Guidelines and Best Practices for MSMEs to assure resiliency and progress towards a circular economy in sustainable resource management and critical raw material supply chain solutions in Bosnia and Herzegovina

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Introduction

1. Background

Bosnia and Herzegovina (B&H) is an upper middle-income economy, with a population of3.5 million and nominal gross domestic product (GDP) per capita of USD 11714 at prices in 2017. B&H economy is consumption-driven and one of the most volatile in the Western Balkans (WB) region, with an economic structure that remains highly exposed to external economic fluctuations.
The service sector contributes the most value added to the economy, generating 55.8% of GDP in 2017; followed by industry (including construction) at 23.4%; and agriculture, forestry and fishing at 5.8%. Most of the active labour force was employed in the service (48.7%) and industry (32.2%) sectors, while the agriculture sector accounted for 19.1% of total employment in 2017.[1]
Public administration is the third largest economic sector in B&H, constituting over one fifth of the economy.[2] The reason for such a high service share lies in B&H's particular institutional arrangements which comprise the central government, the governments of the two entities – the Federation of Bosnia and Herzegovina (FB&H) and the Republic of Srpska (RS) – the Brčko District, 10 cantonal governments within the FB&H, and local administrations.
The companies operated in B&H are dominant micro, small, and medium enterprises (MSMEs) and during the pandemic they are strongly affected.
The overall impact of the pandemic on MSMEs and supply chains is still not completely known, as economic forecasts are not convergent and quickly undergo substantial revisions. The impact takes on multiple channels, affecting both the supply and demand side of the economy, thus making future forecasts difficult due to the number of factors that must be taken into account. However, one thing is for sure - this event will have global financial consequences that will be felt in almost every branch of the economy.
MSMEs are the main drivers of economic development in almost all economies of the world and for various reasons are particularly severely affected by the pandemic. In most cases, MSMEs lack the financial means to bridge the delays in the supply of raw materials that result from interrupted or broken supply chains.
One of the main problems of MSMEs in B&H is to keep their qualified employees. Another problem is to compensate for payment defaults due to the delays and to fulfil longer-term supply contracts due to the non-delivery of raw materials.

a. COVID-19 and the impact on MSMEs in Bosnia and Herzegovina

The supply of critical raw materials (CRMs), which are usually only made available to the market by a few suppliers, is particularly problematic. However, these CRMs are needed for almost all innovative future technologies, such as e-mobility, renewable energies, communication technologies, defence technology, etc.[3]
MSMEs represent a majority of businesses globally, as they account for around 90% of them and employ around 60% of OECD workers, which is likely to be even more in middle income countries. In B&H itself, MSMEs represented around 99% of all enterprises (with even 90% employing less than 10 people) in the non-financial sector in 2015.[4]

[1]ILO, 2018
[2]World Bank Report, 2018
[3]Guidelines and best practices for MSMEs to assure resiliency and progress towards a circular economy in sustainable resource management and critical raw material supply chain solutions, UNECE, 2020
[4]Eurostat

"MSME's in B&H are severely affected by COVID-19, as they confront the combined shocks of lower demand, a shortage of working capital, and supply chain disruptions, causing many to require external financing to maintain business operations, retain jobs, and ultimately recover from this crisis," Emanuel Salinas, World Bank Country Manager for Bosnia and Herzegovina and Montenegro.

For the national analyses of the pandemic effects on MSMEs, the Economic Impact Assessment (EIA) report for B&H[5] is considered, as an overview of the current state of the B&H economy, with an emphasis on the economic situation of vulnerable social groups and industry-level consequences of the COVID-19 pandemic.

The findings of the report testimony that firms employing under 250 workers have already been more adversely affected by the direct impact of the COVID-19 and related containment measures. The MSMEs were significantly more likely to report complete shutdown of their operations. Therefore, sectors that have a large percentage of small and medium-sized enterprises are more prone to larger containment-related economic downturns. Such industries include construction, retail, accommodation manufacturing and food services. Within manufacturing, specific sectors have significant percentage of all employed individuals working in MSMEs. These are textiles, wood, chemicals, and fabricated metals.

The MSMEs fear being out of business within the short and medium-time horizons significantly more than larger firms. These types of firms report having less secure orders more than one month into the future. The analysis of variance (ANOVA) also reveals a significant different between firms 3-month business expectations and their number of employees.

