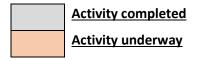


REAL ESTATE MANAGEMENT PROJECT SERBIA (P147050) QUARTERLY REPORT Q2 2019

Key:



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Background

The Republic of Serbia and the International Bank for Reconstruction and Development (Hereinafter: IBRD) concluded the Loan Agreement (Hereinafter: LA) for the Real Estate Management Project in Serbia (Hereinafter: the Project), signed by the two parties on April 17th, 2015 and ratified by the Parliament of the Republic of Serbia in its session on June 24, 2015 (Official Gazette of the Republic of Serbia – International contracts, No. 13-15 dated June 26, 2015).

The Law on State Surveys and Cadastre (LSSC, 2009) with appropriate amendments provides a solid foundation for the project. A viable single agency, the Serbian Republic Geodetic Authority (RGZ), is implementing the LSSC.

The Project consists of four components: (A) Valuation and Property Taxation; (B) E-governance for Enabling Access to Real Estate Information; (C) Institutional Development of the RGA; and (D) Project Management and Support Activities.

The objective of the Project is to improve the efficiency, transparency, accessibility and reliability of the Republic of Serbia's real property management systems.

A full description of the Project is provided in the document "Project Appraisal Document" (PAD) and Loan Agreement (LA). The PAD is considered as a part of the necessary background materials to be understood by Consultants.

Implementation is entrusted to the Project Implementation Unit (Hereinafter: PIU) of the Republic Geodetic Authority (Hereinafter: RGA).

Project Description

Project components

The Project consists of four components: (A) Valuation and Property Taxation; (B) E-governance for Enabling Access to Real Estate Information; (C) Institutional Development of the RGA; and (D) Project Management and Support Activities.

Component A: Valuation and Property Taxation (EUR 6.6 million)

Component A will support provision of goods, consultants' services and non-consulting services for:

- (a) Improving the system for annual property taxation through
 - (i) developing a sales price registry for real estate;
 - (ii) developing software to process data from the sales price registry;
 - (iii) developing and assessing a Mass Appraisal pilot program on property tax rolls and collection procedures in local governments units; and
 - (iv) establishing a building registry; and
- (b) improving the real estate valuation framework through, improving the quality of education for valuers, and adopting internationally recognized standards for valuers.

Component B: E-governance for Enabling Access to Real Estate Information (EUR 16.4 million)

Component B will support provision of works, goods, consultants' services, and non-consulting services to improve e-governance for enabling access to real estate information through:

- (a) developing and implementing integrated real estate cadastre and registration system based on ICT strategy and archive strategy;
- (b) developing a business model and technical framework in line with international standards for the Borrower's NSDI and upgrading the necessary network services;
- (c) developing a financial mechanism and a business plan for the sustainability of RGA's information technology department;
- (d) developing and implementing a central analogue and digital archive management strategy, including providing necessary equipment and training and constructing a central archive building;

- (e) improving the quality of RGA's data standardization and carrying out a public outreach campaign for users to submit cadastral data; and
- (f) developing and implementing a one-stop-shop system for electronic issuing of construction permits.

Component C: Institutional Development of the RGA (EUR 10.6 million)

Component C will support provision of goods, consultants' services, non-consulting services to improve RGA's institutional development through:

- (a) developing a business plan for RGA's governance and institutional and corporate planning and strategy;
- (b) supporting the sustainability of the National Reference System and the functionality of AGROS and improving the existing gravimetric networks and the vertical reference system in Serbia:
- (c) carrying out the digital mapping of selected cadastral municipalities and transforming existing utility maps into digital form;
- (d) improving registration procedures of properties, removing registration backlogs in the cities of Belgrade, Novi Sad, Nis and Kragujevac, enhancing office infrastructure in selected municipalities in Serbia, and setting up mobile services at selected local RGA offices; and
- (e) acquiring cadastral data (geodetic measurements and digital cadastre map database production) in the Vojvodina region in Serbia.

Component D: Project Management and Support Activities (EUR 2.5 million)

Component D will support provision of goods, consultants' services, non-consulting services and Incremental Operating Costs for carrying out project management activities, including:

- (a) provision of support to project implementation unit (PIU)on Project management;
- (b) monitoring and evaluation of the project;
- (c) public outreach on the project activities to improve social inclusion;
- (d) provision of training to stakeholders in the public and private sectors according to a training plan; and
- (e) studies on, *inter alia*, customer satisfaction, real estate administration and management, and based upon the results of said studies, design proposals for adoption of policies and regulations.

Summary:

The main Q2 activities were related to the organization and holding the World Bank mission. The objective of the Mission was for the Mission Team to: (i) evaluate the overall results and the project impact on development indicators set; (ii) review the progress (PDO indicators wise and financial) for each component, with particular focus on the Component B; (iii) define together with the RGA the activities to be proposed for additional financing.

Additionally, procurements of the IT equipment for the RGA and for the SBRA were completed, contracts for the consultants which are, meanwhile, permanently hired by the RGA have been closed. A number of ToR-s have been prepared, as well as the first draft of the PPSD.

Report per components and sub-components

Item No. Title Action description	
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A. VALUATION AND PROPERTY TAXATION

This component will support RGA in developing a mass valuation system, creating a property price index in cooperation with the Statistical Authority, and establishing a registry of buildings (and their parts) liable to be taxed under the annual property tax. It would also support improving the valuation infrastructure and the quality of valuations. The implementing agencies for this component will be RGA in cooperation with municipal authorities.

The activities under this Project include:

- Development of sales price registry and property price index;
- Establishment of a building registry.
- Model development and market data analysis

The goal of this component is to establish the foundation for the property mass valuation system during the first year, by the means of:

- Input of backlog of property sales data in the Sales Price Registry database;
- Upgrade of the Property Price Register application to facilitate easier data input, quality control of the data entered, data verification and direct input by the notaries;
- Processing of satellite images for the purposes of collecting the data on buildings for the Building Registry establishment.

etc.

During the Q2 2019, the activities on data input and verification of data in the Sales Price Register (SPR) had continued, along with the upgrades of the SPR system application. The e-FrontDesk system has been linked to the SPR system to provide for automatic ingestion of the transaction data forwarded from the system of the Ministry of Justice used by the notaries public. Work on the establishment of automatic communication between the e-FrontDesk system and the Tax Administration system has been completed; however, the beginning of automatic data forwarding to the Tax Administration system depends on the time needed for the Tax Administration to complete the module for automatic processing of data submitted and automatic opening of cases per data submitted.

Under the pilot project of property mass valuation system development, apart from four pilot municipalities that had signed the agreement on cooperation, the City of Belgrade, city municipality of Vracar had also joined the project, as initially planned; however, the administrative procedure had induced delay since for the municipality of Vracar, it was necessary to sign a tripartite agreement on cooperation. Signing of the agreement with the City of Belgrade is expected during Q3.

The international consultant was contracted for the purposes of mass valuation model development, with the task to train the RGA employees for the property mass valuation model development and to develop the initial model to be used in the pilot municipalities. During the second quarter, the consultant had performed the initial visit in April, the consultant used 10 days to get familiarized with the RGA's operation, employees, state in the Republic of Serbia regarding property valuation, property register, available data and the situation in the field by visiting the pilot municipalities. The first part of the training for the RGA employees on the property mass valuation model development was held in June.

The building register has been completed in 2018 and establishes a foundation for acquisition of data on properties from other data sources at local and national level, to be performed for all properties on the territories of pilot municipalities for the purposes of testing the property mass valuation model.

A1.2	Entering of back log data and extraction of rental data for	Activity is completed.
and		
A1.2.1	residential sample (16	
A1.2.1	consultants)	

	Data input in the Sales Price Registry (40 consultants)	During the World Bank mission part in July, details of this activity were agreed to offset the consequence of the slow establishment of the digital data delivery by the notaries. The proposed consultants would perform the data input from the property sale contracts and field verification of contract data.
		The Bank had issued No Objection for the proposed Terms of Reference, and the expressions of interest were invited in August 2017. The selection was performed and 40 new consultants were contracted and started working on September 1st, 2017.
A1.2.2		In September, the Department for Property Mass Valuation had organized training for use of the Sales Price Registry systems, where the consultants were familiarized with the system, work procedures and their duties under this assignment.
		Passing of the Law on Procedure of Registration in Real Estate and Utility Cadastre imposes the obligation for the public notaries to use the e-front desk to submit solemnized contracts ex officio. The ex officio submission has no major impact on the consultants' work, since only the indices of the properties traded are being submitted in digital form, while all the other data are still being submitted as scanned copies of the analog documents; therefore, the need for manual data input in the Sales Price Registry still remains.
		Now, 31 consultants are working on this activity, and it is expected that the full staff would continue to work during the next quarter.
		Activity is underway.
	Control of data input in the Sales Price Registry (6 consultants)	During the World Bank mission part in June 2017, the details on how to establish this activity were agreed. This activity was established to control the work of the consultants under the activity A1.2.2. The proposed consultants would control the data input in the Sales Price Registry and field verification of contract data.
		The Bank had issued No Objection for the proposed Terms of Reference, and the expressions of interest were collected in August 2017, together with the Eol's for line A1.2.2.
A1.2.3		The selection of best applicants was performed and 6 consultants were contracted to perform control of work of the consultants under the line A1.2.2. The consultants had started their work on September 1st, 2017.
		Passing of the Law on Procedure of Registration in Real Estate and Utility Cadastre imposes the obligation for the public notaries to use the e-front desk to submit solemnized contracts ex officio. The ex officio submission has no major impact on the consultants' work, since only the indices of the properties traded are being submitted in digital form, while all the other data are still being submitted as scanned copies of the analog documents; therefore, the need for manual data input in the Sales Price Registry still remains.
		Activity is underway.
A1.3	Preparation of quality assurance system and data manual (local consultant)	Activity completed.
	Consultant for verification and	This activity was postponed for 2018 due to the cooperation with
A1.5.1	analysis and model development (international consultant)	Dutch donor project Spatial, which is to provide for this type of support to the Department for Property Mass Valuation; having the results of cooperation with the project, it is expected that this consultant would be contracted in 2018.

