GEODETSKA UPRAVA REPUBLIKE SLOVENIJE

SURVEYING AND MAPPING AUTHORITY OF THE REPUBLIC OF SLOVENIA

LETNO POROČILO | ACTIVITIES REPORT 2012

TABLE OF CONTENTS

1 ADDRESS FROM THE DIRECTOR GENERAL	3
2 ABOUT THE SURVEYING AND MAPPING AUTHORITY OF THE REF	UBLIC
OF SLOVENIA	5
2.1 Identity Card	
2.2 Main Tasks and Activities	
2.3 Organisational Structure	7
2.4 Human Resources	10
2.5 Finance	11
2.6 International Activities	12
3 WHAT WAS ACCOMPLISHED IN 2012	23
3.1 Review of the Activities of the Surveying and Mapping Authority of	the
Republic of Slovenia in 2012	23
3.2 Important Activities of the Main Office	26
3.3 Important Activities of the Real Estate Office	34
3.4 Important Activities of the Mass Real Estate Valuation Office	
3.5 Important Activities of the Geodesy Office	41
4 STEPS FORWARD IN 2013	57
4.1 Main and Strategic Objectives of the Surveying and Mapping Author	ity of
the Republic of Slovenia	57
4.2 Future Projects	61
4.3 Regulations in Preparation	64
4.3.1 Regulations and Acts to be Adopted by the National Assembly of the	
Kepublic of Slovenia	64
4.5.2 Regulations and Acts to be Adopted by the Government of the Reput	66
4.3.3 Regulations and Acts to be Adopted by the Minister of Infrastructure	and
Spatial Planning	
5 REGULATIONS ON SURVEYING AND MAPPING ACTIVITIES	69
5.1 Valid Regulations Currently Applied in Performing Land Survey Activ	ities 69
6 CONTACTS	
6.1 Addresses of the Surveying and Mapping Administrative Bodies	74
7 STATISTICAL DATA ABOUT SLOVENIA	76
7.1 Slovenia 2012 in Numbers	



1 ADDRESS FROM THE DIRECTOR GENERAL



For a number of years, the Surveying and Mapping Authority of the Republic of Slovenia has been striving to manage and maintain good quality and reliable data on real estate in relation to other spatial information, and to manage and maintain network services for users of spatial information. Therefore, all our activities in 2012 focused on attaining efficiency and economy and making the organisation of the Authority more successful. We would like to achieve a higher degree of trust and satisfaction among customers, employees and the entire social environment with our work. The basic principles of our work are lawfulness, responsibility, user-oriented services, impartiality, integrity, а high level of the constant development of employees and high quality. We are successful in certain areas, but unfortunately

not in all, due to numerous external factors. We are aware that we will have to pay more attention to ensuring higher quality data and control of the quality of data services.

In 2012, we began the process of further simplifying business processes and their connection with the activities of other state authorities. This task will be fully implemented only with the adoption of the new Real Estate Recording Act, which is planned for 2013. We have prepared all the necessary starting points to successfully implement all the projects in the e-space programme, which will begin to be fully implemented when funds from EU structural funds from the next financial perspective are secured. We have begun the simplification and acceleration of searches of the land cadastre. We will continue information integration with managers of other collections of spatial data, such as the actual and intended use of space and informational integration with the land register.

The Surveying and Mapping Authority is currently going through a sensitive period of restructuring into a modern and flexible part of the state administration. Together with the private sector and R&D and educational institutions involved in surveying, the Authority must adapt to the current trend of managing sets of data on space and real estate efficiently. As for a number of years, in 2012 the Authority carried out activities to provide our users with easy access to, and use of, good quality data from geodetic records and also services associated with the use of such data. We are continuing to update the system for registering real estate and spatial management, related to which is the establishment of an effective infrastructure for spatial information.



The implementation of the annual programme was somewhat limited in 2012 due to the difficult public finance situation. We were therefore forced to postpone the implementation of some activities until funds are available. Nevertheless, we achieved a lot in 2012, which you can read more about in this annual report.

In order to make our data and services as user-friendly as possible, we continued to implement promotional and other activities to inform users and the wider public. We participated in international expert events and were active in international expert associations. Regarding information technology, appropriate information conditions for regular operations and the distribution system were ensured. Due to reduced funds, further development was substantially impeded.

In 2012, the Decree on the criteria and conditions for determining the costs for the use of network services and for determining charges for spatial data sets and services sharing (Official Gazette of the RS, No. 66/2012) was adopted on the basis of the Infrastructure for Spatial Information Act - ZIPI; the Rules on managing the real estate market register data and on the method for sending data (Official Gazette of the RS, No. 68/2012), and the Rules on the method of calculating annual real estate price indices and on the method of determining real estate value indices (Official Gazette of the RS, No. 4/2013) were adopted on the basis of the Real Property Mass-Appraisal Act - ZMVN, while the Rules on types and contents of certificates from geodetic databases and on the manner of data designation (Official Gazette of the RS, No. 69/2012) and the Rules on building cadastre registration (Official Gazette of the RS, No. 73/2012) were adopted on the basis of the Real Estate Recording Act - ZEN.

More details about all of the above can be read in this report, which I hope you enjoy reading.

Aleš Seliškar Acting under powers delegated by the Minister Head of the Surveying and Mapping Authority of the Republic of Slovenia



2 ABOUT THE SURVEYING AND MAPPING AUTHORITY OF THE REPUBLIC OF SLOVENIA

2.1 Identity Card

The Surveying and Mapping Authority of the Republic of Slovenia is a body within the Ministry of Infrastructure and Spatial Planning. The competence of the Surveying and Mapping Authority of the Republic of Slovenia comprises the tasks of the national land survey service, which include the creation, management and updating of databases pertaining to the basic geodetic system, real estate, the state border, spatial units and house numbers, and the Consolidated Cadastre of Public Infrastructure, as well as the topographic and cartographic system.

The Surveying and Mapping Authority of the Republic of Slovenia is responsible for basic data on space and real estate in the finalised databases, provides services pertaining to the registration of changes in physical space and on real estate, and performs the role of coordinator for the real estate system and spatial data infrastructure. In cooperation with the Ministry of Finance, it is carrying out a mass real estate appraisal with the aim of creating the foundations for successful and efficient real estate management, to provide data for objective and comprehensive real estate taxation and improve the efficiency of the real estate market. It provides for the national coordinate system and its compliance with the European coordinate system and creates the conditions for implementing land surveys.



Figure 1: Information on the Surveying and Mapping Authority of the Republic of Slovenia



2.2 Main Tasks and Activities

The Surveying and Mapping Authority of the Republic of Slovenia comprises: the Main Office, the Real Estate Office, the Mass Real Estate Valuation Office, the Geodesy Office and twelve regional surveying and mapping authorities. The latter have been set up to streamline operations and increase the accessibility of administrative and professional tasks and services implemented by the Surveying and Mapping Authority of the Republic of Slovenia.

In cooperation with the regional surveying and mapping authorities, the regional offices implement the following joint tasks:

- preparing the national land survey service annual programme and the report on its implementation;
- organising the work of the regional surveying and mapping authorities, monitoring their work and ensuring the uniform implementation of national land survey service assignments;
- directing the implementation of development assignments pertaining to surveying and mapping activities;
- implementing operational, professional and administrative assignments from the offices' fields of work,
- drafting regulations on surveying and mapping activities;
- meeting international obligations in the field of national land survey services.



Figure 2: Organisation chart of the Surveying and Mapping Authority of the Republic of Slovenia



2.3 Organisational Structure

Main Office

The Main Office deals with administrative, professional, technical and supervisory activities relating to the linking of spatial databases, the issuing of certificates and data in analogue and digital form in relation to e-commerce with spatial data, the spatial data infrastructure and developing electronic land survey services. It administers the information and telecommunication infrastructure and provides systemic, application and user support and IT training and education. Additionally, it implements activities pertaining to providing assistance in resolving the substantive legal matters of all offices and regional surveying and mapping authorities, financial operations, public procurement, human resources issues, education, office operations, health and safety at work and other organisational activities important for the functioning of the Surveying and Mapping Authority of the Republic of Slovenia.



Figure 3: The headquarters of the Surveying and Mapping Authority of the Republic of Slovenia (photo: Saša Sladič)

Real Estate Office

The Real Estate Office is responsible for administrative, professional, technical, coordination and supervisory activities pertaining to the management of the Land Cadastre, the Building Cadastre, the Real Estate Register and other records on real estate, the management of state border records and activities pertaining to marking, restoring and maintaining the state border. It is also engaged in managing the Register of Spatial Units and the Register of House Numbers. It operates in an interagency capacity in the work of international commissions and in other activities and projects, and is responsible for the training and education of employees of the regional surveying and mapping authorities. It prepares subject matter and material for the mandatory training of geodesists with a geodetic permit in cooperation with the Slovenian Chamber of Engineers. The substantive management and coordination of the work of regional surveying and mapping authorities the field of real estate in is another of its tasks.



Mass Real Estate Valuation Office

The Mass Real Estate Valuation Office implements the tasks of general real estate valuation and the tasks of ascribing value to real estate properties. The main tasks comprise the preparation of real estate valuation models, determination of real estate value indices and monitoring of the real estate market. The main products are valuation models for individual types of real estate that, on the basis of data from the Real Estate Register, provide for the calculation of the market value of real estate, calculated indices of the value of real estate that enable updating of market values with regard to price trends in the real estate market during the period between general valuations of real estate and periodic reports on developments in the market based on systematic monitoring and analysis of data on the market. The Office manages and maintains the Real Estate Market Record, which is a multi-purpose public database on purchases and rental agreements pertaining to real estate. The Real Estate Market Record is managed in order to provide data on realised prices and rents in the real estate market for the purposes of mass valuation and other public purposes determined by law. On account of the changes in real estate markets, the Office verifies individual real estate valuation models at least every four years. The Office manages and updates the Real Estate Valuation Database, which is a public database on real estate valuation models and data on value indices. The Office provides for the procedure of ascribing values, whereby the values of all recorded real estate are calculated on the basis of data on real estate entered in the Real Estate Register by using the mass valuation model, and enters the calculated values into the Real Estate Register.

Geodesy Office

The Geodesy Office is responsible for the basic geo-information infrastructure, represented by the national coordinate system and the national topographic system. In these fields, it implements legislative, professional, technical and coordination, implementation and supervisory assignments. It is responsible for establishing and updating the national coordinate system and its accessibility through the system of permanent global satellite positioning stations and other geodetic networks (the SIGNAL network). It coordinates and implements activities pertaining to the transition to the European coordinate system ESRS (European Spatial Reference System) and is responsible for linking the national coordinate system with the coordinate systems of neighbouring countries. It carries out field work required to set up the horizontal and vertical (geometric and physical) components of the national coordinate system, provides transformation parameters between the existing (old) national and (new) European coordinate system and captures spatial data of the Surveying and Mapping Authority for the purpose of controlling. It manages a collection of data on geodetic points. It also implements organisational and coordination activities regarding the capture, management and integration of topographic data. It manages a collection of topographic data and the Consolidated Cadastre of Public Infrastructure. It is responsible for the national cartographic system and ensures the creation of national topographic and cartographic products for the needs of the state, ministries and local government. It provides for the compliance of the basic geo-information infrastructure with the



European guidelines. It prepares regulations and participates in European and international projects in these fields.

Regional Surveying and Mapping Authorities

- Create, manage and update the Land Cadastre, the Building Cadastre, the Register of Spatial Units and other databases provided by law; provide information from the Land Cadastre, the Building Cadastre and the Register of Spatial Units and other databases,
- Implement administrative procedures and make first instance rulings in administrative matters for which they are competent,
- Provide professional assistance to clients and information to users,
- Participate in the planning and programming of land survey activities, primarily in cooperation with local communities,
- Coordinate activities in the land survey offices,
- Implement individual activities in the areas of financial operation, personnel matters, office operation and other organisational activities,
- Implement other activities as stipulated by the Director General of the Surveying and Mapping Authority.

Regional surveying and mapping authorities receive applications, provide information, provide data to clients and carry out individual tasks in administrative procedures pertaining to direct contact with customers at their head offices and all other geodetic offices.



Figure 4: The territorial division of the regional surveying and mapping authorities with relevant offices



2.4 Human Resources

On **31 December 2012**, **488** civil servants were permanently employed at the Surveying and Mapping Authority of the Republic of Slovenia and **5** temporarily employed civil servants, none of whom was a trainee; **36** employees terminated their employment (permanent or temporary staff), while no new employees were employed on a permanent basis. The number of employees decreased by **5.4%** in comparison to the end of 2011.

Table 1: Number of employees in offices and regional surveying and mapping authorities on 31December 2012 in terms of expertise and level of education

Staff structure by field of expertise in 2012			
Surveyors	252		
Agronomists	10		
IT specialists	16		
Lawyers, financial and administrative staff	215		
Total	493		

Staff structure by level of education in 2012	
University/Bachelor's degree	296
First level university	41
Secondary	150
Primary	6
Total	493







2.5 Finance

The Surveying and Mapping Authority of the Republic of Slovenia is financed primarily from the national budget and to a lesser extent from income generated by its own activities. The surveying works programme is prepared for a period of two years and is approved by the Government of the Republic of Slovenia.

Revenue generated from issuing geodetic data from the Land Cadastre, the Building Cadastre, the Real Estate Register, the state border records and the Register of Spatial Units for payment is revenue generated by our own activity. In accordance with the Budget Implementation Act, revenue deriving from an entity's own activities may be used only to cover material costs, the costs of storing and issuing data and investments in property, plant and equipment for the needs of the Surveying and Mapping Authority of the Republic of Slovenia in implementing its own activities.

Budget 2012	in EUR
Surveying works programme	2,235,824
Wages	13,538,511
Material costs	2,602,459
Investments and investment maintenance	108,782
Own activity	167,292
Total	18,652,868

Table 2: Budget ex	penditure in 2012
--------------------	-------------------



Diagram 2: Shares of expenditure by purpose in 2012

	2007	2008	2009	2010	2011	2012
Surveying	12 158 409	2 662 839	3 488 762	3 870 418	2 363 387	2 235 824
programme	12,130,407	2,002,057	3,400,702	3,070,410	2,303,307	2,233,024
Wages	12,915,929	13,551,555	14,137,920	14,098,625	13,976,793	13,538,511
Material costs	2,714,473	3,072,550	3,004,407	2,753,562	2,697,185	2,602,459
Investments and investment maintenance	495,624	437,209	161,390	109,496	101,145	108,782
Own activity	173,759	221,871	110,512	113,558	230,820	167,292
Total	28,458,194	19,946,024	20,902,991	20,945,659	19,369,330	18,652,868

Table 3: Budget expenditure by year (all figures in EUR)

2.6 International Activities

The Surveying and Mapping Authority of the Republic of Slovenia was active in the international field in 2012, as it has been for a number of years. We cooperated with related institutions in Europe and the south-west Balkans. We have been actively involved in the activities of the European Association of Surveying and Mapping Authorities EuroGeographics; we monitored the work of the Permanent Committee on Cadastre in the European Union (PCC) and the Working Group on Land Administration within the framework of the Economic Commission for Europe of the United Nations Organisation that covers the activities of national institutes in Europe and North America dealing with land cadastres, land registers, real estate valuation, land consolidation and land information systems (WPLA). In 2012, the staff of the Surveying and Mapping Authority of the Republic of Slovenia actively participated with papers at various congresses, conferences and sessions of working groups.