Primary data analysis confirms literature showing that MSMEs are disproportionately affected by economic crisis, as they are characterized by various vulnerabilities on both the supply and demand side. Smaller number of workers mean that health is more detrimental to the continued operations of a firm. On the demand side, MSMEs are more reliant on a specific segment of the industry, therefore as shortages and supply chain disruptions occur through the economy, they are more prone to complete shutdowns.

Larger firms are more prone to partial disruptions as a result to more extensive supply chains. The analysis of variance shows a significant difference between the categorical variable assessing raw supply availability and the number of employees in a firm. However, while fewer in instance, each individual disruption in the availability of raw materials or products for intermediate will have a larger shock effect on small and medium size enterprises.

b. Current status of MSMEs in critical raw material (CRM) value-chain in Bosnia and Herzegovina

MSMEs create employment that lift people out of poverty. The latest global estimate suggests that 11 percent of the world's population, or 783 million people, lived below the extreme poverty threshold in 2013. Most of the poor in developing countries are not employed or do not earn enough to lift themselves out of poverty. Job creation in the private sector has proven to be a main driver in the fight against poverty.

Over the past 30 years, the private sector has contributed to a sharp decline in the share of the population in the developing world living below the poverty line from 52 percent to 22 percent. MSMEs contribute significantly to the employment creation process of the private sector. In emerging markets, 4 out of 5 new positions in the formal sector were created by MSMEs, which is about 90 percent of total employment.[6]

MSMEs take share in total companies number more than 99% also in developed countries (Table 1).

[5]Economic Impact Assessment of COVID-19 in Bosnia and Herzegovina Report, UNDP, 2020

[6]Lessidrenska, T (2019) SMEs and SDGs: challenges and opportunities OECD Development Matters Blog.

Table 1: *Companies size share in some EU countries and USA*

Region or Country	Employees	Share
EU	up to 250	99.8
USA	up to 250	99.0
Germany	up to 250	99.5
France	up to 250	99.5
Austria	up to 250	99.7
Slovenia	up to 250	99.8
Croatia	up to 250	99.7

In accordance with entities legal policy in B&H, precisely entities the Laws on Accounting and Revision, MSMEs are defined under criteria visible in the next tables. Here is also comparison of both entities, the Republic of Srpska and FB&H with EU standards.
Based on 2017 data 70% of MSMEs is registered in FB&H, the rest in the Republic of Srpska. From total percentage in FB&H, 23% is located in Sarajevo.

Table 2: *MSMEs definition criteria, FB&H*

Enterprise	EU standards	FB&H
Micro	<10 employees <2M EUR revenue or balance sheet	not defined
Small	<50 employees <10M EUR revenue or balance sheet	<50 employees <2M BAM euro revenue <1M BAM business property
Mid	<250 employees <50M euro revenue <43M EUR balance sheet	<250 employees <8M BAM euro revenue <4M BAM business property

Table 3: *MSMEs definition criteria,* RS

Enterprise	EU standards	FB&H
Micro	<10 employees <2M EUR revenue or balance sheet	<10 employees <500000 BAM euro revenue <250000 BAM business property
Small	<50 employees <10M EUR revenue or balance sheet	<50 employees <2M BAM euro revenue <1M BAM business property
Mid	<250 employees <50M euro revenue <43M EUR revenue balance sheet	<250 employees <8M BAM euro revenue <4M BAM business property

(1 EUR approx. = 2 BAM).

In accordance with Agency for Statistic of B&H, the structure of the enterprises regarding employees in B&H is:

- 74.7%, microenterprises (0-9 employees)
- 18.3%, small enterprises (10-49 employees)
- 6.0%, mid enterprises (50-249 employees)
- 1.0% big enterprises (250 and more employees)

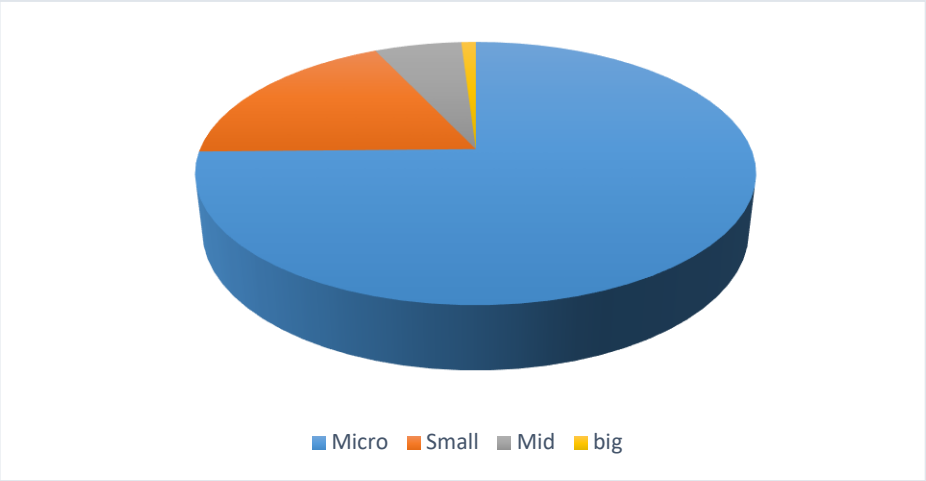

Figure 1: *B&H companies employees share*

Based on the revenue MSMEs are split into:

- 90.7% enterprises with revenue less than 4M BAM annually,
- 5.9% enterprises with revenue 4M - 20M BAM annually ,
- 1.6% enterprises with revenue more than 20M BAM annually.
- for 1.7% active enterprises data are not available.

Sectoral distribution of MSMEs is given in the figure below. When it comes to the sectoral distribution of MSMEs in Bosnia and Herzegovina, distributive trade was the largest sector for MSMEs, accounting for one-third of active MSMEs in 2017 (Figure 2). It was followed by the manufacturing sector, which accounted for 16.3% of MSMEs. Transportation and storage accounted for 6.7%, similar to construction (7.3%).In total share of MSMEs mining and quarrying sector take minor 0.7%, the least among all sectors.

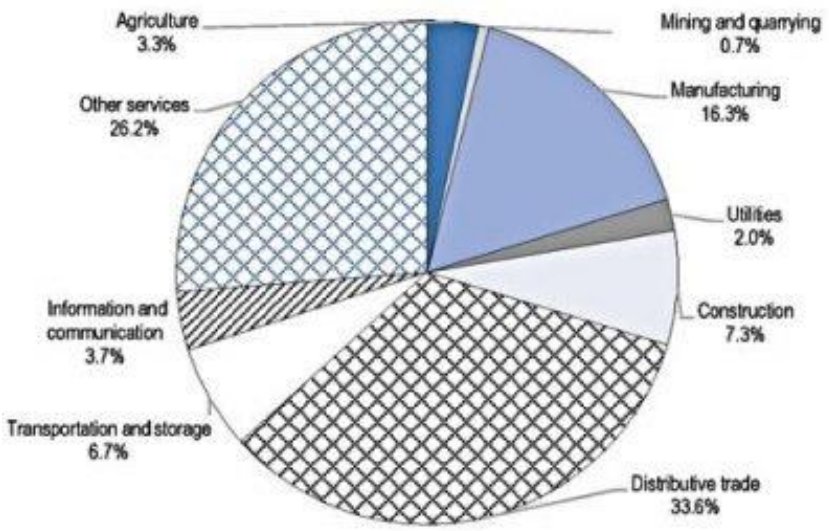

Figure 2: *Sectoral distribution of MSMEs in B&H*[7]

[7]doi.org, OECD publishing, 2017

The majority of metal processing companies in B&H are small companies (80%) while medium sized companies represent 15% and large companies represent 5% of companies in the metal sector. Taking into account income generation criteria, the large companies still achieve the majority of income in the sector.

c. Opportunities for CRM supply MSMEs in economic recovery in Bosnia and Herzegovina

Covid-19 caused significant pressure on MSMEs in B&H, but at the same time open different possibilities in supply chain, which can be driving force in future „closing" of the supply chain in many sectors: resource management, transport and distribution, quality control, repackaging etc.
Inclusion of MSMEs should to help in building of the resilience in CRMs supply and progress in circular economy, and general economy recovery in post Covid-19 period.
The COVID-19 outbreak highlighted the structural deficiencies of the country's business environment. The current situation is therefore an opportunity for Bosnia and Herzegovina to address some of its vulnerabilities to external shocks and overcome the changes needed to transform its economic model and role of MSMEs.
The COVID-19 pandemic has showcased the need to ensure firms are able to adjust to working in the "new normal" being created by the pandemic, and adopt new technologies that can increase their growth potential and competitiveness during the recovery phase.
The different studies results indicate that UNECE region countries seek for flexible and adaptable models of the CMRs supply.
The existing structure of the metal sector in B&H, characterized by small companies, provides an opportunity for larger companies to integrate existing primary producers and further develop their business operations.
The price of labour in the metal extraction and processing industry in B&H is competitive when compared with global market labour costs. Besides materials for industrial processing, during the last decade small private companies also buy modern computerized equipment and strive to stay updated with current technologies. Many factories are engaged in semi-processing of components for foreign companies based in the EU and neighbouring countries.
The MSMEs in metal processing and construction industry are also experienced a significant increase of production in the last decade and the companies within this value chain were able to respond to many demanding projects in EU. It is still important development potentiality for both entities.

