ekcölab
A COMMUNITY WATER QUALITY CONTROL LABORATORY

ekcowater
Water beyound boundaries

EKCOLAB TRAINING FOR ENVIRONMENTAL AND WATER LEADERS

APPLYING KNOWLEGDE WITH PRACTICE TO BRING SAFE WATER AND ENVIRONMENT IN LOCAL COMMUNITIES

An ekcölab project to raise the standards of drinking water quality throughout Africa and the world by using efficient equipment and technology and training a large community of environmental and water quality control experts

Environmental and Water Sanitary Inspector Training

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Background

This specialized training introduces and brings the required knowledge in water and environmental concepts. Water covers 71 % of the total earth's surface but only about 0.3% to 0.5% of it can be used as a source of living by humans for drinking, cooking, bathing, and other domestic use. Humans are in search of water for drinking and other use but the irony still stands at the questionable quality of the water people use which is being contaminated by animals, natural and anthropogenic means. This training will explain how to use different water and environmental concepts as a first step towards solving water quality and environmental problems.

Moreover, the training presents tools to equip and allow one to quickly master and easily apply the knowledge he/she will learn. The training courses consist of specialized module with hands-on practical trainings.

The training has been developed and peer-reviewed through **ekcölab** and **ekcöwater** team members.

Target group

The target groups for this training are students, teachers, health personnel, private sector and NGO workers working in fields related to water and environment, local community (water committee leaders and their members) and the general public. This training will also host some participants from more than 20 countries from around the world through **live online video streaming.**

Structure of the training and learning objectives

The training is structured around 4 main courses and a view on **ekcölab** and **ekcöwater** system and projects. The 4 main training courses include;

1. **Water quality and diseases**
2. **Drinking water quality guidelines and Standards**
3. **Water treatment systems and technology**
4. **Environmental field techniques and analysis of water**
   a. **Sanitary inspection**
   b. **Water sampling**

Course structure and content

1. **Water quality and diseases:** This course gives you background knowledge to know what water quality means and factors that affects the quality of water.it will also give participants the knowhow on how create barriers to safe drinking water *(F-diagram for disease transmission)*. *This course will be in an online video format on [YouTube](#) and also a live face to face online zoom meeting to explain and answer some questions of participants.*

2. **Environmental field techniques and analysis of water:** This course opens a wide understanding and practical skills on the primary steps in solving water quality problem in the field and consequently to help ease water quality analysis results in the laboratory. *This course will be in an online video format [YouTube](#) and also a face to face zoom meeting to explain and answer some questions of participants. This course involves a 1 day workshop to instruct participants on form filling for community assessments.*

3. **Drinking water quality guidelines and Standards:** This course aims at giving participants the knowledge on the world health organization's and national set guidelines and standards for potable water and how to correlation between these with that of known results after carrying out water testing and analysis in the laboratory. *This course will be a live face to face online zoom meeting.*

4. **Water treatment systems and technology:** This course introduce participants into the various types of water treatment methods (in home, local community, urban area (city or town)), treatment plants technologies, as well as their functionalities. *This course will be a live face to face online zoom meeting.*

Learning objectives

After completing this training, participants will be able to:

- Understand the vision and mission of **ekcölab** and **ekcöwater** organization.
- Understand the main divisions and core area of activities within the organization framework and projects
- Know why water quality is a main concern and the importance of protecting our water sources
- Know how to carry out sanitary inspections of environment and water sources in communities and to do quick analysis and reporting for monitoring.
- Know how to collect water samples from a dug well, hand pump, bore well, tap, springs, river or stream, and water storage containers.
- Understand the concentration values of water parameters and units conversions. Master the WHO and national guidelines and standards values (Physical, Chemical, and Microbiological) for potable water and how to analyze water samples with reference to the set guidelines and standards.

- Know the types water treatments methods, the use and functions of different water treatment systems use for irrigation, pharmaceutical industry and for drinking.
- Know how to carryout case study and apply critical knowledge in solving community health and water problems.

Methodology, Exam, Certificates and Feedbacks

This training is a **30 days** intensive training from the **1ˢᵗ Nov– 30ᵗʰ Nov 2023** which will comprise of *theoretical, interactive, practical/workshop lessons together with field work*. At the end of the training), participants will have to sit for an *exam* (not on the day of the training) in which assessment can be made from the scores of each participant. **The training will take around 5 hours of course work excluding workshops and field work**. **The general course work will be for 4 weeks and including field work.**

The *interactive and workshop lessons* present contents supported by videos, external links, exercises, questions and answers. **The *field work*** will be done at various locations in community and will be supported with necessary forms for analysis. *All participants will be assisted by a coordinator in case of difficulties in the field. A video call can be put through your coordinators to ask questions on how to carry out the task in the field.*

The *exam* can be completed at any time after the training but everyone must write on the same date that will be communicated through the *ekcölab whatsapp training group*. This will help to assess the achievement of the learning objectives for the courses. To **pass** the exam, participants need to have at least **50% of the correct answers**. A **CERTIFICATE OF COMPLETION** will be issued to them **2 weeks** after the announcement of their results. Any participant with **less than 50% of the correct answer/ He or she didn't attend the training effectively with no suitable reason** *will not be given a certificate*.

After the completion of training, participants will be requested to submit a feedback form, which will help to better prepare for the next upcoming trainings.

NB: **THE EXAM WILL BE CONDUCTED ONLINE.**

Requirements

General

- Field assessments forms (*provided by ekcölab)*
- Participants batch *(provided by ekcölab)*
- Note book (lesson and field)
- A4 papers
- Pen, pencil, bold, marker ruler and eraser.
- calculator
- A bottle of drinking water (1 to 1.5l)
- Training manual and workshop forms *(provided by ekcölab)*
- 3 pair of globes for practical and field work *(provided by ekcölab)*
- 2 surgical face masks for practical and field work *(provided by ekcölab)*
- field Dressing: long jeans trouser, long sleeves and Field shoes
- sample pet/glass bottles *(provided by ekcölab)*
- 40%-70% alcohol (spirit) *(provided by ekcölab)*
- Cotton *(provided by ekcölab)*
- Gas lighter or alcohol burner *(provided by ekcölab)*
- 100m rope *(provided by ekcölab)*
- 100m-300m tape *(provided by ekcölab)*

Technical

- Computer (laptop)
- Zoom app or Google meet
  Zoom Computer App
  https://zoom.us/client/5.12.2.9281/ZoomInstallerFull.exe?archType=x64
  Zoom Mobile App
  https://play.google.com/store/apps/details?id=us.zoom.videomeetings
- Adobe Acrobat Reader (download for free at
  http://www.adobe.com/products/acrobat/readstep2.html
- Adobe Flash Player (download for free at https://get.adobe.com/flashplayer/
- Microsoft Office (Windows or Apple version) or Open Office (download for free at
  http://www.openoffice.org)
- Platform: Windows 95, 98,2000,7,16 NT, ME, XP or superior; MacOS 9 or MacOS X Hardware:
  64MB of RAM, 1 GB of free disk space Modem:56 K