Improving Water Management in Punjab (Pakistan) Barani Areas through use of Geospatial Technologies

Agency for Barani Areas Development (ABAD)

Pakistan Space and Upper Atmosphere Research Commission (SUPARCO)
Overview

“Strengthening of Database of ABAD with GIS & RS Techniques and GNSS Surveying”

• From older Methods, Practices and Data
• To Modern geospatial tools, recent data, systematic; organized and readily available database
Objectives

“Strengthening of Database of ABAD with GIS & RS Techniques and GNSS Surveying”

• Development of Spatial Database
• Identification of Potential Area for Development
• Capacity Building of ABAD
Development of **Spatial Database**
Development of Spatial Database
Identification of Potential Area for Development
Identification of Potential Area for Development
Identification of Potential Area for Development
Identification of Potential Area for Development
Identification of Potential Area for Development
Identification of Potential Area for Development
Multicriteria Parameter – Rainfall

Legend

- District Boundary
- Annual Total Rainfall (mm)
  - High: 1800
  - Low: 250

Source: TRMM

Annual Rainfall 2012
Min: 491 Max: 1304
Multicriteria Parameter – Soil
Multicriteria Parameter – Land Cover

Legend
- District Boundary
- Land Cover Class
  - Bare Areas
  - Bare Areas with Sparse Natural Vegetation
  - Built-up Area
  - Crop Irrigated
  - Crop Rainfed
  - Crop in Flood Plain
  - Natural Shrubs and Herbs
  - Natural Trees
  - Natural Vegetation in Wet Areas
  - Orchards
  - Wet Areas
Multicriteria Parameter – Slope

Legend
- District Boundary

Slope (%)
- 0 - 1
- 1 - 2
- 2 - 3
- 3 - 4
- 4 - 5
- 5 - 10
- 10 - 15
- 15 - 30
- > 30
Capacity Building of ABAD

- Establishment of **RS GIS Lab** in ABAD
- Hiring of **RS & GIS Experts** in ABAD
- Formal **Trainings** on RS, GIS and GNSS
- On Field **Trainings**
Thank You