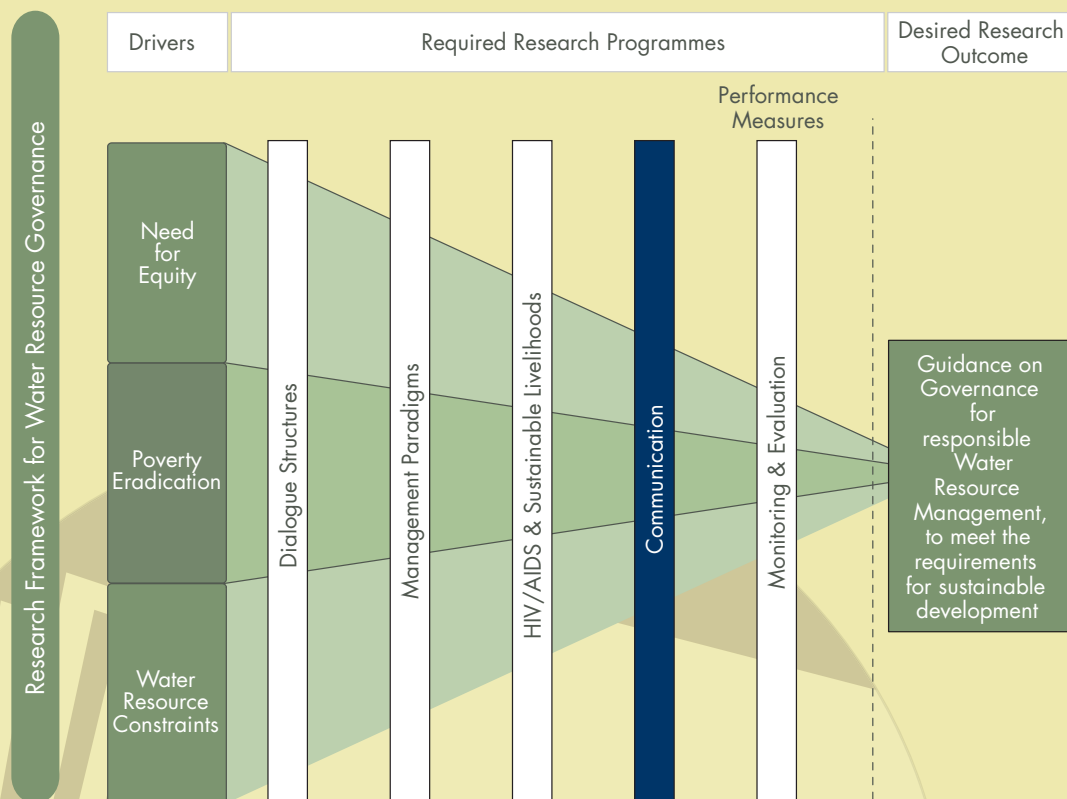




## Communication Research Programme

The **Communication Research Programme** focuses on the complexity of communicating science findings to decision-makers and other key stakeholders in support of the constitutional requirements of cooperative governance, equity and transparency. This builds on earlier published research carried out at the CSIR: Roux, D.J., Strydom, W.F. and Classen, M. 2001. *Effective Implementation of Policies, Services and Programmes in Natural Resource Management*. CSIR: Environmentek Report No ENV-P-I 2001-012; Strydom, et. al., 2003. *Science Communication for Natural Resources*. CSIR: Environmentek Report No ENV-P-I 2003-015; and Turton et. al., (eds.) 2007. *Governance as a Triologue: Government-Society-Science in Transition*. Berlin: Springer Verlag.



This Communication Research Programme consists of research projects that deal with the need for closer scrutiny of the communication processes between the government, science and society as defined by the Triologue Model. The research objective is addressed by focussing on the local, municipal, provincial, national and supra-national levels of scale.

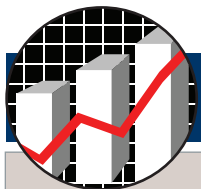
The Communication Research Programme is aligned with national priorities of environmental governance based on the equitable involvement of communities in the governance process. It is believed that a culture of learning, tolerance and cooperation can be fostered between groups (such as scientists and communities) that often stand at odds with one another.

The resourcing needs of the Communication Research Programme are framed around the scarcity of cross-disciplinary research expertise. Since the CSIR is primarily a natural science institution, the success of this research programme therefore depends on the professional networks created between institutions and across disciplines and sciences, both nationally and internationally.

