

Remote Sensing and GIS Applications in Carbon Forestry

March 10, 2017

The Department of Electronics and Communication Engineering under the aegis of Human Resource Development Center (HRDC), was organized the 19th IIRS Outreach Programme on “Remote Sensing and GIS Applications in Carbon Forestry” from February 16, 2017 to March 10, 2017 in association with Indian Institute of Remote Sensing, Indian Space Research Organization, Department of Space, Govt. of India, Dehradun, India. Indian Institute of Remote Sensing (IIRS) under Indian Space Research Organization (ISRO) is a premier Training and Educational Institute set up for developing trained professionals in the field of Remote Sensing, Geo Informatics and GNSS Technology for Natural Resources, Environmental and Disaster Management.

The coordinator of IIRS Outreach Programme is Mr. Imran Ullah Khan, Jr. Associate Professor, Electronics & Communication Engineering Department, Integral University.

Following topics were covered during the outreach programme:

- ❖ Global carbon cycle & climate change: An overview;
- ❖ Forest-based strategies for mitigating climate change;
- ❖ Global Earth observation initiatives for carbon forestry;
- ❖ Spectral signature of vegetation and factors affecting spectral response;
- ❖ Application of satellite remote sensing in mapping and monitoring of forest cover and land use;
- ❖ Application of satellite remote sensing in mapping and monitoring of forest carbon degradation ;
- ❖ Application of satellite data in forest sampling design for biomass/carbon quantification;
- ❖ Application of optical remote sensing in forest biomass/carbon estimation;
- ❖ Application of high resolution data for forest biomass/ carbon inventory;
- ❖ Application of LiDAR in mapping of forest structure and biomass/carbon estimation;
- ❖ Application of microwave remote sensing in forest biomass/carbon estimation;
- ❖ Application of eddy covariance technique in carbon flux measurement and modelling;
- ❖ Application of satellite remote sensing in near-real time forest fire assessment and monitoring;
- ❖ Application of satellite remote sensing in forest biomass burning and carbon emission monitoring;
- ❖ Application of Geoweb portals and services in forestry studies

Overall this outreach programme provided the much needed and timely insights on various aspects of carrying out research and its implementation.