Palestinian National Authority
PALESTINIAN WATER AUTHORITY

السلطة الوطنية الفلسطينية
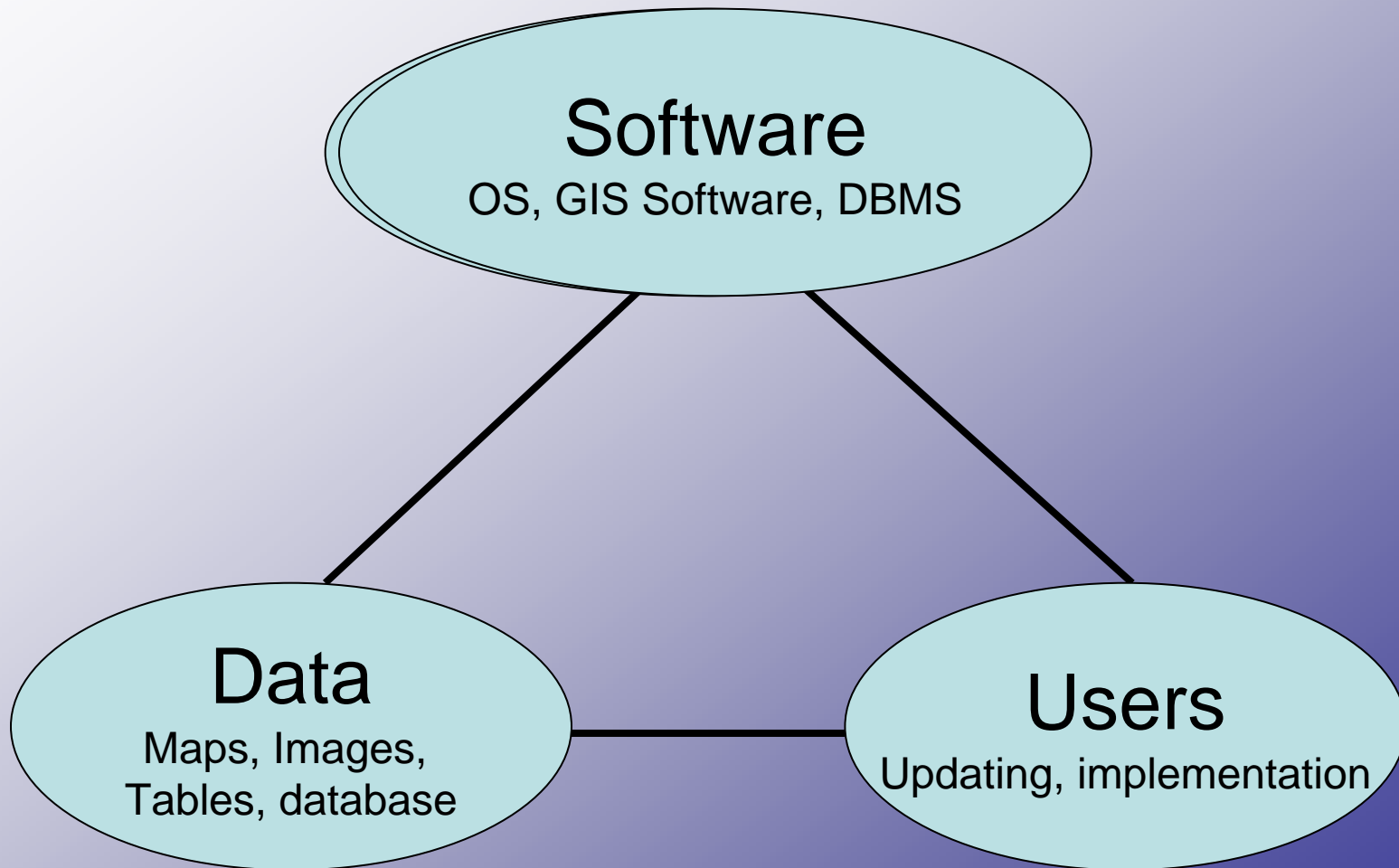سلطة المياه الفلسطينية

GIS and Water Information

Eng.Baha Qanier
NFP-Data Manager

What is GIS

GIS is information system to input, retrieve, process, analyze and output geographically referenced data or geospatial data to support decision making for planning and management

