INSPIRE

Infrastructure for Spatial Information in Europe

Member State Report: Poland, 2010-2012

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Contents

1 Executive Summary

The INSPIRE Directive requires each Member State to monitor the implementation and use of its infrastructures for spatial information. Every three years, Member States send to the Commission a report providing updated information in relation to *inter alia*:

- coordination and quality assurance for the infrastructures for spatial information;
- the contribution made by public authorities or third parties to the functioning and coordination of the infrastructure for spatial information;
- information on the use of the infrastructure for spatial information;
- data sharing agreements between public authorities;
- costs and benefits of implementing the INSPIRE Directive.

This document has been prepared in cooperation with leading bodies and Heads of the provincial executive (contribution relating to measures taken by local self-governments at the provincial level) and it is the second report of that type, concerning the aforesaid measures, to be drawn up by Poland.

2 Abbreviations and acronyms

INSPIRE Directive	Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 *establishing an Infrastructure for Spatial Information in the European Community (INSPIRE)*
ISI	Infrastructure for Spatial Information
Act on ISI	Act of 4 March 2010 on infrastructure for spatial information (Journal of Laws No 76, item 489, as amended) – transposing the INSPIRE Directive.
Commission Regulation No 268/2010	Commission Regulation (EU) No 268/2010 of 29 March 2010 implementing Directive 2007/2/EC of the European Parliament and of the Council as regards the access to spatial data sets and services of the Member States by Community institutions and bodies under harmonised conditions
CSIOZ	Centrum Systemów Informacyjnych Ochrony Zdrowia (Centre for Health Care Information Systems)
GGK	Główny Geodeta Kraju (Surveyor General of Poland)
GUGiK	Główny Urząd Geodezji i Kartografii (Head Office of Geodesy and Cartography)
GUS	Główny Urząd Statystyczny (Central Statistical Office)
MSW	Ministerstwo Spraw Wewnętrznych (Ministry of the Interior)
GDOŚ	Generalna Dyrekcja Ochrony Środowiska (General Directorate for Environmental Protection)
GIOŚ	Główny Inspektorat Ochrony Środowiska (Chief Inspectorate of Environmental Protection)
IMGW-PIB	Instytut Meteorologii i Gospodarki Wodnej – Państwowy Instytut Badawczy (Institute of Meteorology and Water Management – National Research Institute)
MAiC	Ministerstwo Administracji i Cyfryzacji (Ministry of Administration and Digitization)
PIG-PIB	Państwowy Instytut Geologiczny - Państwowy Instytut Badawczy (Polish Geological Institute – National Research Institute)

KZGW	Krajowy Zarząd Gospodarki Wodnej (National Water Management Authority)
DGLP	Dyrekcja Generalna Lasów Państwowych (Directorate-General of the State Forests)
IBL	Instytut Badawczy Leśnictwa (Forest Research Institute)
MŚ	Ministerstwo Środowiska (Ministry of the Environment)
KSPIL	Krajowy System Informacji o Pożarach Lasów (Polish Forest Fire Information System)
BDOT	Baza Danych Obiektów Topograficznych (Topographic Objects Database)
LPIS	System Identyfikacji Działek Rolnych (Land Parcel Identification System)

3 Co-ordination and quality assurance (Art. 12)

3.1 Coordination (Art. 12.1.)

3.1.1 Member State Contact Point

Article 12.1.(a) the name, contact information, role and responsibilities of the Member State contact point

Member State Contact Point	
Name of the public authority	Główny Geodeta Kraju (Surveyor General of Poland)
Contact information:	
Mailing address	Ul. Wspólna 2, 00-926 Warsaw
Telephone number	+48226618017
Fax number	+48226291867;+48226293872;
Email address	pol-inspire@gugik.gov.pl;
Organisation's website URL	http://www.gugik.gov.pl
Contact person	Ewa Surma
Telephone number	+48226618275
Email address	ewa.surma@gugik.gov.pl

Roles and responsibilities

The Contact Point is responsible for delivery of the results of the transposition of the INSPIRE Directive and for the provision of information on the implementation of INSPIRE in its Member State and of reports on behalf of the Member State to the European Commission (*inter alia* monitoring and reporting documents). The role of the Member State Contact Point in Poland has been assigned to the Surveyor General of Poland, who additionally:

- draws ups draft plans for the contribution of administrative bodies to the establishment and functioning of the infrastructure, making the necessary arrangements with the leading bodies to ensure the completeness of that infrastructure in terms of subject and area coverage and variation over time, as well as to prevent the gathering of the same data by more than one administrative body;
- monitors, in cooperation with the leading bodies, the progress of work connected with the establishment and functioning of the infrastructure as well as its development;
- draws up reports on the implementation of the INSPIRE Directive;
- organises initiatives and leads activities to support the development of the infrastructure;
- cooperates with the European Commission on infrastructure-related subjects;
- cooperates with provincial governors (*wojewoda*) and local self-governments with respect to their activities relating to the establishment and functioning of the infrastructure;

3.1.2 The coordination structure

Art. 12.1.
(b) the name, contact information, role and responsibilities, organisation chart of the coordinating structure supporting the contact point of the Member State;
(c) a description of the relationship with third parties;
(d) an overview of the working practices and procedures of the coordinating body;
(e) comments on the monitoring and reporting process

Name and contact information

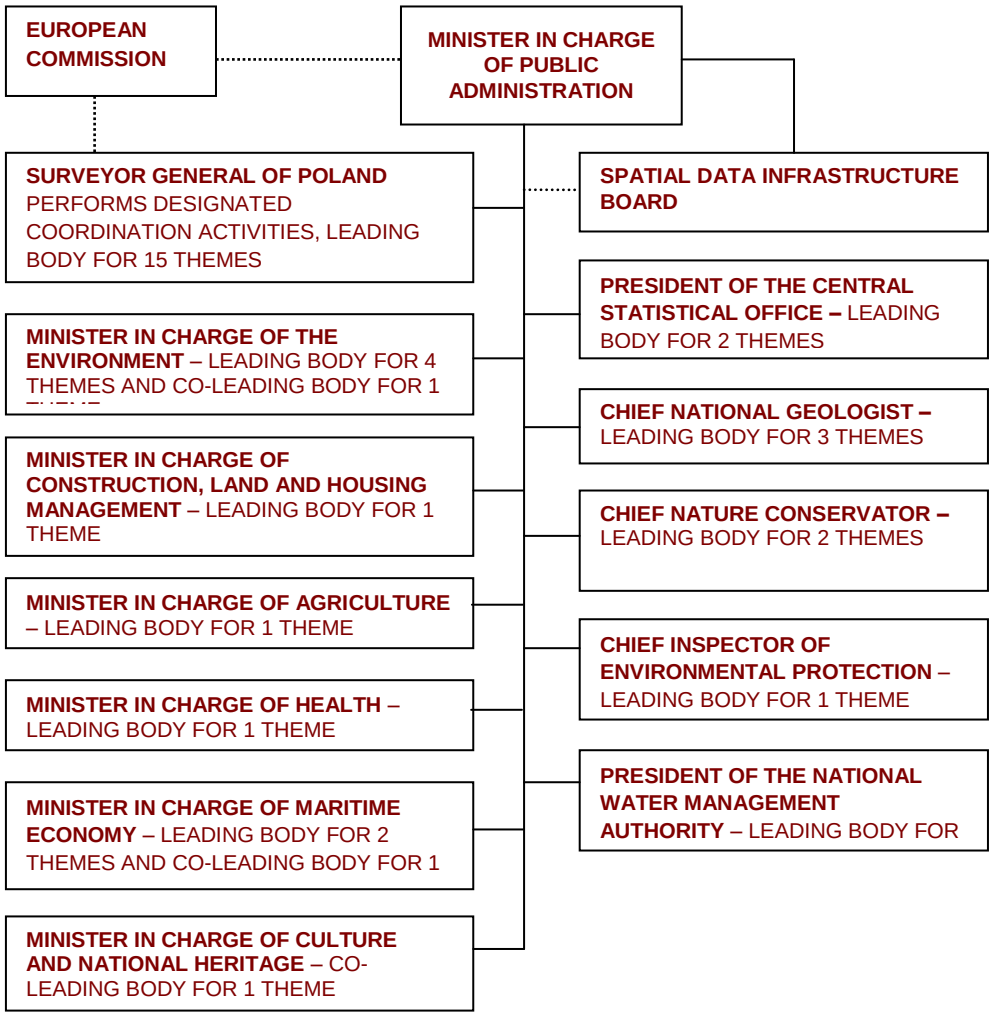
Roles and responsibilities

A hierarchical, three-tier organisation exists in Poland, comprising:

- the coordinator of the entire infrastructure – the minister in charge of public administration, who performs his/her tasks with the aid of the Surveyor General of Poland and the ISI Board;
- leading bodies in 12 thematic sections of infrastructure – ministers and heads of central offices;
- bodies holding public records containing spatial data covered by the infrastructure.

The minister in charge of public administration acts as the coordinator for all ISI-related tasks, and he/she has delegated certain activities (as listed above) to the Surveyor General of Poland. Additionally, GGK is in charge of the development and maintenance of the geoportal, being the central access point to data sets and services, and holds a public record of spatial data sets and services covered by the infrastructure, assigning uniform identifiers. The ISI Board is attached to the minister, acting as an opinion-making and advisory body. The ISI Board may put forward initiatives relating to the improvement of the infrastructure in organisational and technical terms and to extending its scope.
Leading bodies, which include ministers and heads of central offices, are responsible for the preparation of data sets within their respective competences. They are responsible for the integration and harmonisation of data sets with a view to achieving interoperability. Furthermore, they share responsibility for the establishment, development and functioning of the infrastructure, and for monitoring and reporting with respect to its development and functioning.
Government bodies and local self-government bodies participate in the establishment of ISI, provided that they hold digital public records containing spatial data sets relating to at least one of the themes referred to in the Annex to the Act on ISI. In addition, administrative bodies implement technical solutions to ensure the interoperability of spatial data sets and services and the harmonisation of the data sets.

Organisation Chart



Relation with third parties

The inclusion of third party spatial data sets and services in the infrastructure is regulated and ensured by the Act on ISI.

Scientific organisations, universities, self-governmental organisations, research institutes and the private sector are engaged in spatial information projects, such as updating of data models, harmonisation of databases, interoperability of spatial data sets and services etc. The strong commitment of the Polish Association for Spatial Information – a non-governmental organisation which brings ISI actors together – is particularly noteworthy. Further to that, leading bodies cooperate with third parties in their activities. For example, the Minister of Culture and National Heritage has delegated the public task involving the establishment of spatial data infrastructure to the director of the National Heritage Board of Poland (NID). NID is a cultural institution of the state listed in the register of cultural institutions held by the minister in charge of culture and national heritage. Cooperation with third parties is also visible in the joint creation of regional spatial data infrastructures. For example, in the Opole Province, third parties may submit their observations using an online contact form on the OWI ("Opolskie w Internecie") geoportal. The form, aside from sending the text message, offers the option to graphically show the area to which the observation relates. All messages are sent to Wojewódzki Ośrodek Dokumentacji Geodezyjnej i Kartograficznej (Provincial Land Surveying and Cartography Information Centre) in Opole, and then, after verification, are entered into the database of the OWI geoportal.

