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The WRC operates in terms of the Water Research Act (Act 34 of 1971) and its mandate is to support water research and development as well as the building of a sustainable water research capacity in South Africa.

Building an adaptive and stakeholder-centred CMA

A completed Water Research Commission (WRC) study worked to evolve the Inkomati/Usuthu catchment management agency into a more adaptive and stakeholder-oriented institution.

Background

The South African National Water Act emphasises the need for the integrated management of all aspects of water resources in ways that enable everyone to participate in an integrated and adaptive manner. This demands a major shift in thinking and acting from the old bureaucratic and technological approach to water management to a more integrated approach.

Although integrated water resource management (IWRM) is rich in concept, it lacks any clear implementation framework. This study looked into the practices in natural resource management for such a framework, also including the social systems in which they are embedded.

Adaptive management is widely accepted as the primary tool for the management of social-ecological systems. Adaptive management differs from traditional management approaches in that it recognises the inevitability of unexpected change and surprises and encourages management activities to proceed despite the resultant uncertainty.

Strategic adaptive management (SAM) is a local derivative of adaptive management. It is a system for participatory planning, decision-making and review in complex social-ecological systems. In this project, academics from the Centre for Water in the Environment at the University of the Witwatersrand worked with staff of the Inkomati-Usuthu Catchment Management Agency (IUCMA) to advance the understanding and practice of SAM as a framework for IWRM.

The project was based on three primary sets of activities:

- Fostering a culture of structured learning within the IUCMA;

- Multiple use of the adaptive planning process of SAM under a range of contexts at different scales to test its robustness;
- Fostering a culture of sharing of knowledge about, and experiences with, SAM-based IWRM for CMAs.

Motivation for the project

This project built on a previous WRC project completed in 2010.

In South Africa society is working in the face of revolutionary new legislation which requires profound transformation in decision behaviour and completely new, unprecedented institutions. Public engagement activities face wide gulfs in social circumstances, in education and in language, in expectations of a better future on one hand and in fears of losing identity and past privilege on the other.

These stakeholder disparities demand extraordinary focus on issues of equity and the potential for conflict, especially in areas of public engagement required by a new democratic Constitution. It is imperative that techniques of public engagement are developed and used with the requisite simplicity to level the playing field.

In 2009, the IUCMA staff had been struggling for two years in this unchartered environment to build an institution for IWRM. They were bogged down and demoralised in policy-based bureaucracy, and too many people outside the organisation trying to 'help' by each suggesting what they thought needed to be done. Despite this, it was clear that the research team were working with highly dedicated people.

In a very general sense the project's purpose was to bring new ways of thinking and doing to the IUCMA and their

stakeholders when and where they might be useful. The medium for creating an enabling environment for developing this thinking was SAM.

The new ways of thinking are summarised in Figure 1, which has become known as the 'yellow brick road'.

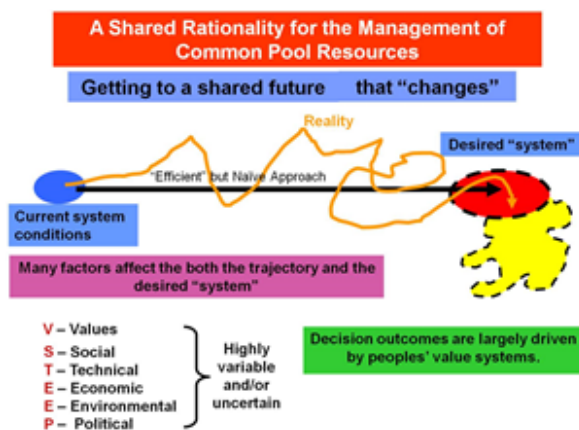


Figure 1. The 'yellow brick road'.

Travelling on the yellow brick road

The primary elements of the new thinking include the acknowledgement that management is dealing with a common pool resources and thus needs to move towards a future designed and shared by all stakeholders. IWRM takes place in an environment full of uncertainties which will cause delay, redirection and rethinking (wiggly yellow line) about the future that can be achieved; hence the need for adaptive management.

Many STEEPP (social, technical, economic, environmental, political and practice) factors affect a journey along the yellow brick road and finally **all** decisions are strongly influenced by people's value systems. This means developing a shared value set is critical to decision-making about common pool resources.

An effective process of engaging stakeholders that minimise conflict and maximises cooperation is absolutely critical to effective IWRM. Unfortunately the processes generally recommended and used in this country have flaws. Together, the research team and IUCMA staff wrote a guide to facilitating stakeholder engagement that was based on five key principles:

- Never do a DAD (decide, announce, defend). Always do a ALIDA (ask, listen, integrate, decide, act)
- Always built a systems (V-STEEPP) perspective/context

with all stakeholders.

