REPUBLIC OF SLOVENIA
MINISTRY OF INFRASTRUCTURE

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YEAR 2018

BULLETIN
MINERAL RESOURCES
in Slovenia

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LEGEND

Energy resources
- Coal
- Geothermal energy source
- Oil and natural gas

Industrial minerals and rocks
- Bentonite
- Calcite
- Chalk
- Quartz sand
- Tuff
- Industrial dolomite
- Chert
- Ceramic (ball) clay
- Fire resistant clay

Materials for construction industry
- Brick clay
- Brick marl
- Natural stone - limestone
- Natural stone - tonalite
- Natural stone - other
- Limestone for lime and cement
- Cement marl

Construction materials – agregates
- Crushed stone - limestone
- Crushed stone - dolomite
- Crushed stone - metamorphic and magmatic rocks
- Gravel and sand

Mineral resources - other
- Sea salt

N
W E
S

0 10 20 30 40 km

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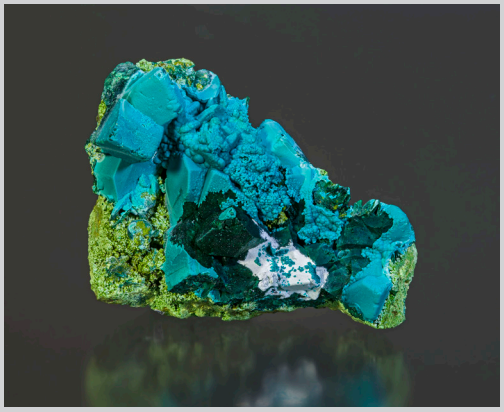
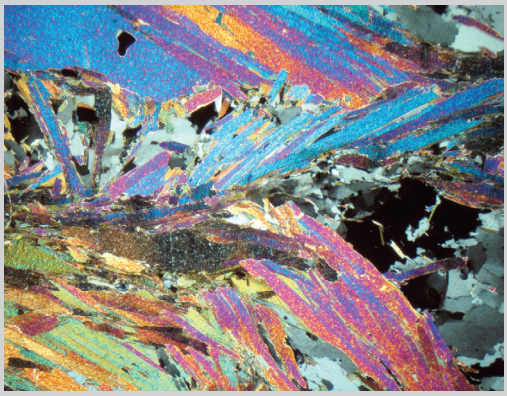
Digital cartography: Jože ŠTIH
Ljubljana, 2018

Podlaga: Digitalni model reliefa 90m, Void-filled seamless SRTM data V1, 2004, International Centre for Tropical Agricultura (CIAT), CGIAR-CSI SRTM 90m Database: http://srtm. csi.cgiar.org

FOREWORD





MINERAL RESOURCES IN SLOVENIA

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Europe is striving to achieve greater self-sufficiency in the field of mineral resources while also emphasizing the necessity to minimize negative impacts mineral exploitation can have on the environment. The mineral resources industry has been historically associated with environmental issues; however with knowledge, implementation of the latest technological improvements and higher environmental standards both goals can be achieved. Sustainable development in mineral resources is now the norm and has been achieved as a result of long term development, largely through various projects featuring international scientific collaboration.

There are many regions in Europe where any exploration and exploitation of mineral resources are hindered by legislative obstacles. These can be overcome with inter sectoral and multidisciplinary dialogue and exchange of knowledge. Collaboration of the scientific community with governmental stakeholders is crucial and is happening at all levels.

Slovenia with its modern and sophisticated system of "Mining Registry Book" is prepared for the new developments in exploration of mineral resources. We were in the first group of European countries to develop a modern knowledge base of mineral resources and share it on the publicly accessible web-based applications, developed in projects such as Minerals4EU and others. Currently Slovenian partners are through various projects of EIT RawMaterials helping to spread this knowledge in the region of South East Europe. The Geological Survey of Slovenia with Slovenian national building and civil engineering institute and University of Zagreb established Regional Center Adria with the intent to operate as a regional EIT RawMaterials knowledge, information and educational hub for this region.

Today exploration focuses on deposits that have been even in the recent past regarded as uneconomical to extract due to lower grades and/or greater depths of the ore bodies, or because they are secondary resources. Slovenia is increasingly active in the field of secondary resources which is also one of the pillars of smart specialization strategy of the country. There is a lot of potential in exploration of buried and blind deposits at greater depths in Slovenia. Well coordinated in-depth and extensive research of deeper crustal layers is utterly needed and hopefully the need for such focused geological investigations will soon be recognized also in our county.

The issues mentioned here and much more will be discussed during the 5th Slovenian geological congress to be held in Velenje between October 3rd and 5th 2018. The congress aims to bring together geoscientists, industry and decision makers. We expect the outcome of the congress will reconfirm willingness and commitment to build our development on knowledge and in full appreciation of our environment. Welcome to Velenje.

Ljubljana, September 2018

Miloš Bavec, Ph.D.
Director
Geological Survey of Slovenia

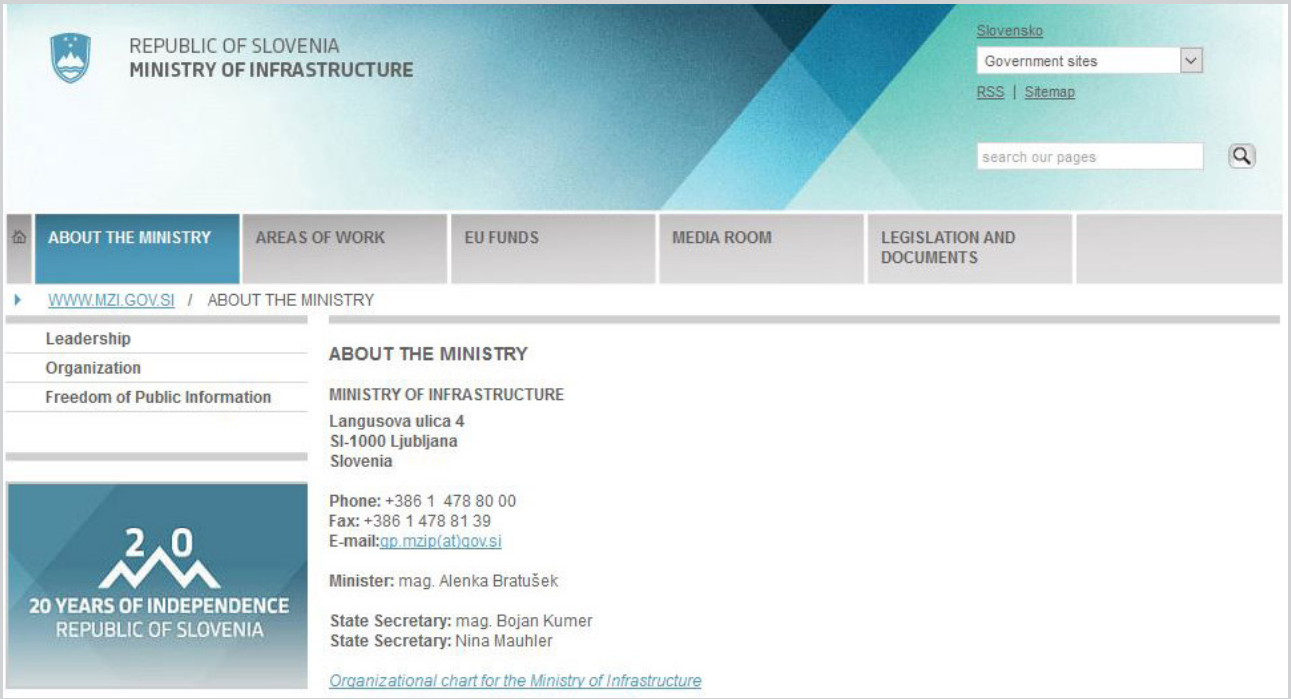
Cover photo by Simon Mozetič: Limestone quarry in Slovenia
Other photos from: Editor photo archive
Mineral data are up-dated to 2017

WORK OF THE UNIT FOR ENERGY SUPPLY (WITHIN MINISTRY OF INFRASTRUCTURE)

National Unit for Energy Supply (relevent for mining), organized within Energy Directorate at the Ministry of Infrastructure, implements various administrative, expert, coordinative, supervisory, and other tasks in the field of mineral management regarding exploration and explotation, including the remediation of degraded areas and in procedures of closing mines.

The main activities are:

- mining legislation development and administrative procedures according to Mining Act,
- issuing mineral exploration licenses and granting mining rights (concessions),
- preparing National Mining / Mineral Strategy,
- preparing expertise for spatial documents and issuing approvals for local spatial plans,
- updating a register of persons authorized in mining,
- monitoring of coal mine operatins and supervising closing works,
- monitoring the work of Inspectorate for energy and mining,
- performing tasks for "Commission for professional certification in mining",
- coordination of administrative procedures and projects coordination.



WORK PLAN OF GEOLOGICAL SURVEY OF SLOVENIA FOR MINISTRY OF INFRASTRUCTURE

According to Slovenian legislation, EU directives and needs of ministry responsible for mining (Ministry of Infrastructure - Energy Directorate / Unit for Energy Supply), basic starting points for annual GeoZS work program are defined.

For the needs of Unit for Energy Supply the work program performed by GeoZS is divided into the main sets of tasks:

- EXPERTISE
  - expertise for National Mining / Mineral Strategy and other implementing regulations,
  - expertise for spatial planning, supporting licensing procedures,
  - cooperation within EU activities regarding mineral resources.
- INFORMATION INFRASTRUCTURE
  - development and maintenance of the information systems "Collection of mining / mineral data" and "Mining Registry Book",
  - compiling data into the information system "Collection of mining / mineral data" and "Mining Registry Book",
  - providing geological data and communication with the public (bulletin Mineral resources, Statement of mineral reserves and resources, etc),
  - archive of closed mines documentation.
- MINERAL DEPOSITS RESEARCH
  - monitoring geological research and sample storage,
  - evaluating of exploitation sites,
  - geothermal resources studies,
  - geological evaluation of hydrocarbons and coal deposits in Slovenia, their energy valuation and exploitation feasibility,
  - impacts of closing mines on the surface.
- OTHER
  - Workshops and presentations at conferences and congresses are being organized annualy. Results are published in scientific and professional publications.
  - Participation in the "Commission for determining mineral reserves and resources". The commission determines the relevance on the studies of the mineral reserves and resources in the exploration and exploitation areas.

PUBLIC MINING SERVICE IN SLOVENIA

In accordance with Article 18 of the Mining Act *(Official Gazette RS, No. 14/14 – official consolidated text and 61/17-GZ)*, Geological Survey of Slovenia in a role of Public Mining Service supports ministry responsible for mining (Ministry of Infrastructure) in terms of sustainable mineral management and mineral policy.

Public Mining Service is authorized to monitor all mineral exploration works (eg. drillings).

Tasks performed by the Public Mining Service:

- professional expertise for the National Mining / Mineral Strategy,
- Mining Register and Mining Cadastre on national level, including a chronology of mining rights granting ("Mining Registry Book" web application and database),
- supervision of field research and sampling, material storage and archive of closed mines documentation.

Figure 1: "Mining Registry Book" web application for mineral deposits with concessions.

MINERAL DATA COLLECTING IN SLOVENIA

All Slovenian concessionaires are committed to annual reporting on: production, excavated surface, reserves and resources in their mining areas (Reporting forms on mineral resources). Mineral data are collected by responsible ministry. Collected data are being further processed and evaluated for mineral statistics on national level.

