

**First Forum
Seoul, Republic of Korea, 24-26 October 2011**

Country Report of Poland *

* Submitted by: Dominik Kopczewski, coordinator, Head Office of Geodesy and Cartography

GEOSPATIAL INFORMATION MANAGEMENT IN POLAND REPORT 2011

**High-Level Forum on Global Geospatial Information Management
and
Inaugural Session of the UN Committee of Experts on GGIM**

Seoul, Republic of Korea
24-26 October 2011

Abstract

The fast growing needs concerning spatial information, coupled with the dynamic development of information and communication technologies (ICT) have been the reason for taking various initiatives in Poland, as well as government and self-government projects, which aimed at modernization of systems and developing spatial information infrastructures. National tendencies and activities have been supported by the initiative of the European Union, concerning the establishment of the European infrastructure for spatial information, commonly known under the acronym of INSPIRE and developed presently in line with the EU directive having the same acronym.

Poland, as an EU member state, has been obliged to make its input to the great undertaking defined by that directive. The Polish input consists of building in the territory of Poland the spatial information infrastructure, making up a part of the European infrastructure, and suited to the jointly developed and approved principles and standards. The first significant achievement in that respect has been the Act on spatial information infrastructure (SII Act), passed by the Polish Parliament in 2010, which makes up the transposition of the INSPIRE Directive, adjusted to Polish conditions.

In this report, adopted legal solutions and first implementation results are presented. Attention is paid to SI organisational framework and SII coordination, including the role of the Surveyor General and the Council for SII as an inter-ministerial body. Finally, the present availability of spatial data is described.

Introduction

Spatial information infrastructure is a basic component of information infrastructure of a modern state, a component indispensable for the functioning of administration at all levels, for sustainable development of the country, and for development of information society. The particular role of spatial information results from the universality of its application, the opulence of its content, the costs of acquiring and maintaining it, as well as the variety of aims which it serves.

The fast growing needs concerning spatial information, coupled with the dynamic development of information and communication technologies (ICT) have been the reason for taking various initiatives in Poland, as well as government and self-government projects, which aimed at modernization of systems and developing spatial information infrastructures. National tendencies and activities have been supported by the initiative of the European Union, concerning the establishment of the European infrastructure for spatial information, commonly known under the acronym of INSPIRE and developed presently in line with the EU directive having the same acronym.

Poland, as an EU member state, has been obliged to make its input to the great undertaking defined by that directive. The Polish input consists of building in the territory of Poland the spatial information infrastructure, making up a part of the European infrastructure, and suited to the jointly developed and approved principles and standards. The first significant achievement in that respect has been the **Act on spatial information infrastructure (SII Act)**, passed by the Polish Parliament, which makes up the transposition of the INSPIRE Directive, adjusted to Polish conditions, which has been in force since June 7, 2010. The spatial information infrastructure defined by that Act is composed of the spatial data sets described by means of metadata, as well as pertaining to its services, technical means, processes and procedures, which are applied and made available by the agencies of administration and third parties, co-creating the spatial information infrastructure. Data sets comprised in the infrastructure represent a multi-thematic information content, which describes geographic space, objects located in it, the phenomena that occur in it, as well as the processes that take place, in their mutual relations, taking into consideration the dimension of time.

Due to the significant dispersal of spatial data resources, an important problem is the provision of adequate co-operation of all interested agencies and institutions. In the above-mentioned Act, that problem has been successfully solved, by introducing a hierarchical, three-level organizational structure. The development of spatial information infrastructure is a difficult and complex undertaking, requiring knowledge and experience, cooperation and coordination.

The Act on Spatial Information Infrastructure - SII Act

Following a proposal of the Polish government, transposition of the INSPIRE Directive, took form of an Act of Polish Parliament of 4 March 2010 on spatial information infrastructure (SII Act), with simultaneous amendments of some national legal rules, having the purpose of adjusting the existing regulations concerning spatial information to the requirements of that Directive.

The stipulations of the SII Act make references to the basic aims of the Directive. The main purpose is the establishment of the national spatial information infrastructure, being a constituent of the European infrastructure. At the same time, the aim is to optimize spatial data acquisition and maintenance by public administration units, as well as to improve spatial information availability to all users.

The essence for accomplishing the above-mentioned aims is the implementation, in the domain of spatial information, of interoperability principles, defined by the European Interoperability Framework for European Public Services from the legal, organizational, semantic, and technical perspective. It implies that introduction of modern, advanced solutions concerning spatial information infrastructure in every above perspective will contribute to the development of electronic administration.