The Communication Research Programme links up with the programmes of:

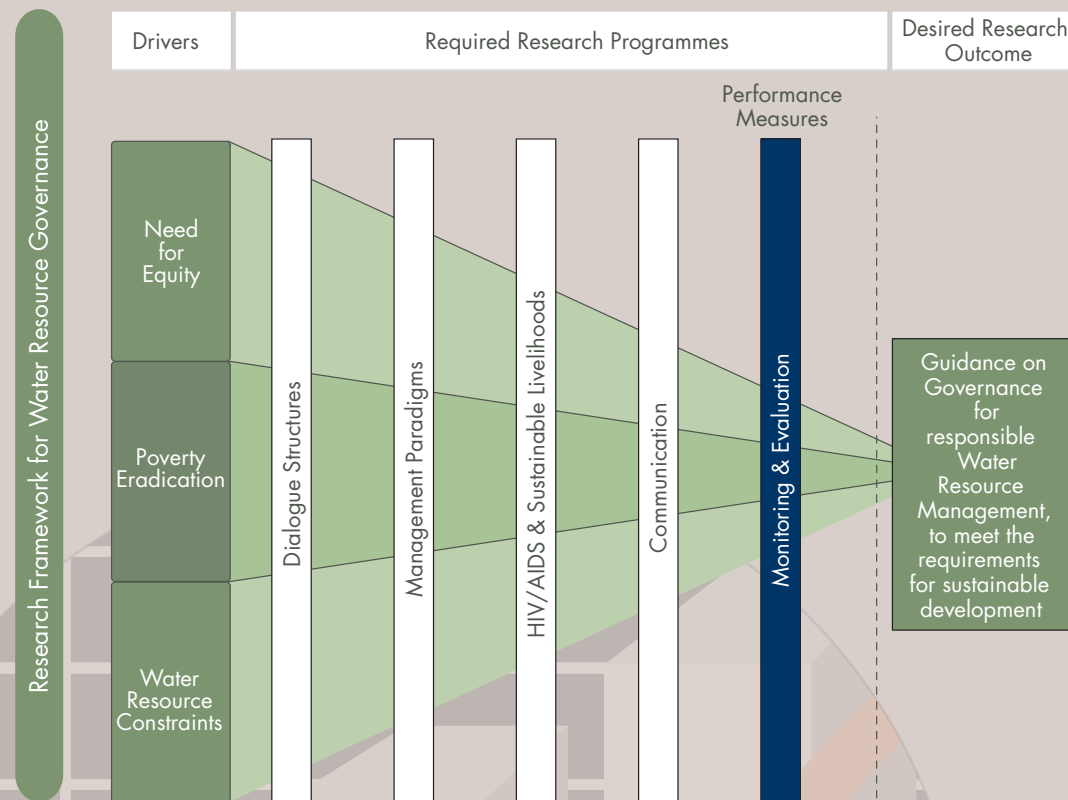
- Southern Science (SA);
- The Research and Communication Monitoring and Evaluation Group (UK based);
- Environmental Education, Awareness and Training Group - African Coelacanth Ecosystem Programme (SA);
- Science Development Network (SA); and
- South African Agency for Science and Technology Advancement (SAASTA).

For more information on the **Communication Research Programme**, contact:  
Ms. Karen Nortje at: knortje@csir.co.za; tel: +27 12 841 4354; fax: +27 12 841-3954.



## Performance Measures Research Programme

The **Performance Measures Research Programme** concentrates on the processes of monitoring and evaluation that are necessary in order to provide feedback on the effectiveness of the components in the overall Water Resource Governance Framework in meeting the desired Research Outcome. This builds on work already begun in the CSIR and published as Ashton P.J., 2007. *The role of good governance in sustainable development: Implications for integrated water resource management in southern Africa*, in Turton et. al., (eds.) 2007. *Governance as a Triologue: Government-Society-Science in Transition*. Berlin: Springer Verlag.



The objective of the Performance Measures Research Programme is to develop a set of practical, governance-related sustainability indicators that will provide current and future generations with a detailed picture of how water resources are being, and have been, managed.

The Performance Measures Research Programme is aligned with national priorities because it interrogates the degree to which the five governance principles, namely: openness, participation, accountability, effectiveness and coherence, are explicit in decision-making processes relating to water resource management. It is also closely aligned to current South African policy relating to water quality management, which defines six enabling principles of sustainable development: protection of water resources, optimal water use, equity between generations, current equitable access, environmental integration, and good governance.

