

UN-GGIM MEMBER STATE - PROFILE

Serbia

Region	EUROPE
UN-GGIM Regional Body	UN-GGIM: EUROPE
Participation	Active participation, August 2016
Mapping/GGIM Organisation	Republic Geodetic Authority
Address	Vojvode Mišića boulevard no. 39, 11 000 Belgrade, Republic of Serbia
Contact Name	Mr. Borko Drašković
Position	Acting Director
E-mail	Cabinet e-mail address: office@rgz.gov.rs / Personal e-mail address: borko1964@gmail.com
Telephone	00 381 11 715 26 01 / 00 381 11 265 08 86
Fax	00 381 11 715 26 11

Organisational Features

GIM Program Production, maintenance and dissemination of geospatial and cadastral data, maintenance of Spatial Data Infrastructure and Integration of geospatial information on national level.

GIM Policy Transparency, efficiency and data availability through provision of services for government, citizens and economy, where volume and quality of services are harmonized with international standards and norms, as well as with the identified user needs. Feasibility study for implementation of "Open Data" policy planned to be realized by Strategic Plan of RGA 2016-2020.

GIM Legislation

- Law on Ministries (published in "Official Gazette of RS", no. 44/2014, 14/2015, 54/2015 and 96/2015);
- Law on State Survey and Cadastre (published in "Official Gazette of RS", no. 72/09, 18/10, 65/13, 15/15 and 96/15).

GIM Strategy/Plan

- Strategic Plan of Republic Geodetic Authority (2016-2020).

GIM Web address <http://www.rgz.gov.rs/>

Leadership Republic Geodetic Authority is special governmental organization and has leadership role in realization of following activities on national coverage:

- Basic geodetic works and establishment and maintaining of geodetic reference networks;
- Establishment and maintaining of:
 - Real Estate Cadaster Register,
 - Utility Cadaster,
 - Address Register
 - Register of Geographical Names.
- Maintaining the :
 - Register of Spatial Units
 - State Border Register;
- Cadastral, utility, land consolidation, topographic and state border survey;
- Cadastral land classification and soil fertility evaluation;
- Cadastral revenue and real estate appraisal;
- Remote sensing, topographic and cartographic activities;
- Geomagnetism and aeronomy;

- Operates Committee for Standardization of Geographical Names;
- Operates establishment and maintaining of National Spatial Data Infrastructure;
- Professional supervision, verification of geodetic survey maps in engineering and technical areas, issuing and revoking of working permits for geodetic organizations, issuing and revoking approvals for aerial image acquisition of the Republic of Serbia and provision of approvals for cartographic publications;
- Providing services under competences of the Authority, as part of international cooperation.

Staff Total amount of 3295 engaged staff.

Specific GIM Budget Yes, budget dedicated for salaries, office maintenance, office supplies, hardware and software procurement and maintenance, ICT implementation and maintenance, data collection, training and capacity development (~ 32.4 million euros).

Government Entities Ministries, government organizations and agencies, autonomous and local self-government bodies (construction and urban planning, foreign investments, utility infrastructure, transport, disaster preparedness and hazard mapping, agriculture, water management, forestry, environment protection, rural and land use planning, national security, border maintenance, healthcare, tourism etc.).

Private Sector Public-entrepreneur companies, geodetic national and international private companies, national development companies, international and national software, hardware and service providers, satellite data provider companies.

Data and Standards

Fundamental Data

Availability

Data are publicly available for discovery and view on national geoportal and real-estate web service.

Insight into official information systems and analogue documents of RGA is free of charge.

Governmental, provincial and local self-government bodies are exempted from fee for performance of certain activities under their competences (planning, risk management, ownership regulations etc.) as well as citizens in case of its social right regulation (defined by related Laws).

Satellite data are free of charge available to the governmental, provincial and local self-government bodies.

Otherwise, RGA charges provision of data and services according to the official Regulation on taxes for provision of services.