The consultant had completed the first visit defined in the Terms of Reference from April 8th to April 19th, 2019. During the visit, he was introduced to the state of the fundamental registers and sources of data for the property mass valuation, resources at the RGA's disposal and the employees working in the Department for Valuation and Property Value Registration, both permanent staff and consultants contracted under items A1.2.2, A1.2.3, A1.5.2, and A1.5.3. During the visit, meetings were held with the representatives of 4 pilot municipalities (Vracar, Veliko Gradiste, Cacak, and Zrenjanin) along with the field visit so the consultant may be fully familiarized with the circumstances of the property mass valuation system development in Serbia. The first phase of training - modeling fundamentals and using software tools for statistical analysis was completed in June. Training for software tool use was performed as online courses on June 20th and 21st, while the modeling fundamentals training was provided by the consultant in the RGA's premises on June 24th to 28th. Activity is underway. Consultants for data verification Tasks of the selected consultant is to develop the module for data (1 local consultant) verification in the Sales Price Registry, develop working version of the e-FrontDesk based on the tested pilot version from the activity A1.3, develop the module for reporting using the data from the Sales Price Registry and to improve the entire Sales Price Registry system in line with the current requirements of the Department for Mass Property Valuation of the RGA. One consultant (developer) is contracted for data verification, and had started working on September 1st, 2017. Work on development and improvement of verification module and electronic front desk had continued throughout October. The e-FrontDesk had officially started operating on July 1st, 2018, to receive the documents from the notaries. In this quarter, access to the documents was also provided to the Tax Administration and local taxation offices representatives, while linking to the surveying companies, public bailiffs and companies for unified collection of utility fees is underway. A1.5.2 During the first quarter 2019, the e-FrontDesk connection to the SPR system was established. The meetings of representatives of the RGA, NALED, Tax Administration and Office for e-Government had been held in March on the topic of automation of property conveyance data forwarding required by the Tax Administration and local tax administration for the purpose of drafting the resolution on absolute rights transfer tax and property tax, and the adjustment of tax returns to the electronic operation. During the second quarter, the link was established to the Tax Administration system and fully automatic communication between the two systems is expected to begin in Q3, since the Tax Administration is yet to customize their central system for accepting the data automatically forwarded from the e-FrontDesk. Activity is underway. Consultants for data analysis Proposal of amended systematization of the RGA that envisions a and model development (10 significant increase of the staff to be working on the mass valuation A1.5.3 local consultants) system development and maintenance was sent to the Government for consent. Pending the approval, the RGA plans to contract 10

		consultants for analysis of data from the Sales Price Registry and
		development of the property mass valuation model. This activity is included in the proposal Procurement Plan as the activity A1.5.3 (Consultant for data analysis and model development – 10 local consultants).
		The Bank had issued No Objection for the drafted Terms of Reference for the consultants to be working under this component. The advertisement for expressions of interest was published in August 2017.
		Selection of consultants was finalized pursuant to the expressions of interest; with 8 out of 10 consultants planned being contracted.
		The consultants had started working on September 1st, 2017.
		During the first quarter, the consultants had performed various analyses of property market data in order to establish a foundation for the property mass valuation model development. The beginning of the model development was planned for April 2019, when the international consultant for data analysis and model development begins his work to closely cooperate with the local consultants by assisting in their work and providing the training for model development.
		Activity continues according to the plan.
		Activity is underway.
A1.6	Data acquisition for building	Activity is completed.
A1.0	registry	TaD was propared and the World Dank approval was obtained. On July
	Consultants for coordinating work between pilot municipalities and the RGA (5 local consultants)	ToR was prepared and the World Bank approval was obtained. On July 16th was published opening for the position on an official RGA web site. Evaluation and contract signing was expected in August, and the beginning of work on September 1, 2018.
		The coordinators started working on September 1, 2018. First activities of the coordinators were focused toward contact establishment between public companies and local institutions that use real estate data in their daily work.
		This activity is in line with the plan, coordinators held regular meetings with local institutions and began preparing for the preparation of a report on the collection of property tax for 2018th year.
A1.7.1		During January 2019, the coordinators collected available urban and spatial plans for pilot municipalities in order to analyze and standardize planned documentation for further use.
		During the February and March of 2019th, activities on the analysis of available real estate data in local public companies continued.
		Apart from regular activities, during the course of April consultants had meetings with an international consultant for MPV model development where they presented the current situation in pilot municipalities, which are possible sources of additional real estate data and current status of the database.
		Currently 4 coordinatos are active.
		Aktivnost je u toku.
A1.9.1	Procurement of satellite images for property mass valuation	Activity is completed.
В. 1	1.5	NG ACCESS TO REAL ESTATE INFORMATION
D. E GOVERNANCE FOR ENABEING ACCESS TO REAL ESTATE INFORMATION		

The objective of this component is to support the provision of works, goods, consultants' services, non-consulting services to improve e-governance for enabling access to real estate information through:

- I. developing and implementing integrated real estate cadastre and registration system based on ICT strategy and archive strategy;
- II. developing a business model and technical framework in line with international standards for the Borrower's NSDI and upgrading the necessary network services;
- III. developing a financial mechanism and a business plan for the sustainability of RGA's information technology department;
- IV. developing and implementing a central analogue and digital archive management strategy, including providing necessary equipment and training and constructing a central archive building;
- V. improving the quality of RGA's data standardization and carrying out a public outreach campaign for users to submit cadastral data; and
- VI. developing and implementing a one-stop-shop system for electronic issuing of construction permits.

INTEGRATED REC AND REGISTRATION SYSTEM DEVELOPMENT

Activities pertaining to Phase II and III had continued, together with the data quality improvement activities. HW procurement was completed in line with the system integrator's specifications.

Contracting was completed for a number of consultants hired for the digital archive purposes.

ToR was drafted for the consultant to cover the data harmonization for the NSDI purposes, as well as the other ToR's agreed during the WB mission. Activities towards the acquisition of necessary permits for the analog archive depot had continued.

The ToR's for the component B3 – National Spatial Data Infrastructure have been prepared. Equipment for the SBR backup center and part of the equipment for the RGA was procured.

B1.1	Software for monitoring resolution of first instance backlog	Activity completed.
B1.1.1	Tool (viewer) for easy maintenance of the central DCM database	Activity completed.
B1.3	Software development – Phase I and installation (DMS, UMS, workflow (business processes management) and Code list - classifiers), with licenses	At the beginning of 2018, in February, an amendment for the extension of the contract was prepared and sent to the Bank for No-Objection. In addition, a Change Request was submitted with the amendment for the extension of the contract, which shows all the changes during the adjustment of the software to the needs of the Republic Geodetic Authority, which were not initially specified.
		The WB sent comments to the amendments on March 2 nd , 2018. The amendments were revised according to the comments and the WB issued No-Objection on March 9 th , 2018 for amendments for the extension of the contract and "Change Request".
		During the implementation, there were problems with system performance and vendor platform on which business processes were developed. The platform Vendor took maximal involvement in support in order to eliminate problems and specially established Vendor's team worked with the contractor and experts from the RGZ for additional optimization, which provided good results and ensured system stability. A rollout novelty was also introduced in the implementation, providing for the monitoring and analyzing system logs on a daily basis with Vendor's support.
		On June 28 th , 2018, the Final report was submitted and Final Operational Acceptance was prepared. Final report was accepted and Final Operational Acceptance was signed.
		During the warranty period, an additional set of reports is implemented at the request of the management of the RGA (in particular the Real Estate Cadastre Sector and the Project Monitoring Department, the analytics and the monitoring of the implementation of the work). This period was also used to exchange information that is valuable for the implementation of F2 and F3 of the ISREC.