Overview of working practices and procedures

Within the framework of the activities initiated by the coordinator, a training cycle on the INSPIRE Directive implementation, addressed to employees of public administrative bodies, was delivered between 2009 and 2012. One of the objectives of such training was to reinforce the commitment to the development of the infrastructure and to strengthen coordination and interoperability between various administration units engaged in the development of spatial data infrastructure in Poland. The training, attended by more than 4 900 people, contributed to a remarkable dissemination of knowledge about the INSPIRE Directive and about establishing and operating the national Spatial Data Infrastructure. 90% of the participants surveyed declared that the knowledge and practical skills acquired in the course of the training would be useful in their jobs.

Another example of activities undertaken by the coordinator that can be considered “good practices” is the manner in which the national legislation relating to data sets stored in the state land surveying and cartography resources is structured. The structure of databases described in the regulations which were drawn up in the reporting period by the Head Office of Geodesy and Cartography was modelled after ISO standards and specifications published for spatial data themes specified in the INSPIRE Directive. The definition in the regulations of a single data exchange standard (GML) for the data sets of the national land surveying and cartography resources will facilitate data sharing between registers and the population and updating of resources stored within the structure defined by INSPIRE specifications. Furthermore, pursuant to the Act on ISI, the Surveyor General of Poland holds a public record of spatial data sets and services (notified by administrative bodies) covered by the infrastructure, assigning uniform identifiers.
Technical guidance has also been developed for the creation of metadata for the “Cadastral parcels” theme, as well as a metadata editor for the “Cadastral parcels” theme.

The progress of the implementation of spatial data infrastructure is a cyclical item on the agenda of the Digitization Committee of the Council of Ministers – leading bodies present the progress with respect to commitments, issues and proposed ways to address them. Moreover, the Surveyor General of Poland organises working meetings with leading bodies as necessary.
Additionally, scientific and science and technology conferences are held every year which strictly relate to the issues of implementation of the INSPIRE Directive. These include: INSPIRE Meetings in Kraków or the conferences of the Polish Association for Spatial Information etc. Furthermore, a conference was held in 2011 under the Polish Presidency of the Council of the European Union titled “Implementation of the INSPIRE Directive in nature protection”.

Overview of working practices of leading bodies:

In 2012, the Minister of the Environment appointed a spatial data infrastructure team, which included representatives of bodies involved in the implementation of the INSPIRE Directive at the ministry of the environment (leading bodies, technical bodies, data providers).

On 24 July 2012, the Director of IMGW-PIB appointed the IMGW-PIB Spatial Data Team (Ordinance of the Director of IMGW-PIB No 36). The responsibilities of the Team include *inter alia* coordination of the work relating to the implementation of the INSPIRE Directive at IMGW-PIB.

Together with the Environmental Information Centre, the leading body conducted an online survey on the theme of land use, titled “Land use in municipalities”, within the framework of the monitoring of the implementation and use of the national spatial data infrastructures, in the part relating to spatial data sets. On the basis of the results of the survey, a data forecasting methodology was developed, to calculate indicators for the “Land use” theme. In addition, an initiative was taken to establish a special e-learning platform to additionally support cooperation with municipalities with respect to the discharge of their duties under the “Land use” spatial data theme, as well as the necessary training.

The Minister of Agriculture and Rural Development appointed the working team for the development of standards for water and land improvement infrastructure records in spatial information systems, consisting of representatives of Provincial Drainage, Irrigation and Water Facility Boards and the Institute of Technology and Life Sciences in Falenty.
The working team provides a platform for discussion and exchange of information on key problems of the implementation of ISI in water and land improvement infrastructure records at the national level and the development of the application schema defined in the INSPIRE Data Specification on Agricultural and Aquaculture facilities.

CSIOZ, a body financed from the state budget, which has been authorised by the Minister of Health – as a leading body – to coordinate the INSPIRE implementation activities, cooperates on an ongoing basis with registration bodies with respect to the structuring of the registers to the extent covered by the Regulation of the Council of Ministers on the National Interoperability Framework, minimum requirements for public registers and exchange of information in electronic formats, as well as minimum requirements for ICT systems. (Journal of Laws of 2012, item 526).

3.1.3 Comments on the monitoring and reporting process

In the monitoring form for Annex I, INSPIRE data sets are included in addition to source data sets for the following themes: “Geographical names”, “Administrative units”, “Addresses”, “Cadastral parcels” and “Transport networks”. Those sets were prepared in conformity with INSPIRE requirements, i.e. Commission Regulation No 1089/2010, as regards interoperability of spatial data sets and services and the applicable technical guidance. However, the requirement regarding the periodic updating of the data sets is not met, and therefore the value of “0” is entered in the monitoring file. Many leading bodies, and also other administration bodies, have noted that the European Commission was late in adopting the regulation on data specifications for Annexes II and III. This entails difficulties in the unambiguous identification of the sets covering the themes, mostly with respect to Annex III. In addition, new metadata elements are found in the draft regulation, which, in turn, may affect the discharge of the obligation to create metadata for Annex III within the statutory time limit (by 3 December 2013).

3.2 Quality assurance

3.2.1 Quality assurance procedures

Art.12.2 (a) a description of quality assurance procedures, including the maintenance of the infrastructure for spatial information

In the course of the construction of the Geoportal as the central access point to spatial data infrastructure, the following procedures having an effect on the quality assurance for infrastructure elements were established:
- Procedure for adding new users and granting user rights – aimed at ensuring that unauthorised users will be unable to access any sensitive elements of the geoportal
- Metadata verification procedure – with the goal to verify the metadata published by third parties on the geoportal catalogue server
- Catalogue server federation procedure – ensuring that the external catalogue servers are connected to the geoportal’s catalogue server
- Procedure for the verification of network services published on the geoportal – ensuring the connection of external network view services to the geoportal
- Geoportal maintenance procedure – aimed at ensuring that the geoportal makes the services available according to the required availability, efficiency and capacity
- Product quality control – the procedure is aimed at verifying whether the application components developed as part of the geoportal meet the customer’s requirements

3.2.2 Analysis of quality assurance problems

Art.12.2 (b) an analysis of quality assurance problems related to the development of the infrastructure for spatial information, taking into account the general and specific indicators

- Varying progress of the work connected with the establishment of ISI by individual entities forming the infrastructure
- Issues involved in assuming responsibility for additional tasks connected with the establishment of ISI by individual entities forming the infrastructure – lack of additional human resources and money
- Complex and changing implementing rules and technical standards (inability to plan IT projects well ahead), using a difficult language, which makes them difficult to comprehend without expert knowledge
- Problems relating to ambiguous interpretations of the INSPIRE implementing rules and technical guidance
- Data harmonisation and publication of networks services are time-consuming and expensive
- Innovative character of ISI giving rise to the need to implement new, often untested technical solutions
- Difficulties of the organisations developing ISI in switching to the service-based working model
- Problems with updating register data
- Difficulties involved in the integration of thematic portals with the national Geoportal
- WMS 1.3.0 implemented differently by key market providers of GIS software

3.2.3 Measures taken to improve the quality assurance

Art.12.2 (c) a description of the measures taken to improve the quality assurance of the infrastructure

A number of measures were taken as part of the development of spatial data infrastructure to improve the quality assurance of ISI. These include the following:

- In the area of organisation:
  - drawing up strategic documents – concepts for the development of system solutions and cooperation in the implementation of ISI:
  - preparing the harmonisation strategy within the framework of ISI;
  - developing the programme and schedule of adjustment measures;
  - preparing the architecture for catalogue services in Poland;
- In the area of legislation:
  - drawing up implementing documents (regulations) concerning source registers containing spatial data – standardisation of data sets and development of data models
- In the area of services:
  - adjusting the existing services and publishing of new services in accordance with the requirements of the regulation with respect to network services;
- In the area of the Geoportal tools and environment:
  - shaping the Geoportal's architecture after the INSPIRE model with an intermediate layer – integrated SOA and OGC service buses;
  - preparing the sandbox environment, intended for *inter alia* testing of the developed tools, verification of data and metadata quality and verification of service quality, as well as training users and administrators in the use of the tools;
  - developing software for the ISI node (ISI Module) – software made available free of charge to administrative bodies, allowing to store data and publish standardised services as well as to exchange data between nodes using one of the synchronisation models;
  - development of the service monitoring module – tools to verify the quality of network services in terms of availability, efficiency and capacity. This module enables the collection and reporting of service statistics and automatic notifications of operating problems to service administrators.
  - tools have been prepared to harmonise the sets assigned to GGK;
  - tools have been prepared to manage and publish INSPIRE data – the tools are intended to enable the management of INSPIRE data with respect to data imports to the data collection system of the Geoportal, and further processing to publish INSPIRE data via the INSPIRE services;
- In the area of training:
  - cycles of basic and expert training (more than 4 900 attendants representing all levels of public administration)
  - training on metadata tools and data set harmonisation tools for representatives of leading bodies;
- Other:

- preparation of a concept for the inclusion of the Field Branches of NID in the process of quality control for the generated spatial data
- the availability of an online application tool to process and manage registration documents in the form of scanned copies of decisions will permit fast sharing and synchronisation of data between NID and other cooperating administrative bodies.
- using advanced ETL (Extract Transform Load) tools, which allow to harmonise all types of spatial data (GDOŚ).
- participation in data specification testing,
- organisation of meetings with system users, aimed at *inter alia* improving the quality of the collected data and information made available to end users (IBL).

3.2.4 Quality certification mechanisms

Art.12.2 (d) where a certification mechanism has been established, a description of that mechanism.

4 Contribution to the functioning and coordination of the infrastructure (Art. 13)

4.1 General overview description of the ISI

- *Vision / policy / strategy (where applicable, reference could be given to existing documents)*

The Act on ISI sets out the basic rules for the establishment and operation of spatial data infrastructure in Poland. The Polish spatial data infrastructure encompasses all levels of public administration and, as a rule, serves all spatial information users nationally and in the Community. Within the framework of the infrastructure, initiatives can be taken to establish regional, local and thematic infrastructures, provided that their interoperability and consistency with the provisions implementing the INSPIRE Directive and the Act on ISI are ensured. ISI in Poland involves multiple disciplines, ministries, stakeholders and themes. The Act on ISI introduces legal mechanisms to ensure interoperability and cooperation in the areas of data, metadata, spatial data services, coordination of the establishment and development of infrastructure.

