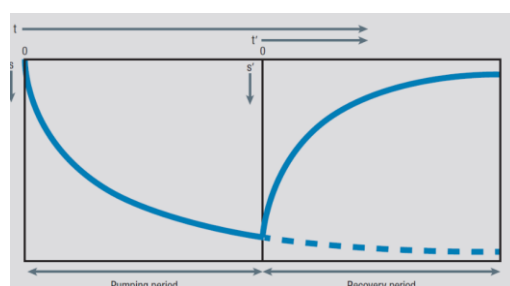




**PAID Online
Course on -
Borehole
sustainable yield
test for water
supply: From
theory to practical**

**12 -15 October
2021.**



**Image: ICRC PRACTICAL
GUIDELINES FOR TEST
PUMPING IN WATER WELLS**

**Facilitated by SADC - GMI and the Institute
for Groundwater Studies (University of the
Free State)**

The SADC-GMI will be offering the Course **Borehole sustainable yield test for water supply: From theory to practice**” from the 12th to the 15th of October 2021.

Purpose and objectives

The course objectives are:

- To strengthen theoretical and practical knowledge on techniques and approaches for determination of sustainable yield of boreholes
- To strengthen capacity of designing, planning, conducting and interpreting data from aquifer pumping tests.

Course Goal

- The estimation of borehole sustainable yield is based on the principles of aquifer pumping tests. To estimate borehole sustainable yield, an appropriate aquifer pumping test should be designed and conducted, and the data has to be analyzed using appropriate methods taking into consideration the capacity of the aquifer system, environment and groundwater needs among other factors.
- The components of this training are therefore designed to cover the theoretical and practical aspects of borehole sustainable yield testing and analysis of data to estimate the yield. From theoretical principles, the participants will be taken through processing and analysis of the time-drawdown data to understand groundwater flow characteristics (Flow diagnostic analysis) and estimate the borehole sustainable yield.



PROGRAMME

Day	Topic/ Activity
Day One	<p>Introducing the basic concepts of groundwater science, (Main aquifer parameters influencing the flow and storage of groundwater (Darcy's Law, Hydraulic conductivity, Storativity, Transmissivity, Specific Storage and Specific yield)</p> <p>Principles of aquifer pumping tests: (Elaborating on the role of aquifer pumping tests in relation to regulatory requirements Understanding the main types of aquifer-pumping tests Understanding the measurements to be made and using appropriate pumping test equipment)</p>
Day Two.	<p>Aquifer pumping test of production boreholes for water supply purposes (Estimation of reliable/safe/sustainable yield borehole yields, Understanding the test parameters and their values, Highlight of inherent challenges, Designing and planning for the tests, Field test procedures)</p> <p>Data analysis and interpretation methods and tools (<i>inclusive of the FC method</i>)- Data analysis and interpretation methods and tools, Principles of data analysis and interpretation, Estimation of borehole sustainable yield on the basis of the FC method and discussion of other approaches and their challenges, Role of operation based monitoring, Class demonstration of examples on borehole yield estimation using the FC method Exercises on borehole yield estimation using the FC method</p>
Day	Topic/ Activity
Day Three	<p>Aquifer pumping test of production boreholes for water supply purposes- Data analysis and interpretation methods and tools, Discussion of exercises on borehole yield estimation using the FC method from day two.</p> <p>Well performance tests- Estimation of well efficiency Demonstrating the value of well performance tests, Class demonstration and individual exercises on estimation of well efficiency</p>
Day Four	<p>Aquifer pumping test of production boreholes for water supply purposes-Discussion of exercises on estimation of well efficiency.</p> <p>An introduction to Aquifer TestPro. Summary of training and Closure</p>

PRESENTERS

Prof. Modreck Gomo

The University of the Free State

Modreck Gomo is an Associated Professor in groundwater working at the Institute of Groundwater Studies, University of the Free State in South Africa. His first degree was a BSc Honours in Agricultural Engineering from the University of Zimbabwe, followed by a BSc Honours in Geohydrology (2008), an MSc in Geohydrology (2009), and a PhD in Geohydrology (2011) from the University of the Free in South Africa.

Professor Gomo has experience in a wide range of groundwater science and consultancy projects. He has consistently published in theoretical and experimental work on a variety of groundwater aspects with main purpose of improving groundwater site characterization techniques in aquifer pumping tests, assessment of hydrogeochemical processes and their influence on groundwater quality. Professor Modreck Gomo is serving as an Editorial Boarder Member for Sustainable Water Resources Management (SWAM) and Discover Water journals.



Prof. Modreck Gomo
– Institute for
Groundwater
Studies - University
of the Free State

Mr. Brighton Munyai

SADC Groundwater Management Institute

Brighton Munyai is a Senior Groundwater Specialist at the SADC – Groundwater Management Institute where he is responsible for providing technical guidance of the SADC-GMI projects and challenges. His previous experiences include groundwater resources assessments and developments in a number of countries in Africa. Currently Brighton is involved in a research in the Khakhea Bray Dolomite Aquifer , focusing on groundwater dependent ecosystems.



Mr Brighton Munyai
SADC-GMI Senior
Groundwater
Specialist



COURSE FEES

Course Fees: ZAR 7 000, fees will cover comprehensive course material.

Payment Details:

**Southern African Development
Community Groundwater Institute
(SADC-GMI)**

Account Number : 421376031

Bank : Standard Bank

Branch Code : 051001

Follow the link below to register for the course:

- [REGISTER HERE](#)

For further Information please contact the following;

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