

Promoting transdisciplinarity in the Southern African Development Community's water sector

I JACOBS AND S NIENABER

CSIR Natural Resources and the Environment, PO Box 395, Pretoria, 0001, South Africa
Email: ijacobs@csir.co.za – www.csir.co.za

INTRODUCTION

Water Governance Challenges in SADC

- The Southern African Development Community (SADC) contains 21 international river basins to which one or more SADC Member States are riparian, which results in hydrologic linkages across national borders¹.
- Some of the most economically developed Southern African states have limited water resources, which may constrain future economic development².
- There are pronounced developmental differences in SADC. Thus some countries are more able to mobilise the necessary human, financial and technological resources to address water scarcity and related human welfare needs than others.
- Social challenges such as population growth, urbanisation, climate change, refugee movements, and diseases such as cholera, malaria, tuberculosis and Aids riddle the region.

All these issues will affect and be affected by the way in which water is managed. Thus "governance issues form the central obstruction to sound and equitable water sharing and management"³.

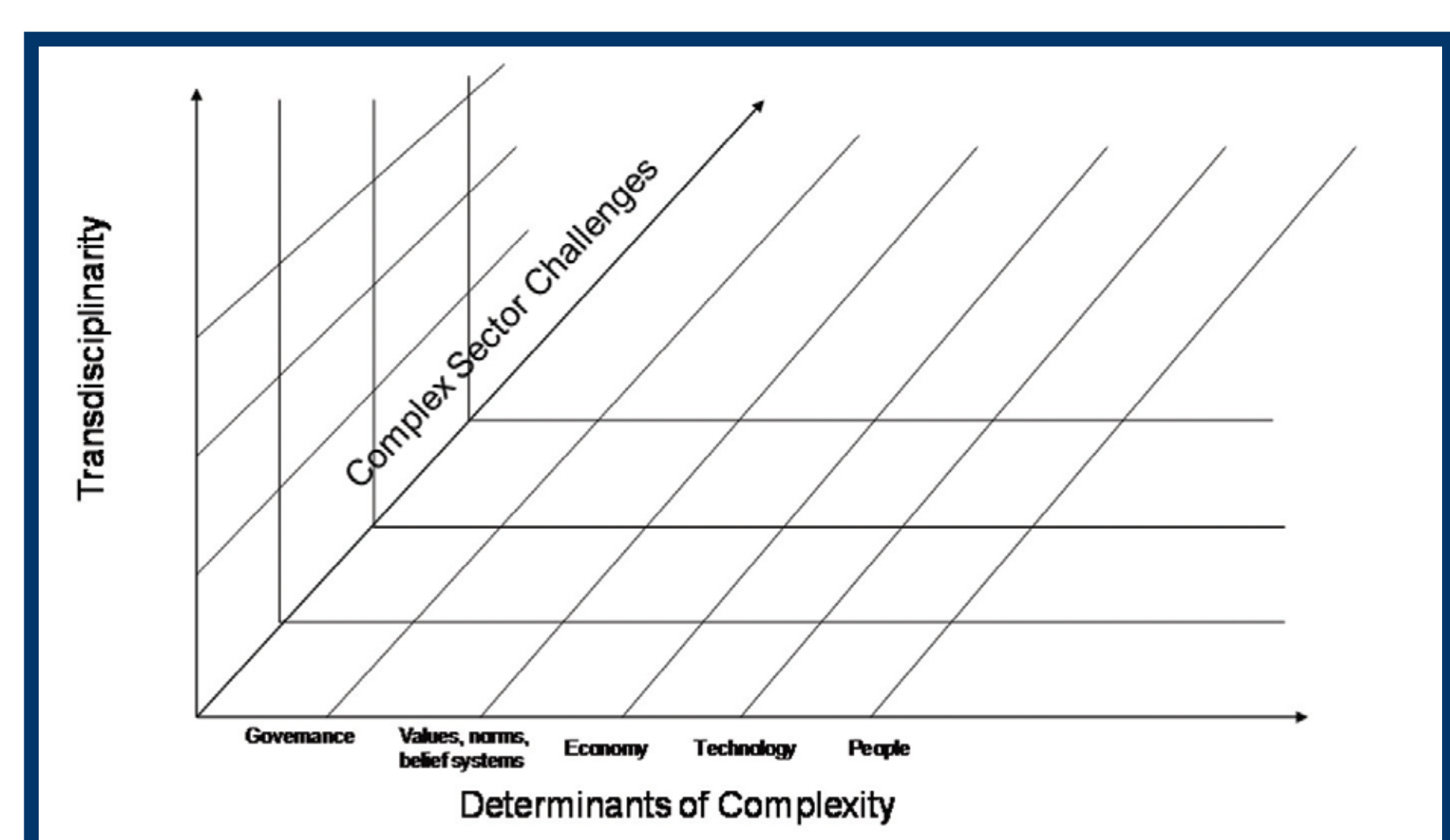


Figure 1: Shared river basins in southern Africa (red line demarcating SADC boundary)⁸

Responding to the water challenges in SADC

1. Traditionally the technical and scientific communities have been called on to respond to the concerns of the water sector.
2. Emerging challenges and complexities are demanding more integrated levels of ingenuity and expertise from a diverse set of backgrounds.
3. Socio-political relevance of technical solutions needs to be determined in order to achieve impact.
4. There is growing recognition of the need for transdisciplinary responses to the challenges facing the water sector.

Transdisciplinarity is therefore about rising to the challenge of working together in a time of complexity; understanding the concepts, contributions and language of different disciplines; and addressing sector challenges by integrating the perspectives of different actors into comprehensive solutions for the water sector.

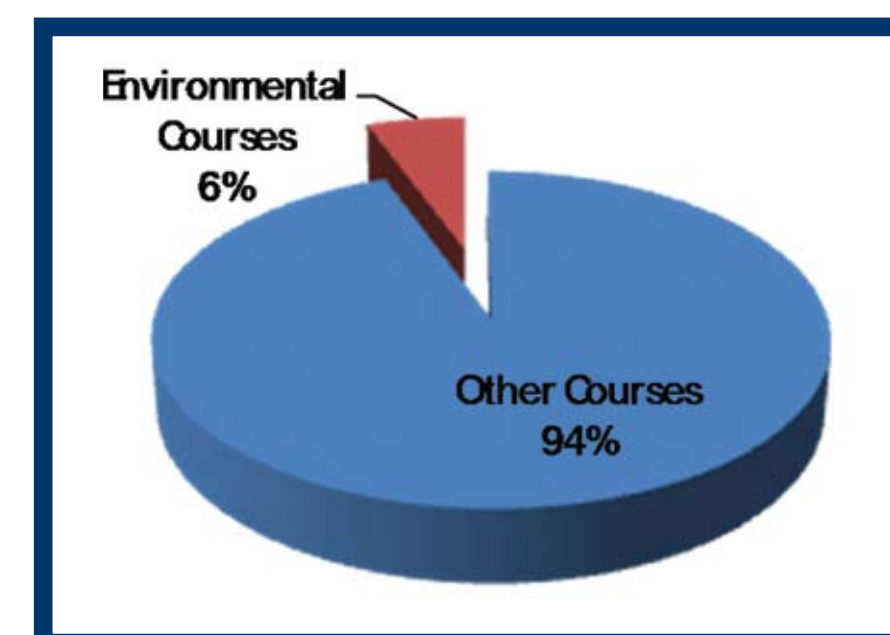


Graph 1: Illustration of the role of transdisciplinarity in addressing complexity and sector challenges

