

# **Report on geospatial activities' stage in Romania**

## **Background**

This report contains information regarding the progress on activities related to the spatial data infrastructure in Romania, member of the European Union.

The spatial data infrastructure is a key component of the information infrastructure of a modern state, an indispensable component for the functioning of administration at all levels, for country's sustainable development as well as for development of the information society.

INSPIRE Directive was initiated by the European Commission to improve coordination between Member States at Community level, to compensate the lack of standards related to spatial data and to overcome political constraints on geo-information necessary for the implementation of the Community environmental policy and the policies or activities having an impact on the environment.

The various aspects of spatial data held by European Union states' authorities will be unitary coordinated through the Directive, such as: technical aspects related to interoperability, data services' use, the principles governing access to data and related costs, national coordination. This Directive's implementation will help to avoid duplicate spatial data and will facilitate data exchange between central and local public administration institutions.

Activities related to the development and implementation of a National Spatial Information Infrastructure (INIS) have increased all over the world in recent years. Generally, the INIS objectives support the principle "unique data collection, multiple uses".

To avoid the multiplication of costs related to the generation and management of data and their integration with other information, it is necessary to share spatial information through the development of an infrastructure at national level. Using spatial information for special applications at regional level requires a huge amount of updated and accurate digital information. Therefore, if spatial information and their maintenance are shared, significant savings in time, money and effort can be made.

In addition, sharing information can improve their quality through increasing the number of individuals that may detect or correct errors. Resources that would be

used to collect duplicate information can be directed to quality control and collection of other required spatial data.

Finally, INIS promotes and coordinates spatial data exchange and sharing among stakeholders in the community of spatial information. The goal is to provide relevant spatial information to support decision makers in relation to regional, national and international policies and activities which integrate also environmental protection.

The National Agency for Cadastre and Land Registration (ANCPPI) is the public authority which ensures the creation, archiving and providing of geodetic and cartographic data at national level for civil sector and for this reason it plays an important role for the development of INIS.

## **The legal framework**

The National Spatial Data Infrastructure in Romania (INIS) was created through the transposition of INSPIRE Directive into Romanian legislation by Government Ordinance no. 4/2010 on the establishment of the National Infrastructure for Spatial Information in Romania, and the elaboration of legal framework for the functioning of the Council of the National Infrastructure for Spatial Information in Romania (CINIS), which is the coordination structure of this process.

The INIS's goal is to ensure the unitary framework for spatial data sharing in Romania and the access of the public to spatial information, as well as the necessary support for the implementation of national and Community policies. The INIS also contributes to improving quality and reducing of costs related to spatial information.

Public authorities must have access to spatial data sets and related services, to exchange and use the spatial data sets and services in order to accomplish the INIS. The public authorities hold and update the spatial information.

## **Council of the National Infrastructure for Spatial Information in Romania (CINIS)**

Coordination is one of the most important organizational aspects in the development of INIS, as the experience gained by many countries shows.

INIS Council, the coordination structure for INIS, was established to create and update the National Infrastructure for Spatial Information in Romania and is constituted from representatives of:

1. Ministry of Administration and Interior;
2. Ministry for Environment and Forests;
3. Ministry of National Defence;
4. Ministry of Public Finances;

5. Ministry of Agriculture and Rural Development;
6. Ministry of Regional Development and Tourism;
7. Ministry of Transports and Infrastructures;
8. Ministry of Economy, Commerce and Business Environment;
9. Ministry of Education, Research, Youth and Sports;
10. Ministry of Health;
11. Ministry for Culture and National Heritage;
12. Ministry for Communications and Information Society;
13. Romanian Academy;
14. National Statistics Institute;
15. National Agency for Mineral Resources;
16. Special Telecommunications Service;
17. Association of Communes in Romania;
18. Association of Municipalities in Romania;
19. Association of Towns in Romania;
20. National Union of County Councils in Romania.