GIS Components

Software
OS, GIS Software, DBMS

Data
Maps, Images,
Tables, database

Users
Updating, implementation

Why GIS for PWA

- Geospatial data better maintained in a standard format
- Revision and updating easier
- Search, analysis and output easier
- Better decision making
- Sharing and exchanging data
- Time and cost saved

GIS and Water Data

❑ Data Input

❑ Data Management

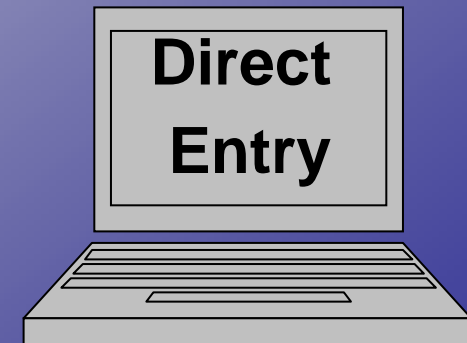❑ Data Manipulation

❑ Data Analysis

❑ Spatial Data Output

Data Input

o Input data by digitizing, scanning, or direct coordinate entry

o Correct errors and add features

o Identified a spatial features (codes, names)

Data Input

Manual Digitizing
Scanning

Maps

Satellite Images

Water Database

Data Transfer

GPS

Direct Entry
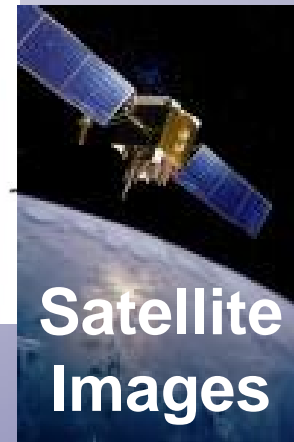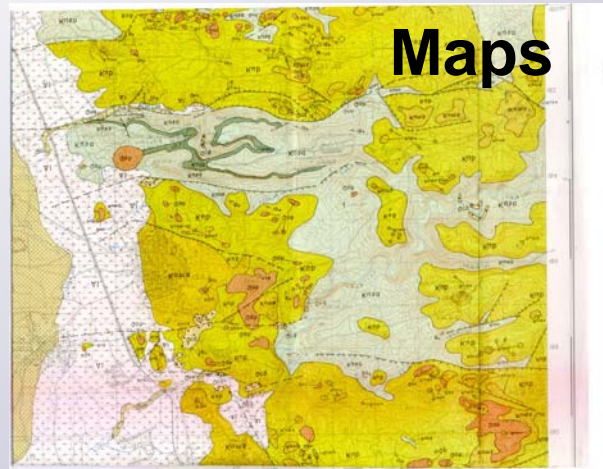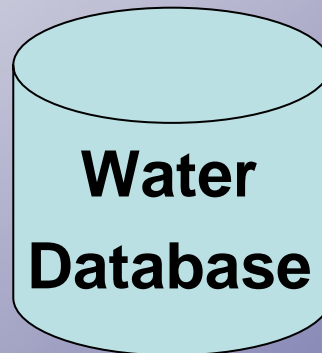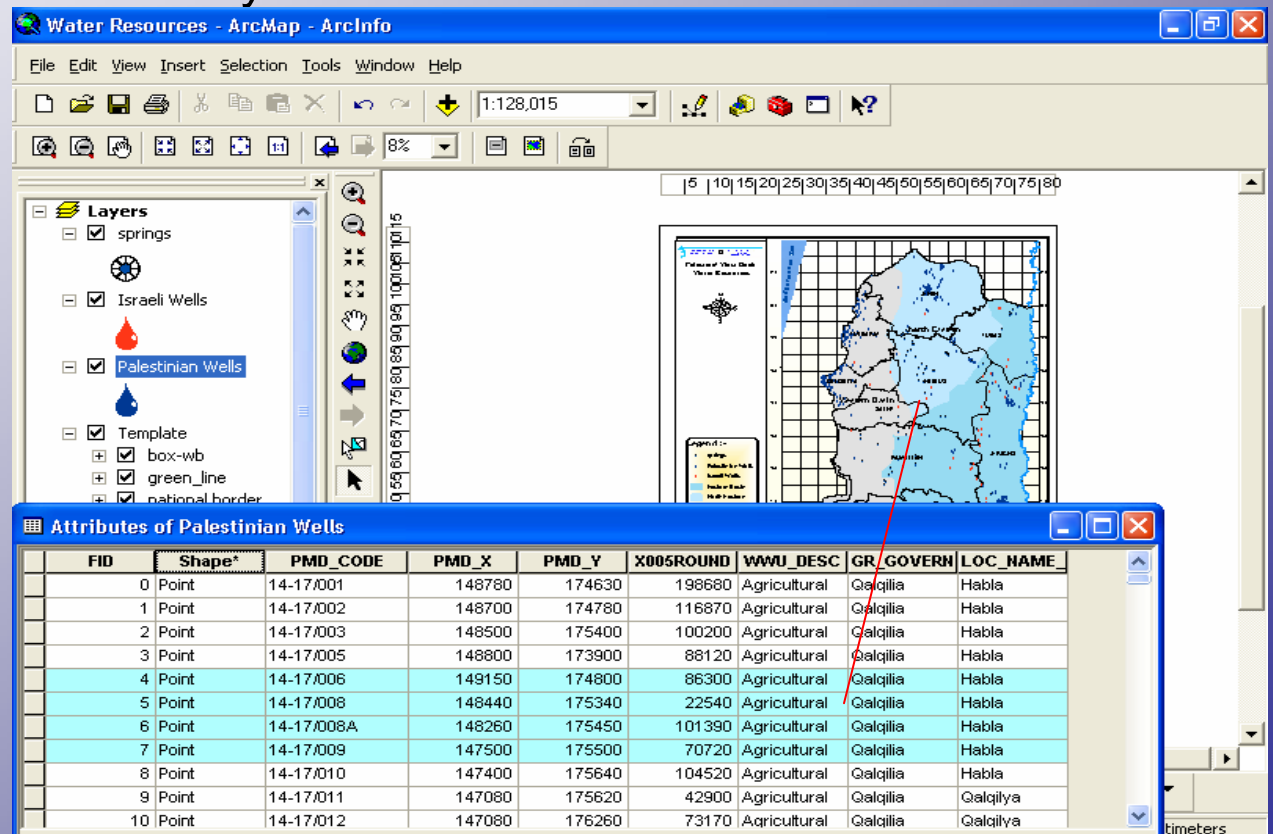
Data Management