- Collect everyone's input/perspective, emphasising that all are equally legitimate.
- Develop and use shared values to guide direction and decision-making.
- Seek consensus (win/win) not compromise (lose/lose).

It is important to understand that the research team's mode of thinking and decision-making was the most critical aspect of their approach to the project. This dictated how the project team and the IUCMA staff conducted all activities and was central to the project's success.

These activities were very simple ways of getting people to interact and learn new things. It was how they were carried out that defined the project and its outcomes. The ALIDA style of facilitation and interaction was a very important component of this 'how'.

The research team became involved in many different activities during the project. Most of these were agreed to and designed with IUCMA staff on a needs basis, but the foundation of action research was laid in three sets of activities that were carried out each year:

- Application, at different scales, of the adaptive planning process.
- Learning/unlearning workshops and assessment of learning.
- Knowledge sharing workshops and activities.

Building an adaptive and stakeholder-centred CMA

The task of the project team was to build up an adaptive and stakeholder-centred CMA for the Inkomati-Usuthu catchment; one that was durable and would carry the new thinking about water resource management and SAM through the trials and uncertainties of a future yellow brick road.

The final research report details the progress that has been made in adoption of the major components of SAM and areas of new thinking at different levels within the organisation.

The APP, and its outcomes, proved their usefulness many times across the range of scales from a division within the IUCMA, to institution itself and to the catchment. Major elements of both the catchment management strategy (CMS) and IUCMA planning processes that this project facilitated have proved durable through many challenges, over many years.

Post-APP, repeated formal learning and reflection, and development of an adaptive decision framework, are probably the most important subsequent steps in SAM.

Although there was limited progress to these steps they have been established for river operations, which is a critical aspect of IWRM. The authors hope that this provides enough of an example for other sectors of the IUCMA and other CMAs to move in this direction.

Conclusions from the study

Feedback from formal and informal learning opportunities have shown the IUCMA developing a deep understanding of IWRM as a complex V-STEEPP process, and learning to apply this understanding to IWRM practice.

Although complexity is a difficult paradigm to formally come to grips with, the concept and diagram of the yellow brick road has appealed to people across the IWRM spectrum, both within the Inkomati catchment and beyond.

Feedback from staff about the change from DAD to ALIDA approaches to stakeholder engagement clearly shows the acceptance and sincere, persistent application of ALIDA, which will hopefully be adopted as strongly by other CMAs and government agencies across the board. South Africa certainly needs a complete revolution in its public participation processes if it is to deepen democratic behaviour in government and across society.

Perhaps the most promising signs of the IUCMA taking up the new thinking and SAM has been that in the last few months many staff, especially senior members, have begun to critique their own progress and the likely challenges to further advances in adaptive and stakeholder centred IWRM.

The issue at the end of the project is: whether the new thinking and SAM are now sufficiently embedded in the IUCMA for them to continue to dominate decision-making well into the future? Time will tell!

Processes of knowledge sharing have highlighted that the IUCMA is a leader regionally, nationally, and internationally.

Recommendations

The process of building an adaptive and stakeholder centred IUCMA has had strong beginnings but there is a way to go yet. Specific recommendations that arise from the project are:

- In general the IUCMA needs to take SAM beyond adaptive planning and build adaptive decision frameworks for more divisions, the management committee (MANCO) and the government Board.
- The institutions and public participation division has made huge strides in adopting and ALIDA approach to stakeholder engagement but they need two advances
 - Firstly, they need to develop formal guidelines for stakeholder engagement that they can embed across the division and can convey to the rest of the IUCMA and to new CMAs
 - Secondly, they need to develop an overall framework for planning and decision-making within the division that will broaden and more effectively embed the new thinking within their ranks.
- The resource protection and waste division used adaptive planning to develop a strategic plan of their own. The key now is to ensure that it is internalised and used by all their staff, and that processes of monitoring, reflecting and learning are developed.
- Many official documents of the IUCMA claim that they practice SAM. Although great strides have been made this runs the risk of becoming an empty statement unless the practical requirements of SAM are explicitly accepted and promoted at the highest levels of senior staff and MANCO.
- Similarly, MANCO and the government Board need to develop clear and effective means of expounding the IUCMA's SAM approach to IWRM to government and other stakeholders.
- There is an urgent need for the appointment of SAM/ new thinking champions, and for regular formal learning opportunities to be embedded in IUCMA practice at all levels.
- There is a similarly urgent need for champions of integration across IUCMA divisions and also between the IUCMA and the many other STEEPP institutions involved with water resources management in the catchment (i.e. for cooperative governance).

Further reading:

To obtain the report, *Building an adaptive and stakeholder-centred catchment management agency in the Inkomati/Usuthu river catchment* (WRC Report No: 2072/1/16) contact Publications at Tel: (012); Fax: (012) 761-9300 or Visit: www.wrc.org.za to download a free copy.