

REPUBLIKA SLOVENIJA MINISTRSTVO ZA OKOLJE IN PROSTOR

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Global Geospatial Information Management

Country Report of Slovenia - 2021

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Slovenia

Slovenia officially the **Republic of Slovenia** (Slovene: <u>Republika Slovenija</u> (help·info), abbr.:RS), is a country in <u>Central Europe</u>. It is bordered by <u>Italy</u> to the west, <u>Austria</u> to the north, <u>Hungary</u> to the northeast, <u>Croatia</u> to the southeast, and the <u>Adriatic Sea</u> to the southwest.^[16] Slovenia is mostly mountainous and forested, covers 20,271 square kilometers (7,827 sq mi), and has a population of 2.1 million, of which 500,000 live in the <u>capital</u> and largest city <u>Ljubljana</u>. <u>Slovenes</u> form the vast majority of the country's population, while <u>Serbs</u> are the largest minority. <u>Slovene</u>, a <u>South Slavic language</u>, is the official language. Slovenia has a predominantly <u>continental climate</u>,^[21] with the exception of the <u>Slovene Littoral</u> and the <u>Julian Alps</u>. A sub-mediterranean climate reaches to the northern extensions of the <u>Dinaric Alps</u> that traverse the country in a NW-SE direction. The Julian Alps in the northwest have an alpine climate. Continental climate is increasingly more pronounced towards the <u>Pannonian Plain</u> in the Northwest. The nation's capital and <u>largest city</u>—<u>Ljubljana</u>—is situated at roughly the centre of the country.



Source: Wikipedia

Slovenia has historically been the crossroads of <u>Slavic</u>, <u>Germanic</u>, and <u>Romance</u> languages and cultures. The territory of modern-day Slovenia has been part of many different states; the <u>Roman Empire</u>, the <u>Byzantine Empire</u>, the <u>Carolingian Empire</u>, the <u>Holy Roman Empire</u>, the <u>Kingdom of Hungary</u>, the <u>Republic of Venice</u>, the <u>Illyrian</u> <u>Provinces</u>, the <u>Austrian Empire</u> and <u>Austria-Hungary</u>. In October 1918, the Slovenes co-founded the <u>State of Slovenes</u>, <u>Croats and Serbs</u>. In December 1918, they merged with the <u>Kingdom of Serbia</u> into the <u>Kingdom of Yugoslavia</u>. During <u>World</u>

<u>War II, Germany, Italy</u>, and <u>Hungary</u> occupied and annexed Slovenia, with a tiny area transferred to <u>Croatia</u>, a <u>Nazi puppet state</u> at that time. In 1945, It became a founding member of <u>Yugoslavia</u>. Post-war, Yugoslavia was initially allied with the <u>Eastern Bloc</u>, but after the <u>Tito-Stalin split</u> of 1948, it never subscribed to the <u>Warsaw Pact</u>, and in 1961, it became one of the founders of the <u>Non-Aligned Movement</u>. In June 1991, Slovenia became the first <u>republic</u> that <u>split from Yugoslavia</u> and became an independent <u>sovereign state</u>.

Slovenia is a <u>developed country</u>, with an advanced <u>high-income economy</u>; ranking very high in the <u>Human Development Index</u>. Measured by Gini, it has one of the lowest rates of income inequality in the world. It is a member of various international organizations, including the <u>United Nations</u>, the <u>European Union</u>, the <u>Eurozone</u>, the <u>Schengen Area</u>, the <u>OSCE</u>, the <u>Council of Europe</u>, and <u>NATO</u>.

The governance of geospatial information in Slovenia

Coordination of Spatial Data Infrastructure in Slovenia

The activities related to implementation of The Infrastructure for Spatial Information are done by the Surveying and mapping authority of the Republic of Slovenia. For that purpose, a national contact point was determined for contacting the European Commission regarding the INSPIRE Directive and for efficient implementation of The Infrastructure for spatial information.

The tasks of the national contact point are:

- managing and maintaining the list of spatial data sets,
- managing the detailed descriptions of the spatial data themes,
- managing the spatial information geo-portal,
- managing and maintaining the metadata information system,
- providing the interoperability of the spatial data sets and the services related thereto,
- preparing the proposals of operational programmes of the Government,
- executing the implementing rules of the INSPIRE Directive in the Republic of Slovenia,
- preparing and supplementing the strategy of the infrastructure for spatial information,
- preparing the programme of activities and measures to meet the requirements for establishing the infrastructure for spatial information,
- Preparing reports on providing the infrastructure for spatial information for the European Commission.

