

ECONOMY and AGRICULTURAL POLICY

NATIONAL SPATIAL DATA INFRASTRUCTURE: CURRENT STATE AND DEVELOPMENT PROSPECTS

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In today's world there are globalization of all processes, and shaft-like increase in information. First the United States and then the European Union came to understand the strategic need to define the concept of geospatial information and creation of geoinformation systems.

The formation of a geospatial data infrastructure is currently an issue that is widely developed and implemented. In particular, research reflects the problems of creation, operation and prospects of development of national spatial data infrastructure, the formation on its basis of sectoral accounting systems for land and property resources, improving the legal aspects of spatial management of the country.

In international practice, much attention is paid to the formation of approaches to creating GIS web platforms to analyse and reflect the state of agricultural land use, existing restrictions on their use, recommendations for agricultural land use planning in the GIS environment to support production and resource management and monitoring of transformations.

Accordingly, Ukraine has decided to form a national spatial data infrastructure, as defined by the Law of Ukraine, according to which the national geospatial data infrastructure is an interconnected set of organizational structure, hardware and software, basic and thematic sets of geospatial data, metadata, services, technical regulations, standards, technical specifications required for the production, updating, processing, storage, publication, use of geospatial data and metadata, other activities with such data.

The holder of the national geoportals is the central executive body that implements the state policy in the field of national spatial data infrastructure. The national spatial data infrastructure includes any spatial information and portals it is located on. Currently, several automated systems are being developed or filled with data. For example, the automated system for monitoring land relations, which was developed by experts from the Institute of Land Management of NAAS, aims to systematize and analyse, spatial reference and, accordingly, display data on land relations, namely – land rights, their price parameters, types and volumes of agreements and transactions concerning land plots and much more.

We also consider automated management systems of land and other property of institutions and organizations of various forms of ownership to be a component of NSDI. One of such systems within NAAS of Ukraine, developed by our specialists, continues to be filled with data on the land and other property of enterprises and institutions of NAAS. Its purpose is to ensure effective management of Academies land and other property.

Another system that is part of the NSDI and that needs to be filled with geospatial data is the agricultural register. It will accumulate spatial and analytical information about the subjects of agricultural production, their resources, specialization and trade. Such data can be obtained by classifying satellite images that have an accurate geospatial reference. The use of exclusively available statistical information is not sufficient today, as its reliability is often in doubt, and there is almost no accurate geospatial reference for it. Accordingly, we proposed to develop an automated system that would analyse and classify satellite images, provide

information on crops and their condition, providing an accurate geospatial reference and high accuracy in determining crops and field boundaries. In turn, this will allow both private land users to monitor their own crops and the state to analyse the structure of agricultural land use and make effective management decisions.

Keywords: Geospatial data, Monitoring, Land structure