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Capacity Building Challenges in the Water Sector: Water Planning & Implementation

by
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Where we are (1) and where we are heading to (2)

(1)

•Environmental Outlook 2006:

- high levels of societal inequality,
- overall deterioration of South Africa's water resources is significant and on-going,
- significant mismanagement of water resources overall.

•River Health:

- Untreated or poorly treated wastewater is severely affecting the quality of water in many areas.
- Most of the economically available yield from surface water resources over large parts of the country has been fully developed and utilised.

(2)

•NWRS 2:

- “The most important consideration in all themes discussed is that water is scarce and it requires careful management to enable provision of basic water services and equitable allocation, while meeting the needs of inclusive economic growth without threatening the integrity of aquatic ecosystems.”

•NDP

- Increase employment from 13 million in 2010 to 24 million in 2030.
- Ensure that all South Africans have access to clean running water in their homes.

Global Change in Southern Africa (Ngcobo *et al.*, 2013)

- Change dynamics are high throughout southern Africa's catchments.
- Global change drivers reflect in local change and partially vice versa. Thus it is important to consider “global change as a catalyst of local change and a trigger of local environmental and socio-economic pressures.”
- “Global change drivers which include climate change, land-use change, population growth and economic development are all coupled and interrelated anthropic-forms of change and they need to be treated as such.”
- “It is concluded that the development of context specific technologies, management approaches and policies which can be applied in an integrated and adaptive management framework are an imperative to the development of the region.”

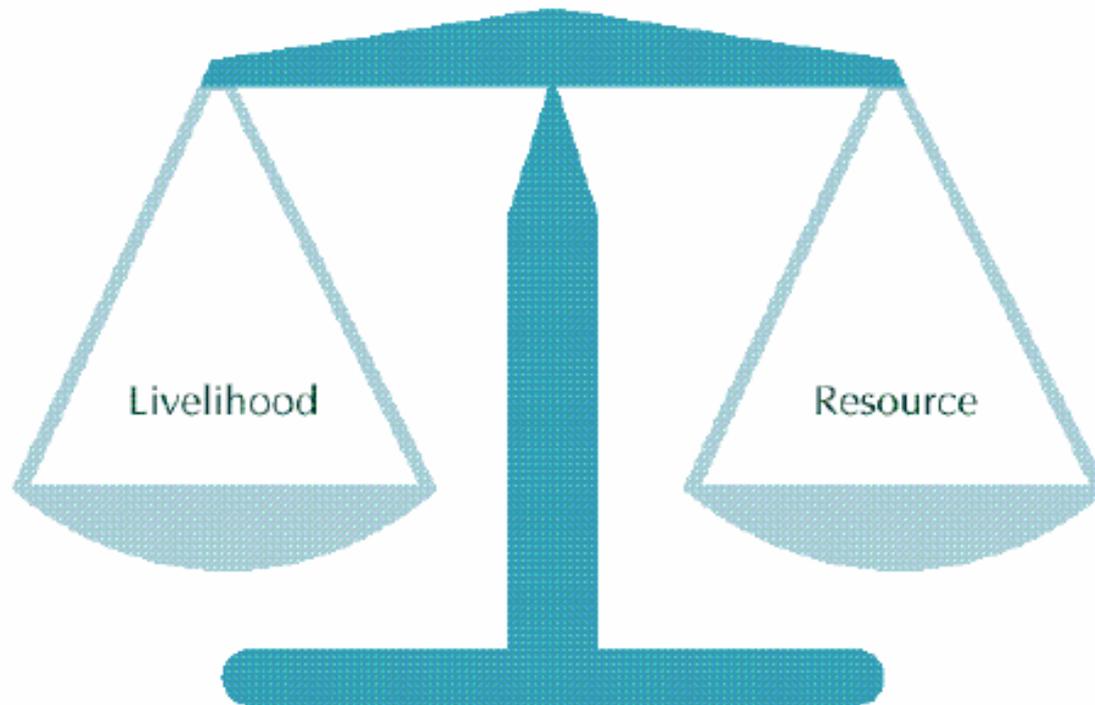
What do we need in order to deal with such change?

“A common understanding of the respective catchments, learning collectively about existing vulnerabilities and so-called hotspots, as well as gaining a better understanding of the projected impacts of change on the catchment areas.”

Stuart-Hill, 2015

The challenge ahead for water resources management

To strike a balance between the use of the resources as a basis for the livelihood of the world's increasing population and the protection and conservation of the resource to sustain its functions and characteristics.



