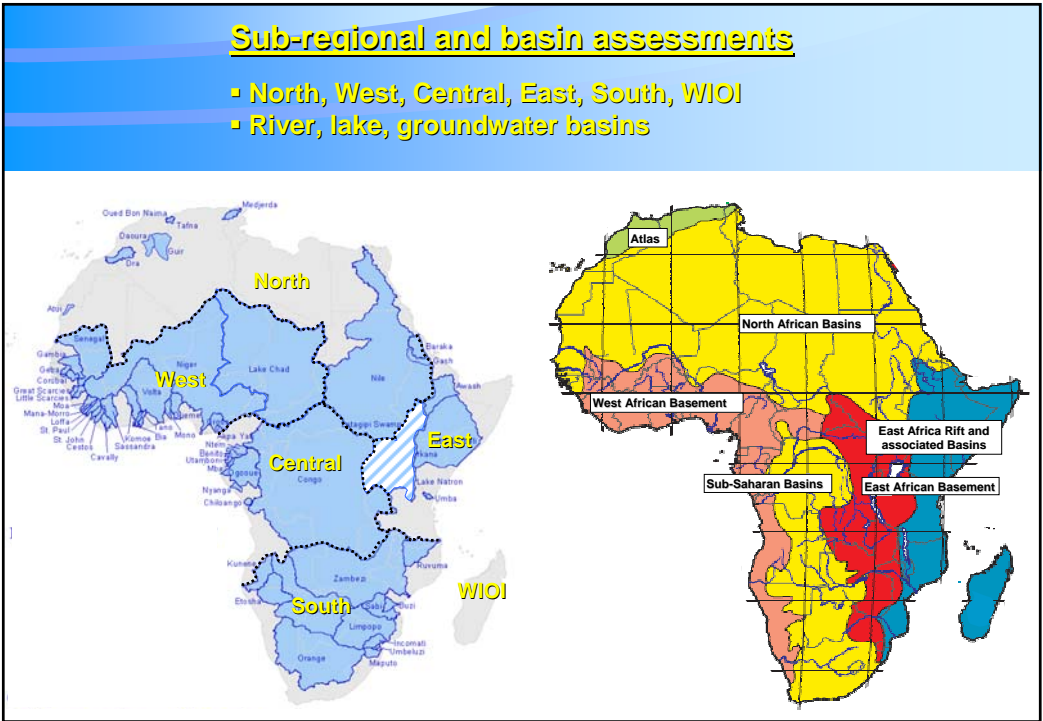
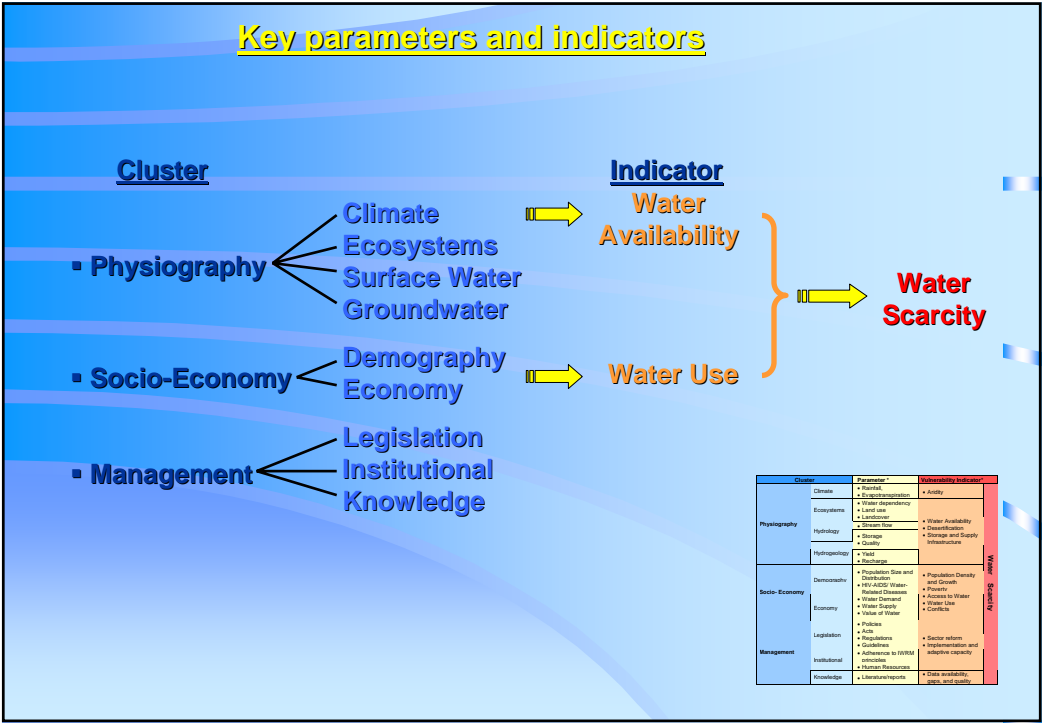


- ✓ Vulnerability
- ✓ The river, lake, groundwater basin approach
- ✓ Key parameters and indicators
- ✓ Sub-regional and basin assessments
- ✓ Key Issues, adaptation and mitigation