In 2012, the Surveying and Mapping Authority of the Republic of Slovenia also joined the activities of the Association of Surveyors of Slovenia, which co-organised a ceremony celebrating the 500th anniversary of birth of cartographer Gerardus Mercator and the 1st European day of surveyors and geoinformation on 5 March 2012 on the premises of the Slovenian Academy of Arts and Sciences. The honorary sponsor and keynote speaker at the event was the President of the Republic of Slovenia, Dr Danilo Türk. In addition to the ceremony, the anniversary was marked in Slovenia with two other events. The exhibition 'The world of cartographers of the past - inspiration for the present' was on display in the exhibition hall of the National and University Library between 9 February and 14 March 2012. On 5 March 2012, the exhibition hall of the National and University Library also hosted a round table debate on the importance and development of cartography. With this event Slovenia joined the European Association of Geodesists in marking the anniversary. The Council of European Geodetic Surveyors, which has a membership of over 50,000 licensed geodetic engineers from more than thirty-five European countries, also decided to mark this important anniversary with a ceremony. The ceremony was held in Brussels under the sponsorship of European commissioners Neelie Kroes and Dr Janez Potočnik. The day was also declared the first Day of the European Surveyor and Geoinformation.

Between 23 and 25 May 2012, the Surveying and Mapping Authority of the Republic of Slovenia organised an expert meeting of surveying and mapping authorities active on the territory of the former Austro-Hungarian Empire, formerly covered by the K & K Institute (Kaiser und Koenigliches Militaer Geographischen Institute). The meeting held in Celje was the 29th meeting of its kind, and Slovenia's turn to host the event. The meeting was attended by members of surveying and mapping authorities from Austria, Slovakia, the Czech Republic, Hungary, Croatia and two northern Italian provinces. The meeting was intended for presentations by individual participating countries on how to improve graphic data of land cadastres. The expert part of the meeting was opened by Ales Seliskar, Director General of Surveying and Mapping Authority of the Republic of Slovenia, who presented a report on the work of the Surveying and Mapping Authority of the Republic of Slovenia in the past year and noted in his speech that the role and tasks of surveying and mapping offices was being constantly changed and supplemented in modern society. The modernisation of society presents new and demanding challenges, which makes regional integration even more important. Contributions from individual participating countries were presented, whereby we were acquainted with the development of graphic data in land cadastres by individual areas, methods for making digital cadastral plans, and the problems encountered in this process and problems which are present today.



Figure 5: Participants at the 29th meeting of surveying and mapping authorities on the territory of the former Austro-Hungarian Empire in Celje

The 5th regional conference on cadastre and spatial data infrastructure was held between 6 and 8 June in Banja Luka, Bosnia and Herzegovina. The conference was co-organised by the Authority for Geodetic and Property Affairs of Republika Srpska from Banja Luka and the Federal Geodetic Administration from Sarajevo. In their



presentations, the participants emphasised the advantages and importance of exchanging experience and information between institutions in the region. The introductory speakers included a representative of the business sector, who presented his first-hand experience of cooperating with the Surveying and Mapping Authority on a large infrastructural project.



Figure 6: Participants at the 5th regional conference, Photo: UIPRS

The general consensus among the conference participants was that a similar process of transforming surveying and mapping authorities from collectors of cadastral information into managers of databases and data integrators was taking place in the majority of countries. The majority of the national surveying and mapping authorities presented the great successes they have achieved in creating infrastructure for spatial information. Most of them play a key coordinating role in this process, which provides new operating and expert challenges in the work of these authorities in the future. Many agencies and national surveying and mapping authorities have commenced the process of connecting real estate data with data generated in the course of spatial planning. In the presentations of the Surveying and Mapping Authority of the Republic of Slovenia, we presented the legislative framework for the operations of the institution in Slovenia and the challenges that establishing spatial information infrastructure presents to surveying and mapping service. The international expert panel concluded with an agreement to hold the 6th regional conference in Serbia, while the theme of the meeting will be decided by a technical commission at its next meeting.





Figure 7: The 5th regional conference (Photo: UIPRS)

A representative of the Surveying and Mapping Authority of the Republic of Slovenia participated in the 4th International Conference on Cartography and GIS, between 18 and 22 June 2012 in Albena, Bulgaria. The purpose of the participation was to acquire information in the field of geographical information systems (GIS), internet cartography, cartographic visualisation, GNSS technologies and remote sensing technologies. The conference was divided into three parts. The first one was dedicated to presentations on cartography, topography, geographical information systems, national spatial information infrastructure. GNSS technologies, remote sensing, virtual geographical environment and similar. The second part featured presentations of posters. The third part consisted of a Seminar with EU Cooperation on Early Warning and Crisis Management.



Figure 8: Participants of the 4th International Conference on Cartography and GIS

ABOUT THE SURVEYING AND MAPPING AUTHORITY OF THE REPUBLIC OF SLOVENIA



The 6th INSPIRE Conference, 'Sharing environmental information, sharing innovation', took place between 25 and 27 June in Istanbul, Turkey. A total of 20 workshops and various meetings were held on the sidelines of the conference. This was the first time that the conference has been held outside the European Union. The conference was attended by Irena Ažman and Tomaž Petek of the Surveying and Mapping Authority of the Republic of Slovenia. They presented the situation in Slovenia and attended a meeting of the National Contact Points. The participants were presented with the latest review of the situation in the implementation of the INSPIRE Directive in EU Member States and the situation in the establishment of spatial information infrastructure, and acquisition of the experience that was lacking in the implementation of implementing rules in our environment. This year's INSPIRE conference was organised with the support of the Joint Research Centre (JRC) and the Turkish government. During the three-day conference, more than 950 participants took part in 20 workshops and 48 meetings, at which almost 150 scientific papers were presented. The panel debate concerned data policy and its adjustment to the requirements of the new INSPIRE Directive in individual Member States. The complexity of the issue of harmonising licences and agreements on use shows that there is still a great lack of clarity and many unanswered questions in this field, and that the situation varies considerably from state to state. Exchange and sharing of data was the second open topic of the round table debate. It was generally agreed that many processes in Member States are implemented on the basis of data sharing, but that not all of these processes comply with the INSPIRE Directive and technical instructions created on its basis. It was also agreed that only a realistic and gradual approach will provide for adequate improvements and better results in this field. The Digital Agenda for Europe and the Europe 2020 Strategy discuss the field of spatial information only indirectly and to a lesser extent, which implies that too little has been done in Europe in the field of informing users and decision-makers about the advantages and benefits of a common infrastructure for spatial information. Many speakers emphasised the need for a closer connection between the INSPIRE Directive and eadministration programmes in individual Member States, as well as at EU level and in connection with the EU 2020 Strategy and the Digital Agenda for Europe. Presentations from the conference can be seen on the conference website http://inspire.jrc.ec.europa.eu/events/conferences/inspire_2012/.



Figure 9: Conference hall during a video message from Commissioner Potočnik



In 2012, the Surveying and Mapping Authority continued to **implement the projects of providing bilateral technical assistance** that was financially supported by the Ministry of Foreign Affairs of the Republic of Slovenia. The work was done in Macedonia in the form of two workshops in Skopje, and in Montenegro, where we organised one workshop in Podgorica, and a study visit of Montenegrin experts to Slovenia.

The workshops in Skopje were held between 2 and 6 July 2012, with the participants discussing the establishment of the Register of Spatial Units (RPE) and the Consolidated Cadastre of Public Infrastructure (ZKGJI). The workshop included 25 civil servants from various institutions (the Agency for Real Estate Cadastre of Macedonia, the Faculty of Civil Engineering in Skopje, the Central Register of Macedonia, the Ministry of Transport and Communications and the Ministry of Foreign Affairs of the Republic of Macedonia). Solutions, development and the legal bases of the Consolidated Cadastre of Public Infrastructure and the Register of Spatial Units in Slovenia were presented and the state of information bases and legal frameworks in Macedonia was analysed in the workshops. Since the existing system of collecting data on the public infrastructure and of the register of spatial units in Macedonia has not been adequately regulated, such workshops help colleagues at the Agency for Real Estate Cadastre to find the best solutions to regulate this field.



Figure 10: Presentation of conclusions and guidelines to representatives of the Agency for Real Estate Cadastre (photo: R.M.)

In October and November of 2012, the Surveying and Mapping Authority of the Republic of Slovenia implemented a project of bilateral technical assistance in Montenegro entitled 'Preparation for the transposition of the INSPIRE Directive to national legislation'. At the time when their country is preparing for EU membership, colleagues from Montenegro were acquainted with obligations related to the establishment of spatial information infrastructure in Europe and introduced by the INSPIRE Directive. The obligations and the way in which the INSPIRE

ABOUT THE SURVEYING AND MAPPING AUTHORITY OF THE REPUBLIC OF SLOVENIA

2

Directive is transposed into the national legislation were also presented. Using the example of the transposition of the Directive in Slovenia, responsible persons at the Real Estate Administration of Montenegro were acquainted with the requirements of the INSPIRE Directive and the role of the national surveying and mapping authority in this process. All the workshop activities were documented in the material which was produced and the reports on both events. The project was implemented in two parts, with a workshop in Podgorica between 17 and 19 October 2012 and a study visit to Ljubljana from 7 to 9 November 2012. Eight employees of the Real Estate Administration of Montenegro participated in the workshop in Podgorica, where the participants were acquainted with the management of real estate registers in Slovenia, with a special emphasis on the transposition of the INSPIRE Directive to Slovenian legislation and tasks assumed by the Surveying and Mapping Authority of the Republic of Slovenia. Representatives of the Real Estate Administration of Montenegro visited Slovenia between 7 and 9 November 2012.



Figure 11: Representatives of the Real Estate Administration of Montenegro during the visit to the Surveying and Mapping Authority of the Republic of Slovenia

During their visit to the headquarters of the Surveying and Mapping Authority of the Republic of Slovenia, we presented the field of work of the national surveying and mapping authority, with an emphasis on the topographic and cartographic systems and our experience with the transposition of the INSPIRE Directive in Slovenia and the creation of the Register of Spatial Units and web portals with spatial information. Besides the headquarters in Ljubljana, the guests also visited the regional surveying and mapping authority in Celje. The colleagues from Celje presented the procedures for registering real estate in Slovenia and the contents of the cadastre of public infrastructure. During their visit to Slovenia, the guests from Montenegro were also received by the President of the Slovenian Notariat, Marjana Tičar Bešter, who acquainted them with changes in the work of notaries in the procedure for entering real estate in the land registry after 1 May 2011, when amendments to the Land Register Act entered into force. Representatives of the Real Estate Administration of Montenegro concluded their visit in Celje with a stop



at the company Geodetski zavod Celje d.o.o., where representatives of the company described the role of the private sector in registering real estate in Slovenia.



Figure 12: Guests from Montenegro during their visit to the regional surveying and mapping authority in Celje

The general meeting of the Association of the National Mapping, Land Registry and Cadastral Agencies - EuroGeographics, of which the Surveying and Mapping Authority of the Republic of Slovenia has been a full member since the association was established, was held in Helsinki, Finland between 3 and 5 September 2012. The annual general meeting was attended by 160 delegates, representing 56 organisations from 45 member countries. The meeting reviewed the realisation of the programme of work for the previous year, adopted strategic documents and a new programme of work, confirmed the budget and carried out elections to the management board. The general assembly elected three new members of the management board, while another term was confirmed for the president. Tomaž Petek of the Mapping Authority of the Republic of Slovenia was elected a member of the management board for a two-year term. The Italian Military Geographical Institute (IGMI) was elected a new full-fledged member by a large majority. In addition to formal administrative activities and introductory speeches, the general assembly also featured a number of substantive debates and presentations.



Figure 13: Participants at the general assembly of EuroGeographics

By joining the activities of EuroGeographics, we also participated in 2012 in certain European projects (European global and regional map, European administrative borders, European digital terrain model, European geographical names and other projects) and joined a consortium whose bid was selected at a ICT/PSP tender for the implementation of a Pilot A project entitled 'European Location Framework', which will be implemented between 2013 and 2016.

A seven-member delegation of the Kosovo Cadastral Agency paid a study visit to Slovenia between 25 and 27 September 2012. The purpose of their study visit was to learn about our procedures and how the Register of Spatial Units in Slovenia is managed and updated. As part of a project in Kosovo co-financed by the European Commission, the Kosovo Cadastral Agency is establishing a multi-purpose register of addresses which will be available via its geoportal. The project is being implemented by the companies Change4Kosovo and B&S Europe, and is part of support for the establishment of an agency for registration of citizens entitled 'Project on support for the civil registration agency and Unified Address system'. During their visit to the Surveying and Mapping Authority of the Republic of Slovenia, we presented the methodology and procedures for managing and updating the Register of Spatial Units and distribution of data on spatial units and addresses. Besides the Surveying and Mapping Authority of the Republic of Slovenia, the guests also visited the Ministry of the Interior and the Statistical



Office of the Republic of Slovenia, where they were shown how data from the Register of Spatial Units is used in various processes. At the end of the visit, the two sides exchanged questions and opinions about future cooperation between the institutions.



Figure 14: Guests from Kosovo during a presentation at the Surveying and Mapping Authority of the Republic of Slovenia

On 26 September 2012, the Surveying and Mapping Authority of the Republic of Slovenia hosted the Director of the Agency for Real Estate Cadastre of Macedonia Slavče Trpeski and colleagues. One of the purposes of the visit was the signing of an agreement on cooperation between the Surveying and Mapping Authority of the Republic of Slovenia and the Agency for Real Estate Cadastre of Macedonia. The institutions have been cooperating well for a number of years both at the regional level and bilaterally. In July 2012, we organised two workshops as part of a project of close inter-institutional cooperation financed by the Ministry of Foreign Affairs of the Republic of Slovenia. The good cooperation was further upgraded and strengthened with the signing of the bilateral agreement.





Figure 15: Director General of the Surveying and Mapping Authority of the Republic of Slovenia Aleš Seliškar (right) and Director of the Agency for Real Estate Cadastre of Macedonia Slavče Trpeski signing the agreement on cooperation

We also fulfilled the obligations to maintain the state border arising from international contracts on the maintenance of borders with Italy, Austria and Hungary, which are laid down in the State Border Control Act.



Figure 16: The end of the session of the Commission for the State Border with Italy

In addition to the above-mentioned activities, the Surveying and Mapping Authority of the Republic of Slovenia was also active internationally in 2012 by following publications from the field and participating in panel discussions via the internet and by completing questionnaires and providing data about our work to the interested international public.



3 WHAT WAS ACCOMPLISHED IN 2012

3.1 Review of the Activities of the Surveying and Mapping Authority of the Republic of Slovenia in 2012

The tasks planned for 2012 were not implemented in full due to budget cuts. In spite of this, we completed the majority of planned tasks:

In the field of **drafting of regulations**, the Surveying and Mapping Authority of the Republic of Slovenia prepared the following act, which was later adopted by the Government of the Republic of Slovenia:

• Decree on the criteria and conditions for determining costs for the use of network services and for determining charges for spatial data sets and services sharing (Official Gazette of the RS, No. 66/2012).