SDI Stakeholders

Different stakeholders cooperate in Slovenia in the implementation of the INSPIRE Directive. These are:

• the national contact point,

- the Intersectoral INSPIRE project group,
- managers of data sets,
- individual public institutions and
- Interested users.

As key holders mainly the following public authorities should be mentioned:

- Ministry of the Environment and Spatial Planning, (<u>www.mop.gov.si/</u>) and the bodies affiliated to it:
- Surveying and Mapping Authority of the Republic of Slovenia, (www.gu.gov.si)
- Ministry of Infrastrucuture, (www.mzi.gov.si)
- Slovenian Infrastructure Agency (<u>www.drsi.gov.si</u>)
- Ministry of Agriculture, Forestry and Food, (<u>www.mkgp.gov.si/</u>) and the body affiliated to it:
- Slovenian Environment Agency (www.arso.gov.si)
- Slovenian Water Agency (www.drsv.gov.si)
- Ministry of Defence (www.mo.gov.si/) the body affiliated to it:
- Administration of the Republic of Slovenia for Civil Protection and Disaster Relief, (www.sos112.si),
- Ministry of Culture, (www.mk.gov.si)
- Ministry of Economic Development and Technology, (http://www.mgrt.gov.si/)
- Ministry of Health, (www.mz.gov.si)
- Ministry of the Interior , (www.mnz.gov.si),
- Ministry of Public Administration, (www.mju.gov.si)
- Geological Survey of Slovenia, (www.geo-zs.si
- Geodetic Institute of Slovenia, (www.gis.si/)
- Biotechnical Faculty, (www.bf.uni-lj.si
- Slovenia Forest Service, (www.zgs.gov.si/)
- Fisheries Research Institute of Slovenia, (www.zzrs.si),
- Institute of the Republic of Slovenia for Nature Conservation, (www.zrsvn.si/)
- Statistical Office of the Republic of Slovenia, (www.stat.si)
- Other ministries and
- Local communities.

Relations with third parties

In order to implement the tasks of strategic importance, the national contact point and the intersectoral INSPIRE project group have invited to cooperation also many private sector institutions as contractors of technical tasks of establishing and operating the Slovenian infrastructure for spatial information, as well as the Geodetic Institute of Slovenia as public institution offering expert and technical support in the implementation of development and research tasks.

General overview and description of infrastructure for spatial information in Slovenia

The Spatial Information Infrastructure consists of metadata, spatial data sets and network services, technologies, agreements for reuse of spatial data and services and coordination, monitoring mechanisms and procedures to ensure compliance with the Spatial Information Infrastructure Act (ZIPI), which is the basis for systematic work in the field of spatial information infrastructure in the Republic of Slovenia. The fundamental goal of SDI is to establish an infrastructure that provides spatial data to public institutions, business entities, organizations and citizens with the help of standardized online services. The reference organization and the national contact point is the Surveying and Mapping Authority of the Republic of Slovenia, which manages and coordinates all activities for the establishment and operation of SDI. In 2020, the Surveying and Mapping Authority of the Republic of Slovenia regularly performed the tasks of the National Contact Point in the implementation of obligations from the INSPIRE Directive. Representatives of the National Contact Point regularly attended INSPIRE working meetings of the MIG-T and MIG-P groups. Activities continued in the field of coordination with other spatial data managers, which are obligated to provide spatial data and services in accordance with the INSPIRE Directive. The Slovenian Geoportal was regularly updated, which provides access to all information on the SDI in one place. The Metadata system for spatial metadata was also regularly updated and maintained in accordance with the valid Slovenian metadata profile. Spatial metadata is regularly harvested from the Slovenian INSPIRE metadata system to the European INSPIRE geoportal and to the Slovenian Open Data Portal. Within SDI, the "Slovenian Metadata Profile for Spatial Data" was adopted as a mandatory document for spatial metadata management, which fully complies with the requirements of the INSPIRE Directive and its implementing rules, as well as the rules and requirements of the Slovenian Access to Public Information Act (ZDIJZ). The metadata profile is mandatory for all spatial data managers who publish spatial metadata in the Slovenian INSPIRE metadata system. The document is also published on the National Interoperability Portal (NIO) at https://nio.gov.si/nio/asset/slovenski+metapodatkovni+profil.

The Surveying and Mapping Authority has established the national **Geoportal** (<u>www.geoportal.gov.si</u>). The portal includes a metadata system, INSPIRE glossary, link to some web applications for data access and key information related to the

INSPIRE Directive and its implementation in Slovenia (list of events, data set managers, list of data sets, regulations and materials, and other information). For the majority of data sets in the list of the INSPIRE data sets and for some services related to them the metadata system contains metadata descriptions consistent with the INSPIRE Directive.



