

Focus on CSIR Research in Water Resources

Water Resource Governance Systems

CSIR research in Water Resource Governance Systems focuses on areas of policy, governance, water resource planning and management and social-ecological systems. The objective is to ensure the equitable, efficient and sustainable deployment of water resources to support socio-economic development.

Good governance as a human right

The Bill of Rights of the Constitution identifies equity as the strongest driver, but importantly also lays the first foundation for environmental rights in South Africa. Three stipulations in the Constitution (Act 108 of 1996) are specifically applicable to the governance field, namely:

1. Section 24 - A safe and sustainable environment is a fundamental right;
2. Section 27 - Access to food and water is a fundamental right, and;
3. Sections 40 and 41 - Co-operative government is mandatory.

To give substance to specifically Sections 24 and 27 of the Constitution, the National Environment Management Act (NEMA) and National Water Act (NWA) were promulgated in 1998. NEMA makes sustainable development, historic redress and the provision of basic needs statutory requirements. Chapter three of NEMA specifically mentions co-operative environmental governance.

The new model of government is one of decentralised decision-making specifically designed to promote democracy via a process of participatory decision-making. This has

changed the way that government, industry and society interact. These changes further catapulted the country and water management into an era of rethinking how things should get done; and what actions need to be taken to get there. This new thinking should advocate a major change in perception and culture – a change required to meet the objectives of sustainable development, poverty eradication and the general improvement of the quality of life for all citizens.

Challenge

These policies now need to be made operational. The challenge lies in translating new policies into new operational practices and then to implement the new practices. Furthermore, this process requires a better understanding of the term “governance”.

Governance as a Triologue: Government-Society-Science in Transition

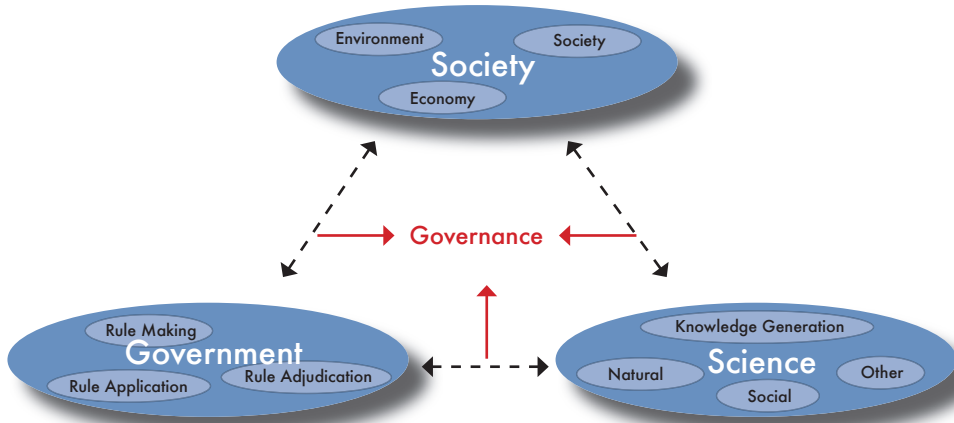
Water governance issues have recently received particular attention, for example in relation to the provision of reliable water supplies as a catalyst for poverty eradication. The issues were highlighted by the Global Water Partnership, when it declared that the water crisis facing the world is in reality a crisis of governance. The CSIR's 'Triologue' hypothesis for ecosystem governance was interrogated by an international specialists group at the International Symposium on Ecosystem Governance in 2005.

The Triologue hypothesis was based on research conducted by the CSIR and concluded that successful governance depends on six elements.



First, governance requires the existence of an effective:

- Science process
- Government process
- Society process



Water governance is the process of informed decision-making that enables trade-offs between competing users of a given resource so as to balance protection with beneficial use in such a way as to mitigate conflict, enhance equity, ensure sustainability and hold officials accountable (Turton et al, 2007b).

Secondly, governance requires effective interfaces between the three processes, namely:

- An interface between society and science,
- An interface between government and society
- An interface between government and science

These interfaces have to be appropriately balanced and available in the right format, at the right time, in order to ensure 'good' governance.

The Outcome

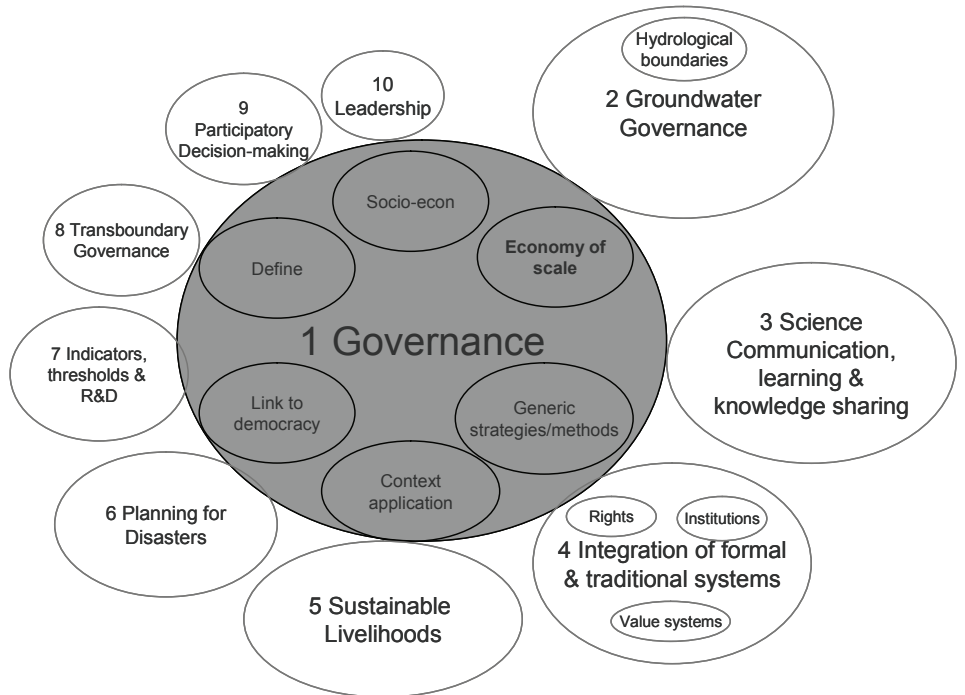
In testing the science-government-society hypothesis, the CSIR hosted the International symposium on ecosystem governance in October 2005. Delegates attending this symposium, from national, regional and internationally recognised governance bodies, were required to interrogate the Triologue Model and its supporting hypothesis. The feedback from this exercise confirmed the Triologue Model as a good conceptual model to use for further research.

It also prompted a proposal requiring a series of high level research programmes for ecosystem governance. These are illustrated in the figure below. The size of the individual circles indicates the priority attributed to the specific research theme by the symposium participants.

Thirdly, a revised definition for water governance was conceptualised through this process:

A Springer-Verlag book: Governance as a Triologue: Government-Society-Science in Transition. (Turton et al. (eds.)), was also published during the testing process.

The CSIR has developed a Framework to guide research in Water Resource Governance. Each of the Required Research Programmes is essential to the attainment of a Desired Research Outcome.



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