Mineral resources in Slovenia are divided into:

- ENERGY
  - brown coal (production until 2012),
  - lignite,
  - oil and natural gas,
  - geothermal energy.
- METALS (no production in recent decades)
- NON-METALS
  - **industrial minerals and rocks** (chert, lake chalk (production until 2003), bentonite, quartz sand, calcite, tuff, industrial dolomite, ceramic / ball clay),
  - **materials for construction industry** (brick clay, natural stone (limestones, tonalite, other natural stones), raw materials for the lime and cement industry),
  - **construction materials – aggregates** (crushed stone (limestone, dolomite, magmatic and metamorphic rocks), gravel and sand).
- OTHERS
  - sea salt.

Overview of Slovenia's mineral resources

In Slovenia, situated between the Alps, Pannonian Basin, Dinarides, and the Adriatic Foreland, energy, metallic and non-metallic resources occur in different geological formations. The energy resources include fossil fuels: coal (lignite, sub bituminous coal and bituminous coal), oil and natural gas (conventional and unconventional), radioactive mineral resources, (uranium), and geothermal energy. Coal-bearing areas with the highest resources and proven reserves are the Velenje Basin (N Slovenia; Pliocene lignite), Sava Basin(s) (E Central Slovenia; Oligocene sub bituminous/"hard brown" coal), and Pannonian Basin (E and NE Slovenia; Miocene lignite and "brown" coal). Uranium ore occurs chiefly in the area of Žirovski vrh, west of Ljubljana (Central Slovenia - W Sava Folds – Permian Val Gardena / Gröden Formation), and with lower potential also to the east (Central Slovenia - E Sava Folds). The most promising area for oil and gas generation and accumulation is the Pannonian Basin. In other areas, hydrocarbons could have been generated in different known source rocks (from Paleozoic to Early Tertiary) but were lost (not trapped) during subsequent geological processes. A potential area could be offshore in the Adriatic Sea (as in a case of Italy, Croatia and southward), but the Slovenian part of the sea is very limited, and no exploration has been carried out. On the metallogenic map of Slovenia, around 200 localities of metallic mineral resources are marked, a few dozens of which were mining sites (ore deposits), while the rest are ore occurrences only. No metal mines are currently active. Potential economic significance can be attributed primarily to sites of mercury (Idrija), lead and zinc (Mežica, Litija), and to a lesser extent to copper (Sovodenj), antimony (Trojane), and iron and bauxite.

Non-metallic mineral resources of higher market value (industrial minerals and rocks) that could be exported are only moderately represented. Non-metallic mineral resources of a lesser value prevail (mineral resources for the industry of building materials and construction), which are primarily used domestically or they are enriched and used in semi-manufacturing and manufacturing. Domestic non-metallic mineral resources are used in the construction, ceramic, brick, metallurgy and metalworking industries, for the environment and water purification, glass manufacturing, farming, food industry, etc.

Mining in Slovenia has a long tradition. In the past, this meant the exploitation of a significant quantity of mercury in Idrija, whereas today it involves the technologically sophisticated underground extraction of lignite in Velenje. After 1990, several underground coal mines, a uranium mine, mercury mine and a lead and zinc mine were closed. Only open surface mines of non-metallic mineral resources and one underground lignite mine were still active in 2017. Lignite production is carried out by the Premogovnik Velenje – The Velenje Lignite Mine, while the production of "hard brown coal in Trbovlje-Hrastnik Mine has been finished in 2012.

Coal mining in Slovenia began in the second half of the 18th century. Almost all coal mining sites known today were found in the 18th and 19th centuries, and then thoroughly explored and increasingly exploited in the 20th century, especially for railway and in electricity power plants. Among more than 100 coal-mining sites, as known from different historical documentation and maps, a lot of them had only a local significance, but numerous were full-blown collieries, which produced tens to hundreds of thousands of tons of coal per year. Between 1950 and 1990, annual coal production (prevailingly underground) increased from 2 to almost 7 million tons (Mt). Peak annual productions reached 6.75 Mt in the 1980s (3.35 t/cap.). The quality of coal was a little below 10 MJ/kg, and coal was used almost entirely in power plants that produced ca. 37% of domestic electric energy (about equal to hydro power plants). In Trbovlje, maximal annual production reached 1 Mt of subbituminous ("hard brown") coal, whereas in Velenje 5 Mt of lignite. In the 1990s, coal production was finished in four coal mines (Laško, Zagorje, Senovo, and Kanižarica) and in 2012 also in Trbovlje-Hrastnik. In the previous decade, around 4 Mt of lignite (10.5 MJ/kg) was produced yearly in Velenje, which is planned to remain the only active coal mine (underground) until the 2050s.

The uranium mine at Žirovski Vrh, which is the only newly opened underground mine in Slovenia after the Second World War, has been in the process of closure since 1991. The production of mercury ore in Idrija ended in 1991. In Mežica, the last tons of lead and zinc ore were mined in 1994. Otherwise, the mines in Idrija and Mežica have been in the process of closure since 1987 and 1988, respectively. The Mežica Mine has been closed since 2005, and the Idrija Mine since 2014, and in Litija since the 1960s.

From the brief preceding description of the situation in Slovenia, the potential of mineral resources and the overall economic state, a pronounced dynamics of change can clearly be seen for the last 30 years: the closing of centuries-old metal mines, smaller underground coal mines and a uranium mine, the preservation of one lignite mine and the marked emphasis on mineral resources for the building and construction industries. In view of current trends and programmes for economic development, primarily in the area of infrastructure construction (roads, railways, apartment buildings), we can predict future needs for individual non-metallic mineral resources, first of all in construction, with others also coming into play in the long term since 2017. Mineral resources for construction, which will be extracted by surface mining, will remain an important factor in the national economy and development in the future as well.

It is concluded that there was a total of 206 exploitation sites with mining rights in Slovenia; with 25 different mineral resources in the year 2017. These sites were run by 135 mining right holders.

Geothermal resources and geothermal energy use

Around 16% of the country has an outstanding deep geothermal potential. The area with the highest such potential is (again) the Pannonian Basin (NE Slovenia, Krško-Brežice-Novo mesto, Rogaška-Celje-Šoštanj, Laško-Zagorje, Ljubljana, and some other basin areas), where geothermal energy is also successfully used in numerous spas, in agriculture and for district heating. In recent years, particular attention has been given to the estimation of the shallow geothermal potential, particularly in urban areas.

The most NE tectonic unit of Slovenia belongs to the Mura -Zala basin which is affected by the large positive geothermal anomaly of the Pannonian basin, characterized by thin crust and thick Tertiary and Quaternary sedimentary layers (up to 5 km). At depths greater than 2500 m, thermal fluids reach temperatures of 100 to 200 °C. The Mura-Zala basin is filled by Tertiary marine and fresh water sediments. Clays and marls predominate, with intercalations of porous sands and sandstones, where mineral, thermomineral and thermal waters are found. In this area the most extensive aquifers of the intergranular type of Lower Pleistocene to Upper Miocene are found at depths of between 600 and 1600 m. There, temperatures of 40 to 70 °C are encountered. Each of the wells drilled yielded from 10 to 30 kg/s soon after the drilling has finished. The basement of Tertiary layers, at depths of 500 to more than 5000 m, consists mainly of Paleozoic metamorphic rocks, but also includes Mesozoic dolomites, limestones and shales. Mesozoic rocks were discovered in some parts of the Mura-Zala basin in areas around Murska Sobota, Ljutomer and Lendava. They comprise layers of carbonate rocks, with thicknesses of between several tens and several hundreds of metres, overlying the metamorphic basement. There, the thermomineral waters have temperatures from 75 to 180 °C. At depths of over 4000 m, temperatures from 150 to 200 °C can be found. The Krško basin is filled by Tertiary marls, sandstones and lithothamnion limestones with thicknesses of 300 to 1700 m. Carbonates and shaly Mesozoic rocks compose the border and basement of the basin. Thermal water accumulates in the carbonate basement ranging from 21 °C in the W part of the basin, to 70 °C in the E part. The thermal water discharges as thermal springs along the fault zones on the border of the basin, with yields ranging from less than 10 kg/s to several 10 kg/s.

Along the faults in the Transition Zone between the Eastern and the Southern Alps and in the Southern Alps narrow and up to 1500 m deep Tertiary depressions and synclines (filled with marls, thin layers of sandstone and conglomerate and andesitic tuffs) form wedges in the Paleozoic and Mesozoic layers, consisting of sediments and, in lesser amounts, of magmatic (very weakly metamorphosed) rocks. The basement consists of Paleozoic and Mesozoic carbonate and clastic sediments, where thermal water with temperatures of 20 to 45 °C circulates. The thermal springs in these areas yield from less than 10 kg/s to 40 kg/s. They are located in fault zones, running in carbonate rocks along the Tertiary depressions. The tectonic unit of the Outer Dinarides in the SW and S part of the country is built upon Mesozoic limestones and partly on dolomites that are intensively and deeply karstified. Depressions are filled with Eocenic flysch. Descending surface water penetrates to great depths due to karstification; this water cools the rocks far below the surface. This is the reason for the absence of thermal springs there.

Total utilization of geothermal energy, as of 2017, was 1423.13 TJ with the corresponding installed capacity of 221.12 MW_t. The direct use of geothermal energy takes place at 32 users of thermal water (Fig.2), where installed capacity and used geothermal energy amounted to 60.63 MW_t and 593.54 TJ, respectively. The shallow geothermal energy contributed 829.59 TJ of used geothermal energy from the installed capacity of 160.49 MW_t.

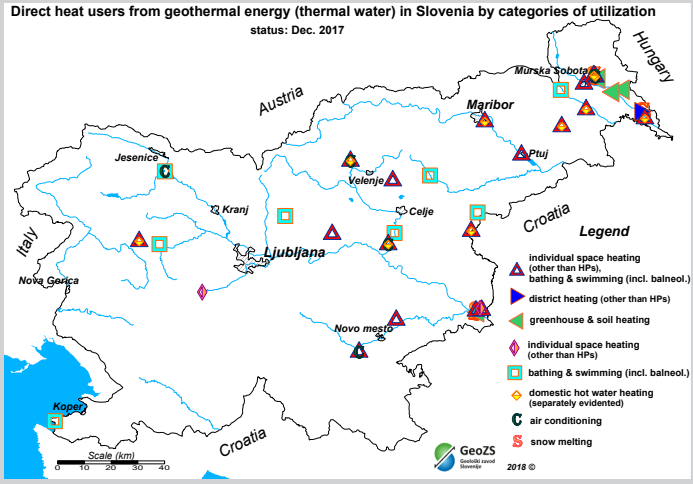


Figure 2: The main categories of direct use of geothermal energy from thermal water in Slovenia in 2017.

Andreja Senegačnik, Miloš Markič, Dušan Rajver

NATIONAL ACTIVITIES WITHIN EIT RAWMATERIALS COMMUNITY

Knowledge and innovation community (KIC) EIT RawMaterials, was established in 2014 by the European Institute of Innovation and Technology (EIT). It is the largest and strongest consortium in the mineral raw materials sector worldwide and unites more than 120 European partners from more than 20 EU countries. EIT RawMaterials is the European Union vision where raw materials are a major strength. Its mission is to boost competitiveness, growth and attractiveness of the European raw materials sector via radical innovation and guided entrepreneurship. It unites partners from all three sides of knowledge triangle: academic, research and businesses. They collaborate on finding new, innovative solutions to secure the supplies and improve the raw materials sector all along its value chain – from extraction to processing, from recycling to reuse.