Moreover, four sets of rules, adopted by the minister of infrastructure and spatial planning, the first two in agreement with the other minister, were prepared:

- Rules on managing the real estate market register data and on the method of sending data (Official Gazette of the RS, No. 68/2012),
- Rules on the method of calculating annual real estate price indices and on the method of determining real estate value indices (Official Gazette of the RS, No. 4/2013),
- Rules on the types and contents of certificates from geodetic databases and on the manner of data designation (Official Gazette of the RS, No. 69/1012), and
- Rules on building cadastre registration (Official Gazette of the RS, No. 73/2012).

Two bills and a draft of regulations have been also prepared, but failed to be adopted for various reasons.

The Surveying and Mapping Authority of the Republic of Slovenia also actively participated in the preparation of regulations by other ministries and state bodies.

In the field of geodesy, topography and cartography, the Geodesy Office performed control of the configuration of fifteen permanent GNSS stations of the SIGNAL network and purchased and upgraded the necessary technical equipment. One permanent station was relocated (Velika Polana was replaced with Lendava). New telecommunications links were established between GNSS stations and the GPS Service. The operation of the network and the GPS Service at the Geodetic Institute of Slovenia, which monitors the network operation and transmits data to users and the mobile phone network, was ensured. Regular maintenance and service works on geodetic measuring instruments and equipment were performed. Geodetic measurements on 130 km with high precision levelling, GNSS measurements on levelling benchmarks, and measurements on points necessary to determine geoid were carried out. Control measurements for registering



land under buildings were carried out, and a part of the first class trigonometers was upgraded.

As part of the financial perspective of the European Economic Area (EEA) for the 2009-2016 period, an opportunity for financing activities from EEA funds was provided and a partnership between the Slovenian, Norwegian and Icelandic surveying and mapping authorities was established (letters of intent for cooperation in the project *Updating spatial information infrastructure to reduce risk and consequence of floods*). All the necessary investment documentation and a plan of the implementation of a 4-year project (2013-2016), which will be partly financed from donations of the EEA (60%) and funds of the Ministry of Agriculture and the Environment, the Ministry of Economic Development and Technology and the Surveying and Mapping Authority of the Republic of Slovenia, were prepared.

A bill on the national geodetic reference system has been drafted, expert and inter-ministerial coordination has been carried out, and the material has been sent to the relevant ministry to forward it to the Government of the Republic of Slovenia.

In the European (new) national geodetic reference (coordinate) system, aerial photographs were taken for 30% of Slovenia's territory (south), and aerotriangulation and a digital terrain model were created. A colour and an infrared ortophoto for the same area was made and control of the quality of the implementation of cyclic aerial photography was carried out. In accordance with the standards of the European Association of Surveying and Mapping Authorities EuroGeographics, individual data layers of the EuroRegionalMap (ERM) and EuroGlobalMap (EGM) were upgraded. Tasks for the Slovenian Governmental Commission for the Standardisation of Geographical Names continued to be implemented. The capture of topographic data for 80 sheets with a 1 : 5,000 scale and special tasks for the Ministry of Defence in the field of cartography and topography were implemented. The system for managing topographic data was not established due to the revision of the state budget, which resulted in the slower introduction of the implementing rules of the INSPIRE Directive for adjusting of topographic data to EU rules. A total of 550 studies for registering public infrastructure buildings in the Consolidated Cadastre of Public Infrastructure were entered. In cooperation with the Ministry of Education, Science and Sport, an upgrade of the Consolidated Cadastre of Public Infrastructure was upgraded for the needs of preparing and sending data to owners of electronic communications and an upgrade of the spatial data infrastructure of the distribution environment at the Ministry of Justice and Public Administration was implemented.

In the field of registering real estate, the Real Estate Office and the regional surveying and mapping authorities implemented regular procedures to manage and maintain data from real estate records and activities to improve the quality of data. The envisaged tasks that were determined as part of the revised budget were fully implemented.



The planned tasks in the field of managing and maintaining data on the state borders with Italy, Austria and Hungary as determined by intergovernmental commissions were implemented. Minor measurements of border posts and regular periodical control of border stones were carried out, and border documentation for individual sectors on the state border was drafted.

It was ensured that current operations in the field of information support for the functioning of real estate registers - management and maintenance of real estate registers - run smoothly. In the field of updating or creating a new information solution, the initial concept for information update was finalised, and the data model for real estate registers and the concept of connecting existing and new information solutions in the transitional period until the final establishment of a new information system were examined and amended.

As part of the efforts to improve data, a land cadastre plan was made on the basis of the data on land cadastre points, whose coordinates in the base of land register points are determined by the national coordinate system. Instructions were written for data capture and the creation of such a plan also in areas where land cadastre points with coordinates do not exist. The operational creation of the land cadastre plan in such areas will be implemented periodically in the coming years.

In the field of mass real estate valuation, the Mass Real Estate Valuation Office operatively implemented the tasks of general real estate valuation under the Real Property Mass Appraisal Act - ZMVN (Official Gazette of the Republic of Slovenia, Nos. 50/2006, 87/2011 and 40/2012 - ZUJF). Real estate transactions were reviewed and processed for the purpose of modelling the Slovenian real estate market and making preliminary calculations of value indices for individual models of valuation of real estate. The production and distribution environment of the Public Real Estate Market Record was managed and maintained, ensuring a good foundation with regard to improving the transparency of the Slovenian real estate market. The system of overall real estate valuation, in regard to its content and IT, was maintained and upgraded. In accordance with the Real estate valuation models determination decree (Official Gazette of the RS, No. 95/2011), the application for the attribution of value to real estate was maintained, on the basis of which all real estate registered in the real estate registry was attributed a general market value with regard to the changed data on real estate. The models of mass valuation of real estate are managed and publically available online in the Real Estate Valuation Database.

In the field of issuing of data, the Surveying and Mapping Authority of the Republic of Slovenia provided users with access to geodetic data electronically and in person at all offices of the institution.

Activities for informing users and the wider public were performed. A bilingual Report on the work of the Surveying and Mapping Authority of the Republic of Slovenia was prepared, and funds for implementing the concession for the management of the GEOSS area were secured.



In 2012, the Surveying and Mapping Authority of the Republic of Slovenia continued activities to establish a common information infrastructure on the basis of the Infrastructure for Spatial Information Act - ZIPI (Official Gazette of the RS, No. 8/2010).

In the field of IT, appropriate conditions for the functioning of information systems were provided.

3.2 Important Activities of the Main Office

Electronic Access to Data

The Surveying and Mapping Authority of the Republic of Slovenia established a computer-supported distribution system for the purposes of accessing data online. It is based at the Ministry of Justice and Public Administration as part of the national information system. It provides access to data in various ways. Almost all the databases are included in the distribution environment: the Land Cadastre, the Building Cadastre, the Register of Spatial Units with Addresses, the Register of Geographical Names, geodetic points, the Real Estate Market Record, the Consolidated Cadastre of Public Infrastructure, as well as the vector and raster topographic data. They are updated daily. Secure and controlled access to personal data is also ensured, and individual solutions, developed jointly with eadministration, are used. The distribution system is separated from the production data, and as such is as independent as possible of the systems and changes in production, of the organisation of data suppliers and changes in the manner of administration and data updating. Through the creation and use of special interfaces, online services and user applications, it enables the simple, secure and correct use of geodetic data.

The Surveying and Mapping Authority of the Republic of Slovenia provides its users with electronic access to online data in two ways:

- access to data, and
- distribution of data (data transfer to the user's system).

Metadata for all data is regularly managed and updated. **Metadata** enables search by data, provider and area of preparation. Metadata contains descriptions of data characteristics, data accuracy, the method and frequency of database updating, etc.

Metadata is available at http://prostor3.gov.si/cepp/ or, when needed in English, at http://prostor3.gov.si/cepp_ang/.

Metadata as well as other information, services and applications relating to geodetic and real estate data are available to users online at the **Prostor portal** at <u>http://e-prostor.gov.si</u>.



PROSTOR	iine -		part of parts	Total Doctor	-	territer ne	
				-		0.0	
Alexandrik ya anana yanta, namayan Manana ya anana ya anana ya anana ya anana ya anana ya anana ya anana Yana ya anana ya anana ya anana Yana ya anana ya anana ya anana Yana ya anana		October no apiraci - ant annat cannot constitute - ant construction to constitute - and construction constitute - annative -			Altuetto * unue tentes annin a numera ta sentito accaso * unue tentes annin a sentito an entito ano event in numera annin accaso in numera acca		
		-	-	100 1 4 Mill -	Kaning agentin Kaning agentin Ka	to postal and movied	
North protocol as AAA** Ascelar in two care Water as a constraints as table Statement and as a school as as a school aschool as a school as a school as a sc		Andrew Construction of the second sec			 A construction of the second se	Long den junitere Altere Martin de la registeren et antide al augentere Altere antide altere alge	
 Natal and build in a Statustical and a set of a					W romann Marriers Aantales Sales en en en en en en en 102	un sector unor named limmet his au, hittere	

Figure 17: Prostor online portal

Access to Geodetic Data

 A map browser enables all users to search for a location and a display of this location on the selected cartographic basis (orthophoto, a basic topographic plan, national topographic maps, etc.) free of charge. It is possible to search a location in two ways: using an address or a geographical name. This, for example, makes it possible to obtain an image and a location of a building on an orthophoto map by supplying its address. This service is available at http://prostor3.gov.si/iokno/iokno.jsp.



Figure 18: Location search and display of orthophoto



• **Public access to real estate data** is a free online service that enables users access to descriptive and graphic data from the Land Cadastre, the Building Cadastre, the Real Estate Register, the Register of Spatial Units and the Consolidated Cadastre of Public Infrastructure. Since December 2011, public access to real estate data offers generalised market values of real estate that were determined using the procedures and methods of mass real estate valuation.

At the end of September 2012, with decision No. U-I-98/11-17, the Constitutional Court of the Republic of Slovenia annulled the first and second paragraphs of Article 114 of the Real Estate Recording Act - ZEN (Official Gazette of the RS, No. 47/2006 and next), where they stipulate the public availability of the Land Cadastre and Building Cadastre in the part related to data on the owner, if the owner is an natural person. The annulment of the first and second paragraphs of Article 114 of ZEN influences the public availability of data from the said collections of geodetic data on the owners of real estate, which is why the public availability tag was removed from data on owners - natural persons.

Data on real estate is available to the public at <u>http://prostor3.gov.si/javni/</u>.



Diagram 3: Number of public access inquiries by month





Diagram 4: Number of public access inquiries by hour

• **Personal access** allows an individual free-of-charge access to graphic and descriptive data on real estate owned by that individual and managed as such in geodetic records. This kind of access allows anyone, after they prove their identity with an appropriate digital online certificate, to verify the accuracy of the data recorded in the Land Cadastre, the Building Cadastre and the Register of Spatial Units and to take appropriate action in the case of discrepancies (<u>http://e-prostor.gov.si</u>).









Diagram 6: Number of personal access inquiries by hour

• Access to real estate data for registered users (<u>http://e-prostor.gov.si</u>) enables access to all geodetic data in the multi-purpose, user-adapted distribution system. This service of access to geodetic data enables browsing by attributes and graphics in all databases that are included in the system: the Land Cadastre, the Building Cadastre, the Real Estate Register, the Register of Spatial Units, the Consolidated Cadastre of Public Infrastructure, the Real Estate Market Record, and the Register of geographical names and geodetic points. In addition to searching for data, the graphic section of the browser also offers the user all standard spatial functions (navigation, maximising, minimising, shifting, choice of scale, distance measurements, choice of image quality, facility selection, etc.).

The browser also displays the selected data in graphic form and, depending on the level of detail of the information displayed, it is possible to select an appropriate cartographic basis (orthophoto, basic topographic plan, topographic map, etc.) for such a display (e.g. plot boundaries). This service of access for registered users is intended primarily for users in public administration (state and local level), commercial users (real estate agents, lawyers, insurance companies, banks, etc.) and land survey service providers.

In the beginning of June 2012, the land cadastre tab was supplemented with the option to search studies. On the basis of the data entered on a cadastral municipality and plot number, a user can gain insight into a list of all studies related to the plot in question.

In accordance with the law, it was possible until the end of September 2012 to gain access to data on an owner of real estate (plots or buildings) on the



basis of the real estate identifier. With the aforementioned constitutional decision No. U-I-98/11-17, data on names, surnames, addresses and years of birth of individual owners became protected personal data, and access to the said data was restricted only to the exceptions referred to in the third paragraph of Article 114 of ZEN, namely to state authorities and notaries - for their official duties, to surveying companies - for the provision of surveying services, and to other persons - if this is determined by law.

A total of 4,393 registered users from 869 organisations made data inquiries in 2012.



Diagram 7: Share of queries by type of data

The 'Access to real estate data for registered users' service is also intended for all bodies that, in addition to the Surveying and Mapping Authority, are permitted by law to issue **certificates from geodetic databases** (state bodies, notaries and geodetic companies performing geodetic activities).

In 2012, 174,828 certificates from geodetic databases were issued, together with 95,418 plot outlines - unofficial certificates.





Diagram 8: Share of issued certificates from geodetic databases by body



Diagram 9: Quantity and share of issued certificates from geodetic databases by type of certificate



Distribution of Geodetic Data

The distribution of geodetic data is intended for registered users. It is possible with special online services which enable secure and controlled access to make transfers from the distribution system to the user's system. Based on requests from the user, the distribution system creates standardised files, which the users then copy to their system.

The online services that the Surveying and Mapping Authority of the Republic of Slovenia began developing in 2006 are in compliance with the recommendations of OGC (Open Geospatial Consortium). Online services enable access to digital data in accordance with the standards and recommendations pertaining to the field of geographical information systems and online services, taking into consideration the standards of SIST (Slovenian Institute for Standardisation), CEN (European Committee for Standardisation) and ISO (International Organisation for Standardisation), as well as recommendations made by OGC and W3C (World Wide Web Consortium).

In the initial phase, the Surveying and Mapping Authority of the Republic of Slovenia developed a WFS type (Web Feature Service) online service for the majority of the data provided to users. The basic web services are developed for the Land Cadastre, the Building Cadastre, the Register of Spatial Units with House Numbers, the Consolidated Cadastre of Public Infrastructure and the Real Estate Market Register. Simultaneously with the development of web services, the Surveying and Mapping Authority of the Republic of Slovenia also defined the basic interoperability framework based on the XML and GML data exchange format.

The practical use of web services began in the last quarter of 2006, when the larger partners within the public administration (both at state and local level) started using these services to update and manage important national and local registers and records.

We are also planning to provide these online services to users outside the public administration and also to develop WMS web services.





Diagram 10: Number of queries by type of interface

3.3 Important Activities of the Real Estate Office

Land Cadastre, Building Cadastre and Real Estate Register

In 2012, special attention was paid to **improving data on buildings and parts of buildings and plots**. In order to comprehensively and systematically improve the quality of data from real estate records, in 2012 activities for improving the quality of data according to individual locations in Slovenia were implemented.

On the basis of a detailed programme for improving the quality of real estate data, the Surveying and Mapping Authority performed analyses and harmonisation of data from the existing registers, while terrain identification of buildings was also carried out. The quality of real estate data was improved by means of internally developed software which enables simpler and faster searches for discrepancies in real estate data. In 2012, a total of 222,983 errors or omissions on land plots, buildings or parts of buildings were eliminated. Procedures to change data on buildings and parts of buildings were simplified.