Data Sets

No.	Geospatial Data
	Cadastral data
	Utilities
	Addresses
	Spatial (administrative) units
	Elevation
	Orthoimagery
	Satellite orthoimagery
	Geographical names
	Topographic maps 1: 20 000 and smaller
	National base maps 1:5 000/1:10000

	Thematic and remote sensing maps
	Land cover data
	Euro Regional Map 1:250 000
	Euro Boundary Map 1:10 000
	Euro Global Map 1: 1 000 000
	Geodetic reference networks data
	Data directory for Geomagnetic Repeat Station/Point Surveys
	Catalogue Geomagnetic Maps

Standards

- National standards and official regulations of Republic of Serbia for each data set production;
- ISO 19115 and ISO 19 139 standards for metadata;
- ISO 19119 for web services;
- ISO 19128 for WMS services;
- ISO 19152 for LADM.

Web/Portal Services

- National geoportal GeoSerbia (<http://www.geosrbija.rs>) – comprise public discovery and view services for geospatial data and metadata, metadata editor available;
- INSPIRE geoportal (<http://www.geoshare.rgz.gov.rs>) – comprise discovery and view services for governmental and public institutions, possibility to use services for their needs;
- National e-cadaster web service (<http://katastar.rgz.gov.rs/>) – comprise discovery and view services for cadastral data and metadata, level of web services availability: for public and professional users;
- Service of Active Geodetic Reference Network of Serbia (<http://agros.rgz.gov.rs/>) - permanent service of precise satellite positioning, available for registered users;
- E-government services related to the RGA competences (<http://www.euprava.gov.rs/>) – publicly available;
- Central register of planning documents (<http://crpd.gov.rs/>) – level of web services availability: for public and professional users;
- Register on prices and real-estate mass appraisal (<http://katastar.rgz.gov.rs/masovna-procena/>);
- wms/wfs services available by request.

Data Access Policies

Defined by:

- Law on State Survey and Cadastre (published in “Official Gazette of RS”, no. 72/09, 18/10, 65/13, 15/15 and 96/15);
- Law on Legalization of Buildings (published in “Official Gazette of RS”, no. 96/15);
- Law on Planning and Construction (published in “Official Gazette of RS”, no. 72/09, 81/09, 64/10, 24/11, 121/12, 42/13, 50/13, 98/13, 132/14 and 145/14);
- Law on Agricultural Cooperatives (published in “Official Gazette of RS”, no. 112/15);
- Law on Agricultural Land (published in “Official Gazette of RS”, no. 62/06, 65/08, 41/09 and 112/15);
- Law on Converting Social Ownership of Agricultural Land to Other Forms of Ownership (published in “Official Gazette of RS”, no. 49/92, 54/96 and 62/06);
- Law on Mortgage (published in “Official Gazette of RS”, no. 115/05 i 60/15);
- Law on Real Estate Transaction (published in “Official Gazette of RS”, no. 93/2014, 121/14 and 22/15);
- Law on Public Notaries (published in “Official Gazette of RS”, no. 31/11, 85/12, 19/13, 55/14, 93/14, 121/14, 6/15 and 106/15);
- Law on Certification of Signatures, Manuscripts and Transcripts (published in “Official Gazette of RS”, no. no. no.);
- Law on Fundamentals of Ownership Relations (published in “Official Gazette of SFRJ”, no. 6/80 and

