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South African Water Research Commission
WRC

Seven catchments of the lowveld



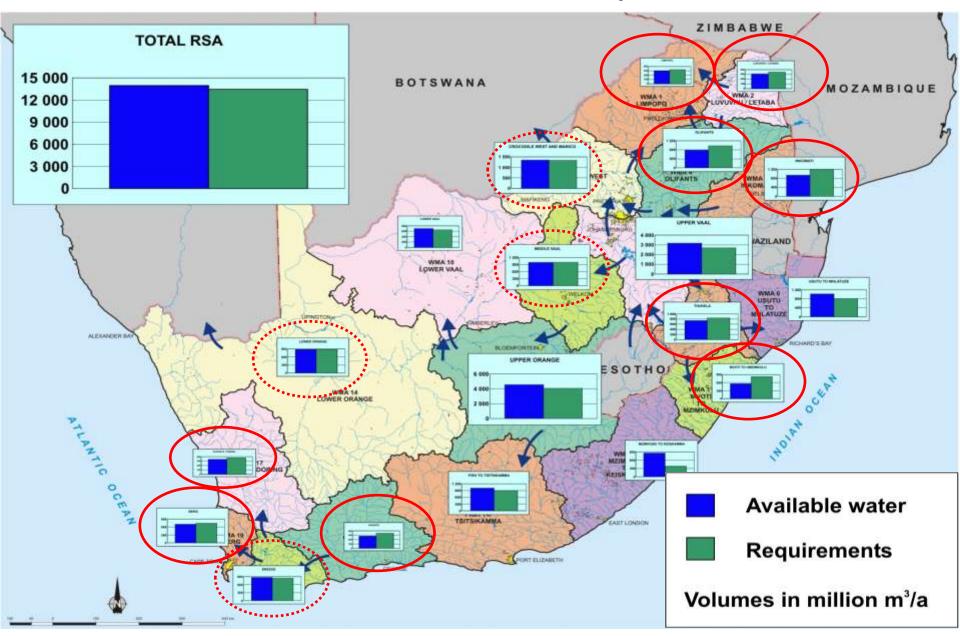
South Africa

 The National Water Act of 1998 was set to change 'business as usual' by introducing a 'new discourse' for water resources management

SUSTAINABILITY

= fundamental objective

Is there enough where we need it? Water reconciliation scenarios, year 2000



Emergence of scarcity

- The first transition:
 - from abundance to scarcity latter part of the
 19th Century

- The second transition:
 - from scarcity to deficit

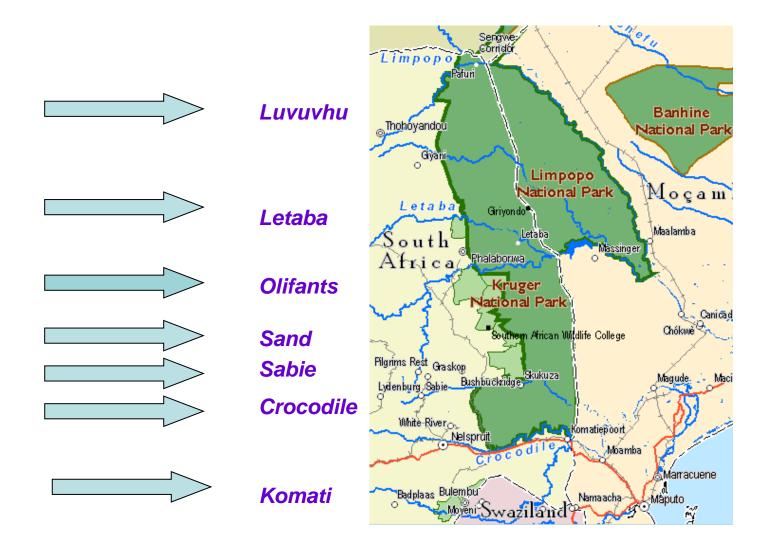
» Movik 2010

South Africa is faced with absolute deficit by 2015...

