

RS Activity Organisation

- Polish Space Agency is established
- Ministry of Science and Higher Education**
coordinates **EU Copernicus program**
- Ministry of Economy and PARP** supports **ESA's activity**
PARP - Polish Agency for Enterprise Development, it acts on behalf of the Ministry
- Ministry of the Environment**
coordinates Polish participation in GEO



POLSA - POLish Space Agency

Scientintific base





NARODOWE CENTRUM NAUKI

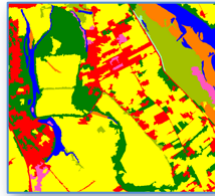


- B-First
- SAR Classification
- GECCO
- AF3
- EDEN
- SPEKTROP-L
- SCARF
- ArtISS
- GLOBE

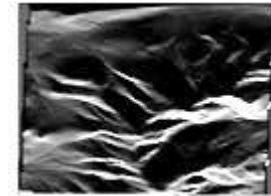
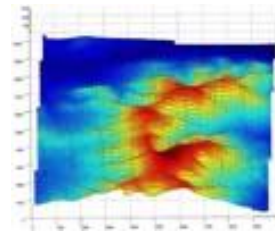
Finished

- G-NEXT
- G-SEXTANT
- EOPOWER
- GMES-Poland
- PEARL
- LIMES
- ASTRO+
- Tango
- G-MOSAIC
- Geoland2, SATChMo
- UrbanSAT
- GEONetCab
- Intelligent Camera
- Multifractals

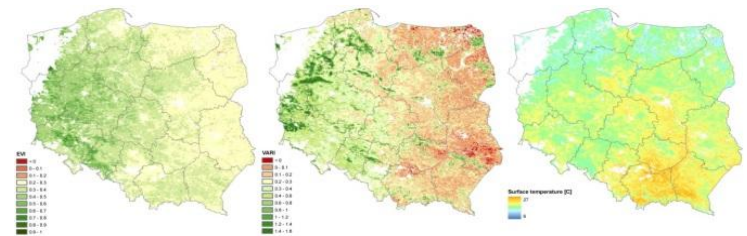
Land cover classification
and change detection



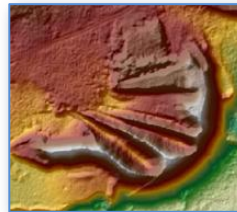
Modelling of SAR backscattering beam



Land surface & climat
monitoring



Environmental modelling



Software development
and integrated applications



Copernicus (GMES) GIO Land Monitoring CORINE Land COVER in Poland

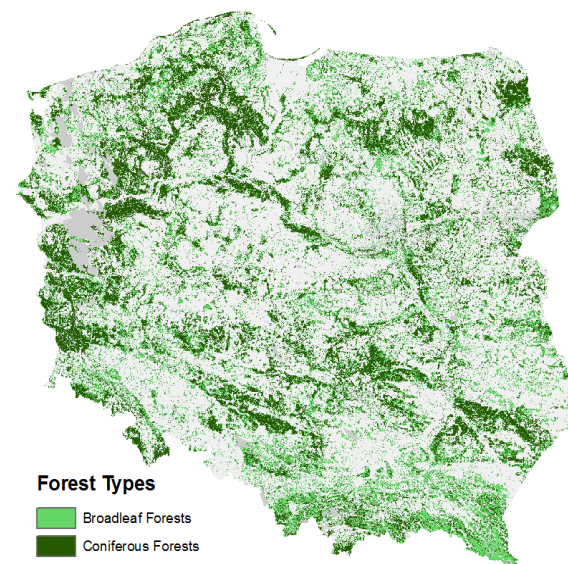
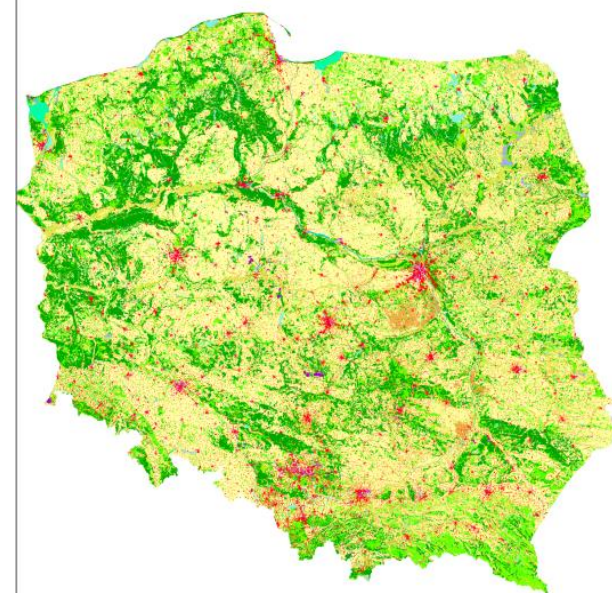
Institute of Geodesy and Cartography (IGiK) acts as one of the National Reference Centres (NRC) for Land Cover to advise on land cover specific issues