(Inspire Geoportal: www.geoportal.gov.si)

The main mission of the SMA is providing the Infrastructure for Spatial Information, effective services and high quality authoritative spatial data, provided in a manner that meets quality standards of a geoinformation-enabled society. The demand for digital spatial data has been constantly increasing over time. This demand has only increased due improvements made regarding accessibility of spatial data over different digital channels. The SMA still provides access to spatial data through written order at the Department for processing data orders. In 2016 there were 1,772 such orders and in 2020 the number was 492. If we look in a longer timeframe, from 2009 till 2020, there is a clear trend of reduction in the number of written orders and on the other hand an increase in digital viewing and downloading of data over all available digital channels the SMA provides. A direct comparison of the number of data requests using written orders and downloading via the web portal shows positive trends in the digitalization of operations of the SMA, increased use of spatial data and thus an increase in the value of spatial data. An heavily digital business process provides cost savings to the SMA and on the other hand, such an exponential growth

in usage of spatial data could not be meet in the classic, analog manner. A constant increase in traffic and use can be also seen at the web portal for accessing and downloading spatial datasets of the SMA called PORTAL e-GEODETSKI PODATKI, which was established at the end of 2016 with the goal to provide free, regularly refreshed and open access to public spatial data of the SMA in the form of prepared packets.



The Surveying and Mapping Authority has established portal **Prostor (Space)** (<u>www.e-prostor.gov.si</u>), providing access to its data, information on data and the possible methods of access to the data. Users have access to some free data and data samples for all data sets. The portal also allows access to some public services, mainly different types of data accesses.

MINISTRSTVO ZA INFRASTRUKTURO IN PROSTOR GEODETSKA UPRAVA REPUBLIKE SLOVENIJE			<u>Domov</u> i <u>Oportalu</u> i <u>Ko</u>	<u>ntakt Kazalo strani</u> <u>O piškotkih</u>
PROSTOR PROSTORSKI PORTAL	Zbirke prostorskih podatkov Projekti	Dostop do podatkov	Metapodatkovni sistem	
				00 0
PROSTOR je spletni portal, namenjen izboljšanju dostopnosti geografskih, geodetskih in ostalih prostorskih informacij v Sloveniji. Pornoč uporabnikom Zanima me odgovor na naslednje vprašanje: Izberi vprašanje Seznam vseh vprašanj	 Bližnjice do aplikacij Javni vpogled v podatke o nepremičninah Javni vpogled v evidenco trga nepremičninah Javni vpogled v evidenco trga nepremičninah Vpogled v podatke o nepremičninah za registrirane uporabnike Vpogled v podatke o nepremičninah za registrirane uporabnike (znotraj HKOM) Spreminjanje podatkov registra nepremičnina Osebni vpogled v podatke o lastnih nepremičninah (vstop z digitalnim potrdilom SIGEN-CA oz. SIGOV-CA) Zbirka vrednotenja nepremičnina 		podatkov ZK točk in ur 04.04.2014 3. evropski dan geod Zveza geodetov Sloven	<mark>ru za leto 2013.</mark> tejenih mej ibo izvajalo usklajevanje ejenih mej med lokalnimi letov in geoinformatikov ije je v Četrtek 3. aprila 2014 · akademijo v počastitev
	Xalkulator vrednosti zem	ljišč po ZUJF Ostale aplikacije >>	<u>trga nepremičnin</u> Zaradi sistemskih teža	<u>nančnih najemih v evidenco</u> v v delovanju aplikacije za ga nepremičnin je rok za…

(Portal Prostor (Space) www.e-prostor.gov.si)

The Slovenian Environment Agency as the second largest INSPIRE data set manager in the country has also established its **Geoportal** (<u>www.gis.arso.gov.si</u>) for the data sets within its competence, which is compliant with the demands of the INSPIRE Directive. The portal includes a metadata system, a search engine and a browser through data sets, WMS and WFS Internet services (browsing and downloading) and a link to the web data viewer (Environmental Atlas). The portal allows access to more than 150 data sets.



(Geoportal ARSO/Atlas okolja: www.gis.arso.gov.si)

Since 2005 Administration of the Republic of Slovenia for Civil Protection and Disaster Relief use their own application **SPIN** (<u>www.spipn.sos112.si</u>) - Information system for the reporting of accidents and intervention. Application SPIN is the result of collaboration Administration for Civil Protection and Disaster Relief and representatives of the civil protection rescue and enables timely collection and processing of data on accidents and interventions. The application allows instant capture data on all natural and other disasters, the activation of protection and rescue units and informing all those they need to be notified of activation.