The SII Act defines the principles and manner of establishing and use of spatial information infrastructure, as well as authorities competent in that respect.

Most important, from the point of view of infrastructure users, are the provisions concerning access to spatial data. Access to spatial data, as well as use of such data take place via network services, by means of electronic communication, including also the services of discovery, view, downloading, and transforming of data. The SII Act provides common and free of charge access to the two former types of services, namely discovery and view, which are most often used, and which enable access to the necessary information, as well as getting acquainted with such information. The use of other services is possible, observing the regulations referring to public registers containing the data made available. An exemption to that rule applied to mutual sharing of data between authorities. Spatial data sets comprised in the infrastructure, as well as spatial data services, kept by administration agencies, are subject of providing access free of charge to other agencies of administration in the scope indispensable for performing public tasks by the latter. That provision is a consequence of other regulations binding in Poland, namely the Act of law on computerization of entities executing public tasks.

Access to spatial data sets and services does not apply to data, which due to the international agreements binding for the Republic of Poland, public safety, or other reasons stipulated in separate regulations, have been considered classified, or are subject to restrictions in providing access.

SII Organisational Framework

Spatial information infrastructure is developed and maintained by agencies of administration and third parties, who have been enabled to join it.

Due to the substantial distribution of the spatial data resources, a major problem is the provision of suitable interoperability between all interested authorities. In the SII Act, that problem has been solved successfully, by introducing a hierarchical, three-level organizational structure, comprising:

- at level one - the coordinator for entire infrastructure, being the minister responsible for public administration, who executed his/her coordination tasks with the assistance of the Surveyor General of Poland, and is aided by the Council for Spatial Information Infrastructure, being a
 - consultative body,
- at level two - leading bodies in the 12 thematically defined parts of infrastructure,
- at level three - bodies that keep public registers, which contain spatial data included in the infrastructure.

The SII Act lists 12 leading bodies, assigning to each of them the suitable themes from among the 34 themes of infrastructure, at the same time having in mind the existing competencies of a given authority. Assigned to each theme in spatial information infrastructure is a leading body of public administration, which coordinates the work and assures the implementation of the SII Act within the scope of its theme.

The 34 themes have been assigned to following bodies:

- minister competent over construction, and spatial and housing planning,
- minister competent over maritime economy,
- minister competent over culture and protection of national heritage,
- minister competent over agriculture,
- minister competent over environment,
- minister competent over health,
- Surveyor General of Poland,
- Chief Geologist of Poland,
- Chief Inspector of Environmental Protection,
Chief Nature Conservator,
- President of the Central Statistical Office,
- President of the National Board of Water Management.

Agencies of administration that keep public registers, which contain sets of spatial data related to listed below . spatial data themes, make up and maintain the network of services pertaining to spatial data sets and services, and are responsible for establishing, updating, and making available the sets of metadata. The themes are formed into three groups corresponding to INSPIRE Directive three annexes.

The first theme group includes the following themes: coordinate reference systems, geographical grid systems, geographical names, administrative units, addresses, registered parcels, transport networks, hydrography, protected sites.

The second theme group includes the following themes: elevation, land cover, orthoimagery, geology.

The third theme group includes the following themes: statistical units, buildings, soil, land use, human health and safety, utility and governmental services, environmental monitoring facilities, production and industrial facilities, agricultural and aquaculture facilities, population distribution (demography), area management/restriction/regulation zones and reporting units, natural risk zones, atmospheric conditions, meteorological geographical features, oceanographic geographical features, sea regions, bio-geographical regions areas, habitats and biotopes, species distribution, energy resources, mineral resources.

SII Coordination

In regard to provisions of the SII Act, Minister of public administration is responsible for establishment, maintenance and development of infrastructure as well as providing the European Commission with information and reports concerning the creation and operation of infrastructure.

The Minister performs his obligations with the assistance of Surveyor General of Poland, who:

- 1) draws up draft plans of the participation of administration bodies in the creation and operation of infrastructure, making the necessary arrangements with leading bodies to ensure the completeness of the infrastructure in terms of themes, area and variability in time, as well as preventing unnecessary collection of the same data by more than one administration body;
- 2) monitors, in cooperation with the leading bodies, the progress of work on the creation and operation of infrastructure and its development;
- 3) drafts the information and reports;
- 4) organises undertakings and performs tasks supporting the development of infrastructure;
- 5) cooperates with the European Commission in matters relating to infrastructure;

- 6) cooperates with voivodes and local self-government units in their actions concerning the establishment and operation of infrastructure;
- 7) determines, under bilateral agreements, the scope and conditions of data exchange concerning facilities located at the border between the Republic of Poland and the neighbouring countries and adjacent to these borders, in order to ensure consistency of data within the infrastructure for spatial information in Europe.

