| SECW 2026 | SARAJEVSKA SEDMICA ENERGIJE I KLIME |
21 – 25. septembar 2026.

Innovations in Geological Information Systems with a Focus on Geothermal Energy

Maida Zejnić
Geological Survey of Federation of Bosnia and Herzegovina

Sarajevo, september 2026.

e-mail: maida.zejnic@fzzg.gov.ba

WHAT IF WE COULD SEE, CONNECT AND USE THE GEOLOGICAL KNOWLEDGE OF BOSNIA AND HERZEGOVINA?

- **ONE DIGITAL ENVIRONMENT!**
- **FOUR CONNECTED TOOLS!**
- **ONE KNOWLEDGE BASE!**

INNOVATION GEOLOGICAL INFORMATION SYSTEMS IN BOSNIA AND HERZEGOVINA

BEFORE

- Scattered datasets
- Maps in different formats
- Historical documents
- Data in different systems
- Difficult to find and connect

AFTER

- DISCOVER
- VISUALIZE
- PRESERVE
- CONNECT
- USE

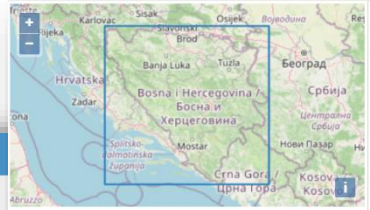
FROM GEOLOGICAL DATA TO DECISION-READY KNOWLEDGE

THE DATA ALREADY EXISTS.
THE CHALLENGE IS CONNECTING IT.

Project Component	How it supports geothermal exploration
FIND? **Metadata Catalogue**	Helps discover and understand existing data relevant to geothermal exploration – geological maps, boreholes, hydrogeological, geophysical and temperature data.
SEE? **WebGIS Portal**	Enables spatial visualisation and integration of different geological datasets needed for assessing geothermal potential.
UNDERSTAND? **Digital Archive**	Preserves historical geological documentation, reports, studies and maps that may contain valuable information for geothermal exploration.
SHARE? **Website**	Provides public access to information and communicates geological data and project results to institutions, researchers, investors and the general public.

Metadata Catalogue – Finding the Data

FZZG Katalog metapodataka ? Pomoć Cookies O aplikaciji



Osnovno / Proširenо metadata

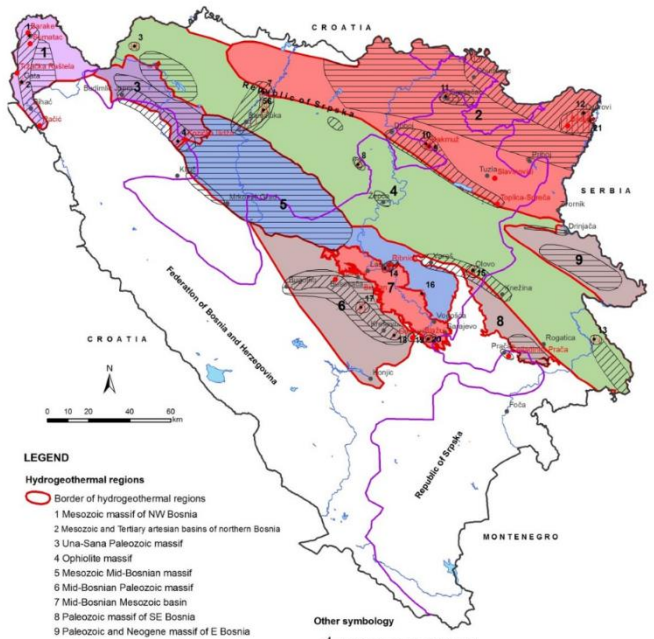
Map of litostratigraphic distribution of aquifers along deepth, hydrogeothermal regions and perspective geothermal zones of Bosnia and Herzegovina

Jezik metapodatka

Sažetak

This document provides an overview of geothermal energy research, development, and utilization in Bosnia and Herzegovina during the period 2010–2014. It presents the distribution of hydrogeothermal regions, geothermal reservoirs, principal aquifers, the energy potential of geothermal resources, and their level of utilization. The document also includes information on the direct use of geothermal energy in spas, building heating, and ground-source heat pump systems, as well as an overview of the most significant exploration activities, drilling operations, and the potential for the sustainable development of geothermal energy in Bosnia and Herzegovina.

