



Mapping & Visualization of Agriculture & Climate Change using ArcGIS



Kigali Institute of Capacity
Development and Data Analytics
Engage and inspire – Learn More





Introduction

Agricultural and climate change intervention projects and programmes may fail to achieve the required outcomes and impacts due to non-use of GIS and remote sensing technology.

A geographical information system (GIS) is a collection of hardware software, and procedures to collect, manage, retrieve, manipulate, analyze and display spatial data.

Remote sensing is the acquisition of information about an object or phenomenon without making physical contact with the object and thus in contrast to on-site observation, especially the Earth.

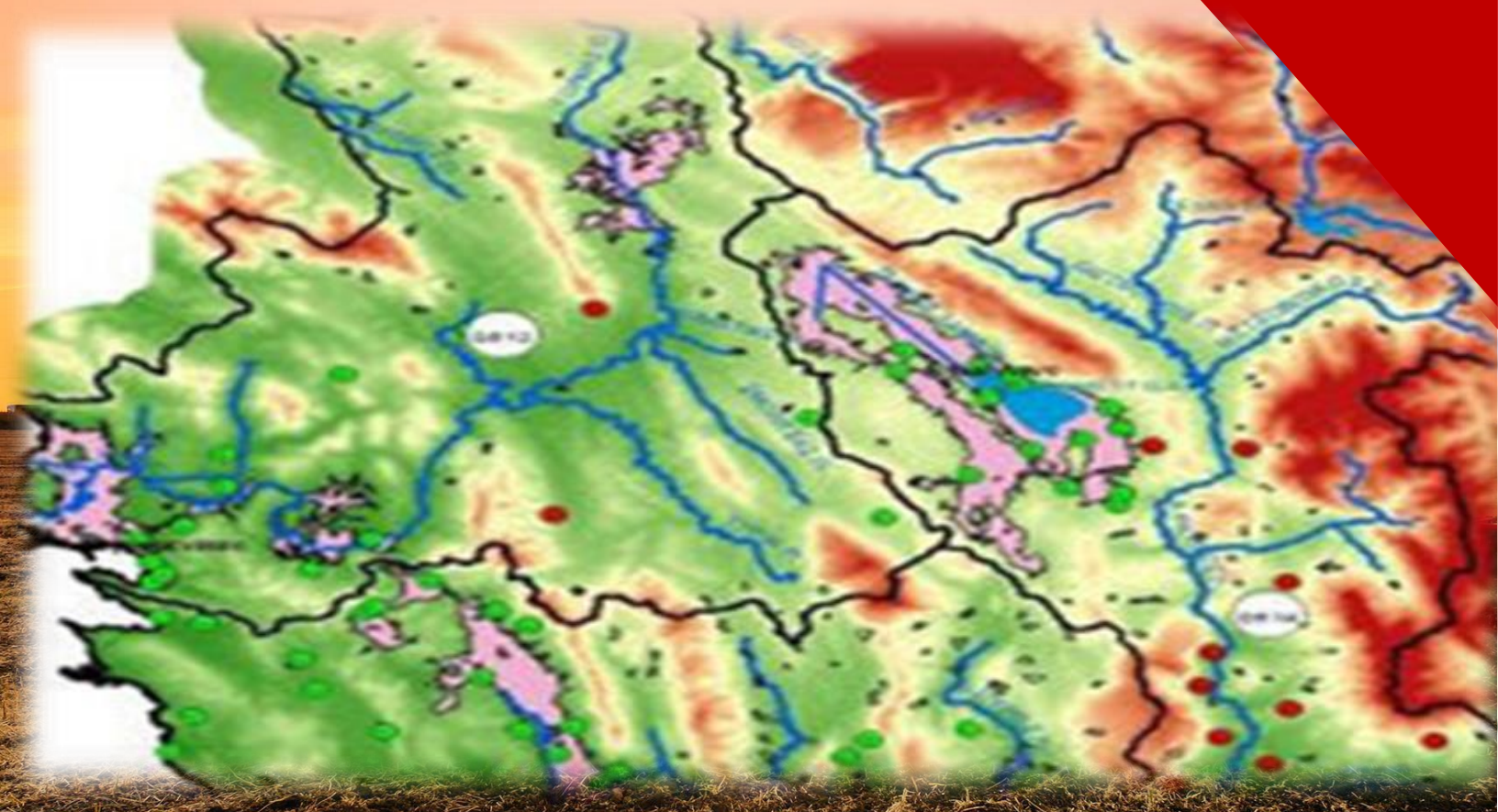
This training workshop will equip participants with handy skills for use in spatial and Earth Observation (EO) as a tool to integrate knowledge about climate change, agriculture, and food security in a meaningful and innovative way.

