



TERMS OF REFERENCE FOR A DIRECTED WRC PROJECT

KEY STRATEGIC AREA	KSA 9: Advisory Services
PROGRAMME	Advisory Services
TITLE	The State of the South African Water RDI Enterprise

General context:

Rationale:

Having an agile, responsive and mature water system of innovation remains a key national priority in support of a more water secure South Africa. This is because robust water research, development and innovation (RDI) planning and implementation enables:

- new products, innovations and services that support socio-economic development
- knowledge generation that transitions the sector into improved practices and provides decision support;
- the provision of evidence that informs policy development and implementation;
- opportunities for the export of know-how and technology into Africa and beyond;
- the development of science and innovation capacity, and of content that informs sector upskilling;
- the development of new opportunities for business and industry;
- insight on balancing protection and use of water resources; and
- facilitation of a learning culture in water sector institutions about the challenges, risks, opportunities, and solutions.

Given this priority, it is important to track and trace the state of the Water RDI Enterprise to understand trends, be more responsive to risks, guide future investment and identify emerging needs. The Water RDI enterprise refers to the system of innovation that enables water-related research and innovation in South Africa. When reflecting on the state of the water RDI enterprise we focus on the traditional outputs of the science and innovation system (publications, research outputs, post graduates, patents and innovation/technology demonstrations, etc), we work to understand the maturity of the institutions driving research and innovation outputs (universities, water centres, science councils, etc), and we work to understand the landscape that resources RDI activities (investment, investor priorities, etc).

In establishing the current state of the South African Water RDI Enterprise, the team leading the project will need to draw on previous bibliometric mapping reports, relevant tracer studies, lessons in implementing the Water RDI Roadmap sector report, the WRC knowledge repository, engagements with the research institutions of the sector etc.

The WRC also wishes to use the results of this project to more specifically define and communicate its own role and contribution to the National Water Enterprise in South Africa, in line with our strategy focus in this area.

**Objective:**

Produce a state of the Water RDI enterprise baseline update. This report would need to include (but not be limited to):

1. Framing the central themes and focus points of the Water RDI Enterprise (problems we are trying to solve and focus areas). This will need to build on the WRC strategy and other national and global signals. It must include the development of a set of topics and associated key words to inform the logic of the rest of the project.
2. Mapping of Water Research outputs, which must include an understanding of publication outputs, research focus areas, relative outputs of different research institutions in South Africa in relation to each other, growth in research outputs over time, and an understanding of SA's outputs in relation to global outputs. Bibliometrics (quantitative analysis of the scholarly communication landscape by examining patterns in citations, authorship, and publication data) must be part of the methodology for this output.
3. Mapping of water nodes of expertise around the country, including an understanding of the depth and breadth of where different water research and innovation deployment expertise sits at different institutions, and also where the various water chairs, centres of excellence, institutes/centres, technology demonstration hubs are based. This should be mapped in a way that is visible and interactive.
4. Mapping of knowledge deployment activities in the water NSI (activities shifting the outputs of research into policy, practise, implementation, or the market). This would include research-practitioner-policy communities of practise, technology and process solution demonstrations, incubation, and upscaling, intellectual property, etc. This would need to include innovation activities happening within municipalities, utilities, government institutions, etc.
5. Reporting the scale of investment into research and innovation deployment in the sector (how much money, who, and what are the funding trends).
6. Mapping the main transformative innovation initiatives that are leading to scale up research into practise in a South African context.

Outputs and Products:

At a minimum we would expect:

1. State of Water RDI Enterprise Report
2. Popular communication redacted version of the report (with designed infographics, etc) and interactive mapping of nodes of expertise
3. Transformative innovation case studies
4. Policy brief

Time frame

24 months

Total funds available

R1 000 000 in total. First year budget should be R 500 000.

Closing date and Proposal Template

The closing date for submission of proposals is specified on the WRC Call document.

Please apply on the standard WRC template, via the BMS system, details in the Call Document.

Contact

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