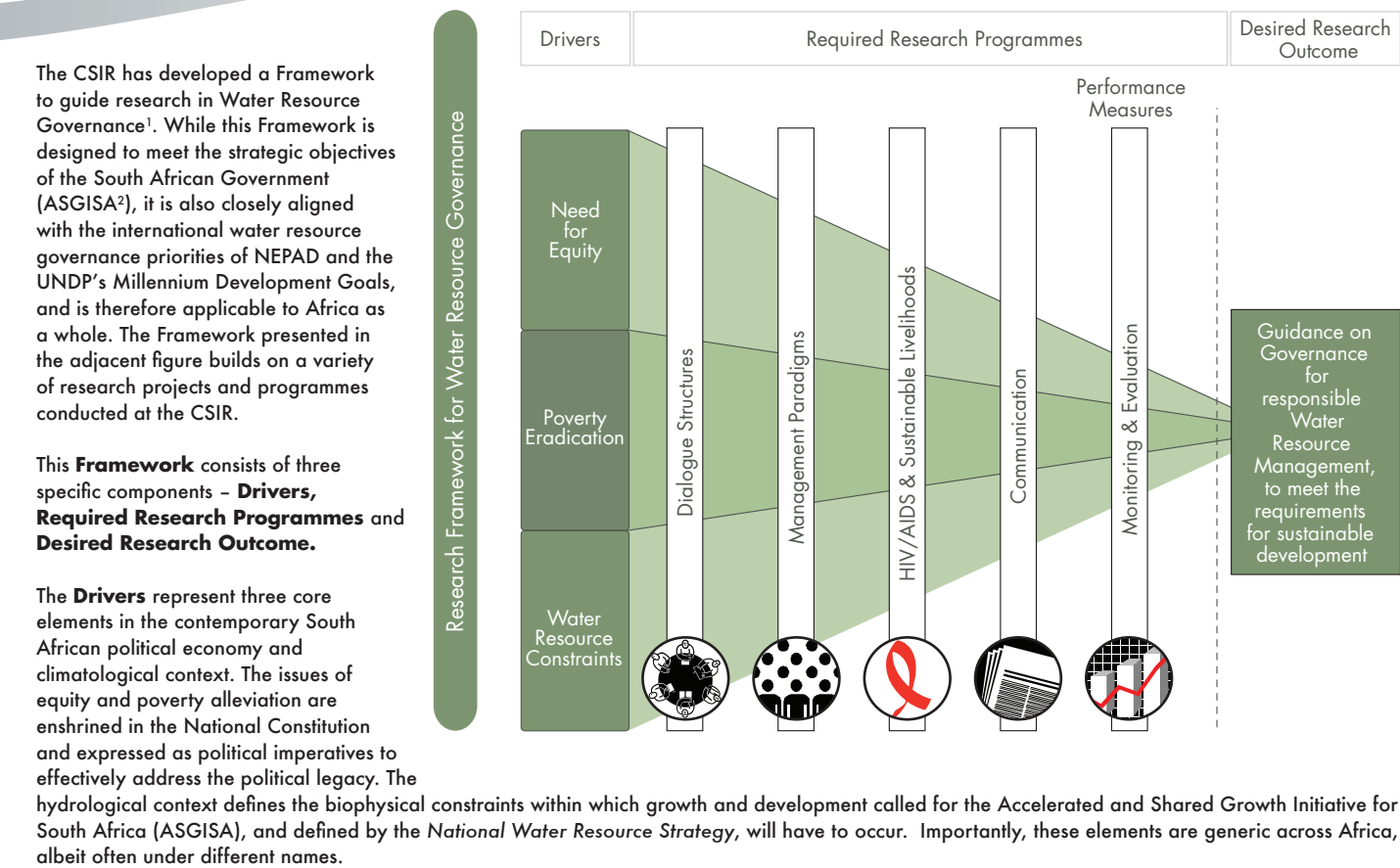
Research Funding is currently being targeted from within the CSIR. Research and co-funding partners are sought in order to achieve the overall programme objectives and to build new capacity in this field.

The Performance Measures Research Programme links up with the programmes of the:

- Stockholm International Water Institute (SIWI);
- International Water Resources Association (IWRA); and
- Third World Centre for Water Management.