(SPIN Application: www.spipn.sos112.si)

Geopedia (<u>www.geopedia.si</u>) is a web based application for searching, viewing, and editing of geographical data, with service available to many clients at the same time. It contains various kinds of geographical and geo- referenced information which comes from many different sources and is thoroughly described, tagged, cross-referenced and categorized.

Its user-friendly web interface makes it easy to find items of interest – either through full text search or via hierarchically organized categories – and to display them on interactive maps, which can be saved for later viewing and manipulation.

Users can define and publish new layers with custom styling and textual descriptions, aggregate related layers into custom maps and associate them with other sources of information. Its advanced browser-based geometry editor allows anyone to insert new geographical features or edit existing one.





(Geopedia: www.geopedia.si)

Land Parcel Information System (LPIS – <u>www.rkg.gov.si</u>) is a system to identify land use. It provides an overview of data on land use of agricultural holdings, records of actual use of agricultural and forest land, and certain other information: orthophoto and other information The Surveying and Mapping Authority of the Republic of Slovenia (maps, register of spatial units, cadastral data, digital model of relief), vineyard information, forestry data, control layers for agricultural policy measures, bee pasture, water regulation, the soil map.



(LPIS: <u>www.rkg.gov.si</u>)

Stage II (STAtistika - Geografija) is an interactive cartographic application that introduces an individual to the world of viewing statistical data via mobile phone or the web in an accessible and friendly way. The application enables the display of statistical data at different spatial levels (eg at the national, regional and local levels) and in different time periods. We can also create custom statistics and combine individual spatial or temporal units as we wish. All data can be exported in the form of a map or graphs and used in further work.

I'm thinking of a new company, but we want to do market research before that?

They are simply interested in interesting data about Slovenia and its inhabitants, e.g. which part of Slovenia is the least populated? Or how does the projected life expectancy in Slovenia change over the years?

Are you involved in space planning and management and need a tool to display statistics?

Want to compare statistics between years, by gender, individual spatial areas, etc.?



.(Statistical GIS portal STAGE; www.gis.stat.si)

STAGE offers on overview of 300 variables at different territorial levels. The population density example below presents only a fraction of this.

Cohesion regions and population density

How populated is Slovenia? Of the two cohesion regions, Zahodna Slovenija was more densely populated with 127 people per square kilometre. In Vzhodna Slovenija, there were 89 people per square kilometre.



Population density, cohesion regions, Slovenia, 2020

Source: SURS

Statistical regions and population density

Of the twelve statistical regions, Osrednjeslovenska was the most densely populated with 238 people per square kilometre. With 36 people per square kilometre, the Primorsko-notranjska statistical region was the least populated.

Population density, statistical regions, Slovenia, 2020



Source: SURS

Municipalities and population density

The most densely populated municipality was Ljubljana with 1,075 people per square kilometre. On the other hand, the municipality of Solčava had only 5 people per square kilometre.

Population density, municipalities, Slovenia, 2020



Source: SURS

Settlements and population density

Among the settlements, the most densely populated settlement was Kerinov Grm in the municipality Krško. This settlement had a population of 5,966 per square kilometre. There were 216 settlements with fewer than 5 people per square kilometre. 57 settlements had no residents at all.



Population density, settlements, Slovenia, 2019

Source: SURS

Population density on grid

The area of Slovenia is 20,217 square kilometres. If we showed the area on a grid of 1,000 m by 1,000 m cells, we would find that 13,486 cells were inhabited. The most densely populated was one of the cells in the area of the Štepanjsko naselje in Ljubljana with 11,217 residents in 2019.

Population density, 1,000 m grid, Slovenia, 2019

	Population > nu 2019	mber of populatior	n > total , Grid 100	10 m,
	BIC	rtališka cesto	Edvordo Peperko stališka cesta Indus	Razcep Zadobros
Vodmat	000_464_101 r of population	Zaloška cesta	Ljub Studene Zaloška cest	ljan <mark>o, vzhod</mark>
Taxana a popularica	Stepansko nasele	JUD Nove Fil		ubijena vzhod
	Zgornja H	Spodnja Hrusica	Litijska cesta Bievska cesta	Liubljana Bizo 30