Pregled



Lithostratigraphic distribution	Hydrogeothermal regions	Number of aquifers through depth
Paleozoic limestones, dolomites, marbles and quartzites	8, 6	2 aquifers
Paleozoic and Triassic limestones and dolomites	4	2 separated aquifers
Paleozoic, Triassic and Jurassic limestones	5	3 separated aquifers
Paleozoic, Triassic, Jurassic and Cretaceous limestones and dolomites	1	4 aquifers
Paleozoic,Triassic, Jurassic, Cretaceous and Tertiary limestones, dolomites and clastites	2, 7	>5 separated aquifers
Triassic, Jurassic and Cretaceous limestones and dolomites	3	3 separated aquifers

Tip	skup podataka
Veze	Official web site of Geological Survey of Federation of Bosnia and Herzegovina
Identifikator	
Jezik	Bosanski, Engleski
Kategorija teme	Okoliš Geonaučne informacije Unutrašnje vode
Ključne riječi	***GEMET - INSPIRE themes, version 1.0:*** ***Spatial scope:*** National ***EGDI Keyword Thesaurus:*** Hydrogeothermal hydrogeothermal regions ***European Geoscience Registry - Projects:*** EGDI ***HVD category:*** Hydrography Geology Energy resources Mineral resources ***Slobodno:*** geothermal resources energy aquifers hydrogeothermal BIH hydrogeology EGDI
Ograničavajući okvir	15.729, 42.555, 19.624, 45.276
Regija	Bosnia and Herzegovina
Datum	kreacija: 2015 završeno
Prostorni prikaz	vektor, tekstualna tabela, grid

Svrha

To present the spatial distribution of hydrogeothermal regions, aquifers by depth, and prospective geothermal zones in support of the exploration, planning, and sustainable utilization of geothermal resources in Bosnia and Herzegovina.

Kontakt informacije	Geological Survey of the FBiH Ferid Skopljak Ustanička 11, Ilidža, Sarajevo, 71210, Bosna i Hercegovina https://fzzg.gov.ba tel: +38733483367 email: ferid.skopljak@fzzg.gov.ba Uloga: **čuvar**

Kvalitet podataka

Porijeklo

The map was produced based on the results of long-term geological, hydrogeological, and geothermal investigations conducted in Bosnia and Herzegovina. The compilation uses data collected from oil and gas exploration, exploratory drilling, geological, geophysical, seismological, and hydrogeological investigations, as well as groundwater and gas analyses carried out from the late 19th century to 2014. The spatial interpretation of hydrogeothermal regions, aquifers, and prospective geothermal zones is based on the synthesis of existing research, published scientific papers, monographs, and the results of long-term regional investigations conducted by the Geological Survey and other relevant institutions.

Prostorna rezolucija	Ekvivalentna razmjera: 1: 300000

Ograničenja

Uvjeti pristupa i korištenja

Use of and access to the data are governed by the applicable regulations and practices of the Geological Survey of the Federation of Bosnia and Herzegovina.