In 2012, a document was drawn up titled “Programme for the establishment of Spatial Data Infrastructure in Poland – stage 2012 to 2013”. This document was developed jointly by 12 leading bodies defined in the Act on ISI, responsible for the themes assigned to them by that Act and coordinated by the Minister of Administration and Digitization with assistance from the Surveyor General of Poland. The ISI Board plays a significant role in the process, as a platform of understanding for leading bodies, enabling the effective coordination of work by developing cooperation between the bodies and other stakeholders. The document was created pursuant to Resolution No 7 of the ISI Board, which obliged leading bodies to prepare programmes within their respective competences, in accordance with the standard contents and programming procedure and schedule set out in that Resolution (the document is available on the ISI Board website: www.radaiip.gov.pl).

4.2 INSPIRE stakeholders

An overview of the various stakeholders contributing to the implementation of the infrastructure for spatial information according to the following typology: users, data producers, service providers, coordinating bodies

The Act on ISI lists twelve leading bodies: the minister in charge of construction, local planning, land use and housing, the minister in charge of maritime economy, the minister in charge of culture and the protection of the national heritage, the minister in charge of agriculture, the minister in charge of the environment, the minister in charge of health, the Surveyor General of Poland, the Chief National Geologist, the Chief Inspector of Environmental Protection, the Chief Nature Conservator, the President of the Central Statistical Office, the President of the National Water Management Authority, who, by virtue of the applicable provisions of law, are responsible for public registers or for the oversight of the state policy in the area of public registers constituting spatial data sources for relevant INSPIRE themes. Additionally, leading bodies play a coordinating role for individual spatial data themes, as they are not always the data producers, only supervising the implementation of those tasks by other administrative bodies instead. ISI users are, of course, citizens, economic operators, scientific and research institutions and administrative bodies, to a various extent and on different principles (in particular, those dealing with the following themes: environmental protection, waste management, spatial management, as well as emergency services engaged in crisis management, civil protection, emergency medical services, police forces, fire brigades), as specified by the Act on ISI and the Acts laying down the rules for public registers in Poland. Further stakeholders include other administrative bodies.

Examples of data providers at the ministry of the environment:

1. Institute of Meteorology and Water Management – National Research Institute – data provider for themes from Chapter 3, points 7, 13 and 14 of the Act on ISI;

2. Polish Geological Institute – National Research Institute, data provider for themes from Chapter 1 point 8 and 9, Chapter 2 point 4 and Chapter 3 points 7, 12, 20 and 21 of the Act on ISI, and the data keeper;
3. The General Directorate for Environmental Protection, data provider for themes from Chapter 1 point 9 and Chapter 3 point 19 of the Act on ISI;
4. The Forest Research Institute, data provider for themes from Chapter 3 point 12 of the Act on ISI.

4.3 Role of the various stakeholders

A description of the role of the various stakeholders in the development and maintenance of the infrastructure for spatial information, including their role in the coordination of tasks, in the provision of data and metadata, and in the management, development and hosting of services

Leading bodies, within their respective competences, organise, coordinate and monitor activities relating to the establishment, maintenance and development of infrastructure in the area of the spatial data themes which have been assigned to them, in particular with a view to ensure the consistency of those activities.
Other administrative bodies, within their respective competences, make data sets available and introduce technical solutions to ensure the interoperability of spatial data sets and services.

For instance, CSIOZ, an entity dedicated and authorised by law to create electronic information resources populated both by units and entities reporting to or supervised by the Minister of Health and by certain dictionary data from other bodies (the Ministry of the Interior, Central Statistical Office, self-regulating health professional associations), carries out activities with the aim to standardise, update and complete the processed data and to organise the data in value-adding sets.

4.4 Measures taken to facilitate sharing

A general description of the main measures taken to facilitate the sharing of spatial data sets and services between public authorities and a description of how sharing has improved as a result

The spatial data sets and services of an administrative body covered by the infrastructure must be made available free of charge to other administrative bodies to the extent necessary for them to perform their public tasks. An administrative body makes the spatial data sets and services available to administrative bodies from other European Union Member States and institutions and bodies of the European Union for the purposes of public tasks that may have an impact on the environment, respecting the provisions on public registers to which such data sets and services relate. An administrative body makes the spatial data sets and services available to bodies established by international agreements to which the European Union and Member States are parties, for the purposes of tasks that may have an impact on the environment, respecting the provisions on public registers containing such data sets. Spatial data sets and services are made available to EU institutions and bodies for environmental protection reporting purposes free of charge.

Examples of measures:

Main measures involve the consistent computerisation of resources, for example in the health sector, on the basis of the provisions of law which permit such computerisation: the Act on the computerisation of activities of entities performing public tasks, the Act on providing services by electronic means, the Act on national archive resources and archives, the Act on electronic signature, the Act on the information system in health care, the Act on health care services, the Act on access to public information, the Act on personal data protection, the Act on public statistics, the Code of Administrative Procedure, as well as training and awareness-raising activities carried out by means of conferences, publications of newsletters and meetings with employees of registration bodies.

GDOŚ makes data available for the purposes of nature conservation to all interested public bodies free of charge and without licensing agreements. The data is shared via an authorised download service. Login names and passwords for the service are provided on the basis of relevant agreements.

IBL shares general data on fires with all interested public bodies free of charge and without licensing agreements. For specific data, a login name and password must be obtained from the IBL service administrator.

4.5 Stakeholder cooperation

Art.13 (d) a description of how stakeholders cooperate

This could for example include the description of:
- *Written framework for cooperation*
- *Working groups (list of active working groups)*
- *Newsletters, other publications (references)*
- *Description of the National geoportal (including URL), and where relevant regional or thematic portals*

The infrastructure is established, maintained and developed and it also functions within the framework of cooperation between its constituent leading bodies, other administrative bodies and third parties. Administrative bodies may, in consultation with leading bodies and by way of agreement, establish and maintain common elements of infrastructure, in view of minimising the cost of establishment and maintenance of that infrastructure, optimising the access to spatial data sets and services, as well as ensuring the harmonisation, security and quality of those data sets and services.

Leading bodies cooperate with one another *inter alia* by using a shared tool to edit, validate and publish metadata. A working group was established as part of the development of cooperation details between GDOŚ and NID on the "Protected sites" theme.

In some provinces (e.g. Małopolskie, Mazowieckie), Conciliation Teams for Regional Spatial Information Systems were established. The core working areas of the Teams are: sharing the experience of regions in the establishment of spatial data infrastructures and working out a common path for initiatives in regions concerning the inclusion of individuals in cooperation.

Regional portals:

In 2011, the Małopolskie Province (MP) together with the Kraków Urban Municipality (KUM) established a regional infrastructure named MIIP – the Little Poland Spatial Data Infrastructure: http://miip.geomalopolska.pl). This solution, as an example of cooperation between self-government bodies, contributed to a decreased cost of establishment of infrastructure elements. The basic objective of MIIP is to provide public access to the INSPIRE data sets and services created by MP and KUM for the general public, and in particular, to other administrative bodies, which use the data and services to perform public tasks. The geoportal of the Małopolskie Province additionally integrates INSPIRE services for further administrative bodies at the level of districts and municipalities. The number of users is constantly growing. It reached 36 600 at the end of 2012.

The Świętokrzyskie Province runs the "Wrota Świętokrzyskie" portal, which shares data as a free view service conforming to the OGC WMS standard. Aside from georeferenced data, a range of thematic data is shared. http://map.wrota-swietokrzyskie.pl/wrotasw/.

Information about the Mazowieckie Province can be found on the www.wrotamazowsza.pl website, where data and information on the Mazowieckie Province are shared via an interactive map designed and developed using the GIS technology. Currently, about 400 different thematic layers are available on the website. It ensures public access to information, in accordance with the principles of the information society.

The Opole Province has implemented the "Opole Province Online – spatial information system and information and promotion website for the Opole Province" project. The execution of the project allowed to implement the provisions of the INSPIRE Directive and its implementing rules at the level of the Opole Province. As part of the project, an OWI geoportal was launched on the www.mapy.opolskie.pl website, serving as an access point to spatial data of the Regional Spatial Data Infrastructure named "Opole Province Online – spatial information system". The system makes it possible to collect spatial data, perform spatial analyses on the basis of the collected data, and to share and present selected data using e-services to individual and institutional customers.

The Podlaskie Province launched its Podlasie Spatial Information System (PSIP) www.psip.wrotapodlasia.pl as a regional IT system to acquire, manage and analyse spatial data sets. Data that can be viewed via the WMS service include: address points, buildings, roads, street names, railways,

water courses and water bodies. The solutions are based on free software and use INSPIRE-UP, a proprietary application, to create metadata in the XML format and import them to the database of the catalogue server.

The Pomorskie Province runs the http://mapy.pomorskie.eu geoportal, which is based on interactive maps. The data shared through the portal relate to key information about the province area, i.e. the administrative division, land cover, streets, address points, nature conservation features etc. Aside from that data, raster data are available in the form of an orthophotomap and topographic maps at various scales.

Thematic portals

The http://geoportal.nid.pl geoportal (a map portal) was launched, serving as the central access point for spatial data sets and services covering information on historic landmarks.
The geoportal provides the following services:

- discovering spatial data sets and services (CSW catalogue server) on the basis of the content of the corresponding metadata as well as viewing and publishing metadata content;
- viewing, displaying, navigating, overlaying images, data sets and displaying map legend information,
- downloading of spatial data in the form of WFS and WFS-G data services (gazetter).

In addition, the geoportal is capable of offering data transformation services. Standard spatial data publication mechanisms (WMS view services and WFS download services) were used to develop and disseminate information on Polish historical landmarks on two IT platforms:

- NID map portal (http://geoportal.nid.pl),
- e-zabytek portal (http://e-zabytek.nid.pl),

and the mobile application "Zabytki w Polsce" (Historical Landmarks in Poland) – a mobile version of the e-zabytek portal.

The Director-General for Environmental Protection develops and maintains the geoportal named Geoserwis as an access point for the "Protected sites" theme: http://geoserwis.gdos.gov.pl/mapy/. The following services form an integral part of Geoserwis:

- view: http://sdi.gdos.gov.pl/wms,
- discover: http://sdi.gdos.gov.pl/csw,
- download: http://sdi.gdos.gov.pl/wfs.

The President of KZGW develops and maintains the KZGW Geoportal and the KZGW Metadata Catalogue, which serve as a source of information and an access point to thematic spatial data in the field of water management.

PIG-PIB runs Geoportal IKAR as an access point for the data on the following themes: "Geology", "Energy resources" and "Mineral resources". The Geoportal consists of:

- A map viewer: http://ikar2.pgi.gov.pl/mvs_viewer/,
- A metadata catalogue: http://ikar2.pgi.gov.pl/geoportal/catalog/main/home.page.