For more information on the **Performance Measures Research Programme**, contact:  
Dr. Kevin Murray at: kmurray@csir.co.za; tel: +27 12 841 4587; fax: +27 12 841 2506.

# Summary of the Water Resource Governance RESEARCH FRAMEWORK



The CSIR has developed a Framework to guide research in Water Resource Governance<sup>1</sup>. While this Framework is designed to meet the strategic objectives of the South African Government (ASGISA<sup>2</sup>), it is also closely aligned with the international water resource governance priorities of NEPAD and the UNDP's Millennium Development Goals, and is therefore applicable to Africa as a whole. The Framework presented in the adjacent figure builds on a variety of research projects and programmes conducted at the CSIR.

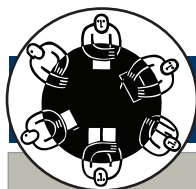
This **Framework** consists of three specific components - **Drivers**, **Required Research Programmes** and **Desired Research Outcome**.

The **Drivers** represent three core elements in the contemporary South African political economy and climatological context. The issues of equity and poverty alleviation are enshrined in the National Constitution and expressed as political imperatives to effectively address the political legacy. The hydrological context defines the biophysical constraints within which growth and development called for the Accelerated and Shared Growth Initiative for South Africa (ASGISA), and defined by the *National Water Resource Strategy*, will have to occur. Importantly, these elements are generic across Africa, albeit often under different names.

Each of the **Required Research Programmes** is essential to the attainment of the **Desired Research Outcome**. The *Communication and Dialogue Structures* programme contributes to a better understanding of communication and communication structures between stakeholder groups, and shows how improved participation by these groups can be focussed on equity, efficiency and sustainability in their access to, and use of, water resources. Closely linked to these two programmes are the *Management Paradigms*, which evaluates the use of IWRM as the preferred water management strategy in South Africa. The *HIV/AIDS and Sustainable Livelihoods* research programme focuses on the need for sustainable livelihoods to be created in the context of a large population where many people have compromised immune systems. The *Performance Measures*, namely monitoring and evaluation, are essential in order to give constructive feedback on the effectiveness of the various components in the overall Framework in meeting the Required Research Outcomes.

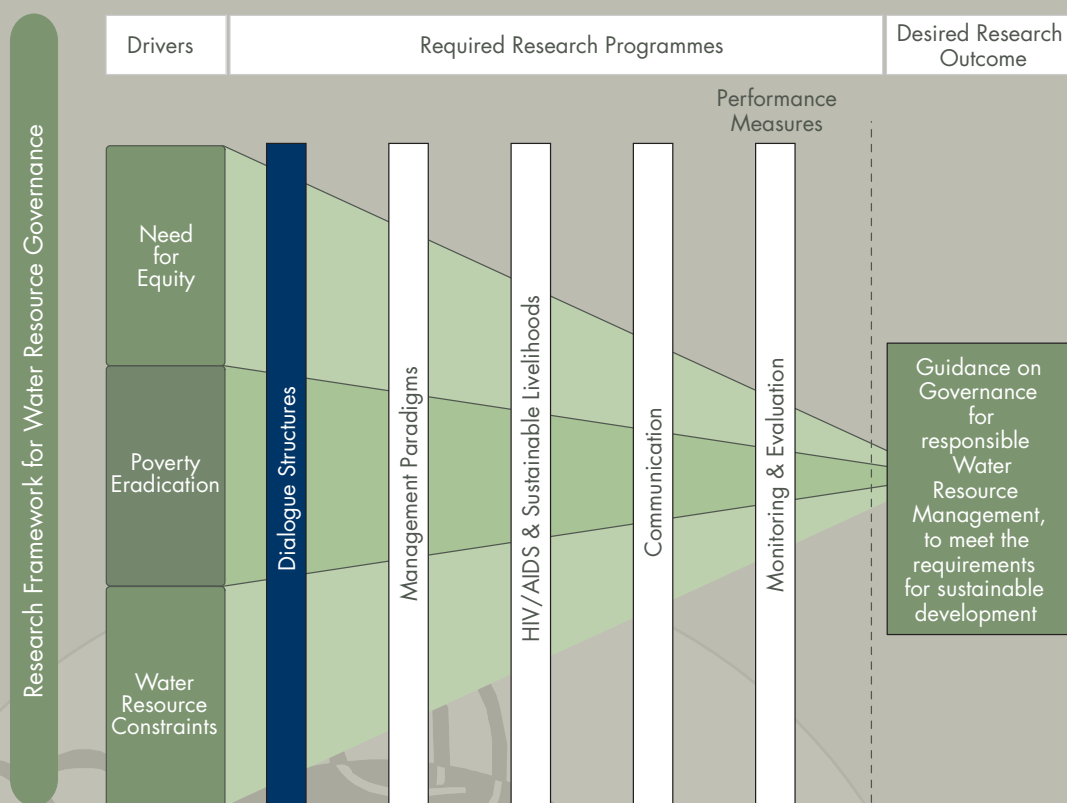
The **Desired Research Outcome** is a set of sustainable development strategies defined by the South African Constitution and articulated in an official document entitled ASGISA that is aligned with the water governance priorities of NEPAD and the UNDP.