Source: SURS

Use of spatial data infrastructure

All existing elements of the Slovenian infrastructure for spatial information are used mainly by the institutions of the public administration. For several years, individual elements of the infrastructure for spatial information have been available to the public. Such information contains mainly joint fast communication network of public authorities (HKOM), managed and maintained by the Ministry of Public Administration, which has been connecting all public authorities and some other public institutions for many years. On the basis of the Act on the Access to Information of Public Character and according to the Decree on re-use of information of public sector, every public authority must publish on its website the »Catalogue of Public Information«, which enables the users a more transparent access to the information managed and maintained by a particular public authority. In these data, spatial information occupies an important position. The Ministry of Public Administration is actively working on establishing a national interpretational framework (NIO) and it represents Slovenia in the EU ISA program »Interoperability Solutions for European Public Administrations«. Cooperation of the national administration in the EU ISA program offers an additional dimension of the ISI use in Slovenia.

In the field of information and communication technology (ICT) and e-commerce, interoperability represents one of the most important conditions for a successful development of information society, as it brings positive effects to the users (greater choice of services, increased competition and, thus, also better quality at lower price, enabling the closing of information systems and applications), as well as for the ICT industry (facilitating the entry to the market, sharing knowledge, basis for the development of new innovative and competitive products and services). This allows faster development and implementation of innovation (technological, organisational, and procedural) in the public administration and economy, which shall ensure faster dissemination of knowledge, involvement, innovation and competition for society as a whole. The Ministry of Higher Education, Science and Technology and the Ministry of Public Administration implemented a project "Concept of national interoperability framework and test interoperability of the e-Kindergartens application". From the outset of systematic elaboration of the national e-administration, the interconnection of official records has been one of the main problems impeding faster development of electronic services of the types G2G, G2B and G2C. Due to lack of connectivity standards there appear, as a rule, in the interconnection of data bases or applications technical and organisational problems related to harmonising interests, duties and rights of national (public) institutions.

About the Surveying and Mapping Authority of the Republic of Slovenia

The Surveying and Mapping Authority is an independent body within the Ministry of the Environment and Spatial Planning. It is a national land surveying service and is responsible for conducting administrative procedures and deciding in administrative cases at the first instance, issuing data from geodetic databases, and other administrative services and tasks of a land surveying service.

The Surveying and Mapping Authority performs tasks related to the establishment, management and maintenance of databases concerning the basic geodetic system, the recording of real estate, the mass valuation of real estate, the state border, spatial units and house numbers, the consolidated cadastre of public infrastructure, and the topographic and cartographic system.

It is responsible for capturing, updating, storing and transmitting basic spatial and real estate data from databases, provides services related to recording changes in physical space and real estate, and performs the role of coordinator for the real estate system and spatial data infrastructure.

The Authority maintains the system of mass valuation of real estate, keeps a record of and monitors data on purchase and sale and rental transactions in real estate, analyses the real estate market, draws up periodic reports on the developments in the real estate market, and provides information on the market and estimated market values of real estate.

It manages the national coordination system, which serves as the basis for the geographical positioning of data and provides the infrastructure for conducting geodetic measurements.

Through international cooperation and participation, the Authority ensures the implementation of European guidelines and policies on real estate recording, cartography and geoinformatics. The Authority also performs the tasks of the national contact point for the implementation of the EU Directive INSPIRE.

According to some estimates 80% of all information contains a reference to their location. Therefore it is extremely important for both individuals and communities to ensure a high-quality and globally interoperable infrastructure for the geographical positioning of data.



The vision of the Surveying and Mapping Authority is to become a reference organisation for the official spatial data infrastructure and real estate regulation in Slovenia, which will stimulate the sustainable development of society and put Slovenia among the advanced spatially enabled societies, where all important decisions will be made on the basis of effective services within a public spatial data infrastructure and land management using official high-quality spatial and real estate data.

Its goal is to provide infrastructure for spatial information, effective services and highquality official spatial data in a manner that is in accordance with the high standards of a geoinformation society.