d. Progress towards sustainable resource management and the circular economy: Application of UNFC and UNRMS in Bosnia and Herzegovina

UNFC – United Nation Framework Classification

UNFC for resources application

The United Nations Framework Classification for Resources (UNFC, here considered in the latest version, update from 2019) is a resource project-based and principles based classification system for defining the environmental-socio-economic viability and technical feasibility of projects to develop resources. The UNFC provides a consistent framework to describe the level of confidence of the future quantities produced by the project.
Sources, such as solar, wind, geothermal, hydro-marine, biomass energy, injection for storage, hydrocarbons, minerals, nuclear fuels and water (Figure 3), are the feedstock to resource projects from which products can be developed.
The sources may be in their natural or secondary (anthropogenic sources, tailings, etc.) state.

Products of the project may be bought, sold or used, including electricity, heat, hydrocarbons, hydrogen, minerals, and water.
It is noted that with some projects, such as for renewable energy, the products (electricity, heat, hydrogen etc.) are different from the sources (wind, solar irradiation etc.).
In other projects the products and sources may be similar e.g. in petroleum projects both, the sources and products are oil and/or gas, although the fluid state and properties may change from reservoir to surface conditions.

Figure 3: *Domains of application of the UNFC for Resources*

A Project is a defined development or operation which provides the basis for environmental, social, economic and technical evaluation and decision-making. The project plan may be detailed or conceptual (in the case of long-term national resource planning). The project plan should be sufficiently detailed to allow an appropriate assessment for the stakeholder needs at the defined level of maturity.
UNFC has been designed to meet, to the extent possible, the needs of applications pertaining to:

- policy formulation based on resource studies;
- resources management functions;
- corporate business processes;
- financial capital allocation.

UNFC categories and sub-categories

UNFC is a principles-based system in which the products of a resource project are classified on the basis of the three fundamental criteria of:

- environmental-socio-economic viability (E),
- technical feasibility (F), and
- degree of confidence in the estimate (G),

using a numerical coding system. Combinations of these criteria create a three-dimensional system (Figure 4). Categories (e.g. E1, E2, E3) and, in some cases, sub-categories (e.g. E1.1) are defined for each of the three criteria.
The first set of Categories (the E axis) designates the degree of favourability of environmental-socio-economic conditions in establishing the viability of the project, including consideration of market prices and relevant legal, regulatory, social, environmental and contractual conditions.
The second set (the F axis) designates the maturity of technology, studies and commitments necessary to implement the project. These projects range from early conceptual studies through to a

fully developed project that is producing, and reflect standard value chain management principles. The third set of categories (the G axis) designates the degree of confidence in the estimate of the quantities of products from the project.
The Categories and Sub-categories are the building blocks of the system, and are combined in the form of "Classes". UNFC can be visualized in three dimensions, as shown in Figure 4.

Relationship with UNFC and current national (entity) classification system/s

The UNFC classification is rarely used in legal document in B&H entities, and it is quite unknown to many experts deal with energy and mineral resources classification systems.
For the first time it is mentioned in some legal document in the Rule on classification and categorization of the mineral resources of the Republic of Srpska, adopted in 2014.[8]
Indeed, the section 5 in article 15 of the Rule consider UNFC 2004 version and contain the following parallels between national classification and UNFC 2009:

Article 5

(1) In accordance with level of exploration and knowledge of quality, solid mineral resources are split into categories A, B, C_1 and C_2.
(2) In accordance with United Nations Framework Classification (UNFC) reserves of A and B categories of national classification approximately match Proven Reserves in UNFC, and C_1 matches Probable Reserves in UNFC.
(3) In analogy with the previous, reserves of C_2 category matches Inferred Reserves.
(4) Categories and classes mentioned under (1) in this article area applied in UNFC and use appropriate three-axis based system.

From the above listed paragraph of the article 5 of the Rule and in comparison with figure numerous documents consider relation between UNFC and CRISCO,[9] it is obviously that this transposition of UNFC in entity legislation (in that moment 2009 version) do not properly considers this classification. Used terms: proven, probable and inferred, matches CRISCO standard, not UNFC.
On the other side, positive fact is that the UNFC classification was for the first time recognised and mentioned in one B&H entity (Republic of Srpska) and adopted in one entity sub-law document deal with mineral resources.

