

NEWS LETTER OF THE CAPACITY DEVELOPMENT PROJECT FOR UTILIZING THE NATIONAL GEOSPATIAL DATA INFRASTRUCTURE IN UKRAINE



DIRECT SPEECH

Acting Chairman of the StateGeoCadastrе Dmytro MAKARENKO:

“ The support of Ukraine from the Government of Japan, represented by the Japan International Cooperation Agency, is invaluable in these difficult times. It is important that the Japanese side promptly responded to the critical challenges faced by the StateGeoCadastrе and provided technical support for the establishment and smooth functioning of state resources held by the StateGeoCadastrе. In particular, the system of the State Land Cadastre, the National Spatial Data Infrastructure and the State Cartographic and Geodetic Fund. Moreover, with the support of the Government of Japan, in 2022, the update of digital topographic maps of various scales began. The maps created under the Project are of great value and importance for Ukraine’s development and future recovery initiatives. They will serve as indispensable tools guiding our decision-making processes and contributing to sustainable development, strategic urban planning, disaster management and many other important areas.

EQUIPMENT

On November 23, 2021 the Protocol of discussions on the Capacity Development Project for Utilizing the National Geospatial Data Infrastructure in Ukraine was signed between the State Service of Ukraine for Geodesy, Cartography and Cadastre, the State Enterprise «Research Institute of Geodesy and Cartography» from the Ukrainian side and Mr. Kazumasa SANUI – Director of Urban and Regional Development Group of the Infrastructure Management Department of the Japan International Cooperation Agency (JICA) and Mr. Satoshi SUGIMOTO – the Senior Representative of the JICA Ukraine Office – from the Japanese side.

The Protocol specified the purchase of some equipment. After the beginning of Russia’s full-scale invasion of Ukraine on February 24, 2024 at the initiative of the StateGeoCadastrе, the equipment list was adjusted taking into account the needs to ensure the proper functioning of StateGeoCadastrе’s critical systems, namely the State Land Cadastre, the National Geoportal of the National Spatial Data Infrastructure and the preservation of cartographic materials in the State Cartographic and Geodetic Fund of Ukraine.





DIRECT SPEECH

Mr. Satoshi SUGIMOTO, Senior Representative, JICA Ukraine Office:

“ Following our successful project on Creation of National Geospatial Data Infrastructure in Ukraine (in 2015-2018), JICA fully understood the urgent need of continued support for StateGeoCadastrе in this horrific times for Ukraine. Development and maintenance of reliable and accurate geodetic and cartographic data is of paramount value when it comes to disaster mitigation, urban planning, community development and overall territory reconstruction. Which is why the importance of this cooperation now cannot be overestimated. We strongly believe in the soon victory of Ukraine and will continue our support in every critical sphere!



BIDS

The Japanese side has committed itself to procuring a wide range of goods and services at the request of the beneficiary under the Project.

In November 2022, JICA signed an Additional Agreement with the Project Executor – the company KOKUSAI KOGYO CO., LTD., which, in particular, contained obligations regarding the additional requested equipment.

On January 23, 2023, tenders on equipment procurement for the StateGeoCadastrе, State Enterprise «Research Institute of Geodesy and Cartography», State Enterprise «State Land Cadastre Center», State Scientific and Production Enterprise «Kartographiia», State Enterprise «State Ukrainian Aero Geodetic Enterprise» were held.

RESULT

As of March 2024, the Japanese side has transferred almost 400 pieces of equipment to StateGeoCadastrе and related state enterprises, including server software, quadcopters, uninterruptible power supply kits, software licenses, servers, graphic workstations, drone software, and more.



NSDI

During 2015-2018 as a part of the cooperation between JICA and the StateGeoCadastrе, the NSDI prototype for the pilot area, technical standardization and a draft of the NSDI work plan were developed.

The results of the Project were used as a basis for explaining the benefits of the NSDI building and contributed to the adoption of the relevant Law, which was adopted by the Parliament of Ukraine in April 2020 and entered into force in January 2021.

The Law reflects the basic principles of the National Spatial Data Infrastructure functioning in Ukraine and corresponds to the best international practices.

Among the expected results of ongoing Project:

- Refinement of the specification and methodical documents required for the NSDI Law implementation
- Integration of geospatial data sets and their visualization on the NSDI National Geoportal.
- Clarifying the benefits of geospatial data to relevant government agencies, the private sector and civil society.



MAPS

Within the framework of the ongoing international technical assistance project «Capacity Development Project for Utilizing the National Geospatial Data Infrastructure in Ukraine» the following maps were created:

- 71 map sheets of digital topographic maps on a scale of 1:10,000 for the territory of the cities of Odesa (167 sq. km), Mykolaiv (258 sq. km) and Kherson (68 sq. km);
- 104 map sheets of digital topographic maps on a scale of 1:25,000 for a part of the territory of Ukraine covering an area of approximately 8,732 sq. km

On June 7 and November 17, 2023, the results of the performed works were accepted by the relevant StateGeoCadastre's Commission.

The maps have been transferred to the State Cartographic and Geodetic Fund of Ukraine and they can be utilized by other state bodies of executive power or local self-government bodies for decision-making. In the future, after the opening of public access to the National Geoportal of NSDI, the mentioned materials will be available to a wide range of users.



PROSPECTS

Since the beginning of the full-scale Russian military invasion, the need for geospatial information in Ukraine for humanitarian assistance, post-invasion recovery and reconstruction has increased significantly compared to peacetime. In general, no large-scale topographic maps were updated on the territory of Ukraine. Therefore, it is especially important to continue ensuring the proper and timely updating of topographic maps for the territory of Ukraine in order to assess the damage caused by Russia, plan for recovery, develop the National Spatial Data Infrastructure (data sets of digital topographic maps are the basic sets of geospatial data at the NSDI), update the cartographic base, development of comprehensive plans for the spatial development of territorial communities and assistance in making management decisions both at the central and local levels.

The efforts of the Project participants are aimed at overcoming these challenges.



DIRECT SPEECH

Deputy Director for State Enterprise "Research Institute of Geodesy and Cartography" Yuri KARPINSKYI:

“ In the context of the development of the national geospatial data infrastructure, specifications and metadata are an integral component of the data itself, without which its effective use is impossible.

The development of specifications for basic geospatial data sets is carried out in accordance with:

- DSTU ISO 19131:2019 (ISO 19131:2007; Mad 1:2011, IDT) «Geographic information. Specification of a geospatial product».
- DSTU 8774:2018 «Geographic information. Geospatial data modelling rules». This standard was developed as a result of the joint project of JICA and the StateGeoCadastre 2025-2018.

The work on the development of the specification can be considered as a systematic continuation of the work aimed at the development of NSDI in Ukraine.

The use of these standards for the development of the specification ensures their high information technology level.

The developed specification will ensure the effective use of the basic state topographic map at a scale of 1:10,000, which is the cartographic basis for maintaining state cadastres and registers, specifically land, urban planning, forestry, water, natural resources and others, and should become a model for further development of thematic geospatial data specifications.

REBUILD

During the official visit of representatives of the Headquarters of the JICA to the StateGeoCadastre, which took place on December 5, 2023, it was reported that the created digital topographic maps on a scale of 1:10,000 are planned to be used within another international technical assistance project of the Government of Japan aimed at for emergency recovery and reconstruction of Ukraine.