International cooperation

By contributing and engaging in the international community, the SMA governs over the implementation of European guidelines and directions in the fields of real estate registration, cartography and geoinformatics. The SMA is also the National Contact Point (NCP) regarding the implementation of the INSPIRE Directive and as such coordinates the establishment of the Infrastructure for Spatial Information in the Republic of Slovenia. In accordance with the guidelines of the declaration of the National Assembly regarding Foreign politics of the Republic of Slovenia and tasks defined in the geodetic work plan, the SMA contributes to many international organizations, among other EuroGeographics, United Nations Group of Experts on Geographical Names (UNGEGN), Working Party on Land Administration (UN/ECE), Permanent Committee on Cadastre in the European Union (PCC), European Regional Committee of the United Nations Initiative on Global Geospatial Information Management (UN GGIM Europe), EuroSDR, EUPOS and the Reference Frame SubCommission for Europe (EUREF) of the International Association of Geodesy (IAG). As in previous years, the SMA has continued its active participation and collaboration with similar institutions in the European space and in the South-West Balkan region and carried out activities in accordance with the guidelines and strategic goals defined in the Programme of the national geodetic service. Funds for international cooperation were allocated for the annual subscription in EuroGeographics and participation in its activities. Funds were also used for active participation in the UN GGIM Europe and for collaboration in the frame of EuroSDR. The SMA was also involved with activities of other international associations and incentives (EUREF, WPLA etc.) and carried out tasks for regional cooperation in the South-East Europe region and West Balkan region. On June 22 2020, the Seventh Regular Plenary Session of the United Nations Regional Committee for Global Spatial Information Management (UN GGIM Europe) took place, at which the General Manager of the SMA was re-elected as Chairman of the UN GGIM Europe Executive Committee for a period of three years. The web session was attended by 110 participants from 36 UN member states from the European area and representatives of 11 international and observer organizations.

The United Nations Group of Experts on Geographical Names (UNGEGN) is an advisory and expert body of the United Nations. During the five years period between the 7th and 8th general conference of the United Nations on the Standardisation of Geographical Names (until 2002) Slovenia chaired the regional group for Eastern, Central and South-eastern Europe. KSZI (Slovene Governmental Commission for the Standardisation of Geographical Names) homepage.

The SMA is also involved with the International Association of Geographical Names UNGEGN and in the work of the Reference Frame Sub-Commission for Europe EUREF and in the activities of the Permanent. Committee on Cadastre in the European Union PCC. Representatives of the Surveying and Mapping Authority also participated in the ISA2 Intergovernmental Public Administration Group and the Permanent Committee for INSPIRE, which operate within the European Commission.

The international association for the administration of real estate within the United Nations Economic Commission for Europe covers the activities of the national institutions of Europe and North America in the field of land cadastre, land register, real estate valuation, land consolidation and land information systems. In the period between 1999 and 2001 Slovenia chaired the association.

Permanent Committee on Cadastre in the European Union (PCC) was established in 2002, at the First Congress on Cadastre in the European Union. The purpose of the Permanent Committee on Cadastre is to improve cooperation between the cadastral administrations of all Member States in the development of strategies and joint initiatives with the aim of co-ordination between the various European cadastral systems and their users. Surveying and Mapping Authority of the Republic of Slovenia participate in work of the Permanent Committee on Cadastre since its inception in October 2002.

In 2013 international cooperation covered inclusion in activities, performed by EuroGeographics: Association of National Mapping, Cadastral and Land Registry Authorities (such as European global and regional map, European administrative borders, European digital model of relief, European geographic names and work on European projects of horizontal and vertical network and cooperation with project ELF).

Representative of The Surveying and Mapping Authority of Republic of Slovenia in current mandate held the role of a member of executive board of this association. Funds of international cooperation were used for payment of membership fee for membership in EuroGeographics. The Surveying and Mapping Authority of Republic of Slovenia also cooperated with work of other international organisations and associations, but, because of saving measures, its employees did not participate in those meetings. Contacts were made and maintained by means of electronic communication.

In 2020, the SMA was also actively preparing for the organization of the international symposium EUREF 2021 in Ljubljana. Due to the COVID-19 epidemic, the event will be organized at the end of May 2021 as a three-day web conference. More than 100 participants from all European countries are expected to attend.

Main and strategic objectives of the Surveying and Mapping Authority of the Republic of Slovenia

The national surveying and mapping authority is responsible for maintaining basic data on land surfaces, facilities and real estate (stored in orderly databases) and for providing services pertaining to the recording of changes made to real estate. Furthermore, it acts as a coordinator of the real estate system and spatial data infrastructure, performs real estate mass evaluations and provides data for an objective and comprehensive real estate tax assessment and improvement of the performance of the real estate market. It establishes and manages topographic system data and national maps, establishes and maintains the national spatial coordinate system, ensures the compliance of this system with the European coordinate system and provides for conditions for implementing land surveys.

The strategic objectives support the development of a comprehensive real estate system and national spatial data infrastructure with regard to providing basic and derived data and services to all users, and especially to support the implementation of spatial planning policy, agricultural and land policies and efficient management of real estate.

