Project information sheet

DFID Department for International Development

British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

odi Overseas Development Institute

UCL

Groundwater resilience to climate change in Africa

DFID-funded research

to strengthen the evidence base linking climate change, climate variability, aquifer resilience and livelihood vulnerability.

to support local and international research agendas and programmes, including the ability to collect and interpret data, and transform data into policy-relevant information and knowledge.

to develop evidence-based guidance on assessing how groundwater can support adaptation and build resilience to climate change.

BGS-led project team, involving UK and African researchers

BGS *www.bgs.ac.uk*
ODI *www.odi.org.uk*
UCL *www.ucl.ac.uk*
University of Ibadan, Nigeria *www.ui.edu.ng*
Ministry of Water and Irrigation, Tanzania *www.maji.go.tz*
Sokoine University of Agriculture, Tanzania *www.suanet.ac.tz*
Ethiopia RiPPLE consortium *www.rippleethiopia.org*
WaterAid *www.wateraid.org*

12 month research programme

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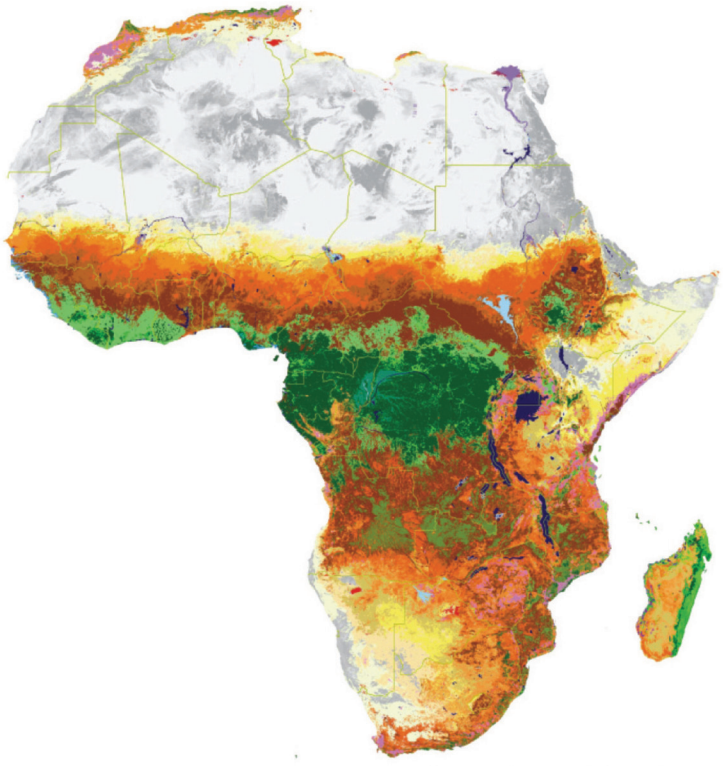
Background

Groundwater provides most of the domestic water in rural Africa and supports poverty reduction through irrigation. Reliance on groundwater is likely to increase as rainfall becomes more variable and demand for water becomes greater. However, African groundwater resources are poorly understood, and there is little knowledge about how resilient they are to climate change. This lack of knowledge is reflected in the paucity of information on groundwater presented in the IPCC 4th Assessment Report and Technical Paper on Water.

In response, this 1 year DFID-funded Research Programme aims to improve understanding of the resilience of African groundwater to climate change and links to livelihoods. The project will develop policy recommendations for assessing how groundwater can support adaptation and build resilience to climate change.



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Project team

A BGS-led team, bringing together UK researchers from BGS, ODI and UCL with African research institutions in Nigeria, Tanzania and Ethiopia has been commissioned to undertake the DFID-funded research. This interdisciplinary project team encompasses skills in international water resources, water policy and governance and water supply. A steering group oversees the project comprising senior academics, representatives from the donor community and users.

Research objectives

The aim of the project is to improve understanding of the impacts of climate change on groundwater resources and local demand. The project will develop policy recommendations for sustainable groundwater development and management that will support adaptation and build resilience. There are three key objectives:

1. To strengthen the evidence base linking climate change, climate variability, aquifer resilience and livelihood vulnerability.

2. To support local and international research agendas and programmes, including the ability to collect and interpret data, and transform data into policy-relevant information and knowledge.

3. To develop evidence-based guidance on assessing how groundwater can support adaptation and build resilience to climate change.

Project outputs

The main outputs from this project will be:

1. **An aquifer resilience map for Africa**; based on existing geology and hydrogeological maps. A set of benchmarked studies on aquifer properties and recharge will be derived from existing hydrogeological studies in Africa.

2. **Two hydrogeological case studies of aquifer resilience to climate change**; in which assessments will be made to storage and availability of groundwater in different aquifers, within different climate zones of Africa.

3. **Socio-economic case study**; examining the linkages between water use and household economy.

4. **Peer reviewed research papers and policy briefings**.

Project timeline:

Start date, 1 February 2010
Preliminary resilience map, October 2010
Case Studies fieldwork, April - October 2010
Policy briefings, December 2010
End date, January 2011.

For further updates on the work of this project please go to:
www.bgs.ac.uk/GWResilience

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