United Nations
Economic Commission for Africa

Geoinformation and Sectoral Statistics Section (GiSS)

Mozambique: Spatial Planning Training
02 -13 July 2018

MODULE 1: FUNDAMENTALS OF GIS	
Course Description	The course focus is on theoretical concept of GIS. It will provide common understanding on the fundamentals of GIS. Participants will be introduced the basic concepts of geospatial data, geospatial data sources, the most commonly used geospatial models used, as well as most common spatial analysis operations and tools
Course Content	Topics Covered (click to access) • Theoretical concept on GIS: Fundamentals of GIS • Evolution of GIS and Current and Future Trends • Data use and Data sharing concept • Geospatial Data models
Other Resources	https://www.esri.com/en-us/what-is-gis/overview
MODULE 2: ENTERPRISE GEOSPATIAL DATABASE MANAGEMENT SYSTEMS / GEOSPATIAL DATABASES AND GEODATABASE CONCEPTS.	
Course Description	The course focus is on how to apply ArcGIS skills in a multiuser environment, and how this environment differs from that of a personal geodatabase. The course discusses geodatabase behavior in the context of a versioned environment, fundamental versioning workflow procedures, and client-side performance considerations.
Course Content	Topics Covered: • Geodatabase basics: Types of geodatabases; Advantages of a multiuser geodatabase; Connecting to the multiuser geodatabase. • Connecting to the geodatabase: ArcGIS application server. • Importing data: Loading data into geodatabase. • Versioning concepts: Working with versions; Versioning workflow. • Disconnected editing: Checkout and check-in process. • Metadata introduction: Metadata concepts; Essential metadata vocabularies • Viewing metadata: From the Catalog window; From ArcCatalog; From the Table of Contents • Editing metadata: Creating standard-compliant metadata; Validating an item's metadata; Creating thumbnails; Exporting and publishing metadata • Metadata workflows: Creating a metadata template
Other Resources	**http://desktop.arcgis.com/en/arcmap/latest/manage-data/geodatabases**
MODULE 3: SPATIAL MODELING	
Objective	Those completing this course will be able to: • Understand Spatial Modeling concept • Understand the different spatial analysis tools used to model a process • Create surface models using spatial modeling operations • Acquainted with the ModelBuilder environment in ArcGIS • Create models using ModelBuilder to automate geoprocesses

Course Content	Topics Covered: • Spatial Analysis and Modeling Concepts • Surface Modeling and Surface Model examples • Surface Modeling Operations • Creating Models in ModelBuilder
Available Resources	http://desktop.arcgis.com/en/arcmap/latest/analyze/modelbuilder/what-is-modelbuilder.htm http://desktop.arcgis.com/en/arcmap/latest/analyze/modelbuilder/executing-tools-in-modelbuilder-tutorial.htm
MODULE 4: GEOSPATIAL WEB	
Course Description	This course covers the context of geoportals and mapping solutions. These portals and web GIS solutions are defined and explored using a number of platforms, specifically ArcGIS online and interoperability is demonstrated in a practical sense. It is expected that users will implement these solutions to develop their own platforms for sharing geospatial information.
Objective	Those completing this course will be able to: • Understand different Web Technologies • Understand the basics of HTML • Differentiate between types of geospatial web services and how they are used • Explain the main features of a Geoportals • Create Web Maps in a Geoportal • Share content in a geoportal
Course Content	**Topics Covered:** Introduction to Web Technologies. • The World Wide Web • Introduction to HTML and HTML tags • Creating a simple web page Geospatial Web • About geospatial web • Web services • Geospatial portals • ArcGIS Online • Sharing maps/Permissions Using ArcGIS online • Creating Web Maps • Creating apps using WebApp Builder • Creating user controls using Widgets • Sharing WebMaps Building custom Web tasks: • Creating Story Maps • Working with APIs
Available Resources	www.learningzone.rspsoc.org.uk https://doc.arcgis.com/en/ www.lynda.com http://esri.github.io https://www.cdac.in/