

# TOWARDS SUSTAINABLE GROUNDWATER SUPPLIES IN SUB-SAHREL AFRICA

Today, around 500 million people in sub-Saharan Africa depend upon groundwater supplies: within a generation, that will rise still further to close to a billion.

## GROUNDWATER RESOURCES

Groundwater resources are potentially more resilient to the combined pressures of climate variability, population growth, and land-use change, yet evidence suggests that, during extended periods of low rainfall, such supplies can fail. For this reason, together with the absence of long historical records of borehole levels, it is unclear whether the planned development of groundwater resources to meet increases in demand is feasible in all areas of sub-Saharan Africa.

## ACCESS TO GROUNDWATER

Safe reliable access to water by the rural poor is a key critical factor in achieving Millennium Development Goals in this region, in particular the target of halving the proportion of people living in extreme poverty and hunger. As most poor people in Africa depend upon farming for their livelihoods, developing resilient agricultural water supplies is clearly an essential first step.

## THE BRAVE PROJECT

The BRAVE project will reduce risk and improve water security resilience of rural communities in sub-Saharan Africa by combining better understanding and planning of groundwater supplies with practical communication and knowledge exchange at all levels, from individual smallholder farmers to national government and regional bodies.



# THE BRAVE PROJECT – BRIDGING SCIENCE-PRACTICE- POLICY TO BUILD LIVELIHOODS RESILIENT TO DROUGHT

## KEY OBJECTIVES OF THE BRAVE PROJECT

- **Combining new scientific knowledge** with outputs from suite of linked models to develop appropriate tools for planning at range of scales
- **Pilot new groundwater planning tools** in eight communities: focus on GW irrigation, together with active monitoring
- **Evaluation of impact of new tools** on the livelihoods of some of the poorest communities in the countries will be evaluated against the co-designed set of vulnerability metrics
- **Knowledge brokering** to generate cross-level interactions and support and strengthen institutional structures for effective/(flexible?) development planning – ‘Serious Game Play’
- **Production of seasonal groundwater status reports** which will be linked into the newly operational RWX (Rainwater-AfClix) Drought Early Warning System in Burkina Faso and Ghana and radio platform
- **Key characteristics** – across scale partnerships, synergistic collaborations, truly interdisciplinary

## WHO IS BEHIND THIS PROJECT?

BRAVE2 brings together a dedicated interdisciplinary, multi-institutional team of internationally recognised natural scientists, social scientists, and knowledge exchange experts with an established track record of productive collaboration in Sahel research and development, together with humanitarian and development organisations and networks with extensive experience working in Africa and international reach. The team is composed of leading meteorologists, soil scientists, environmental scientists with governance, livelihoods and decision-making assessment expertise, and partners in both African and UK institutions.

## PILOT CASE STUDIES

Pilot case studies will address connected problems of unsustainable land management, extreme weather events and low agricultural productivity: by providing farmer field training and information to promote local climatic adaptive measures, the farmers will increase their resilience to weather shocks. The pilots will be participative and consultative, integrating national/local water resource planning departments, specialist institutes and partner NGOs, to ensure local needs are met, and building capacity for sustainability and equitable groundwater resource management.

### Find out more

Visit:

[www.anysite.org](http://www.anysite.org)

Contact:

**Tim Yates**

Communications Manager

Walker Institute

Agriculture Building

University of Reading

Earley Gate, Reading, RG6 6AR

[t.yates@reading.ac.uk](mailto:t.yates@reading.ac.uk)

Tel +44 (0)118 378 4910

[www.walker.ac.uk](http://www.walker.ac.uk)

## BRAVE PARTNERS INCLUDE:

- University of Reading
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- Christian Aid
- BGS
- Ghana Meteorological Agency
- Council for Scientific and Industrial Research
- Été Burkina
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