Active engagement on workshops had covered the data model for F2 as well as on the planning of linking a part of the case management (the part relating to the reception, archiving and transition of documents) with the address register and the administrative units' register. In December 2018, the integration of DMS with DQI (maintenance applications) in the test environment was established and an agreement was reached that in January 2019 the integration of the maintenance application with the DMS will be completed. In April, regular maintenance and additional support to the DMS was done. Also, it was actively worked on the implementation of an additional set of reports as per RGA management request. During the month of May and June, some processes handling standardization was changed in order to support new standardization methodology. Also it was redefined level of the complexity in a cases handling related to the automatic delivery of items through the system. We were working on the completion of the web services for integration with AR and RPJ. The technical specification for DMS system maintenance and upgrade has been written and sent for verification to the World Bank. The Bank made comments on the technical specification. The technical specifications are currently being processed according to the given comments. Activity is completed. Upgrading and maintenance of In January 2019, the work on implementing an additional set of the Phase I ISREC information reports upon the RGA management request had continued. system. Integration of the DMS with Address Register and Administrative Units Register has been implemented; however, changes had followed, in particular, selection of the elements included in the case is now done by the front desk officer (DMS), instead of by the processing officer when he/she takes the case for processing, as previously planned. The DMS integration with the data maintenance application – user B1.3.1 authorization and case forwarding - was finalized in March. Additionally, a meeting was held covering the definition of changes that need to be made to the integration with the e-Appeal application (integration of the DMS and the e-FrontDesk was successfully implemented in the previous period). Technical specifications for the DMS upgrade and maintenance was drafted and sent to the WB for NO. Activity is underway. Software development – Phase II Evaluation of received bids (two bids submitted in December 2017) and installation (Address was completed in March 2018 and the lowest bid was selected. On Registry, Administrative Units) March 19th, 2018, the BER was sent to the WB for NO. On March 26th, 2018, the WB sent comments. In the second week of April, the BER was sent to the WB with changes in line with the received instruction (comments). NO was obtained on the evaluation report and draft **B1.4** contract from the WB and on May 21st, 2018. The contract was signed. An initial meeting was held, followed by a working meeting where an overview of the existing AR application and the data model of the existing AR were performed. In addition, meetings were held where the functionalities of the existing AR were further elaborated. During

June, the plan for the Phase II and III of the project was aligned due to the same or similar periods for the realization of the planned activities.

In July and August 2018, the user requirements were actively reviewed, during that period, the initial document "Specification Requirement20180731" was created. Regular project controls (planrelated project reviews) were held that provide information on the status of the project. Additionally, workshops have been launched to carry out the analysis phase and to certify the user requirements under Phase II and III.

In September, the timetable for implementation was generally harmonized. The planned part of the analysis for Phase II and Phase III was completed, the work had continued on specific user requirements and the document "Specification of Requirements20180731" was updated. In addition, part of the Phase III analysis was near the end and was presented in document the AR and AU - Use Case.

In October, a proposal for the final version was submitted, describing the Use Case for the address registry and the administrative units registry, as well as the accompanying documentation. Work on the harmonization and completion of the document AR and RPJ - Use Case as well as on the document AR and RPJ - Data Model and AR and AU - CRD - SRS - Software Requirements Specification had continued. The workshops had also continued to complete the analysis phase and to verify the user requirements in phase II and III. In particular, workshops were dedicated to the integration with DMS and integration with the existing code lists realized under the Phase I of the ISREC system.

In November 2018, the final version of the document was actively developed (comments and recommendations provided by the RGA team at the end of October) AR and RPJ - Use Case as well as for the documents AR and RPJ - Data model AR and AU - CRD - SRS - Software Requirements Specification. The current version of the CDS document as well as the .eapx for the entire project (current version) has been delivered. Regular project controls were held.

In December, business analysis workshops were completed, according to which the details of business requirements of the RGA regarding the administrative units register and address register were determined. The specifications of the request, the Data Model and the Use Cases are complied. The harmonization of technical details through workshops and the clarification of the technical realization of individual items have been completed. Integration points and web services with the DMS system are defined. The elaboration phase is ending.

Textual and graphical data were migrated in January.

There were significant changes in the method of integration with the DMS system. Pursuant to the decision, the selection of elements included in the case are to be done by the case management officer (DMS) instead of by the processing officer after commencing the case processing as initially planned. This resulted in re-development of the part of components for integration and taking over cases from the DMS.

The Asseco team had decided to improve the required functionalities (so that the house number linked to the textual data of the street is also linked to the part of street geometry).

Due to the changes in street classification, the changes of the model had also occurred invoking changes to the certain number of software components.

Work is being done on generating data used for generating the output documents.

The Supervisory Board had met in February, when the issues in implementation have been noted, along with the changes that may cause the extension of the project activities performance.

Integration with Editor – data maintenance application is underway.

In April, "RGZ Address Register and Register of Spatial Units" was presented to the RGA, ie. part of the solution through the example of Use Case: "Change of the street name".

Contractore said that all modules developed and reached the integration stage. Since integration is not fully completed, output creation was simulated by displaying xml files which represent output to the DMS system. Simulation of the services of other systems upon arrival of the request was presented.

At the end of April, the contractor submitted to RGZ the revised project plan for Phase II (RGZ Termin plan_april2019 v1) as well as project status report. RGA commented the reports and returned to the contractor.

A demonstration of the performed AR functionality has been performed. At the end of the first daz of testing, it was noticed that the integration with the DMS was not completed (items are downloaded to the AR application manually). RGA's working group tested a number of agreed test cases (TC-32.1, TC-33.1, TC-33.2 ...) and presented its observations and suggestions. Excel with the list of proposals will be submitted to the RGZ working group at the beginning of June. Testing and finishing of test case books is in progress.

An introductory meeting was held with representatives of the company for monitoring, monitoring and quality assurance of the successful implementation of the software development Phase 2 and Phase 3 (AR, RPJ, KN, RL).

Joint AR testing is continued in accordance with the test plan and by defined test cases. For AR, 43 TCs were identified and in the first pass of the test, the results were as follows: Tested all 43. Defective TCs: 2. It could not be tested: 2. The remaining TCs were in principle passed, the part contains comments that require finishing.

During the month of June, 56 TCs were defined for RPJ. Testing this registry was agreed for the beginning of August.

All tests are done without integrating with DMS, via mock up screens that simulate DMS operation.

The Steering committee meeting was held on June 21, 2019.

Activity is underway.

Software development – Phase III and installation

The third phase of software development for the needs of the RGA is also the most important phase of project development. The contract between the RGA and the bidder was signed on March 16th, 2018.

In May, guarantees were submitted by the bidders as well as the advance payment invoice. The project implementation started on

B1.5

May 17th, 2018. The implementation plan has been submitted, which was accepted by the management of the RGA.

An initial meeting was held early in June. Shortly afterwards, work meetings were held where an overview of existing applications being used as part of the current REC maintenance system was performed. The current textual system was presented: Jedinstvena Evidencija and GEODIS KN - all textual data about real estate as well as graphical systems, Arc GIS and Mapsoft - all graphical data on real estate on the basis of which a project plan was created and submitted.

Inception report for Phase III was submitted in June. According to the plan, the necessary licenses were purchased and a working version of the ISREC System Architecture was submitted.

During July, the project plan was harmonized. In addition, an analysis of functional requirements has been initiated and workshops have been launched to carry out the analysis phase and to certify user requirements in the Phase II and Phase III. Work was also done on harmonizing the plans for the phase II and III of the project (due to the same or similar periods for the realization of the planned activities). The work was performed with reduced intensity due to the introduction of legal changes to the existing systems.

Inception report for Phase III is accepted on August 9th, 2018. A working version of the ISREC System Architecture is being worked out to define the future needs for the establishment and smooth operation of the entire ISREC as precisely as possible.

During the October mission of the WB, it was emphasized that the implementation of the F III will be extended for at least 5 months, since it is necessary to re-introduce the legal changes in the existing systems and describe them as preparation of the continuation of the implementation of the F III.

The ISREC System Architecture that defines future needs for establishment and smooth operation is accepted. On the basis of the accepted solution, a bidding document was prepared, which was sent for NO to the World Bank on October 23rd, 2018.

It was agreed that 13 i.e. 11 local offices for which the contract provides for data migration only, would be covered by the phase of Data Quality Improvement. Since the contract indicated Belgrade Center and the RGA Headquarters on the list of local offices, instead of them, the local offices envisioned for migration will be included in the production phase. It was agreed at the meeting of the Steering committee that it would be Novi Sad 1 and Novi Sad 2.

In November, alignment of the implementation plan was continued. A workshop plan was developed for a detailed analysis of business processes and technical requirements described in the technical specification. Members of the RGA team were also designated for detailed workshops of the Analysis phase. A set of workshops for a detailed analysis of business processes was held and a draft version of the documentation with business processes is being prepared. On the basis of a harmonized report on the status of the analysis phase and for the purpose of requesting an extension of the time limit for the realization of the analysis phase, the deadline was extended until March 26th, 2019.

In December 2018, the work was done on updating the Project Plan in accordance with the recommendations of the World Bank. The draft version of the Documentation with Business Processes is being drafted. The Project Plan has been updated in accordance with the

recommendations of the World Bank. Work has begun on harmonization and correction of processes and preparation of implementation scenarios. Work on streamlining and correction of processes and preparation of process implementation scenario has been completed end January. Workshops for user requirements analysis were performed in February. The meeting of Steering committee was held and previous results of activities commenced have been presented. Extension of implementation period was verified, to be presented in the reviewed activity plan for the project implementation. Workshops for technical user requirements analysis have been performed in March. Additionally, all business requirements were mapped and documentation of business processes was drafted. During the month of April, the analysis was undertaken (user requirements, user technical requirements, business requirements and business processes), as well as on the revision of the Project Plan. The revised Project Plan has been submitted. During May, the work on the adoption of detailed analysis documentation and final specifications continued. A new implementation plan was adopted and development activities started. An introductory meeting was held with representatives of the company for QA/QC of the software development and implementation for the Phase 2 and the Phase 3 (AR, RPJ, KN, RL). In June, a meeting was held with the SBRA. The development environment for the development of Owners/Users personal data Module has been successfully set up. The development of the Owners/Users personal data Module has begun. The Steering committee meeting was held on June 21, 2019. Activity is underway. Software tool for managing Technical specifications for the upgraded software procurement for graphical data and building graphical data and building register maintenance was developed and B1.5.1 register sent to the WB for NO. Activity is underway. Supervision, monitoring and Terms of Reference for supervision, monitoring and quality assurance quality assurance of the consultant for source code review of software development Phase 2 successful implementation of the and Phase 3 were developed. software development Phase 2 Invitation for interested bidders was advertized on October 20th, and Phase 3 2018. Deadline for proposals delivery was November 19th, 2018. **B1.6** Consulting company "PROZONE d.o.o." was selected for supervision of Phase II and III ISREC development and implementation. Contract was signed and the company began performance. An introductory meeting was held with RGZ teams in charge of the implementation of ISREC Phase 2, Phase 3 and DQI. The RGZ and PIU provided complete documentation (reports, PP, contracts ...)

