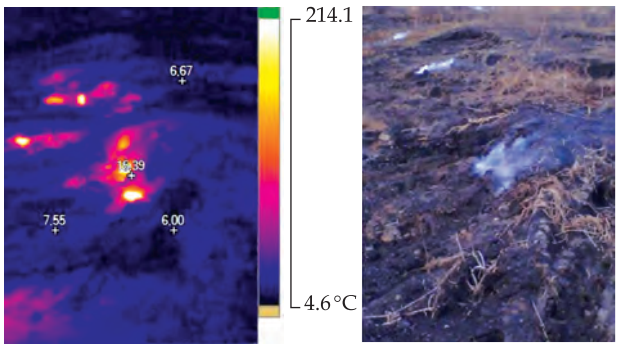
MONITORING OF THE STATE OF PEATLANDS FOR IDENTIFYING FIRE-DANGEROUS AREAS USING REMOTE METHODS



Latent underground fire seats in peatland areas after completion of fire-fighting operations

Areas of Application

The method is to be used for monitoring the fire-dangerous areas of peatlands to prevent fire outbreaks and for detecting hidden residual hot spots and fire seats after fire-fighting operations

Specification

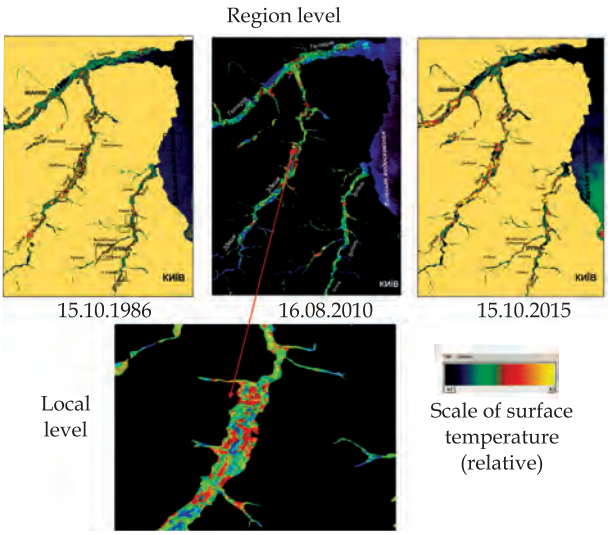
The method is based on monitoring of thermal anomalies in peatlands using time series of thermal channels of medium spatial resolution multichannel satellite images (seasonal, annual) and IR imager field measurements. The deliverables are outlined peatland contours, calculated absolute temperature of peatland surface, identified fire-dangerous areas submitted as GIS

Advantages

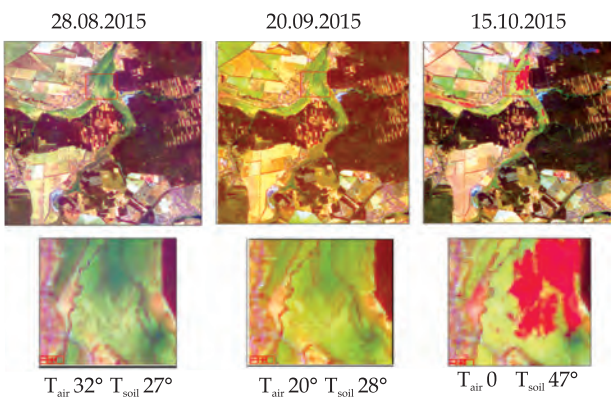
As compared with the counterparts, this method enables ongoing monitoring of the thermal state of peaty soils, as well as rapid detection of fire outbreak areas and residual thermal anomalies after fire-fighting operations due to the use of a complex of ground-based IR imagers and airborne thermal surveys

IPR Protection

IPR2



Monitoring of the thermal field of flood plain surface (Irpin, Zdvizh, and Teteriv Rivers) based on the data of *Landsat*-5, 7, 8).



Changes in remote image of Chornohorodka peatland based on Landsat data for three months of 2015

Stage of Development. Suggestions for Commercialization

IRL5, TRL6
Upon request, a survey for determining the thermal state of individual peatlands and fire hazard level can be carried out for environment protection organizations, as well as for structural units and departments of the Ministry for Emergency Situations

Contact Information

Liudmyla P. Lishchenko, Scientific Center for Aerospace Research of the Earth of the Institute of Geological Sciences of the NAS of Ukraine; +380 44 482 03 72, e-mail: Lischenko.lp@gmail.com