EIT RawMaterials generates a significant impact on European competitiveness and employment by driving and fostering innovation and empowering students, entrepreneurs and education partners to act towards the circular economy. This results in the introduction of innovative and sustainable products, processes and services, as well as talented people that will deliver increased economic, environmental and social sustainability to European society. With EIT Regional innovation Scheme (EIT RIS) great emphasis is placed on rising innovation level in European countries, which are moderate and modest innovators. The scheme speeds up transfer of knowhow to these countries and enables rise of their innovation level. Geological Survey of Slovenia and Slovenian National Building and Civil Engineering Institute are Slovenian partners of EIT RawMaterials community.

Regional Center Adria, established in spring 2018 by Slovenian and Croatian partners, represents a hub for mineral raw materials stakeholders in South East European (SEE) region, outreaching to West Balkan countries. For local stakeholders it acts as an informational »one stop shop«. It connects local mineral communities with EIT RawMaterials by encouraging networking, project ideas exchanging and offering support to potential new partners of the EIT RawMaterials community. At the same time it links local raw materials communities with their international EIT RawMaterials counterparts. RC Adria represents an excellent opportunity for all regional stakeholders to get to know EIT RawMaterials better and potentially become its partner.

GeoZS - EIT RM team

CHERT IN SLOVENIA AS A SCARCE RAW MATERIAL IN EU

Chert is a biochemical sedimentary rock composed of micro to crypto-crystal quartz and/or calcedon. Chert outcrops in the Mirna Valley and its surroundings in the South Central Slovenia. Wider area is built of layers of Upper Triassic dolomites with chert, in a form of tectonic breccia, and layers of Lower Cretaceous flysch which are discordant with the dolomite and breccia beneath. The primary chert occurs in the Upper Triassic carbonates, and the secondary chert, which is a product of weathering processes, occurs in breccia with clay matrix.

Chert, commercially named "quartzite", is a natural sillica raw material, and is extracted by surface excavation from deposits in Jersovec in the Mirna Valley. Most of the organic components are removed after the extraction in the process of washing, separation and manual sifting. The product is characterized by its crypto-crystal mineral structure (particles of 5 to 10 μm) and its high chemical purity – it contains 98.5% to 99.5% SiO_2.

Due to its mineral structure, during heating the optimal transition from low-temperature to high-temperature modifications of quartz (tridimite and cristobalite) takes place and as such the end product complements well with other European "quartzite" products. This raw material is of high quality and is mainly used for the production of refractory materials. Refractory silica bricks made of "quartzite" are used for the lining of glass furnaces, high furnaces in ironworks and coke production furnaces. It is also used for sandblasting, the production of casts in foundries, the production of acidic refractory masses and for the production of various building materials (paving stones, kerbstones).

Figure 3: Production of refractory material.

The Mirna chert is, with its crypto-crystal mineral structure and its pure chemical composition, an unique occurrence in Slovenia and as raw material rather rare in Europe. Due to its uniqueness and high quality, the entire annual production of this sillica raw material is exported and traded within Europe.

Source: http://www.kremen.si

Figure 4: Mirna valley chert deposits.