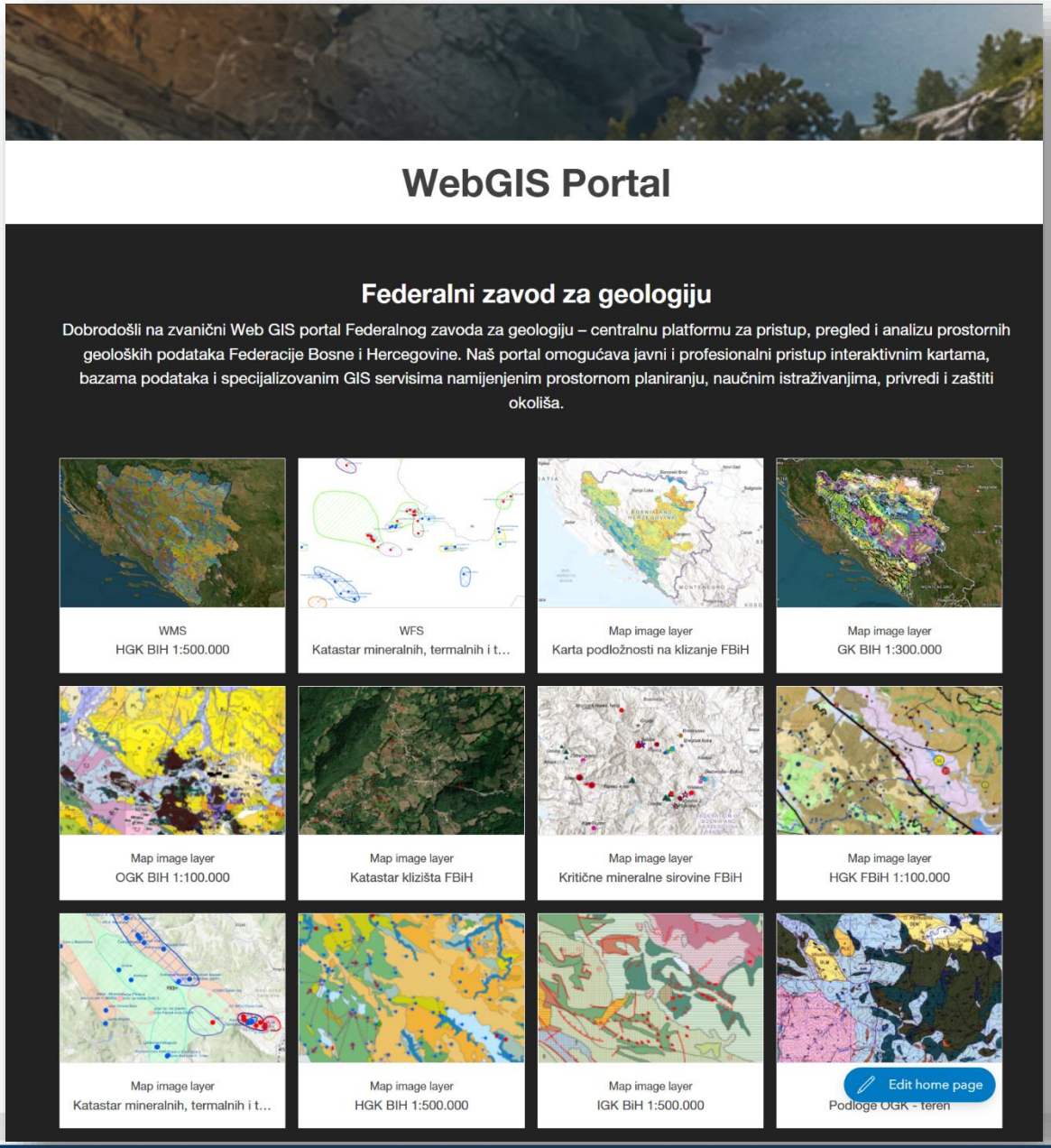
Ograničenja javnog pristupa	Vector data have restricted use and are provided upon request.