In the Podkarpackie Province and Warmińsko-Mazurskie Province, the web portal of Geomelio was launched, which offers discover, sharing and analysing services for cadastral data on waters and drainage and irrigation structures as well as land with drainage and irrigation structures in relation to cadastral parcels. The portal is mainly used to plan flood control investments.

4.6 Access to services through the INSPIRE geoportal

Art. 13 (e) A description of the access to the services through the Inspire geo-portal, as referred to in Article 15(2) of Directive 2007/2/EC.

The Surveyor General of Poland develops and maintains the ISI geoportal as a central access point to a network of services relating to spatial data sets and services. A discover service sharing metadata for data sets and services forms an integral part of the ISI geoportal. This service was notified to the European Commission as an official national discover service for the area of Poland. Metadata shared via the national network service are cyclically downloaded by the catalogue server of the INSPIRE geoportal and shared at the level of that geoportal. Through the metadata which describe the services, users of the

INSPIRE geoportal have direct access to public view services published in Poland and to information on other services, e.g. download services.
The following spatial data services are available via the INSPIRE geoportal:

- Geoportal – General Geography Database – RASTER http://sdi.geoportal.gov.pl/wms bdor/wmservice.aspx
- Geoportal – Buildings BDOT 2009 http://sdi.geoportal.gov.pl/wms budynki bdot 2009/request.aspx
- Geoportal – Buildings BDOT 2010 http://sdi.geoportal.gov.pl/wms budynki bdot 2010/request.aspx
- Geoportal – Cadastral data http://sdi.geoportal.gov.pl/wms dzkat/wmservice.aspx
- Geoportal – ISOK – product range http://sdi.geoportal.gov.pl/wms isok/wmservice.aspx
- Geoportal – ASG-EUPOS and ZSiN locations http://sdi.geoportal.gov.pl/wms lokalizacje asg-eupos zsin/request.aspx
- Geoportal – Unemployment maps according to GUS http://sdi.geoportal.gov.pl/GM WMS GUS/request.aspx
- Geoportal – National Programme for the Redevelopment of Local Roads 2008-2011 http://sdi.geoportal.gov.pl/wms nppdl 2008-2011/wmservice.aspx
- Geoportal – Orthophotomap http://sdi.geoportal.gov.pl/wms orto/wmservice.aspx
- Geoportal – Geodetic network http://sdi.geoportal.gov.pl/WMS OSNOWY/Request.aspx
- Geoportal – Polish registry of state borders http://sdi.geoportal.gov.pl/wms prg/wmservice.aspx
- Geoportal – Polish registry of geographical names http://sdi.geoportal.gov.pl/wms prg/wmservice.aspx
- Geoportal – Administrative map of Poland (raster) http://sdi.geoportal.gov.pl/gm wms administr500/request.aspx
- Geoportal – Hydrographical map of Poland (raster) http://sdi.geoportal.gov.pl/wms hydro/wmservice.aspx
- Geoportal – Landscape map of Poland (raster) http://sdi.geoportal.gov.pl/gm wms krajobraz500/request.aspx
- Geoportal – General geographical map of Poland (raster) http://sdi.geoportal.gov.pl/gm wms ogolnogeogr500/request.aspx
- Geoportal – Biosphere protection map of Poland (raster) http://sdi.geoportal.gov.pl/wms sozo/wmservice.aspx
- Geoportal Topographic map of Poland (raster) http://sdi.geoportal.gov.pl/wms topo/wmservice.aspx
- Geoportal – ASG-EUPOS stations http://sdi.geoportal.gov.pl/gm wms asg/request.aspx

Spatial data services for the themes of the INSPIRE Directive available in the ISI Geoportal: WMS:

- INSPIRE_AU: Administrative units

http://mapy.geoportal.gov.pl/wss/service/INSPG2/guest/INSPIRE AU/MapServer/exts/InspireView/pol/service

- INSPIRE_CP: Cadastral parcels

http://mapy.geoportal.gov.pl/wss/service/INSPG2/guest/INSPIRE CP/MapServer/exts/InspireView/pol/service

- INSPIRE_GN: Geographical names

http://mapy.geoportal.gov.pl/wss/service/INSPG2/guest/INSPIRE GN/MapServer/exts/InspireView/pol/service

- INSPIRE_TN_BDO: BDO Transport

http://mapy.geoportal.gov.pl/wss/service/INSPG2/guest/INSPIRE TN BDO/MapServer/exts/InspireView/pol/service

- INSPIRE_TN_TBD: TBD Transport

http://mapy.geoportal.gov.pl/wss/service/INSPG2/guest/INSPIRE TN TBD/MapServer/exts/InspireView/pol/service

WMTS:

- INSPIRE_CP: Cadastral parcels

http://mapy.geoportal.gov.pl/wss/service/WMTS/guest/wmts/INSPIRE CP

- INSPIRE_GN: Geographical names

http://mapy.geoportal.gov.pl/wss/service/WMTS/guest/wmts/INSPIRE GN

- INSPIRE_AU: Administrative units

http://mapy.geoportal.gov.pl/wss/service/WMTS/guest/wmts/INSPIRE AU

- INSPIRE_AD: Addresses

http://mapy.geoportal.gov.pl/wss/service/WMTS/guest/wmts/INSPIRE AD .

5 Usage of the infrastructure for spatial information (Art. 14)

5.1 Use of spatial data services in the ISI

Art. 14(a) the use of the spatial data services of the infrastructure for spatial information, taking into account the general and specific indicators

This could include an explanation of how this information was collected, and how it should be interpreted/understood.

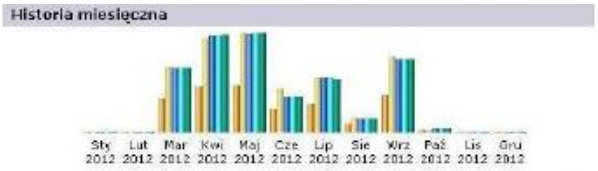
GDOŚ:
Overview of visits and users of GDOŚ Geoserwis in a year:
Visits: 68 800
Unique visitors: 31 200
Views: 86 000
GDOŚ network services (WMS, WFS, CSW) are invoked 500 000 to 700 000 times a day and generate as many responses.

IBL:
Overview of visits and visitors to the KSIPL service in a year, e.g. 2012:

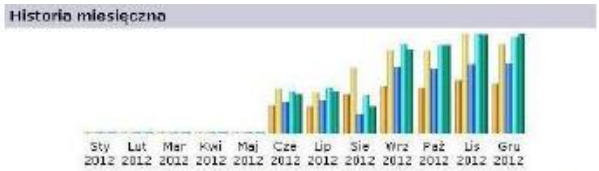
Visits: 2 947

KZGW:
Visit statistics for the homepage of the KZGW Geoportal have been recorded since January 2011. From 1 January 2011 to 31 December 2012, the website recorded 3 500 visits, of which ca. 60% were generated by new visitors and ca. 40% by returning visitors. Currently, the functionalities of the KZGW Geoportal do not allow to tell precisely which information (services) are most often used and for which purposes.

The statistics below show the number of users of the services published in the ISI Geoportal system in a year (2012), month, day and hour.
The year 2012 was remarkable as regards the Polish ISI, because it marked the migration to new infrastructure.
Therefore, two types of statistics are provided – for both map portals: Geoportal 1 and Geoportal 2.
The annual, monthly, daily and hourly overviews provided below show statistics for both map viewers in sequence.
Annual statistics – 2012



Miesiąc	Unikatowych gości	Liczba wizyt	Strony	Żądania	Pasmo
Sty 2012	0	0	0	0	0
Lut 2012	0	0	0	0	0
Mar 2012	266,382	526,867	210,688,591	210,688,608	224.99 GB
Kwi 2012	369,206	755,863	317,205,367	317,205,439	338.72 GB
Maj 2012	377,948	794,560	324,826,306	324,826,329	345.21 GB
Cze 2012	189,464	359,029	110,417,079	110,417,089	125.49 GB
Lip 2012	221,968	440,746	177,551,689	177,552,018	187.86 GB
Sie 2012	68,420	116,145	44,566,306	44,566,306	47.38 GB
Wrz 2012	294,822	606,044	238,307,119	238,307,129	253.31 GB
Paź 2012	19,993	26,016	10,958,915	10,958,915	11.65 GB
Lis 2012	0	0	0	0	0
Gru 2012	0	0	0	0	0
Razem	1,808,223	3,617,070	1,442,521,372	1,442,521,833	1534.61 GB

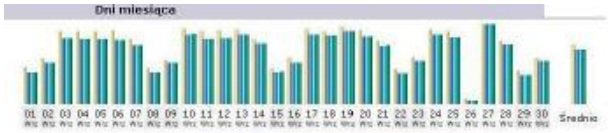


Miesiąc	Unikatowych gości	Liczba wizyt	Strony	Żądania	Pasmo
Sty 2012	0	0	0	0	0
Lut 2012	0	0	0	0	0
Mar 2012	27	134	10,726	34,974	27.44 MB
Kwi 2012	88	466	208,251	288,562	222.76 MB
Maj 2012	515	1,205	527,304	645,411	586.98 MB
Cze 2012	73,698	118,433	30,413,619	40,674,355	33.52 GB
Lip 2012	70,778	107,759	32,206,043	43,601,259	35.85 GB
Sie 2012	103,974	174,148	18,427,043	35,984,065	23.13 GB
Wrz 2012	124,147	218,924	63,589,952	85,600,545	71.99 GB
Paź 2012	121,476	219,941	61,332,213	84,286,555	75.39 GB
Lis 2012	141,855	261,262	66,022,895	94,529,540	84.55 GB
Gru 2012	132,696	236,819	66,867,089	92,295,178	84.67 GB
Razem	769,254	1,339,091	339,614,135	477,940,444	409.91 GB

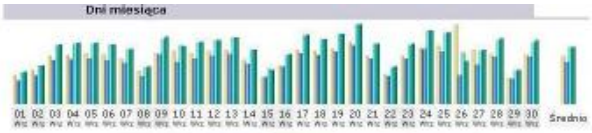
Historia miesięczna	Monthly history
Sty	Jan

Lut	Feb
Mar	Mar
Kwi	Apr
Maj	May
Cze	Jun
Lip	Jul
Się	Aug
Wrz	Sep
Paź	Oct
Lis	Nov
Gru	Dec
Miesiąc	Month
Unikatowych gości	Unique visitors
Liczba wizyt	Visits
Strony	Pages
Żądania	Requests
Pasmo	Band
Razem	Total