OVERVIEW OF EXPLOITATION SITES AND MINERAL PRODUCTION

Table 1: LIST OF EXPLOITATION SITES WITH MINING RIGHTS IN SLOVENIA IN THE YEAR 2017

	Mineral commodity	Exploitation sites	Concessionaire
1	Coal	Velenje	PREMOGOVNIK VELENJE, d.o.o.
2	Oil and natural gas	Murska depresija	GEOENERGO, raziskave in pridobivanje surove nafte in zemeljskega plina d.o.o.
3	Geothermal energy source	Lendava	PETROL GEOTERM, pridobivanje surove nafte in zemeljskega plina d.o.o.
4	Bentonite	Zaloška Gorica	MONTANA, pridobivanje in predelava nekovinskih rudnin, d.o.o.
5	Calcite	Stahovica	CALCIT, proizvodnja kalcitnih polnil d.o.o.
6	Chalk	Srpenica	TKK Proizvodnja kemičnih izdelkov d.o.o.
7	Quartz sand	Bizeljsko	IGM ZAGORJE Industrija gradbenega materiala, d.o.o.
8	Quartz sand	Globoko	IGM ZAGORJE Industrija gradbenega materiala, d.o.o.
9	Quartz sand	Kuštanovci I	KEMA, Kremen in specialni gradbeni materiali, d.o.o.
10	Quartz sand	Moravče - Moravška terciarna kadunja	TERMIT, rudarsko podjetje za pridobivanje kremenovih peskov d.d.
11	Quartz sand	Polhovica - Prapreče	KREMEN d.d., Industrija in rudniki nekovin, Novo mesto
12	Quartz sand	Ravno	KREMEN d.d., Industrija in rudniki nekovin, Novo mesto
13	Quartz sand	Štebih	KREMEN d.d., Industrija in rudniki nekovin, Novo mesto
14	Tuff	Zaloška Gorica	MONTANA, pridobivanje in predelava nekovinskih rudnin, d.o.o.
15	Industrial dolomite	Rečica	GRATEX, Pridobivanje in predelava dolomitskega agregata in kurivoprodaja d.o.o., Laško
16	Chert	Jersovec II	P-D KREMEN, Pridobivanje drugih rudnin in kamnin, d.o.o.
17	Ceramic (ball) clay	Hom	Gorenje Keramika, d.o.o.
18		Hom - širitev	
19	Ceramic (ball) clay	Okroglica I	MARTEX Proizvodnja keramičnih ploščic d.o.o.
20		Okroglica I - širitev	
21	Fire resistant clay	Globoko	IGM ZAGORJE Industrija gradbenega materiala, d.o.o.
22	Brick clay	Boreci - širitev	TONDACH SLOVENIJA, proizvodnja opečne kritine, d.o.o.
23	Brick clay	Okroglica II - širitev	GORIŠKE OPEKARNE d.d.
24	Brick clay	Šmiklavž	Gorenje Keramika, d.o.o.
25		Šmiklavž - širitev	
26	Brick marl	Okroglica II - širitev	GORIŠKE OPEKARNE d.d.
27	Natural stone – limestone	Debela Griža pri Povirju	KAMNOSEŠTVO TAVČAR pridobivanje in obdelava kamna d.o.o.
28		Debela Griža pri Povirju - širitev	
29	Natural stone - limestone	Doline	MARMOR, Podjetje za pridobivanje in obdelavo naravnega kamna Sežana, d.d.
30		Doline - širitev	
31	Natural stone - limestone	Drenov Grič	MINERAL, podjetje za pridobivanje, predelavo in montažo naravnega kamna, d.o.o.
32	Natural stone - limestone	Hotavlje	MARMOR HOTAVLJE, družba za obdelavo kamna, d.o.o.
33	Natural stone - limestone	Kazlje	MARMOR, Podjetje za pridobivanje in obdelavo naravnega kamna Sežana, d.d.
34	Natural stone - limestone	Kopriva	MARMOR, Podjetje za pridobivanje in obdelavo naravnega kamna Sežana, d.d.
35	Natural stone - limestone	Lesno Brdo	MINERAL, podjetje za pridobivanje, predelavo in montažo naravnega kamna, d.o.o.
36	Natural stone - limestone	Lipica I	MARMOR, Podjetje za pridobivanje in obdelavo naravnega kamna Sežana, d.d.
37	Natural stone - limestone	Lipica II	MARMOR, Podjetje za pridobivanje in obdelavo naravnega kamna Sežana, d.d.
38		Lipica II - širitev	
39	Natural stone - limestone	Šumet	MEDARD ŠUMET
40	Natural stone - limestone	Tomaj	MARMOR, Podjetje za pridobivanje in obdelavo naravnega kamna Sežana, d.d.
41	Natural stone - tonalite	Cezlak I	MINERAL, podjetje za pridobivanje, predelavo in montažo naravnega kamna, d.o.o.
42	Natural stone - other	Cezlak II	MINERAL, podjetje za pridobivanje, predelavo in montažo naravnega kamna, d.o.o.
43	Natural stone - other	Klemenc	SILVESTER KLEMENC
44	Natural stone - other	Korže	KORŽE SONJA
45	Natural stone - other	Kotnik	KOTNIK VESNA
46	Natural stone - other	Krajnc	PREDELAVA OKRASNEGA KAMNA SIMON KRAJNC S.P.
47	Natural stone - other	Loška gora	ČREŠNAR ANTON
48	Natural stone - other	Obrovnik	PRIDOBIVANJE, OBDELAVA IN MONTAŽA ŠKRILNIH PLOŠČ, OBROVNIK ANTON S.P.
49	Natural stone - other	Ovčar	OVČAR ALOJZ - DOPOLNILNA DEJAVNOST NA KMETIJI
50	Natural stone - other	Ovčar	PK OVČAR, PRIDOBIVANJE OKRASNEGA KAMNA JOVAN DAMJAN S.P.
51	Natural stone - other	Premančan	INGEN - Gradbeni inženiring, d.o.o.
52	Limestone for lime and cement	Lipovški vrh	IGM ZAGORJE Industrija gradbenega materiala, d.o.o.
53	Limestone for lime and cement	Retje - Plesko	Lafarge Cement, d.o.o., Trbovlje
54	Limestone for lime and cement	Stahovica	CALCIT, proizvodnja kalcitnih polnil d.o.o.
55	Limestone for lime and cement	Ušenišče 2	IAK, INDUSTRIJA APNA KRESNICE, d.o.o.
56	Limestone for lime and cement	Zidani Most	APNENEC d.o.o., Proizvodnja apnenčeve moke
57	Cement marl	Deskle	SALONIT ANHOVO Gradbeni materiali, d.d.
58	Cement marl	Deskle - Lastivnica - Perunk - širitev	SALONIT ANHOVO Gradbeni materiali, d.d.
59	Cement marl	Retje - Plesko	Lafarge Cement, d.o.o., Trbovlje
60	Cement marl	Rodež	SALONIT ANHOVO Gradbeni materiali, d.d.
61	Crushed stone - limestone	Bitenjska planina	GOZDNO GOSPODARSTVO BLED d.o.o.
62	Crushed stone - limestone	Brezovica	VODNOGOSPODARSKO PODJETJE d.d.
63	Crushed stone - limestone	Črna	PESKOKOP ČRNA, pridobivanje gramoza in peska, d.o.o.
64	Crushed stone - limestone	Črni Kal	CPK, d.d., družba za vzdrževanje cest, gradbeništvo in druge poslovne storitve
65	Crushed stone - limestone	Črni Kal - Črnotiče	SALONIT ANHOVO, Kamnolomi, d.o.o.
66	Crushed stone - limestone	Gabrovec	PROIZVODNO GRADBENO PODJETJE SNEŽNIK d.o.o.
67	Crushed stone - limestone	Gabrovec (Vrbovo)	SALONIT ANHOVO, Kamnolomi, d.o.o.
68	Crushed stone - limestone	Gorjuše	GOZDNO GOSPODARSTVO BLED d.o.o.
69	Crushed stone - limestone	Griža pri Rižani	PRIMORJE d.d. družba za gradbeništvo, inženiring in druge poslovne storitve - v stečaju
70	Crushed stone - limestone	Laže I	KOLEKTOR CESTNO PODJETJE NOVA GORICA, družba za vzdrževanje in gradnjo cest, d.o.o.
71		Laže I - širitev	
72	Crushed stone - limestone	Liboje	VOC Ekologija, urejanje okolja d.o.o.
73	Crushed stone - limestone	Mali Medvejk	KRAŠKI ZIDAR d.d., podjetje za gradbeništvo, inženiring in proizvodnjo - v stečaju
74	Crushed stone - limestone	Malin dol	KRAJEVNA SKUPNOST LOKOVEC
75	Crushed stone - limestone	Mežica (Žerjav)	GRADBENI MATERIALI, podjetje za proizvodnjo gradbenih materialov d.o.o.
76	Crushed stone - limestone	Peskokop Mala gora	O-PROJEKT, Gradbeno projektiranje in inženiring d.o.o., Kočevje
77	Crushed stone - limestone	Podgora	KAMTEH GmbH, Predstavništvo Šmartno ob Paki
78	Crushed stone - limestone	Predstruge	KPL, družba za gradnjo in vzdrževanje cest, zelenih površin ter inženiring d.o.o.
79	Crushed stone - limestone	Razdrto - širitev	CPK, d.d., družba za vzdrževanje cest, gradbeništvo in druge poslovne storitve
80	Crushed stone - limestone	Rovtarica	GOZDNO GOSPODARSTVO BLED d.o.o.
81	Crushed stone - limestone	Rudno polje	GOZDNO GOSPODARSTVO BLED d.o.o.
82	Crushed stone - limestone	Solkan	SALONIT ANHOVO, Kamnolomi, d.o.o.
83	Crushed stone - limestone	Stahovica	CALCIT, proizvodnja kalcitnih polnil d.o.o.
84	Crushed stone - limestone	Štanjel	KAMNOLOM ŠTANJEL DUŠAN ŽERJAL s.p.
85	Crushed stone - limestone	Trbovlje - Hrastnik	RTH, Rudnik Trbovlje-Hrastnik d.o.o.
86	Crushed stone - limestone	Ušenišče 2	IAK, INDUSTRIJA APNA KRESNICE, d.o.o.
87	Crushed stone - limestone	Velika Pirešica	CM CELJE, d.d. - Ceste mostovi Celje, družba za nizke in visoke gradnje - v stečaju
88		Velika Pirešica - širitev	
89	Crushed stone - limestone	Verd	KAMNOLOM VERD Podjetje za proizvodnjo kamnitih agregatov, d.o.o.
90	Crushed stone - limestone	Vrhpeč	CGP, družba za gradbeništvo, inženiring, proizvodnjo in vzdrževanje cest, d.d.
91		Vrhpeč - širitev I	
92		Vrhpeč - širitev 2	
93	Crushed stone - dolomite	Adamlje 2	KAMNOLOM JEŽCE, JOŽE ADAMLJE, S.P.
94	Crushed stone - dolomite	Andraž 2	EKOMINERAL, svetovanje, storitve, proizvodnja, d.o.o.
95	Crushed stone - dolomite	Batič	PESKOKOP PRIDOBIVANJE PESKA BATIČ IVAN S.P.
96	Crushed stone - dolomite	Bela	KLAS PRODAJALNA NOVE IN RABLJENE KMETIJSKE TER GRADBENE MEHANIZACIJE, STARO ZA NOVO STANISLAV HACE S.P.
97	Crushed stone - dolomite	Bereča vas	AVTOPREVOZNIŠTVO IN PRIDOBIVANJE PESKA IN GRAMOZA - JANEZ AMBROŽIČ S.P.
98		Bereča vas - širitev	
99	Crushed stone - dolomite	Bizeljsko 3	AGRAD podjetje za trgovino, gradbeništvo in gostinstvo d.o.o.
100	Crushed stone - dolomite	Boben	AGM NEMEC, podjetje za proizvodnjo, trgovino in storitve d.o.o.
101	Crushed stone - dolomite	Borovnik	AGM NEMEC, podjetje za proizvodnjo, trgovino in storitve d.o.o.
102	Crushed stone - dolomite	Bradeško - Zadobje	IZKOPI IN PREVOZI JANEZ BRADEŠKO S.P.
103	Crushed stone - dolomite	Brezovica	KOGRAD gradbeništvo d.o.o.
104		Brezovica K2	
105	Crushed stone - dolomite	Bučka	AVTOPREVOZNIŠTVO - TGM - MKI JOŽEF TOMAŽIN S.P.
106		Bučka - širitev	
107	Crushed stone - dolomite	Cerov Log - širitev 2	CGP, družba za gradbeništvo, inženiring, proizvodnjo in vzdrževanje cest, d.d.
108	Crushed stone - dolomite	Červivec	GMP LUZAR Škocjan, nizke gradnje d.o.o.
109	Crushed stone - dolomite	Dolenje Laknice	CGP, družba za gradbeništvo, inženiring, proizvodnjo in vzdrževanje cest, d.d.
110	Crushed stone - dolomite	Draga	TRGOGRAD trgovina in gradbeništvo, d.o.o., Litija
111	Crushed stone - dolomite	Draga pri Cerovici	DRAGA Separacija peska, d.o.o., Litija
112	Crushed stone - dolomite	Grdadolnik	TGM IN PRIDOBIVANJE PESKA FRANC GRDADOLNIK S.P.
113	Crushed stone - dolomite	Gunte	CGP, družba za gradbeništvo, inženiring, proizvodnjo in vzdrževanje cest, d.d.
114	Crushed stone - dolomite	Hrast pri Vinici J2	PRIDOBIVANJE IN PRODAJA PESKA ZDRAVKO JURŠINIČ S.P.
115	Crushed stone - dolomite	Ježce	PESKOKOP KEPA SUZANA KEPA s.p.
116		Ježce - širitev I	
117		Ježce - širitev 2	
118	Crushed stone - dolomite	Kamna Gorica	GORENJSKA GRADBENA DRUŽBA, projektiranje, inženiring, gradnja in vzdrževanje objektov visoke in nizke gradnje d.d.
119	Crushed stone - dolomite	Klanci	GREDIN gradbeno in transportno podjetje Markovec d.o.o.
120	Crushed stone - dolomite	Kmetov pruh	TRGOGRAD trgovina in gradbeništvo, d.o.o., Litija
121	Crushed stone - dolomite	Kočevska Reka	SNEŽNIK podjetje za proizvodnjo in storitve, d.d.
122	Crushed stone - dolomite	Konjiška gora	KONGRAD gradbeno, obrtno, instalacijsko in proizvodno podjetje d.d.
123	Crushed stone - dolomite	Koprivnik	LESDOG KOČEVJE, družba za proizvodnjo in storitve, d.o.o.
124	Crushed stone - dolomite	Koševnik	DOLOMIT GRADBENA MEHANIZACIJA-SEPARACIJA PESKA JANKO KOSMAČ S.P.
125	Crushed stone - dolomite	Kot pri Ribnici	KLUN - PESKOKOP, TRANSPORT IN USLUGE TGM KLUN JOŽE S.P.
126	Crushed stone - dolomite	Kresni grič	DOLOMIT GRADBENA MEHANIZACIJA-SEPARACIJA PESKA JANKO KOSMAČ S.P.
127	Crushed stone - dolomite	Laharna	RASPET, Podjetje za proizvodnjo materialov in gradbene storitve d.o.o.
128	Crushed stone - dolomite	Lajše	STORITVE S TEŽKO GRADBENO MEHANIZACIJO MARJAN VEHAR S.P.
129	Crushed stone - dolomite	Lajše	TOPOS HOTAVLJE, gradbeništvo, proizvodnja, trgovina in storitve, d.o.o.
130	Crushed stone - dolomite	Laze	RIGLER, peskokop, prevozništvo in storitve gradbene mehanizacije, d.o.o.

