GIS Fundamentals (Mapping and Spatial Analysis) using ArcGIS 10.4- TRAINING PROGRAMME

This five days GIS Training programme is designed to help you use GIS to solve spatial related problems and challenges, from disaster analysis, development and policy planning. Anyone seeking to gain proficiency in GIS, particularly in the humanitarian sector, will benefit immensely from this training.

DAY 1 – INTRODUCTION TO GIS AND GIS DATA

TIME	TOPIC	DETAILS
08:30 – 08:45	**Opening**	Introductions and Objectives and General Theoretical Introduction.
08:45 – 10:45	**An introduction to GIS**	• Define GIS • Describe the various applications of GIS • Sharing maps via ArcGIS online
10:45 – 11:00	**Health break**	
11:00 – 13:00	**Exploring GIS data**	• Explore the different data models • Differentiate between spatial and non-spatial data • Preparing data for sharing and re-use
13:00 – 14:00	**Lunch break**	
14:00 – 17:00	**GIS data acquisition and evaluation**	• Explore the different sources of GIS data • Explore the methods/factors to consider in selecting data for use in a GIS project

DAY 2 – DESIGNING MAPS; SPATIAL ANALYSIS AND MAP SHARING

TIME	TOPIC	DETAILS
08:30 – 08:45	**Recap of previous day exercise**	Revising the key aspects learnt in the previous day
08:45 – 10:45	**An introduction to GIS maps**	• Map navigation • Identifying and querying map features

10:45 – 11:00	**Health break**	
11:00 – 13:00	**Geoprocessing tools and spatial analysis**	• Overview of ArcGIS geoprocessing tools • An introduction of spatial analysis using ArcGIS • Solving spatial problems
13:00 – 14:00	**Lunch**	
14:00 – 17:00	**Sharing GIS maps and analysis results**	• Printing and exporting GIS maps • Generating reports and graphs from spatial data • Sharing GIS analysis results

DAY 3 – MAP AUTHORING AND VISUALIZATION

TIME	TOPIC	DETAILS
08:30 – 08:45	**Recap of previous day exercise**	Revising the key aspects learnt in the previous day
08:45 – 10:45	**Authoring GIS maps**	• An overview of the different types of GIS maps • Authoring GIS maps using ArcGIS
10:45 – 11:00	**Health break**	
11:00 – 13:00	**Managing map layers**	• In-depth understanding of map scale • Manage layer visibility using scale ranges. • Organizing layers in a map
13:00 – 14:00	**Lunch**	**Lunch**
14:00 – 17:00	**Data visualization using attributes**	• Evaluating attributes for symbology • Data measurement categories • Data classification • Data symbolization

DAY 4 – DATA EDITING AND MAP LAYOUTS

TIME	TOPIC	DETAILS
08:30 – 08:45	**Recap of previous day exercise**	Revising the key aspects learnt in the previous day
08:45 – 10:45	**Data editing**	• Creating new data using an ArcGIS editor toolbar • Modifying feature shapes and attributes

10:45 – 11:00	**Break**	**Break**
11:00 – 13:00	**Labeling spatial features**	• Understanding map labels • Labeling rules for points, lines, and polygons • Managing labels visibility using map scale
13:00 – 14:00	**Lunch**	**Lunch**
14:00 – 17:00	**Designing GIS map**	• Create a map layout using cartographic design principles. • Map layout and elements • Designing a map layout with multiple maps

DAY 5 – SPATIAL ANALYSIS AND INFORMATION SHARING

TIME	TOPIC	DETAILS
08:30 – 08:45	**Recap of previous day exercise**	Revising the key aspects learnt in the previous day
08:45 – 10:45	**GIS data evaluation in readiness for analysis**	• Transforming geographic coordinate systems • Evaluating data quality • Detecting common errors in GIS data
10:45 – 11:00	**Break**	**Break**
11:00 – 13:00	**Solving spatial problems through spatial analysis**	• Solving spatial problems • The spatial analysis process • Geoprocessing
13:00 – 14:00	**Lunch**	**Lunch**
14:00 – 16:00 17.00	**Sharing spatial information** **Course Closure and award of Certificates**	• An introduction to ArcGIS ModelBuilder • Sharing spatial information • Sharing Geoprocessing packages

DAY 6		
TIME		**DETAILS**
9.00- 12.00	**City Tour**	• Visiting the National Park and the Maasai Market