IGiK was responsible for:

- production of all CORINE LC inventories: CLC1990, CLC2000, CLC02006 and CLC2012.

- verification and enhancement of the 5 high resolution layers (HRLs):

Imperviousness,
Forest (Tree cover and Forest type),
Permanent grasslands,
Wet lands
Water bodies



FOREST MONITORING

- Assessment of forest above ground biomass using a synergy of optical and radar data at regional and national scale
- Investigation of forest structure using radar data (i.e. ALOS-2, Sentinel-1, TerraSAR- X)
- Assessment of forest degradation caused by fires, air pollution and climate change (i.e Modis data)



Current projects for forestry:

GLOBBIOMASS DUE - PROJECT IS TO BETTER CHARACTERIZE AND TO REDUCE UNCERTAINTIES OF AGB ESTIMATES BY DEVELOPING AN INNOVATIVE SYNERGISTIC MAPPING APPROACH IN FIVE REGIONAL SITES FOR THE EPOCHS 2005, 2010 AND 2015 AND FOR ONE GLOBAL MAP FOR THE YEAR 2010. ESA PROJECT



REMBIOFOR - REMOTE SENSING BASED ASSESSMENT OF WOODY BIOMASS AND CARBON STORAGE IN FORESTS FUNDED BY NCBIR PROGRAM BIOSTRATEG

WICLAP - ECOSYSTEM STRESS FROM THE COMBINED EFFECTS OF WINTER CLIMATE CHANGE AND AIR POLLUTION - HOW DO THE IMPACTS DIFFER BETWEEN BIOMES?





Land cover and it's change

- Land cover mapping (e.g. with use of Landsat composites)
- Data integration:
 - optical&radar (e.g. Sentinel-1 and Landsat e.g. study on crops types monitoring)
 - radar&LiDAR (e.g. Sentinel-1 and ISOK e.g. forest biomass assessment)
- Research carry out within different national and international projects e.g. NASA projects from SILVIS Lab (University of Wisconsin-Madison)
- Study area: mostly the Carpathians

Forest monitoring



- Assessment and modelling of past and future forest cover change
- Secondary succession mapping
- Forest biomass and carbon storage assessment

- Data integration:
 - Historical cartographic materials and RS data
 - Optical&Radar data and Radar&LiDAR data
 - Dense time data series analysis

- Research carry out within different national and international projects, e.g. FORECOM project (<http://www.gis.geo.uj.edu.pl/FORECOM/index.html>)
- Study area: mostly the Carpathians