- 36/90, "Official Gazette of SRJ", no.29/96 and "Official Gazette of RS", no.115/05);
- Law on Public Ownership (published in "Official Gazette of RS", no. 72/11, 88/13 and 105/14);
 - Law on General Administrative Procedures (published in "Official Gazette of SRJ", no. 33/97, 31/01, "Official Gazette of RS", no. 30/10 and new Law on General Administrative Procedures (published in "Official Gazette of RS", no. 18/16);
 - Law on Forests (published in "Official Gazette of RS", no. 30/10);
 - Law on Waters (published in "Official Gazette of RS", no. 30/10 and 93/12);
 - The Law on Public Roads (published in "Official Gazette of RS", no. 101/05, 123/07, 101/11, 93/12 and 104/13);
 - Law on Expropriation (published in "Official Gazette of RS", no. 53/95, 23/01 i 20/09 and "Official Gazette of SRJ", no. 16/01);
 - Law on the Determination of Cadastral Revenue (published in "Official Gazette of RS", no. 49/92);
 - Law on Method and Conditions of Recognition of Rights and Restitution of Land Transferred to the Social Ownership on the Basis of the Agricultural Land Fund and Confiscation due to the Outstanding Liabilities from the Compulsory Purchase of Agricultural Products (published in "Official Gazette of RS", no. 18/91, 20/92 and 42/98);
 - Law on Restitution of Meadows and Pastures to Villages on Use (published in "Official Gazette of RS", no. 16/92);
 - Law on Housing (published in "Official Gazette of RS", no. 50/92, 76/92, 84/92, 33/93, 53/93, 67/93, 46/94, 47/94, 48/94, 44/95, 49/95, 16/97, 46/98, 26/01, 101/05, 99/11 and 102/12);
 - Law on Enterprises (published in "Official Gazette of RS", no. 36/11, 99/1, 83/14 and 5/15);
 - Law on Privatization (published in "Official Gazette of RS", no. 83/14, 46/15 and 112/15);
 - Law on Bankruptcy (published in "Official Gazette of RS", no. 104/09, 99/11, 71/12 and 83/14);
 - Law on Enforcement and Security (published in "Official Gazette of RS", no.106/15);
 - Law on Property Restitution and Compensation (published in "Official Gazette of RS", no. 72/11, 108/13, 142/14 and 88/15);
 - Regulation on taxes for provision of services of RGA (published in "Official Gazette of RS", no. 116/13, 5/14 , 8/14, 120/14 and 29/15);
 - Regulation on changes of Regulation on taxes for provision of services of RGA published in "Official Gazette of RS", no. 35/16).

Technical Infrastructure

Geodetic Infrastructure

- Active Geodetic Reference Network of Serbia - Serbian Positioning System AGROS;
- Serbian Geodetic Reference Network;
- Leveling Network of Serbia;
- Gravity network;
- Standard geodetic equipment (GNSS equipment, leveling instruments, total stations, gravimeters etc.);
- Pixel Factory system for image data processing.

Geomagnetic Infrastructure:

- Geomagnetic Observatory Grocka (GCK) Full Participating Member of INTERMAGNET;
- Observatory for Geo-Electromagnetism and Aeronomy;
- Geomagnetic Repeat Station Surveys Reference Network of Serbia;
- Paleomagnetic Laboratory.

Geomagnetic Equipment:

- The Magnetometer;
- The Instrument for Paleomagnetic Measurements;
- The Instrument for Geo-Electromagnetic Measurements;
- The Instrument for Magnetospheric and Ionospheric Measurements.

ICT Infrastructure

- Internet - Fibre Optics 100 Mbs/100 Mbs (Microsoft's ISA Server (Internet Security and Acceleration Server) is used to provide the two basic services of an enterprise firewall and a Web proxy/cache server).
- Intranet network - LAN network consists of Cisco routers, switches from different manufacturers - managed Cisco switches and unmanaged switches (TP - Link, Allied Telesis, D -Link...). RGA WAN network is connected to L3 VPN service of Telekom Serbia, which connects remote sites via the creation virtual private network (VPN) that works in the L3 layer of the OSI reference model. The logical topology to connect remote locations is a star, a routing protocol is static. WAN routers manufacturers CISCO Systems and are connected to Telecom's IP / MPLS network via copper wires or optical fibers.
- Data storage and archive – different types of storages (SAN, NAS, archivers etc.) are housed in RGA Data Center. Overall capacity of production data storages is approximately 300TB. In order to satisfy the need for keeping data safe, our backup and archiving strategy involves the use of tape technology as well as disk-based storages. Amount of stored data increases up to 200TB annually.

