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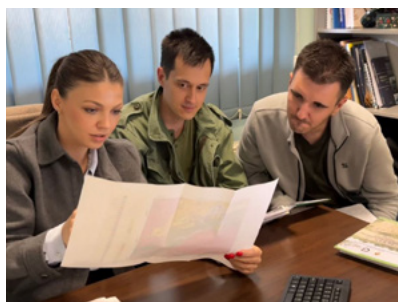
No. 2
September 2025

Newsletter

of the project Innovation of Geological Information Systems
in Bosnia and Herzegovina



Project duration:	01/2023–12/2027
Project implementer:	Czech Geological Survey (CGS)
Project partners:	Geological Survey of Federation of Bosnia and Herzegovina (FZZG), Geological Survey of the Republic of Srpska (RZZGI)
Source of funding:	Czech Development Agency (CDA)



<https://cgs.gov.cz/en/projects/682800-gis-bih>



Dear readers,

It is my great pleasure to introduce the second issue of our project newsletter, "Innovation of Geological Information Systems in Bosnia and Herzegovina". Over the past year, we have made significant progress in both technical development and capacity building across our partner institutions. In this issue, we will introduce you to important events and activities we have managed to implement.

An important change was the decision by project management to extend the project until 2027, along with the necessary adjustments to the plan for the individual stages of work. This was mainly due to public tenders taking much longer than expected. This change provides enough time for the planned implementation.

Work on the activity dedicated to designing an innovative information system continued. The processing of metadata builds directly on the outcomes of the Data and Metadata Management workshop held in December 2024. Preparations are also underway for the implementation of the data management strategy. The processing of archival documents also continues, with the analysis of the proposed solution and the preparation of documentation for programmers now underway.

The purchased technical infrastructure delivered to the Geological Survey of the Republic of Srpska (RZZGI) and the Geological Survey of the Federation of Bosnia and Herzegovina (FZZG) was put into operation. The implementation of this modern IT infrastructure took place online via remote access and directly at both workplaces in Zvornik and Sarajevo by CGS experts during missions in November 2024, January and June 2025. This crucial upgrade is a cornerstone of the project's objectives, enabling the secure and efficient management of national geological data.

The tender for the purchase of Esri GIS technology (provided by ČRA) was completed and a contract was signed with the supplier. Preparations for installation are underway and the implementation plan is being discussed with the supplier. Following the completion of the tender for metadata catalogue technology (provided by ČGS), the system is being tested and fine-tuned in a test environment.



FOREWORD



Workshops and training have been central to our efforts. Our Data Management Workshop in Prague equipped colleagues with best practices, while the Drupal and PostgreSQL Administration course provided key technical skills. These targeted trainings directly support our goal of ensuring the sustainable, long-term operation of the new geological information systems. More technical certified courses are planned for the second half of the year. As the individual components were being implemented, local experts were trained in how to use the new technology. The timing was adjusted so that there was as little time as possible between the courses and putting the knowledge into practice.

We strengthened academic and professional links by organizing lectures at universities Tuzla, Banja Luka, and Travnik in autumn 2024, inspiring students to pursue careers in geology. At the same time, joint student internships in the summer of 2025 bridged theory and practice, showcasing how hands-on experience can inspire the next generation of geologists and offering them work opportunities at the geological surveys. The internship for young employees from both partner organizations at the CGS in Prague was more focused on supporting their professional education with the help of experts from the CGS.

Information about the progress of the project and partial results is being published on traditional web platforms and social media. The presentation event in Banja Luka on 9–11 September 2025 is focused on presenting the main objectives and results of the project to date and informing and, in particular, engaging representatives of relevant government entities and universities in Bosnia. This also includes dedicated workshops for working teams.

In March 2025, representatives of the partners attended a meeting of the Spatial Information Expert Group at EuroGeoSurveys in Prague (SIEG). Representatives of both geological surveys from Bosnia and Herzegovina were accepted as members of this expert group. Membership is extremely beneficial, as members have access to information about EuroGeoSurveys strategy, future plans, current and future activities, and upcoming projects. As part of the team, they have access to shared knowledge and provide information from their information systems to the European Geological Data Infrastructure (EGDI).

Our work is not just about systems and technology – it is about building partnerships, sharing knowledge, and ensuring that geological data is managed responsibly for the benefit of society and future generations. I would like to thank all our partners, colleagues, and students for their commitment and enthusiasm, and I look forward to continuing this journey together.

Dana Čápková
Project implementer



Strengthening geological education in Bosnia and Herzegovina

From November 5th to 7th 2024, the Czech Geological Survey (CGS) delivered a series of lectures at several Bosnian universities, including the University of Tuzla, the University of Banja Luka, and the University of Travnik.

