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

4th TARGETED TRAINING COURSE: Advanced Training on Monitoring of Crops through Satellite Technology for CRS staff **12-16 November, 2012 at SCF-Lahore**

*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 United Nations (FAO)** to organize an on-the-job training to develop local technical and methodological expertise for timeliness of reliable crop statistics on crop acreage and yield.*

PROJECT BACKGROUND

The main goal is to help Government of Pakistan in the integral 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 Pakistan Bureau of Statistics(PBS).

USDA is supporting the project through provision of appropriate funding to train staff of CRS in the assimulation of appropriate technologies.

TRAINING SUMMARY

Remote sensing and GIS approach is fast track, efficient and provides temporal information for agricultural crop monitoring.

Crop area estimation is done by image classification and is validated by area frame techniques. Crop yield model based forecasting/estimation utilizes agro-meteorological, irrigation, fertilizers and satellite NDVI's data. Ground truth surveys campaigns are carried out to obtain field information.

Pakistan is facing severe weather related disasters that had adverse affects on agriculture, so monitoring of crop damages through satellite is also integrated into training to communicate adaptation strategies at grass root level. Weather and agriculture experts are also involved to develop national policies and their implementation for agricultural development and other agro-economic parameters.

Training focus

- Introduction to Remote Sensing in agriculture
- Methodology for different crop area estimation techniques.
- Inter comparison between crop area frame and satellite image classification techniques.
- Crop modeling concepts and models
- Crop yield modeling for forecasting and estimation
- Mapping & monitoring of crop damages due to river/rain floods
- Ground validation and survey techniques.

Target group

Staff from Provincial Crop Reporting Services with back ground 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.