[8] https://www.vladars.net/sr-SP-Cyrl/Vlada/Ministarstva/mper/PAO/Documents/PravilnikKategorizacijaIKlasifikacijaRezerviMineralnihSirovinaIVodjenjeEvidencijeONjima9214.pdf
[9] https://www.micon-international.com/mineral-resource-reporting-differences-between-cim-jorc-and-others/

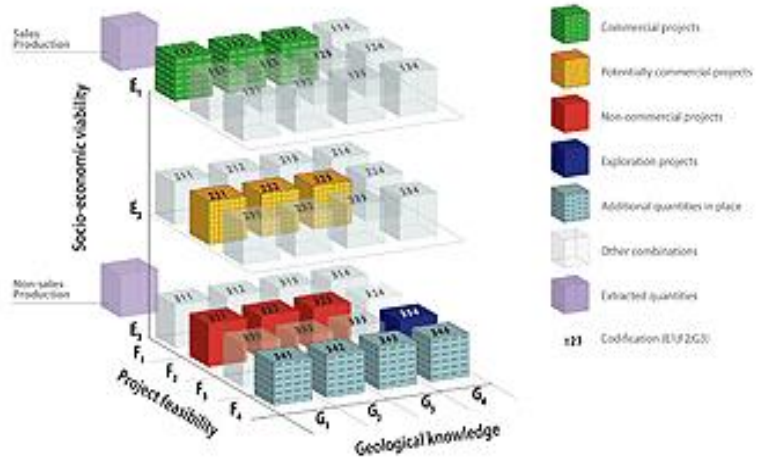

Figure 4: *UNFC Categories and Examples of Classes*

Transitional schemes between UNFC and national classification system for solids and groundwater for the first time is proposed by R. Vukas and B. Jolović.[10]

UNRMS – United Nations Resource Management System

The United Nations Resource Management System (UNRMS) is essentially based on the United Nations Framework Classification for Resources (UNFC). The UNRMS, as the UNFC extension (Figure 5), is a comprehensive, sustainable resource management system that supports the realization of the 2030 Agenda for Sustainable Development.
While resources are required to support sustainable development, resources need to be produced and consumed in a sustainable manner.

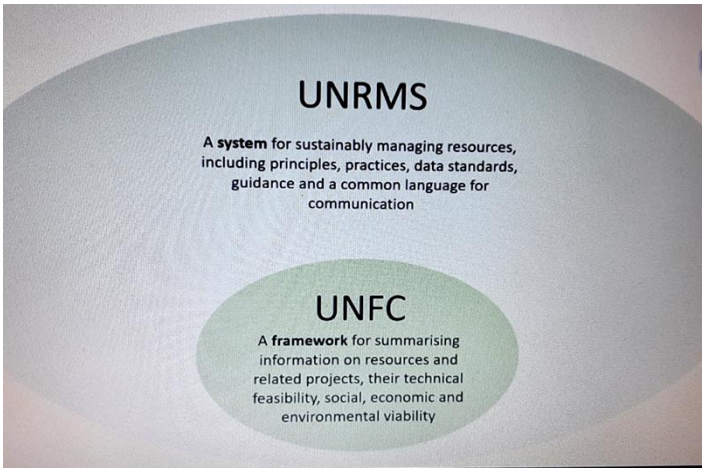

Figure 5: *UNRMS – UNFC linkage*[11]

It is a voluntary global standard for integrated resource management within the framework of public, public-private and civil society partnerships that is uniformly applicable to all resources. Primary users of UNRMS will be governments/regional bodies, industry, capital investment entities and

[10]https://unece.org/fileadmin/DAM/energy/se/pdfs/UNFC/proj/integrated_water_RM/Case_studies/UNFC_Case_Study_Republic_of_Srpksa_Bosnia_and_Herzegovina__2020.pdf
[11] https://eurogeologists.eu/questionnaire-on-united-nations-resource-management-system/

civil society, including academia, non-profits, indigenous communities and the public (Figure 6). Each stakeholder group will be using UNRMS for specific purposes.

Figure 6: *Primary users of UNRMS*

2. Brief overview of opportunities for MSMEs in critical raw material supply in Bosnia and Herzegovina

a. Primary and secondary resources of CRMs

As a part of daily lives metals, minerals and natural materials are crucial for sustainable development. At the same time their extraction and processing are usually very sensitive issues regarding environmental impact.
Among numerous raw materials there are those materials that are economically most important and have a high supply risk. These group is called critical raw materials.
Critical raw materials are essential to the functioning and integrity of a wide range of industrial ecosystems.
Currently, solid mineral extraction sector in B&H entities covers:

Republic of Srpska
- lignite and coal;
- lead and zinc;
- iron;
- bauxite;
- quarrying of construction stone;
- kaolin and bentonite;
- gravel and sand.

