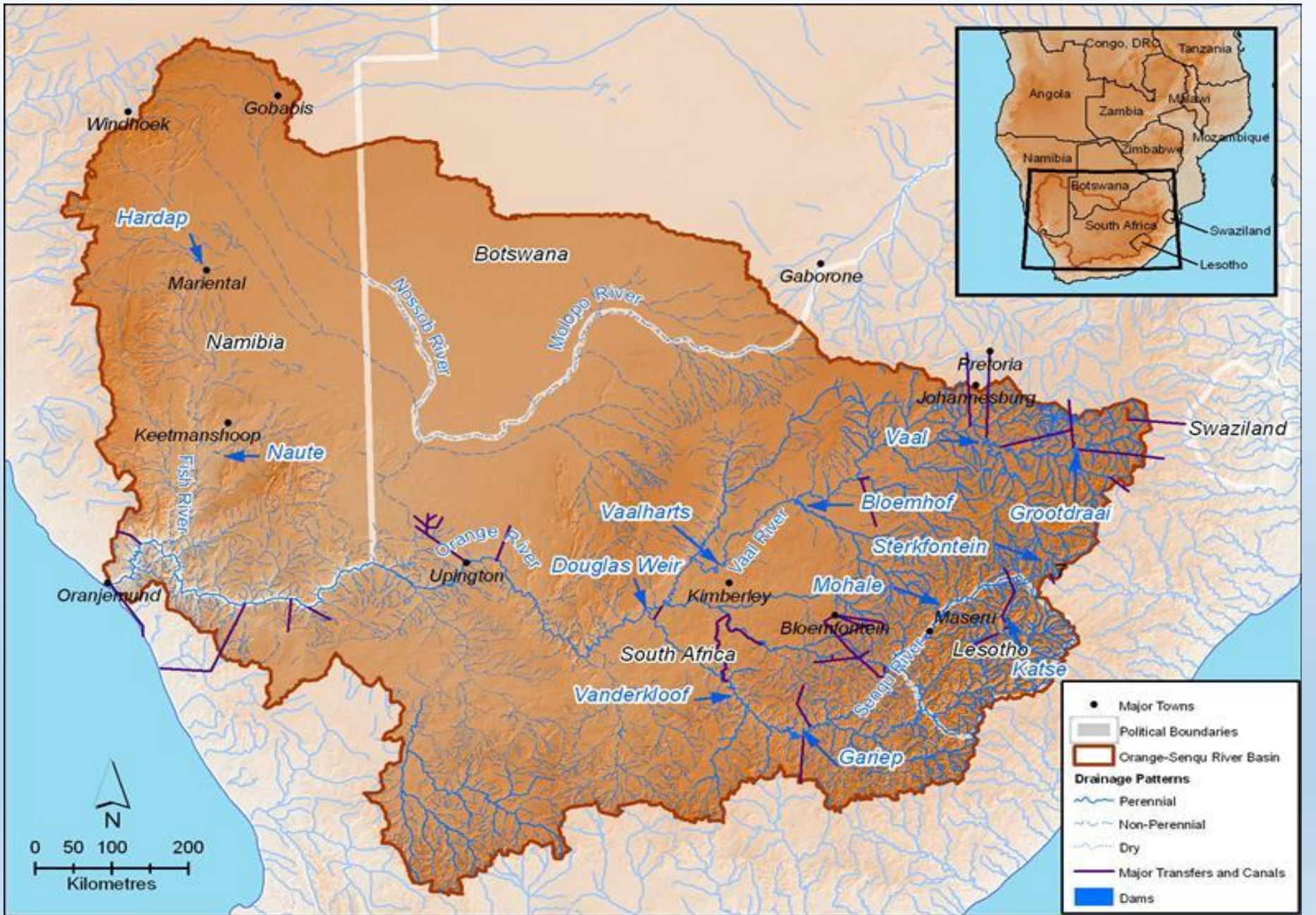
- Major town
- Orange-Senqu
- Main rivers
- Main reservoirs
- Live storage (>1 Mm³)
- Watershed
- Country
- Sub-catchment

BRL
Bureau of River and Water Management

August 2014
Source :



System of Water Transfers to Supply Demand Centres



Challenges

- i. Establishing common understanding, trust, and transparency towards agreement on a basin level integrated plan for water infrastructure delivery and management.
- ii. Uneven availability of scientifically robust information due to limitations in research capabilities and efficiency in processing and validation of field data.
- iii. Historically limited focus on climate resilience or adaptation rationale – focus on access to water, meeting demand and water security.
- iv. Limited self financing to consolidate project concepts into well formulated proposals.