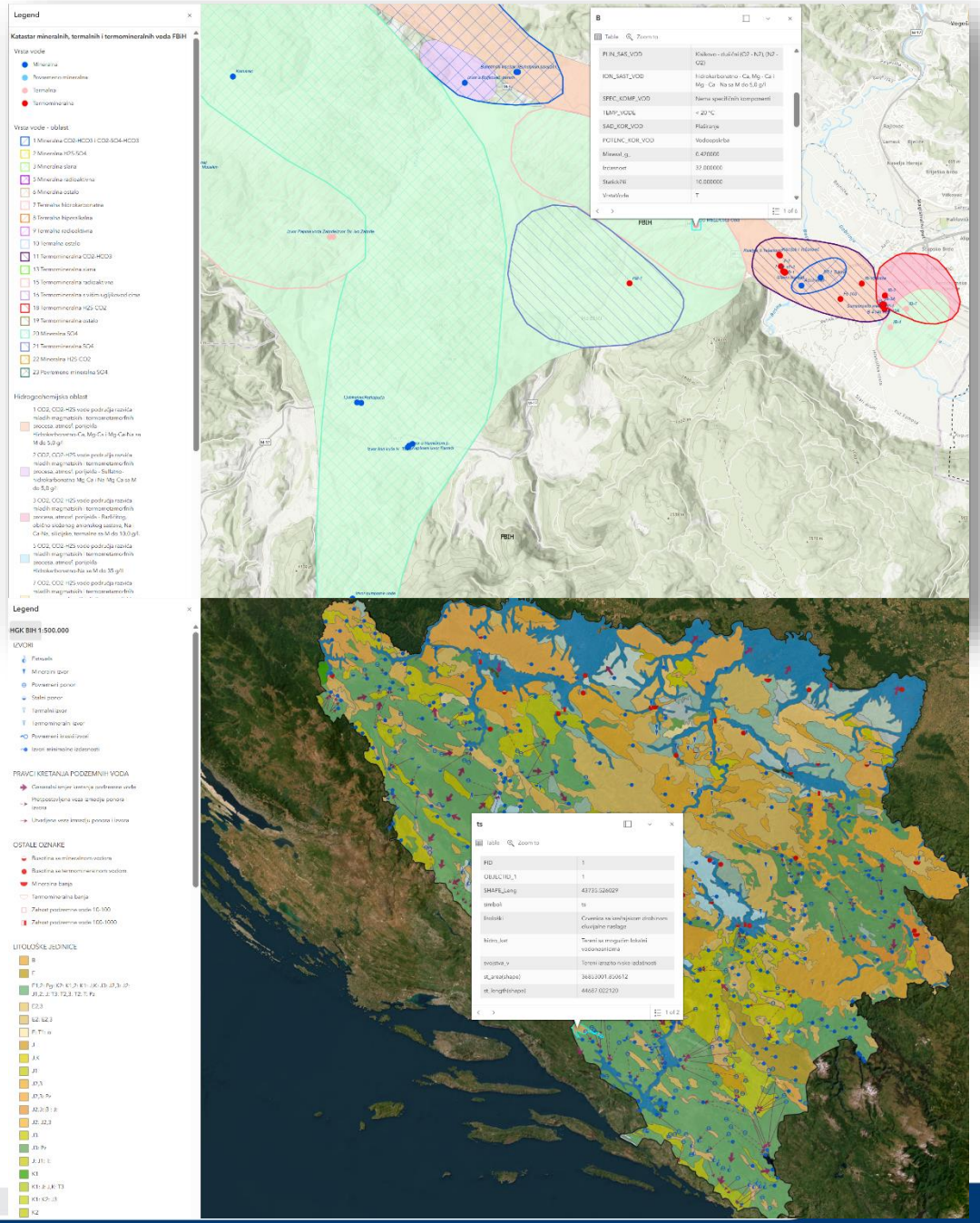
Metapodaci o metapodacima

Identifikator metapodatka	6a69a88c-20ac-49a8-b60a-32f9c0a010e92
Kontakt za metapodatke	Geological Survey of the FBiH Maida Zejnic Ustanička 11, Ilidža, Sarajevo, 71210, Bosna i Hercegovina https://fzzg.gov.ba tel: +38733483368 email: maida.zejnic@fzzg.gov.ba Uloga: **kontakt tačka**
Datum ažuriranja	2026-08-05

Povezani resurs

WebGIS Portal – From Data to Spatial Information





Digital Archive – Preserving Geological Knowledge

Bosnian archive

Coder edit | New record | Edited by me | All records | Waiting for approval | Approved | Deleted | Show all edited | Manage roles