FB&H
- lignite and coal;
- salt and gypsum;
- cement;
- quarrying of construction stone;
- chalk and slate;
- gravel and sand;
- mining of clays and kaolin;
- chemical and fertilizer minerals.

Regarding secondary MRs, in the case of bauxite production huge amount of red mud remain. It could be valuable source of Fe and REEs in the future and represent most important secondary site of these metals. Further, Pb, Zn tailing sites in the eastern part of the country are interesting regarding these metals but also for some other. Ash from the TPP could be analysed in detail regarding e.g. Ge content.

b. Critical studies defined at the entities/national level

The strategies of mineral resources management are not prepared yet in B&H entities. In the entity Republic of Srpska preparation of the strategy was triggered in the spring 2021 and it is expected to be completed in the first half of 2022. As any, the task of the strategy is to consider entire chain of mineral resources management, for the period up to 2032. One of the key tasks is identification of strategic MRs.

Anyhow, those defined as critical at the EU level will be accepted as relevant as well.

The EU 2020 assessment covers a larger number of materials: 83 individual materials or 66 candidate raw materials comprising 63 individual and 3 grouped materials (ten individual heavy rare earth elements (REEs), five light REEs, and five platinum-group metals (PGMs). Five new materials (arsenic, cadmium, strontium, zirconium and hydrogen) have been assessed (Figure 7).

For comparison, 41 candidate materials have been screened in 2011, 54 in 2014 and 61 in 2017. Results of the 83 individual (66 candidate) raw materials assessed, the following 30 were identified as critical in this assessment.

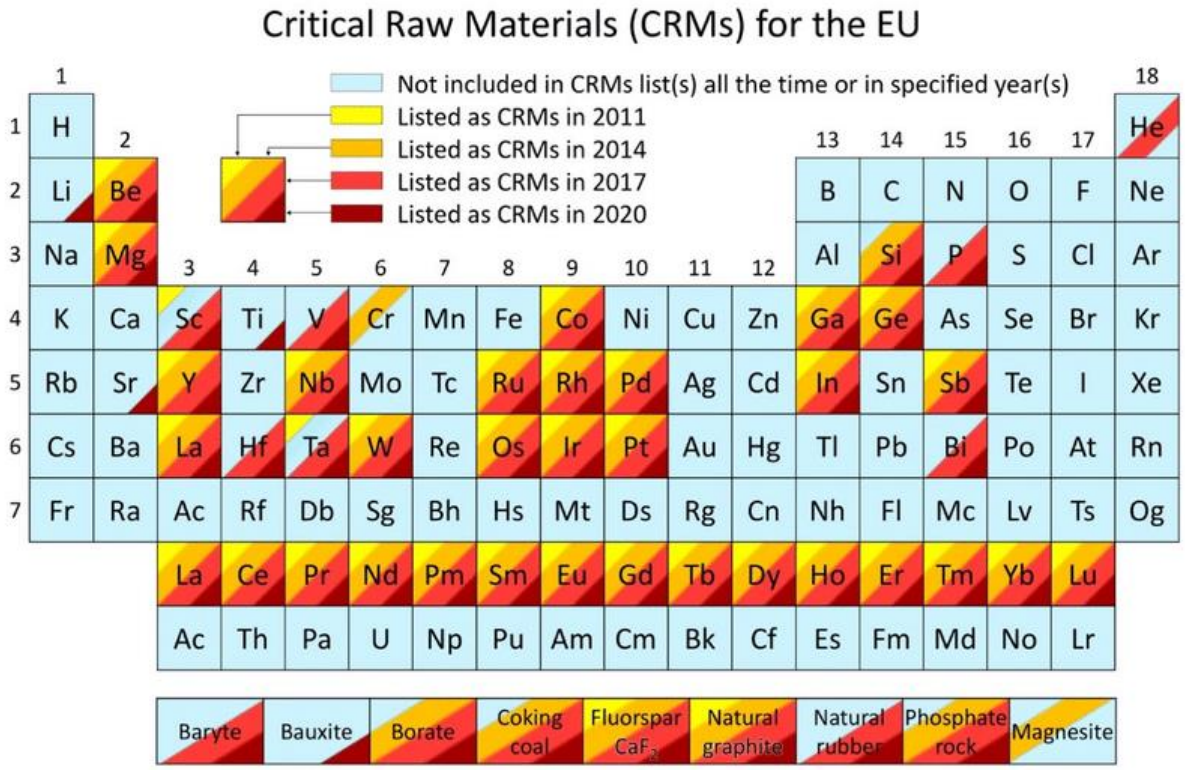

Figure 7: *Critical raw materials list for 2011-2020 overlaid on the periodic table of elements*[12]