In 2012, the actual use of land in the land cadastre on the basis of graphic analyses of data from the Ministry of Agriculture and the Environment and graphic data on the land cadastre was maintained at quarterly intervals.

The tax on high-value real estate in 2012 increased the scope of regular recording of data in cadastres and the Real Estate Register. In 2012, the Surveying and Mapping Authority noted an increase in the number of requests to record cadastral data in comparison to 2011 (by 2.7% for the Land Cadastre and by 1.2% for the



Building Cadastre). New and updated data in both cadastres consequently mean updated data in the Real Estate Register. In 2012, we requested owners to register their buildings in the Buildings Cadastre and the Real Estate Register. In cases where owners failed to register building data despite the issued request, 148 motions to the competent inspection body were issued in 2009, 105 motions in 2010, 392 motions in 2011 and 252 motions in 2012.

Organisational measures to distribute work to all locations of land survey offices across Slovenia allowed us to distribute equally the delay in registration that was caused while informing real estate owners of the preliminary real estate value calculation.

The existing software of the Land Cadastre, the Building Cadastre and the Real Estate Register was upgraded so as to ensure more stable operation.

On **31 December 2012**, **5,440,275 plots** and **1,164,506 buildings** were registered, of which **74,531 were registered in the Building Cadastre** in accordance with the Recording of Real Estate, State Border and Spatial Units Act - ZENDMPE (Official Gazette of the RS, Nos. 52/2000, 87/2002 - SPZ and 47/2006 - ZEN) and the Real Estate Registering Act - ZEN (Official Gazette of the RS, Nos. 47/2006, 65/2007 - Constitutional Court Decision US, 106/2010 - ZDoh-2H, 47/2012-ZKUD-1A and 79/2012 - Constitutional Court Decision). On 31 December 2012, **1,807,258 parts of buildings** were registered, of which **561,546** were registered in the Building Cadastre.

In 2012, **14,361** procedures for registering buildings in the Building Cadastre and **3,717** procedures for changes to data in the Building Cadastre were carried out. For buildings and parts of buildings that are entered in the Land Register, as many as **28,298** procedures recording ownership were carried out in 2012.

In 2012, **84,713** changes to land plots in the Land Cadastre were made, which is 21% more than in 2011. In 2012, **78,864** changes to the ownership of plots were made.

The manual recording of ownership on the basis of a decision in the Land Register or access in the electronic land register and the manual entering of changed identifiers of land plots and parts of buildings is expected to be replaced in 2013 with electronic data exchange between the Land Register, Building Cadastre and Land Cadastre.





Diagram 11: Number of procedures for entering buildings in the Building Cadastre by year



Diagram 12: Number unsolved requests in the Land Cadastre and the Building Cadastre by year

The new Rules on Building Cadastre Registration (Official Gazette of the RS, No. 73/2012), which simplify the procedures for registering buildings and parts of buildings in the Building Cadastre, were adopted in 2012. The new **Rules on the types and content of certificates from geodetic databases and on the manner of data designation** (Official Gazette of the RS, No. 69/1012) were also adopted. The Rules were adopted with the purpose of adapting certificates from real estate registers to users' needs.

The taxation of high-value real estate was carried out on the basis of data from the Real Estate Register for the first time in 2012. The Surveying and Mapping Authority, in cooperation with the Tax Administration of the Republic of Slovenia,


prepared a methodology for data processing and, using a harmonised methodology, prepared the data from the Real Estate Register for the calculation of tax, and was also involved in procedures regarding owners' complaints on the taxation of highvalue real property. In 2012, owners of real estate changed a total of 967,189 items of data on real estate in the Real Estate Register.

The Surveying and Mapping Authority has not maintained data on types of land use, cadastre culture and cadastre class in the Land Cadastre since 1 July 2012. Until the erasure, data on types of land use, cadastre culture and cadastre class in all applications and products of the Surveying and Mapping Authority (certificates, issuing of data, public access, etc.) will be displayed as they were recorded on 30 June 2012. In terms of content, data on the types of land use, cadastre culture and cadastre class in the Land Cadastre are replaced by data on actual land use and land rating.

Owners can submit changes to data on real estate and ownership in several ways: by mail, at geodetic offices or via an online application.

State Border

In the field of maintaining the state border, only some of the planned tasks determined by inter-governmental commissions were implemented.

On the border with **Austria**, we moved four boundary markers in border section XXI to the correct place (or secure place). We completed the periodic control of boundary markers only for border section X (393 boundary markers). Due to a lack of funds, we failed to undertake the periodic control of border section XI (300 boundary markers). We produced new border documents for border sections XX and XXI.

On the border **with Italy**, we carried out GPS measurements of dry walls in border sections VI and VII (approximately 7.2 km), repaired four boundary markers and cut distances to the border line. We prepared a draft of technical documentation for all unmarked break points for the entire borderline with Italy. We did not perform the planned removal of vegetation due to reduced budgetary resources.

On the border **with Hungary**, we completed (after a one-year delay) the periodic control of the section from boundary marker A357 to boundary marker A614 (12 boundary markers) and on the right bank of the River Lendava from boundary marker A614 to A644 (4 boundary markers). We prepared a draft of the document 'Amendments and corrections', which is produced after the conclusion of each periodic control. We did not perform the planned removal of vegetation along the entire border due to reduced budgetary resources.

In 2012, as regards the state border **with Croatia**, we cooperated well with the Ministry of Foreign Affairs and provided the Ministry with expert assistance in the preparation of evidence for border arbitration.



Coordination of the Work of Regional Surveying and Mapping Authorities

In the field of coordinating the work of regional surveying and mapping authorities in the real estate field, we prepared several operational instructions and professional clarifications in order to help implement regular procedures. In cases in which the content of such instructions and clarifications referred to land survey services, the documents were submitted to the Member Sector of the Slovenian Chamber of Engineers, which also provides information from land survey companies that provide such services. Individual instructions, knowledge transfers and exchange of experience were presented to the employees of regional surveying and mapping authorities and geodetic offices in the form of educational workshops.

Training of Geodesists with a Geodetic Permit and Employees of the Surveying and Mapping Authority

As regards the mandatory training of geodesists holding a geodetic permit, whose organisation and implementation was transferred to the jurisdiction of the Slovenian Chamber of Engineers in accordance with the provisions of the Land Survey Service Act - ZGeoD-1, the Surveying and Mapping Authority participated in the preparation of the training programme. Representatives of the Authority also participated as lecturers in individual training sessions on real estate registration.

3.4 Important Activities of the Mass Real Estate Valuation Office

Mass real estate valuation is a rather new systemic field in Slovenia which relates to real estate, real estate prices and values and the real estate market. It affects the decision-making and operation of practically all state bodies, municipalities, real estate owners and other citizens.

In 2011, the Government of the Republic of Slovenia determined real estate valuation models. Based on real estate valuation models and real estate data from the Real Estate Register, real estate value was determined. A generalised market value was ascribed to all real estate entered in the Real Estate Register. This concluded the first phase of the general valuation of real estate in the Republic of Slovenia. The real estate mass valuation system was finally practically implemented. It can be used for various purposes of public interest determined by law.

The first important applications of the generalised market values were in the field of social transfers in determining the property status of persons and in the field of taxes in determining the tax basis for levying tax on real estate transactions. In 2012, data on generalised market values was also used to levy tax on high-value real estate and on profit made with a change in the intended use of land.

In the autumn of 2011, the National Assembly of the Republic of Slovenia passed amendments to the Real Property Mass Appraisal Act which determined in detail



the procedure for the general valuation of real estate, with a precise definition of real estate valuation models and a trial value evaluation, while the most important changes relate to the systematic recording of data on real estate transactions and rentals of buildings and parts of buildings in the Real Estate Market Register. This regulation will enable a more complete capture of data on transactions that are subject to value added tax and rental agreements relating to commercial and residential units. An information update of the system of the Real Estate Market Register is in progress.

Based on the recorded, verified and improved data of the Real Estate Market Register, in 2012 the Surveying and Mapping Authority prepared quarterly reports on average real estate prices and an interim and annual report on the Slovenian real estate market.

	POLITINA POROČILA	TVARTALNA PORDÍZIA
2008	2003_1	2008_4 08_3 08_2
2009	2009_1	2009_4 09_3 09_2 09_1
2020	2010_1	2010-4 10-3 10-2 10-1
- 2011	2011_1	2011-4 11-3 11-2 11-1
		2012_4 012_3 012_2012_1
		Alexandren Alexandren Arten

Figure 19: Reports on the real estate market in Slovenia

The reports are publicly available on the Internet. The professional and lay public can access data on recorded purchases and other transactions in the Real Estate Market Record through an online application. The public access and periodic publication of reports make the real estate market in the Republic of Slovenia more transparent.





Figure 20: Public access to real estate market data

The general real estate valuation system allows for the continuous review and update of data on purchases and other legal transactions for the purposes of determining real estate valuation models and calculating real estate value indices.

Real estate valuation models determine the influence of real estate properties on the value of real estate. They are kept in the real estate value database. It is determined by law that real estate valuation models be updated with a consideration of supply and demand at least every four years. In the meantime, changes in the ratios between supply and demand in the real estate market are coordinated by means of real estate value indices. An improved method for calculating and determining real estate value indices was created in 2012.

Data on the generalised market values of real estate were updated on the basis of changes in data on real estate recorded in the Real Estate Register. Publicly available data on the market values of real estate is a basic element of the real estate system in every developed market economy. In Slovenia, this data provides important additional information about the economic characteristics to all participants in the real estate market and puts real estate management in a completely new perspective. The mass valuation system is designed as a multitasking system. Data on generalised market values is important for a number of other activities, such as valuing property in determining social transfers, monitoring the credit risks of real estate portfolios, estimating the economic efficiency of land development and similar. The mass real estate valuation system provides the foundation for a methodological upgrade for various needs and uses and is thus an important reference framework for procedures and activities related to the value of real estate.





Figure 21: Public access to the real estate valuation database

3.5 Important Activities of the Geodesy Office

In the field of the national geodetic reference system, activities in 2012 focused mainly on the transition to the new national coordinate system. Regarding the topographic system, the activities included the capture, maintenance and management of spatial data.

In 2012, as part of the EEA Financial Mechanism 2009-2014, the Surveying and Mapping Authority of the Republic of Slovenia in cooperation with the Ministry of Agriculture and the Environment continued to prepare the project Updating spatial information infrastructure to reduce risks and consequences of floods. The aim of the project is to set up the altitude component of the national coordinate system and to update spatial data infrastructure in accordance with the requirements of the INSPIRE Directive in support of water management and the reduction of flood hazards and risks. This is a pre-defined project arising from the Memorandum of Understanding on the Implementation of the EEA Financial Mechanism 2009-2014 that was signed in May 2011 between the donor states of Iceland, the Principality of Liechtenstein and the Kingdom of Norway and the Republic of Slovenia as the beneficiary state. The Surveying and Mapping Authority of the Republic of Slovenia cooperated with other relevant ministries in preparing the proposal for the EEA Financial Mechanism 2009-2014 programme. The project proposal has been included in the programme area of Environmental Monitoring and Integrated Planning and Control.



Transition to the New Coordinate System

In 2012, the bulk of activities pertaining to the national geodetic system were marked by the transition to the new national, European coordinate system, which is gradually being introduced into geodetic practice. Activities in the following areas were implemented:

- the horizontal system:
 - provision of data of the SIGNAL network to users via mobile service operators,
 - relocation of the permanent station of the SIGNAL network from Velika Polana to Lendava,
 - connection of some permanent GNSS stations of the SIGNAL network to the levelling and gravimetric network;
 - GNSS observations at points for geoid determination;
 - processing of GNSS observations for determining ellipsoidal heights of levelling points;
- the altitude system:
 - processing and evaluating levelling measurement data;
 - correction of the Celje-Šmarje pri Jelšah-Brežice levelling line of the 1st order,
 - correction of the Ljubljana-Celje levelling line of the 1st order,
 - correction of the Ivančna Gorica-Šmartno pri Litiji levelling line of the 1st order,
 - stabilisation of benchmarks on the new line of the 1st order Celje-Dravograd,
 - stabilisation of benchmarks on the new line of the 1st order Celje-Zidani Most,
- the gravimetric system:
 - implementation of supplementary gravimetric measurements at highaltitude points (benchmarks).

Horizontal System

The setting up of the SIGNAL network began in 2000 and ended in 2006, when it was technically set up and entered the testing phase.

The SIGNAL network is a fundamental national geo-information infrastructure for determining an accurate position anywhere on the territory of Slovenia by using the global navigation satellite system (GNSS). It comprises a network of 15 permanent GNSS stations (receiver and GNSS aerial), the monitoring and distribution centre, and the GPS Service at the Geodetic Institute of Slovenia in Ljubljana. The Ljubljana GNSS station is included in the European network of permanent GPS stations - EPN (European Permanent Network). The GPS service provides for real time data exchanges with five other networks of the Austrian APOS network, six stations of the Croatian CROPOS national network and a station in Hungary (ZALA).

The functioning of the SIGNAL network was regularly monitored in 2012. One of the network stations was relocated from Velika Polana to Lendava.

WHAT WAS ACCOMPLISHED IN 2012





Figure 22: The SIGNAL network stations with connections to stations in neighbouring countries

Measurements aimed at connecting the horizontal, vertical and gravimetric components of the coordinate system were performed at selected geoid determination points.



Figure 23: GNSS measurements



Three trigonometric points of the 1st order were refurbished in 2012, namely: TT169 - Blegoš, TT176 - Debeli Vrh and TT175 - Snežnik.



Figure 24: TT 169 - Blegoš before and after refurbishment of the trigonometric point



Altitude System

In line with the transition to the new coordinate system, the Surveying and Mapping Authority of the Republic of Slovenia will continue to carry out corrections to the levelling network. In 2012, several levelling lines of the 1st order with a total length of 186 km were measured.



Figure 25: The new levelling network indicating lines measured in the last years (2012 in purple)

GNSS measurements were performed at certain benchmarks of the levelling network in order to determine ellipsoidal heights and control the existing geoid. A total of 200 benchmarks were included in the measurements.



Figure 26: Levelling measurement of the 1st order



Gravimetric System

In 2012, we continued taking gravimetric measurements at high-altitude points (benchmarks) for the needs of introducing the new altitude system and determining the new geoid. The measurements were conducted using two relative gravimeters, the Scintrex CG-3 and Scintrex CG251, on 251 benchmarks. Altogether, more than 1,200 gravimetric points have been measured in Slovenia in the last 6 years.



Figure 27: Gravimetric measurements at benchmarks

Aerial Photography and Orthophoto Production

A new three-year period of aerial photography of Slovenia began in 2012. Aerial photographs of the southern and south-eastern parts of Slovenia were taken; these are colour photographs (panchromatic + three colour channels - RGB), with a ground sample distance (GSD) of 0.25 m. A digital terrain model (5 x 5 m) and a colour ortophoto with a GSD of 0.25 m (DOF025) and 0.5 m (DOF050) were made for the area covered by aerial photography. An infrared ortophoto with a GSD of 0.5 m was also made. Quality control for all products was carried out in cooperation with the Surveying and Mapping Authority of the Republic of Slovenia.

