British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

Applied geoscience for our changing Earth

The role of hydrogeology in WASH projects in Africa

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WAter supply, Sanitation and Hygiene

- Often rural water supply
- Secure supply: *adequate quality & quantity; accessable; reliable; low cost; easy to manage*
- Low technology
- Integrated programmes
- Large component of social development

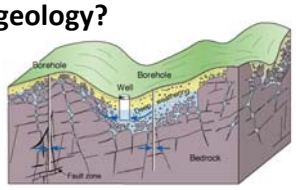
Where's the hydrogeology?

Aquifer with T > 1 m^2/d

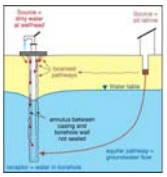
Recharge > 10 mm per annum

Adequate groundwater quality

Protected from contamination





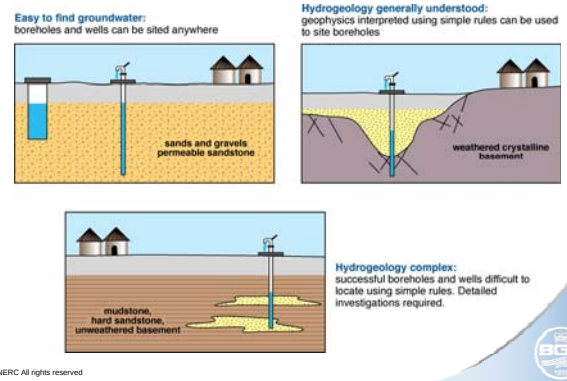


BUT....

Hydrogeologists often not involved...


...or confused with geophysicists

Is that a problem?

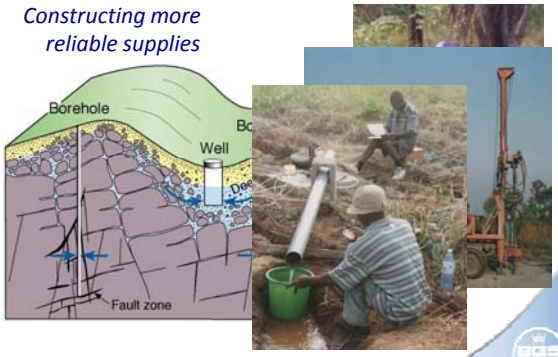


Hydrogeology in WASH

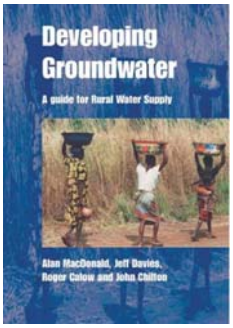

- Constructing water supplies
- Designing projects
- Generating hydrogeological knowledge
- Groundwater governance
- Research
- Impacting Policy

Hands on roles

Constructing more reliable supplies



Overseeing projects



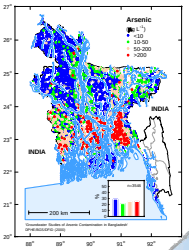
Improving cost effectiveness and reliability

Tender development
Reconnaissance
Choosing techniques
Borehole/well design
Checking for corruption
Building databases and knowledge

Generating regional knowledge

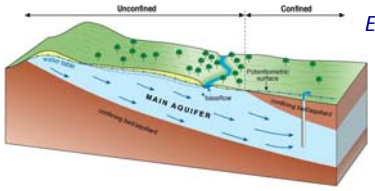
Hydrogeological mapping
Advice and databases
Water quality data

Providing base data for everyone



Groundwater governance

Monitoring – early warning systems
Regulation – licensing and protection of resources
IWRM – ecosystem services approaches

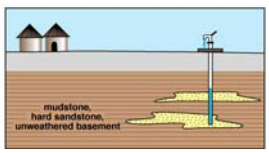


Ensuring equitable distribution and sustainability

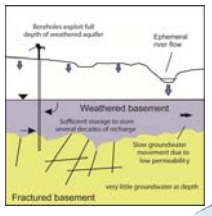
Critical Research

Filling the gaps – addressing new issues

New techniques



Difficult areas



Climate change

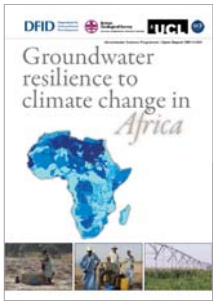
Impacting Policy

Advocating for hydrogeology and WASH to be taken seriously

National: fighting for WASH and money; setting standards

Within NGOs: importance of considering groundwater

International – world bank, UN Agencies: helping to develop evidence based policy



Summary

WASH needs hydrogeologists... but not all about drilling supervision

Hydrogeologists not generally involved need to make our case

IAH Burdon Network. What can IAH do?

Supporting sustainable groundwater development for poverty reduction

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