[12]https://www.researchgate.net/figure/Critical-raw-materials-list-for-2011-2020-overlaid-on-the-periodic-table-of-elements_fig1_349307861

Minerals and metals are essential to the technologies that define our modern world. It could be considered as driving force of the key industries related with sustainable development:

- batteries;
- automotive sector;
- defence industry;
- electrical and electronic equipment;
- renewable energy;
- food production.

In addition, many of these are key to many of the medicinal innovations. While many are not aware of this fact, minerals and metals are the building blocks of the life-saving medical devices and medications that doctors and patients rely on daily scale.
Not only can it be found in MRI scanners, it is also critical to inhibiting the spread of the influenza virus. It is also vital in other medical equipment due to its anti-microbial properties. Another mineral with significant medical benefits is e.g. silver.
Silver is an active ingredient in medical products as it prevents bacterial growth and accelerates the healing process. Because of this, silver is a present ingredient in a number of antibiotics.
In fact, a small amount of silver makes *E. coli* bacteria significantly more sensitive to commonly prescribed antibiotics like penicillin. Further, titanium, which is resistant to bacteria, is a critical component is surgical equipment.
Currently, B&H support CMRs just in bauxite mining (Figure 8) and further, the part of the chain of alumina and alumina-hydrates production.

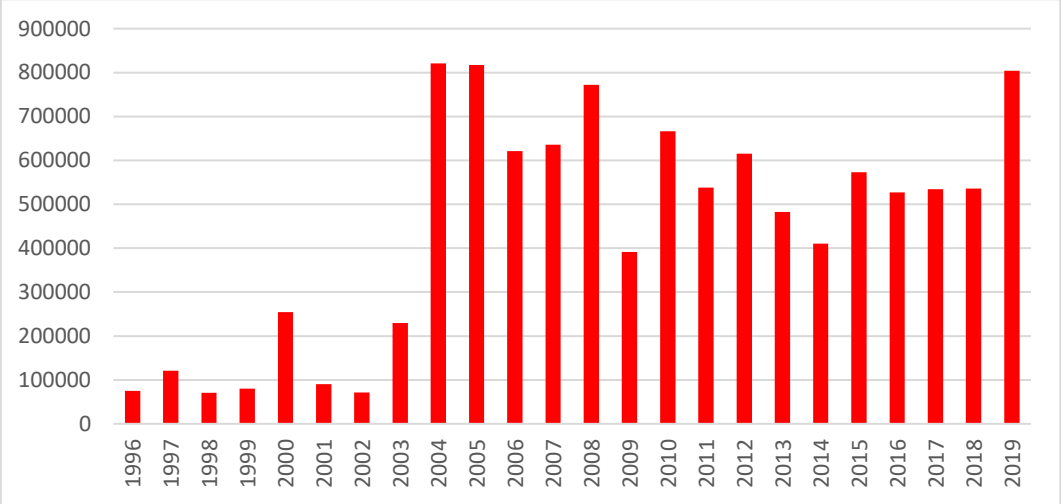

Figure 8: *Bauxite production in tons, RS, B&H, 1996-2019.*

In accordance with data published by the Institute for Statistic of RS, in the period 1996-2019, mean bauxite production was 447.417 tons. Excluding the period 1996-2003, characterized by very low production (mostly up to 1000.00 tons / annual), in the period 2004-2019 mean production was 609.092 tons.[13]
In the next decades it is realistic assumption that bauxite production rate will slow down because the reserves depletion.
On the other side, it is also assumed that country could give significant support to national and European market in batteries important minerals (Li, Ni, Co), also in antimony. Further, beginning

[13]Institute for the Statistic of the Republic of Srpska

of extraction of Cu, which is very important for healthcare sector is considered as possible in the next 10 years.
Increasing of pressure metals production is expected as well.
In the case of bauxite production huge amount of red mud, close to alumina factories in Zvornik and Mostar, are deposited. It could be valuable secondary source of e.g. Fe and REEs.