		Also consultanting company had as introduction with
		Also, consultanting company had an introductory meeting with representatives of the consortium responsible for the implementation of the Phase 2, Phase 3 and DQI.
		In June, the focus of QA / QC was on the analysis of Phase 2 test cases (AR and RPJ) that were found to be overly general. Also, it was pointed out that the so-called test cases can cause problems in implementation.
		Meetings with the IT Support Unit (QA / QC expert for infrastructure) were also held.
		They actively participated in the work of the Steering committee held on June 21, 2019.
		Activity is underway.
B1.6.1	Supervision, monitoring and quality assurance of the successful implementation of the software development Phase I and installation (workflow, DMS, UMS, code lists – classifiers)	Activity is completed.
	Senior implementer	Over the period January / March, consultants provided support to the LCO's for the implementation and training of the new DMS system on a daily basis. Consultants had undergone further training. A consultant resigned and a decision was made to abandon division between senior and assistant consultants because the work is equal in scope and difficulty. Additional consultants are yet to be contracted, despite RGA's efforts to find the appropriate consultant profile. The implementation was continued with one senior implementer. During the May-July period, the consultant actively participated in the implementation of the system, especially in the RGA headquarters,
B1.6.2		had attended a new training on the version 4 of the system of Therefore platform that is now adapted to the needs of the RGA. The consultant provides continuous support to the new REC offices in the introduction of DMS (adjustment of working environment and training) according to the implementation plan. After the implementation, the work of the consultant continued on daily support in the implementation of the DMS. Since August, the consultant constantly supports and participates in the maintenance
		of databases as well as in administering user accounts in the system. Terms of Reference has been developed for contracting 2 senior implementers to be engaged in the implementation of the data quality improvement system. The competition was opened in May. The Committee for contracting implementers began evaluation of CV's submitted end June.
		Activity is underway.
B1 6 3	Implementation assistant	Over the period January / April, consultants provided support to the LCO's for the implementation and training of the new DMS system on a daily basis. Consultants had undergone further training. Additional consultants are yet to be contracted, despite RGA's efforts to find the appropriate consultant profile.
B1.6.3		During the May-July period, the consultant actively participated in the implementation of the system, especially in the RGA headquarters, had attended a new training on the version 4 of the system of Therefore platform that is now adapted to the needs of the RGA. The consultant provides continuous support to the new REC offices in the

		introduction of DMS (adjustment of working environment and training) according to the implementation plan.
		After the implementation, consultants provide daily support in the implementation of DMS for all RGA' offices and the Headquarters. Since August, they constantly provide support in administering the network and user accounts, providing immediate help to civil servants in solving the problems of using computer equipment; participate in the implementation and maintenance of information and communication systems; participate in the maintenance of IT equipment. Consultants continue to provide daily support for the DMS implementation. They also provide support in administering the network and user accounts, providing immediate help to civil servants in solving problems of using computer equipment; participate in the implementation and maintenance of information and communication systems; participate in the maintenance of IT equipment. Activity is underway.
1.6.4	Implementation assistant	Terms of Reference have been developed and competition was opened in May for contracting junior implementers – surveyors. The implementers will be engaged in the implementation of the data quality improvement system. The Committee for contracting implementers began evaluation of CV's submitted end June.
		Activity is underway.
	Hardware for primary Data center, Remote backup and local offices	Within Phase 3, the final version of the ISREC System Architecture was developed, which defines the future needs for the establishment and smooth operation of the entire ISREC system.
		Based on the needs expressed within the ISREC System Architecture, a bidding document was prepared and sent to the World Bank team for NO on October 23 rd , 2018.
		The World Bank team had issued NO to the bidding document on November 16 th , 2018, which includes the framework of the ISREC System Architecture defining the future need for the establishment and smooth operation of the entire ISREC system.
		On November 11 th , 2018, an invitation for proposals was announced for interested companies to submit their bids.
		The bidding was international and was published on the UNDP portal as well as on the World Bank website.
B1.8		Bid opening was held on December $31^{\rm st}$, 2018 at 12 o'clock. Two bids were submitted. A report on the opening was sent to the World Bank.
		The evaluation report was submitted to the World Bank team for review and NO on February $1^{\rm st}$, 2019.
		On February 13 th , 2019, the World Bank had sent the comments on the evaluation report.
		The evaluation report was changed pursuant to the comments sent by the World Bank and re-submitted to the World Bank team for review and NO on March 4 th , 2019.
		The World Bank had issued NO for the evaluation report for selection of company on March 18 th , 2019.
		The contract is presently being signed.
		Activity completed.

	Procurement of hardware,	Activity completed.
B1.8.1	communication, and other	
	equipment	A
B1.8.2	Procurement of hardware to support software	Activity completed.
D1.0.2	implementation Phase I	
D4 0 3	Centralized system for the IT	Activity completed.
B1.8.3	infrastructure supervision	
B1.8.4	IT equipment: Digital Archive, PMV, AGROS, NSDI and satellite imagery vectorization	Activity completed.
B1.8.5	Computer screens	Activity completed.
B1.9	Lan/Wan	Activity completed.
	IT consultants for software	
	implementation	The consultant was working on drafting the business processes
		documents for Phase III in January.
		He took active part in the user requirements analysis workshop for Phase III, while also working on preparing the draft version of user requirements for Phase III.
		In February, he continued streamlining and correcting processes and drafting the processes implementation scenarios (Phase III).
		He also participates in technical user requirements analysis workshops (Phase III).
		He monitors the activity plan within the DQI implementation (e.g. additional training and testing for 4 local offices in Belgrade).
		Addendum no. 5 (extension of the consultant contracting period) was prepared and sent for NO.
B1.13.2		He participated in the preparation of the Test Case Book for Phase II. He carried out activities on setting up the first version of the AR and RPJ application in the RGZ test environment.
		Actively participated in the process of adopting the documentation of the detailed analysis and the final specifications as well as the adoption of the new Phase III implementation plan. He also participated in the preparation of documentation for the May mission of the World Bank.
		During the month of June, he participated in the process of completion of the detailed analysis and final specification, as well as on the completion of the new Phase III implementation plan.
		Follow the joint testing of the Address Register. He also participates in the definition of test cases for the Register of Spatial Units.
		Participates in the development of the implementation plan of the Second Phase of the DQI project - commissioning, operational work in the remaining LCO's.
		Amendment No. Approved. 5 consultants.
		Activity is underway.
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IT SECTO	K – NSDI	

IT SECTOR – NSDI

The Law on State Survey and REC prescribes establishing of the NSDI, which involves strategy, technology, rules, standards and human resources necessary for acquisition, processing, storage, access, sharing and optimal use of spatial data. In this manner, some of the provisions of the INSPIRE Directive are being transposed to the legislation

in Serbia. The government adopted a Mid-Term Program for establishment and maintenance of the NSDI for 2011-2015. The Strategy for the establishment of the NSDI 2013-2015 is under development. Full transposition of the EU INSPIRE Directive to the Serbian legislation, pursuant to the National Program for Adoption of *Acquis*, is to be defined by the proposed Law on National Spatial Data Infrastructure. This subcomponent would support:

- (a) NSDI business model development (financing model, pricing policy, spatial data sharing and distribution among stakeholders, licensing, cost-benefit analysis, spatial data, and services access for emergencies);
- (b) development of NSDI technical framework by upgrading network services for discovering, viewing, transformation, download and linking spatial data;
- (c) introduction and support for the implementation of international standards for spatial information, including ISO, OGC, CEN W3C and INSPIRE Implementation Rules and data harmonization for themes under the competence of RGA.

Further, under Component D, there would be support for organization of NSDI annual conferences, plus training and capacity building, including study visits to EU member states and participation in INSPIRE annual conferences and other relevant international and national events.

	National geoportal upgrade and implementation – software development	This activity will most likely be financed by the donation of the Kingdom of Norway, which had also financed the Geoportal development during the previous Project implementation. Confirmation of the Project by the donor – the Kingdom of Norway is pending.
B2.1		Meanwhile, the pilot version of the portal and the WMS services were developed, and "map viewer" and "discovery service" were implemented.
		No loan funds were used in this phase, and if the donation were verified, the funds for this component would be reallocated to other activities.
		Donor's proposal is still pending.
B2.2.2	Socio-economic study on the NSDI impact on society.	Terms of Reference (ToR) are presently being prepared. Activity is underway.
B2.2.3	Data harmonization	Terms of Reference (ToR) are presently being prepared for the company to be contracted for data harmonization. Activity is underway.
B2.2.4	Business and implementation plan	Terms of Reference are being prepared. Activity is underway.
B2.2.6	Consultant for data harmonization methodology development	Two consultants have been contracted since August 2018. So far, they have covered 240 datasets available over the NSDI portal. Activity is underway.
B2.2.8	Consultant for the national geoportal upgrade, optimization and e-security	
B2.2.9	Upgrade and optimization of the national spatial data portal	

IT SECTOR - STRATEGY

Main objective of this component is to improve the Sector for Information Technologies through drafting the strategic sustainability plan. Under this component definition in the Project, it was planned to contract the consultants (local or international) to analyze the existing business processes and material resources regarding the information technologies in the Republic Geodetic Authority. Pursuant to the analysis performed, there is the need to develop the plan under coordination with the RGA management to improve organization, services and upgrading of information-communication equipment, i.e. establishing of the future institutional framework for the functional

support to the implementation of all projects pertaining to software development based on the modern information platforms, to facilitate better business communication with all entities in daily work. The precondition for initiating this sub-component is contracting the Deputy Manager of the PIU (expert with IT references) to support the IT sector and contribute a more successful implementation of the Component B. The expected result is the IT strategy for a 5-year period (2017-2021).