Implications of the WHITE PAPER

The Three Waters and the Resource Management Act

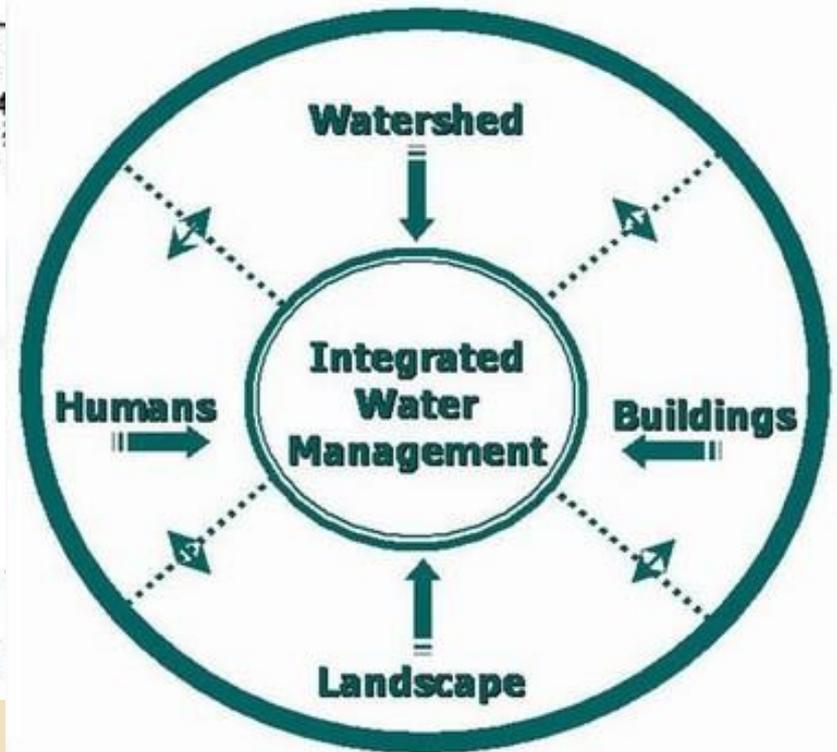
“Amongst the many things I learnt, as a president of our country, was the centrality of water in the social, political and economic affairs of the country, continent and indeed the world.”



Nelson Mandela

World Summit for Sustainable Development,
Johannesburg, 28 August 2002

Presentation by Joel Cayford –
Studio 4 – Planning



A Rapid Assessment

Scales	National	CMA / Province	Local
Tools	<ul style="list-style-type: none"> • NWRS • Licences • Reserve • Development • Climate Change 	<ul style="list-style-type: none"> • CMS • Development • Climate Change 	<ul style="list-style-type: none"> • Infrastructure • Development • Climate Change
Knowledge	Technical, Economic, Project Management, CONTEXT (e.g. district, province, RSA, SADC)		
Skills Focus	<ul style="list-style-type: none"> • Data and Modelling • Communication • Organisational Development and Change 	<ul style="list-style-type: none"> • Modelling • Negotiations • Facilitating • Learning 	<ul style="list-style-type: none"> • Engineering • Enforcement / Compliance

Dimensions of Learning

- “The above calls for a sound understanding of the overall water related system (in this instance the hydrological cycle and its interdependencies with other spheres – physical and anthropogenic), for a constant uptake of new information into decision-making processes (Vogel and O’Brien, 2006) as well as for the flexibility to change and be responsive to change (Olsson et al., 2006; Pollard and du Toit, 2011) when learning from respective outcomes.” (Stuart-Hill, 2015)
- Here the three levels of capacity-building as identified in the framework of UNFCCC and discussed by Ogallo (2010) will have to be reflected upon:
 - a) The systemic level, which includes economic and regulatory policies as well as the accountability frameworks in which institutions and individuals operate;
 - b) The organisational level, which includes organisations and institutions, the latter including the respective organisations’ missions, mandates, cultures, structures, competencies, and human and financial resources; and last, but not least,
 - c) The individual who is operating and making decisions within this environment.

Essential Mechanisms

- dialogue and coordination (Rogers *et al.*, 2000; MacKay *et al.*, 2003; TEC GWP, 2004; Vogel *et al.*, 2007)
- cooperation, leadership and learning (Folke *et al.*, 2005; Olsson *et al.*, 2006; Termeer, 2009; Taylor *et al.*, 2011)
- learning, reflexivity and adaptation into the centre of implementation (Colvin *et al.*, 2008)
- learning and particularly feedbacks will be crucial to management and implementation under the challenges of change (Pollard and du Toit, 2011; Never, 2012)

Additionally, relevant participation by stakeholders and the public, and collaboration within and outside the water sector can enhance learning and performance (Folke *et al.*, 2005; Pahl-Wostl *et al.*, 2007; Newig and Fritsch, 2009)!

Capacity Building Offered (1) and Opportunities (2)

(1)

- EWSETA
- The Water Academy
- Learning Academy by DWS
- Rand Water Academy
- WISA



**a domination of
engineering (partially
economic) knowledge**

(2)

- Short courses
- Research lead Honours Degree
- WaterNet?



**incorporate new
knowledge and skills
as identified**

ANYONE WHO
SAYS THEY ARE NOT
INTERESTED IN POLITICS
IS LIKE A DROWNING MAN
WHO INSISTS HE IS NOT
INTERESTED IN WATER.

MAHATMA GANDHI

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