CC308 - GIS for Monitoring and Evaluation of Projects Course

Course Duration: 10 Days
Training Fee: KSH 80,000 | USD 800
Course Registration: **Register Here>>**

1.0. Introduction

GIS is a computer system capable of assembling, storing, manipulating and displaying geographically referenced information, i.e. data identified according to their locations. This training will present a practical guide for using a geographic information system (GIS) integrated with Monitoring and Evaluation. The ten days training is aimed at helping development partners to monitor and evaluate the activities of specific projects intended to support M&E systems for sustainable programs and projects. The application of GIS in monitoring and Evaluation of projects improves the effectiveness and communications of results to management, funding partners, and beneficiaries.

1.1. Course Overview

The integration of GIS in monitoring and evaluation makes it possible to link, or integrate information that is difficult to associate through any other means. With GIS M&E/Researchers are able to use combinations of mapped variables to build and analyze new variables. Presenting data in the form of a map helps to understand the significance of where, when, and by whom. By using the GIS to link data from multiple programs the training will make it possible to understand the individual programs better but also better understand the relationship between the programs. Spatial analysis techniques will also help with driving outcomes measures. This course will focus on collection of projects data using set variables, analyzing the data in GIS and presenting the results using maps (web/online or hardcopy), charts as well as reports.

1.2. Course Objectives

To achieve set objectives, the training will also explore the technical topic of Monitoring and Evaluation (M&E) methods that are used worldwide in many development projects and the application of technical tools of Geographic Information Systems (GIS) for project monitoring and management. In particular, this training will enable participants to;

i. Understand Monitoring and Evaluation (M&E) Systems;
ii. Understand key concepts of GIS and their applications in M&E;
iii. Learn how to developing an M&E-GIS System;
iv. Learn about the working of M&E information management systems;
v. Learn how to collect data using mobile phones and GPS;
vi. Learn how to integrate existing M&E data with GIS;
vii. Learn how to analyze and visualize M&E data with the aid of GIS techniques;
viii. Learn how to integrate GIS into M&E activities;

1.3. Course Content/Outline

❖ **Overview of GIS and Monitoring and Evaluation**
- Introduction to Monitoring and Evaluation (M&E) and GIS;
- Key components of M&E; Basic GIS and GPS Concepts;
- GIS Software; the General Overview;
- Open Source GIS Software;
- Bringing tabular/spreadsheet data into a GIS (Excel, SPSS, Access etc.).

❖ **Modern GIS Technologies adopted in Project M&E**
- Mobile phones in M&E; Use of GPS devices and M&E;
- Participatory videos for M&E; Supporting bottom-up learning;
- Making real-time M&E a reality through ICT;
- Examples of M&E systems incorporating GIS.

❖ **The GIS - M&E Interface**
- The Quantum GIS (QGIS) Interface;
- Adding Vector Data in QGIS;
- Exploring the Data in Map View; Exploring Shapefile Features
- Adding Raster Data in QGIS;
- Saving Your M&E Project.

❖ **M&E Data Collection using GIS Apps**
- Overview of M&E Mobile apps;
- Designing data collection digital forms;
- M&E field data collection;
- Importing GPS data to Quantum GIS

❖ **Geographic Analysis of M&E Data:**
- Creating New Project from Existing One;
- Geoprocessing Shapefiles in QGIS;
- Joining and Mapping Attribute Data;
- Plotting Coordinate Point Data;
- Running Statistics and Querying Attributes;
- Drawing Buffers and Making Selections;
- Creating of a web mapping application;
- Creating of reports and info-graphs.

❖ **Thematic Mapping of M&E Data:**
- Transforming Map Projections;
- More Geoprocessing workflows;
- Creating Calculated Fields; Classifying and Symbolizing Data;
- Designing Maps (static & online) in QGIS;
- Adding Map Labels and other map elements to map Layout;

1.4. Case Study Project

Using GIS and M&E Tools to Evaluate the Performance of The Nairobi Expressway Project.

1.5. Expected Learning Outcomes

i. The participant will get acquainted with GIS-M&E tools and understand the general principles of monitoring and evaluation systems;

ii. By using the GIS to link data from multiple projects the training will enable participant to understand projects executions better;

iii. The participant will understand the use of mobile apps in the collection of M&E field data;

iv. The will understand the application of GIS in storage, analysis, visualization and presentation of M&E data using maps, reports etc.

v. Supporting the sound decision making based on spatial nature of the projects. This will improve project delivery hence boosts efficiency and effectiveness.

1.6. Training Tools (Hardware and Software)

1. Handheld GPS;
2. Smartphones;
3. Quantum GIS (Q-GIS);
4. EpiCollect5 App;

1.7. Training Style and Approach

❖ On-site instructor-led training;
❖ On-line self-paced training (optional);
❖ Use of PowerPoint Slides;
❖ Use of Case Study Videos;
❖ Data Collection using phones, GPS etc.

1.8. Who Should Attend?

This training is designed for professionals in projects/programs who want to apply GIS to improve their monitoring and evaluation systems.

GIS for Sustainable Development