The event was organized in close cooperation with the Geological Survey of the Federation of Bosnia and Herzegovina (FZZG) and the Geological Survey of the Republic of Srpska (RZZGI).



A team from CGS, composed of Jakub Kryl, Jan Jelének, Ondřej Švagera, and Lucie Koucká, introduced the audience to the latest technologies used in geology, **including remote sensing methods, GIS applications, and 3D modeling.**

The main goal was **to inspire students to pursue careers in geology and to strengthen cooperation** between Bosnian universities and geological surveys.

The lectures attracted a broad audience, including not only university students but also pupils from a technical secondary school in Banja Luka and representatives of the professional community. «

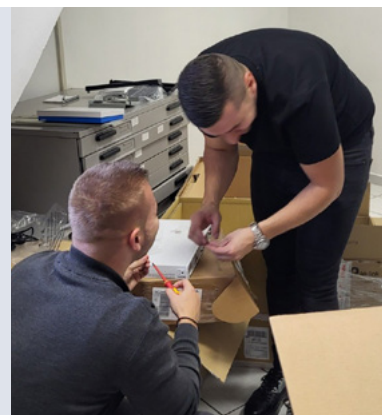


Implementation Mission in Zvornik

The Implementation Mission in Zvornik took place on November 13th–14th, 2024, focusing on the installation and initial configuration of new IT equipment for the Geological Survey of the Republic of Srpska (RZZGI). The primary goal was to establish a robust and secure IT infrastructure.

Key activities included preparing the server room with proper cooling and network connectivity, followed by the installation and interconnection of critical hardware such as servers, storage systems, firewalls, and switches.

The mission also featured basic training for RZZGI staff on essential IT management tasks. These sessions covered Active Directory user management, fundamental VMware administration, and basic operations on the ST1 data storage system. **This upgrade significantly enhances RZZGI's capacity to manage geological data and support future development.** «





Data Management Workshop

From December 10th to 12th 2024, the CGS hosted a workshop in Prague for colleagues from the Geological Survey of the Federation of Bosnia and Herzegovina and the Geological Survey of the Republic of Srpska. The event focused on enhancing data management and metadata practices within their organizations.



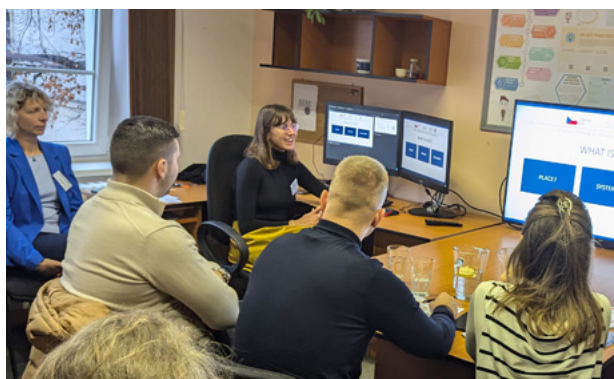
The first day began with the CGS team presenting the project's current status and the structure of their institution. This was followed by a tour of key CGS departments, including the publishing house, library, collections, and labs for remote sensing and 3D modeling. Afterwards, the workshop shifted to its core topic: the principles of organizing a central data warehouse (CDW). Participants engaged in a live simulation of a project data management workflow.

The second day was dedicated to metadata. The sessions focused on the practical management of a local metadata catalog and its use for both internal needs and external reporting obligations within Bosnia

and Herzegovina and towards the European Union. The broader context of European data initiatives (INSPIRE, Open Data, EGD, etc.) and other relevant standards was also addressed.

Proper metadata management ensures that data remains discoverable, standardized, and usable for both local and international stakeholders.

This training was strategically timed to correspond with the recent installation of new IT infrastructure in both geological surveys. The attendees, who are directly responsible for data management, are now well-equipped to leverage this knowledge to establish robust and effective data warehouses within their respective organizations. «



Implementation mission in Sarajevo

On January 14th–15th, 2025, a team from the Czech Geological Survey conducted an implementation mission in Sarajevo. The primary goal was to install and configure new IT equipment for the Geological Survey of the Federation of Bosnia and Herzegovina (FZZG).

The mission successfully established a robust and secure IT infrastructure, which will **significantly enhance FZZG's capacity to manage geological data and support future development.** <<



Training for employees of the geological surveys of Bosnia and Herzegovina



From April 2nd to 4th, 2025, four key experts from Bosnia and Herzegovina attended an intensive training session at the Czech Geological Survey in Klárov.