Monthly statistics – September 2012



Dzień	Liczba wizyt	Strony	Żądania	Pasmo
01 Wrz 2012	12,807	4,596,830	4,596,830	4.90 GB
02 Wrz 2012	15,592	6,004,835	6,004,835	6.40 GB
03 Wrz 2012	24,725	9,603,364	9,603,365	10.23 GB
04 Wrz 2012	24,836	9,457,788	9,457,788	10.06 GB
05 Wrz 2012	24,768	9,563,042	9,563,043	10.16 GB
06 Wrz 2012	25,096	9,359,787	9,359,788	9.95 GB
07 Wrz 2012	22,050	8,579,744	8,579,744	9.12 GB
08 Wrz 2012	12,237	4,534,846	4,534,847	4.82 GB
09 Wrz 2012	14,971	5,999,364	5,999,364	6.35 GB
10 Wrz 2012	25,640	10,229,093	10,229,093	10.87 GB
11 Wrz 2012	24,767	9,543,387	9,543,387	10.14 GB
12 Wrz 2012	25,112	9,690,901	9,690,902	10.30 GB
13 Wrz 2012	25,304	10,171,066	10,171,067	10.83 GB
14 Wrz 2012	22,066	8,861,508	8,861,508	9.42 GB
15 Wrz 2012	12,261	4,658,126	4,658,126	4.96 GB
16 Wrz 2012	15,903	6,045,013	6,045,013	6.44 GB
17 Wrz 2012	25,754	10,191,277	10,191,279	10.84 GB
18 Wrz 2012	24,663	10,019,781	10,019,781	10.61 GB
19 Wrz 2012	26,394	10,744,748	10,744,748	11.37 GB
20 Wrz 2012	25,114	9,856,341	9,856,341	10.47 GB
21 Wrz 2012	21,528	8,531,306	8,531,306	9.08 GB
22 Wrz 2012	11,996	4,522,187	4,522,187	4.81 GB
23 Wrz 2012	15,875	6,309,104	6,309,104	6.71 GB
24 Wrz 2012	25,328	10,112,961	10,112,961	10.75 GB
25 Wrz 2012	24,790	9,742,297	9,742,297	10.36 GB
26 Wrz 2012	1,577	463,785	463,785	504.33 MB
27 Wrz 2012	27,008	11,659,108	11,659,108	12.38 GB
28 Wrz 2012	21,495	8,714,234	8,714,234	9.26 GB
29 Wrz 2012	11,343	4,243,894	4,243,894	4.51 GB
30 Wrz 2012	15,525	6,295,404	6,295,404	6.69 GB
Średnio	20,201	7,943,570	7,943,570	8.44 GB
Razem	606,044	238,307,119	238,307,129	253.31 GB



Dzień	Liczba wizyt	Strony	Żądania	Pasmo
01 Wrz 2012	4,364	1,181,436	1,567,843	1.94 GB
02 Wrz 2012	5,179	1,441,300	1,952,347	1.63 GB
03 Wrz 2012	7,312	2,182,779	2,951,077	2.49 GB
04 Wrz 2012	7,523	2,255,428	3,054,808	2.57 GB
05 Wrz 2012	7,734	2,277,244	3,063,477	2.57 GB
06 Wrz 2012	7,595	2,218,559	2,988,484	2.52 GB
07 Wrz 2012	6,859	2,070,707	2,753,022	2.34 GB
08 Wrz 2012	4,973	1,418,947	1,844,924	1.60 GB
09 Wrz 2012	7,779	2,511,736	3,270,213	2.84 GB
10 Wrz 2012	8,178	2,133,532	2,967,147	2.44 GB
11 Wrz 2012	7,733	2,295,001	3,101,305	2.61 GB
12 Wrz 2012	8,105	2,406,872	3,220,333	2.71 GB
13 Wrz 2012	8,324	2,500,484	3,343,182	2.79 GB
14 Wrz 2012	6,822	2,043,524	2,728,024	2.28 GB
15 Wrz 2012	4,094	1,360,970	1,749,248	1.44 GB
16 Wrz 2012	5,792	1,897,079	2,453,086	2.09 GB
17 Wrz 2012	8,242	2,552,295	3,448,134	2.91 GB
18 Wrz 2012	8,140	2,462,266	3,254,167	2.74 GB
19 Wrz 2012	8,442	2,644,758	3,532,923	2.96 GB
20 Wrz 2012	9,450	2,946,273	4,003,511	3.34 GB
21 Wrz 2012	7,280	2,273,014	3,024,899	2.55 GB
22 Wrz 2012	4,483	1,401,007	1,827,338	1.57 GB
23 Wrz 2012	7,382	2,279,543	2,973,618	2.55 GB
24 Wrz 2012	8,533	2,762,045	3,696,618	3.11 GB
25 Wrz 2012	8,951	2,664,206	3,561,362	3.02 GB
26 Wrz 2012	12,093	1,432,043	2,619,615	1.82 GB
27 Wrz 2012	8,261	1,977,059	2,680,443	2.29 GB
28 Wrz 2012	7,656	2,373,875	3,220,960	2.76 GB
29 Wrz 2012	4,026	1,256,470	1,646,847	1.42 GB
30 Wrz 2012	7,620	2,369,502	3,111,190	2.69 GB
Średnio	7,297	2,119,665	2,863,351	2.40 GB
Razem	218,924	63,589,952	85,600,545	71.99 GB

Dni miesiąca	Days of the month
Średnio	Average
Dzień	Day
Liczba wizyt	Visits
Strony	Pages
Żądania	Requests
Pasmo	Band
Wrz	Sep
Średnio	Average
Razem	Total

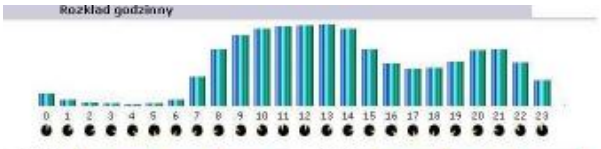
Weekly statistics – September 2012

Dzień	Strony	Żądania	Pasmo
Nd	6,130,744	6,130,744	6.52 GB
Pn	10,034,173	10,034,174	10.67 GB
Wt	9,690,812	9,690,813	10.29 GB
Śr	7,615,619	7,615,619	8.08 GB
Cz	10,262,075	10,262,076	10.91 GB
Pt	8,671,698	8,671,698	9.22 GB
So	4,511,176	4,511,176	4.80 GB

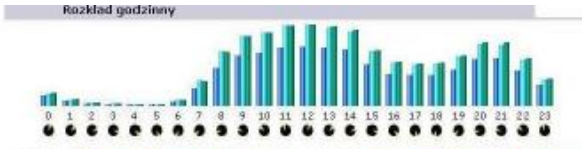
Dzień	Strony	Żądania	Pasmo
Nd	2,099,831	2,752,130	2.36 GB
Pn	2,407,662	3,265,794	2.74 GB
Wt	2,419,225	3,242,910	2.74 GB
Śr	2,190,229	3,109,087	2.51 GB
Cz	2,410,593	3,253,905	2.74 GB
Pt	2,190,280	2,931,726	2.48 GB
So	1,323,766	1,725,240	1.47 GB

Dni tygodnia	Days of the week
Dzień	Day
Strony	Pages
Żądania	Requests
Pasmo	Band
Nd	Sun
Pn	Mon
Wt	Tue
Śr	Wed
Cz	Thu
Pt	Fri
So	Sat

Hourly statistics – September 2012



Rozkład godzinny	Strony	Żądania	Pasmo
00	2,979,616	2,979,617	3.17 GB
01	1,344,367	1,344,367	1.43 GB
02	696,920	696,920	755.07 MB
03	443,120	443,120	481.40 MB
04	388,379	388,379	422.43 MB
05	510,901	510,901	556.16 MB
06	1,496,225	1,496,225	1.59 GB
07	7,073,418	7,073,419	7.50 GB
08	13,706,971	13,706,972	14.56 GB
09	17,201,076	17,201,077	18.28 GB
10	18,760,505	18,760,505	19.94 GB
11	19,282,872	19,282,872	20.49 GB
12	19,603,535	19,603,537	20.84 GB
13	19,687,890	19,687,890	20.92 GB
14	18,633,215	18,633,217	19.81 GB
15	13,663,831	13,663,831	14.53 GB
16	10,077,669	10,077,669	10.71 GB
17	9,052,656	9,052,656	9.61 GB
18	9,367,607	9,367,607	9.95 GB
19	10,674,744	10,674,745	11.34 GB
20	13,396,212	13,396,212	14.24 GB
21	13,709,709	13,709,709	14.60 GB
22	10,347,839	10,347,840	11.02 GB
23	6,208,842	6,208,842	6.62 GB



Rozkład godzinny	Strony	Żądania	Pasmo
00	864,657	1,061,696	938.06 MB
01	426,596	508,595	462.07 MB
02	208,275	248,942	223.72 MB
03	131,668	157,099	142.07 MB
04	80,263	97,130	87.76 MB
05	111,902	143,545	124.89 MB
06	349,658	477,158	401.70 MB
07	1,544,093	2,238,326	1.80 GB
08	3,312,665	4,709,236	3.86 GB
09	4,342,606	6,011,995	4.99 GB
10	4,555,295	6,333,559	5.25 GB
11	5,001,254	6,975,926	5.75 GB
12	5,062,752	6,982,815	5.79 GB
13	4,975,039	6,770,494	5.67 GB
14	4,820,411	6,395,408	5.43 GB
15	3,553,516	4,668,694	3.98 GB
16	2,763,609	3,678,407	3.13 GB
17	2,659,285	3,527,183	3.01 GB
18	2,668,025	3,573,790	3.03 GB
19	3,174,621	4,251,725	3.60 GB
20	4,025,721	5,318,666	4.54 GB
21	4,047,095	5,271,429	4.52 GB
22	3,050,825	3,917,276	3.37 GB
23	1,820,101	2,281,461	1.97 GB

Rozkład godzinny	Hourly distribution
Strony	Pages
Żądania	Requests
Pasmo	Band

5.2 Use of the spatial data sets

Art.14 (b) the use of spatial data sets corresponding to the themes listed in Annexes I, II and III to Directive 2007/2/EC by public authorities, with particular attention to examples in the field of environmental policy and/or policies and activities which may have an impact on the environment (air and emission policies, waste related policies, inland-coastal-marine policies, biodiversity related policies, horizontal policies such as public access to environmental information, environmental liability, environmental and strategic impact assessments) – 'greening' of the Common Agricultural Policy, energy and transport policies, security policies with an environmental dimension (for example maritime security).