The Programme of the projects eProstor is part of the Operational Programme for the Implementation of the EU Cohesion Policy 2014-2020 (CCI 2014SI16MAOP001), specifically the second Priority Axes titled »Enhancing access to, and use and quality of, information and communication technologies«. A detailed description of activity implementation is provided in the Implementation Plan for the Operational Programme for the Implementation of the EU Cohesion Policy in the Period 2014-2020, which was passed by the Government of the Republic of Slovenia. The Programme of the projects eProstor is comprised of four projects, which are interconnected and interdependent, and a fifth project meant for management support and informing. Within the Programme, tasks were performed in the field of establishing spatial data infrastructure and connecting to the national computing information infrastructure for real estate records and cloud, establishing improvements to the positional accuracy of the graphical part of the land cadastre. The Surveying and Mapping Authority of the Republic of Slovenia, together with the Ministry of the Environment and Spatial Planning, continued with the implementation of the eProstor, which is successful in establishing a common and unified information infrastructure for spatial data in Slovenia in accordance with the European INSPIRE Directive. This will enable shortening of real estate and spatial management procedures and make them more efficient and simple. At the end of 2020, the

Programme of the projects eProstor is entering the last fifth of its five-year period, the phase to implement all that has been done so far, within which it is necessary to transform existing business processes in accordance with new IT solutions. Hereinafter, the tasks of individual projects carried out in 2020 are described.



In the second half of the 2020, several workshops were organized with indivi - dual managers on the topic of setting up online services in accordance with the INSPIRE Directive. In December, to - gether with the 4th Conference of the Programme of the projects eProstor, the 6th Slovenian INSPIRE Day was organized. The event presented the progress and the development of the National Spatial Information Infrastructure (NIPI). Special attention was paid to the interoperability and accessibility of spatial data and the possibility of applications in new areas. A brochure on the compliance of spatial data sets and related services with the INSPIRE Directive has also been prepared.



Introductory activities have begun as part of the task "Data exchange and network services", which aims to establish and ensure conditions for the smooth flow of spatial data between public administration bodies and other stakeholders in Slovenia, their exchange with European Commission bodies and between Member States. Permanent coordination tasks were carried out in the field of individual projects and with the Ministry of Public Administration. Public tenders were conducted for the purchase, supply and installation of the necessary hardware, system and licensed equipment for the installation of software solutions developed within eProstor. Decades ago, the Surveying and Mapping Authority of the Republic of Slovenia, in cooperation with the then Government Informatics Center, established the Distribution Environment of the Surveying and Mapping Authority, which is now part of the common information infrastructure of the Ministry of Public Administration. The distribution environment is used by various users, from the general public to State Bodies, including the Ministry of the Environment and Spatial Planning, as a source of representative data for different environments: view services, for the integrated spatial planning viewer and system for recording construction administrative acts. As part of eProstor, a technological and content-wise renovation of the distribution system is being carried out. For this purpose two contracts have been signed in 2020, one for the first project - Infrastructure for Spatial Information and one project -Portals, and projects for implementation were prepared for both projects.



The aim of the project is to renovate the real estate records system of the Surveying and Mapping Authority of the Republic of Slovenia and thus the establishment of a unified IT solution that will enable modern operation of the new real estate system and will represent a unified fundamental national spatial infrastructure. This will establish a single platform, a single-entry point, through which communication will take place between the Surveying and Mapping Authority of the Republic of Slovenia and the private sector and surveying service providers. A connection with other IT systems will be established via real estate identifiers (Spatial Information System, eGovernment, Land Register, Slovenian Business Register, Central Population Register...). All this will facilitate e-commerce and in doing so remove many administrative barriers. In 2020 contracts were signed regarding financing public power tasks and public service tasks for development and technical tasks in the field of renovation of real estate records, which encompassed tasks in the field of regulation and preparation of real estate data for migration to the new data system, migration of procedural data and archival data, control of vectorized floor plans and monitoring and control of activities of the renovation of real estate records. Based on the project for implementation, an IT solution was developed to support the maintenance of real estate records, called IR Delovodnik. The IT solution IR Delovodnik is linked with the IT solution (IR Kataster), which was designed to manage all attribute and graphic data of the new real estate cadastre (land plot data, buildings and parts of buildings data, spatial units and address data). Both applications had issues when they were installed inside the national cloud computing information environment. In the scope of implementation of the renewed system of real estate records, the contractor participated in the review of IT solutions IR Kataster and IR Delovodnik.

Detailed implementation plans were prepared along with initial user education. As part of modeling the real estate registration processes and the organizational changes of the Surveying and Mapping Authority of the Republic of Slovenia, models of key processes re system complexity and interdependence of processes: - garding real estate registration were supplemented due to minor changes to the Real Estate Cadastre Act (based on interdepartmental reading). Activities were continued for the establishment of a system of user support on data and services of the Surveying and Mapping Authority of the Republic of Slovenia continued.