WHAT WAS ACCOMPLISHED IN 2012





Figure 28: Aerial photography sectors in the 2012-2014 period

Topographic Data of the DTK 5 Collection

DTK 5 is a national vector collection of topographic data with homogenous precision and particularity, on a scale of 1 : 5.000, and is established uniformly for the entire territory of the country. Data is captured from stereo-pairs of cyclic aerial photographs, but other sources can also be used in data capture in accordance with specifications. The unit of capture is a sheet with a scale of 1 : 5,000. DTK 5 data have been captured in the new coordinate system since 2009. In terms of content, DTK 5 are divided into four areas: buildings, transport, ground cover and hydrography. Each of the areas is further divided into types. DTK 5 data is one of the basic sources of information on the spatial situation. In addition to the content which individuals can upgrade according to their own needs, DTK 5 data also provide the geolocation basis for all other spatial data and are useful as a supplement to outdated basic topographic plans.

In the period from 2001 up to and including 2012, the Authority captured more than 2,000 sheets, which represents more than 63% of the entire territory of the country.

WHAT WAS ACCOMPLISHED IN 2012





Figure 29: A map of the coverage of Slovenia with DTK 5

EuroRegionalMap (ERM) and EuroGlobalMap (EGM)

The maintenance of ERM and EGM, which are the European collections of topographic data and which correspond to the precision and particularity of the 1:250,000 scale (ERM) and the 1:1,000,000 scale (EGM), was continued in 2012. The collections are maintained as part of the European Association of Surveying and Mapping Authorities EuroGeographics. The capture and restoration of data is the task of individual members of this association, and the Surveying and Mapping Authority of the Republic of Slovenia is responsible for the capture and restoration of data for the territory of Slovenia. In 2012, the categories of administrative borders, settlements, hydrography, interesting facilities and transport were restored in ERM; in EGM, roads and railways were restored.



Figure 30: ERM and EGM data coverage across Europe



Recording Public Infrastructure

A legislative framework for the systematic recording of public infrastructure was created in recent years with the adoption of new spatial legislation. The Authority was assigned the task of ensuring technical and organisational conditions for the operation of the system at national level. In cooperation with the relevant ministries, local communities and providers of public services, the Authority:

- ensured conditions for recording public infrastructure,
- created the Consolidated Cadastre of Public Infrastructure (hereinafter referred to as ZK GJI), and





Figure 31: Example of the Consolidated Cadastre of Public Infrastructure: the Municipality of Maribor

The owners of public infrastructure are responsible for administering their own infrastructure data and sharing it with ZK GJI. The legislation obliges public infrastructure owners to submit data on facilities to the consolidated cadastre within three months of any modification. Therefore, the integrity and quality of data in the consolidated cadastre depends on individual infrastructure owners. In 2012, we received 611 studies on the entry of modifications in ZK GJI, which is the highest annual figure ever. A total of 6,012,000 facilities were registered in ZK GJI by the end of 2012, with the total length of linear facilities amounting to 187,827 km.



Туре	Number of facilities	Infrastructure length (km)
Roads	139,580	49,797
Railways	7,526	2,495
Airports	89	
Ports	1,096	
Cableways	164	11
Electricity	1,386,854	39,081
Natural gas	387,500	4,536
Thermal energy	67,738	968
Petroleum products	214	
Water distribution system	869,601	22,466
Sewage system	716,626	8,944
Waste management	3,758	
Water infrastructure	7,820	11
Electronic communications	2,423,798	59,518
Total	6,012,420	187,827

 Table 4: Length and number of infrastructure facilities by type in ZK GJI on 31 December 2012

The Consolidated Cadastre of Public Infrastructure contains most of the public infrastructure of national importance (e.g. state roads, railways, gas pipelines, water infrastructure, transmission and distribution of electricity) and infrastructure belonging to municipalities or private owners.

The system for recording public infrastructure is designed to afford infrastructure owners:

- greater protection of infrastructure against damage (if their infrastructure is recorded, any person carrying out land development activities can obtain information on the location of such infrastructure and protect it against damage during the activities),
- greater legal security in managing infrastructure.

Analysis of positional accuracy of buildings in ZK GJI

A verification of the positional accuracy of public infrastructure data was carried out in 2012. The purpose of the project was to establish whether data on facilities entered in the records correspond to the actual situation and intended use. A comparison was made between the data provided to ZK GJI by public utility services (PUS) which manage data for local communities and the data acquired with data capture on the ground. Based on both types of data, an analysis was made of the discrepancy between the positional accuracy of individual pieces of data and the defined accuracy as provided to ZK GJI by owners or operators. One of the objectives was also to establish if the data in the records are complete (whether all facilities in an individual network are captured) or if they display an outdated or incomplete situation (certain facilities no longer exist).

The accuracy and integrity of data in ZK GJI that has to be considered in the use of data was established on the basis of the results of the analysis. In order to improve



data, municipalities and PUSs have to be informed on the quality of data on the public infrastructure which is under their ownership or management. In order to acquire a generalised, transparent image of the accuracy of data on public infrastructure, the implementation of the project was distributed between municipalities in all regions of Slovenia and individual areas for verification were determined within municipalities. A total of 25 municipalities were included in the analysis.

Verification measurements in individual municipalities were carried out on the following types of infrastructure if it is recorded in ZK GJI in an individual municipality:

- water supply infrastructure,
- sewage infrastructure,
- electronic communications infrastructure,
- electricity infrastructure, and
- gas supply infrastructure.

The selection of facilities took into account the accuracy and method of capture that was used to register an individual facility and as many methods of capture as possible were included:

Code of source	Source		
1	geodetic measurement		
2	geodetic measurement after earthworks		
3	analogue geodetic plan in a 1 : 500 scale		
4	analogue geodetic plan in a 1 : 1,000 scale		
5	analogue geodetic plan in a 1 : 2,880 scale		
6	analogue geodetic plan in a 1 : 5,000 scale		
7	analogue geodetic plan in a 1 : 10,000 scale or less		
8	design for a building permit and execution design projects		
9	photogrammetric capture by means of stereo-pairs (CAS, PAS)		
10	DOF050		
11	GPS		
12	cartographic bases in a 1 : 25,000 scale or less		
99	other		

Table 5: Code table for sources of individual facilities in ZK GJI

The owner or operator sends the data to ZK GJI in accordance with the code table of positional accuracy:

Table 6: Code table of accuracy of individual facilities in ZK G.	Table 6: Code table of	accuracy of	individual	facilities in ZK GJ	I
--	------------------------	-------------	------------	---------------------	---

Class	Accuracy range
1	0.1 m or less
2	from 0.1 m to 1 m
3	from 1 m to 5 m
4	from 5 m to 10 m
5	from 10 m up to and including 20 m
6	above 20 m



A summary table for each municipality was also produced in which the following were displayed for each individual municipality:

- number of measured registered facilities,
- number of registered facilities that no longer exist,
- number of facilities that have not yet been registered,
- average discrepancy of positional accuracy in metres, and
- percentage of correct accuracy classes.

In addition to the assessments of positional accuracy and classification of data in accuracy classes, it is evident from the analysis that many facilities are not registered in ZK GJI, although they exist on the ground, and vice versa.

Project 'Upgrading the ZK GJI system in the field of electronic communications'

In 2012, in cooperation with the Ministry of Education, Science, Culture and Sport, we started to implement the project 'Upgrading the ZK GJI system in the field of electronic communications'. The project consisted of three sets in 2012: designing a system of supervision of data on accessibility to broadband internet connections in Slovenia; upgrading ZK GJI for the needs of exchanging data among owners of electronic communication facilities; upgrading the spatial infrastructure of the distribution environment.

In the field of ZK GJI, the purpose of the project of upgrading of ZK GJI, whose first step is to conduct a survey on the broadband accessibility of all networks of all electronic communications operators in Slovenia, which will primarily be the basis for faster and more effective planning of the development of broadband electronic communications infrastructure and the development of next-generation access networks. Another purpose is to establish a public system which will enable searches for available capacities of existing networks in order to make the supply of broadband services by service providers more efficient and create synergy effects for service providers in the planning of their own investments and cooperation on investments in various categories of public infrastructure. The costeffectiveness of investment in the public infrastructure is of extreme importance planning investments of both private and public funds.

The objective of the project is to create a public database on the current situation in terms of the broadband accessibility of all networks of all electronic communications operators in Slovenia. This database will available for all entities that deal with broadband communications, both in the field of supply and the use of broadband networks and services. The database will enable the state to supervise the supply of broadband electronic communications services, and make it easier for users and providers of broadband networks and services to search for information and simplify the planning of the construction and utilisation of broadband networks. This is why it is necessary to upgrade the existing ZK GJI with data on the broadband accessibility of all networks in Slovenia, establish a system of periodic and, if necessary, individual updating by all electronic communications operators and upgrade the existing online service infrastructure, which provides the basis for accessing all spatial data, including broadband electronic communications.







Figure 32: A map of accessibility of electronic communications in ZK GJI

Introduction of the Directive Establishing the Infrastructure for Spatial Information in Europe (INSPIRE) at the Surveying and Mapping Authority of the Republic of Slovenia



The Surveying and Mapping Authority of the Republic of Slovenia is aware of the responsibilities stipulated by the INSPIRE Directive. Geodetic data is basic reference data which is important for locating other facilities and phenomena and is therefore included primarily in the subject matter discussed in Annexes I and II of the Directive. This means that in the process of ensuring access to data and the related services, such data is assigned top priority. The Surveying and Mapping Authority of the Republic of Slovenia also participates in

preparing and adopting regulations for the implementation of the Directive.





			Indicator set			Metada	68	Data Sets	-	
						8				
						1	1 1			
Member State: Ski	versia.		Indicator			- 4	- 3			
					Indiana and in case of	ARCA I	Distant I			110
					Indiana Value	80%	124			
				2	Rowsen aller					1 740 45
					Demanduated		412			1.808.74
Spatial Data Se	15									
RA - Responsible aut	Annes	Theme	Sputial Data Sat			Esistanto	Compliant	Relevent and	Actual area	a shared
					-					
2010		A Construction in the second second	President and a	Constants and the				24 274	20.222	
This .	-	A descent of and a state	Canal Contract of the Contract	date and a second		-		and all a	_ CLAIR	
1010		C. Department and Stateman	and the second second second	designed of the second second second				20.000		
4010		A PRODUCTION COMPANY	Labora testing and set	CARLE OF DESCRIPTION OF			-	12.511		
8000	-	A STOPPING A PARTY	Excel 2 Boltomere	A STOCKED AND A			-	12.4.4		100
2000	-	A MARCHINE POLE	Laboration business and	AND AND A DESCRIPTION OF A				12 414		
2014		A MARCHINE INTO	Excellence of the	Event investigation		-		10.0.1	C. 4/ 8	
2010		Contractory and the	Provide and a second second	Construction in Charles Provide						
BALA.		E. Casadral parters	Campion sates	Land Laguage		-		20 213	44 47 8	
3554		7. Dengole networks	Theographic propage 1,0000	Tepopreprint Lans 1.8000		-		- 49 2139	14.595	
			Christi Austantiar	Conditional Constants						
Shine .	-	7. Dengor hereory	Postocerne Jevoe	Pytos of anostyra		-	-	20 21 21	19.364	
SAVA		7. Transport networks	Externegionenter	Evenegicharthan			-	20 273	20.673	
2014	-	7. Trensport networks	Excisionering.	Evropedental		-	-	20.2731	20.473	
Lasa .	_	7. Parapor hereosa	Parallel January 1985.	Hegeline of Public Poeds		-		- 20 27 21		
3010	-	1/2/2020/00/V	Checkages, house a poor	Tapographic Data 5,8000		-			14-587-	
2010	-	8. PD 95122865X	Excentracionation	ENCROBED CALOR		-		10.271	- 28.812	
2016	-	E. MOREQUELY	Even of the second	Ever21084/144				20,212	22,272	
848		E. MORTINES/	Visiter salaster	Hater Callestre				20.414	29,272	
M	-	E. Martigraphy	Voltra telese perat	15048- Boldies (Tryers)		_		20,213	38.853	1470
EAS		E. Hydrography	Moderal defense gesteres	Hater bodies (lates)		-		20.273	29,273	1224
EAS		E. Hydrography	Faculture	ulladarshavla		-		20.273	28,279	1221
EAB		8. Hyshography	Volovantvana sonolja	Maner protection Areas		-		29,273	20,273	1324
EAS		E. Myshophphy/	Kipalta utala	Battong Waters		_		20.2134	29.273	1078
		1000 C 2000 C	Cedurijive oberolije zaresi	Sensitive areas for bath						
E45		E. Hydrography	Adpainin vode	in altera				20.273	29.272	1000
		11405-5012	Ceres ejiondo evijiuče0	Senaltive areas for				- 244	Constant of the local data	
648		E. Hystography	eutoficecje	extrafacient.				20,273	20.273	12:25
549		8. Hydrography	Histopatha Ionola	PS/20200011E Armen				20.273	29,275	1.00
545		8. Hostography	Otaina Inge	Coastine				20,277	22,272	1004
SAB .		E. Hydrography	Optoportine harte priprier	Homes want of figure		1	1	20 211	20,272	1525
2012			Voona telese problemsh							
EAS .	1	K. Hydrography	reals	Oroundurater bodies		1		20 273	28,273	1000
		and the second sec	Odaeki površinakih voda.	A STATE OF STATE			1.00	100 C	100000000000000000000000000000000000000	
			poelandmit za življenje	River segments, important						
State .		W interimentation and a second second	and the second sec	New Workshop			1.0	- main received	The Part of the	

Figure 33: A part of the table for monitoring the implementation of the INSPIRE Directive

In 2012, the Slovenian geoportal INSPIRE and the information system for metadata were updated and the metadata for the databases referred to in Annexes I and II of the Directive were prepared. The metadata managed in the Slovenian metadata system are regularly copied and published on the European INSPIRE portal. The Surveying and Mapping Authority of the Republic of Slovenia participated in these activities and continued to edit the INSPIRE geoportal and metadata.

The INSPIRE geoportal offers a list of databases comprising the infrastructure of Slovenian spatial data. The list of databases is classified under headings as required by the INSPIRE Directive and the Slovenian Infrastructure for Spatial Information Act - ZIPI (Official Gazette of the RS, No. 8/2010), and the database manager is listed next to each database. All databases have to consider the implementing rules of INSPIRE (decrees and decisions of the European Commission) and the provisions of ZIPI. The geoportal regularly publishes important events and news relating to INSPIRE and geo-information, as well as material that the European Commission submits for public discussion.





Figure 34: News on the INSPIRE geoportal

In 2012, the European Commission prepared draft data specifications for data from Annexes II and III of the INSPIRE Directive for a total of 25 topics. Due to their complexity, discussing data specifications is demanding. The Surveying and Mapping Authority of the Republic of Slovenia dealt with and commented on data specifications for the following themes: statistical units, buildings, orthoimagery, relief models and municipal and public services.

The Authority continued activities related to implementing the Directive regarding linking, single capturing, administering and maintaining data. This includes activities needed to integrate the Geodesy Office's databases and integrate topographic data with data from other offices and sectors within the Ministry of the Environment and Spatial Planning and with data from other sectors.

To conduct annual monitoring of the setting up and use of national infrastructure, data was collected that is required to calculate the indices that need to be provided annually to the European Commission in accordance with its decision on monitoring and reporting.