B3.1.1	ICT Sector Strategy	The RGA had contracted a company with the task to develop strategic and two-year business plan, which would be followed by the ICT sector sustainability strategy, as a precondition for the ICT strategy development.
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DIGITAL ARCHIVE DEPARTMENT

This sub-component supports continued implementation of the Digital Archive through digitizing and indexing land registry sheets and key documents pertaining to the cadastre and property rights registration, using the existing Digital Archive Center in Belgrade. The sub-component also supports establishing the central archive building, to be used for storage of the analog documents and provide additional premises for conversion of documents.

The documents planned for storage in this building are of exceptional national importance, showing the history of ownership and parcel shapes in Serbia.

The need for the additional archive documents storage capacities in the Republic geodetic authority (RGA) arisen in early 1990. The archive depots of the RGA had run out of room for archive map originals storage. The problem of archive documents storage had escalated at the end of 2000's. Many municipal local offices had completed the Digital Cadastral Map (DCM), and the analog working originals used for registration of changes had become the archive maps. These maps are still kept in the local offices since archive depots are over-populated. The maps are still there, stored in a more or less appropriate manner.

When the Real Estate Cadastre (REC) became enforceable, the entire Land Registry (LR) institution was transferred from the municipal courts to the RGA's management. The LR, with the complete collection of documents, is presently a part of the RGA's archive documents, scattered over multiple locations. At some locations, the municipal offices had taken over registries and collections of documents (often in poor and completely inadequate conditions), while at other locations, the registries were stored in the local archives.

The RGA had defined the development strategy by 2020, which was recently adopted by the Government of the Republic of Serbia. The strategy elaborates on the Archive and Digital Archive development strategy, thus defining guidelines for the future development in line with the "Real Estate Management Project in Serbia" objectives.

The issue of central digital archive database is being solved in parallel with storage issue solving. Establishing of the central digital archive database would provide for a quality integration of digital archive with the future IT system for the REC and fully resolve the issue of document access, both for internal and for external users.

	:	
	Main design of the archive	The Terms of Reference for design and supervision was sent for
	building	review and No Objection was submitted on February 4 th , 2017.
		Durswant to the WD procedures and the approved Procurement Dian
		Pursuant to the WB procedures and the approved Procurement Plan,
		the procedure for a consulting company selection was implemented.
		The company selected is MasinoprojektKopring A.D. (hereinafter: the
		Designer).
		The contract between the RGA and the Designer was signed on
		August 8 th , 2017. The Designer had commenced implementation of
B4.1		sub-phases from the Task 1 – Drafting design documents for the
D4.1		Archive Depot. The activities performed so far:
		The decimal performed so furt
		 All geotechnical survey activities on site were performed.
		Conceptual solutions pursuant to the Terms of Reference as
		a part of the contract were produced and submitted.
		The investor (RGA) had selected the appropriate conceptual
		solution.
		The consultant had commenced developing the draft
		solution in order to obtain location conditions. The draft
	4	

solution will be elaborated in line with the conceptual

		solution and pursuant to the guidelines provided by the Archive Material Storage Expert. The consultant had produced draft solution for the building accepted by the RGA. Request for location requirements pursuant to the accepted draft solution was filed, pursuant to the Law on Planning and Construction and the One-Stop-Shop procedure. Secretariat for urbanism and construction affairs had issued Location Requirements on May 16 th , 2018. Due to the unfavorable conditions for connection to the heating system and the details of geotechnical elaborate, the decision was made to amend the draft solution for the following parts: - connect the building to the gas network - amend the foundation solution (introduce basement floor) The request for amending the location requirements was submitted on June 12 th , 2018. Change of location requirements issued on July 27 th , 2018. DBP (design for building permit) was finalized for submission of request for the building permit issuance. Building permit was issued on December 4 th , 2018 by the Secretariat for Urbanism and Civil Works. CD (contractor's design) is being elaborated. The request for issuance of the fire safety consent for the CD (contractor's design) was submitted to the Sector for Emergencies of the Mol of the Republic of Serbia. Activity is underway.
B4.3	Data Entering/Scanning Specialists B4.3.1 – Professionals for data input/scanning/indexing (76 consultants) B4.3.2 – Professionals for scanning and data input control (30 consultants) B4.3.3 – Shift leaders for scanning and indexing (14 consultants)	Activity ongoing. The consultants have been contracted under the DEU funded project for scanning cadastral documents for the territory of the Province of Kosovo and Metohija as of April 1st, 2016. A total of 120 consultants were contracted and analog archive documents transformation into the digital format is being performed in line with established schedule and plan. The consultants' contracts have been extended to April 30th, 2019. Considering the funds available for this activity, it has been agreed to cut the number of consultants to maximum 30 (from 110 that were contracted until now). The activity will continue as long as the funds are available on this item and the results will be monitored continuously.
B4.7	Expert for archive documents conversion	Activity is underway. Contract with the Consultant was signed on December 25th, 2017. Beginning of consultant's engagement was designated by issuing
54.7		guidelines for the design of the new analog depot building. Activity is underway.
B4.8	IT equipment (hardware and other equipment)	Activity completed.
B4.9	Software upgrade and further development	Technical specification for the upgrade of software for operations in the RGA archive was prepared. Improving the existing software platform would provide a new revision of scanning software and, more importantly, the software solution for the dissemination of the Digital Archive products. The

new solution would increase the scanning productivity regarding the scanning process itself.

The development of the new dissemination module for the Digital Archive products will provide:

- Transfer of metadata input subsystem to web environment
- Improvement of the existing workflow management system
- Access to the central Digital Archive database by other interested systems, predominantly the new REC software
- Search of central Digital Archive database in line with the access rights assigned
- Viewing, ordering and buying documents
- Price policy implementation
- Personal data security
- Protection of the Digital Archive central database against unauthorized use
- Keeping records on the Digital Archive system users
- Any other activities that upgrade the existing production system

Technical specification presently awaits functionality verification in the RGA.

IT SECTOR - DATA QUALITY IMPROVEMENT

The analysis of RGA data showed that the data format is not consistent (standardized), which is partially a consequence of outdated software solutions currently in use (distributed database system), with a lack of integration between the data in different systems. The most common error categories are:

 data entered with the incorrect content; data entered with the correct content, however in nonstandardized format; missing data without the impact on the registered rights validity, however containing shortcomings such as missing UPIN for citizens, no address change registration, or inconsistent spatial data (parcel intersects CM boundaries, construction intersects parcel boundaries), etc.

Having in mind everything above, the activity plan contains:

- Contracting a consultant for the data quality improvement methodology development (December 2016) –
 Consultant for data quality improvement
- Preparing bidding documents for selection of a consulting company to provide data quality improvement services (December 2016). Among the other things, the company shall contract the consultants for correcting the errors and assist in organizing the work in local offices towards data quality improvement, develop necessary software tools and the appropriate procedures for data quality improvement.

This component includes a media campaign to stimulate citizens to submit the missing data, including other forms of mass data acquisition.

	Data quality improvement in all local offices	After the completed procurement procedure with the obtained NO from the WB, a contract was signed with the consortium on January 19th, 2018. In March, an initial meeting was held and a project monitoring committee was set up.
		The Bidder has prepared and submitted the Project Plan and the plan has been accepted by the RGA within the time stipulated in the contract. According to the contract, the analysis was started.
B5.2		The bidder submitted the Inception report and draft version of the Current Status Analysis. The initial report as well as the Analysis of the current state of the RGA are accepted within the prescribed deadline.
		On the basis of the accepted Analysis, a Flow diagram was prepared according to the Project Implementation Plan. The process flowchart was verified by RGA and was accepted on May 30th. In May, the process of testing the environment for spatial data maintenance at the central level began. A final report on the analysis of existing data for pilot municipalities was submitted and the process flow diagram

was updated with all required data controls. The work on testing scripts, procedures, and tools - the D3 part of the project plan was being performed.

In the period June / August, testing of the maintenance application with the extended testing team within the RGA was done, but the local offices were not actively involved. In this period, the preparation of data migration has begun. User and technical documentation was provided. Delivered version D3 part of the project plan has been adopted.

In September, testing of maintenance applications within the RGA was continued; local offices were still not actively involved. Preparation of data for migration has been continued. A part of data successfully went through the conversion scripts. The provided user and technical documentation has been verified and accepted. Work is still being done both in contractor's environment and in the RGA's test environment.

In October, all data successfully went through conversion scripts and the data was migrated successfully. Local offices were included to test scripts, procedures, and tools, and to check the migration results as well. An attempt was made to check the pilot offices elaborates in the RGA headquarters. Work is being done both in contractor's environment and in the RGA's test environment.

