INSTITUTIONAL TRAINING COURSE

Energy Efficient Borehole Pumping Systems

Training code: 0870

Learning mode: Blended

Duration: 6 weeks preliminary eLearning, 5 days f2f, 2-months post course assignment

Unit in charge: ICRC Water and Habitat department

Functional competencies: Water & Sanitation

Training type:

Specialized course

Languages available:

English later French

Course description

The course aims at consolidating the participants' competence in the field of small to medium borehole pumping system. It focuses on a comprehensive design concept that allows to optimisation sustainability and energy consumption, being renewable or not. It covers the full project extent, from assessment, contractor supervision, work commissioning and training operators for operation and maintenance.

What you will learn?

After the training participants will learn:

- To master the basics of hydraulics and electricity necessary for the design
- To collect, analyse and use data to identify suitable solutions for water supply.
- To use the collected data to optimize the pumping system.
- To size the pump, pipe, cables, genset, PV (solar panels) and control panel.
- To give necessary technical specifications for all the required material and evaluate offers.
- To supervise important points during the installation, what to check during commissioning and ensure that sufficient training on O&M is given.

What changes can you expect after this training?

Critical work behaviours expected from participants after completion of the course.

- Complete field assessment for water project with all necessary information
- Use standard tools to make the design.
- Make an integrated design taking in account all elements (borehole, pump, pipe and tank)
- Involve all stakeholders in the projects.
- Give precise and pertinent work specifications to contractors.
- Give precise and pertinent technical specifications to purchasers.
- Closer follow-up of the contractor during the work with checklist
- Involve more the operators during the work.
- Ensure that the operators were trained after work is completed.
- Have a complete understanding of the system before fixing one of its elements.

Teams expected results

- Increase the quality of the data collected during the assessment phase.

- Increase the usage of standard tools => easier to check and faster to implement
- Decrease delays due to incomplete technical specifications in tenders.
- Increase the quality of the contractors' work through an efficient site supervision.
- Decrease cost and time to repair existing system (troubleshooting)
- Increase the number of trained operators.
- Better design => more sustainable and energy efficient
- Better specifications => improve quality and procurement process
- More professional approach=> better recognition with local authorities

Organizational expected results

- Better design => more sustainable and energy efficient, optimizing the use of resources
- Better specifications => improve quality and procurement process, optimizing the use of resources
- More professional approach=> better recognition with local authorities

Who should attend?

WatHab and WASH project engineers responsible for the design, installation, operation, and maintenance of borehole pumping systems.

Where will it take place?

The training courses are taking place in Nairobi (within Strathmore Energy Research Center) in partnership with Grundfos.

Training cost?

The total course cost will be **2650 EUR (1750 course fees + 900 hotel).**

Course fees include venue, facilitation, lunch, and snacks during the days of the course.

You have the option of having the ICRC organize your accommodation or arranging it yourself. If you organize it yourself, you will only pay the course fees **(1750 EUR).**

Flight and transport are entirely your/your organization's responsibility in terms of organization and coverage.

How to register?

Please use the registration form link:

https://forms.office.com/e/zWzDPrGzBy

Contact

wathabtraining@icrc.org

Calendar

Cohort 1 12th to 16th January 2026

Cohort 2 8th to 12th June 2026