- Resource integrity in the long-term
- Social upliftment and advancement
- Economic growth and use of environmental resources

2



Sub-regional and basin assessments

Approach

- Rapid
- Intermediate
- Comprehensive

Rapid Assessment

- Spatial scale (biophysical / socio-economic boundaries)
- Temporal scale (environmental change)
- Data and information collection
- Summarized overview

Format rapid assessments

- Sub-regional scale
- Basin scale

Physiography

Socio-Economy

Management

Sub-clusters

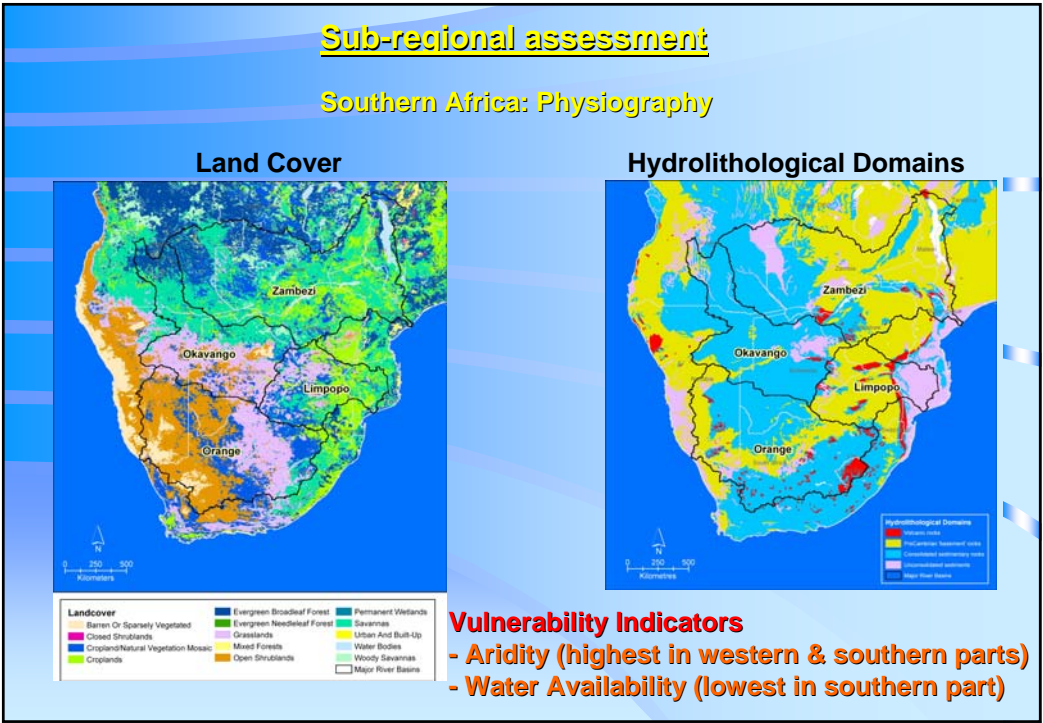
Parameters

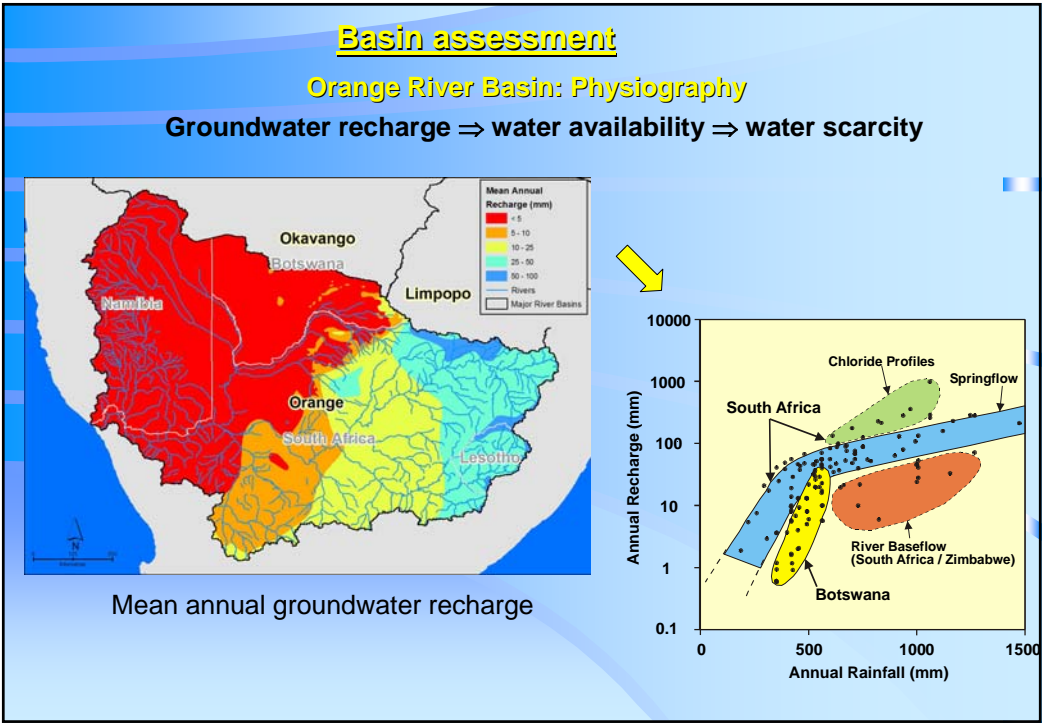
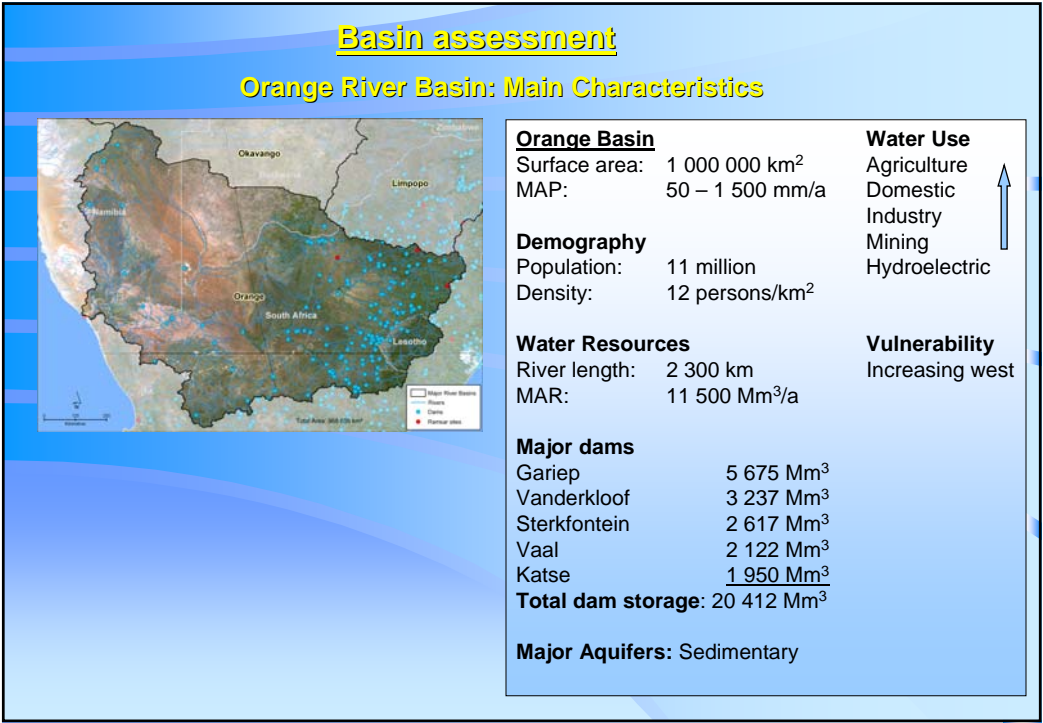
Indicators

Key Issues

Adaptation

Mitigation





Orange River Basin

- ◆ Economy
 - Gauteng: Industrial & Mining

- ◆ Legislative Framework
 - South Africa key role
 - SA Water Act (1998)
 - Various guidelines
- ◆ Institutional Framework
 - Adherence to IWRM principles
 - Development of capacity urgently required
 - Orange-Senqu River Commission
- ◆ Knowledge
 - Literature / reports

Comparison basins

Cluster	Vulnerability Indicator	River Basin A	River Basin B
Physiography	Aridity	<20% of the area	>80%
	Water Availability	Vulnerable	Stressed
	Storage and Supply Infrastructure	Well developed - middle course	Highly developed - upstream
Socio-Economy	Population Density	X p/km ² ; downstream increase; variable	Y p/km ² ; upstream increase; variable