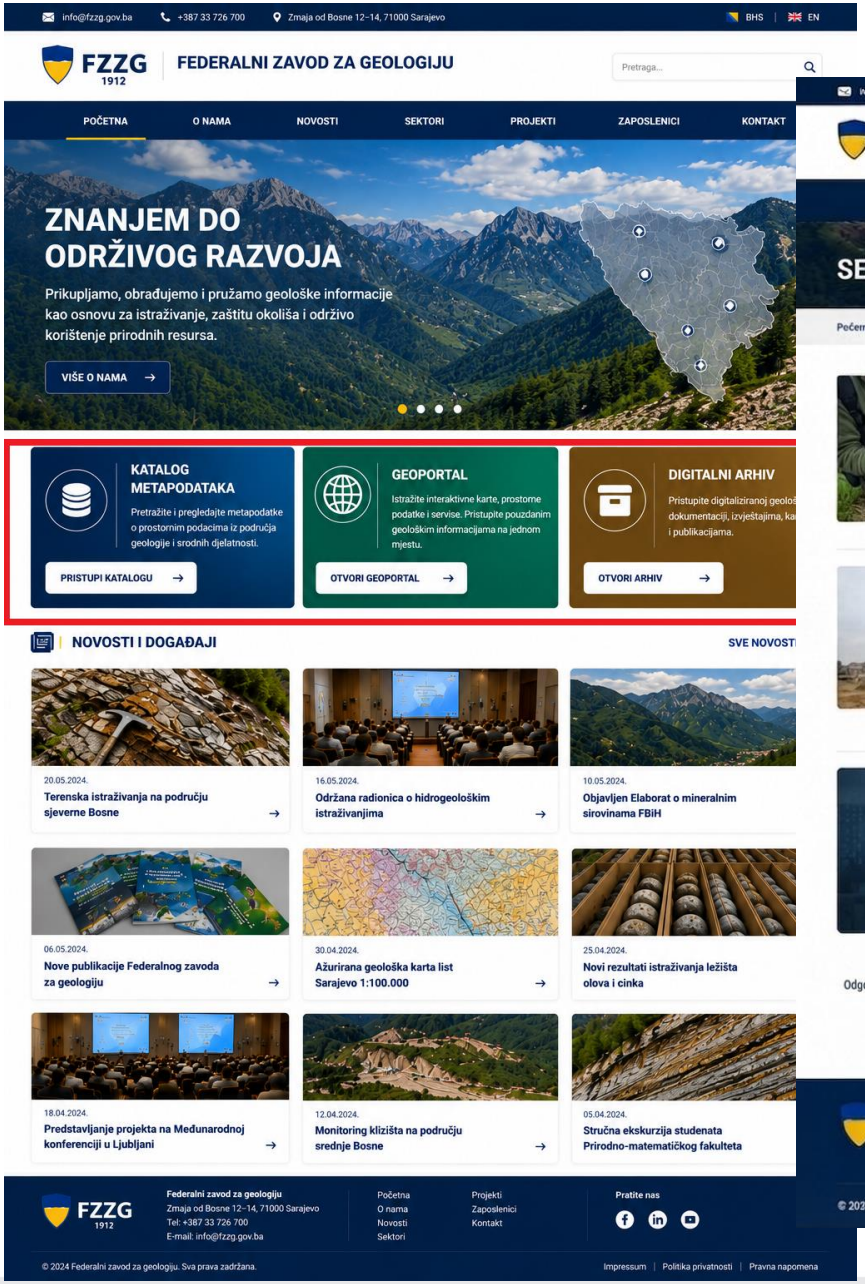
Edit query

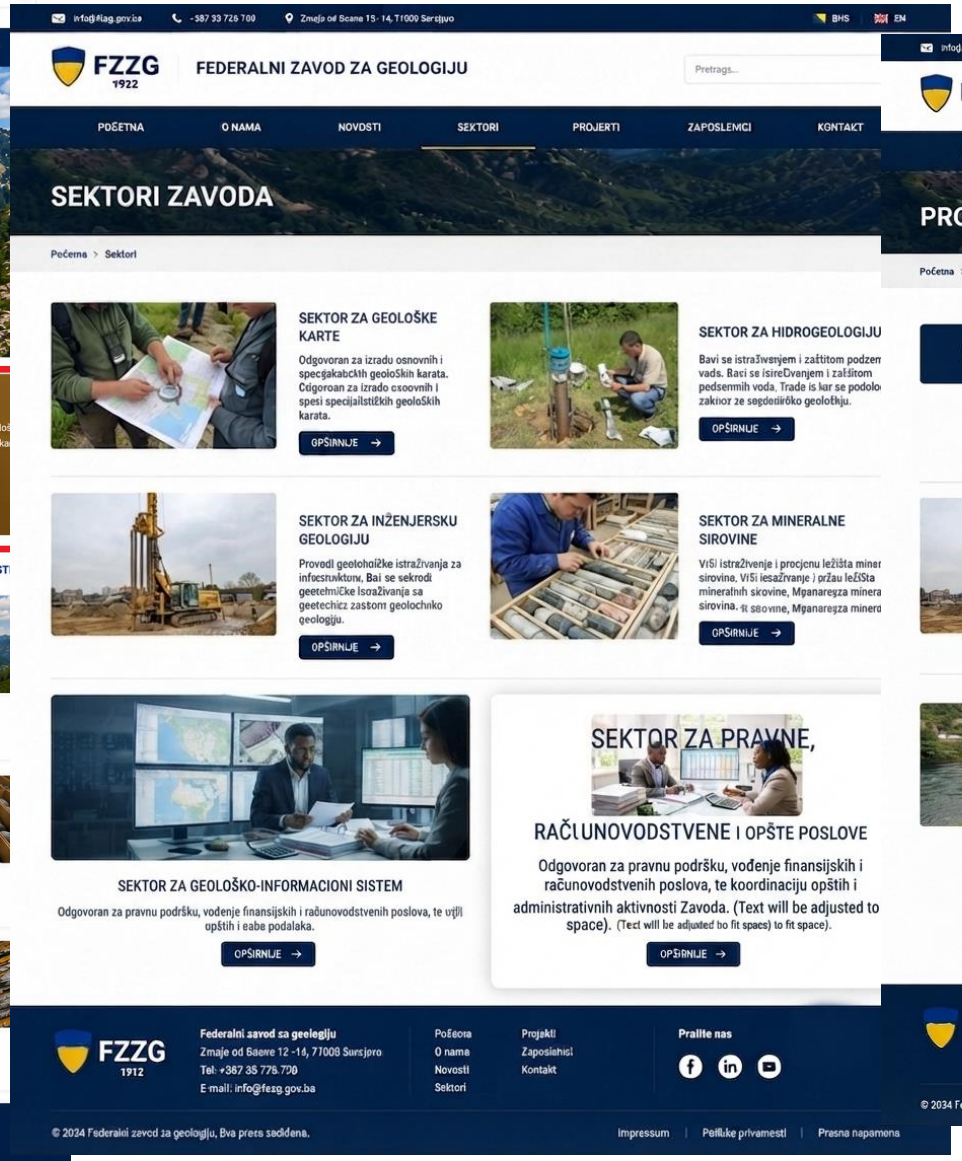
Total 19 records (2 pages)