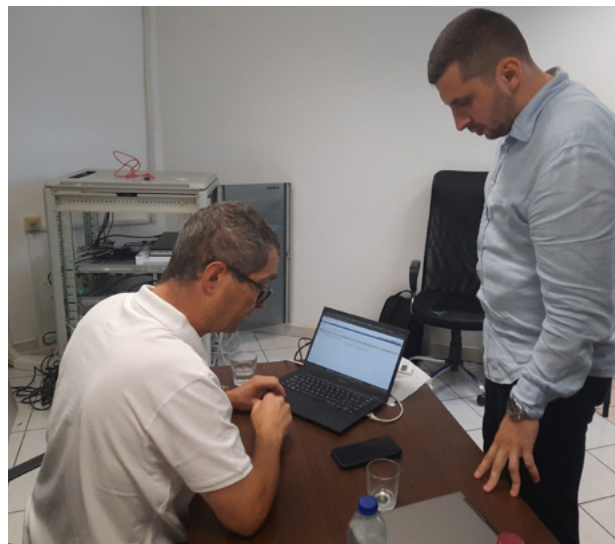
The participants – two from the Geological Survey of the Federation of Bosnia and Herzegovina (FZZG) and two from the Geological Survey of the Republika Srpska (RZZGI) – are responsible for the future implementation and management of their modernized information systems.

led by external contractors, the three-day course covered crucial modernization topics. The first day focused on the Drupal content management system for websites. The following two days were dedicated to PostgreSQL database administration.

The content of this training was specifically designed to align with the project's goals, with a strong emphasis on ensuring the long-term sustainability of the new systems even after the project's completion. <<



CGS WORKING MISSION TO BOSNIA AND HERZEGOVINA: support for the modernisation of geological systems



On 3rd–5th June, 2025, CGS specialists Václav Pospíšil and Richard Binko visited partner institutions in Sarajevo and Zvornik as part of the project Innovation of Geological Information Systems in Bosnia and Herzegovina, supported by the Czech Development Agency (CDA).

The aim of the mission was to solve technical problems related to the installation of information infrastructure at both partner institutions.

The team addressed firewall configuration, VPN and access point settings, as well as system resilience testing. The possibilities of deploying the ArcGIS Enter-

prise platform for spatial data management were also discussed.

This platform would enable advanced mapping, data sharing, and collaboration between geological institutions.

The project contributes to strengthening the professional capacity of both geological surveys and lays the foundation for long-term sustainable management and access to geological data in Bosnia and Herzegovina, in line with the UN 2030 Agenda for Sustainable Development. «

Geological surveys of Bosnia and Herzegovina now on Facebook!

facebook

The Geological Survey of the Federation of Bosnia and Herzegovina (FZZG) and the Geological Survey of the Republic of Srpska (RZZGI) have launched their official profiles on Facebook!

This step is part of a broader effort by both institutions to improve access to geological information and strengthen communication with both the professional and lay public.

The Facebook pages of both geological surveys will offer regular news not only about this project, event announcements, and a behind-the-scenes

look at geological research, including information about activities for the public.

Follow them on Facebook:



Geological Survey
of Federation of Bosnia
and Herzegovina



Geological Survey
of the Republic of Srpska



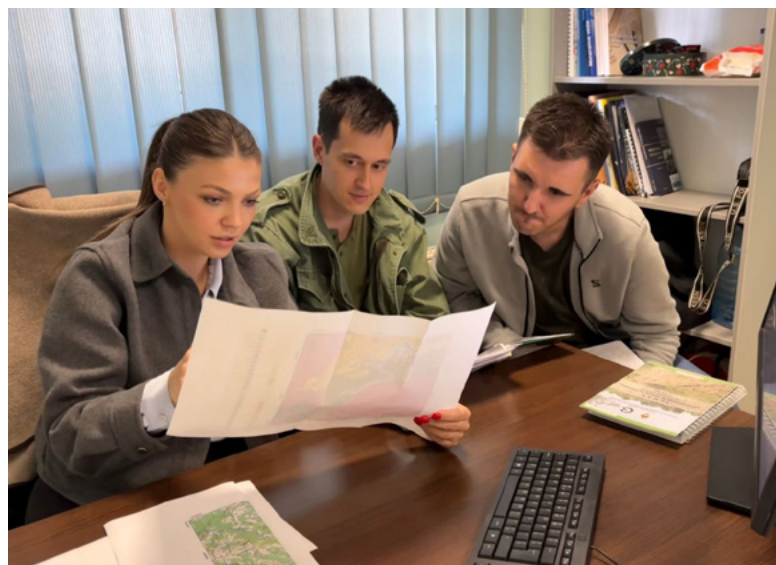
JOINT STUDENT INTERNSHIPS WITHIN THE PROJECT

Innovation of Geological Information Systems in Bosnia and Herzegovina

In the summer of 2025, two series of professional internships brought together academia and hands-on experience in geology as part of the *Innovation of Geological Information Systems in BiH* project.