The promotion of the requirements and future influence of INSPIRE continued in 2012. A representative of the Geodesy Office presented the national activities related to INSPIRE at the 6th INSPIRE Conference 2012 in Istanbul, at a workshop of the working group for data quality of the European Association of Surveying and Mapping Authorities EuroGeographics in Zagreb and at the workshop *Capture*, *processing and use of data on the environment and space: GEO, GMES and national activities in Slovenia*.





Figure 35: Participants at the workshop of the working group for quality

GNNS Workshop Observation in Practice

A workshop on GNSS observations in practice (post-processing) was held on 29 February 2012 in Celje in cooperation with the Interest Group of Land Survey Services (GIZ GI). Representatives of the Surveying and Mapping Authority of the Republic of Slovenia demonstrated the usefulness of post-processing GNSS observations for determining the position of points. We analysed the quality of the determined coordinates of points (GPS, GPS + GLONASS) depending on the conditions (almost ideal or poor conditions), duration of observation, interval of registration of observation, number and distribution of satellites during observation and the use of different ephemerides.



Figure 36: Participants at the workshop GNSS observations in practice in Celje - 56 -



4 STEPS FORWARD IN 2013

4.1 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 strategic goals in individual activities of the national land surveying service are:

Geodesy Office

In the field of the national spatial coordinate and topographic system, we will:

- continue to set up the new national coordinate system (the horizontal, altitude and gravimetric component) as part of the European coordinate system ESRS (Spatial Reference System),
- ensure conditions for implementing national geodetic measurements (horizontal and vertical component, geoid); ensure the operation of the national network of permanent GNSS stations (Global Navigation Satellite System) and the GPS Service, which provides for the control of the functioning of the network, the use of the network for implementing national geodetic measurements and the provision of data for implementing geodetic measurements and location services,
- continue to establish and maintain national data on the features of land surface and facilities (topographic data) in topographic databases, on geographical names and on remote sensing, and provide national maps created in accordance with international standards,
- further develop and maintain the cartographic system of the Republic of Slovenia for defence purposes in accordance with NATO standards and Slovenian military standards,
- continue to ensure conditions for implementing the requirements of the INSPIRE Directive relating to the topographic system.



The attainment of these strategic objectives will enable the easier capture, quality maintenance and efficient use of data in real estate records and other spatial records for establishing the geolocation of data and phenomena in the ESRS. National topographic data, cumulative economic infrastructure data and state maps will be used as expert bases in spatial and environmental planning and management, flood safety and agricultural policy and will thus serve as a basis for producing various topical maps or displays for navigation.

In the field of recording public infrastructure, we will:

- ensure the functioning of the system of recording public infrastructure,
- ensure control of the quality of data on public infrastructure in the Consolidated Cadastre of Public Infrastructure,
- keep a record of rights *in rem* on the public infrastructure,
- establish a system to protect public infrastructure.

The attainment of these strategic objectives will enable more efficient planning, the safer implementation of land development and more economical management of public infrastructure facilities. The recording of rights *in rem* on public infrastructure will increase the legal safety of public infrastructure owners.

When introducing the INSPIRE Directive, we will:

- ensure the conditions to fulfilling the requirements of the Infrastructure for Spatial Information Act and the INSPIRE Directive,
- provide access to spatial data and metadata in accordance with the requirements of the Infrastructure for Spatial Information Act and of the INSPIRE Directive,
- cooperate with the European Commission in the process of enforcing the regulations for the implementation of the INSPIRE Directive,
- participate in the establishment and functioning of the national spatial information infrastructure, harmonised with the INSPIRE Directive,
- implement the activities of national contact points in accordance with the Infrastructure for Spatial Information Act.

The attainment of the above-mentioned strategic goals will provide data infrastructure for spatial information. This will lay the foundations for a comprehensive spatial data infrastructure at the national level in accordance with the INSPIRE Directive.

The attainment of strategic goals will enable simpler, more accurate and faster capture of data for the needs of updating of geodetic and other spatial records, establishing the geolocation of data in the European spatial reference system, integration of data and exchange of data in international projects.

Real Estate Office

In the field of real estate registration, we wish to:

• improve the quality and completeness of data regarding real estate,



- simplify procedures, and arrange and update data on all real estate in the Land Cadastre, the Building Cadastre and the Real Estate Register,
- participate in the process of ensuring the conditions for fulfilling the requirements of the INSPIRE Directive in the field of real estate registration,
- create the core of a comprehensive real estate system linked to the Land Cadastre, the Building Cadastre and the Land Register,
- enable dynamic upgrading of real estate data in basic databases (guest data) or the entering of new data by linking data from other databases with basic databases (linked data).

By achieving strategic objectives in real estate registration, we will meet the requirements for the greater legal security of real estate owners, greater security of real estate investments and investments related to real estate; make the real estate market more efficient; make real estate taxation fairer and more efficient; create the pre-conditions for adopting a more appropriate land and housing policy and the planning of land development activities; quickly detect and register all unauthorised activities in the physical environment and effectively perform activities for protection and rescue services.

The strategic objectives in the field of quality and completeness of data and coordination of the integration of real estate registers will, in relation to the appropriate information infrastructure, be achieved as part of the implementation of the e-space group of projects.

Mass Real Estate Valuation Office

In the field of mass real estate valuation, we wish to:

- establish, manage, maintain and develop a mass real estate valuation system for the purpose of real estate taxation,
- develop and upgrade real estate market records with data on new buildings and data on the real estate rental market in Slovenia,
- keep quality data records on events in the real estate market,
- establish, administer and maintain data on the generalised market values of real estate,
- efficiently adjust the mass real estate valuation system to situations in the real estate market.

The attainment of our strategic objectives will ensure the conditions for the transparent functioning of the real estate market, data on realised prices and rents in the real estate market and data on the generalised market value of all real estate in Slovenia for the purposes of objective taxation of real estate and other purposes.

Main Office

In the field of issuing geodetic data, we wish to:

• provide quality services and data,



- ensure an efficient, user-friendly system for issuing data,
- ensure that geodetic data is used as reference data in the Republic of Slovenia.

The attainment of these strategic objectives will enable the wide use of data for various purposes in a standardised, efficient and user-friendly manner. Data will be available via the entire entry point, while the better understanding of information and wider use of data will enable the faster development of other services as part of the information society.

In the field of information science, we wish to:

- ensure a uniform and effective information system,
- standardise procedures and solutions,
- ensure comprehensive management of the field of information science and information technology.

The attainment of the listed strategic objectives will provide a stable information environment, which will enable the cost-efficient and procedurally efficient implementation of organisational processes determined by law, undisturbed operations and quality data for our own needs and external users.

In the field of the organisational structure of the national land survey service, we wish to:

- develop an optimal organisation of the national land survey service as part of public administration in connection with other institutions recording real estate and spatial data,
- establish an organisational structure that will allow the efficient communication of data, implementation of services and provision of information to our users.

The attainment of the strategic objectives will ensure more economical implementation of the activities of the national land survey service and better implementation of services for user.

In the field of education and training, we wish to:

- ensure an appropriate level of education and competence of employees of the Surveying and Mapping Authority of the Republic of Slovenia with regard to the effective and efficient performance of land survey services,
- improve users' knowledge of the possibilities of using real estate and spatial data and records.

The attainment of the strategic objectives will ensure adequately trained personnel for the Surveying and Mapping Authority of the Republic of Slovenia, providers of the land survey service and users.

In the field of international cooperation, we wish to:

• implement European guidelines on recording real estate, mapping and geoinformatics,

- з 🧳
- participate in establishing European and cross-border data sets, taking into account the interoperability of spatial and real estate data and services,
- ensure that we are involved in developing Slovenian and European e-government projects,
- implement NATO guidelines in cooperation with the Ministry of Defence, taking into account interoperability in the preparation of topographic and cartographic products,
- provide professional assistance to other countries both in cooperation with the private sector and independently,
- encourage and support the private sector in penetrating and establishing themselves in foreign markets.

Applying European and other international guidelines and actively contributing to their development will enable the comparable and coordinated development and performance of the land survey service in Slovenia.

4.2 Future Projects

Geodesy Office

As part of the Financial Mechanism of the EEA 2009-2014, the Surveying and Mapping Authority of the Republic of Slovenia, in cooperation with the Ministry of Agriculture and the Environment, prepared a draft of the four-year project Updating spatial information infrastructure to reduce the risks and consequences of floods. The objective of the project is to set up the altitude component of the national coordinate system in accordance with the requirements of the INSPIRE Directive and recommendations from international expert organisations (IAG and EUREF), and to update the spatial information infrastructure with the requirements of the Directive in order to support a reduction of flood risk and water management. The implementation of the project will ensure up-to-date geodetic reference (a network of geodetic points of the best quality, the altitude component of the national spatial coordinate system, the levelling network and geoid), which will be in full compliance with the European spatial reference system. This will provide a geodetic basis for data on the altitude component for all spatial data and will enable the use of satellite technologies in determining coordinates not only for the horizontal (as the network of permanent GNSS stations used to provide), but also for the altitude component of the position. The existing topographic data model will be modified to comply to a large extent with the requirements of the INSPIRE Directive. The existing topographic data will be copied into a new data model; also to be captured are new topographic data for the corresponding data topics in the annexes to the INSPIRE Directive in accordance with the competences of the Surveying and Mapping Authority of the Republic of Slovenia. The hydrographic data infrastructure will be updated by devising a new data model that complies with the requirements of the INSPIRE Directive, and 10% of existing hydrographic data will be copied. Tasks and the areas covered by managers of hydrographic data will be determined. Among other things, this will enable simpler reporting on water management, as required by European directives. Online services will be prepared for accessing spatial data, with a



special emphasis on topographic and especially hydrographic data. Services will be made compliant with the requirements of the INSPIRE Directive on spatial data online services. Online services will be included in the Slovenian INSPIRE geoportal, which will make them publicly accessible. The project is expected to be concluded in 2016.

In the field of **establishing a new national coordinate system**, fundamental geodetic measurements will be taken, especially regarding the altitude segment of the coordinate system and the gravimetric network. The legislative basis for the new national coordinate system will also be prepared. In particular, the functioning of the permanent GNSS stations in the SIGNAL network and its use by the public and private sectors will be ensured. A time analyses of data of the horizontal component of the coordinate system will be implemented with a view to creating a geo-kinematic model of the Republic of Slovenia.

Regarding the **topographic system**, a third of Slovenian territory will be aerially photographed annually within the framework of cyclic aerial photography, and orthophotos made of the area photographed. We will capture topographic data on the part of Slovenian territory on which the data available is outdated. We will continue to update the information system for managing topographic data as precisely as possible. New topographic data relating to topics in the annexes to the INSPIRE Directive will be collected. We will maintain the existing national cartographic products, some with the Ministry of Defence. We will continue to record public infrastructure, participate in the implementation of projects with other sectors (primarily with the Ministry of Education, Science, Culture and Sport) and promote and establish a system to protect public infrastructure.

We will participate in European processes of introducing principles and meeting the requirements of the **INSPIRE Directive**. We will follow and participate in the procedure to adopt the implementing rules of the INSPIRE Directive, compare existing solutions in the field of the Slovenian spatial database infrastructure with the adopted rules, and prepare measures and projects to ensure the compliance of data and related services. We will continue our cooperation with other sectors in relation to linking content that is managed in multiple databases in accordance with the principles of the INSPIRE Directive about management and updating of data on the same object groups in one database.

Mass Real Estate Valuation Office

After the conclusion of the first general real estate valuation, the **mass real estate** valuation system has been enforced and implemented. All real estate in the Real Estate Register has been ascribed and regularly updated the generalised market value of real estate, which is important additional information for all users in the public and private sectors and is required for the successful and efficient management of real estate and preparation of appropriate housing, land, spatial and environmental strategies or policies.



The most important operational projects in 2013 are the upgrading of the information system of the real estate market record and the calculation of real estate value indices. The information system of the real estate market record needs to be upgraded due to the capture of data on real estate purchases that are subject to value added tax and rental agreements for buildings and parts of buildings. This will ensure the comprehensive capture of data on real estate purchases, including new residential units and commercial facilities that are the subject of purchase agreements concluded between business entities that are liable for VAT payment, and data on rental agreements pertaining to residential and commercial facilities. In the periods between general valuations, appropriate generalised market values have to be created in accordance with supply and demand in individual market segments. This can be done by means of value indices that are calculated in accordance with the prescribed procedure on the basis of all available data on the real estate market for an individual region. If value indices show a difference of over 10% compared to the previous general valuation, real estate indexation in such an area will be implemented.

In 2013, we also plan to begin the upgrade of existing mass evaluation models and develop **new mass evaluation models** for certain types of real estate, such as hotels. All development tasks will be included in the new cycle of procedures for general real estate valuation and implemented in the future.

A **methodology to determine cadastral income** in accordance with ZUKD-1 was finally created in 2013.

Real Estate Office

In the field of real estate, the main activities will focus on the **preparation and gradual implementation of e-space projects**. Two sub-projects directly linked to real estate are included in the project: *Information update of real estate registers* and *Improving real estate register data*.

As part of the **information upgrade**, the purpose of which is to ensure appropriate information support for business processes and better utilisation of real estate and spatial data which provide the basis for recording data on real estate and its ownership, the creation of a detailed specification of the entire architecture of the new information solution (making a list of business processes, defining a physical and logical model, establishing the necessary infrastructure, technical rules and services, a plan of data migration and implementation) is first being planned for 2013, while the development and implementation of applicable solutions and data migration is planned for the coming years.

The planned **data improvement** includes the transfer of archival studies of the Land Cadastre and the Building Cadastre from analogue to digital form, which will enable the Surveying and Mapping Authority to carry out more efficient e-commerce in the field of recording real estate and the functional integration of the information system for real estate record management and the spatial information system. Due to the large volume of documents to be scanned (around 12 million



documents of A4 or A3 formats), the task is expected to continue for the next two to three years.

The data improvement project also includes gradually improving the location accuracy of graphic data in the Land Cadastre. Some of the data (around 26% of all land plots in Slovenia) are already correct in terms of location, i.e. the data has positional accuracy which enables the direct use of location data from the Land Cadastre to implement the graphic breakdown of the Land Cadastre with other spatial data. Improvement in the field of permanent crops is first planned for 2013, which is directly related to a different method for determining cadastral income. Improvement in other fields of agricultural and other land is planned for the coming years.

Among the regular tasks of recording real estate, emphasis will be put on **further and permanent improvement of the quality of the following data**: data on land plots, buildings and parts of buildings, which includes verification of data, adequate preparation or updating or mutual harmonisation, which gives the recorded data greater utilisation value. An improvement in data in terms of content will be achieved also by gradually eliminating the backlog of unresolved administrative procedures.

The electronic exchange of data from the cadastres to the Land Register will be implemented at the beginning of 2013. An exchange of data in the opposite direction - the electronic exchange of data from the Land Register to both cadastres - is also planned for the same year.

In 2013 and 2014, in accordance with the normative programme for the preparation of regulations and the programme of work of the national surveying and mapping service, we will prepare a bill in 2013 on the recording of real estate which will: eliminate ambiguities in the current law and harmonise terminology; simplify the procedures for obtaining geodetic services and recording changes to data in real estate registers; introduce the possibility of e-commerce, and define the obligations to record buildings in the Building Cadastre, all of which will make it easier and faster to recording changes to data, and consequently eliminate the backlog in resolving requests from customers and gradually improve the quality of data.