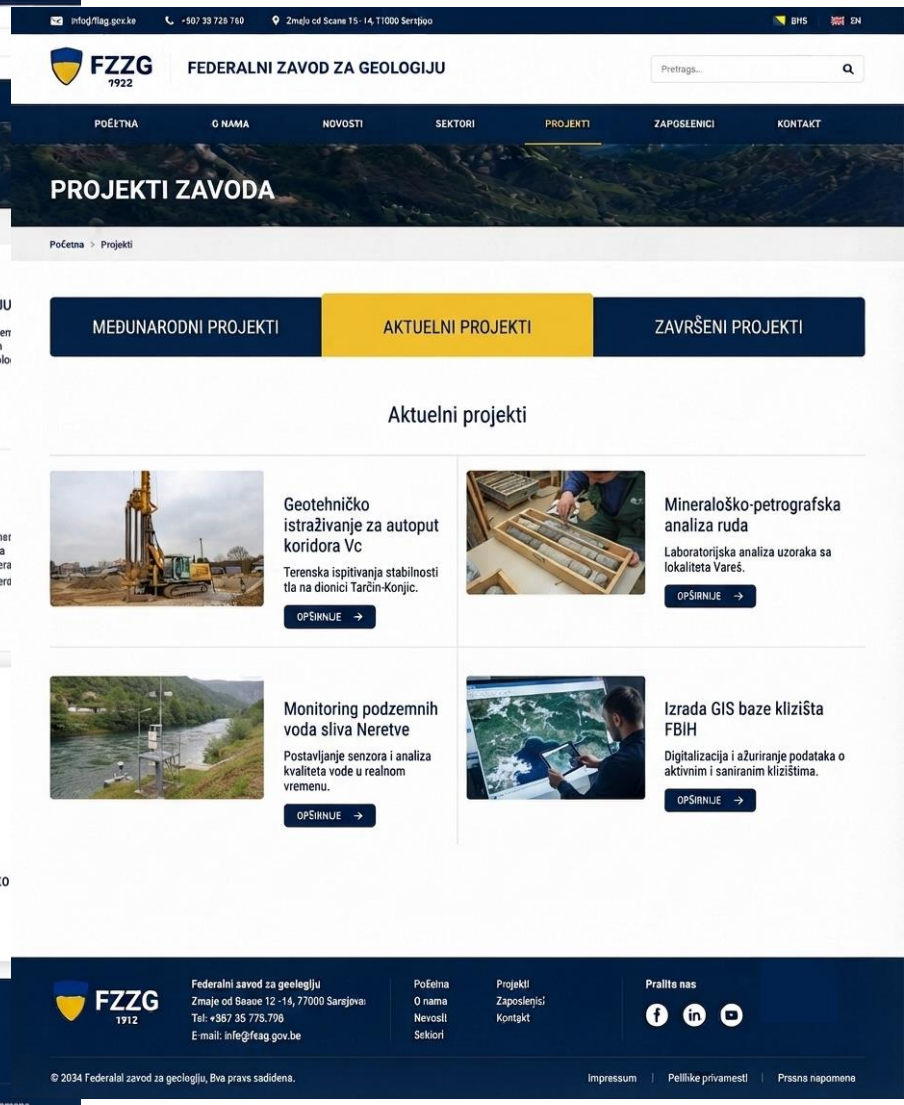
1 2 →

Record number	Name	Type	Year	Scan	Detail
261	Projekat detaljnog istraživanja bakarne mineralizacije Čavka-Teslić-Zavidovići-Maglaj-Ozren (1970-1972)	Research	1970	No	≡
263	Projekat detaljnih geoloških istraživanja krečnjaka na ležištu "Krkojevci II", kod Sanskog Mosta u toku 1986.godine	Research	1986	No	≡
265	Regionalna geološka istraživanja mineralogenog područja Bosanske Krajine	Research	1972	No	≡
266	Projekat III faze I podfaze istraživanja uglja na lokalnosti Ugljevik Istok za 1984. Godinu	Research	1984	No	≡
267	Projekat detaljnog geološkog istraživanja tehničkog građevinskog kamena u ležištu dolomita "Hajrat" kod Slapnice Velika Kladuša	Research	1985	No	≡
260	Projekat detaljnih geoloških istraživanja Pb, Zn mineralzacije na lokalitetima Marevo, Kozja Luka i Lisičine u periodu od 1970-1972. godine	Research	1970	No	≡
278	Projektni elaborat o regionalnim geološkim istraživanjima uglja u kamengradskom basenu u 1983.	Research	1983	No	≡
903	Projekat detaljnih geoloških istraživanja opekarskih glina na ležištu "Podnovlje" kod Doboja	Project	2006	No	≡
803	Projekat detaljnih geoloških istraživanja tehničkog građevinskog kamena - rožnaca na lokalitetu "Pavlov brijeg" kod Banja Luke	Project	2018	Yes	≡
903	Projekat detaljnih geoloških istraživanja tehničkog građevinskog kamena-krečnjaka na lokalitetu "Karaula" kod Banja Luke	Project	2018	Yes	≡