1 Hattingh, H., Rascher, J. and Turton, A.R. 2007. *Research Framework for Water Resource Governance for Sustainable Development*. Pretoria: CSIR.  
2 ASGISA - A Strategic Framework for Sustainable Development in South Africa, otherwise known as the Accelerated and Shared Growth Initiative for South Africa



## Dialogue Structures Research Programme

The **Dialogue Structures Research Programme** will contribute to a better understanding of communication processes, norms, cultures and accountability mechanisms – aimed at strengthening shared understanding between stakeholder groups to ensure equity, efficiency and sustainability in access to, and use of, limited water resources.



The overall objective of the Dialogue Structures Research Programme is to launch a collaborative, expanded, action-research programme to address issues in water resource governance, with special emphasis on social learning and self-regulation. The programme will design and test a variety of concepts using case studies to gain a deeper understanding of institutional and inter-institutional dynamics, particularly at the local level, that underpin co-operative actions and equitable trade-offs in water resource allocation as intended by policy.

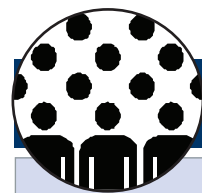
The Dialogue Structures Research Programme is aligned with national priorities and it interrogates the requirements for stakeholder interaction as a vehicle to deliver on the targets set by ASGISA, NEPAD, SADC and the Millennium Development Goals.

The resourcing needs of the Dialogue Structures Research Programme are currently being targeted from within the CSIR, the South African Department of Water Affairs and Forestry and the South African Water Research Commission. Research partners and co-funding partners are sought in order to achieve the programme objectives through collaborative learning among participating researchers with a shared interest in this field.

The Dialogue Structures Research Programme is aligned with the programmes of the

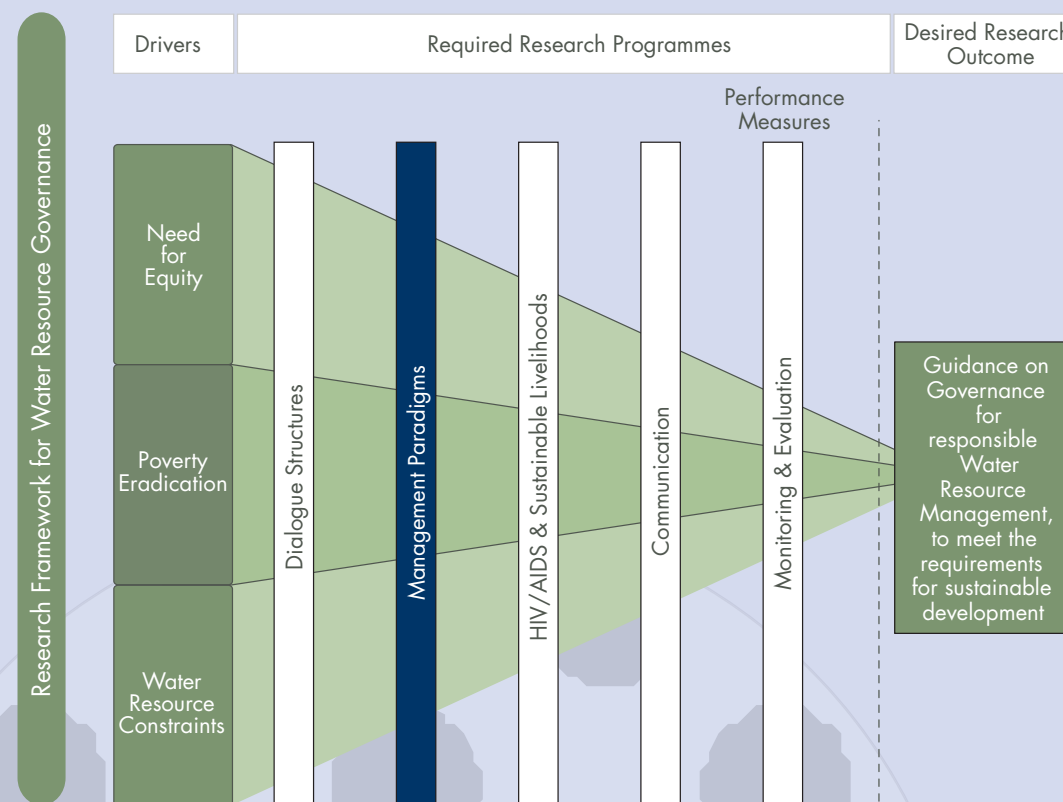
- South African Department of Water Affairs and Forestry;
- South African Water Research Commission;
- Stockholm International Water Institute (SIWI);
- International Water Resources Association (IWRA); and
- Third World Centre for Water Management.