Examples could cover the use made for:

a) *the implementation of measures and programmes as laid down in various elements of the EU environmental acquis;*
b) *the monitoring of such measures, the monitoring of trends in pressures, environmental impact assessments.*

Examples could demonstrate the added value of INSPIRE measures with regard to use of the spatial datasets for policies above. Examples could also provide a state-of-play of progress achieved and problems still outstanding. In this respect, examples could be provided of multi-purpose use of spatial data sets collected for a particular policy which may have an impact on the environment (for example Land-parcel Information / cross-compliance – LPIS related to agricultural subsidies contains real-world spatial data covered by INSPIRE – land-use/cover etc.)

An example of a good practice with respect to the use of data sets in the Małopolskie Province could be the use of the topographic objects database (bdot) to carry out the environment-related tasks of the provincial self-government.
bdot data were used *inter alia* to develop a clean-air programme (including a map of air pollutant emissions, a map of environmental risks), a noise control programme (including noise maps), inventories of landfills, waste management installations, battery processing facilities, vehicle collection points etc.

Furthermore, topographic objects databases were used by the Police to locate properties, by PIG-PIB to develop a geological map, and by PKP Polskie Linie Kolejowe to implement its own tasks relating to the infrastructure and organisation of railways. Additionally, the use of the aforesaid databases may have a substantial impact on the areas of crisis management, spatial planning, strategic planning, environmental impact assessment (drawing up the documentation for environmental impact assessments (EIAs), project location activities, monitoring of the state of the environment at execution and operation stages, waste management, including the programme for the removal of asbestos and asbestos-containing products).

The use of agricultural soil maps (1:5 000, 1:25 000) and spatial data sets relating to the characterisation of agricultural areas supports sound soil management and administration of rural areas (e.g. the map of wind erosion in the Dolnośląskie Province at a scale of 1:25 000, map of surface water erosion in the Dolnośląskie Province at a scale of 1: 25 000).

Under an agreement with the Agency for Restructuring and Modernisation of Agriculture, GDOŚ shares data on the borders of protected sites and wildlife survey resources which are used in the LPIS system, a Common Agricultural Policy tool.
Moreover, the “Protected sites”, “Habitats and biotopes” and “Species distribution” data sets play a significant role in the environmental impact assessment process.

5.3 Use of the ISI by the general public

Art.14 (c) if available, evidence showing the use of the infrastructure for spatial information by the general

public

GDOŚ examples:
GDOŚ receives more than 350 written requests annually to share data from the INSPIRE infrastructure. Information on nature conservation features is provided through GDOŚ Geoserwis to approx. 30 000 users annually.

IBL examples:
General information on forest fires is available to all users free of charge. The number of site visits is not monitored.

NID examples:
Standard spatial data publication mechanisms (WMS view services and WFS download services) were used to develop and disseminate information on Polish historical landmarks on two IT platforms:

- NID map portal (http://geoportal.nid.pl),
- e-zabytek portal (http://e-zabytek.nid.pl), and the mobile application “Zabytki w Polsce”.

5.4 Cross-border usage

Art.14 (d) examples of cross-border use and efforts made to improve cross-border consistency of spatial data sets corresponding to the themes listed in Annexes I, II and III

The e-zabytek portal publishes metadata (including data relating to the location of historical landmarks) in the European portal of EUROPEANA (www.europeana.eu). Owing to that, it is possible to merge and analyse data produced by other institutions (also from abroad) which publish information about the Polish national heritage. With respect to the "Protected sites" theme, examples of sharing and joint creation of the spatial data infrastructure could include the thematic websites developed by the Tatra National Park and Karkonosze National Park jointly with Czech and Slovak partners.
PIG-PIB participated in the OneGeology and OneGeology Europe projects, whose goal was to improve the cross-border consistency of spatial data sets.
Furthermore, as part of cross-border cooperation, annual meetings of Czech, Polish and Slovak land surveying services are held, mostly in the context of land surveying issues. However, last year the entire agenda was dedicated to the progress of work (experience sharing) on INSPIRE in the three countries.
Agreements were made with the Federal Republic of Germany, Belarus, Russia and the Czech Republic to support cooperation and mutual spatial database sharing.
Cross-border access to harmonised and interoperational spatial data provides a reliable basis for cross-border activities, such as spatial planning, infrastructure development, flood risk management and environmental protection.
Furthermore, with a view to ensure the consistency of spatial data relating to geographical objects, steps were taken to develop uniform spatial data sets for EuroBoundaryMap, EuroGlobalMap, EuroRegionalMap, EuroDem, EuroGeoNames, i.e. European spatial databases.
In 2012, preparations were started to sign a cooperation agreement with the Slovak Office of Geodesy and Cartography within the framework of general geography database exchange.

Examples of cross-border uses for maritime areas:
The efforts aimed at the development of a spatial data system for maritime areas in Europe were initiated already in 2004. Within the framework of cooperation on the Sea-Search project, followed by the SeaDataNet project and currently the SeaData2 project, the Marine Branch of IMGW-PIB has started populating metadata sets with information. The metadata sets are as follows: EDMO – European Directory on Marine Organisations (conducting marine research), EDMERP – European Directory on Research Projects (relating to marine research), CSR – Cruise Summary Reports (relating to research carried out on vessels at sea and with the use of other measurement platforms, e.g. buoys, ferryboxes), CDI – Common Data Index (relating to the available data resources).
To facilitate access to marine monitoring data, the metadata sets created within the framework of the implementation of the aforesaid European projects are available on the http://www.seadatanet.org website as part of the SeaDataNet2 project. In 2012, the Marine Branch of IMGW-PIB generated metadata for water temperature and salinity. The sets fall within Theme III Oceanographic geographical features. The metadata are published on the http://www.seadatanet.org website. It should be noted that the metadata profile is not fully consistent with the INSPIRE profile.

5.5 Use of transformation services

Art.14 (e) how transformation services are used to achieve data interoperability

6 Data sharing arrangements (Art. 15)

6.1 Data sharing arrangements between public authorities

Art.15 (a) requests an overview of data sharing arrangements that have been, or are being, created between public authorities

In order to facilitate correct understanding of the report, the overview and examples should at least cover the following two items:

- *Overview and examples of existing or being created data sharing arrangements that provide open and free data access, without any further restrictions or conditions for use and free of charge for commercial and non-commercial use?*
- *Overview and examples of existing or being created types of data sharing arrangements, such as framework agreements, one time licences, using widely known licensing schema, etc.?*

Additionally, answers to the following questions would be helpful:
- Is there a need for a specific legislative basis to provide open spatial data? What is already adopted or planned to adopt?
- Are licenses available in electronic and machine-readable forms?

In order to make it possible to use spatial information in Poland, tools have been prepared to support the establishment and development of the spatial data infrastructure:
- ISI module;
- Universal Map Module;
- data set harmonisation tools;
- metadata editing, validation and automatic generation tools.

The basic purpose of the ISI module is to store, manage and share data and metadata available to a user of the Module using spatial data services. Additionally, the module supports data exchange with other nodes of the spatial data infrastructure (other ISI users – e.g. governmental and self-governmental bodies), and ensures the synchronisation of spatial databases with the use of spatial data services. The elements composing the ISI are:

a. Spatial database;
b. Spatial database management system;
c. ISI database population tool;
d. Spatial Data Server;
e. Catalogue Service Server;
f. Management tools for the synchronisation of local nodes (ISI Module instance).

The ISI Module allows any entity holding spatial data sets to share standardised spatial data services, while maintaining data interoperability and standardising access to data for spatial data infrastructure users. An entity using the ISI Module forms part of the spatial data infrastructure, and therefore has access to spatial data resources and can exchange (share and download) data with other entities using the ISI Module. The ISI Module software is made available free of charge on the basis on an agreement with the Surveyor General of Poland.

The Universal Map Module (UMM) is a set of application tools supporting user activities, e.g. by performing spatial data analyses. The solutions adopted in UMM make it possible to use a uniform architecture and to use *inter alia* the following in all modules:

- a common bus for GUGiK services,
- common authentication and authorisation services,
- a common security policy,
- a uniform monitoring and reporting system,
- uniform access to spatial data stored in data warehouses of the Geoportal system.

The basic functionalities of UMM are:

a. access to spatial data via the ISI Module,
b. managing the spatial data stored in the database of the Universal Map Module with respect to:
   - spatial data visualisation,
   - discovery of spatial objects using defined parameters,

- spatial data analyses (e.g. displaying locations where particular events occur, analysis of event intensities),
- statistical data analyses (e.g. trend analysis, forecasting),
- network analyses (e.g. route planning, finding nearest object locations),
- data import/export,

c. cartographic printouts (maps),
d. preparation and generation of reports.

UMM works on the basis of reference spatial data, kept by the Head Office of Geodesy and Cartography, and the geospatial data of the entity/entities using the Universal Map Module. UMM can use the ISI Module solution with respect to spatial data management and access.

Data set harmonisation tools were developed to prepare spatial data sets for INSPIRE Directive Annex I themes, with the Surveyor General of Poland as the leading body, using the source data sets available in Poland. Additionally, the Head Office of Geodesy and Cartography took certain organisational measures with respect to the creation of metadata, which included the preparation of the assumptions for the development of metadata, adjusting the metadata profile for spatial data resources and developing guidance on metadata creation.

As part of that work, metadata were created for spatial data sets. The metadata were created in the XML format, in accordance with the existing assumptions and using the tools produced for the purposes of metadata editing, validation and automatic generation.

The Editor, Validator and the automatic metadata generation tool (Metadata Generator) are used to:

- create metadata for spatial data sets,
- create metadata for series of data sets and services,
- validate metadata files against the application schema in bulk,
- export the resulting files to the metadata database,
- manage the identifiers of metadata files.

The metadata editor is a public tool which allows to create metadata in Polish and in other languages (as needed), conforming to ISO 19115, 19119 and 19139 standards. The editor allows to define any metadata profiles, to enter metadata hierarchically, to use existing glossaries and thesauruses and to automatically generate the identifier of the metadata file and to automatically fill the date when metadata were entered. The editor is available online through a website interface, API programming interface and as a network service. The online version is available at edytor.geoportal.gov.pl/EdytorMetadanych. Files can be created without authorisation, in which case the file is saved locally on a computer drive. On the other hand, when a login and password are obtained from the administrator, the files are temporarily stored on the server and can be published directly in the Geoportal's metadata catalogue.

The metadata validator allows to check metadata files for conformity with ISO standards (19115, 19119, 19139), the INSPIRE profile and the prescribed metadata profile, and also to define the requirements and to check metadata for conformity with new metadata profiles based on ISO standards. The validator allows the author of metadata and the catalogue administrator to check the correctness of the XML metadata file. Validation covers metadata files and metadata stored in the metadata database of the catalogue server of the Geoportal system. The validator is available online through a website interface, API programming interface and as a network service. The online version of the validator is available at walidator.geoportal.gov.pl/WalidatorMetadanych, and the network service is available at http://walidator.geoportal.gov.pl/WPSValidator/WPSValidatorService.svc/get?service=WPS&request=GetCapabilities.