o Link attribute data to objects

o Link to databases

o Make changes in existing db

o Import/export form other systems

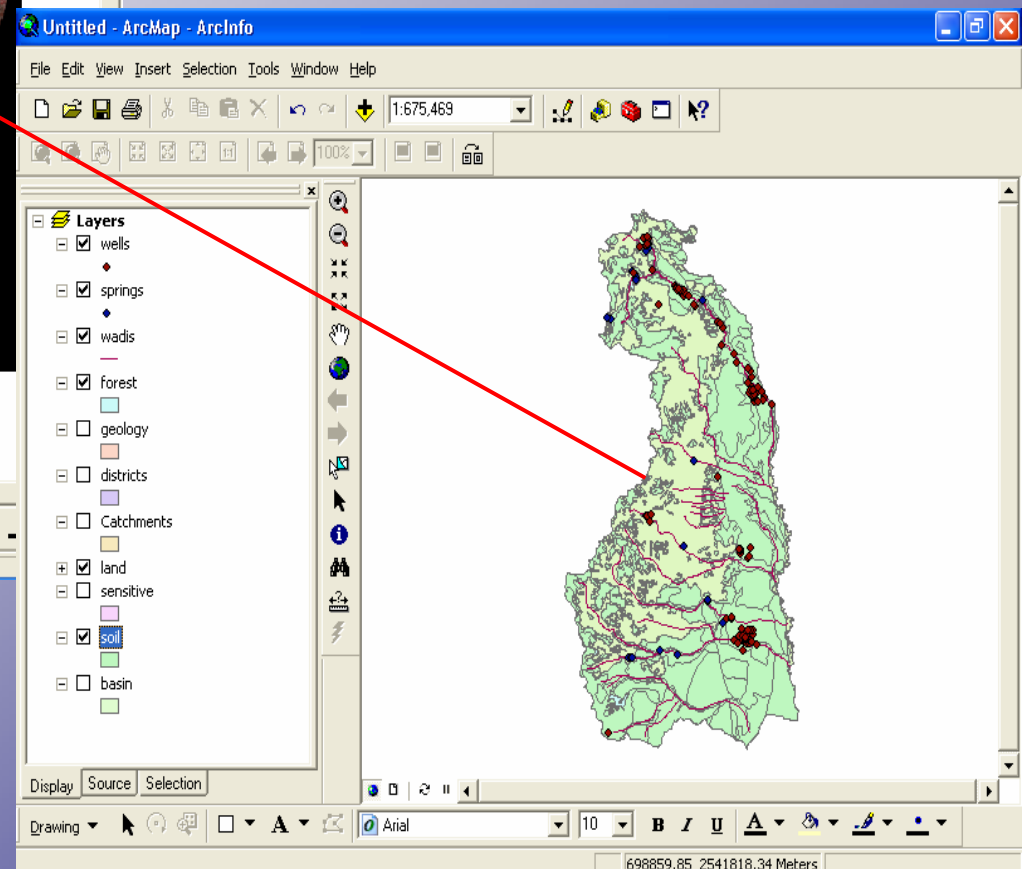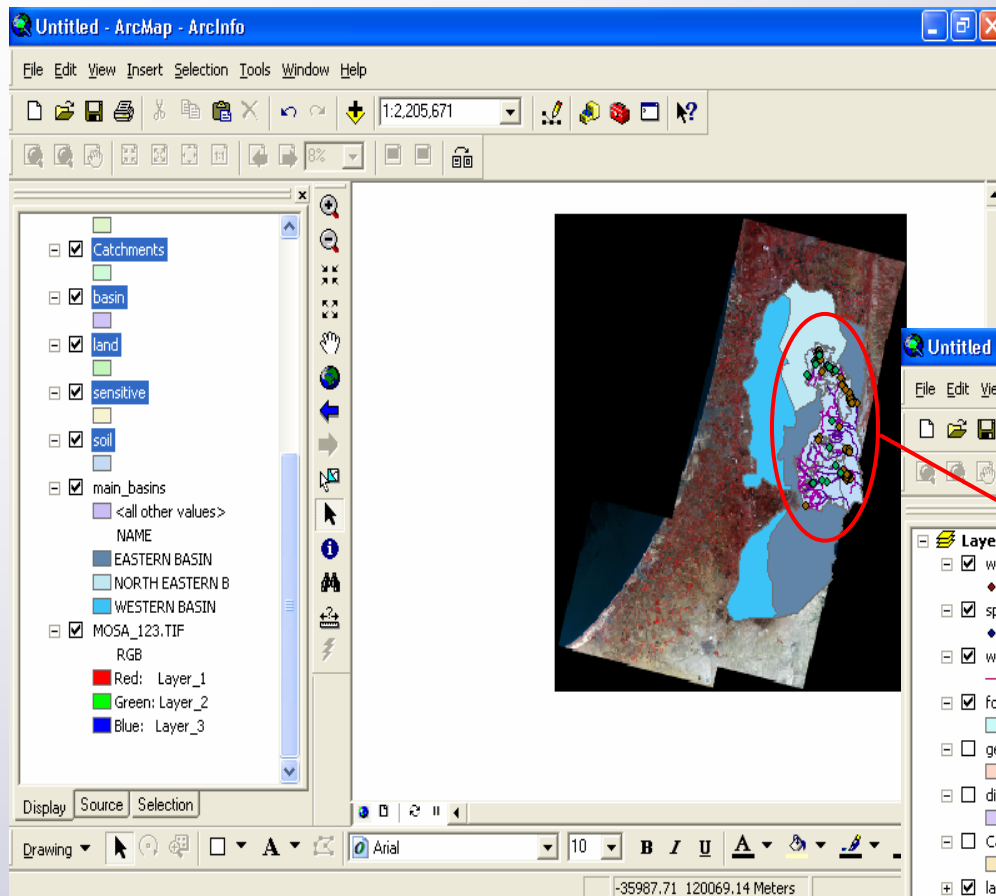# Data Manipulation