Surveyor General of Poland is responsible for maintaining contacts with the European Commission in regard to development and management of the Polish Spatial Data Infrastructure as an official, National INSPIRE Contact Point.

Council for Spatial Information Infrastructure

The infrastructure is established, maintained, and developed, as well as functions as a result of **cooperation** among subjects that make it up. In that context, as well as due to the necessity of providing uniform and efficient spatial information infrastructure, the SII Act provides for the establishment of the Council for Spatial Information Infrastructure.

The Council for Spatial Information Infrastructure is an inter-ministerial committee, in which the leading bodies are represented, as well as other agencies of the state administration, local authorities, along with interested scientific institutions and NGOs.

The Council provides its opinion for the undertakings planned regarding the development of infrastructure, and shall initiate improving the efficiency of infrastructure, concerning organization and technical issues, as well as broadening its thematic scope, which will assure real influence of the ministries, organizations, institutions, and circles listed above upon the directions of its development.

Access to SII

Surveyor General of Poland establishes and maintains the geoportal of spatial information infrastructure as its central access point, in the full thematic and territorial range of the infrastructure.

Public administration, while performing the assigned public tasks, often requires reliable access to relevant spatial data sets and services. Popularization of access to spatial data will encourage verification of reference data and necessary corrective activities and updates to the system by the users themselves. Such activities will not require excessive workload, and providing information about such a possibility should be sufficient motivation. Spatial data is crucial information for many fields, such as security, spatial planning, environment or local taxes. Effective government activity planning is not possible without reliable and accessible spatial data. In the long run, this will assist

and accelerate the decision making process, hereby making the administration more efficient and responsive to the needs of the nation and the citizens. The better the data quality, the more potential problems could be accurately diagnosed during the planning and project preparation stage. This could mean lower investment costs, because decision making in later stages requires changes in elements already created, which aside from the financial cost can often be a significant burden on the environment.

Every citizen and business owner would like to complete most matters over the internet, without waiting in line at the appropriate governmental offices. Support for the creation of new electronic services for citizens and businesses is provided under the EU Innovative Economy Operational Programme (OP IE). This will be possible due to the reconstruction of public facilities and the implementation of a fully integrated platform, which will enable the provision of public services in an electronic manner in leading business areas. Thus, a modern administration will be created, allowing all of us to contact the authorities over the Internet. The expansion and integration of the National Public Administration Information and Communication Technology infrastructure is also within the framework of support granted by the EU. Infrastructure provides the background for the coherent implementation of electronic services. It will not only transfer data between different platforms, electronic records and offices, but will also provide a set of necessary services to facilitate the provision of public services over the Internet. Another important area of support under the OP IE is the creation and development of Polish digital resources in a network. These resources are essential for the competitiveness of the Polish economy in the European Union as well as the development of entrepreneurship. In this area, the main task will be the reconstruction and integration of state registers, to ensure safe and efficient access to contained data, as well as the development of public information sharing systems.

The current version of the Geoportal, available at www.geoportal.gov.pl is based on an interactive map viewer with the tools to search and analyze spatial information. Within the framework of the GEOPORTAL.GOV.PL project the following spatial data databases have already been implemented:

Databases maintained by the State Geodetic and Cartographic Service

- Cadastral data
- General Geographic Database of Poland
- Topographic Database
- Orthophotomaps
- Topographic map raster
- Subject map raster
- State Border Register
- State Register of Geographical Names
- Digital terrain model
- Metadata sets and spatial data services

Databases maintained by other governmental bodies

- Map of unemployment . Central Statistical Office
- Flood endangered areas . Chief Geologist of Poland,
- Protected sites . Minister of Environment.

The main goal of the new GEOPORTAL 2 project, implemented currently by the Head Office of Geodesy and Cartography, is to provide citizens, businesses and public administration access to government registers, which contain high quality, current and reliable data. As a result of the GEOPORTAL 2 project, services related to spatial data will also be enabled. Widespread access to and the use of spatial information in Poland will be rendered possible through the expansion of the Spatial Information Infrastructure. This time, however, the infrastructure for spatial data services will be available not only to certain government units, which create or maintain records, but also for citizens, businesses and other entities.