	Mineral commodity	Exploitation sites	Concessionaire
131	Crushed stone - dolomite	Lazna	SOŠKO GOZDNO GOSPODARSTVO TOLMIN d.d.
132	Crushed stone - dolomite	Log II pri Sevnici	CGP, družba za gradbeništvo, inženiring, proizvodnjo in vzdrževanje cest, d.d.
133	Crushed stone - dolomite	Lukovica 2	STRABAG gradbene storitve d.o.o.
134	Crushed stone - dolomite	Maček	STORITVE Z GRADBENO MEHANIZACIJO MARJAN MAČEK S.P.
135	Crushed stone - dolomite	Mala gora	TANKO podjetje za nizke gradnje in hidrogradnje in trgovino na debelo, d.o.o.
136		Mala gora 2	
137	Crushed stone - dolomite	Mivšek	MIVŠEK, OPRAVLJANJE STORITEV Z GRADBENO MEHANIZACIJO, AVTOPREVOZNIŠTVO, DRUGA GRADBENA DELA, RAČUNOVODSKE STORITVE RAJKO MIVŠEK S.P.
138	Crushed stone - dolomite	Mozelj	LESDOG KOČEVJE, družba za proizvodnjo in storitve, d.o.o.
139	Crushed stone - dolomite	Mozelj	JAVNO KOMUNALNO PODJETJE KOMUNALA KOČEVJE d.o.o.
140	Crushed stone - dolomite	Mrak	MRAK LEOPOLD
141	Crushed stone - dolomite	Mrzla rupa	„GRAMEH“ GRADBENA MEHANIZACIJA BOJAN JEREB S.P.
142	Crushed stone - dolomite	Paka pri Velenju 2	RGP d.o.o., rudarski gradbeni programi
143	Crushed stone - dolomite	Pleše pri Škofljici	GRAMATEK KAMNOLOM, družba za proizvodnjo in storitve, d.o.o.
144	Crushed stone - dolomite	Podskrajnik	JAVNO PODJETJE KOMUNALA CERKNICA d.o.o. Cerknica
145	Crushed stone - dolomite	Podsmreka - širitev	PESKOKOP UNIVERSAL proizvodnja gradbenega materiala d.o.o. Ivančna Gorica
146	Crushed stone - dolomite	Podutik	KPL, družba za gradnjo in vzdrževanje cest, zelenih površin ter inženiring d.o.o.
147	Crushed stone - dolomite	Poljane	PREVOZNIŠTVO - PESKOKOP, KRIVEC JANEZ S.P.
148	Crushed stone - dolomite	Poljčane	GRANIT proizvodnja, trgovina in storitve d.d. - v stečaju
149		Poljčane - širitev	
150	Crushed stone - dolomite	Prigorica	RIGLER, peskokop, prevozništvo in storitve gradbene mehanizacije, d.o.o.
151	Crushed stone - dolomite	Rečica	GRATEX, Pridobivanje in predelava dolomitskega agregata in kurivoprodaja d.o.o., Laško
152	Crushed stone - dolomite	Rudnik	Avtoprevozništvo in gradbena mehanizacija Klemen Uršič s.p.
153	Crushed stone - dolomite	Sadinja vas	KPL, družba za gradnjo in vzdrževanje cest, zelenih površin ter inženiring d.o.o.
154	Crushed stone - dolomite	Selo pri Velenju	VEGRAD d.d. Gradbeno industrijsko podjetje - v stečaju
155	Crushed stone - dolomite	Smolevec	STORITVE S TEŽKO GRADBENO MEHANIZACIJO PRIDOBIVANJE PESKA IN GRAMOZA RAJKO ČERIN S.P.
156	Crushed stone - dolomite	Soteska	GOZDNO GOSPODARSTVO NOVO MESTO d.d.
157	Crushed stone - dolomite	Stranice	VOC Ekologija, urejanje okolja d.o.o.
158	Crushed stone - dolomite	Šebalk	SOŠKO GOZDNO GOSPODARSTVO TOLMIN d.d.
159	Crushed stone - dolomite	Šmarje - Sap	KG-EKO, Proizvodnja in predelava agregatov, d.o.o.
160	Crushed stone - dolomite	Ter 2	PRIDOBIVANJE PESKA IN GRAMOZA TEREZIJA BURJA S.P.
161	Crushed stone - dolomite	Topli vrh	GMP PESKOKOP ALEN MUJAKIĆ S.P.
162	Crushed stone - dolomite	Tržišče	AGM, JANEZ PUNGERČAR S.P.
163		Tržišče - širitev	
164	Crushed stone - dolomite	Vehar - I	STORITVE S TEŽKO GRADBENO MEHANIZACIJO MARJAN VEHAR S.P.
165	Crushed stone - dolomite	Vetrnik 2	REKON gradbeništvo, inženiring, trgovina, d.o.o.
166	Crushed stone - dolomite	Vrh pri Križu	GOSTGRAD, Gostinstvo, gradnje in storitve d.o.o. Žužemberk
167	Crushed stone - dolomite	Zabukovje	GM KUSELJ, gradbena mehanizacija, d.o.o.
168	Crushed stone - dolomite	Zabukovje	PESKOKOP MOŽINA gradbene storitve d.o.o.
169	Crushed stone - dolomite	Zala v Davči	GORENJSKA GRADBENA DRUŽBA, projektiranje, inženiring, gradnja in vzdrževanje objektov visoke in nizke gradnje d.d.
170	Crushed stone - dolomite	Zavratec I in 2	GRADNJE gradbeništvo in prevozništvo d.o.o. Boštanj
171		Zavratec Ib	
172	Crushed stone - dolomite	Zelence	STEDO proizvodnja, trgovina in storitve d.o.o.
173	Crushed stone - dolomite	Zelše	KAMNOLOM ZELŠE, d.o.o.
174		Zelše - širitev	
175	Crushed stone - dolomite	Zg. Gabernik	PREVOZNE STORITVE, ZEMELJSKA DELA, PRIDOBIVANJE KAMNA ANDREJ JAGODIČ S.P.
176	Crushed stone - dolomite	Žamerk	KRAJEVNA SKUPNOST LOKA PRI ŽUSMU
177	Crushed stone - dolomite	Žusem	KRAJEVNA SKUPNOST LOKA PRI ŽUSMU
178	Crushed stone – metamorphic and magmatic rocks	Kamna Gorica	GORENJSKA GRADBENA DRUŽBA, projektiranje, inženiring, gradnja in vzdrževanje objektov visoke in nizke gradnje d.d.
179	Crushed stone – metamorphic and magmatic rocks	Lenart pri Gornjem Gradu 2	„TUFKA“ PESKOKOP TUFA KANOLŠČICA PETER BEZOVŠEK S.P.
180	Crushed stone – metamorphic and magmatic rocks	Martinček	GOZDNO GOSPODARSTVO BLED d.o.o.
181	Crushed stone – metamorphic and magmatic rocks	Zagaj	TRIK kamenine d.o.o.
182	Crushed stone – metamorphic and magmatic rocks	Zagaj	POSREDNIŠTVO IVAN MIJOŠEK S.P.
183	Gravel and sand	Bakovska cesta	POMGRAD, gradbeno podjetje d.d.
184	Gravel and sand	Bezena - širitev	PREVOZNIŠTVO, GRADBENA MEHANIZACIJA, POSREDNIŠTVO, GRAMOZNICA BEZENA SILVA BRAČKO S.P.
185	Gravel and sand	Bistrica pri Naklem	GORENJSKA GRADBENA DRUŽBA, projektiranje, inženiring, gradnja in vzdrževanje objektov visoke in nizke gradnje d.d.
186		Bistrica pri Naklem - širitev	
187	Gravel and sand	Dobrava II	MARALD-MARSEL gradbena mehanizacija-gramoz d.o.o.
188	Gravel and sand	Dobrovnik	NOGRAD, gradbeno in trgovsko podjetje d.o.o.
189		Dobrovnik - širitev	
190	Gravel and sand	Graben	GORENJC, splošno gradbeno podjetje, d.d.
191	Gravel and sand	Jurkovec	ECOENERGETIKA družba za varstvo okolja, rudarstvo in gradbeništvo d.o.o.
192		Jurkovec - širitev	
193	Gravel and sand	Krapje	SEGRAP rudarstvo, proizvodnja in gradbeništvo d.o.o.
194	Gravel and sand	Lakoš	GRAMOZ, družba za proizvodnjo in poslovne storitve d.o.o. - V STEČAJU
195	Gravel and sand	Melinci	T G P OZMEC - trgovsko, gradbeno in prevozniško podjetje d.o.o.
196	Gravel and sand	Pleterje II	CESTNO PODJETJE PTUJ D.D.
197		Pleterje II - širitev Ib	
198	Gravel and sand	Pleterje PI	EPSON, trgovina, gostinstvo in storitve, d. o. o.
199	Gravel and sand	Pleterje P2b	CESTNO PODJETJE PTUJ D.D.
200		Pleterje P2b - širitev	
201	Gravel and sand	Pleterje P2e	CESTNO PODJETJE PTUJ D.D.
202	Gravel and sand	Pleterje P3	TLAKOVEC podjetje za proizvodnjo in trgovino d.o.o.
203		Pleterje P3 - širitev	
204	Gravel and sand	Prepolje	BETON - BETONSKI IZDELKI DUŠAN KUHAR S.P.
205	Gravel and sand	Rače 2	GOKOP gradbeno, gostinsko in trgovsko podjetje d.o.o.
206	Gravel and sand	Selnica ob Dravi	PANEL avtoprevozništvo, storitve z gradbeno mehanizacijo, trgovina, gradbeništvo in svetovanje d.o.o.
207	Gravel and sand	Selnica ob Dravi	KONSTRUKTOR VGR gradbeništvo, proizvodnja, trgovina in storitve,d.o.o. - v stečaju
208	Gravel and sand	Selnica ob Dravi	MAGDA GODEC družba za proizvodnjo, trgovino in storitve d.o.o.
209	Gravel and sand	Stari Grad 2b	CGP, družba za gradbeništvo, inženiring, proizvodnjo in vzdrževanje cest, d.d.
210	Gravel and sand	Stari Grad 3b	Kostak, komunalno in gradbeno podjetje, d.d.
211	Gravel and sand	Stari Grad 4	Kostak, komunalno in gradbeno podjetje, d.d.
212	Gravel and sand	Šentvid pri Vuzenici	GRADBENIŠTVO KUSTER, nizke in visoke gradnje, d.o.o.
213		Šentvid pri Vuzenici - širitev	
214	Sea salt	Lera in Fontanigge	SOLINE Pridelava soli, d.o.o.
215	Sea salt	Strunjan	SOLINE Pridelava soli, d.o.o.

Table 2: NUMBER OF EXPLOITATION SITES (NON-ENERGETIC) IN SLOVENIA

		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Bentonite		1	1	1	1	1	1	1	1	1	1
Calcite		1	1	1	1	1	1	1	2	1	1
Kaolin											
Chalk		1	1	1	1	1	1	1	1	1	1
Quartz sand		7	7	7	7	7	7	7	7	7	7
Tuff		1	1	1	1	1	1	1	1	1	1
Industrial dolomite		2	2	2	2	2	2	1	1	1	1
Chert		1	1	1	1	1	1	1	1	1	1
Ceramic clay		6	5	4	4	4	4	5	4	5	5
Industrial minerals and rocks		**20**	**19**	**18**	**18**	**18**	**18**	**18**	**18**	**18**	**18**
Brick clay		9	7	9	8	7	5	6	5	6	5
Natural stone	limestone	12	11	13	12	12	11	13	14	15	14
	tonalite	3	3	3	3	3	3	3	3	2	1
	other	16	15	15	14	14	13	13	13	12	10
Natural stone		31	29	31	29	29	27	29	30	29	25
Raw materials for lime		6	6	6	6	6	6	6	5	5	5
Raw materials for cement		6	6	6	6	6	5	5	5	4	4
Materials for construction industry		**52**	**48**	**52**	**49**	**48**	**43**	**46**	**45**	**44**	**39**
Crushed stone	limestone	24	25	26	26	26	27	29	36	33	32
	dolomite	96	99	101	101	94	95	94	84	86	85
	other	3	3	4	4	4	4	6	6	5	5
Crushed stone		123	127	131	131	124	126	129	118	124	122
Sand and gravel		46	47	47	45	41	47	44	38	34	31
Construction materials – aggregates		**169**	**174**	**178**	**176**	**165**	**173**	**173**	**147**	**158**	**153**
TOTAL		**241**	**241**	**248**	**243**	**231**	**234**	**237**	**227**	**220**	**210**

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Table 3: PRODUCTION OF MINERAL COMMODITIES IN SLOVENIA
(in metric tons)

