

## Researcher: Water and Climate Change

### JOB DESCRIPTION

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Climate change adds stress to delivering water services and water resource management. These two challenges are already complex and under enormous pressure. You will research just and sustainable ways in which we can adapt and build resilience.

You will work with the Programme Manager: environmental governance who is responsible for managing two related projects on water and climate change (see general project description below).

### Responsibilities

- Develop a **research plan** with articulated lines of enquiry
- Qualitative and quantitative **data collection and analysis**
- **Write** briefing papers on key aspects of water and climate change
- Help to **convene meetings and seminars** that bring a range of perspectives together
- Support the programme manager with **meeting the aims objectives of the project**, including reporting, networking, information dissemination, etc.

### Description of project

#### Title

Water service delivery and resource management in a context of Climate Change

#### Aims and Objectives

The broad aim is to ensure that all spheres of government responsible for sustainable management of water resources and the delivery of water to households, have plans and strategies that take into account the potential impacts of climate change.

*The specific objectives are to ensure that:*

- civil society organisations are sufficiently aware of the issues to be able to engage productively with government around water provision and climate change.
- civil society organisations are sufficiently aware of the issues to be able to contribute to changing patterns of water use.
- there exists suitable platforms for fruitful and meaningful dialogue between stakeholders in government, civil society and the private sector.

#### Background: climate change–water–society interfaces

At a climatic level, it is predicted that southern Africa, and in particular the western parts will get drier. It is also predicted generally that rainy seasons will become shorter and weather events more severe. The changing climate and rainfall patterns will change water catchment patterns and the way in which water is collected and stored in dams and aquifers.

It is not possible to live without water. It is not possible to grow the economy without water. When rain becomes scarcer and less predictable, when evaporation from surface water and soil increases – our challenge to have a healthy economy with healthy people will be even greater.

At the same time that water is become scarcer, demand for it is increasing, and will continue to increase in the foreseeable future. Not only is the country's population increasing, but the demand per capita is set to increase with further industrialisation and improved standards of living. Paradoxically demand will also increase with some climate change mitigation measures such as biofuels. These may replace our dependence on fossil fuel, but will compete for land and water.

Such increased pressure brings the risk that those without financial or political power will be further marginalised. Providing sufficient clean affordable water to people living in poor urban and rural areas will become even harder than it already is. Issues of democracy, justice and social change will intensify.

### **The role of civil society organisations**

While it is the responsibility of various levels of government to plan for the provision of water to all, civil society organisations need to be able to support government in this task. This means we need to improve our understanding of (a) how climate change may affect surface and groundwater resources, (b) the pros and cons of various supply-side options available and (c) the demand-side options that help us adapt to increasing water scarcity, but are also fair and just, and developmental.

Civil society organisations can play a key role in engaging with different levels of government to ensure that policy and practice is developed that is robust enough to cope with climate change stresses. Civil society organisations can also play a key role in encouraging changes in behaviour with respect to water use and conservation.

EMG's approach is two-fold. Firstly, we aim to build the capacity of civil society organisations (including ourselves) to better understand the complexities of environmental resource and environmental justice issues, so that the quality of interaction between civil society and government is increased. Secondly, we aim to create platforms for meaningful dialogue between stakeholders, supported by evidence based research.

### **Activities**

#### *Phase 1 – Research (approx 12 months)*

This will entail a research phase focused on gathering and processing information from prior research, scientists, climate models, etc. Areas of focus will be:

- Predicted changes to rainfall and water catchment trends and identifying broadly which parts of the country will be most affected and to what extent;
- Water supply-side options (such as desalination, dams, etc.) and critiquing their application with respect to financial cost, climate change and other environmental footprints, development needs, etc.
- Water demand-side management techniques and critiquing their application with respect to their effectiveness in changing usage, impact on the poor, cost, etc.

In parallel to the research, EMG will begin a process of identifying key players and networking with stakeholders.

At the end of the research phase, a number of workshops are envisaged that will draw experts (academics, planners, water managers, etc.) together to validate collected information, critique EMG's analysis, and draw out new ideas. Based on the outcome of these workshops, a series of

awareness-raising publications (fact sheets, posters, booklets, etc.) will be developed, aimed at water activists, environmentalists and decision-makers.

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