For more information on the **Dialogue Structures Programme**, contact  
Ms Ernita van Wyk at: [evanwyk@csir.co.za](mailto:evanwyk@csir.co.za); tel: +27 12 841 3672; fax: +27 12 841 2689.



## Management Paradigms Research Programme

The **Management Paradigms Research Programme** focuses on the rationale and assumptions that underpin the Integrated Water Resource Management (IWRM) model that is accepted as the global norm. Central to this interrogation is the recent review of EU funding in the field of IWRM, as reflected in the published document: Gyawali *et al.*, 2006. *EU-INCO Water Research from FP4 to FP6 (1994-2006): A Critical Review*. Luxembourg: Office for Official Publications of the European Communities.



This Management Paradigms Research Programme consists of three phases. The overall objective is to determine whether or not the current sanctioned discourse of IWRM is the most appropriate and effective approach to water management in southern Africa, where optimal and sustainable socio-economic growth is the regional political imperative. This objective will be tested in three focus areas, namely: **Shared Water** - leading to improved governance of shared water resources; **Water Resource Planning** - directed at developing improved linkages between social and ecological planning processes; and **Decision Making and Leadership** - aimed at improved leadership and institutions for effective service delivery in water resource management and allocation.

The Management Paradigms Research Programme is fully aligned with national priorities because it interrogates the appropriateness of IWRM as a vehicle to deliver on the targets set by ASGISA. The IWRM, coming from developed nations that are not approaching thresholds of finite water resource availability, might therefore not be capable of predicting and managing the non-linear responses that are anticipated once the dilution capacity of over-allocated South African water resources has been lost. Similarly, the current approaches to IWRM may not be capable of effectively mitigating the anticipated impacts of Global Climate Change on hydrological flow regimes and associated ecosystem integrity.

Research funding is currently being targeted from within the CSIR. Research partners and co-funding partners are sought in order to achieve the programme objectives and build new capacity in this field.

The Management Paradigms Research Programme links up with the various programmes conducted by the:

