

AGRICULTURE INFORMATION SYSTEM

Building Provincial Capacity in Pakistan for Crop Estimation, Forecasting, and Reporting based on the integral use of Remotely Sensed Data GCP/PAK/125/USA



3RD TARGETED TRAINING COURSE: Advanced Training on Monitoring of Crops through Satellite Technology 25-29 June, 2012 - Karachi, Pakistan

As Part of the “Monitoring of Crops through Satellite Technology-Phase II”, the **Government of Pakistan** has requested the **Pakistan Space and Upper Atmospheric Research Commission (SUPARCO)** and the **Food and Agriculture Organization of the United Nations (FAO)** to organize an on-the-job training at the **National Center for Remote Sensing and Geoinformatics (NCRG)** of Karachi to develop local expertise in monitoring crops and crop damages from natural disasters through satellite technology.

PROJECT BACKGROUND

The main goal is to help Government of Pakistan integrate the use of remotely sensed data into existing data collection, analysis and dissemination systems and to improve accuracy and timelines of agricultural statistics. In the longer term, the project aims to develop national capacity for agricultural monitoring and disaster risk management in response to food insecurity.

FAO provides technical assistance and supervision, while SUPARCO is the national implementing agency, working in close collaboration with the Ministry of National Food Security and Research (MinNFSR), the Crop Reporting Services (CRS) at a provincial level, the Pakistan Meteorological Department (PMD) and Federal Bureau of Statistics (FBS).

TRAINING SUMMARY

Remote sensing and GIS approach is fast track, efficient and provides temporal information to estimate crop area, production and yield. Crop area estimation is done by image classification and is cross checked by area frame technique. Ground truth surveys are organized to obtain online field information. Weather, irrigation, fertilizers and satellite Normalized Difference Vegetation Index (NDVI)'s data are taken as inputs for crop yield modeling.

Pakistan is facing severe weather-related disasters affecting agriculture; thus, monitoring of crop damages through satellite technology is also integrated in this training to communicate adaptation strategies on root level.

Weather and agriculture experts are invited to share national policies and their implementation about food security in Pakistan.

TRAINING FOCUS

- Introduction to remote sensing in agriculture
- Methodology for crop area estimation for crops using satellite techniques
- Satellite image classification technique for crop area estimation
- Satellite based area frame technique
- Crop yield estimation and forecasting
- Water resources development and management
- Monitoring of crop damage due to natural disasters

TARGET GROUP

Staff from Provincial Crop Reporting Services with background in GIS, Remote Sensing, Environmental Sciences, Agro-Forestry and Cartography.

EXPECTED OUTCOME

CRS officials should understand the procedure of crops monitoring through satellite technology and they will be able to estimate crop area and forecast yield and production on provincial level.