	Access to Safe Water	Urban: Low, Rural: Low, highly variable	Urban: High, Rural: High ; variable
	Water Use	Agriculture ~X%	Agriculture ~Y%
	Poverty	High	Low
	Conflicts	Low	Low
Management	Sector reform	In progress	Advanced
	Implementation and adaptive capacity	Moderate to bad	Reasonable
	Data availability, gaps, and quality	Moderate to bad	Reasonable

PDF prepared by ACWR (www.acwr.co.za)


Key issues, adaptation and mitigation		
Physiography		
	Climate	▪ Extreme events and impacts
	Ecosystems	▪ Impacts of land use changes
	Surface Water	▪ Distribution, quantity and quality
	Groundwater	▪ Storage and supply infrastructure
Socio-Economy		
	Demography	▪ Population growth and urbanisation ▪ Water related diseases and HIV/Aids
	Economy	▪ Access to safe water and sanitation services ▪ Water use ▪ Water related conflicts
Management		
	Legislation	▪ Governance of water resources
	Institutional	▪ Implementation and adaptive capacity (finances, human res.)
	Knowledge	▪ Data availability and quality ▪ Knowledge gaps (climate change, water pollution, water res.)

Our experiences...

➤ The framework worked well for Africa

➤ A more detailed framework is needed for intermediate and comprehensive assessments

Thank you for your attention





PDF prepared by ACWR (www.acwr.co.za)

Title goes here

7