What you will learn

By the end of the course the learner should be able to:

- ▶ Use GIS as monitoring tool for projects and programmes activities in agriculture and climate change setup.
- ▶ Familiarize with spatial data availability
- ▶ Appreciate the role of spatial data infrastructure (SDI) in agriculture and climate change setup
- ▶ Use participatory GIS (PGIS) at community level
- ▶ Conduct agriculture and climate change modeling using GIS
- ▶ Collect data using Mobile data gathering tools
- ▶ Integrate GIS within new and existing activities in agriculture and climate change.

Trainings in Kigali



Mapping and Visualization of Agriculture and Climate Change using ArcGIS

Content Overview

Most interventions fail due to non-accounting for location data. This training workshop will equip participants with handy skills for analyzing spatial data in agriculture and climate change using ArcGIS.

Who Should Attend?

This course is useful for agricultural professionals who are involved in development in rural intervention and climate change programming. The course is useful for professionals who use spatial data as part of their work and who need to make decisions from such data.



Day 1

Introduction

- ▶ Fundamentals of Monitoring and Evaluation
- ▶ M&E Data Management
- ▶ Data Collection Tools and Techniques
- ▶ Introduction to spatial data gathering and analysis in agriculture and climate change
- ▶ Introduction to GPS, GIS and Remote Sensing Principles
- ▶ Data Acquisition in agriculture and climate change: Using Mobile based GPS (ODK)



Content Overview



Day 2

Data Acquisition and Database Design and Development

- ▶ Data Acquisition in agriculture and climate change: Extraction of feature from other sources
- ▶ Database Design and development for agriculture and climate change programming



Day 3

Editing and management of GIS and Integrating Imagery and Remote Sensing into GIS

- ▶ Editing and management of GIS in agriculture and climate change
- ▶ Integrating Imagery and Remote Sensing into GIS in agriculture and climate change
 - Radiometric and atmospheric correction
 - Temporal normalization
 - Geo-coding and geo-referencing
 - Transformation
 - Signature development
 - Classification and change detection
 - Accuracy assessment



Day 4

Geo-Spatial Analysis and Introduction to cartographic visualization and the mapping process

Geo-Spatial Analysis in agriculture and climate change

- ▶ Geo-processing
- ▶ Creating views and themes
- ▶ Working with themes
- ▶ Working with attribute tables

- ▶ Spatial query and analysis
- ▶ Working with charts
- ▶ Creating a map layout
- ▶ Digital Cartography and Visualization

Introduction to cartographic visualization and the mapping process in agriculture and climate change

- ▶ Components of a map
- ▶ Map design
- ▶ Symbol design
- ▶ Name design and placement
- ▶ Concept of scale
- ▶ Map projections
- ▶ Data pre-processing techniques
- ▶ Thematic mapping;
- ▶ Digital mapping



Day 5

Online publishing of maps and GIS outputs

Online Publishing of agriculture and climate change maps and GIS outputs

- ▶ Working with Google Maps and Fusion Tables
- ▶ Publishing into other web based platforms

Case study

- ▶ Case study of application of GIS and RS technology in agriculture and climate change



OUR SERVICES

Kigali Institute of Capacity Development and Data Analytics (KICDDA) is the Leading Provider of Corporate Training. Looking for corporate training with a difference? Call us Now!



Data Management and Analysis Trainings

Explore our list of training courses on data management and analysis and align yourself with the latest trends in data analytics.



M&E, and Project Management Trainings

Learn how to professionally design and execute monitoring and evaluation exercises, and project management functions.



GIS & Remote Sensing Trainings

Get hands-on skills on how to apply GIS & remote sensing technologies in your area of interest and give your data spatial dimension.



Other Areas of Trainings

Explore our other areas of trainings such as:

- Leadership & Management
- Agriculture & Rural Development

WHY CHOOSE US

- ▶ Our trainers are the best. Seasoned professionals with a proven track record of training.
- ▶ Practicality is emphasized. You will leave this workshop with skills you can apply immediately.
- ▶ The value is unbeatable. Our enrolment fee is among the lowest you'll find. Additional discounts are enjoyed in group registrations.
- ▶ We provide free post-training support in a bid to ensure we make you an expert.

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