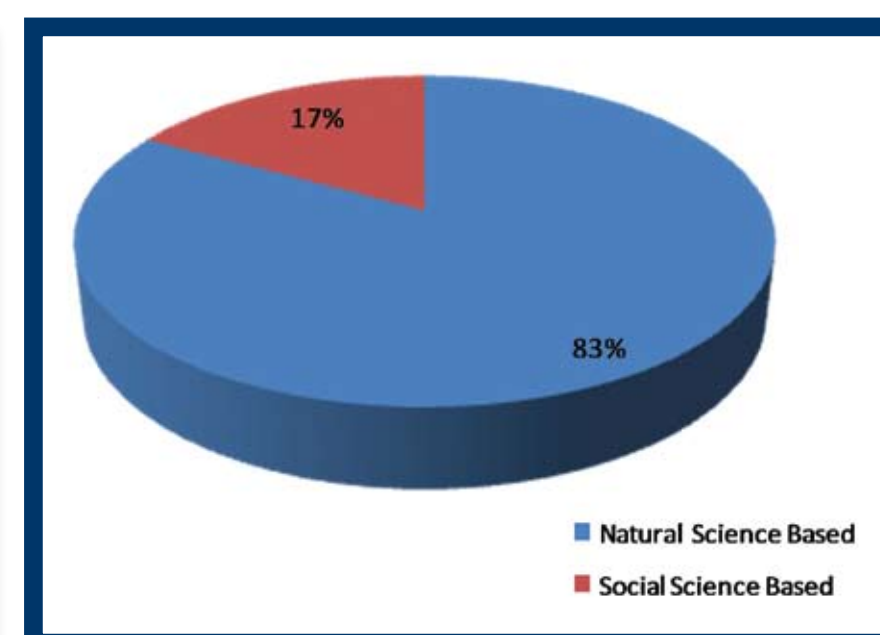
THE CHALLENGES HINDERING TRANSDISCIPLINARITY

Currently there are very few social scientists, equipped with skills, understanding, experience and passion for governance issues in the water sector. There are many possible reasons for this.

- Universities are not adequately equipping social scientists with the specific skills and language needed to grapple with environmental issues. **Graph 2** indicates the percentage of environmental courses offered in social science degrees (Political Science, International Relations, Sociology, Anthropology and Philosophy) in three major South African universities. The data was derived by reviewing the curriculum modules and content at undergraduate level for these universities⁴.