		1993	1998	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Bentonite		20	447	187	141	140	130	130	160	104	135	168	98	143	199	232	182	147
Calcite		105.402	103.000	119.606	128.725	164.752	271.509	273.745	348.152	405.467	459.926	458.800	474.152	555.663	646.542	268.677	255.709	220.771
Kaolin		20.171																
Chalk		2.090	945	607														
Quartz sand		374.164	518.755	449.733	264.349	254.195	278.041	295.667	289.529	215.065	253.866	230.908	219.481	224.387	207.381	343.455	338.080	359.476
Tuff			84.101	84.333	88.884	95.126	88.013	90.319	109.949	58.062	39.401	24.639	23.732	19.171	8.872	9.116	8.840	9.144
Industrial dolomite					260.367	279.555	294.645	299.177	177.715	146.214	156.179	154.721	119.317	136.516	177.338	172.697	150.545	172.656
Chert		17.477	18.200	20.824	20.325	19.445	15.445	16.745	21.648	16.695	16.114	18.907	9.960	11.530	15.340	21.041	20.272	15.525
Ceramic clay		152.268	98.588	79.900	69.560	78.683	86.443	78.221	32.200	9.478	12.279	10.103	5.295	3.479	7.461	7.574		5.478
Industrial minerals and rocks		**671.592**	**824.036**	**755.190**	**832.351**	**891.896**	**1.034.226**	**1.054.004**	**979.353**	**851.085**	**937.900**	**898.246**	**852.035**	**950.889**	**1.063.133**	**822.792**	**773.628**	**783.197**
Brick clay		883.420	632.696	573.584	508.232	730.670	638.329	706.866	420.360	235.348	296.118	374.020	159.746	180.748	154.944	194.852	202.540	167.898
Natural stone	limestone	54.321	31.474	38.942	21.538	102.635	52.459	47.983	71.260	73.156	55.045	25.109	21.006	21.158	79.005	99.541	101.991	107.630
	tonalite	21.600	54.478	30.850	21.867	36.488	56.587	65.715	67.400	39.787	36.855	45.930	23.374	41.016	23.749	26.995	26.746	28.544
	other	2.465	1.139	5.713	23.940	29.741	24.392	27.124	21.959	21.573	19.724	11.896	11.526	8.332	9.917	9.790	7.690	6.151
Natural stone		78.386	87.091	75.505	67.345	168.864	133.438	140.822	160.619	134.516	111.624	82.935	55.906	70.506	112.671	136.326	136.427	142.325
Raw materials for lime					1.111.417	1.691.696	2.089.495	2.082.593	1.631.391	1.221.197	1.260.446	1.103.163	896.241	860.890	919.528	1.103.283	1.046.293	1.174.038
Raw materials for cement		1.520.954	1.479.644	1.400.423	1.409.780	1.306.889	1.324.803	1.489.625	1.684.258	1.188.493	982.653	883.573	952.758	1.138.560	1.325.907	1.190.807	1.149.065	1.318.832
Materials for construction industry		**2.482.760**	**2.199.431**	**2.049.512**	**3.096.774**	**3.898.119**	**4.186.065**	**4.419.906**	**3.896.628**	**2.779.554**	**2.650.841**	**2.443.691**	**2.064.651**	**2.250.704**	**2.513.050**	**2.625.268**	**2.534.325**	**2.803.093**
Crushed stone	limestone	4.620.273	6.748.784	6.623.054	5.939.214	5.926.378	7.242.777	7.134.305	7.541.043	6.284.804	5.773.480	4.034.597	3.264.404	2.813.266	3.060.104	3.486.409	3.164.109	3.824.938
	dolomite	3.068.666	4.502.498	8.391.079	7.729.802	6.197.589	6.712.996	6.909.947	7.291.259	7.175.362	6.143.336	5.440.918	4.223.692	4.127.357	4.901.721	4.427.094	4.280.306	4.808.753
	other		99.963	26.207	50.872	99.215	257.546	235.002	150.258	149.562	155.716	151.276	69.335	127.272	161.762	194.610	26.018	9.190
Crushed stone		7.688.939	11.351.245	15.040.340	13.719.888	12.223.182	14.213.319	14.279.254	14.982.560	13.609.728	12.072.532	9.626.791	7.557.431	7.067.895	8.123.587	8.108.113	7.470.433	8.642.881
Sand and gravel		2.668.860	2.440.115	3.437.911	2.712.174	3.750.707	6.871.519	8.549.960	4.506.076	3.001.291	2.422.771	1.899.770	1.707.455	2.143.013	2.799.006	2.943.870	1.833.732	2.047.403
Construction materials – aggregates		**10.357.799**	**13.791.360**	**18.478.251**	**16.432.062**	**15.973.889**	**21.084.838**	**22.829.214**	**19.488.636**	**16.611.019**	**14.495.303**	**11.526.561**	**9.264.886**	**9.210.908**	**10.922.593**	**11.051.983**	**9.304.165**	**10.690.284**
TOTAL		**13.512.151**	**16.814.827**	**21.282.953**	**20.361.187**	**20.763.904**	**26.305.129**	**28.303.124**	**24.364.617**	**20.241.658**	**18.084.044**	**14.868.498**	**12.181.572**	**12.412.501**	**14.498.776**	**14.500.043**	**12.612.118**	**14.276.574**
brown coal									488.828	510.769	419.466	435.800	314.262					
lignite									4.008.442	3.921.746	4.010.930	4.066.278	3.967.064	3.721.188	3.108.203	3.168.001	3.348.889	3.355.664
coal*									4.497.270	4.432.515	4.430.396	4.502.078	4.281.326	3.721.188	3.108.203	3.168.001	3.348.889	3.355.664
oil									174	138	233	263	279	298	366	261	229	241
gas condensate									104	105	207	131	60	114	95	98	150	240
gas									2.348	2.317	6.006	2.095	1.454	2.698	2.463	3.109	4.331	7.554
oil and gas*									**2.626**	**2.560**	**6.446**	**2.489**	**1.793**	**3.110**	**2.924**	**3.468**	**4.710**	**8.035**
sea salt*									535	2.924	59	4.291	5.684	3.360	0	2.191	2.417	2.335

* Coal, oil, gas and sea salt are recorded in this table since 2008.

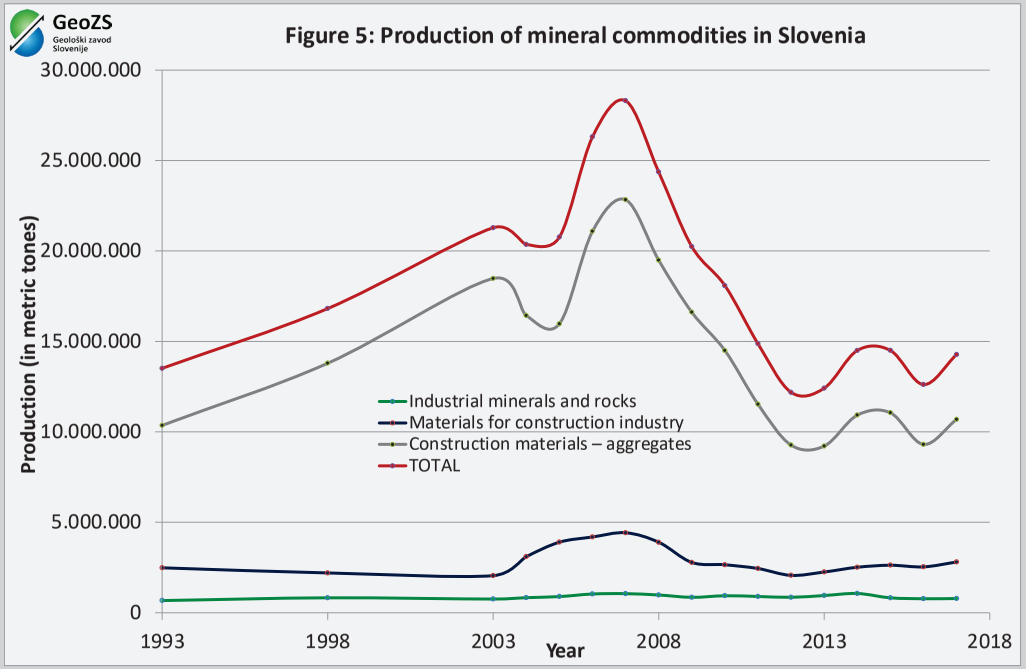
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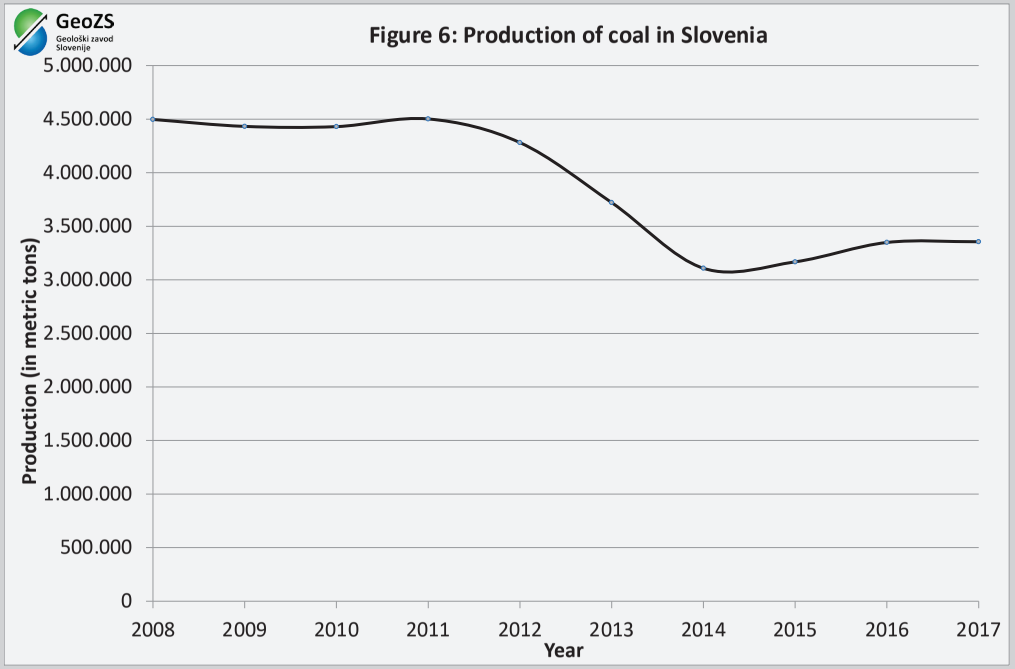
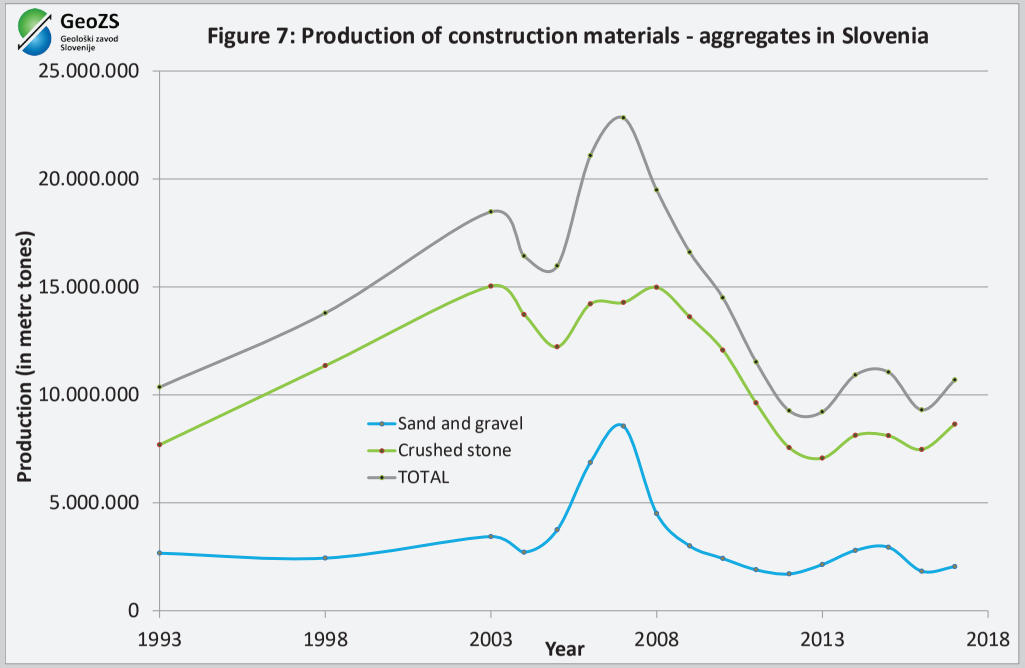
Figure 5: Production of mineral commodities in Slovenia
30.000.000
25.000.000
20.000.000
15.000.000
10.000.000
5.000.000
0
Production (in metric tones)
1993
1998
2003
2008
2013
2018
Year
Industrial minerals and rocks
Materials for construction industry
Construction materials – aggregates
TOTAL


GeoZS
Geološki zavod Slovenije
Figure 6: Production of coal in Slovenia
5.000.000
4.500.000
4.000.000
3.500.000
3.000.000
2.500.000
2.000.000
1.500.000
1.000.000
500.000
0
Production (in metric tons)
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Year


