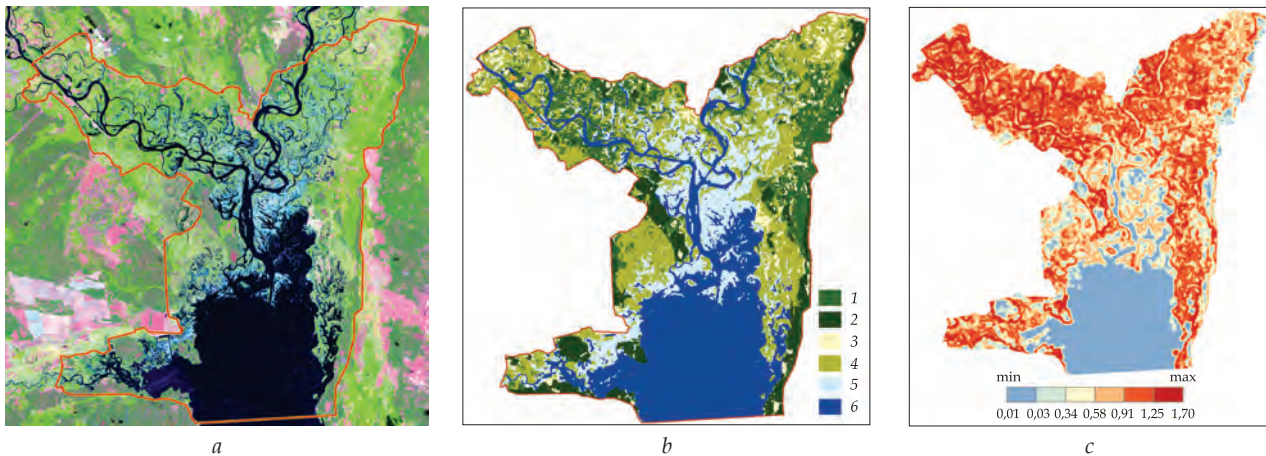


## METHOD FOR REMOTE ASSESSMENT OF ECOLOGICAL STATE AND WATER QUALITY OF INLAND RESERVOIRS



Decoding of the satellite images and mapping of the biotopes of the inland water (e.g. top of the Kyiv reservoir): *a* – the part of the Landsat 8 satellite image (2015-08-28); *b* – map of the biotopes; *c* – map of the landscape diversity (e.g. Simpson’s index)

### Areas of Application

The comprehensive assessment of inland reservoir ecological state is used for long-term monitoring and forecasting based on present-day and retrospective Earth remote sensing data and ground-based observations

### Specification

The deliverables are: set of thematic maps of water reservoir state (biotope types, vegetation and water indexes, surface temperature, and landscape diversity parameters) with high and moderate spatial resolution; statistical tables with areas of selected components and ground-based observation data; and graphic results of simulation and forecast of reservoir condition

### Advantages

The method surpasses the analogs in terms of more simple and fast assessment of aquatic ecosystem condition; it covers larger areas and enables retrospective study of inland reservoir condition. Also, it enables to detect shallow aquatic-landscape complexes that not only affect the reservoir hydrological regime, but also condition physical, chemical, and hydro-biological characteristics of aquatic environment

### Stage of Development.

### Suggestions for Commercialization

IRL6, TRL5

The ecological state of particular reservoir or group of reservoirs is studied upon request

### IPR Protection

IPR2

### Contact Information

Olexander D. Fedorovsky, Scientific Centre for Aerospace Research of the Earth of the Institute of Geological Sciences of the NAS of Ukraine; +38 044 486 63 70, e-mail: adfedorovsky@ukr.net