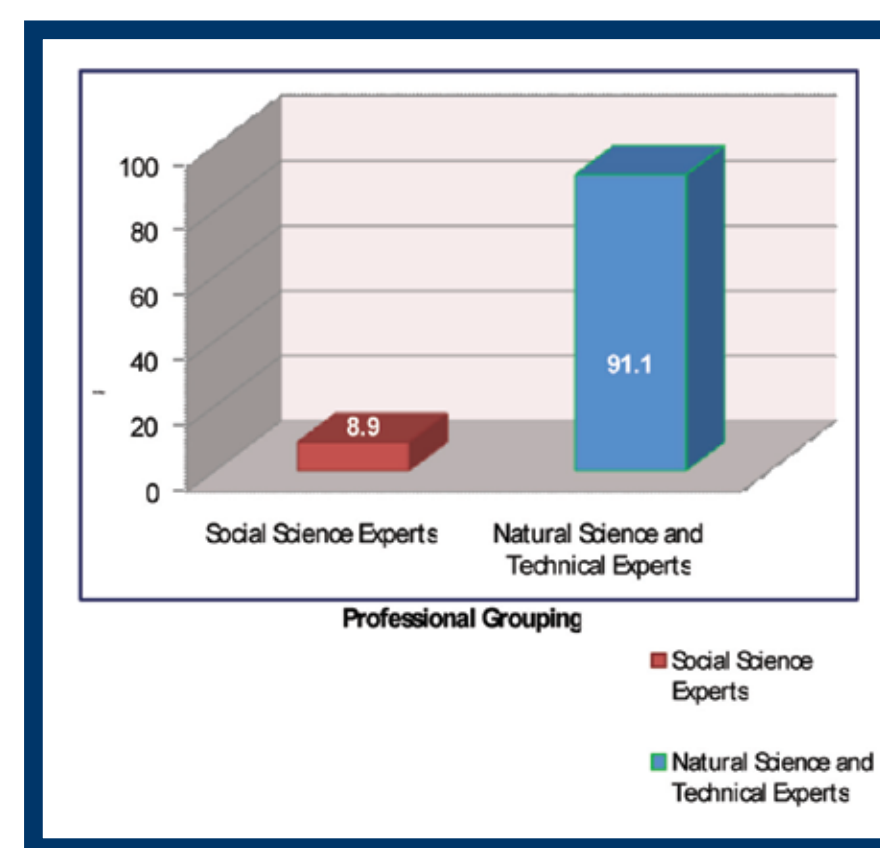


Graph 2: Percentage of environmental courses offered in social science degrees at 3 major South African universities



Graph 3: WRC Water Resource Management: Research Project Portfolio 2007/08

- Funding agendas tend to favour natural science methodology and thus tend to support less social science research. Of the 229 Water Research Commission's funded projects (as listed in the Research Project Portfolio for 2007/08), 83% were identified as natural science based (See **Graph 3**)⁵.



Graph 4: Representative sample of a grouping of natural science and technical versus social science professionals*

* Data pool: Natural Resources and Environment, CSIR, March 2009, Researchers only

- There is often an organisational bias favouring natural scientists and technical experts in scientific research organisations. This is tied to the (mis)perception that 'hard' science is more accurate and quantifiable than the 'soft' and often more qualitative science that social scientists specialise in.
- Scientists from different disciplines speak different languages, use and value different methodologies, at times mistrust each others' science, work on different timelines, have different personalities, and lack the ability to link theories and tools to integrate their work.

Why continue the fight for better integration?

Social scientists have unique expertise in cultural, behavioural and societal realities. This equips them with the skills to interpret subjective, objective, inter-subjective and structural aspects of a society. This aids understanding of the social developments, needs and drawbacks of a context.

Social science has a familiarity with social and institutional capacity building mechanisms and thus can offer critical support to the bodies and individuals that are mandated to manage water in the region.⁷

A primary goal of social science is to influence public policy by generating practical knowledge that can help policy makers make informed decisions, and in so doing, help to foster more effective policy and governance options.⁷

Social science research strives to produce findings that can support or improve the livelihoods of individuals, households and communities.⁷ This can be done, for example, by considering the effects on the productivity of households, governments and the private sector.

Transdisciplinary work helps to bridge divides and build understanding of the methodology, theories, paradigms and language of different disciplines. This facilitates the pooling (rather than dividing) of knowledge in the pursuit of finding solutions to complex problems.

RIISING TO THE CHALLENGE OF TRANSDISCIPLINARITY: QUO VADIS?

One possible way to assist in incentivising social science in the water sector and to facilitate sustainable knowledge transfer is through the:

Forum of Young Scholars (YSF) in Transboundary Water Governance in SADC

Aims:

