Satellite Monitoring of Agriculture in Bulgaria – Use Cases from SRTI-BAS

Abstract
In support to the international agrometeorological community with data and analyses, Bulgaria has been a member of World Meteorological Organization (WMO) since 1952. During the Warsaw treaty and within the Soviet integration of COMECON, Bulgaria was part of the INTERCOSMOS program. During this period was organized an UNFA regional training seminar on remote sensing applications for land resources, 15-20 September 1981. Sofia, Bulgaria was host to 12 experts from the SRTI-BAS space station and various land resources applications (agriculture, UNFA) regional training seminar, 1981.

Field and Satellite Spectrometry
For conducting the sub-satellite experiments in 1977 and 1978, were used developed at Space Research and Technology Institute (SRTI-BAS) methodology and instrumentation for ground measurements: spectral reflectance of natural formations (ISO 110 and ISO 220), temperature profiles in the surface layer of a typical ground test and probe for rapid measurement of the moisture in the soil.

Programmes
- INTERCOSMOS International Programme (1975-1990) 1974 – on a meeting in German Democratic Republic (DDR) the INTERCOSMOS Remote Sensing of the Earth group was established. In 1975 first meeting of the RS group in Bela Long-term programmes in DDR 1971 – within INTERCOSMOS Bulgaria 1300 and Melkon-Pirodri (Melkon) – an earth resources were studied with the Temezsa-1300 radiometer and 32-channel spectrophotometer.
- ESA-PECS (2015-2020) - a group of related approved projects - TEBAG-ES2, SGER-SENS.

Experiments and Projects
- 1979 – on flight of the first Bulgarian astronaut Georgi Ivanov onboard of Soyuz-Satellite, a total of 15 experiments were planned among which:
  - Experiment Balkan (spectrometry of different LULC types (including different crop types) from space using Spectral-16 channel ISO-200 from space laboratory in SRTI-BAS) and multiparametric photography using MKR-6 (Tserafimov 1979).
  - Experiment “Agricultural lands” for assessment of the information value of multispectral aerial images acquired by the camera MKP-6 MC and “Fragment” C-600.

Experiments and Projects
- Testing PROBA-V and VEGETATION data for agricultural monitoring in Bulgaria and Romania (PROAGROBURO) – Contract CBX0106. Four sub-satellite experiments were conducted for Zhitomir test area and three for Pancevo test area.

Field and Satellite Spectrometry
- Trace data from Spektov-15MC
  - INTERCOSMOS-Bulgaria 1300

Experiments and Projects
- Trace data from Spektov-15MC

Field and Satellite Spectrometry
- Trace data from Spektov-15MC

References

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