GeoZS
Geološki zavod Slovenije
Figure 7: Production of construction materials - aggregates in Slovenia
25.000.000
20.000.000
15.000.000
10.000.000
5.000.000
0
Production (in metrc tones)
1993
1998
2003
2008
2013
2018
Year
Sand and gravel
Crushed stone
TOTAL

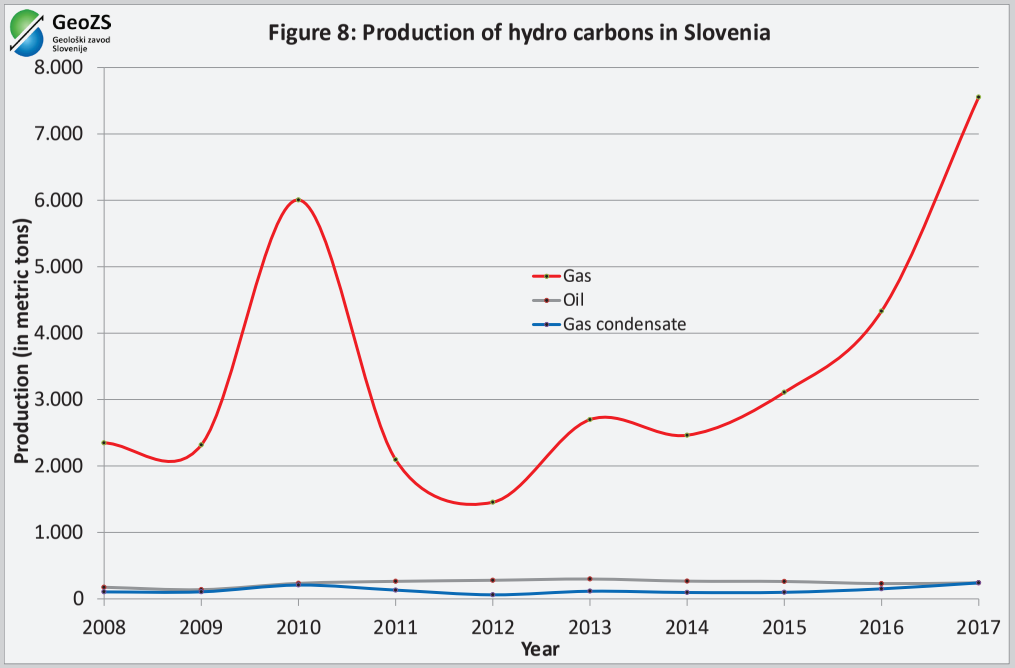

GeoZS
Geološki zavod Slovenije
Figure 8: Production of hydro carbons in Slovenia
8.000
7.000
6.000
5.000
4.000
3.000
2.000
1.000
0
Production (in metric tons)
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Year
Gas
Oil
Gas condensate

Table 4: LIST OF SOME EU-FUNDED PROJECTS RELATED TO MINERAL RESOURCES

Programme	Project acronym	State	Project title	Start	End	Duration (months)	GeoZS role in project	Lead partner	Summary
Horizon 2020-WASTE-4c-2014	ProSUM	finished	Prospecting Secondary raw materials in the Urban mine and Mining waste	Feb ,15	Dec ,17	35	Project partner	Waste of Electrical and Electronic Equipment Forum (WEEE Forum), Belgium	The ProSUM project will establish a European network of expertise on secondary sources of critical raw materials (CRMs), vital to today's high-tech society. Data on primary and secondary raw materials are available in Europe, but scattered amongst a variety of institutions including government agencies, universities, NGOs and industry. By establishing a EU Information Network (EUIN), the project will coordinate efforts to collect secondary CRM data and collate maps of stocks and flows for materials and products of the "urban mine". The scope is a particularly relevant sources for secondary CRMs: Electrical and electronic equipment, vehicles, batteries and mining tailings.
Horizon 2020-SC5-11a-2014	iVAMOS!	finished	iViable and Alternative Mine Operating System	Feb ,15	Jan ,18	42	Project partner	BMT Group Ltd., United Kingdom	VAMOS will provide a new Safe, Clean and Low Visibility Mining Technique and will prove its Economic Viability for extracting currently unreachable mineral deposits in flooded open pit mines. Deriving from successful deep-sea mining techniques, the VAMOS mining solution aspires to lead to: Re-opening of abandoned mines; extensions of opencut mines which are limited by stripping ratio, hydrological or geotechnical problems; and opening of new mines in the EU. VAMOS will design and manufacture innovative automated excavation equipment and environmental impact monitoring tools that will be used to perform field tests in four mine sites across Europe with a range of rock hardneses and pit morphologies.
Horizon 2020-SC5-13a-2014	**MINATURA 2020**	finished	**Developing a concept for a European minerals deposit framework**	Feb ,15	Jan ,18	36	**WP leader**	MinPol GmbH, Austria	The exploitation of minerals in Europe is an indispensable activity to ensure that the present and future needs of the European society can be met. This means that sufficient access is required to explore and exploit minerals. At the same time the mineral needs of our society must be met without compromising the ability of future generations to meet their own needs. Accordingly exploitable mineral deposits (known deposits, abandoned mines and historical mining sites) need to be assessed against other land uses, taking into account criteria such as habitats, other environmental concerns, priorities for settlements, etc. Access to mineral deposits also meets public interests such as raw materials security (compared with many international access options). The overall objective of MINATURA 2020 is to develop a concept and methodology (i.e. a harmonised European regulatory/guidance/policy framework) for the definition and subsequent protection of "Mineral Deposits of Public Importance" (MDoPI) in order to ensure their "best use" in the future. Providing a policy planning framework that comprises the "sustainability principle" for mining is the key driving force behind MINATURA.
Horizon 2020-SC5-13b-2014	INTRAW	finished	International cooperation on Raw materials	Feb ,15	Jan ,18	36	Project partner	European Federation of Geologists (EFG), Belgium	INTRAW will map and develop new cooperation opportunities related to raw materials in Australia, Canada, Japan, South Africa and the United States, addressing: Research and innovation, Raw materials policies and strategies, Joint educational and skills programmes, Licensing and permitting procedures, Data reporting systems, Exploration, extraction, processing and recycling practices and Management and substitution of Critical Raw Materials. The outcome of mapping and knowledge transfer activities will be used as a baseline to set and launch the European Union's International Observatory for Raw Materials as a definitive raw materials intelligence infrastructure, operating internationally.
EIT RawMaterials KIC	Better GeoEdu	finished	Teaching Raw Materials Through Gamification	Aug '17	Dec '17	6	Project partner	Geological Survey of Sweden (SGU), Sweden	Minecraft is one of the most popular video games in the world where the players have to build and craft by finding and extracting raw materials (rocks, metals and minerals). Since the geology in the game is very simplified, the Geological Survey of Sweden (SGU) has developed a modification BetterGeo, by introducing more realistic geology in the Minecraft game. The BetterGeoEdu is an education project built using the tools in BetterGeo, with aim of creating, translating, testing and distributing educational material about geology and raw materials among primary schools pupils. The role of the Geological Survey of Slovenia in the project is translation of BetterGeo materials (the mod, the educational material and the installation guide) into Slovene language.
Horizon 2020-SC5-2014-2015	**UNEXMIN**	on-going	**Autonomous Underwater Explorer for Flooded Mines**	Feb ,16	Oct ,19	45	**WP leader**	University of Miskolc, Hungary	The project will develop a novel robotic system for the autonomous exploration and mapping of Europe's flooded mines. The Robotic Explorer (UX-1) will use non-invasive methods for autonomous 3D mine mapping for gathering valuable geological and mineralogical information. This will open new exploration scenarios so that strategic decisions on the re-opening of Europe's abandoned mines could be supported by actualised data that cannot be obtained by any other ways. The Multirobot Platform will represent a new technology line that is made possible by recent developments in autonomy research that allows the development of a completely new class of mine explorer service robots, capable of operating without remote control. Such robots do not exist nowadays; UX-1 will be the first of its kind. Research challenges are related to miniaturisation and adaptation of deep sea robotic technology to this new application environment and to the interpretation of geoscientific data.
COST action - Open Call Collection OC-2015-1	MINEA	on-going	Mining the European Anthroposphere	Mar ,16	Mar ,20	48	Project partner	Institute for Water Quality, Resource and Waste Management (TU Vienna), Austria	Currently, acquiring an adequate overview of the future availability of secondary resources in Europe is not possible due to a lack of consolidated knowledge regarding the resource potential in the anthroposphere. To overcome this gap, this COST Action strives for a breakthrough in the field of waste and resource management and pursues the establishment of a universally acceptable and internationally applicable scheme for the classification and reporting of resource potentials. To this end, the COST Action works to form a pan-European network of high-quality researchers, engineers and scholars to coordinate nationally funded research activities.
Horizon 2020-SC5-15-2017-	ORAMA	on-going	Optimising quality of information in RAw MAterials data collection across Europe	Dec '17	Nov '19	24	Project partner	Geological Survey of Finland (GTK), Finland	With the aim to optimise collection of primary and secondary raw materials information within EU member states, assessment of information data sources, collection practices and reporting systems accross EU will be performed within the project framework. A clear strategy for improving the quality of collected data, harmonisation of statistical data and transparent sharing of information at different levels (national and EU) will be developed with the intention to expand the mineral resources knowledge base, which would in long-term cover all European countries. To such a degree the future European Community will have access to harmonised, high quality and easily shareable information on raw materials that will support strategic policy decisions and sustainable investments in the field of raw materials.
EIT RawMaterials KIC	**MineService**	on-going	**Mining/Mineral Support Services**	Apr ,16	Mar ,19	36	**Lead partner**	**Geological Survey of Slovenia (GeoZS), Slovenia**	The main objectives of the MineService project are to create a network and a compendium of good practices of Mining/Mineral Support Services (MSS), to improve technical tools for raw materials (RM) management and transfer the methodology of mineral resources (MR) management to the test site country (FYRO Macedonia). MSS is a public mineral intelligence system intended to support authorities (on national, regional or local level) at the decision-making process and to facilitate industry to enter into new markets. The network of partners in this project would increase the institutional capacity in executing technical and administrative tasks for mining and spatial planning in all involved partner countries. The good practices and knowledge of the methodology will be transferred and supplied to FYRO Macedonia during the projects life-time, but could be transferred to other EU candidate countries in a follow-up project in order to improve the relationship between the EU and the candidate countries and potentially widen the European RM supply area. This should effect and reduce the MR supply shortage and consequently diminish vulnerability of EU MR sectors. Effective MSS is therefore needed for EU to remain competitive in minerals and products market and to provide MR to meet its society needs.
EIT RawMaterials KIC	STINGS	on-going	Supervision of Tailings by an Integrated Novel Approach to combine Ground-based- and Spaceborne Sensordata	Apr '17	Sep '20	42	Project partner	DMT GmbH & Co. KG, Germany	STINGS is an innovation project funded by EIT Raw Materials to establish a ground- and space-borne remote sensing and analysis system to effectively and cost-efficiently monitor critical ground infrastructure stability and content, primarily focusing on mining tailing dams. It's purpuse is incrise the safety standards related to tailing operations and to deliver an extended monitoring and early worning sisitem for indentification of operational inpact and enviromental risks to the mining sector, government, citizens and all stakeholders affected by previous and current activities.
EIT RawMaterials KIC	RE-ACTIVATE	on-going	Developing superior technical infrastructure throughout EIT RawMaterials community to foster technologies and methodol. for re-activation of former mine sites	Apr '17	Mar '20	36	Project partner	DMT GmbH & Co. KG, Germany	The project objective is to establish a Network of Infrastructure (NoI) of experts throughout EIT RawMaterials community, developing superior technical infrastructure to create synergies to merge and further develop advanced technologies and methodologies for re-activation of former mine sites. The NoI will also be the single point of contact for any relevant expertise in the particular fields. The participating partners are covering the major regions with relevant potential for projects in Europe and the main target region for the proposed services is also Europe. It is believed that the NoI will be able to deliver a clear impact in securing raw materials supply within Europe.
EIT RawMaterials KIC	raPHOSafe	on-going	Classification and Sorting of Radium-rich Phosphogypsum Tailings	Jan ,18	Dec ,18	12	Project partner	DMT GmbH & Co. KG, Germany	raPHOSafe is a 1-year Strategic Risk Study on Greek, Bulgarian and Serbian PG tailings, which will compile key technical constraints for a low-cost conveyor belt pilot facility for automated classification and separation of low-radioactive 226Ra-bearing PG tailings material. The radionuclide classification and separation system will allow classification, sorting and separation of non-radioactive PG material from radioactive, environmentally hazardous PG. This will minimize the amount of radiologically active PG due for remediation and enable zero-waste recycling of the non-radioactive PG into construction material, whereas the radioactive PG material will provide a resource for further processing into radiopharmaceutical applications as 223Ra for cancer medication.
EIT RawMaterials KIC	**RIS-Recover**	on-going	**Regional innovation scheme for zero waste extraction of critical raw materials**	Jan '18	Dec '20	36	**WP leader**	Slovenian Nacional Building and Civil Engineering Institute (ZAG), Slovenia	The main objective of RIS-RECOVER is to build a roadmap for zero waste extraction of CRM and metals from mining tailings and metallurgical heaps in SEE. Beside development of an innovative zero waste approach the project is building capacity of T-shaped entrepreneurs and actors along the value chains. In this way RIS-RECOVER has a high impact potential for the KIC community and in developing a more sustainable mining industry in Europe.
EIT RawMaterials KIC	RM@Schools 3.0	on-going	Raw Matters Ambassadors at Schools 3.0	Jan '18	Dec '20	36	Project partner	Consiglio Nazionale delle Ricerche (CNR), Italy	The RM@School 3.0 project is an innovative program focused towards making science education and careers in raw materials (RM) more attractive for the younger generation. RM Ambassadors (experts in some RM-related issues and trained teachers) will engage students in an active way of learning. They will be involved in experiments with RM-related hands-on educational toolkits, excursions to companies, and in science dissemination activities. The students can become Young RM Ambassadors by creating dissemination products focused on issues related to RM (i.e. videos, cards, comics, etc.) in their native languages (ages 10 to 13 years) or in their native and English languages (ages 14 to 19 years). Local awards competitions for the best communication products, as well as an annual European Conference will be organized. Selected groups of students will be taught about digital competences, like video making and other suitable activities to be proposed during Public Events in order to work together with RM Ambassadors.
EIT RawMaterials KIC	AWARD	on-going	RM Documentary: A Series of RM Documentaries followed by Interactive Workshops	Jan ,18	Dec ,18	12	Project partner	Rheinisch-Westfaelische Technische Hochschule Aachen, (RWTH Aachen), Germany	The AWARD project aims to raise future generations' awareness about the importance of raw materials in our lives. It will help school pupils (ages 8 to 10 years) to better understand their relationship with raw materials and to stimulate their reflection about the crucial importance of raw materials. A documentary will be produced, answering the question "What happens if a specific raw material suddenly disappears from the Earth?". It will sketch of all the consequences of raw materials disappearing in our daily life: from economic, environmental, and social perspective. Complementing the documentary and facilitating better understanding, workshops will be organized, where hands-on toolkits will be used and teachers will be coached to organize new workshops by themselves in the future.
EIT RawMaterials KIC	**RESEERVE**	on-going	**Mineral potential of the ESEE region**	Apr '18	Mar '21	36	**Lead partner**	**Geological Survey of Slovenia (GeoZS), Slovenia**	Primary and secondary mineral resources are of strategic importance for the EU. Most EU countries are already part of the pan-European Minerals Intelligence Network which provides consistent and organised data information on primary and secondary mineral resources on the European level. The West Balkan region represents a gap in this network. Project's objectives: (1) Created West Balkan Mineral Register for primary and secondary mineral resources by mapping the mineral resources of the West Balkan countries: Croatia, Bosnia and Herzegovina, Serbia, Montenegro, FYRO Macedonia and Albania, which are currently not included in the existing data platforms, (2) Created ESEE mineral community to determine available and further needed information on primary and secondary mineral resources data in West Balkan countries, (3) Increased capacity of West Balkan countries for management of mineral resources on national level and (4) Ensured sufficient flow of information on mineral resources for Europe's industry to expand their business and investments in the West Balkan region. Transferred knowledge of EIT RawMaterials partners to the West Balkan region with the purpose to develop new markets for modern technologies, create opportunities for start-ups and SMEs, contribute to new jobs opportunities and generate economic added value in the field of mineral resources.