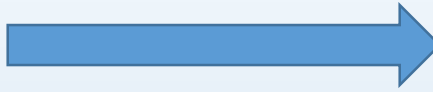
Overview of 2015 Basin Level IWRM Plan

Table 4-1: Summary of strategic objectives

Central Objectives (CO 1 to 4)	Enabling strategic objectives (EO 1 to 5)	Cross-cutting strategic objectives (X0 1 and 2)
<ol style="list-style-type: none">1. Ensure the optimised sustainable management of the basins water resources2. Support socio-economic upliftment and eradication of poverty in the basin3. Ensure that the adverse effects of catchment degradation are reduced and the sustainability of resource use is improved4. Maximise security from water-related disasters (especially flood and drought)	<ol style="list-style-type: none">1. Put an adequate knowledge base in place,2. Build sufficient capacity and institutional strength,3. Promote high level of stakeholder engagement4. Ensure appropriate financing mechanisms are in place,5. Promote adaptive management and effective monitoring and evaluation systems.	<ol style="list-style-type: none">1. Promote the mainstreaming of adaptation to potential impacts of climate change into planned actions2. Ensure the mainstreaming of gender considerations into planned actions

Opportunities

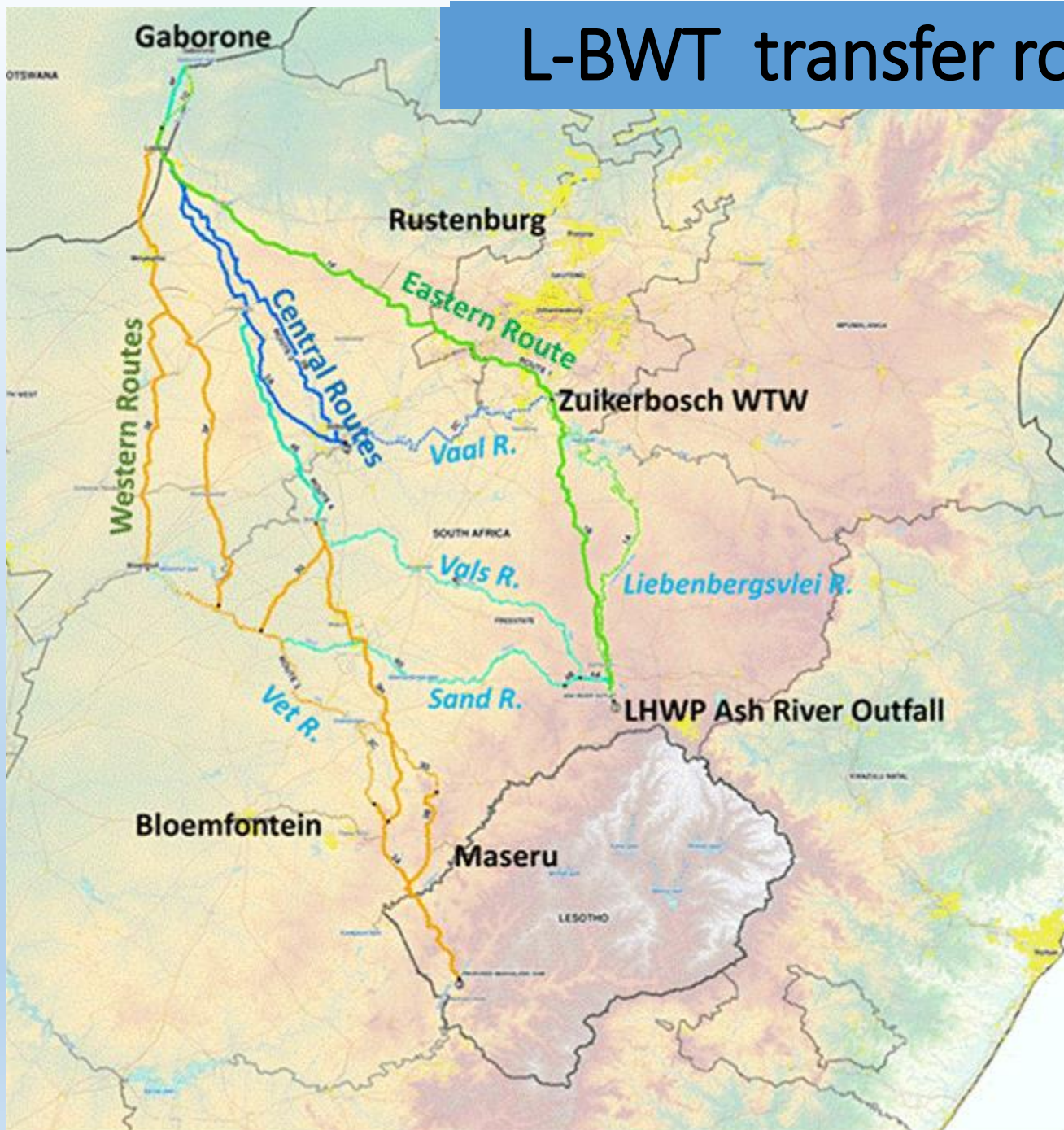
- i. Political commitment, advocacy and solidarity due to urgency of climate change impacts within the basin and improved awareness on vulnerabilities.
- ii. Promotion of climate resilient projects offering solution with multiple benefits (multipurpose nature of infrastructure solutions).
- iii. Basin approach, ability to identify basket of solutions jointly by state Parties, optimisation at basin level for sustainability, and ability to leverage economies of scale and collective economic strength.
- iv. Partnership with agencies with knowledge of potential funding windows, and with complimentary skills and capacity.



THE LESOTHO-BOTSWANA WATER TRANSFER PROJECT



L-BWT transfer routes



Thank you

Tshimolodiso semmuso ya tiriso ya metsi mo metseng
ya Middlepits go tswa Aferika Bo
Metsi ga a itse melelwan
Tirisanyo ya mafatshe a

Joint Official Commissioning of Cross Border Water
Supply to Middlepits Cluster from South Africa.
Water knows No boundaries,
Trans Boundary Cooperation.