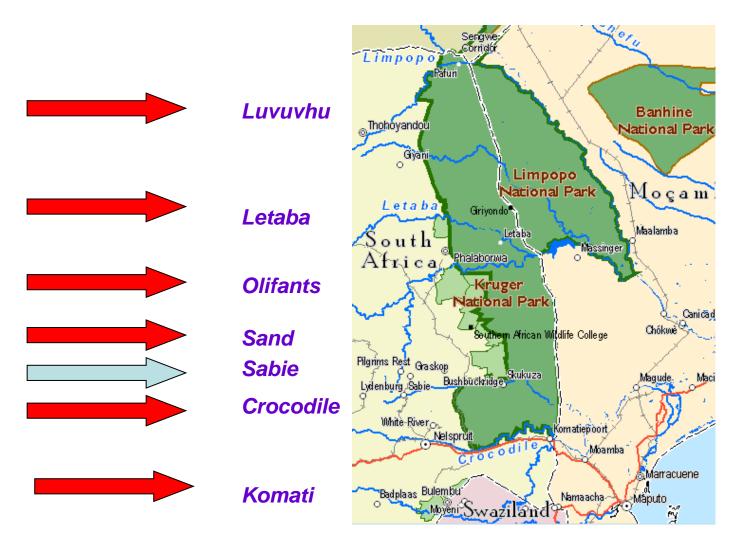
We all want to use the river....

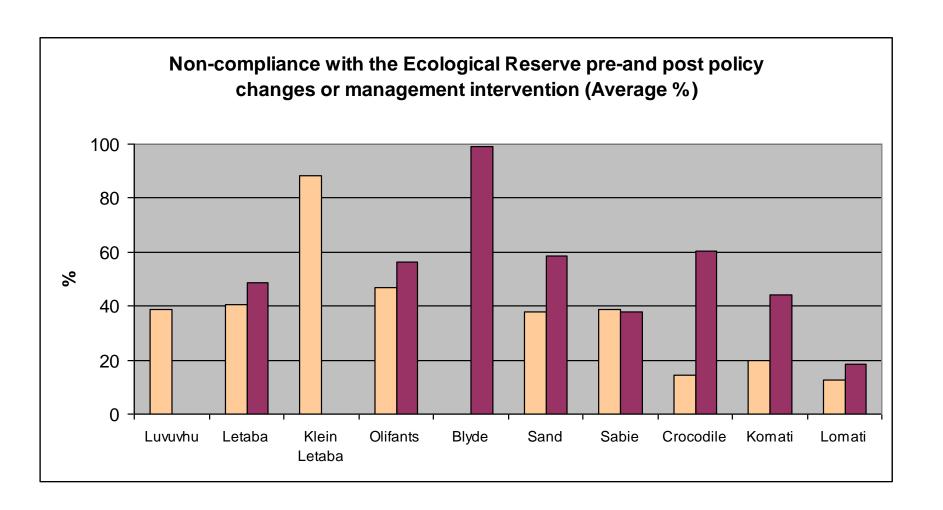


Perennial systems



Emphemeral systems





Legal

Laws, regulations, rights, obligations, violations, reasonability, litigation, political, lawyers, judges, regulators, informal/formal

Ecology

Nature, complex systems, conservation, management, academic, key drivers, resource, thresholds, resilience, biodiversity, scientism, uncertainty

Economics

Goods and services, trading, incentives/disincentives, supply and demand, free market, profit/loss, employment, growth, businesses, privatisation

Legal Laws, regulations, rights, obligations, violations, reasonability, litigation, political, lawyers, judges, regulators, informal/formal

Ecology

Nature, complex systems, conservation, management, academic, key drivers, resource, thresholds, resilience, biodiversity, scientism, understanding, uncertainty, scientist

Economics

Goods and services, trading, incentives/disincentives, supply and demand, free market, profit/loss, employment, growth, businesses, private individuals

Different discourses of IWRM

	Environmental Protection Principles	Associated Concepts	
1.	Sustainability Principle	 Limits to growth Sustainable development Carrying capacity Ecological Footprint 	
2.	Polluter Pays Principle (PPP)	LiabilityExtended Producer responsibility	
3.	Precautionary Principle	 Shift of the Burden of proof Threat to the desired level of protection Scientific uncertainty Evidence 	
4.	Equity Principle	Inter-generational equity	
5.	Human Rights Principles	 Equality, participation, interdependency, transparency Conflicting rights 	
6.	Participation Principle	Right to knowPublic participation in decisions	
7.	Economic mechanisms	 Cost Benefit Analysis Willingness to pay Offsets Trading Incentives 	

Sustainability principles in South African primary legislation

- 1. National Water Act 36 of 1998
- 2. National Forests Act 84 of 1998
- 3. Mineral and Petroleum Resources Development Act 28 of 2002
- 4. Conservation of Agricultural Resources Act 43 of 1983
- 5. Leadership and Governance Framework Act 41 of 2003
- 6. Local Government Municipal Systems Act 32 of 2000
- 7. Development Facilitation Act 67 OF 1995
- 8. Tourism Act 72 of 1993