903	Program regionalnih geoloških istraživanja mrkog uglja na lokalitetu Bukova Kosa i Marinje u Lješljanskom ugljonosnom basenu 1984.god.	Program	1984	Yes	≡
246	Projekat detaljnih geoloških istraživanja tehničkog građevinskog kamena - dolomita na lokalitetu "Bijela Stijena" kod Banja Luke	Project	2007	Yes	≡

WEBsite – From Information to Communication







IMAGINE A GEOTHERMAL PROJECT IN BiH?

01
FIND
Geological data

02
LOCATE
Boreholes & spatial data

03
CONNECT
Hydrogeology + geology + geophysics

04
EXPLORE
Temperature information

05
UNDERSTAND
Subsurface conditions

06
PLAN
Further investigation

FROM INFORMATION TO DECISION SUPPORT!

KNOWLEDGE SHOULD BE ACCESSIBLE:

 **Institutions**

 **Researchers**

 **Investors**

 **Professionals**

 **Public**

ONE KNOWLEDGE BASE — MANY USERS!

METADATA CATALOGUE

Find the data

GEOPORTAL

See and analyse the data

DIGITAL ARCHIVE

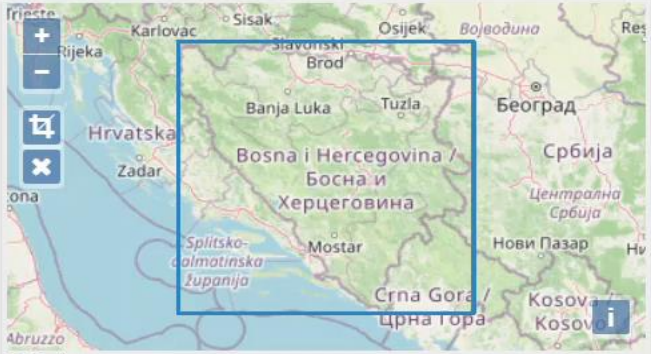
Preserve and reuse the knowledge

WEB PORTAL

Find/share the information

- BETTER ACCESS TO GEOLOGICAL INFORMATION
- BETTER UNDERSTANDING OF THE SUBSURFACE
- SUPPORT FOR GEOTHERMAL EXPLORATION & PLANNING
- SUSTAINABLE ENERGY DEVELOPMENT

Katalog metapodataka FZZG
Ask Gemini
app.fzzg.gov.ba/metapodaci/
Outlook GeoNetSee-google... ArcGIS Enterprise web site FZZG DIGITALNI ARHIV Katalog metapodat... EGDI Katalog metapodat... GeoNetSee Login – Česká geolo... All Bookmarks



Tekst

pretraži...

