



# Training Schedule



Somalia Water and Land Information Management  
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## Basic Information Management

**Class hours:** 7.30 am – 12.30 pm

**Pre-requisites:** Participants should have basic computer skills

**Course Description:** This training is designed to provide knowledge and skills in managing digital information as well as general computer use. The training seeks to address areas in which the participant can learn new concepts, approaches and attitudes for effective information management. Some of the topics covered include; data formats and conversion between different data formats, document management, introduction to the internet and computer security.

Unit	Outline
<b>Management of electronic documents</b>	<ul style="list-style-type: none"><li>• Electronic data formats</li><li>• Electronic image formats</li><li>• Conversion between formats</li><li>• Production and management of electronic documents</li><li>• Digital filing (File and folder structures)</li></ul>
<b>Introduction to the internet</b>	<ul style="list-style-type: none"><li>• Internet Vs. World Wide Web (WWW)</li><li>• Internet hardware and software</li><li>• Browser basics</li><li>• Search engines</li><li>• Downloading and uploading documents</li><li>• Internet messaging</li></ul>

## Computer Hardware and Software

**Class hours:** 7.30 am – 12.30 pm

**Pre-requisites:** Participants should have basic computer skills

**Course Description:** This training enhances the participants understanding of computer hardware and software. It also equips the participants with the knowledge and skills to carry out basic computer hardware and software troubleshooting.

Unit	Outline
Basic Software Trouble Shooting	<ul style="list-style-type: none"><li>• Installing, Uninstalling Software</li><li>• Trouble Shooting Windows XP</li><li>• Trouble Shooting Common Computer Software Problems</li><li>• Trouble Shooting Internet Explorer</li><li>• Computer Security</li></ul>
Basic Hardware Troubleshooting	<ul style="list-style-type: none"><li>• Overview</li><li>• Hard drive errors</li><li>• Monitor errors</li><li>• Scanner errors</li><li>• Mouse errors</li><li>• Floppy drive</li><li>• Conclusion</li></ul>

## Hydromet Data Processing and Analysis

**Class hours:** 7.30 am – 12.30 pm

**Pre-requisites:** Participants should have basic computer skills and experience using Ms Excel

**Course Description:** This training aims at improving the data processing and analytical skills of personnel working with water and land related datasets e.g. climate data. The training covers basic statistical skills, time series modelling, frequency analysis, data analysis and presentation among others.

Unit	Outline
<b>Basic concepts of data analysis and statistics</b>	<ul style="list-style-type: none"> <li>• Introduction</li> <li>• Types of data</li> <li>• Population and sample</li> <li>• Sampling - concepts and methods</li> <li>• Probability and return periods</li> </ul>
<b>Data collection, processing and presentation</b>	<ul style="list-style-type: none"> <li>• Using secondary data</li> <li>• Collecting primary data – measurements, interviewing and mapping</li> <li>• Presenting data – tabulations, percentage and frequencies, charting</li> </ul>
<b>Data analysis – measure of central tendency</b>	<ul style="list-style-type: none"> <li>• Arithmetic Mean</li> <li>• Median and Mode</li> <li>• Relation between Mean, Median and Mode</li> </ul>
<b>Data analysis - measures of dispersion</b>	<ul style="list-style-type: none"> <li>• Methods of computing dispersion</li> <li>• Range and mean deviation</li> <li>• Variance, standard deviation and co-efficient of variation</li> <li>• Percentile, quartiles and inter quartile range</li> </ul>
<b>Data analysis - correlation and regression</b>	<ul style="list-style-type: none"> <li>• Introduction to correlation</li> <li>• Types and degree of correlation</li> <li>• Methods of determining correlation</li> <li>• Linear regression</li> </ul>
<b>Data analysis – time series analysis</b>	<ul style="list-style-type: none"> <li>• Introduction to time series Analysis</li> <li>• Components of time Series</li> <li>• Trend component</li> <li>• Seasonal and cyclical variations</li> <li>• Random factors</li> <li>• Analysis of trend and seasonality</li> </ul>
<b>Application of MS Excel in data processing and analysis</b>	<ul style="list-style-type: none"> <li>• Using Excel for data processing</li> <li>• Using Excel for tabulation, frequency analysis and charting</li> <li>• Using Excel functions for descriptive statistics</li> <li>• Using Excel as a data analysis and statistical tool kit</li> </ul>