IT solution IR Kataster - 3D display of terrain, land plots, buildings.

Regarding the Consolidated Cadastre for Public Infrastructure, a public tender for the **renovation of the IT solution** was carried out, a contractor was selected and a project for implementation was prepared. On the basis of the project for implementation for the IT solution for recording state border data the construction of such an application has begun. Two interdepartmental readings we carried out on the proposal of the Real Estate Cadastre Act. The resulting comments and proposals in both hearings have been harmonized and material was prepared for discussion at the Government of the Republic of Slovenia.



The Project of Spatial Information System is being carried out by the Ministry of the Environment and Spatial Planning, namely the Spatial Planning, Construction and Housing Directorate. The current situation in the field of spatial planning and construction is reflected in the fragmented data sets and supporting services, nonstandardized and missing data, functional orientated solutions and systemic lack of transparency. These are the reasons the Ministry started planning necessary support system for e-commerce. The new spatial and construction legislation adopted at the end of 2017, provides an appropriate legislative framework for the Spatial Information System with spatial data sets (spatial acts data set, construction data set, collection of actual use of inhabited land, building land records) and e-commerce in the field of spatial planning and construction. e-commerce in the field of spatial planning and construction includes: » Single-entry point in the form of a web portal, » the ePlan system, which supports processes in the field of spatial planning, » the eGraditev system, which supports processes in the field of construction, » joint spatial status display, » Spatial Development Monitoring System. As part of the contract for IT support in the field of spatial planning and construction, a Single-Entry Point was created with a data connection to ePlan, eGraditev and Spatial Development Monitoring systems. Most activities were aimed at testing systems, redeveloping and upgrading systems, integration with external systems and preparing data for migration. Activities have begun related to the introduction and system integration of systems inside user IT environments. In 2020, the development has begun on an IT solution to support the management of data on inhabited land and records of building land. A project for implementation was prepared, along with personnel, organizational and financial plans, rules for harmonization of mass acquisition of data with the latest land cadastre data and data migration. An activities plan was prepared for build-up land records. The base infrastructure for the development environment was established and a physical model of the database, user interface templates have been prepared. In 2020, the necessary data bases for mass acquisition were prepared in accordance with the time schedule, and controls were performed to ensure the quality of the data (external control). Regular and necessary maintenance of the monitoring system for mass acquisition was performed.



Spatial Information System - the central web portal.

Legal framework

Infrastructure for Spatial Information Act (Official Gazette of the RS, No. 8/10).

The Act defines the tasks related to the establishment and operation of a metadata system, network services to access the data and their use, coordination in establishing the infrastructure for spatial information (ISI) and the use of this infrastructure. It also defines the tasks of individual public entities responsible for establishing, managing and using spatial data and services, which have to be provided as an integral part of the Slovenian and, also European infrastructure for spatial information.

Act on georeference system (Official Gazette of the RS, No. 25/14)

This act introduces a new, modern national spatial reference system, which is based on the European Spatial Reference System (ESRS), and a new national topographic system together with the new map-grid system. The scope of the new act is regulation of competences and tasks of the Surveying and Mapping Authority of the Republic of Slovenia related to the realization and maintenance of the national spatial reference system in long term and providing up-to-date spatial datasets and data products.

<u>Decree on communication and re-use of information of public character</u> (Official Gazette of the RS, No. <u>76/05</u>, <u>119/07</u> and <u>95/11</u>)

This Decree lays down the method by which public information shall be provided to applicants and published on the World Wide Web, as well as the charging of costs for provision, re-use of information, price and other terms of such use and reporting on provision of access to public sector information.

Public Information Access Act (Official Gazette of the RS, No. <u>51/06</u>, <u>117/06</u>-ZDavP-2, <u>23/14</u> and <u>50/14</u>)

This Act governs the procedure which ensures everyone free access to and re-use of public information held by state bodies, local government bodies, public agencies, public funds and other entities of public law, public powers holders and public service contractors.

Links:

The Surveying and Mapping Authority of the Republic of	
Slovenia	http://www.gu.gov.si
INSPIRE Geoportal	www.geoportal.gov.si
Portal Prostor (Space)	<u>www.e-prostor.gov.si</u>
Geoportal ARSO	www.gis.arso.gov.si
Application SPIN	www.spipn.sos112.si
Portal Geopedia	www.geopedia.si
Land Parcel Information System LPIS	www.rkg.gov.si