According to the project plan, the Pilot phase should have been completed by October 10th, 2018; however, as agreed with the RGA, it was extended by the end of November.

In November, application was installed in the pilot local offices, and the pilot local offices elaborates were checked at the RGA headquarters as well as in pilot offices. All training has been completed, internet speed has been tested, and the requirements of the application (GB) over a certain time (for example, 20 minutes) in all pilot offices. Work is still being done both in contractor's environment and in the RGA's test environment.

In December, based on scripts and procedures for data quality control, procedures are intensively done to correct errors in local databases in order to transfer the cleaner data to the central database. The initial production environment has been set up and the final environment according to the agreement with the RGA will be set up on the equipment provided for the ISREC. The degree of integration of the data maintenance application and the DMS was specified, and preparations were made for testing.

Commissioning of the pilot phase of the project was postponed to January 21st, 2019, at the request of the RGA.

Changes have been made to the editor that enable the transformation between gk6 and gk7 zones.

The remaining activities that need to be realized before the production phase (output documents, integration / presentation of data on GeoPortal) are specified.

For the purpose of the pilot project phase implementation, rollout of data quality maintenance in 16 CM's, all activities required for the production have been performed:

The maintenance application had undergone user testing in January, all required functionalities are supported, and user manuals were

delivered. Likewise, the reports on results of controls have been submitted and the GeoPortal viewing was implemented.

Integration with the DMS system was implemented and export in dshape was provided, along with additional training and testing for 4 local offices in Belgrade (Savski Venac, Vozdovac, Vracar and Stari Grad).

LCO Savski Venac was commissioned on February 18th, 2019 (production was followed by data migration).

LCO Lazarevac was commissioned on March 20th, 2019.

The local offices had received the control reports to work on the data correction.

The sequence of commissioning the remaining 12 CM's was agreed and subject to changes depending on the strike duration and volume.

The Steering committee meeting was held, noting the previous results of the implementation and explaining the reasons for moving deadlines for the Pilot implementation and its impact on the duration and completion of the DQI Project.

The World Bank team was sent the notification on strike on March 13th, 2019. The minutes by consortium that implements the DQI was attached to the e-mail. The minutes contain a detailed description of problems imposed by the strike of employees in the individual local real estate cadastre offices.

DQI in a 16 pilot LCO is sucessfully completed.

Contractor provided a training for 146 users (8 SKN: Belgrade-Savski Venac, Voždovac, Vračar, Stari Grad, Lazarevac, Čačak-grad, Lajkovac, Zrenjanin-grad) were trained for the use of the Applications for Central Maintenance of the DKP.

Technical requirements for project extension to the maintenance of the "Building register" was prepared.

U pripremi je Amandman za dogovoreno (u vreme misije SB) vremensko produženje aktivnosti (od februara 2020 na septembar 2020).

Amendment for the contract extension is under preparation (this extension was agreed during the May 2019 mission). Contract extension will cover extension of the scope of the works and time for implementation from February 2020 till September 2020.

Last Steering committee meeting was held on June 21st, 2019.

Activity is underway.

B5.3

Consultant for data quality improvement

Activity completed.

SBR - ONE STOP SHOP FOR ELECTRONIC ISSUING OF CONSTRUCTION PERMITS

This sub-component had supported the development and implementation of the one-stop shop system for electronic issuing of building permits in the Serbian Business Registers Agency. The project had supported the review of the existing IT systems and database structures of the institutions/organizations, which are part of the building permits processes, re-design of the working process to comply with the one-stop-shop principles, identification of any additional legal amendments, which may need to be on place to support the new unified digital processes, development of requirements for all institutions/organizations involved, development and piloting of IT system, which supports the electronic issuing of construction permits, capacity building.

A massive number of training at all levels was provided and the necessary equipment supplied to the local governments towards faster and more efficient implementation of one-stop-shop for electronic issuing of construction permits.

This subcomponent will finance technical assistance, software development, independent quality assurance and quality control of the design and development of the application software and supply of hardware and standard licenses.

B6.1	Local consultants (for producing technical specifications for software development)	Activity completed.
B6.2.1	IT expert – development	Activity completed.
B6.2.2	Quality assurance and control (consultant)	Activity completed.
B6.3	Training	Activity completed.
B6.4	Procurement of equipment necessary for upgrading the existing system (urgent)	Activity completed.
B6.5.1	Procurement of necessary IT equipment for e-permitting for the SBR	Activity completed.
B6.5.2	Procurement of necessary IT equipment for e-permitting for the SBR – municipalities	Activity completed.
B6.5.3	Quality assurance and control (consultant)	Activity completed.

C. INSTITUTIONAL DEVELOPMENT OF THE REPUBLIC GEODETIC AUTHORITY

Activities under the Component C of this Project will support the provision of goods, consultants' services, non-consulting services to improve RGA's institutional development through:

- I. developing a business plan for RGA's governance and institutional and corporate planning and strategy;
- II. supporting the sustainability of the National Reference System and the functionality of AGROS and improving the existing gravimetric networks and the vertical reference system in Serbia;
- III. carrying out the digital mapping of selected cadastral municipalities and transforming existing utility maps into digital form;
- IV. improving registration procedures of properties, removing registration backlogs in the cities of Belgrade, Novi Sad, Nis, and Kragujevac, enhancing office infrastructure in selected municipalities in Serbia, and setting up mobile services at selected local RGA offices; and
- V. acquiring cadastral data (geodetic measurements and digital cadastre map database production) in the Vojvodina region in Serbia.

Strategic and business plan produced under the project are still being considered. The Government is yet to decide on the model of reorganization, out of the three models proposed, which is appropriate and acceptable for the Government of the Republic of Serbia.

Activities under the component C2 have continued towards the infrastructure improvement (leveling network establishment). Works on the leveling network establishment for southern Serbia and works in central part of Serbia are progressing according to the plan.

A number of consultants contracted for the DCM production, resolving of first instance backlog and resolving second instance backlog have been permanently hired by the RGA. The other consultants have been reassigned to the other activities under the project covering data quality improvement, digitizing satellite imagery for the building register production, digitizing utility cadastre maps, etc.

STATEGY AND BUSINESS PLAN

C1.1		Drafting corporate and business	On February 24th, 2017, the contract was signed with the selected
•	C1.1	plan	consulting company Deloitte d.o.o. to produce corporate and two-
			year business plan for the purposes of the RGA and the Project. The

consultant had commenced the information gathering and had the first meeting with the RGA representatives regarding the human resources management.

From April to June, the Delloite company had collected information required for drafting the Inception Report. The Inception Report had opened a number of questions, including the definition of the RGA's final status, which should not be disputable. Having that the parties are situated in remote locations, the discussion on further steps was initiated in June, in order to reach the desired outcome in line with the Project objectives and the expectations of the RGA and the WB.

The addendum was signed for the contract for strategic and two-year business plan in July, since it had turned out that the additional time for data analysis is needed. The contract was extended to October 31st, 2018 since the data on revenues and expenses are linked to treasury, and their segregation is difficult since the service fees were charged together with the republic levies, requiring amendments to the evaluation methodology.

The consultant had managed to perform the evaluation and complete recommendations regarding the future status in line with the contract. The documents were finalized and submitted to the RGA for review and approval. Three scenarios were developed for the future organization. The RGA will shortly make a decision on the future organization model.

RGA's preparations for transformation are underway in line with one of the models proposed (to remain the authority, to become a public agency or a company).

Decision of the Government is still pending.

Activity is underway.

C1.1.1

International consultant for drafting Terms of Reference for Strategic and 2-year business plan

Activity completed.

SECTOR FOR BASIC GEODETIC WORKS

RGA is responsible for establishing and maintaining the National Reference System by the Law on State Survey and REC, pursuant to Article 31, which consists of: 1) spatial (three-dimensional) reference system; 2) horizontal (twodimensional) reference system; 3) vertical (single-dimensional) reference system; 4) gravimetric reference system; and 5) astronomic reference system. Under the RECRP, the spatial reference system was established and this subcomponent would make the spatial reference system sustainable by upgrading and completing the technical equipment and also by re-establishing the vertical reference system and the gravimetric reference system.

Under the project, the functionality of this important infrastructure is to be maintained by replacing outdated equipment and making further improvements to capacity. The AGROS is linked to the rest of the European Union Positioning System (EUPOS) network, and Serbia is taking an important role, considering that one of the control points for the European Positioning Network (EPN) maintenance is situated within the AGROS network. The following activities are included: i) replacement of outdated receivers; ii) installation of a time station for the control center; iii) procurement and renewal of the network access licenses for the system control software in the AGROS control center for the next five years; iv) enhancement of the IT infrastructure; and v) promotion of the system and staff training.

The project would utilize both the private sector and RGA staff for the leveling work and includes construction of the leveling monuments; procurement of equipment and vehicles for motorized leveling (two passenger vehicles and one pickup vehicle per team, which would be modified for this purpose); staff training; and processing the results. The results would be included within the European Leveling Network (EULN).