The Presidency of CINIS is held by ANCPPI and the vice-presidency by the Ministry for Environment and Forests. ANCPPI is the National Contact Point concerning INSPIRE Directive and represents Romania's interests in INSPIRE decision-making forums.

The main tasks of CINIS are:

- to coordinate the activity of public institutions and of associated structures within CINIS;
- to establish the responsibilities of public authorities and third parties, as case may be, for the creation and update of spatial data sets, of their related services and of the metadata for the INIS themes;
- to coordinate the activities for the creation and update the INIS;
- to monitor the INSPIRE Directive implementation;
- to decide upon spatial data sets and services for which fees are applied or for which licenses may be granted.

In its activity, CINIS is assisted by a technical group. The technical group comprises experts appointed by the heads of the public institutions involved in INIS. The technical group provides specialized support for CINIC members and performs the tasks set by the council.

Data owners and users maintain all the rights upon data and in this respect set up the policies for licensing, payment and access to their own data, as the case may be.

The Secretariat of CINIS is provided by a functional department within ANCPPI organizational structure.

## **INIS Strategy**

As in many other complicated evolutions it is important to “think big but act with small steps”. It is impossible to start with everything at once and do all at the same time. Thus, a series of rules meant to support the successful implementation of INIS in Romania must be defined. It must be taken into account that the geographical information must be collected once, for multiple use. In this respect the following steps must be taken:

- Identification of the most important geographical data sets
- Designation of the institution responsible for every reference data set
- Guarantee data sets for a certain feasible period of time
- Identification of public institutions which use these data sets

The public institutions will make every effort to meet the user needs related to the use of geographical information.

A good cooperation between public authorities represents the basis for efficient use of spatial information. In this way overlaps inside spatial information production process is eliminated, enabling their use by both public and private sector.

In addition sharing information can enhance their quality by increasing the number of individuals who can detect or correct the errors. The resources which could be used for collecting repetitive information could be used for quality control and collection of other necessary spatial information.

To conclude, INIS enables and coordinates information exchange and sharing between parties belonging to spatial information community. The aim is to supply relevant spatial information for decision maker, related to national, regional and international policies and activities in many fields, including environment.

Some of the strategy’s objectives refer to: stimulation of partnership and cooperation between involved parties, information integration, decreasing of overlaps, more efficient use of resources and creation of a spatial information database as a basis for spatial information industry productivity, for the enhancement of markets and for management purposes. These have to meet the suppliers demands such as the ones related to the promotion of access to (public) geographical information and a better efficiency as well as the demands of users which have to be taken into account when developing INIS.

## **INSPIRE Geoportal of Romania**

Taking into account the tasks stipulated in Ordinance 4/2010, ANCPPI has developed the INSPIRE Geoportal of Romania. The development started in 2010. It provides access to the metadata, spatial data and services owned by the members of CINIS and is connected to European geoportal. The Geoportal is bilingual (Romanian and English) and includes the following services types:

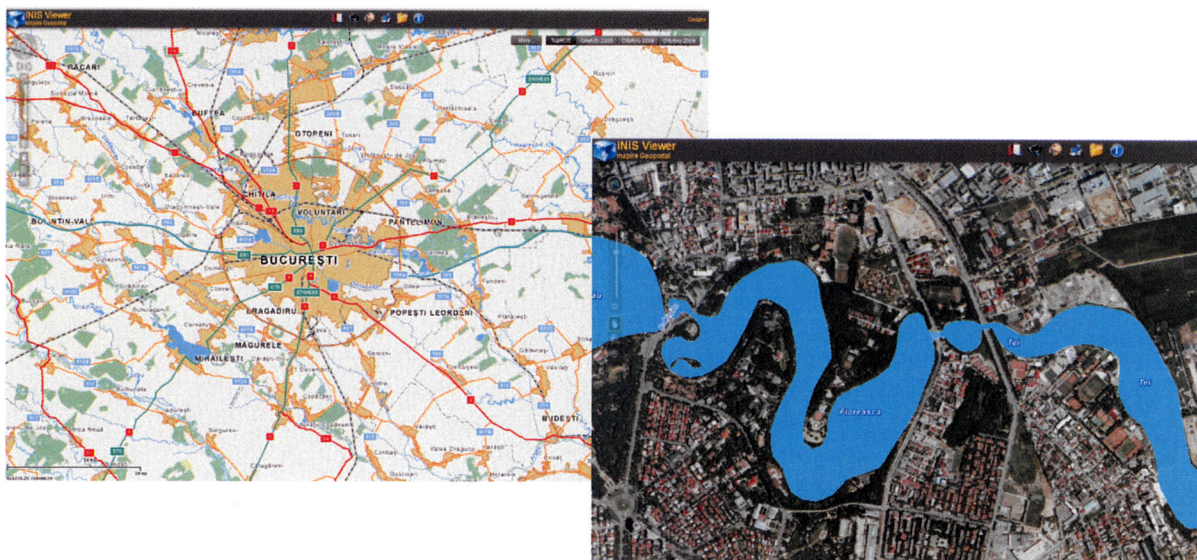
metadata publication, view and discovery and can be accessed at <http://geoportal.ancpi.ro/geoportal>. View and discovery services are provided free of charge for users. There are also available information regarding INSPIRE Directive and INSPIRE geoportal of Romania, information about CINIS members, INSPIRE calendar, as well as supplementary options for resources discovery.



Discovery service enables discovery of spatial data and services based on the corresponding metadata content. At present, one can discover metadata for data sets and services owned by CINIS members using this discovery service. Metadata offer information to the users regarding availability and quality of spatial data.

The service for metadata publication is available for CINIS members, grouped on category of users, for uploading and management of data sets owned by them. This service contains the metadata editor and validator together with a section for their management. The metadata editor ensures the conformity with Regulation (CE) no 1205/2008 from December 3<sup>rd</sup>, 2008 for enforcing the Directive 2007/2/CE of European Parliament and Council regarding metadata.

By using INSPIRE Geoportal of Romania one can view the data sets TOPRO5 (reference plan of Romania corresponding to scale 1:5000) carried out by ANCPI and orthophotomaps from 2005, 2008 and 2009.



The geoportal is continuously growing and, according to the INSPIRE calendar, in 2012 the downloading and transformation services shall also be available.

## Data policy

The setup of CINIS enhanced communication between public institutions and authorities, data owners, users and suppliers.

In order to supply spatial data sets and related services public institutions have the possibility to license data or to charge for certain fees.

The conditions for spatial data use shall be transparent by publishing on internet of the access policy (price, conditions for use) on geographical information for public sector.

In order to put together spatial data the CINIS members conclude collaboration protocols where conditions for use of these data are stipulated.

## CONCLUSIONS

At national level it is necessary to exchange spatial data in order to avoid supplementary costs related to generation and management of information and their integration with other information. If the spatial data produced for an application can be used also by others, then money, time and effort can be spared.

Successful implementation of INIS requires classification of concepts and general architecture of INIS and specification of modalities used by the participants in INIS for integration of the components they are developing, as well as a realistic evaluation of necessary resources to be provided by responsible public authorities and their incorporation in the state budget.

Following the monitoring process, data sets and services which can be part of INIS have been identified at national level. Public institutions have created their own spatial data sets but there are still differences related to design, database format as well as semantic differences related to terms definition.

For medium and long term perspective sufficient 'INIS persons' (execution and coordination) have to be hired and trained within public institutions involved in CINIS activity.

In order to successfully meet the objectives of INIS it is necessary to update the legal framework for streamlining a better collaboration between local and central public authorities and the rest of data producers/managers – utilities companies.

The activity undertaken by Romania is pursuant to the calendar of INSPIRE Directive implementation.