

Training Workshop on Exploring Groundwater Resources for Multiple Uses in Ghana

CSIR-WRI Conference Hall, March 17, 2022 (Thursday)

Water plays a crucial role in human well-being, socioeconomic development and environmental health. The use of surface water and groundwater resources contributes directly or indirectly to several of the United Nations Sustainable Development Goals (SDGs), including SDG 1 – end poverty in all its forms everywhere; SDG 2 - end hunger, achieve food security and improved nutrition and promote sustainable agriculture; SDG 6 - ensure availability and sustainable management of water and sanitation for all; SDG 7 - ensure access to affordable, reliable, sustainable and modern energy for all; and SDG 13 – take urgent action to combat climate change and its impacts.

Future water availability will be affected by many factors, including, but not limited to, climate variability and change, urbanization, industrialization and the need to produce more food to feed the growing population. A major challenge will be sustainably managing available water resources to balance the competing demand for water for domestic use, agriculture and other productive uses while maintaining healthy ecosystems and ensuring future water availability.

There is a growing dependence on groundwater for domestic use, irrigation, livestock watering and other productive uses. However, in many cases, there is limited knowledge on the quantity of available groundwater resources, the trade-offs associated with its exploitation, and options for the conjunctive use of groundwater and surface water. This understanding is critical to informing sustainable groundwater management and mitigating possible trade-offs. There is a pressing need to utilize existing knowledge and sustainable solutions to strengthen the capacity of key stakeholders in the exploration of groundwater for multiple users and uses.

The National Planning Committee, hosted by the Water Resources Commission (WRC), has prioritized the provision of training to groundwater drillers as one of the key activities to be undertaken to commemorate World Water Day (WWD) 2022. The theme for WWD is Groundwater: Making the Invisible Visible. The International Water Management Institute (IWMI) and the Council for Scientific and Industrial Research - Water Research Institute (CSIR-WRI) are collaborating with WRC to deliver a training workshop targeted at groundwater drilling companies in Ghana.

The objectives of the training workshop are as follows:

- Sensitize selected water sector actors on the available groundwater resources in Ghana, and the governing rules, policies and procedures to explore the possibility of using these resources for multiple uses.
- Train water drillers on good practices for accessing and siting groundwater.
- Present opportunities, and available tools and resources to enhance the sustainable use of groundwater for multiple uses

The training workshop, aimed at technical staff and managers of drilling companies, will focus on the following:

- Overview of groundwater availability and quality in Ghana.
- Key considerations in groundwater exploration and management. This will include the trade-offs in the water-energy-food nexus; conjunctive use of groundwater and surface water; and the governing rules, policies and procedures to explore groundwater for multiple uses.
- Demonstration of basic tools for groundwater exploration.

Expected learning outcome: At the end of the workshop, the participants are able to apply the procedures for groundwater exploration in Ghana.

Partner organizations

Water Resources Commission (WRC)

The Water Resources Commission (WRC) was established by an Act of Parliament (Act 522 of 1996) as the overall body responsible for the management and utilization of freshwater resources in Ghana, and coordinating relevant policies. WRC provides permits for all water use activities; issues licenses for groundwater development; and registers and licenses dams. WRC is the focal institution for transboundary water cooperation and developing flood early warning systems.

<https://www.wrc-gh.org/>

Council for Scientific and Industrial Research - Water Research Institute (CSIR-WRI)

The Water Research Institute (WRI) is one of the 13 public research Institutes of the Council for Scientific and Industrial Research (CSIR) of Ghana. WRI has a mandate to conduct research on all aspects of water and related resources. The Institute generates and provides scientific information, strategies and services towards the rational development, utilization and management of the water resources of Ghana in support of the socioeconomic advancement of the country, especially in the agriculture, health, industry, energy, transport, education and tourism sectors. <https://wri.csir.org.gh/>

International Water Management Institute (IWMI)

The International Water Management Institute (IWMI) is a research-for-development organization that works with governments, civil society and the private sector to solve water problems in developing countries and scale up solutions. Through partnership, IWMI combines research on the sustainable use of water and land resources, knowledge services and products for capacity strengthening, dialogue and policy analysis to support implementation of water management solutions for agriculture, ecosystems, climate change and inclusive economic growth. IWMI leads the Groundwater Solutions Initiative for Policy and Practice (GRIPP) (<https://gripp.iwmi.org/>) and is part of the Rural Water Supply Network (RWSN) (<https://www.rural-water-supply.net/en/>).

<https://www.iwmi.org/>



Training Workshop on Exploring Groundwater Resources for Multiple Uses in Ghana

Date: March 17, 2022; Time: 0900 - 1330
Venue: CSIR-WRI Conference Hall

Agenda

| Time | Activity | Responsible organization |
|---------------|---|--------------------------|
| 09.00 – 09.30 | Registration of participants | WRI |
| 09.30 – 10.30 | Introductions, welcome statements and opening session | WRC/IWMI/WRI |
| 10.30 – 10.45 | Coffee break / Press interviews | |
| | Presentations | |
| 10.45 – 11.00 | Drilling permits and regulations | WRC |
| 11.00 – 11.15 | Introduction to groundwater resources management | IWMI |
| 11.15 – 11.30 | Overview of groundwater availability and quality in Ghana | WRI |
| 11.30 – 12.00 | Groundwater exploration in Ghana: Guiding procedures | WRI |
| 12.00 – 12.30 | Questions and discussions | All participants |
| 12.30 – 13.00 | Practical demonstration of pumping test | WRI |
| 13.00 – 13.15 | Presentation of certificates | WRC |
| 13.15 – 13.30 | Closing remarks | WRC/IWMI |
| | Lunch and departure | WRC |

Resources

Materials: CSIR-WRI, IWMI-GRIPP, RWSN

Facilitators: Dr. Anthony Duah (CSIR-WRI), Dr. Olufunke Cofie (IWMI) and Ms. Adwoa Paintsil (WRC)