22.4	Procurement of 16 receivers for
2.1	replacement of outdated

	equipment in local real estate cadastre offices			
	Procurement of clock station for the control center	Technical specification and justification for direct contracted are prepared. The procurement will be performed in 2017.		
C2.2		Pending RGA's decision, the procurement procedure will be initiated.		
		Activity is yet to be approved by the RGA.		
C2.3	Maintenance of the control center software	Activity completed.		
	Leveling and stabilization of leveling network in central part of Serbia	During the April mission, it was agreed to change the activities under the component C2 towards the establishment of the leveling network over the territory of the central Serbia, instead of procurement of equipment and other activities (C2.8, C2.9, C2.11, C2.13).		
		With that regard, preparation of bidding document for launching an invitation for the Expressions of Interest had started in June, for the domestic and foreign companies, for the leveling network establishment over the territory of central Serbia.		
		The public call for bids was advertized in September 2018, and bid opening and selection of bidders are expected in October.		
C2.5		Bidding documents were bought by two companies, and only one had submitted a bid.		
		On December 20 th , 2018, the contract was signed with the contractor and the initial meeting was held to agree upon the schedule.		
		The first part of activities – stabilization of 572 benchmarks – had commenced in February 2019 and 105 benchmarks were stabilized so far.		
		So far, stabilization has been done for 456 out of 572 benchmarks and height differences have been measured for 256 km out of 2900 km planned.		
		Activity is underway.		
	Leveling and stabilization of leveling network in southern part of Serbia	The international call for expressions of interest was published on May 29th, 2017. The lowest bidder was invited to submit a technical and financial proposal.		
		Evaluation of bids submitted was completed on August 10th, 2017, and evaluation report for the Bank was completed. A consortium from the Former Yugoslav Republic of Macedonia was selected: GeofotoZenitd.o.o. FYROM &Vardargradbad.o.o. ("the Consultant"). The contract with the selected contractor was signed on August 22nd, 2017.		
C2.6		The first part of the activities – stabilization of 657 leveling network benchmarks – has been completed in November 2018. As for the second part of the activities – measuring height differences – a total of 530 leveling lines were measured, with the total of 2294 km length, out of 663 leveling lines, with the total 3400 km length.		
		2nd phase activities (height differences measuring) – a total of 610 leveling lines have been measured, with total length of 2889 km out of 663 leveling lines designed with approximate length of 3400 km.		
		Activity is underway.		
C2.10	Gravimeter	Activity completed.		
SECTOR F	OR REC			

The e-government agenda requires all cadastral data to be in digital form, in accordance with national standards (based on international standards). The activities proposed under the project had supported transformation of analog maps to digital format (original survey data input); and transformation of utility cadastre analog maps into digital format (digitalization and original survey data input) is to be done in the upcoming period.

The project support focuses on expanding the workforce capacity by engaging individual consultants working in the Sector for REC at RGA's headquarters to carry out the digitizing work.

C3.1	C3.1.1 – Local consultant for cadastral maps digitizing – Head of the Group (1 consultant) C3.1.2a – Local consultant for cadastral maps digitizing – quality control (5 consultants) C3.1.2b - Local consultant for cadastral maps digitizing – quality control (11 consultants) C3.1.3a - Local consultant for cadastral maps digitizing – operators (7 consultants) C3.1.3b - Local consultant for cadastral maps digitizing – operators (19 consultants)	Consultants' contracts for 43 consultants had been extended for another year. The remaining consultants were reassigned to the activities pertaining to the Utility Cadastre digitalization and data acquisition for the purposes of property mass valuation under the direct contracting method. The number of consultants was decreased for the number of consultants (20) transferred to the basic topographic model production and data acquisition for the mass valuation. The number of consultants on this activity will be reduced by April 30 th , 2019, pursuant to the previously established plan. The remaining consultants have been engaged in the DQI activities. Activity completed.	
C3.2	Local consultants for the Utility Cadastre maps digitizing (16 consultants)	The local consultants are contracted under the SSS method. The number of consultants on this activity was reduced by April 30th, 2019, pursuant to the previously established plan. The remaining consultants will be engaged in the DQI activities. Activity is underway.	
C3.3	Local consultants for property mass valuation data acquisition from satellite images (17 consultants)	The local consultants are contracted under the SSS method. The number of consultants on this activity was reduced by April 30th, 2019, pursuant to the previously established plan. The remaining consultants will be engaged in the DQI activities. Activity is underway.	
C3.3a	Local consultant for the basic topographic model production (20 consultants)	20 consultants previously contracted for the DCM construction were transferred to this component. The task of the consultants will be to perform data acquisition for the purposes of property mass valuation from the satellite images previously procured.	
		In December 2018, processing of satellite imagery for the entire territory of the Republic of Serbia was completed.	
		The consultants continue working in line with the ToR adopted.	
		The number of consultants on this activity was reduced by April 30th, 2019, pursuant to the previously established plan.	
		The remaining consultants will be engaged in the DQI activities.	
		Activity is underway.	

Removal of backlogs in selected local real estate cadastre offices

Following the completion of the REC during the RECRP, all registration work in urban areas and all land books from the courts were transferred to RGA. As RGA dedicated much of its registration staff to finalizing the REC, a backlog of outstanding requests for registration has developed in major cities. Further, the Law on State Survey and REC, which provided the foundation for completion of the REC, provided for shorter public display periods, but these resulted in lower responses from real estate owners during the public display procedure, thus decreasing the data quality, which

has brought up numerous cases within the REC maintenance procedure, and numerous requests for correction of data both on real estate and on property rights. Also, the Law extended the deadline for submitting the requests for errors correction to five years from the day of the REC enforceability, thus it may be expected that the number of such cases would only increase in the years to 2016 (the REC was largely completed by 2011). An additional limiting factor is some 30000 unresolved appeal cases against the decisions by the local RGA offices, which are with the second-degree decision-maker.

For the purposes of removal of backlogs, the Project will fund contracting of qualified consultants, for resolving both first and second instance cases.

	Removing first instance backlog	The consultants for removing first instance backlog in selected local real estate cadastre offices were contracted in March and assigned to the local real estate cadastre offices, under the head of the local offices. Three profiles were contracted: lawyers, surveying engineers and surveyors. A total of 155 consultants were contracted, and the volume of backlog to be resolved during their engagement is approximately 150,000. Expected resolving period is 12 – 15 months.
		A total number of cases resolved since the Project commencement from April 1st, 2016 to September 30th, 2107 is 90.200.
		From April 1st, 2017 to September 30th, 2017 (second phase of the Project), a total of 16,399 cases were resolved.
		During the third quarter 2017, a total of 6,745 cases were resolved.
C4.1		The activities towards resolving the backlog of unresolved cases had continued in first quarter 2018. Having that the existing contracts had expired on February 28th, 2018, and there were approximately 30,000 unresolved cases, the RGA had requested for the consultants' contracts (for the reduced number – 76) to be extended for additional 6 months, which was approved.
		Having that the procedure for hiring 500 persons to staff vacant positions in the RGA is underway, it is expected that the majority of consultants contracted will sign the permanent contract with the RGA. To avoid breaks and discontinued operation, the Project will continue to finance this component until April 30th, 2019.
		Results of this activity are shown in the M&E report on a regular basis.
		Activity completed.
C4.2	Local technical staff for resolving REC cases (backlog) second instance	Most of the consultants contracted for resolving second instance backlog have been permanently hired. The remaining 5 consultants not permanently hired had their contracts terminated upon the agreement on April 17th, 2019.
		Activity completed.

REAL ESTATE CADASTRE IMPROVEMENT

This sub-component will perform geodetic measurements and acquisition of data on properties and property rights holders over a part of the AP Vojvodina, where the existing survey is in Stereographic projection, for the construction land.

The works financed under the project consist of geodetic measurements with the acquisition of data on properties and property rights holders and the production of the DCM database, will be contracted to the authorized private geodetic organizations under the procurement procedures.

The works pertaining to designing, preparatory works, cadastral classification, real estate cadastre database production, address registry production; public display of property and property rights data, professional supervision, review, and acceptance of works shall be performed and financed by the RGA.

The operative costs for the purposes of project implementation incurred by the RGA (consumables: envelopes and paper for notifying parties, etc.) shall be financed from the Project funds.

Data acquisition (cadastral survey)

Although technical specifications and bidding documents were prepared for the three CM's, the RGA had decided to update property data from satellite imagery. This would provide for collecting necessary information for the property mass valuation model and updating the data in the cadastral municipalities where cadastral map originals were produced in stereographic projection.

Savings achieved under this line would be distributed in line with the project priorities.

Methodology for this activity is presently being prepared.

During the first quarter 2018, the documents pertaining to the new method of data acquisition in the cadastre using the satellite imagery to replace the classic data acquisition method had been submitted.

Submitted documents are: Procedures for data acquisition control, Rules for digitizing constructions, Technical specifications and instructions for data acquisition and New methodology for data acquisition.

The newly introduced methodology covers data acquisition from the satellite imagery in the RGA's premises, thus providing the conditions for reallocation of funds planned for this sub-component.

The World Bank team had accepted reasons and application of the new methodology, which would achieve the objective to improve the real estate cadastre data, while the funds allocated to this activity would be reallocated to the other activities.

D. PROJECT MANAGEMENT AND SUPPORT ACTIVITIES

Component D has the objective to support the provision of goods, consultants' services, non-consulting services and Incremental Operating Costs for carrying out project management activities, including:

- I. provision of support to project implementation unit (PIU)on Project management;
- II. monitoring and evaluation of the project;
- III. public outreach on the project activities to improve social inclusion;
- IV. provision of training to stakeholders in the public and private sectors according to a training plan; and
- V. studies on, *inter alia*, customer satisfaction, real estate administration and management, and based upon the results of said studies, design proposals for adoption of policies and regulations.

