Human Capacity and Expertise in Hydrogeology

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The need for expertise in hydrogeology

Groundwater assessment requires expertise in hydrogeology.

Groundwater specialists are necessary for development of the knowledge base and keeping it up to date

Organisations such as water authorities, WASH agencies, river basin organisations need hydrogeologists to provide support to understand the local groundwater resources, professionally site boreholes and supervise drilling activities and manage groundwater data.
A gap in capacity and expertise

Many professionals involved in groundwater management are not aware of groundwater principles and methods.

There is a lack of hydrogeological training and mentoring for those who site, drill, supervise and manage borehole drilling programmes, particularly in low-income countries.

In many African countries there is a gap in higher education in groundwater, even when groundwater is the major water resource.

There is also a gap of interdisciplinarity in university programs, with little connections between hydrogeology and other sciences (e.g. geography, water engineering and planning, environmental sciences, social sciences, public health).

Even when hydrogeologists are trained at higher education level, they tend to be hired in other sectors or even in other countries.

How to increase capacity and expertise within the region and retain these groundwater experts?
Short Term

Capacity building activities
Can assist in the short term

→ Workshops

Short courses

“training the trainers”, etc.

Vocational training

But not a replacement for technical higher education professional training

Long term

Long term, investment in professional technical training is essential

- Development of education in hydrogeology (e.g. university programs)
  knock on effect, increasing groundwater research in region

- Water professionals from low-income countries can be offered
  postgraduate education abroad (e.g., IHE-Delft and GroundwatCh
  programme)

- Create groundwater related jobs
Capacity within L/RBOs

GW Capacity if often limited with L/RBOs

Hydrogeological work can be outsourced but writing the ToR, supervising the work of the consultant and taking up the outcomes requires expertise in hydrogeology - in L/RBO.

Support can be sought at regional institutions, like SADC-GMI.

Year of Groundwater, 2022

Theme for World Water Day 2022:

Groundwater:
Making the invisible visible

Take advantage of 2022, the year of groundwater, to raise awareness and build capacity within L/RBOs
Thank you for your attention