The automatic metadata generator allows to create metadata automatically and to convert the created metadata for spatial data resources in line with the prescribed metadata profile. This application is integrated with the metadata validator.

A system for the inventory of towns/cities, streets and addresses (EMUiA) is available to local self-governments free of charge. The EMUiA system is integrated with the PRG management system. The integration allows for automatic updates using PRG address data. Therefore, the service which publishes address data at the INSPIRE level is continuously populated with up-to-date data. Local self-governments which use the application to run the inventory of towns/cities, streets and addresses publish the data stored in that inventory on the national geoportal. Furthermore, they have the option to make the collected address data available in the GML format in line with the XSD schema published in the Regulation of 2 February 2012 on the inventory of towns/cities, streets and addresses (Journal of Laws of 2012 No 0, item 125).

Moreover, in view of the obligations arising from the provisions of the Act on ISI and the INSPIRE Directive, in 2012, the Surveyor General of Poland and the President of the National Water Management Authority made efforts to sign an agreement which could commit the two parties to cooperate on the establishment, maintenance and development of the spatial data infrastructure with respect to the "Hydrography" data theme. Pursuant to that agreement, GGK undertakes to make available the tools which ensure the interoperability of spatial data sets and services, and KZGW undertakes to use the tools made available by GGK and to make the harmonised data sets available to GGK free of charge. The agreement was signed on 15 January 2013.

Further agreements are being entered into between official bodies and other INSPIRE stakeholders. Various standardisation initiatives are emerging – such as the proposals for geodesy and cartography data or spatial planning data standards (data models) commissioned by the self-government of the Mazowieckie Province, as well as documents developed by experts, containing descriptions of organisational, formal and technical procedures for data exchange between various entities. Additionally, public entities can use the electronic resources of other entities on the basis of data provided by a party to the proceedings (legal basis: the Code of Administrative Procedure).

6.2 Data sharing arrangements between public authorities and Community institutions and bodies

Art.15 (b) requests an overview of data sharing arrangements that have been, or are being, created between public authorities and Community institutions and bodies, including examples of data sharing arrangements for a particular spatial data set.

In order to facilitate correct understanding of the report, the overview of data sharing arrangements between public authorities and Community institutions and bodies should include answers to the following three questions, including examples of particular spatial data set and services, or categories of spatial data set and services, for example based on the annexes of the INSPIRE Directive:
- Can any spatial data sets and services be accessed by the Community institutions and bodies without any arrangement?
- Which arrangements provide free and open access to spatial data sets and services to the Community institutions and bodies?
- Which arrangements require payment from the Community institutions and bodies that use the spatial data sets and services (Article 17(3) of INSPIRE Directive)?

Commission Regulation (EU) No 26/2010 – on spatial data sets and services – provides additional context to access under harmonised conditions. The Guidance on the Regulation suggests an INSPIRE licence model. Please indicate how the INSPIRE license could be implemented with regard to the legislative system and the existing or being created licenses in the country.

Solutions used by GDOŚ:
GDOŚ does not charge any fees for the sharing of its spatial data sets and services forming part of the INSPIRE infrastructure. No licence-based data sharing model is planned.

Solutions used by PIG-PIB:
Everyone, including other public authorities, can use the services which are made available online. The access to and viewing of geological information is regulated by:

- the Act of 9 June 2011 – Geological and Mining Law (Journal of Laws No 163, item 981)
- Regulation of the Minister of the Environment of 15 December 2011 on the collecting and sharing of geological information (Journal of Laws No 282, item 1657)
- Regulation of the Minister of the Environment of 20 December 2011 on the use of geological information for a fee (Journal of Laws of 2011 No 292, item 1724).

The principles of sharing and viewing of geological information can be found at: http://www.pgi.gov.pl/pl/narodowe-archiwum-geologiczne-62/dostep-do-danych.html

Solutions used by IBL:
The KSIPL service is available to all public authorities and no charges apply for the sharing of data forming part of the INSPIRE infrastructure.

Solutions used by GIOŚ:
As far as the data from the State Environmental Monitoring are concerned, GIOŚ is not planning to charge fees for data sharing, in accordance with the requirements of the Act on the access to environmental information.

6.3 Barriers to the sharing and the actions taken to overcome them

Art. 15(c) requests a list of barriers to the sharing of spatial data sets and services between public authorities and between public authorities and the Community institutions and bodies, as well as a description of the actions which are taken to overcome those barriers.

Commission Regulation (EU) No 26/2010 – on spatial data sets and services – again provides additional context. It requests an overview of procedure to provide the conditions applicable to the Community institutions and bodies in compliance with this Regulation in metadata element 8.1, referred to in part B of the Annex to Commission Regulation (EC) No 1205/2008 (procedure for updating metadata for spatial data sets and services). We strongly encourage providing related information in this section of the country report.

In addition to the above, we recommend including an overview of other ways how and where the Community institutions and bodies can access up-to-date information on data sharing arrangements between public authorities and Community institutions and bodies.

Technical limitations (diversity of formats).
Legislative limitations (the legislation in force defines who and to what extent should receive, for example, the data collected by IMGW-PIB free of charge; other entities must pay a fee to obtain the data).
It is advisable to extend the practice of collecting the minimum scope of data, while maximising the use of dictionaries and validation mechanisms in electronic forms, the templates of which should be published in a central repository of model documents on the ePUAP platform.

Unsatisfactory data quality – measures have been taken to develop national standards for planning documents, which constitute spatial data sets for the “Land use” theme.

Insufficient organisational and technical conditions to provide access to reliable and up-to-date spatial information which is necessary for the planning of investments, management, land use, sustainable development and environmental protection. The direct effects of that problem include *inter alia* prolonged consultation processes, due to the need to obtain individual pieces of information from various local self-government bodies, in accordance with their respective competences, and from various sections/departments of those bodies, as well as the provision of incomplete and/or inconsistent information, which may result in substantial and costly errors in the investment preparation process. To eliminate those barriers, an up-to-date database of topographic objects has been prepared, which provides input to a number of INSPIRE themes.

7 Cost / Benefit aspects (Art.16)

7.1 Costs resulting from implementing INSPIRE Directive

Article 16(a) requires an estimate of the costs resulting from the implementation of INSPIRE Directive

In order to facilitate correct understanding of the report, please indicate what is included in the estimation of costs (e.g. hardware, software, staff time) and how you have approached the estimation (e.g. indicate what proportion of the costs are attributed to INSPIRE or related initiatives such as eGovernment).

Please indicate either monetary costs (e.g. on hardware or staff) and/or staff time (days, months) related to the items listed below.

***IT Infrastructure** (Hardware and core software components)*
Set up costs
Maintenance (recurrent yearly costs)

***IT infrastructure* – GDOŚ:**

Purchase of a server to share services and data: **PLN 94 000 (gross)** Personnel costs (one FTE): **PLN 57 800 (gross) / year**

IT infrastructure – GUGiK:
ISI Geoportal
PLN 20 656 781
Maintenance (average yearly costs) PLN **314 300**
BDOT PLN **2 400 000**
Maintenance, management PLN **4 000 000**

IT infrastructure – NID:
PLN 891 394
Maintenance (average yearly costs) PLN **138 802**

***IT infrastructure* – PIG-PIB:**

Maintenance (recurrent yearly costs) – ca. **PLN 6 200**

Set up costs of regional infrastructures			
Province	IT infrastructure	Maintenance (recurrent yearly costs)	Metadata
Dolnośląskie	PLN 1 064 786	PLN 150 000	PLN 1 500 000 (including harmonisation)
Małopolskie	PLN 2 700 000		* Cost included in IT infrastructure
Opolskie	PLN 3 402 762	PLN 58 800	PLN 47 908
Świętokrzyskie	PLN 120 000 (the map service represents a part of the entire service, which cost PLN 550 000)	PLN 10 000	

The total set up cost of the Geomelio thematic portal (in Podkarpackie and Warmińsko-Mazurskie Provinces) amounts to approx. PLN 3.8 million.

***Metadata** for data and services falling under INSPIRE Directive and that are indicated in the Monitoring table.*

Set up costs (one-off costs) **PLN 40 000 (KZGW)**

Software (adapting software, creating new software, setting catalogues) **PLN 297 762 (GUGiK)**

Production **PLN 565 748.75 (GUGiK)**

Creation of metadata for discovery **PLN 500 (PIG-PIB)**

Creation of metadata for evaluation and use (new metadata elements required by Data Specifications Implementing Rules) **PLN 6 500 (PIG-PIB)**

Testing for compliance

Participation of national experts into INSPIRE development process **PLN 9 000 (PIG-PIB)**

Maintenance costs (recurrent yearly costs)

Software (adapting software, creating new software, setting catalogues)

Production

Maintenance of metadata for discovery MD

Maintenance of MD for evaluation and use **PLN 2 000 (PIG-PIB)**

Testing for compliance **PLN 1 000 (PIG-PIB)**

Data interoperability/harmonisation *for data falling under INSPIRE Directive and that are indicated in the Monitoring table*

Set up costs (one-off costs) **PLN 6 000 (PIG-PIB)**

Development (mapping of concepts, setting up tables, setting up registries) **PLN 80 000 (PIG-PIB)** **PLN 1 667 470 (GUGiK)**

Software (adapting software, creating new software) for data transformation **PLN 10 000 (KZGW)**, **PLN 25 000 (PIG-PIB)**, **PLN 297 762 (GUGiK)**

Production:

Creation of INSPIRE compliant dataset and related support services

Testing for compliance

Participation of national experts into INSPIRE development process **PLN 36 800 (GUS), PLN 4 000 (PIG-PIB)**

Maintenance costs (recurrent yearly costs)

Software for data transformation including maintenance of registries **PLN 3 000 (PIG-PIB)**

Production

Maintenance of INSPIRE compliant dataset and related support services

Testing for compliance

Maintaining coherence cross domains that evolve

Network services *falling under INSPIRE Directive and that are indicated in the Monitoring table*

Set up costs (one-off costs)

Development Software (adapting software, creating new software) for network services (Discovery, View, Transformation, Download, Invoke) **PLN 975 450 (GUGiK)**

Production: **PLN 975 450 (GUGiK)**

Set up of INSPIRE compliant services

Testing for compliance

Participation of national experts into INSPIRE development process

Maintenance (recurrent yearly costs) of INSPIRE compliant network service **PLN 35 000 (GDOŚ), PLN 5 000 (PIG-PIB)**

Monitoring and reporting

Development: refining of tools e.g. online tools, registries etc. **PLN 975 450 (GUGiK)**

Production: Collection of monitoring data and filling of templates by stakeholders

Reporting: Coordination activities to collect examples of good practice and as well as difficulties in implementation, cost and benefit consideration, assessment together with stakeholders **PLN 8 500 (PIG-PIB)**