## Map Reading

**Class hours:** 7.30am – 12.30pm

**Pre-requisites:** Participants should have basic computer skills

**Course Description:** This training is designed to provide practical knowledge and skills in map reading, assimilation and analysis. Different sets of maps produced by SWALIM are used in interpretation exercises. And in the end, the trainee should be able to perform basic geographic analysis which is necessary for field and office operations.

Unit	Outline
<b>What is a map?</b>	<ul style="list-style-type: none"> <li>• What is a map</li> <li>• Elements of a map – title, map area, legend, scale , north arrow</li> <li>• Map symbols – standard and non standard symbols</li> </ul>
<b>Types of maps</b>	<ul style="list-style-type: none"> <li>• Topographic maps</li> <li>• Orthographic maps</li> <li>• Physical maps</li> <li>• Political maps</li> </ul>
<b>Map symbols</b>	<ul style="list-style-type: none"> <li>• Roads</li> <li>• Tracks or footpaths</li> <li>• Vegetation</li> <li>• Buildings</li> <li>• Rivers and streams</li> </ul>
<b>Elevations on a map (contour lines)</b>	<ul style="list-style-type: none"> <li>• Steep slopes</li> <li>• Gentle slopes</li> <li>• Valleys</li> <li>• Ridges</li> <li>• Summits</li> <li>• Depressions</li> </ul>
<b>Map legend</b>	<ul style="list-style-type: none"> <li>• Map Name</li> <li>• Year of Production and Revision</li> <li>• General Location in State</li> <li>• Next Adjacent Quadrangle Map</li> <li>• Map Scale</li> <li>• Distance Scale</li> <li>• Contour Interval</li> <li>• Magnetic Declination</li> <li>• Latitude and Longitude</li> </ul>
<b>Directions</b>	<ul style="list-style-type: none"> <li>• Parts of a Compass</li> <li>• Map north and magnetic north</li> <li>• Following direction and giving bearings</li> </ul>
<b>Map coordinates</b>	<ul style="list-style-type: none"> <li>• Geographic vs. grid coordinate systems</li> <li>• Geographic coordinate system – major latitudes and longitudes</li> <li>• Converting degree, minutes and seconds to decimal degrees</li> <li>• Grid coordinate system and Somalia UTM grid</li> </ul>
<b>Map scale and distance</b>	<ul style="list-style-type: none"> <li>• Understanding map scale</li> <li>• Scale representation</li> <li>• Map scale and spatial resolution</li> <li>• Small scale maps – Bigger area but less details</li> <li>• Large scale maps</li> </ul>

## Global Positioning System (GPS)

**Class hours:** 7.30am – 12.30pm

**Pre-requisites:** Participants should have basic computer skills

**Course Description:** The aim of this course is to demonstrate how GPS tools can be used in data collection, and how the to download and integrate the data from the GPS tools into Geographical Information Systems (GIS).

Unit	Outline
<b>Introduction</b>	<ul style="list-style-type: none"><li>• How does the GPS work</li><li>• Determining Position</li><li>• Storing Positions</li><li>• How accurate is a GPS</li><li>• Sources of error in the GPS</li></ul>
<b>GPSmap 60cs</b>	<ul style="list-style-type: none"><li>• Overview of GPSMAP 60CS</li><li>• Procedure for Creating waypoints</li><li>• Editing waypoint</li><li>• Deleting waypoint</li><li>• Saving tracks</li><li>• Deleting tracks from the Card</li><li>• Checking the memory of the GPS card</li></ul>
<b>GPSmap 60c Setups</b>	<ul style="list-style-type: none"><li>• System setup</li><li>• Map setup</li><li>• Unit setup</li><li>• Track log setup and Time setup</li></ul>
<b>Downloading GPSData in Map Source</b>	<ul style="list-style-type: none"><li>• Procedure for downloading Waypoints and tracks</li></ul>
<b>Checklist before Using a GPS</b>	<ul style="list-style-type: none"><li>• Briefing</li><li>• Equipment</li><li>• prepare GPS receiver and marking waypoint</li></ul>