4.3 Regulations in Preparation

4.3.1 Regulations and Acts to be Adopted by the National Assembly of the Republic of Slovenia

• The Act on the State Land Survey Reference System

The INSPIRE Directive on mandatory implementing rules obliges EU Member States to establish a pan-European coordinate system - European Spatial Reference System (ESRS). In the field of national coordination systems, the national land survey services in Europe and the European branch (the EUREF association - European Reference Frame) have been directing activities



towards the complete renovation of national coordinate systems for several years. A uniform system is being set up based on the use of satellite technology that provides a common basis in Europe for performing land surveys, geo-referencing and linking and exchanging spatial data. In Slovenia, the geo-reference system in use was set up in the last century and is no longer technically or methodologically appropriate. Furthermore, the growing importance of private property and rights *in rem* to real estate require a new definition of the rights and duties of the state and owners of real estate on which facilities and equipment important for establishing the European coordinate system, land survey infrastructure and performance of land surveys are located. The national topographic system will also have to be updated, since the existing regulatory bases do not correspond to the state of technology for capturing, managing and displaying topographic data. Public administration obligations related to ensuring topographic data and maps will have to be re-defined.

The new act will replace the Basic Geodetic Measurement Act from 1974, which is no longer suitable for professional and technical reasons and the different ownership relationships, and will ensure that the geodetic reference system complies with the INSPIRE Directive and its mandatory implementing rules.

The bill on the national geodetic reference system was prepared already in 2011. Together with draft implementing regulations, it was submitted to the Government of the Republic of Slovenia for discussion in September 2011, but the Ministry of Spatial Planning and the Environment at the time withdrew it from discussion in November 2011, because the discussion of the bill by the Government of the Republic of Slovenia exceeded the concept and content of regular duties in accordance with Article 115 of the Constitution of the Republic of Slovenia. The bill was reintroduced into the Government's legislation programme in 2012, submitted for inter-ministerial coordination and sent to the competent ministry to be discussed by the Government. The Surveying and Mapping Authority subsequently received comments from the Faculty of Civil and Geodetic Engineering of the University of Ljubljana, with certain proposals primarily concerning terminology.

In the already prepared bill on the national geodetic reference system, the financial consequences related to the state budgets for 2013 and 2014 should be determined, the delay in the planned co-financing for establishing the European coordinate system from donations of the European Economic Area has to be taken into account and an expert revision of terminology is required.

• Act Amending the Real Estate Recording Act (ZEN-1)

The new Real Estate Recording Act will eliminate ambiguities in the current law and harmonise terminology; simplify the procedures for obtaining geodetic services and recording changes to data in real estate registers; introduce the possibility of e-commerce, and define the obligations to record buildings in the Building Cadastre, all of which will make it easier and



faster to recording changes to data, and consequently eliminate the backlog in resolving requests from customers and gradually improve the quality of data.

This will also provide adequate legal bases in accordance with the reference of the Court of Audit and the Government Office for Legislation that real estate data management should be systemically and comprehensively regulated.

• Act on Recording Public Infrastructure

The Consolidated Cadastre of Public Infrastructure was established in 2007 as a technical record of all public infrastructure facilities in the Republic of Slovenia. None of the regulations deals with the uniform (systemic) recording of public infrastructure, and the existing spatial legislation primarily regulates the construction of public infrastructure facilities.

The Act on Recording Public Infrastructure will thus comprehensively regulate the recording of public infrastructure; define the recording of facilities and networks of public and private infrastructure; regulate the obligation of operators to provide data and the issuing of data from the Consolidated Cadastre of Public Infrastructure, and organise the Consolidated Cadastre as a public record. The act will also establish a system to protect public infrastructure from activities affecting space and for the exchange of data on public infrastructure. This will improve safety in land development works and reduce the amount of damage to public infrastructure from activities affecting and the population from injuries and have a positive impact on environmental protection.

The act will not regulate property rights relationships for public infrastructure facilities and networks, because the preparation of civil legislation (preparation of regulations on property law) is under the jurisdiction of the Ministry of Justice and Public Administration.

It is expected that the act will be drafted and expert discussions will begin in 2013.

4.3.2 Regulations and Acts to be Adopted by the Government of the Republic of Slovenia

 Report on the implementation of Change to the programme of work of the national land survey service for 2011 and 2012 in the part which relates to 2012
 Article 29 of the Land Survey Service Act - ZGeoD-1 (Official Gazette of the RS, No. 77/2010) requires that the Government of the Republic of Slovenia adopt the report on the implementation of the annual programme of the

national land survey service at the latest on 1 February of the current year.



The report on the implementation of the annual programme of the national land survey service for 2011 and 2012 where it refers to 2012 comprises reporting on the substantial and financial implementation of tasks determined by the Government of the Republic of Slovenia with the adoption of the Change to the programme of work of the national land survey service for 2011 and 2012 in the part which relates to 2012 (decision from the 26th regular session of Government of the Republic of Slovenia on 23 August 2012).

- Programme of work of the national land survey service for 2013 and 2014 Article 29 of the Land Survey Service Act - ZGeoD-1 (Official Gazette of the RS, No. 77/2010) stipulates that a detailed definition and planned volume of tasks of the national land survey service and the planned amount of funds for the implementation of these tasks be determined in the annual programme of the national land survey service, which is adopted by the Government of the Republic of Slovenia for the current year at the latest on 1 February of the current year
- Report on the provision of spatial information infrastructure in Slovenia The Infrastructure for Spatial Information Act - ZIPI (Official Gazette of the RS, No. 8/2010) requires the National Contact Point to prepare a report every three years on the provision of infrastructure for spatial information in Slovenia and send it to the Government of the Republic of Slovenia for adoption. The Government adopts the provision of infrastructure for spatial information and forwards it to the European Commission.

In accordance with the provisions of Article 18 of ZIPI, the tasks of the National Contact Point are implemented by the ministry responsible for the land survey service. In accordance with the Act Amending the Government of the Republic of Slovenia Act (Official Gazette of the RS, No. 8/2012) and the Act Amending the Public Administration Act (Official Gazette of the RS, No. 21/2012), the responsible body is the Ministry of Infrastructure and Spatial Planning, more precisely the Surveying and Mapping Authority as a body within the ministry. Since Article 21 of ZIPI stipulates that the deadline for the submission of the first report to the European Commission is 15 May 2010, the three-year reporting period expires on 15 May 2013.

• Decree determining real estate value index

The Real Property Mass Appraisal Act - ZMVN (Official Gazette of the RS, Nos. 50/2006, 87/2011 and 40/2012-ZUJF) stipulates in the third paragraph of Article 13 that the Government of the Republic of Slovenia shall determine and publish real estate value indices when value indices for individual types of real estate change by more than 10% in comparison to the previous change in the model or previous publication of the value index. On the basis of a regulation by the Government of the Republic of Slovenia, a new calculation of the value of individual types of real estate value indices determined for individual zones and real estate valuation models determined for these types of real estate.



4.3.3 Regulations and Acts to be Adopted by the Minister of Infrastructure and Spatial Planning

The preparation and adoption of implementing regulations under the act on the national geodetic reference system is planned for 2013, if this act is to be adopted in 2013.



5 REGULATIONS ON SURVEYING AND MAPPING ACTIVITIES

5.1 Valid Regulations Currently Applied in Performing Land Survey Activities

ACTS
Land Cadastre Act - ZZKat (Official Gazette of the SRS, Nos. 16/1974, 42/1986; Official Gazette of the RS, Nos. 17/1991 - ZUDE, 52/2000 - ZENDMPE and 47/2006 - ZEN)
Basic Geodetic Measurements Act - ZTGI (Official Gazette of the SRS, Nos. 16/1974, 23/1976 - ZGS, 42/1986; Official Gazette of the RS, No. 17/1991 - ZUDE)
Land Survey Service Act - ZGeoD-1 (Official Gazette of the RS, No. 77/2010)
Law of Property Code - SPZ (Official Gazette of the RS, No. 87/2002)
Spatial Planning Act - ZureP-1 (Official Gazette of the RS, Nos. 110/2002, 8/2003 - amend., 58/2003-ZZK-1, 33/2007-ZPNačrt,108/2009-ZGO-1C and 80/2010-ZUPUDPP and 106/2010 - amend.)
Agricultural Land Act - ZKZ (Official Gazette of the RS, Nos. 71/2011 - official consolidated text and 58/2012)
Land Registry Act - ZZK-1 (Official Gazette of the RS, Nos. 58/2003, 37/2008 - ZST-1, 28/2009 and 25/2011)
Housing Act - SZ-1 (Official Gazette of the RS, Nos. 69/2003, 18/2004 - ZVKSES, 47/2006 - ZEN, 9/2007 - Constitutional Court Decision, 45/2008 - ZVEtL, 57/2008, 90/2009, 62/2010 - ZUPJS, 56/2011 - Constitutional Court Decision, 87/2011 and 40/2012 - ZUJF)
Construction Act - ZGO-1 (Official Gazette of the RS, Nos. 102/2004 - official consolidated text, 14/2005 - amend., 92/2005-ZJC-B, 93/2005-ZVMS, 111/2005 - Constitutional Court Decision, 120/2006 - Constitutional Court Decision, 126/2007, 108/2009, 61/2010-ZRud-1, 62/2010 - amend., 20/2011 - Constitutional Court Decision and 57/2012)
General Administrative Procedure Act - ZUP (Official Gazette of the RS, Nos. 24/2006 - official consolidated text, 105/2006 - ZUS-1, 126/2007, 65/2008 and 8/2010)
Real-Estate Recording Act - ZEN (Official Gazette of the RS, Nos. 47/2006, 65/2007 - Constitutional Court Decision, 106/2010-ZDoh-2H, 47/2012 - ZUKD-1A and 79/2012 - Constitutional Court Decision)
Real Property Mass Appraisal Act - ZMVN (Official Gazette of the RS, Nos. 50/2006, 87/2011 and 40/2012 - ZUJF)
Access to Public Information Act - ZDIJZ (Official Gazette of the RS, Nos. 51/2006- official consolidated text and 117/2006 - ZDavP-2)
Spatial Planning Act - ZPNačrt (Official Gazette of the RS, Nos. 33/2007, 70/2008-ZVO-1B, 108/2009, 80/2010 - ZUPUDPP, 106/2010 - amend., 43/2011 - ZKZ-C, 57/2012 and 57/2012 - ZUPUDPP-A)
Administrative Fees Act - ZUT (Official Gazette of the RS, No. 106/2010 - official consolidated text)
Public Servants Act - ZJU (Official Gazette of the RS, Nos. 63/2007 - official consolidated text, 65/2008, 69/2008 - ZTFI-A, 69/2008 - ZZavar-E and 40/2012 - ZUJF)
Act on Designating Areas and Naming and Marking Settlements, Streets and Buildings - ZDOIONUS (Official Gazette of the RS, No. 25/2008)
Act on the Acquisition of the Strata Title of a Part of a Building on the Proposal of the Owner and on Determining the Land Belonging Thereto - ZVEtL (Official Gazette of the RS, No 45/2008 and 59/2011)
Act regarding the siting of spatial arrangements of national significance in physical space - ZUPUDPP (Official Gazette of the RS, Nos. 80/2010 (106/2010 amend.) and 57/2012)
Infrastructure for Spatial Information Act - ZIPI (Official Gazette of the RS, No. 8/2010)
Geometric Centre of Slovenia Act - ZGSS (Official Gazette of the RS, No. 101/2003)



IMPLEMENTING REGULATIONS

REGULATIONS ISSUED ON THE BASIS OF THE LAND CADASTRE ACT

Instructions Concerning Location and Marking-Out of Land Property Boundaries (Official Gazette of the SRS, Nos. 2/1976, 6/1987, Official Gazette of the RS, Nos. 52/2000 - ZENDMPE and 47/2006 - ZEN)

Rules for Cadastral Classification of Land (Official Gazette of the SRS, Nos. 28/1979, 35/1983; Official Gazette of the RS, Nos. 52/2000 - ZENDMPE and 47/2006 - ZEN)

Rules on Maintaining the Types of Use of Land Properties in the Land Cadastre (Official Gazette of the SRS, No. 41/1982; Official Gazette of the RS, Nos. 52/2000 - ZENDMPE and 47/2006 - ZEN)

Rules for Evaluation of Soil in Identifying the Production Capability of Pilot Land Parcels (Official Gazette of the SRS, No. 36/1984; Official Gazette of the RS, Nos. 52/2000 - ZENDMPE and 47/2006 - ZEN)

Instruction on the Beginning of the Official Use of the Digital Cadastral Register (Official Gazette of the RS, Nos. 57/1999, 52/2000 - ZENDMPE and 47/2006 - ZEN)

REGULATIONS ISSUED ON THE BASIS OF THE BASIC GEODETIC MEASUREMENTS ACT

Instructions for the Archiving and Copying of Reduced Format Data of Basic Geodetic Measurements (Official Gazette of the SRS, No. 3/1976)

Decree on the Use of Geographical Names in Plans and Maps in Multinational Areas in the Socialist Republic of Slovenia (Official Gazette of the SRS, No. 11/1980)

Rules on the Technical Standards for Networks of Basic Geodetic Points (Official Gazette of the SRS, No. 18/1981)

Rules on the Designations Used on Basic Topographic Maps (Official Gazette of the SRS, No. 29/1982 and Official Gazette of the RS, No. 40/2004 - Rules on Land Survey Plan)

Instructions Concerning the Current Harmonisation of Basic Topographic Plans of 1:5,000 and 1:10,000 Scales (Official Gazette of the SRS, No. 30/1983)

Rules on the Use of the Gauss-Krueger Projection in Producing the National Topographic Maps in a 1:25,000 Scale and Dividing it into Sheets (Official Gazette of the RS, No. 36/1998)

REGULATIONS ISSUED ON THE BASIS OF THE LAND SURVEY SERVICE ACT

Rules on the Programme and Method of Taking an Exam in Land Surveying (Official Gazette of the RS, No. 10/2011)

Rules on Terms and Procedures for Scoring, Monitoring, Certification and Registration of Mandatory Proficiency Education of Certified Land Surveyors (Official Gazette of the RS, No. 10/2011)

Rules on the Programme and Method of Taking Proficiency Examination for the Performance of Land Surveying Services (Official Gazette of the RS, Nos. 11/2011 and 23/2011)

Rules on the Content, Form and Issuing Procedure of the Land Survey Licence (Official Gazette of the RS, No. 14/2011)

Decision on the Change of the Status of the Land Survey and Photogrametry Institute of the Faculty of Civil Engineering and Geodesy into the Land Survey Institute of Slovenia (Official Gazette of the RS, No. 38/2011)

REGULATIONS ISSUED ON THE BASIS OF THE SPATIAL PLANNING ACT

Rules on Land Consolidation in the Area of the Municipality Location Plan (Official Gazette of the RS, Nos. 21/2004 and 33/2007 - ZPNačrt)

Rules on the Land Register of the Public Communications Network and Associated Facilities (Official Gazette of the RS, Nos. 56/2005, 64/2005 - amend. and 33/2007 - ZPNačrt)