o Make maps form different sources
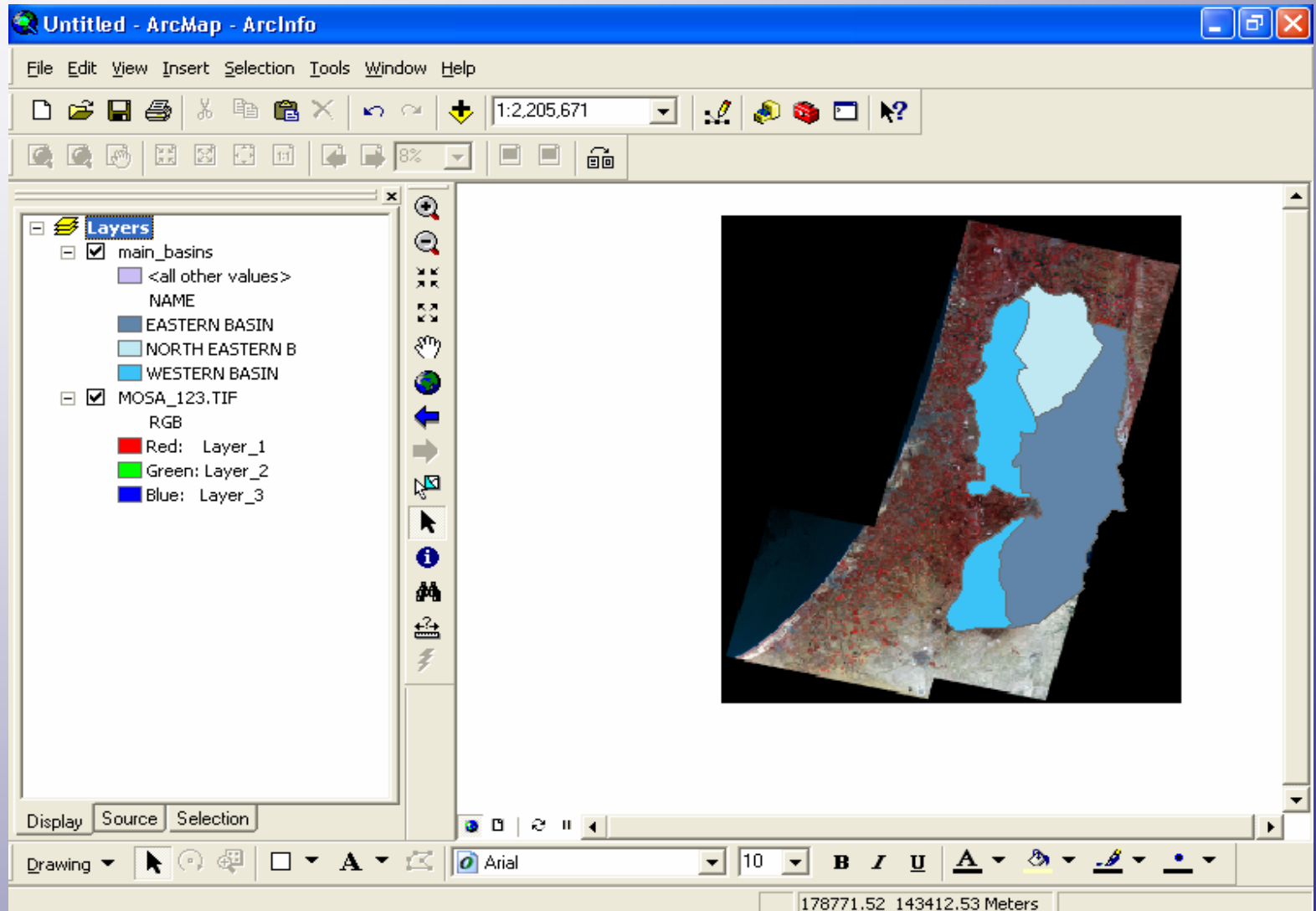
Data Manipulation