Local government:

Local Government Municipal Systems Act 32 of 2000

To provide for the core principles, mechanisms and processes that are necessary to enable municipalities to move progressively towards the social and economic upliftment of local communities, and ensure universal access to essential services that are affordable to all; to define the legal nature of a municipality as including the local community within the municipal area, working in partnership with the municipality's political and administrative structures; to provide for the manner in which municipal powers and functions are exercised and performed; to provide for

Section 1 'development' means amongst others sustainable development and includes integrated social, economic, environmental, spatial, infrastructural, institutional, organisational and human resources upliftment of a community aimed at:

- (a) improving the quality of life of its members with specific reference to the poor and other disadvantaged sections of the community; and
- (b) ensuring that development serves present and future generations

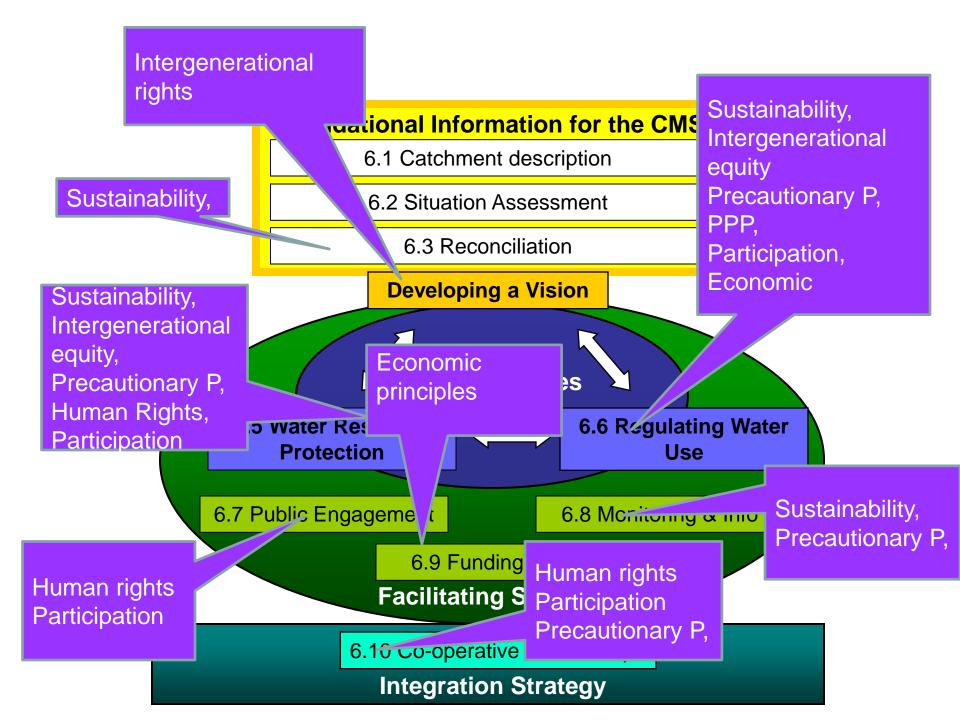
Section 1 'environmentally sustainable', in relation to the provision of a municipal service, means the provision of a municipal service in a manner aimed at ensuring that:

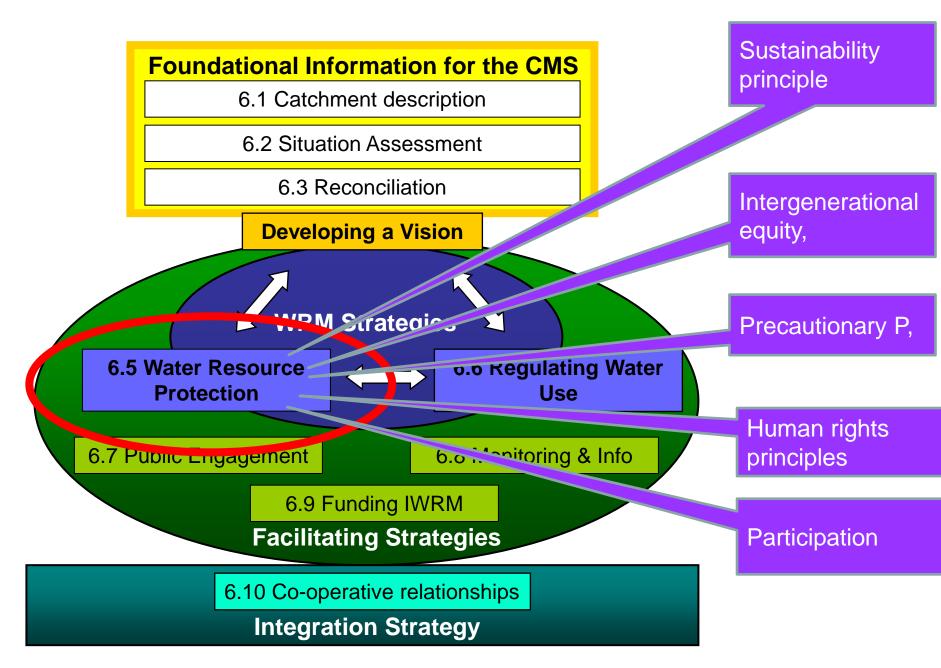
Adopts an integrated view of sustainable development However, environmental is separate to spatial