Rules on Drinking Water Supply (Official Gazette of the RS, Nos. 35/2006, 33/2007 - ZPNačrt, 41/2008, 28/2011 and 88/2012) - ceased to apply on 31 December 2012, except Articles 9 and 10 Rules on the Content and Method of Keeping a Database on Actual Land Use (Official Gazette of the RS, Nos. 9/2004 and 33/2007 - ZPNačrt)

Rules on Land Survey Plan (Official Gazette of the RS, Nos. 40/2004 and 33/2007 - ZPNačrt) - used until the issuing of implementing regulations on the basis of ZPNačrt, if this is not in violation of ZPNačrt

REGULATIONS ON SURVEYING AND MAPPING ACTIVITIES



REGULATIONS ISSUED ON THE BASIS OF THE LAND REGISTER ACT (ZZK-1)

Rules of Land Register (Official Gazette of the RS, Nos. 30/2011 and 55/2011)

Rules on Electronic Exchange of Data Between the Land Register and Cadastres (Official Gazette of the RS, No. 30/2011)

REGULATIONS ISSUED ON THE BASIS OF THE HOUSING ACT

Decree on the Marking of Apartments and Business Premises (Official Gazette of the RS, No. 63/2006)

REGULATIONS ISSUED ON THE BASIS OF THE CONSTRUCTION ACT (ZGO-1)

Regulation on Classification of Constructions with Regard to their Complexity (Official Gazette of the RS, Nos. 37/2008 and 99/2008)

Rules on the Form and Content of Identity Card and Uniform Stamp of Certified Engineers (Official Gazette of the RS, Nos. 51/2004, 60/2005, 73/2005 and 55/2011)

Rules on the Form and Content of the Identity Card and Uniform Stamp of Certified Architects, Certified Landscape Architects and Certified Spatial Planners (Official Gazette of the RS, Nos. 114/2004 and 53/2005)

Rules on Land Survey Plan (Official Gazette of the RS, Nos. 40/2004 and 33/2007 - ZPNačrt) - used until the issuing of implementing regulations on the basis of ZPNačrt, if this is not in violation of ZPNačrt

REGULATIONS ISSUED ON THE BASIS OF THE GENERAL ADMINISTRATIVE PROCEDURE ACT

Rules on the Keeping of Records of Administrative Procedures (Official Gazette of the RS, Nos. 18/2003 and 7/2006)

Decree on Administrative Operations (Official Gazette of the RS, Nos. 20/2005, 106/2005, 30/2006, 86/2006, 32/2007, 63/2007, 115/2007, 122/2007 - amend., 31/2008, 35/2009, 58/2010 and 101/2010)

Rules on Confirming Finality and Final Decisions in Administrative Procedure (Official Gazette of the RS, Nos. 43/2005 and 94/2007)

Rules on Costs in Administrative Procedure (Official Gazette of the RS, No. 86/2005)

Regulation on Online Address Designation of Unified National E-government Web Portal in accordance with the General Administrative Procedure Act (Official Gazette of the RS, No. 36/2008)

Decree on Education and Proficiency Exam to Head and Decide in the Framework of Administrative Procedure (Official Gazette of the RS, No. 12/2013)

REGULATIONS ISSUED ON THE BASIS OF THE RECORDING OF REAL ESTATE ACT

Decree on the Marking of Apartments and Business Premises (Official Gazette of the RS, No. 63/2006)

Decree on Cadastral Area Territories and Names (Official Gazette of the RS, No. 100/2006) Rules on the Register of the State Border (Official Gazette of the RS, No. 118/2006)

Rules on the Contents and Method of Administration of the Register of Spatial Units (Official Gazette of the RS, No. 118/2006)

Decree on the Method of Registration of Administrators of Real Estate into the Land Cadastre and Building Cadastre (Official Gazette of the RS, No. 121/2006)

Rules on Boundary Settlement and Changing and Recording Data in the Land Cadastre (Official Gazette of the RS, Nos. 8/2007 and 26/2007)

Rules on the Land Rating Exam and the Power to Implement Land Rating (Official Gazette of the RS, No. 29/2007)

Rules on the Terms and Methods of Computer Access to Data from Geodetic Data Records and Databases (Official Gazette of the RS, Nos. 25/2008 and 10/2011)

Rules on Establishing Land Rating (Official Gazette of the RS, No. 35/2008)

Rules on Determining and Administering Land Rating (Official Gazette of the RS, No. 47/2008)

Rules on the Types and Contents of Certificates from Geodetic Databases and on the Manner of Data Designation (Official Gazette of the RS, No. 69/1012)

Rules on Building Cadastre Registration (Official Gazette of the RS, No. 73/2012)

REGULATIONS ISSUED ON THE BASIS OF THE REAL PROPERTY MASS APPRAISAL ACT

Rules on Managing and Updating the Real Estate Market Register and on the Method and Deadlines for Sending Data (Official Gazette of the RS, Nos. 134/2006 and 87/2011 - ZMVN-A) - ceased to apply on 22 September 2012, used until the beginning of the application of the adjusted Real Estate Register in accordance with the first paragraph of Article 12 of ZMVN-A.

Rules on Criteria of Real Property Mass Valuation (Official Gazette of the RS, No. 94/2008)

Rules on General Valuation of Real Estate Questionnaire (Official Gazette of the RS, No. 15/2010) Decree on Data about Real Estate Characteristics in the Real Estate Register (Official Gazette of the RS, Nos. 95/2011 and 109/2011)

Real Estate Valuation Models Determination Decree (Official Gazette of the RS, No. 95/2011)

Rules on Managing the Real Estate Market Register Data and on the Method of Sending Data (Official Gazette of the RS, No. 68/2012) - entered into force on 22 September 2012, and will begin to be applied with the day of the entry into force of the adjusted Real Estate Register in accordance with the first paragraph of Article 12 of ZMVN-A

Rules on the Method of Calculating Annual Real Estate Price Indices and on the Method of Determining Real Estate Value Indices (Official Gazette of the RS, No. 4/2013)

REGULATIONS ISSUED ON THE BASIS OF THE ACT ON DESIGNATING AREAS AND NAMING AND MARKING SETTLEMENTS, STREETS AND BUILDINGS

Regulation on Settling Issues of Determining Areas of Settlements, Determining of House Numbers and Street Layouts and House and Street Markings (Official Gazette of the Republic of Slovenia, No. 76/2008)

Regulation on Terms and Ways to Determine an Official Short Name of a Settlement and Official Short Name of a Street (Official Gazette of the Republic of Slovenia, No. 78/2008)

REGULATIONS ISSUED ON THE BASIS OF THE ACT ON ACCESS TO INFORMATION OF A PUBLIC NATURE

Decree on Communication and Re-use of Information of a Public Nature (Official Gazette of the RS, Nos. 119/2007 and 95/2011)

REGULATIONS ISSUED ON THE BASIS OF THE SPATIAL PLANNING ACT

Rules on the Content, Format and Drawing-up of Municipal Detailed Spatial Plan and on Criteria for Specifying Dispersed Settlement Areas in Need of Restoration and for Specifying Areas for New Settlements (Official Gazette of the RS, No. 99/2007)

Rules on the Content, Format and Drawing-up of Municipal Detailed Spatial Plan (Official Gazette of the RS, No. 99/2007)

Rules on the Detailed Content, Format and Method of Drawing up the Regional Spatial Plan (Official Gazette of the RS, No. 99/2007)

Decree on the Content and Management of Spatial Data System (Official Gazette of the RS, Nos. 119/2007 and 8/2010-ZIPI)

Rules on Duties which are Carried out within the Mandatory Municipal Public Services for the Discharge and Treatment of Urban Waste Water and Meteoric Water (Official Gazette of the RS, Nos. 109/2007, 33/2008, 28/2011 and 88/2011) - all provisions of the Rules cease to apply on 1 January 2012, except Article 21

Rules on land Use and legal Regimes Data (Official Gazette of the RS, No. 50/2008)

Rules on the Cadastres of Public Infrastructure for Environmental Public Services (Official Gazette of the RS, No. 28/2011)

Rules on Land Survey Plan (Official Gazette of the RS, Nos. 40/2004 and 33/2007 - ZPNačrt) - used until the issuing of implementing regulations on the basis of ZPNačrt, if this is not in violation of ZPNačrt

Rules on Drinking Water Supply (Official Gazette of the RS, Nos. 35/2006, 33/2007 - ZPNačrt, 41/2008, 28/2011 and 88/2012) - ceased to apply on 31 December 2012, except Articles 9 and 10

REGULATIONS ISSUED ON THE BASIS OF THE CIVIL SERVANTS ACT

Rules on a Particular Part of the Exam for Inspectors in the Fields of Environment and Nature, Construction, Mining, Energy, Land Survey and Housing (Official Gazette of the RS, Nos. 125/2004 and 62/2006)
REGULATIONS ON SURVEYING AND MAPPING ACTIVITIES



REGULATIONS ISSUED ON THE BASIS OF THE ACT REGARDING THE SITING OF SPATIAL ARRANGEMENTS OF NATIONAL SIGNIFICANCE IN PHYSICAL SPACE

Rules on the Content, Format and Drawing-up of Spatial Plan of National Importance (Official Gazette of the RS, No. 106/2011)

REGULATIONS ISSUED ON THE BASIS OF THE INFRASTRUCTURE FOR SPATIAL INFORMATION ACT

Decree on the Criteria and Conditions for Determining Costs for the Use of Network Services and for Determining Charges for Spatial Data Sets and Services Sharing (Official Gazette of the RS, No. 66/2012)

REGULATIONS ISSUED ON THE BASIS OF THE GEOMETRIC CENTRE OF SLOVENIA ACT

Decree on the Concession for the Management of Area Belonging to the Geometrical Centre of the Republic of Slovenia (Official Gazette of the RS, No. 112/2004)



6 CONTACTS

6.1 Addresses of the Surveying and Mapping Administrative Bodies

REPUBLIC OF SLOVENIA MINISTRY OF INFRASTRUCTURE AND SPATIAL PLANNING SURVEYING AND MAPPING AUTHORITY OF THE REPUBLIC OF SLOVENIA

7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	🕾 +386 1 478 48 00
1000 Liubliana	昌 +386 1 478 48 34
	@ pisarna.gu@gov.si

REGIONAL SURVEYING AND MAPPING AUTHORITIES

CELJE REGIONAL SURVEYING AND MAPPING AUTHORITY		
Mariborska cesta 88 3000 Celje	 	
KOPER REGIONAL SURVEYING AND MAPPING AUTHORITY		
Cankarjeva ulica 1 6000 Koper	 ★ +386 5 663 59 50 ★ +386 5 663 59 52 @ ogu.gukp@gov.si 	
KRANJ REGIONAL SURVEYING AND MAPPING AUTHORITY		
Slovenski trg 2 4000 Kranj	 ★ +386 4 201 80 58 ★ +386 4 201 80 71 @ ogu.gukr@gov.si 	
LJUBLJANA REGIONAL SURVEYING AND MAPPING AUTHORITY		
Cankarjeva cesta 1 1000 Ljubljana	 [™] +386 1 241 78 01 [⊥] +386 1 241 78 20 [@] ogu.gulj@gov.si 	
MARIBOR REGIONAL SURVEYING AND MAPPING AUTHORITY		
Ulica heroja Tomšiča 22000 Maribor	 	
MURSKA SOBOTA REGIONAL SURVEYING AND MAPPING AUTHORITY		
Slomškova ulica 19 9000 Murska Sobota	 № +386 2 535 15 70 ₩ +386 2 532 10 63 @ ogu.gums@gov.si 	
NOVA GORICA REGIONAL SURVEYING AND MAPPING AUTHORITY		
 Rejčeva ulica 7 5000 Nova Gorica 	 	

CONTACTS

	and the second s
S	140
	0

NOVO MESTO REGIONAL SURVEYING AND MAPPING AUTHORITY		
 Ljubljanska cesta 26 8000 Novo mesto 	 [™] +386 7 393 10 10 ⊨ +386 7 393 10 20 @ ogu.gunome@gov.si 	
PTUJ REGIONAL SURVEYING AND MAPPING AUTHORITY		
Krempljeva ulica 2 2250 Ptuj	 	
SEVNICA REGIONAL SURVEYING AND MAPPING AUTHORITY		
Trg svobode 9 8290 Sevnica	 	
SLOVENJ GRADEC REGIONAL SURVEYING AND MAPPING AUTHORITY		
 Francetova cesta 7 2380 Slovenj Gradec 	 	
VELENJE REGIONAL SURVEYING AND MAPPING AUTHORITY		
Rudarska cesta 33320 Velenje	 [™] +386 3 898 27 00 [⊥] +386 3 898 27 04 [@] ogu.guve@gov.si 	

\square	Address
22	Telephone number
Ē	Fax number
@	Email address

7 STATISTICAL DATA ABOUT SLOVENIA

7.1 Slovenia 2012 in Numbers

Surface area of the Republic of Slovenia	20,273 km ²
Population*	2,058,123

* Number of residents on 1 October 2012. Source: Statistical Office of the Republic of Slovenia

Geographical Coordinates of Extreme Points

	Latitude	Longitude
north	46°53´	16°14′
south	45°25´	15°10′
east	46°28´	16°36′
west	46°17´	13°23´
GEOSS	46°07´	14°49´

GEOSS – Geometrical Centre of the Republic of Slovenia

Length of the state border

Austria	318 km
Croatia*	670 km
Italy	280 km
Hungary	102 km
TOTAL	1,370 km
Length of coastline **	46.6 km

* Border not marked on land; the length was calculated on the basis of the borders of cadastral communities.

** The length of the maritime border has not yet been determined.

Highest peak		Triglav (2,864 m)
The longest Karst cave (together	with Pivka and Črna Jama)	Postojna Cave (20,570 m)
The largest intermittent Karst la	ke	Lake Cerknica (24 km ²)
The largest natural lake		Lake Bohinj (3.28 km ²)
The longest river	The Sava (947 km, of which 2	21 km run through Slovenia)

House numbers	540,640
Streets	10,111
Settlements	6,032
Municipalities	211
Plots	5,440,275
Buildings	1,164,503
Cadastral communities	2,698

December 2012

Prepared by:

Kristian Lukšič, Dušan Mitrovič, Erika Mlakar, Jana Mlakar, Tomaž Petek, Franc Ravnihar, Jurij Režek and Darja Komovec with colleagues

Edited by:

Darja Komovec

Cover design and final design editing: MetaFora grafično oblikovanje Marjeta Gabrijel s.p.

Proofreading of the Slovenian text:

Elizabeta Vovko Ozimek

Translation and proofreading of the English text:

PSD d.o.o., prevajalske storitve

Photos by:

- Archive of the Surveying and Mapping Authority of the Republic of Slovenia
- Cover and back: purchased image from the photo archive of Shutterstock

Copyright:

Surveying and Mapping Authority of the Republic of Slovenia

Ljubljana, 2013

Republika Slovenija | Republic of Slovenia Ministrstvo za infrastrukturo in prostor | Ministry of Infrastructure and Spatial Planning GEODETSKA UPRAVA REPUBLIKE SLOVENIJE | SURVEYING AND MAPPING AUTHORITY OF THE REPUBLIC OF SLOVENIA

Zemljemerska ulica 12, SI-1000 Ljubljana t: +386 (0)1 478 48 00, f: +386 (0)1 478 48 34, e: pisarna.gu@gov.si, www.gu.gov.si