Subsequent spatial data databases will be made available through the Geoportal along with the implementation progress of the GBDOT and TERYT2 projects, conducted by the Head Office of Geodesy and Cartography. The primary aim of these projects is the construction of a geo-referenced Topographic Database register, which includes the following types of data: geodetic control network, buildings, roads, railways, infrastructure, hydrography, protected areas, relief and land coverage components, transmission network, and orthophotomaps. The projects will also collect, update and harmonize data from the state register of borders and areas of the units of the territorial division, the state register of geographic names, the register of towns, streets, and addresses, the register of land buildings (real property cadastre). Expansion of the existing portal www.geoportal.gov.pl will also pertain to the implementation of additional spatial data services. Ultimately GEOPORTAL 2, will facilitate all services in accordance with the INSPIRE directive. Available services - of viewing and discovering spatial data, will be supplemented by additional services such as downloading, transformation and invoke service allowing usage of spatial data services. The development of spatial databases, will be parallel to continuous work upon creating and updating metadata sets and spatial data services.

Conclusion

The advantages resulting from the INSPIRE Directive may be perceived from a two-fold perspective: that of state transposing the Directive and that of the European Union. The transposition of the Directive should be executed in such a way that the interests and needs in all aspects should be duly satisfied.

In the legal aspect, the expected positive results - in European context - will be in the first place the unification of law concerning spatial information in the European Community, and establishment of a legal basis for the development of a cohesive and homogeneous European infrastructure for spatial information, composed of national infrastructures constituting parts of INSPIRE, providing at the same time interoperability in the entire area of the EU.

The transposition of the Directive results, in this respect, in direct advantages for individual member states. An essential effect of the Directives transposition is the amending and making cohesive of the national legal rules concerning spatial information, as well as their adjustment to the needs of users and technological requirements. Another unquestionable advantage is provision of the possibilities of execution of implementing rules of the Directive, in line with the national needs and conditions.

In Poland, the SII Act has already begun to give measurable benefits, attaching a proper rank at government level to spatial information. Spatial information infrastructure is becoming a part of information infrastructure of the state. The activities of state administration, aiming at integration of public registers, and computerization of public administration take into consideration the services of infrastructure. Many domain-oriented systems, presently designed within the framework of computerization of the state, take into consideration the use of spatial data as reference or source data.

The content of the SII Act contributes to dissemination of the content of public registers and explains the scope of spatial information gathered in those registers, being at the disposal of public administration. It enforces the verification of systems managing access to registers and procedures of their updating, in connection with the increasing expectations of present and future users. In the light of facilitated access to the resource, the units of administration extend the scope of cooperation and intensify their activities towards making complete and effective use of spatial data. Interest in technical parameters of spatial data increases, which as a result will lead to development of technical standards of the data gathered, so that they satisfy the needs of as many users as possible. Also, the scope of data used by ministries gradually expands. Moreover, making data available in an infrastructure geo-portal raises the awareness of the entire society, as to the scope of data held in state registers and making potential use of such data. The number of users of the resource via the functionality of Internet access point also increases.

In the domain of geodesy and cartography, the most significant advantage is the marked stimulation and channelling the technological development of the state geodetic and cartographic resource. The technological changes initiated by implementation of the provisions of the SII Act will be continued and shall entail also the modernization of the Geodetic and Cartographic Service organization, as a natural consequence of the achieved level of computerization and access to network services.

More information can be found at:

SII in Poland:

Head Office of Geodesy and Cartography

Web: www.gugik.gov.pl

Email: gugik.wz@gugik.gov.pl

National INSPIRE Contact Point

Web: www.gugik.gov.pl

Email: pol-inspire@gugik.gov.pl

Geoportal.gov.pl

Web: www.geoportal.gov.pl/en/

Email: gugik.iz@gov.pl

**Council for Spatial Information
Infrastructure**

Web: <http://www.radaip.gov.pl>

Email: radaip@gugik.gov.pl

Ministry of Interior and Administration

Web: www.mswia.gov.pl/portal/en

SII in the European Union:

European Commission INSPIRE

Web: <http://inspire.jrc.ec.europa.eu/>

European Commission

INSPIRE Geoportal

Web: <http://www.inspire-geoportal.eu/>

Prepared by:

Head Office of Geodesy and Cartography
Str. Wspolna 2; 00-926, Warsaw, Poland
Phone: + 48 22 661 81 74 Fax: + 48 22 629 18 67
[Email: gugik.wz@gugik.gov.pl](mailto:gugik.wz@gugik.gov.pl)