## Somalia Dynamic Atlas

**Class hours:** 7.30 am – 12.30 pm

**Pre-requisites:** Participants should have basic computer skills

**Course Description** - Dynamic Atlas is a software used for compiling and distributing spatial information to non-GIS users. The software makes it easy for anyone to use maps in their everyday work. It provides easy access to and manipulation of maps, associated tabular data, related documents, pictures, web sites and more. Another key feature is easy integration with Ms Excel for advanced analysis and information addition.

<b>Unit</b>	<b>Outline</b>
<b>Dynamic maps at a glance</b>	<ul style="list-style-type: none"><li>• Design philosophy</li><li>• Overview of the interface</li></ul>
<b>Dynamic maps functions</b>	<ul style="list-style-type: none"><li>• Topics and user views</li><li>• Using map layers</li><li>• Using the map view</li><li>• Drawing and annotating</li><li>• Related information</li><li>• The spreadsheet, tabular data sets and queries</li></ul>
<b>Spread sheet, Query and administrative functions</b>	<ul style="list-style-type: none"><li>• The spreadsheet's basic functionality</li><li>• Query builder</li><li>• Class rendering</li><li>• Using color schemes</li><li>• Importing a "user" data set</li><li>• Importing a local warehouse</li></ul>
<b>Working with map composer</b>	<ul style="list-style-type: none"><li>• Map composer functionality</li></ul>

## Somalia Water Sources Information Management System (SWIMS)

**Class hours:** 7.30 am – 12.30 pm

**Pre-requisites:** Participants should have basic computer skills

**Course Description:** SWIMS is a database application developed by SWALIM to collect and manage water sources information. It allows users to manage water information within their organizations while at the same time contributing to the national inventory on water. The training aims to enhance the knowledge and skills of the Somali ministry staff in using this software.

Unit	Outline
<b>SWIMS installation, activation and user login</b>	<ul style="list-style-type: none"> <li>• SWIMS software installation</li> <li>• SWIMS activation process</li> <li>• SWIMS login process</li> </ul>
<b>SWIMS database management</b>	<ul style="list-style-type: none"> <li>• Adding a user profile</li> <li>• Editing a user profile</li> <li>• Changing a user password</li> <li>• Backing up data</li> <li>• Restoring data</li> <li>• Importing and exporting data</li> </ul>
<b>Entering and managing water sources data</b>	<ul style="list-style-type: none"> <li>• Adding a water source record</li> <li>• Editing a water source</li> <li>• Attaching external files to a water source record</li> <li>• Editing a water source location</li> </ul>
<b>Entering and managing metadata records</b>	<ul style="list-style-type: none"> <li>• Add metadata record</li> <li>• Editing a metadata record</li> <li>• Creating a master metadata record</li> </ul>
<b>Entering and managing interventions</b>	<ul style="list-style-type: none"> <li>• Adding an intervention to a water source records</li> <li>• Editing a water source intervention records</li> </ul>
<b>Generating reports</b>	<ul style="list-style-type: none"> <li>• Generating a detailed information report</li> <li>• Generating an essential information report</li> <li>• Generating an intervention report</li> <li>• Generating a source history report</li> <li>• Generating a metadata listing report</li> <li>• Generating an information management report</li> </ul>
<b>SWIMS help &amp; documentation</b>	<ul style="list-style-type: none"> <li>• Using the help feature</li> <li>• Viewing and printing SWIMS documents</li> </ul>