

# IT Usage in GIS field in Afghanistan

Usage of GIS in AGCHO

Sincere

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Kabul

## **Afghan Geodesy and Cartography Head Office (AGCHO)**

- AGCHO was established in 1958 as National Mapping Authority
- Primary GIRoA organization for implementing, developing and services of Geodesy, Cartography and meta data.
- Afghanistan Spatial Data Infrastructure (ASDI).
- Standardization and Romanization of Geographic names

# Achievement

- Compilation different scale topographic maps of country.
- Large scale map of same cities.
- Establishment of horizontal, vertical network for country.
- Plane survey of area for many development projects.

# Use of digital technology

- Arc view 7.3 used on 2003 in AGCHO.
- Providing of map making soft wear:
  - Arc GIS 9.3 , Erdas Imaging , Plts Tool.
- Digital work station of photogrametry.
- Surveying Equipment:
  - GPS , Total station , Electronic Level.

# Capacity building

- Sending employee to courses and workshops.
- Sending employee to other country:  
Japan, India, Nepal.
- Training center in the office:  
increase professional knowledge of our staff, and other governmental  
agencies.

# Digital products

- Shape files:
- Administrative boundary, Hydrologic features , Roads , villages.
- Digital 1/5000 maps of Kabul with the help of JICA Japan.
- ICM maps of Afghanistan with help of NGA USA.
- Digitizing 1/25000 maps of Kabul City.

# Main points of workshop

- Where is data ?
- Data is with all agencies
- AGCHO has all topographic data
- Static data is with all agencies but most of them doesn't have x,y value (crucial problem)

# Ownership of data

- Each agencies is owner of his own data.
- No interest for sharing data.
- Lack of information about existing data.



# Data quality

- Accuracy of data.
- Date of data.
- Data standards.
- Formats of data.
- Maintenance and updating of data.
- Manipulate of data.

# What do we need

- Afghanistan Spatial Data infrastructure (ASDI).
- Data bank.
- Meta data.
- Strengthening ASDI need honest data sharing.
- Current law restriction in governmental organization

# Advantage of digital system in the field of map making

- Good data with high accuracy.
- Preventing to lose time and tedious work.
- Easy change of data with different Scale
- Easy update
- Storing of data
- Data transfer and sharing.

# Disadvantage of digital system in the field of map making

- Availability of free soft wear in the market
- Free data are available.
- Lack of Cartographic knowledge and proficiency.
- Lack of standards and symbols.

Result:

Poor maps (visualized Spatial data)

# Available soft wear in AGCHO

- Use of Arc GIS 9.3 and Arc GIS 10.2 illegal Crack soft wear.
- Compilation of ICM and AIM maps of Afghanistan.
- Update of administrative boundary based on information from government.
- Working with related organization to have a unique list of Afghanistan villages.

# Suggestion

- Strengthening of educational section that teaching subjects related to geomantic specially surveying and map making.
- Sharing of knowledge and experience.
- Strengthening ASDI need cooperation of all government and non government organization.
- Giving enough budget for organization that are working with spatial data to have technology and related soft wear.