o Transformation of coordinates

o Projection change
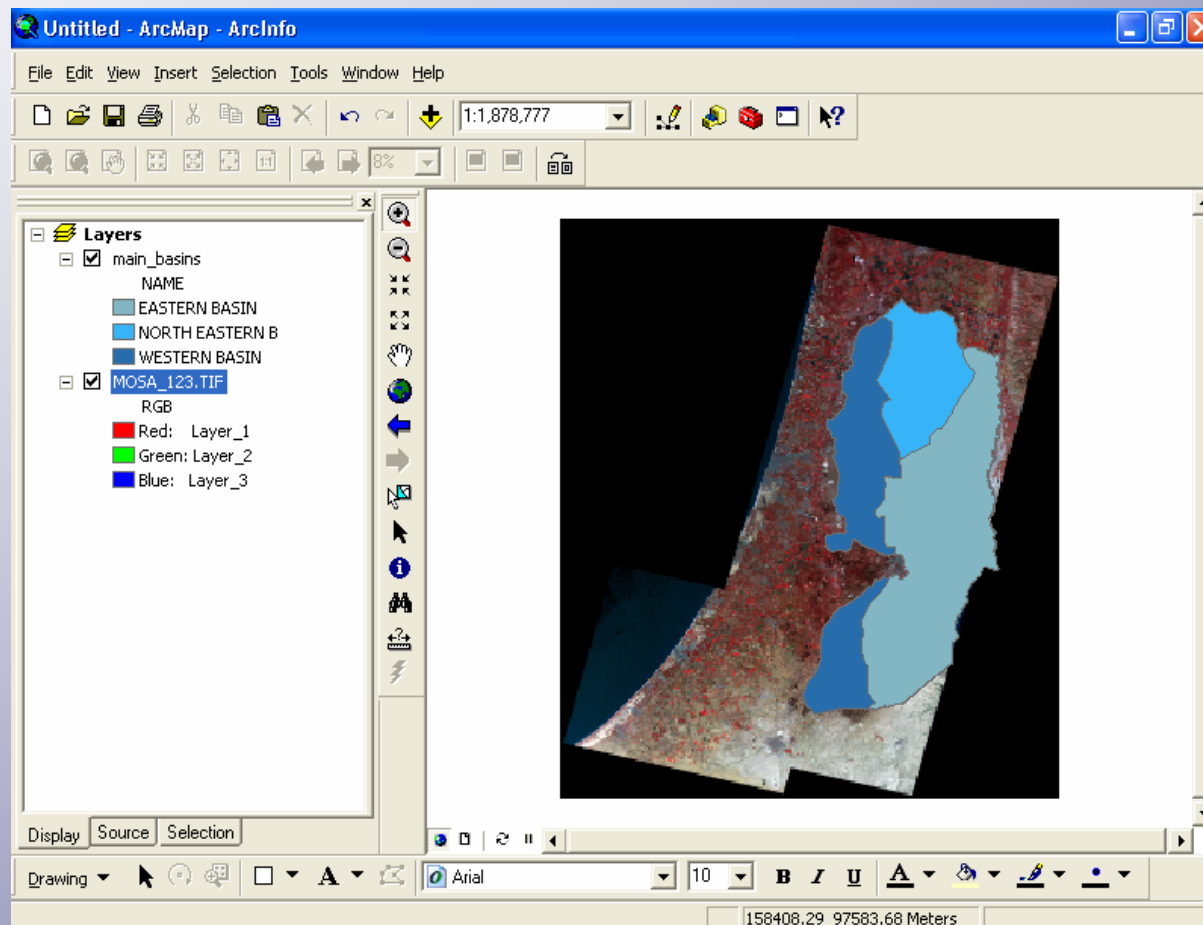
Data Manipulation

Data Analysis

o Query: retrieve data according to the operator specifications

o Reclassification: reassign new thematic values to spatial feature

o Coverage rebuilding: is a boundary operation to create new coverage identify by users

o Connectivity analysis: to analyze the connectivity between points, lines and areas in terms of distance, area…

Query

Query

Reclassification

Spatial Data Output

Displays

Tables

Maps

Reports

Beneficiary of GIS

➢ Provide different types of information in water sector for

  ❖ PWA Staff

  ❖ Students

  ❖ Projects

  ❖ Researchers

  ❖ Different institution in water sector

➢ Provide the decision makers the necessary information

The Future

- Develop a Web Based system to be linked to NFP web site

The Future

EMWIS NFP_Palestine (Web Client)

Web server

ArcIMS Server

PWA Water DB

Application

The beginning...