Svuda Naslov Naslov + Opis

Vrsta resursa

odaberi

INSPIRE teme

odaberi

FZZG teme

odaberi

Supervizor podataka

odaberi

Prostorni obuhvat

odaberi

INSPIRE EGDI

Poredaj po

posljednje ažuriranje silazno

Metapodaci 22

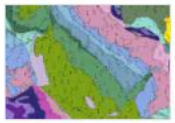
Digitalni model terena klizišta Mladoševica u Novom Šeheru



Model pruža detaljan prikaz prostorne morfologije terena i karakteristika područja zahvaćenog klizanjem. Podaci omogućavaju analizu geometrije, obima i morfoloških elemenata klizišta, kao i praćenje prostornih promjena. Resurs je namijenjen za potrebe geoloških i geotehničkih istraživanja, procjenu hazarda i rizika od klizanja, planiranje sanacionih aktivnosti te podršku upravljanju prostorom i donošenju stručnih odluka.

Kontakt za metapodatke: Maida Zejnic, Datum ažuriranja: 2026-08-05

Elementi pada sloja (OGK 1:100.000)



Skup podataka sadrži elemente pada sloja preuzete iz Osnovne geološke karte Bosne i Hercegovine u mjerilu 1:100.000 (OGK). Podaci prikazuju prostorni položaj i orijentaciju geoloških slojeva, uključujući smjer pružanja i kut pada slojeva. Elementi pada sloja predstavljaju sastavni dio geološke dokumentacije OGK i služe za interpretaciju geološke građe i strukturnih odnosa terena te za potrebe geoloških i drugih stručnih analiza.

Kontakt za metapodatke: Maida Zejnic, Datum ažuriranja: 2026-09-07

Geološka karta Bosne i Hercegovine (1:300.000)



Geološka karta predstavlja sažetak geološkog sastava i tektonike terena Bosne i Hercegovine u mjerilu 1:300.000. Predstavlja stratigrafiju sastava Farenozoika (paleozoik od silura pa na dalje, mezozoik i kenozoik) praćen tektonikom i geološkom evolucijom. Obuhvata praktično sva dosadašnja saznanja o litofacijskom razvoju, debljini i rasprostranjenosti geoloških elemenata koji čine geološki sastav Bosne i Hercegovine. Zasniva se uglavnom na Osnovnoj geološkoj karti Bosne i Hercegovine u razmjeri 1:100.000 i...

Kontakt za metapodatke: Maida Zejnić, Datum ažuriranja: 2026-09-08

Geološke granice i tektonika (OGK 1:100.000)



Geološke granice i tektonika predstavljaju prostorni skup podataka izveden iz Osnovne geološke karte Bosne i Hercegovine u mjerilu 1:100.000 (OGK). Skup podataka obuhvata digitalizovane geološke i tektonske elemente prikazane na izvornoj kartografskoj dokumentaciji OGK. Geološke granice obuhvataju utvrđene, pokrivene, granice nesigurnog karaktera i prevrnute geološke granice, kao i erozione i tektonsko-erozione granice, koje su klasifikovane kao utvrđene i pokrivene. Tektonski

WE ARE NOT JUST DIGITIZING GEOLOGICAL DATA.

WE ARE CONNECTING KNOWLEDGE

AND MAKING THE SUBSURFACE MORE UNDERSTANDABLE.

FROM GEOLOGICAL INFORMATION TO BETTER DECISIONS.

Thank you for your attention!

INNOVATION OF GEOLOGICAL INFORMATION SYSTEMS IN BIH

Project partners:

Czech Development Agency (CzechAID)

Czech Geological Survey (CGS)

Geological Survey of the Federation of Bosnia and Herzegovina (FZZG)

Geological Survey of the Republic of Srpska (RZZGI)