University of Agriculture in Krakow, Poland

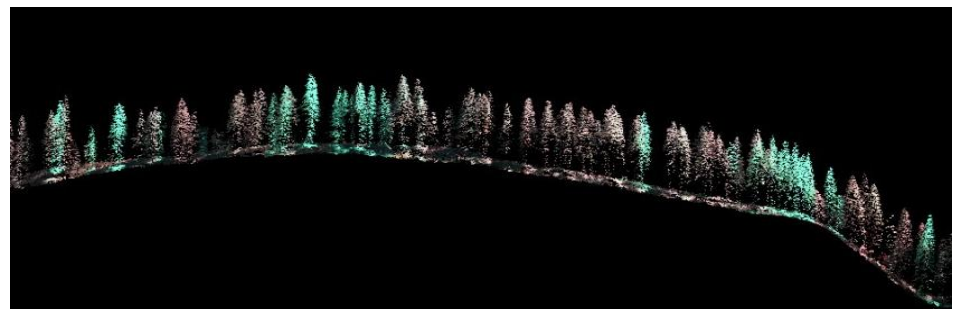
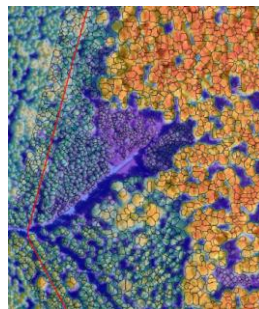
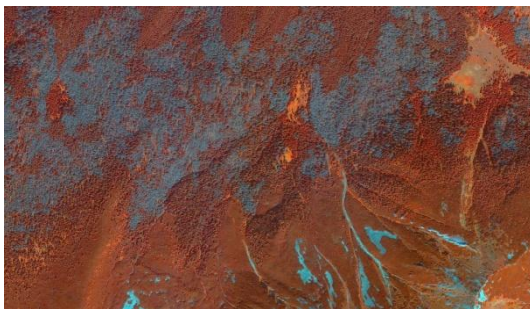
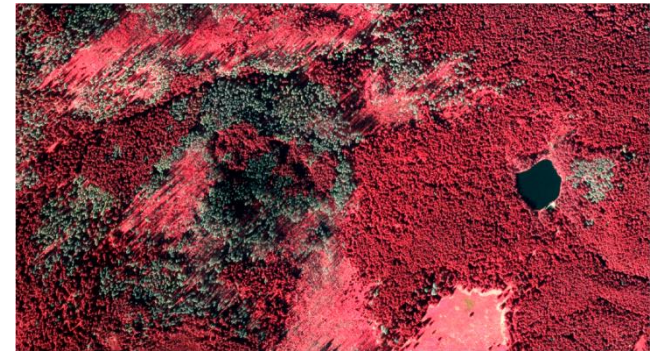
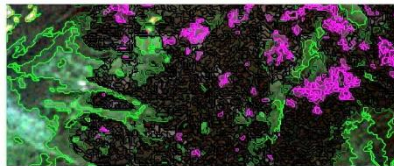
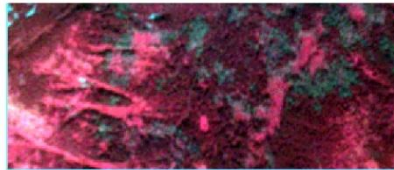
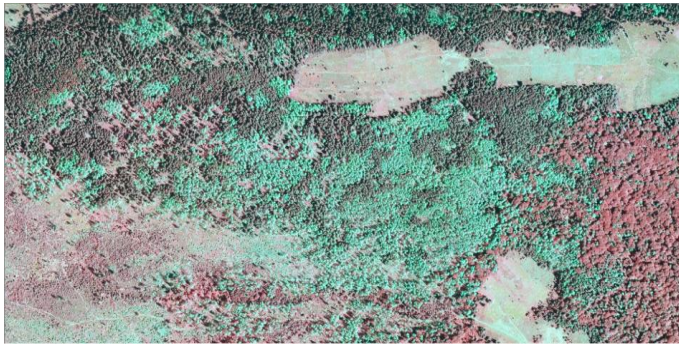
Faculty of Forestry



Institute of Forest Resources Management, Laboratory of Geomatics,

Topics concerning to SCERIN - Forestry

- Monitoring of the forest disturbances
- Monitoring of disasters in forest areas (windstorms, flood)
- Change detection in the mountainous landscapes (3-D and 4-D)





University of Agriculture in Krakow, Poland

Faculty of Forestry



Institute of Forest Resources Management, Laboratory of Geomatics

Topics concerning to SCERIN - Agriculture

- secondary forest succession on abandoned agricultural land;

