

EFGS 2022 Conference

Towards standardised geospatial statistics

(Virtual, 27-28 October, 2022)

TITLE: Geospatial Data Store - centralization of spatial data in Statistics Poland

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ABSTRACT:

Currently at the Statistics Poland, works are carried out as part of the 'Gates of Statistics' project, which aims to improve the quality, usefulness and availability of statistical information for the largest possible group of recipients. In principle, this project is carried out with the use of modern technologies and adapting the current methodology and organization of research to modern technological possibilities. It also provides for the modernization of MPPS (Model of the Statistical Production Process – Polish implementation of GSBPM) to adapt it to current needs.

Providing reliable, credible and independent statistical data of high quality is the overriding task of official statistics services, serving to meet the information needs of state bodies, public administration, entities of the national economy, and the entire society, including individual citizens. Collecting data, processing it, and finally making it available gives the recipients the opportunity to get acquainted, among others, with the economic, demographic and political situation of the country, the state of the natural environment or changes taking place in them.

As part of the work, it was planned to create many databases (repositories) so that different processes could access them and, as a result, base their activities on the same sets of data without the need of duplication. One of such repositories is the Geospatial Data Store (GDS) - a database containing geometric data of geospatial objects along with their spatial location, with the accuracy of x, y coordinates. Database objects allow for geocoding (linking to a spatial location) both address points and units of the administrative or statistical division of the country.

Building the GDS taking into account the assumptions of the MPPS model, and thus the consistency and standardization of data structures, technical processes and metadata, and, consequently, also business processes taking place as part of the works of the MPPS phase 7 (sharing), will extend the scope and improve the sharing of statistical information, and increasing their usefulness.

The main task of the GDS, which is one of the database structures planned to be implemented under the Gates to Statistics project, is the centralised storage of geospatial data.

The GDS will be a database structure containing geometric data of geospatial objects along with their spatial location, with an accuracy of x, y coordinates. The base objects will allow for geocoding (linking to a spatial location) both to address points and units of administrative division, statistical division of the country and grids. The basis of the GDS will be a geospatial database created as part of the project "Spatial Statistical Data in the State Information System (PDS)". In the 'Gates of Statistics' project, this database will be expanded to achieve full functionality of the Geospatial Data Store and thus fit into the entire statistical production process.

GDS will provide a centralized place for collecting geospatial data and provide mechanisms for their management. Geospatial data is necessary both to conduct preparatory work for surveys or censuses, to manage and monitor the work of interviewers and enumerators in the field during data collection, and finally, after the completion of a statistical survey - to perform multidimensional spatial analyzes.

The use of geospatial data collected and managed in one place will allow, in the context of the entire statistical production process, to:

- unify the information resource described by geospatial data,
- organize the entire production process in this area,
- more efficient quality control of the shared data,
- centralized management of the full range of geospatial data.

KEYWORDS: GIS; GSBPM; geospatial data; statistics;