PROJECT IMPLEMENTATION UNIT

The Project Implementation Unit (PIU) is situated in the RGA Headquarters and works full time on the project implementation. The PIU consists of:

PIU Director

Training specialist (part time)

Monitoring and evaluation specialist (part time)

Procurement specialist / Deputy PIU Director

FM specialist

FM assistant

Valuation specialist

Designer / Procurement assistant

IT specialist

Office assistant

PR specialist/interpreter

The PIU is responsible for:

Administration and project management

Financial management and reporting

Procurement of works, goods and technical services

Technical support (support regarding IT, legal issues, cadastre& survey)

Project activities planning system

C5.1

Financing system (annual planning, budgeting, and accounting)

Contract quality control and supervision system

Monitoring & evaluation system and reporting

Support to the steering committee, project managers and consultants in the project implementation Relations and communication system with the World Bank

System for documents preparation and archiving.

Consultant – Senior
procurement specialist

Senior procurement specialist has been contracted in December 2016. Task of the consultant is to provide support to the Project Implementation Unit in the events of extensive workload or technically demanding procedures. The consultant reports to the Senior procurement specialist in the PIU and PIU Director in the RGA.

Pursuant to the Terms of Reference and satisfactory performance, the RGA had extended the contract to the consultant for legislation issues (Addendum no. 5).

Activity is underway.

STUDY AND CAMPAIGN

D1.13

The M&E specialist will be contracted part time for the entire Project duration with the task to monitor the Project implementation against the indicators agreed, by performing periodical surveys and collecting available information. The methodology of information collecting and the reporting method will be carefully considered during the first quarter. The Project monitoring results will serve for improving the individual Project activities (changing and adjusting methodologies) to achieve the maximum effects of the project implementation.

Social and customer studies (year 1, 3 and 5)

Invitation for proposals was published on July 29, 2016, for a public awareness campaign, and the contract with "Deep Dive" company was signed on December 5, 2016. The primary task of the company is to perform social studies and customer surveys, to collect the baseline (realistic) parameters for the Project monitoring and evaluation. The activity should be completed in first half of 2017.

This activity was completed during the second quarter; all studies had been performed and the final report was submitted. Having that the consultant had demonstrated significant knowledge in the field of engagement, we are hopeful to have the opportunity to continue the cooperation.

The decision was made in August to extend the scope of works for the company, pursuant to the expertise demonstrated, to provide for the same company to perform the remaining studies under the project. Amendments to the Terms of Reference and payments were drafted and sent to the WB for NO.

The WB had issued NO for the documents submitted.

The second social and customer study campaign had started in September and October. The survey had shown a significant improvement in raising the quality of services and confidence in the RGA.

The results of study have been sent to the WB team.

Presently awaiting for the next research period.

Activity is underway.

PUBLIC AWARENESS

The project provides funding for the general public awareness campaign to improve communication with the public, with the information being published predominantly through the media. The RGA's webpage is updated regularly with the information about the news in the RGA and under the REMP.

The project funds are used for the development of the communication strategy and design and distribution of promotional material.

D2.1

part of employees. The strike itself had finished during the first half of May. The RGA was covering this topic in releases and informed the public on all steps towards ending the strike, regularly published which local offices opened for business and on strike on the website. This topic was also covered by the Prime Minister and the Minister of Construction, and two MP's. The media coverage of this topic was published on the RGA's website. The news on minimum work process for the RGA at the time of the strike had received a good media coverage. Director of the RGA spoke on this subject in the RTS morning show. During the strike period, the PR campaign was also focusing on the other topics so that the public may comprehend the scope of the RGA's work and the minor percentages of the persons on strike. TV presentations introduced the work with the LIDAR technology, international cooperation with Slovenia and Netherlands James Russell Tingan who supports the Department for Mass Valuation gave an interview, and the magazine "Srpska ekonomija" had published an article about our team. RGA's role in digitating cultural heritage project, implemented through the cooperation with the Ministry of Culture was presented. Improvement of info center was done in June, and the activities had received media coverage. The new job vacancies were advertized, and the RGA's website had provided the information on the selection procedure. With the NALED's support, website upisnet/restricts was developed with the objective to clarify the procedure of property sale and registration to the citizens. The new project "Business climate improvement in Serbia" was started with media of the received media coverage. The new job vacancies were advertized, and the RGA's website had provided the information on the selection procedure improvement was also presented to the media in June. Activity is underway. Training Training Training Training Treview of the activities implemented during the second quarter 2019 in the field of training is g	The RGA provides regular clarification for its clients and information about upcoming campaigns over several TV stations, at least weekly.				
Training The review of the activities implemented during the second quarter 2019 in the field of training is given in Annex 1 below. Activity is underway. POLICY AND LEGISLATION Legal expert for harmonizing legislation in the field of land administration was contracted in December 2016. The task of the consultant is to systematically (in an advisory capacity) indicate the potential non-congruencies among various laws in the land administration domain. The consultant reports directly to the RGA Director. Pursuant to the Terms of Reference and satisfactory performance, the RGA had extended the contract to the consultant for legislation issues (Addendum no. 5).	D3.1	Public awareness campaign	During the strike period, the PR campaign was also focusing on the other topics so that the public may comprehend the scope of the RGA's work and the minor percentages of the persons on strike. TV presentations introduced the work with the LiDAR technology, international cooperation with Slovenia and Netherlands, information on IT equipment procurement and software being developed for the purposes of the RGA's operation. US consultant James Russell Timgan who supports the Department for Mass Valuation gave an interview, and the magazine "Srpska ekonomija" had published an article about our team. RGA's role in digitizing cultural heritage project, implemented through the cooperation with the Ministry of Culture was presented. Improvement of info center was done in June, and the activities had received media coverage. The new job vacancies were advertized, and the RGA's website had provided the information on the selection procedure. With the NALED's support, website upisnepokretnosti.rs was developed with the objective to clarify the procedure of property sale and registration to the citizens. The new project "Business climate improvement in Serbia" was started with media coverage. The Inter-ministerial working group for property registration procedure improvement was also presented to the media in June.		
D4.1 D4.1 Activity is underway.	TRAINING				
POLICY AND LEGISLATION Legal expert for harmonizing legislation in the field of land administration was contracted in December 2016. The task of the consultant is to systematically (in an advisory capacity) indicate the potential non-congruencies among various laws in the land administration domain. The consultant reports directly to the RGA Director. Pursuant to the Terms of Reference and satisfactory performance, the RGA had extended the contract to the consultant for legislation issues (Addendum no. 5).	D4.1	Training			
Legal expert for harmonizing legislation with the Law on Planning and Construction Consultant for harmonizing legislation in the field of land administration was contracted in December 2016. The task of the consultant is to systematically (in an advisory capacity) indicate the potential non-congruencies among various laws in the land administration domain. The consultant reports directly to the RGA Director. Pursuant to the Terms of Reference and satisfactory performance, the RGA had extended the contract to the consultant for legislation issues (Addendum no. 5).			Activity is underway.		
D5.1 legislation with the Law on Planning and Construction administration was contracted in December 2016. The task of the consultant is to systematically (in an advisory capacity) indicate the potential non-congruencies among various laws in the land administration domain. The consultant reports directly to the RGA Director. Pursuant to the Terms of Reference and satisfactory performance, the RGA had extended the contract to the consultant for legislation issues (Addendum no. 5).	POLICY A	ND LEGISLATION			
the RGA had extended the contract to the consultant for legislation issues (Addendum no. 5).	D5.1	legislation with the Law on			
Activity is underway.			the RGA had extended the contract to the consultant for legislation issues (Addendum no. 5).		
			Activity is underway.		

Project components	Module	No. of trainings in 2019 / No. of persons	NOTE
	ArcGIS for Desktop II - Basic working procedures	19	FINISHED
B.2: Support to the	ArcGIS for Desktop III - Data analyses	8	FINISHED
National Spatial Data	Geodatabase creation	8	FINISHED
Infrastructure	Deploying and Maintaining Multiuser Geodatabase	8	FINISHED
	Professional IT training: GDPR training	10	FINISHED
B.3: Sustainability of the Sector for Information and Communication Technologies	Professional IT training: Advanced Cisco training	6	Under execution
	Conference/Institutional development - FIG Working week 2019 Conference in Hanoi, Vietnam	1	One representative from RGA was present and had presentation at the Conference.
C:Institutional Development of the	Committee meeting /Institutional development - UNGGIM meeting in New York, USA	1	WB provided no objection to finance presence of one RGA representative at this committee meeting to be held in August 2019.
Republic Geodetic Authority	Conference/Institutional development - EuroGeographics General Assembly in Manchester, UK	2	WB provided no objection to finance presence of two RGA representative at the EuroGeographics General Assembly and the fallowing 12th European Forum for Geography and Statistics (EFGS) conference taking place in Manchester, United Kingdom in October 2019.
C.2. National Reference Infrastructure - Module for transformation of the coordinates	Training in connection to the contract SRB-REMP-8486F-Sh-G-18-110	4 days training for 8 participants 1 day training for 15 participants	Livona representatives in period February 4-9, 2019 held Trimble advanced positioning training for TPP – RTN as part of contract execution.
A1.5.1. Consultant for verification and analysis and model development (international consultant)	Training in connection to the contract SRB-REMP-8486F-IC-CS-16-045	2 days online training for 13 participants 5 days training for 13 participants	During June 2019, international consultant for data analysis and modeling provided a 2-day online training in use of SPSS software which 13 trainees from RGA went through on June 20 th and 21 st . During the week of June 24 th through 28 th the consultant conducted a training consisting of lectures and labs on basics of development of mass property valuation models in the RGA premises.