

<b>Course Completion Report Introduction to ArcGIS Software</b>	Course 4.1	<b>NORPLAN</b> 
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## 1 CONTENT

- Course data
- Course objectives
- Training focus group
- Practical and theoretical work
- Course evaluation: comments from participants
- Recommendations for next or other courses

## 2 COURSE DATA:

Name of course:	Introduction to ArcGIS Software
Number of participants:	18 from: RuWatSIP, MRRD, MAIL, MEW, DACAAR
Location for training:	RuWatSIP Conference Room, MRRD
Date of implementation	6 - 8 July 2013
Course trainer	Abdullah Barat
Supporting presenters	Prof. Zarinkhail

## 3 COURSE OBJECTIVES

The ArcGIS Software is the first course planned in series of GIS courses to build capacity of GIS users in Afghanistan. This course is an introductory and included conceptual topics. The main objective of the course was to introduce using of ArgGIS software in practice. ArcGIS is an ESRI product and flexible software for using in geographical information systems. This product is very common in Afghanistan both in government and private sectors. The general view and extensions of ArcGIS and focus on specific functionalities of this software was targeted to be taught to the participants. Approach of implementing sample activities during course session enriched more the knowledge transfer to trainees.

Here-under are outlined objectives of the course.

- The Main Objective of the course was to demonstrate Introduction of Arc GIS Software in General.
- Explaining the Principles and basics terminologies of GIS
- Explaining the Concepts of GIS, and sharing practical examples of the GIS in the field of water Supply
- Describing basics of ArcGIS Application, and furnishing it with practical examples
- Practical Sessions and exercises to work with ArcGIS 10 environment in ArcMap and working with ArcCatalog
- Working with projections and coordinate systems
- Creating and editing shapefiles
- Make students to be able generate a GIS Map

## 4 TRAINING FOCUS GROUP

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This training was planned to train people who are working in the field of GIS and data management. Fellows responsible for data analysis, data mapping and reporting to represent data figures on maps were the main participants and set as target group for the training. In specific, staffs of RuWatSIP MIS-GIS unit who are directly involved in data management and GIS activities were in focus. Capacity building of the staff of RuWatSIP MIS-GIS unit will let the current and new systems be maintained and kept sustainable for the long term.

Besides, some technical people in the fields of engineering and water sector organisers were also participated in this course. Staffs in this group are using GIS related issues in their routine activities. Currently, GIS is using in most organisations in Afghanistan. In this training, the focus group consisted from data management, GIS and engineering units in mentioned organizations.

The focus group of the ArcGIS Software Course was: 3 from MIS-GIS Unit/RuWatSIP, 2 from MAIL, 2 from DACAAR, 2 from MEW, 3 from ESD/MRRD, 1 from WRD/MRRD, 5 from Engineering/RuWatSIP.

## 5 Practical and theoretical work

Some practical sessions conducted during 3 days of training. Participants were very eager to earn more knowledge and experience during practical sessions. The practical sessions were containing bellow activities:

Working with ArcMap Environment (Standard Toolbar, Tools Toolbar, Difference between Add and Open in Arcmap , Working with ToC, using data view and layout view, Selection Methodologies, Using Bookmark) Project a shapefile, Convert the projections from Geographic to UTM and vice versa, Creating Shapefiles with all types of geometries, Editing Shape Files, Conversion of Vector to Raster, Symbology, Labelling, Multiple Labelling and assigning symbols, querying shapefiles, Adding survey points and create a permanent shapefile, exporting attribute table information from the shapefile, Area calculation, and finally generating a Map which was containing all practices related to the map generation like (working with Data view and Layout view, inserting map elements, page setup, exporting map and other activities related to the map design)

Theoretically, GIS components and explanation of each component, GIS functions and explanation of each function in detail, GIS data sources, GIS definition, GIS and GIS maps usage in different fields, Map definition and explanation, GIS concepts including GPS coordinate systems, usage and common types used in Afghanistan were presented. Map projection and common projection types in Afghanistan, map scale explanation and examples of large scale map and small scale map, explanation of feature, vertex and geometry types of line, point and polygon, illustrating examples of line, point and polygon from the GIS Maps and Actual Geography on the ground, Defining GIS as sandwich technology and means of how layer are over each other, explanation of GIS data formats and differences between vector and raster, usage of vector and raster data, practical map examples of vector and raster data from same location, use of GIS and data management in the government of Afghanistan, map examples from other projects specially water projects presented, some examples of analysis with GIS, sharing GIS related common questions with the trainees to activate self motivation in trainees as well as evaluating of the answers they have found from their own attempts, which finally a discussion for the correct answers each day of the training.

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## 6 Course evaluation: comments from participants

The course evaluation is available on the web in full with comments. In summary the questions for evaluation were as follows:

**Question 1:** Did the training course meet your expectations? 1=Completely, 2=Partially, 3= Not at all,

Response: Completely : 44%, Partially 50%, Not at all 6%.

**Question 2:** What do you think about the overall relevance of training course? Considering the limits on your time and the topics discussed? 1= Too Long, 2= Just right, 3 = Too short

Response: Too Long : 0%, Just right 39%, Too short 61%.

**Question 3:** How the relevant was the training workshop to your organization or project's need? 1= Very relevant, 2 = Somewhat relevant, 3 = Not relevant

Response: Very relevant: 89%, Somewhat relevant 11%, Not relevant 0%.

## 7 RECOMENDATIONS IF THE COURSE WAS TO BE REPEATED

1. Attendance of participants need to be more precise. Some trainees join the training session even at the end of session 1 in the morning. Attendance document should be circulated and signed at the start up to 30 minutes; trainees coming late can sign under a red line.
2. To go parallel with the focus group and have targeted participants, a pre-test can be added. It will also be good to include either daily quizzes or a post-test. Then we can have two type of certificates (attendance certificate and successfully completed certificate); this will give value to our certificates to be more professional.
3. Official agenda of the training course should be covered during official time (9:00 to 15:30) every day. If trainees need more time to practice, trainer can only work with them and cover additional topics excluded from the anticipated agenda. This is because part of trainees maybe interested to work more: before 9 am and after 3:30 pm.

Prepared by: Abdullah Barat and Prof. Zarinkhail, Norplan, July 2013