Recognises the principle of intergenerational rights

Risk and benefits discourse Recognises that human health and environmental health are linked

Clear distinction between environmentally sustainable and financial sustainability!





Intergenerational equity,



Vision

Classification

The Reserve

Vision

Licensing

Sustainability principle

Limits to growth
Ecological footprint
Sustainable development
Carrying capacity

Reconciliation

Classification

Licensing

Compulsory licensing

Resource quality objectives

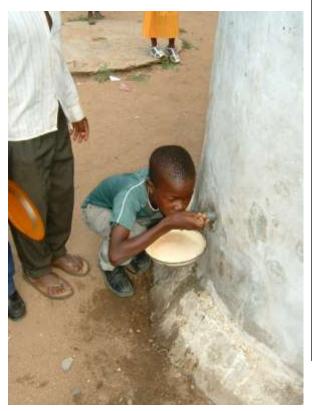
Precautionary Principle

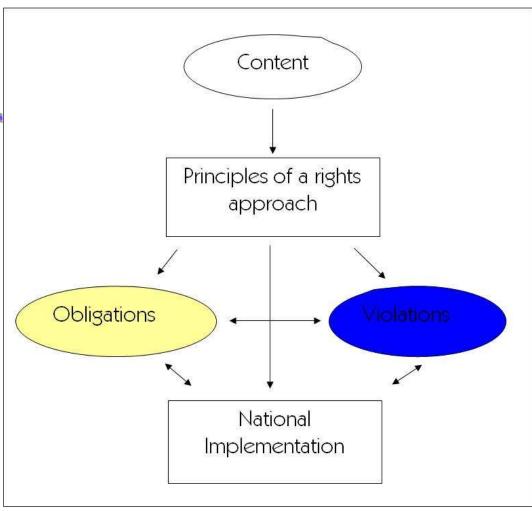
Shift of the Burden of proof Threats to the desired level of protection Scientific uncertainty Evidence

Table 4: Management classes for water resources

Management Class Descriptions				
Class I	Water resource is one which is minimally used and the overall condition of that water resource is minimally altered from its pre-development condition			
Class II	Moderately used Water resource is one which is moderately used and the overall condition of that water resource is moderately altered from its pre-development condition			
Class III	Heavily used Water resource is one which is heavily used and the overall condition of that water resource is significantly altered from its pre-development condition			

Human rights principles





Obligations					
Negative	Positive				
Respect	Protect	Fulfil			
The State shall NOT	The State SHALL				
(Examples only)	(Examples only)	(Examples only)			
Support actions that negatively affect people's ability to access basic water	Enact legislation against water pollution	Facilitate the participatory development of a national water strategy			
Increase one groups access to basic water at the expense of another group's access to basic water	Fight crime to ensure the safety of people accessing water	Ensure that information needed for good water management and use is easily accessible			
Develop legislation that works against people's water rights	 Ensure that water plans and practices are ecologically and socially sustainable 	Support, encourage and facilitate the improvement of rural water infrastructure			

Participation



Visioning

Resource protection

Water allocations

Monitoring

Co-operative gov

Do we need to audit ourselves for sustainability?

Against what?

Challenges for water management

- Application of principles in practice
- Allocation of duties
- Co-ordination of duties
- Monitoring and compliance
- Enforcement and reporting
- Adaptive management
- Flexible standards
- Reasonableness
- Future-focused

Legal implications?

- Application of principles vs application of sections of the law?
- Integrated sustainability discourse new?
- Conflict with other discourses
- Obligation and liability
- Intergenerational equity

We all want to use the river....