Internship at RZZGI

At the Geological Survey of the Republic of Srpska (RZZGI), Marko Majstorović and Nikola Lazić from the Faculty of Mining in Prijedor (University of Banja Luka) took part in a program focused on archiving and digitizing technical documentation, creating maps in ArcGIS (geological, topographic, and situational layers), and performing field measurements of physicochemical water parameters. The program included a visit to the "Vivia" water bottling plant to learn about the collection, quality control, and bottling of groundwater, a trip to the Vitinički Kiseljak mineral springs, and participation in fieldwork for the Geochemical Atlas of the Republic of Srpska involving the collection and processing of sediment samples.





Internship at FZZG

At the Geological Survey of Federation of Bosnia and Herzegovina (FZZG), Amina Junuzović and Aldiana Skula from the Faculty of Mining, Geology, and Civil Engineering at the University of Tuzla completed a ten-day internship, rotating through all five departments of the Institute. In addition to in-office activities, they joined field excursions to key locations, including the Curine Njive landslide, the "Vrtlište" brown coal surface mine, a limestone quarry in Hadžići, the "Kapa" water source, an

abandoned dolomite quarry "Zovik," and several thermal water springs.

Both internships provided the students with a comprehensive insight into modern geological work, combining theory and practice, geoinformation technologies, and field methods, contributing to their professional and career development. At the end of the program, all participants were awarded certificates confirming the successful completion of their internships. «



The CGS supported the education of Bosnian colleagues through professional internships

In August 2025, the Czech Geological Survey (CGS) hosted two professional internships for young female employees from partner institutions in Bosnia and Herzegovina. These internships took place as part of the [Innovation of Geological Information Systems in Bosnia and Herzegovina](#) project, funded by the Czech Development Agency (ČRA).

Selma Čatić from the Geological Survey of Bosnia and Herzegovina (FZZG) worked under the supervision of Tereza Nemeškalová on the processing of petrological and geochemical data. Marija Milanović from the Geological Survey of the Republic of Srpska (RZZGI) gained practical experience in the field of hydrogeology under the supervision of Jaroslav Řihošek.

Both colleagues gained not only new professional skills, but also valuable knowledge from the everyday practice of the CGS. At the same time, the ties between Czech and Bosnian geologists were further strengthened.

Thanks go to all colleagues who participated in the internship and shared their experience with the participants. «



Check out the first issue of our project newsletter!

In the first edition, you will find:

- An overview of the main objectives and expected results
- A summary of key achievements and milestones
- The most interesting highlights from recent meetings, missions, and events

Scan the QR code to read the full issue.





The annual presentation of the project took place in September 2025 in Banja Luka, attended by experts and politicians. The results of the cooperation to date and the future direction of the project were presented. The event was organized by the Geological Survey of the Republic of Srpska in cooperation with the CGS and FZZG.

The meeting in Banja Luka confirmed the successful continuation of the project

The annual presentation of the project [Innovation of Geological Information Systems in Bosnia and Herzegovina](#) took place in the northern Bosnian city of Banja Luka on September 9-11, 2025. The event, which attracted considerable interest from the media and pro-

fessional public, was organized by the Geological Survey of the Republic of Srpska (RZZGI) in cooperation with the Czech Geological Survey and the Geological Survey of the Federation of Bosnia and Herzegovina (FZZG).

Continued on page 12





Continued from page 11

Among the guests were the directors of all three geological surveys, representatives of the Czech Development Agency (ČRA), the Federal Ministry of Energy, Mining and Industry of Bosnia and Herzegovina, the Federal Archives of Bosnia and Herzegovina, and representatives of the academic sector. The opening ceremony was addressed by Petar Đokić, Minister of Energy and Mining of the Republic of Srpska, who emphasized in his speech the key role of geological surveys for the economic growth and stability of every country.

Zdeněk Venera, Director of the Czech Geological Survey, then pointed out the necessity of qualified professional support, accessibility of geological data, and functioning high-quality geological institutions as fundamental pillars for the prosperity and sustainable development of society. Another opening speaker was Zbyněk Wojkowski from the Czech Development Agency, who emphasized the key role of international cooperation in this field.

The initial presentation of the project and an overview of its progress to date were given by the project's senior manager, Dana Čápková. The following parts of the program featured presentations of the current results and progress in the individual thematic areas of the project. The program also included a meeting of the Advisory Committee, which discussed fundamental issues important for the further successful course and possible continuation of the project. This was followed by expert workshops on metadata, data models, digital archival documentation, and PR activities.

The project, implemented by the Czech Geological Survey, is funded by Czech Development Cooperation through the Czech Development Agency. It is planned for the period 2023–2027 and focuses on the long-term sustainable and effective use of geological data and knowledge in Bosnia and Herzegovina. «



[Report
on national television](#)



Newsletter of the project Innovation of Geological Information Systems in Bosnia and Herzegovina 2/2025

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Website: <https://cgs.gov.cz/en/projects/682800-gis-bih>

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