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KNOWLEDGE TRANSFER OF MINING / MINERAL SUPPORT SERVICE TO FYRO MACEDONIA

Mining / Mineral Support Service (MSS) is a public mineral intelligence system with the mission to support authorities at the decision-making process (on national, regional or local level) and to facilitate industry to enter new markets. The majority of EU countries with developed mineral resources (MR) policy and management have organized MSS, mostly founded by legal authorities.

In the past decade, the demand for raw materials has increased significantly and it is expected to increase even faster. To meet the short and long-term EU mineral demand, industry is expected to expand investments, exploration and mining activities in the Balkan region. To facilitate this process, the mineral extractive industry needs easy access to relevant data on minerals and mineral deposits, concessionaires and legal procedures in the SEE region.

Since the West Balkan region represents a gap in the existing pan-European Minerals Intelligence Network, the "MineService" project (full title: Mining / Mineral Support Services) aims to bring mineral potential closer to EU industry and investors. MineService project is creating a network, a compendium of good practices of MSS, improving technical tools for mineral management, transferring the knowledge and increasing capacity building in mineral management on the test site (FYRO Macedonia). The project takes the first step towards the establishment of MSS in the FYRO Macedonia in the framework of Geological Survey of the Republic of Macedonia. Within the project, the "Mining Registry Book" web application (Figs. 9) for the FYRO Macedonia is being created, containing attributes for 12 metal ore deposits with concessions in this country. The application could provide numerous benefits to its potential users (e.g. stakeholders, wider interested public). It provides a simple spatial overview of exploitation and exploration areas and presents all important information in one place. The application could also serve as a support to the ministry and to mining inspector observation, etc.

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Figure 9: "Mining Registry Book" web application for the FYRO Macedonia includes 12 metal ore deposits with concessions (Marko Tukić, Ana Burger).

THE WORLD OF RAW MATERIALS IN THE YEAR 2050?

The Geological Survey of Slovenia participated in the project INTRAW (International Cooperation on RawMaterials, a H2020 project, GA 642130), which finished in February 2018. The coordinator of the project was Vitor Correia, from the European Federation of Geologists. As a partner, GeoZS provided expertise, mainly in research and innovation for raw materials. The key results were the establishment of the International Raw Materials Observatory. Another interesting outcome was a set of scenarios to determine plausible futures for the world of raw materials in 2050. More than 30 experts participated and made common agreements on different topics, three of whom were from the GeoZS. The scenario development was led by Sven Schimpf and Flavius Sturm from the Fraunhofer Institute of Germany. More information about scenario development and scenarios can be found on the INTRAW project web page (http://intraw.eu/the-world-of-raw-materials-2050/)

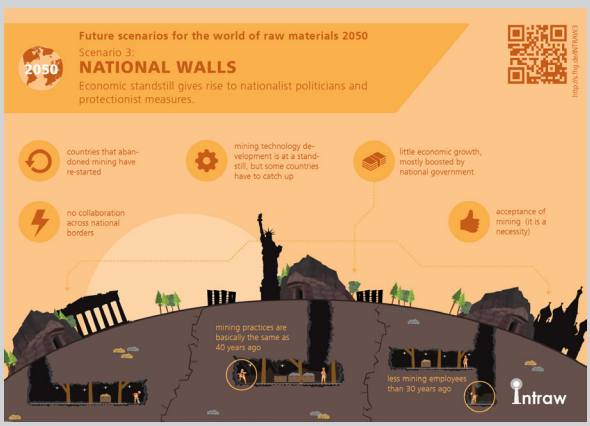
The scenario creation process was composed of several steps. The first step was definition of the scenario field: the focus area (primary and secondary raw materials), time horizon (year 2050) and geographical location (world, continental level). The next step was definition of 33 of the most relevant influential factors, covering political, economic, societal, technological, environmental and legislative areas; 1056 pair-wise evaluations of cause & effect showed the relationships between factors and aided in narrowing down the system options further. The obtained list of 23 factors was called "descriptors". Plausible future developments (projections), for each descriptor was done in the third step. A cross-impact analysis of each of the plausible futures for each descriptor was done by asking a question: "If a certain projection becomes reality, how plausible will another projection be?" A numerical score was assigned for each of the projection pairs, and a Monte-Carlo simulation determined the consistency of the individual projection; 23 raw scenarios were finally obtained. Then, possible future political and economic situation and societal, technological and environmental development was discussed. Finally, three scenarios were defined, called: (1) sustainability alliance, (2) unlimited trade and (3) national walls.

Gorazd Žibret

Scenario 1: Sustainability alliance. A new generation puts sustainability above everything else to keep deposits for future generations.

Scenario 2: Unlimited trade. Increased global consumption leads to raw material growth.

Scenario 3. National walls. Economic standstill gives rise to nationalist politicians and protectionist measures.



A snapshot from one of the scenarios workshop with experts - the definition of influential factors.

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SURFACE MINING ASSOCIATION ("DTV PO")

Surface mining association has been operating continuously for 23 years. It brings together more than 90% of all Slovenian mining companies - holders of mining rights, experts from public institutions responsible for mineral resources management and planning, researchers and private sector.

The Association organizes professional training courses and capacity building of expert knowledge (geological, mining, environmental, economic, legislation, safety practices and other solutions).

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SLOVENIAN MINING ASSOCIATION OF ENGINEERS AND TECHNICIANS ("SRDIT")

The Slovenian Mining Society of Engineers and Engineers (SRDIT) is a non-governmental non-profit organization of miners and geotechnologists. The mission of SRDIT is the implementation of the mining and geotechnical profession in Slovenia and beyond. SRDIT assumes the role of an arbitrator in assessing the professionalism of its membership, organizes international networking, raises the expert knowledge of membership and organizes the social events. The Slovenian mining association of engineers and technicians, at the time of its establishment in 1991, counted 53 members, at the end of 2017 it has 171 members. The SRDIT is the organizer and co-organizer of educational seminars, expert meetings and consultations (meetings »Jump over the leather« and »St. Barbara«, technical meetings and workshops of miners and expert consultants and conferences with the international participation »Waste Management - GzO« and »Urban mining«).

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