Coordination and horizontal measures

Setting up coordination structures, national contact point activities

Activities that relate to the data and service sharing obligations **PLN 20 000 (PIG-PIB), PLN 8 653 933 (GUGiK)**

Supporting activities: **PLN 624 192 (GUGiK)**

- Training and education organised by different stakeholders in the public and private sectors **PLN 9 000 (PIG-PIB)**
- Development of Guidance document to support implementation of INSPIRE and use **PLN 7 000 (PIG-PIB)**
- Participation in INSPIRE-related workshops/seminars/standardisation activities **PLN 890 (GUS), PLN 20 000 (PIG-PIB)**
- Coordinating mechanisms at different levels of government
- Outreach, Counselling and Support **PLN 2 000 (PIG-PIB), PLN 23 985 (GUS)**
- Awareness raising in the private sector and at different levels of government **PLN 4 000 (PIG-PIB)**

7.2 Benefits observed

1) *Choose examples that have quantitative measures (e.g. increase in data use, more data sharing, savings in time and money, better policy outcomes, etc.).*
   - **Faster processing of requests and information sharing, which results in time and money savings, better spatial policy outcomes within the municipality concerned (e.g. the inhabitants of the municipality can view electronic versions of planning documents published, for example, on the geoportal, and can submit their observations regarding spatial policy to the municipal bodies);**
   - **The number of free data sharing events on the basis of the Act on ISI is steadily growing. For example, in 2012, the number of shares in the Mazowieckie Province increased by 67% in comparison with 2011;**
   - **Reduced costs of obtaining reference data.**

2) *Distinguish between:*
   - *Core benefits for public authorities in improving environmental policies and policies that affect the environment (primary objective of INSPIRE)*

The services shared by GDOŚ form part of the LPIS system and the environmental impact assessment process, and thus improve the efficiency of both systems, which makes it possible to take fuller account of environmental aspects in both tools. Owing to the implementation of the KSIPL service, access to up-to-date information on fires is provided with respect to the locations, frequencies, types of fires and damage caused by fires. Furthermore, selected public administrations can now use an extended scope of information on fires in forests and agricultural areas.

   - *Broader side effects of implementing the Directive (e.g. benefits of increased interoperability across environmental information systems, and between environmental and other sectoral policies (e.g. agriculture, transport, regional policy, etc.).*

With the launch of the relevant procedures and the use of those procedures in the systems of the cooperating bodies, the benefits of increased system interoperability are noticeable. Development of innovative methods of cooperation with other public registries (interoperability) run by other public administrative bodies (in particular, information collected in the land and building inventory, orthophotomaps, scans of topographic maps, GIS databases).

Providing local self-governments with a free application to run the inventory of towns/cities, streets and addresses drives the dissemination of innovative solutions within those bodies, reduces costs and ensures ongoing data updates.

3) *Identify who are the main beneficiaries (public administrations, business and citizens)*

Public administrations are starting to appreciate spatial data with respect to their usefulness in policy making aimed at improving the state of the environment. Data availability is a very important question. Quick access to data and provision of data in the formats required by users encourages the users to use the data more often.
For example, the availability of information on landmarks (protected sites) in the digital format will considerably improve the efficiency and reduce the costs of analyses and planning documents needed, for example, in the spatial planning process. Owing to the possibility to use the system to promote the Polish cultural heritage, it will act as a tool supporting the development of tourism.

4) Cross border examples could include reporting on data sharing arrangements with neighbouring countries.

Thematic websites (developed by the Tatra National Park and Karkonosze National Park jointly with Czech and Slovak neighbours).

5) Consider whether any undesired side effects of implementing INSPIRE are also worth reporting.

The precision of the shared data could be a potential problem, mostly in the "Habitats and biotopes" and "Species distribution" themes. The precise location of valuable habitats or bird nest sites could potentially be used to the detriment of the habitats of the species. The absence of relevant regulations in the Community and national law in this respect is visible.
A negative aspect of INSPIRE is the multitude of strictly specialist documents which are very complicated and incomprehensible for most people. It takes a lot of time to analyse them, which does not improve the performance of institutions. Consideration should be given to the question of to what extent the solutions offered by INSPIRE will satisfy the needs of the main users and whether the current service users will be actually willing to use the services offered in that form. It should be noted that INSPIRE guidance cannot replace the analyses of market expectations.

An alternative way of considering benefits is to organise them into three main categories:

1) *Efficiency*
2) *Effectiveness*
3) *Broader Socio-economic benefits (or democratic benefits)*

Examples of elements that can be considered under each heading are:

Efficiency

- *Efficiency gains due for example to increased data availability, ease of use, better data sharing:*
  - *Time saved in internal queries*
  - *Time saved in internal processes*
  - *Time saved in serving the public*
  - *Reduced cost of integrating data*
  - *Better re-use of existing datasets (reduced need for new data collection)*
- *More motivated employees e.g. because they are able to respond better to work demands, and see increased opportunities to develop in their profession.*
- *Better organisational structures and interoperable IT architectures leading for example to cost savings for information management.*

Effectiveness

- *Reduced administrative burden (e.g. in reporting on environmental legislation):*

  easier access to environmental information makes environmental protection more effective. It is easier to consider environmental information in the decision-making and legislative process.

- *Increased intra-institutional collaboration (across different departments in the same institution):*

  increased data availability inside of institutions

- *Increased inter-institutional collaboration (across different organisations and levels of government from local to national).*

- *Increased awareness in different levels of governments of the benefits of delivering services on a spatial basis:*

  general increase in public awareness of nature conservation features and the nature conservation concept itself

- *Improved policy implementation, monitoring, and evaluation.*

Broader Benefits

- *More inclusive services (e.g. on line accessibility of services reduces divide between large/urban and small/rural administrations and improves services to citizens and businesses).*
- *Greater transparency and accountability*
- *Greater participation by the public.* ***Improved communication between administrations and the public***
- *Greater opportunities for business to innovate and build new services and applications based on INSPIRE data.*

The headings above are not intended to be prescriptive, but only as an aide to Member States in the preparation of their reports.

8 Conclusions

As a Member State of the European Union, Poland is obliged by the INSPIRE Directive and its transposition into the Polish law, i.e. the Act on spatial data infrastructure, to establish the spatial data infrastructure forming the Polish part of INSPIRE. The infrastructure is established, maintained, developed and also operates as a result of cooperation between its constituent leading bodies, other administrative bodies and third parties.

This report has been developed in cooperation with leading bodies and heads of the provincial executive. It contains a synthesis of information on the measures taken by self-governments at the provincial level, mostly in the context of the initiatives which involve the building of regional portals and the benefits from those portals in the context of INSPIRE. Such portals are already well-functioning in some provinces, while in other provinces they are still under development.

Increased commitment of leading bodies to the establishment of the ISI can be observed. ISI working teams have been set up or initiative has been taken to appoint such working teams, and the cooperation between leading bodies and other administrative bodies is getting stronger. A good example of that cooperation is a document drawn up in 2012, titled “Programme for the establishment of Spatial Data Infrastructure in Poland – stage 2012 to 2013”. The document was developed jointly by 12 leading bodies.
A fact which gives rise to certain difficulties in the implementation of the statutory tasks of the leading bodies (in particular as concerns the themes included in Annex III) is that leading bodies are not always data producers, and they play a coordinating role only instead, supervising the implementation of those tasks by other administrative bodies (although in fact they are not supervisory bodies, either).

A diversity of forms of cooperation with third parties is also observable, although no inclusions of third party spatial data sets and services pursuant to the Act on ISI have been recorded so far.

An important aspect of the implementation of INSPIRE is to ensure the adequate quality of technical infrastructure. A number of measures have been taken, both at the level of the coordinator and of other leading bodies, to improve the quality in the establishment of spatial data infrastructure. Work is now under way to have metadata describing spatial data sets and services provided by leading bodies, in order to publish them on the national geoportal and subsequently, to make them available through the INSPIRE geoportal.

Furthermore, measures have been taken to facilitate the sharing of spatial data sets and services. Tools have been prepared to support the establishment and development of spatial data infrastructure (the ISI Module; Universal Map Module; data set harmonisation tools; metadata editing, validation and automatic generation tools). More and more frequently, agreements are signed between various public administrations to cooperate on the establishment of spatial data infrastructure.

The report does not contain any detailed information on the overview and examples of existing or being created types of one time licences, using widely known licensing schema etc. The issue of agreeing upon and implementing a harmonised, joint licensing system for INSPIRE data from various sources calls for a comprehensive approach, supported by an in-depth analysis of legal conditions. However, it is planned that the problem will be included in the working agenda of the ISI Board, as part of the development of the next short-term Spatial Data Infrastructure Establishment Programme for the period from 2014 to 2015.
Still, legislative activities, technical and implementation activities, organisation and coordination activities are necessary to fully implement the spatial data infrastructure.

The report contains information about the costs arising from the implementation of the INSPIRE Directive in Poland. However, not all costs are included, as it was considerably difficult to isolate relevant information with respect to particular actions taken within the framework of INSPIRE. The benefits of the implementation of INSPIRE are already noticeable. However, it is too early to quantify the benefits in financial terms, in relation to the incurred costs.

The large number of complicated, difficult and specialist documents relating to the implementation of INSPIRE poses a considerable challenge. Therefore, training in this area should play a significant role in the process of developing INSPIRE.

9 Annexes

9.1 List of organisations – names and contact details

Leading and cooperating bodies:

Ministerstwo Środowiska (Ministry of the Environment)
ul. Wawelska 52/54, 00-922 Warsaw;
Telephone: +48225792472
Email address:Departament.Informacji.o.Srodowisku@mos.gov.pl

Generalny Dyrektor Ochrony Środowiska (Director-General for Environmental Protection)
ul. Wawelska 52/54, 00-922 Warsaw;
Telephone: +48225792165
Email address: kancelaria@gdos.gov.pl

Prezes Krajowego Zarządu Gospodarki Wodnej (President of the National Water Management Authority)
ul. Grzybowska 80/82, 00-844 Warsaw
Telephone: +48223720260
Email address: kzgw@kzgw.gov.pl

Główny Inspektorat Ochrony Środowiska (Chief Inspectorate of Environmental Protection)
ul. Wawelska 52/54, 00-922 Warsaw;
Telephone: +48228253325
Email address: gios@gios.gov.pl

Instytut Meteorologii i Gospodarki Wodnej – Państwowy Instytut Badawczy (Institute of Meteorology and Water Management – National Research Institute)
ul. Podleśna 61, 01-673 Warsaw
Telephone: +48225694100
Email address: imgw@imgw.pl

Państwowy Instytut Geologiczny - Państwowy Instytut Badawczy (Polish Geological Institute – National Research Institute)
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9.2 List of references for the compilation of the report