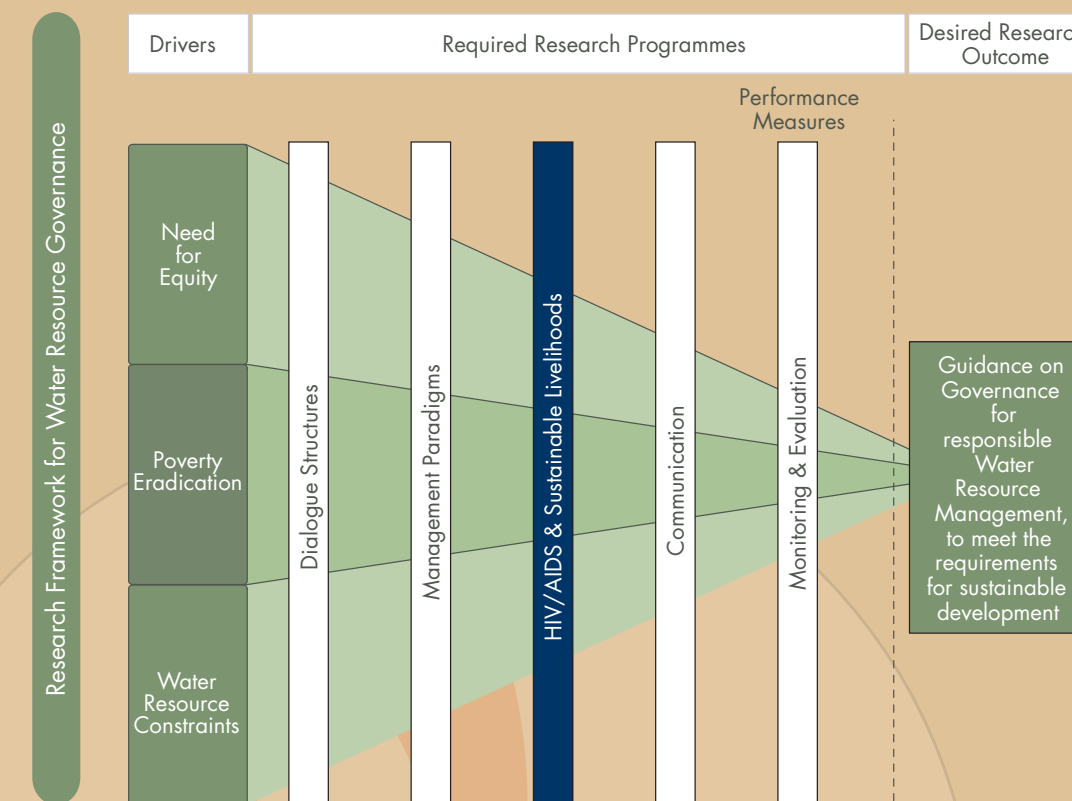
- Stockholm International Water Institute (SIWI);
- International Water Resources Association (IWRA); and
- Third World Centre for Water Management.

For more information on the **Management Paradigms Research Programme**, contact:  
Ms Marian Patrick at: [mpatrick@csir.co.za](mailto:mpatrick@csir.co.za); tel: +27 31 242 2330; fax: +27 31 261 2509.



## HIV/AIDS and Sustainable Livelihoods Research Programme

The **HIV/AIDS and Sustainable Livelihoods Research Programme** focuses on the need for sustainable livelihoods to be created among a population that has many individuals whose immune systems have been compromised by HIV. In this regard the strategic ramifications of high levels of HIV/AIDS, specifically where these link to water resource management, are analysed with a view to informing policy-making decisions. This Programme has been developed from earlier work at the CSIR and published as Ashton, P.J. and Ramasar, V. 2002. *Water and HIV/AIDS: Some strategic considerations for southern Africa*. In: Turton, A.R. and Henwood, R. (eds). *Hydropolitics in the Developing World*. Pretoria: AWIRU; and Rascher, J., Ashton, P.J. and Turton, A.R. 2007. *The strategic role of water in alleviating the human tragedy associated with HIV/AIDS in Africa*, (in press).



The overall objective of the HIV/AIDS and Sustainable Livelihoods Research Programme is to develop a strategy and operational framework for mainstreaming consideration of HIV/AIDS within the Water Services Sector in South Africa. The strategy will focus at municipal, provincial and national level. Current policies and programmes on HIV/AIDS, water, agriculture and poverty will be reviewed. The nature of the interfaces between the institutional environment and each of HIV/AIDS, water, and agriculture, will be clarified to identify the cross-cutting issues between the key stakeholders.

The HIV/AIDS and Sustainable Livelihoods Research Programme is aligned with national priorities as it interrogates HIV/AIDS, poverty and sustainable livelihoods through developmental and governance lenses. These perspectives are regarded as appropriate vehicles to deliver on the targets set by ASGISA, as they are aligned with NEPAD and the UNDP's Millennium Development Goals, making them applicable to Africa as a whole.

Research Funding is currently being targeted from within the CSIR. Research and co-funding partners are being sought in order to achieve the research programme objectives and to build new capacity in this field.

The HIV/AIDS and Sustainable Livelihoods Research Programme links up with research and operational programmes directed by:

- The South African Department of Water Affairs and Forestry;
- The South African Water Research Commission; and
- UNAIDS.

For more information on the **HIV/AIDS and Sustainable Livelihoods Research Programme**, contact:  
Dr Jeanette Rascher, at [jrascher@csir.co.za](mailto:jrascher@csir.co.za); tel: +27 12 841 2757; fax: +27 12 841 3954.