Hardware Platform RGA ICT infrastructure includes approximately 3500 desktop and specialized graphic workstations, 500 servers, 2000 printers and plotters allocated on 170 sites.

GIM Software There are different types of operating system platform including Windows, Linux, Apple OS and three different virtualization software. RGA exploits Oracle, Windows SQL Server, PostgreSQL, MySQL and others. A number of different user or a service-based application in the RGA is approximately 70.

Projects

Project 1 Real Estate Management Project

Organization World Bank

Project Objectives Improvement of efficiency, transparency, availability and reliability of real-estate management system in the Republic of Serbia.

Funding Credit loan

Duration 2015-2020

Project 2 IMPULS Project

Organization Swedish International Development Agency

Project Objectives Support for cadastral and mapping national organizations of West Balkan in order to make their activities in line with the INSPIRE directive of EU.

Funding Donation

Duration 2014-2018

Project 3 ELF Project

Organization EuroGeographic and EU NMAs

Project Objectives Harmonization of geospatial data of National Mapping Agencies and generation of common technical platform for data dissemination.

Funding EU funds

Duration 2013-2016

Challenges and Needs

The main need addresses establishment of reliable and stable financing system of all essential and development activities in the scope of RGA competences, which would secure provision of qualitative geo-services on national level and thus supporting sustainable social and economic development of nation.

The primary challenges in the period 2016-2020, which RGA as an institution will face with, are related to the improvement of the efficiency, transparency, accessibility and reliability of the Republic of Serbia's real property management systems as well as development of National Spatial Data Infrastructure and improvement of quality, availability and accessibility of reference geospatial data on national level, and are:

- Improvement of Valuation and Property Taxation enabling thus fiscal consolidation, reduction of the fiscal deficit, and strengthening of the local governance, throughout developing of:
 - Sales price registry for real estate;
 - Software to process data from the sales price registry;
 - Mass Appraisal pilot program on property tax rolls and collection procedures in local governments units;
 - Building registry;
 - Real estate valuation framework.
- Improvement of E-governance for Enabling Access to Real Estate Information which will advance business climate, attract investors, reduce transaction cost and time and develop of real estate market boosting small and medium enterprises that use real estate as collateral and advance European integration process, throughout developing of:
 - Integrated real estate cadaster and registration system based on RGA's (ICT) strategy and archive strategy;
 - Business model and technical framework in line with international standards for the NSDI and upgrading the necessary network services;
 - Financial mechanism and a business plan for the sustainability of RGA's information technology sector;
 - Central analogue and digital archive management strategy, including providing necessary equipment and training and constructing a central archive building;
 - Quality of RGA's data and standardization and carrying out a public outreach campaign for users to submit cadastral data;
 - One-stop-shop system for electronic issuance of construction permits.
- Institutional Development of the Republic Geodetic Authority which will lead to the improvement of quality, availability and accessibility of reference geospatial data on national level, throughout:
 - Developing a business plan for RGA's governance and institutional and corporate planning and strategy;
 - Develop sustainability of National Reference System and the functionality of the Active Geodetic Reference Network of Serbia (AGROS) and improving the gravimetric networks and vertical reference system;
 - Carrying out the digital mapping of selected cadastral municipalities and transforming existing utility maps into digital form;

- Improving registration procedures of properties, removing registration backlogs in the cities , enhancing of the office infrastructure and setting up mobile services at selected local RGA offices;
- Acquiring cadastral data (geodetic measurements and digital cadaster map database production) in the Vojvodina region in Serbia;
- Perform periodical aerial/satellite VHR image acquisition on the national level;
- Update of the topographic-cartographic data base (elevation, orthoimagery, basic topographic model);
- Develop Geoinformation sector in order to be able to provide wide geostatistical data and services;
- Develop Center of excellence in Remote Sensing which will be able to provide services on national level related to the maintenance of spatial registers, planning, risk management, agriculture and environment on national level and support cross-border activities.



UN-GGIM

United Nations Secretariat
Global Geospatial Information Management

ggim.un.org