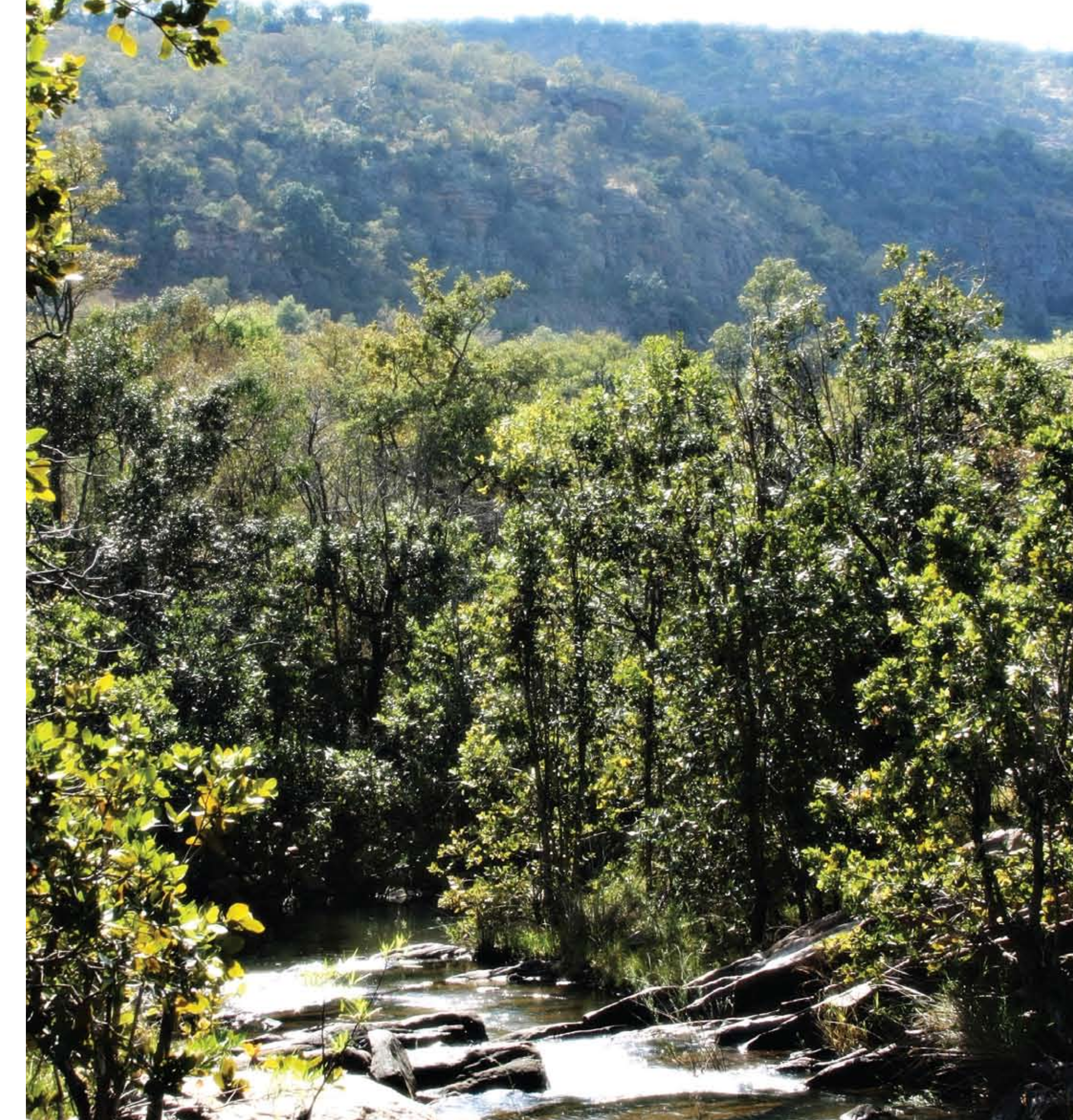
1. Build a community and network of young professionals, who have an interest in dealing with water issues from a social science perspective.
2. Create opportunities for younger and more experienced water professionals to interact and share knowledge.
3. Increase the social science literature output relating to water issues in SADC.

What's unique about this forum?

- It has a specific focus in that it looks at water in terms of its transboundary and governance dimensions in SADC.
- It is theme based allowing young professionals to develop their expertise in a focussed manner.

This forum is an ideal way of grooming, supporting, mentoring and encouraging young social scientists who are either in the water sector or considering it as a career option.

Creating a balance between natural and social science is critical to developing relevant and impactful solutions to the governance challenges facing the water sector.



The YSF annual symposium will be taking place from 29-30 November 2010 at the CSIR Knowledge Commons. The topic for the event is "Exploring transdisciplinarity to address change in the SADC Water Sector: Establishing the role of social scientists in this vision."

For more details about YSF or the symposium, please contact:
Shanna Nienaber: snienaber@csir.co.za
Inga Jacobs: ijacobs@csir.co.za



A YSF event held at the Water Institute of South Africa's Biennial Conference in 2010 exploring the challenges that young water professionals face when working in a trans-disciplinary manner

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