c. Applications in key sectors

The key metal processing sectors are aluminium and iron, both based on domestic mining. Because the bauxite reserves depletion, aluminium industry will probably become more import dependant in the recent future.
Aluminium value chain is mostly concentrated around Zvornik region, where Alumina Zvornik produces good quality primary alumina at a good price. Bauxite mines, distanced about 50 km from the alumina factory (localities Milići and Srebrenca), provide majority of the ore. The rest is imported from Guinea, China, India etc.
The Zenica region situated in central Bosnia is another large metal sector hub. Located there is Arcelor Mittal, the largest iron and steel producer in the country with an annual export over EUR 220 million. Metal processing companies in this region use modern technologies and processes including welding, laser cutting, machine processing and metal sheet processing (CNC), iron, and steel and aluminium castings in their production of various products. The ore is mostly provided from Ljubija mine, also in ownership of the ArcelorMittal Company.
In addition, both mentioned factories are located relative close to TPPs, able to provide huge electricity demand for alumina and iron and steel production. Electricity production in this TPPs is supported by national coal and lignite production, where coal and lignite mines are reclined to TPPs.
The B&H metal construction industry also experienced a significant increase of production in the last decade and the companies within this value chain were able to respond to many demanding projects in EU.

d. Demand and supply

Demand side

During the last decade, the Bosnia's key export covers products based on iron, steel and aluminium. This fact reveals importance of the MRs sector for the national economy.
The production is significantly based on the entities resources. In addition, natural/geological conditions indicate that some metallic MRs could be driving forces for the future development of some other sub-sectors.
In accordance with the most recent market investigations, provided by Agency for the Statistic of B&H, during the first six months of 2021 the highest export was in sector of metal based products. Moreover, from the total export, 1/3 is related with products based on the above mentioned metals – aluminium and iron. In addition, here is car industry, with constant growth in export share, what can be additional challenge for future metallic MRs demand.
It indicates that high demand in theses metals is expected to be continued in the upcoming decade.
The industry also possesses broad capabilities in metal processing and manufacture, from forging, pressing, stamping and rolling, to milling, forming and coating. This enables the industry to manufacture many elements and structures used in sub-sectors such as construction, energy, defence, and automotive.
The automotive industry has experienced strong growth and profitability. When other sectors saw stagnation, companies engaged in auto components manufacture prosper year by year.

The defence industry has been a strong driver for growth and investment in the metals sector.
The Foreign Trade Chamber finds that metals production and processing and auto-parts manufacture will be two main pillars of the B&H economy.
The highest growth in industry was registered in "applied industry", which involves the production of machines, mechanical tools, devices, and miscellaneous parts. Automotive parts are a well-cited export, which has enjoyed good growth in recent years, with a growth of 11.8% in 2018.[14]
In the first three months of 2020 compared to the same period in the year prior, the metals and electrical equipment industries experienced 9.6% decrease in exports and a 10% decrease in imports.[15]
On the other side, related with demand, the highest import is also in mineral sector (total value of 297 M KM or approximately 151 M euros) or 21.8% of total import.
In accordance with the Agency investigation it is paradoxically that huge amount of some other materials (e.g. cement, gypsum) is imported, taking into account that country dispose with important resources of salt, stone, gypsum, carbonate mineral resources, minerals used as base for cement industry etc.

Supply side

There is a longstanding tradition of metal processing in B&H, due to the country's abundance in natural resources such as iron ore, bauxite, lead and zinc. The metal sector is a significant export driver with robust production growth rate of over ten percent in the past few years, although this growth slowdown in the last period.
As it mentioned currently key resources for mining sector in the Republic of Srpska are: lignite and coal, lead and zinc, iron, bauxite.
In FB&H there are: lignite and coal, salt and gypsum, cement, quarrying of ornamental and building stone, chalk and slate, gravel and sand, mining of clays and kaolin and chemical and fertilizer minerals.
The main export products of the metal sector included aluminium, steel and automotive industry components; although since the problems in the largest aluminium producer the production of aluminium will significantly decline. B&H's metal sector exports are primarily oriented towards the EU and Central European Free Trade Agreement (CEFTA) markets.
But looking into potentiality described in numerous geological studies in both entities, the list of those MRs which could play significant role for the future of mining sector is not exhausted.
Bauxite national production is presented in the previous part of the document.
Average annual iron ore production in Bosnia and Herzegovina for the period 2000-2019 was 1.264.579 tons. Excepted period 2000-2004 (with average production 1.264.579 tons), for the period 2005-2019 it was 1.633.270 tons.[16]

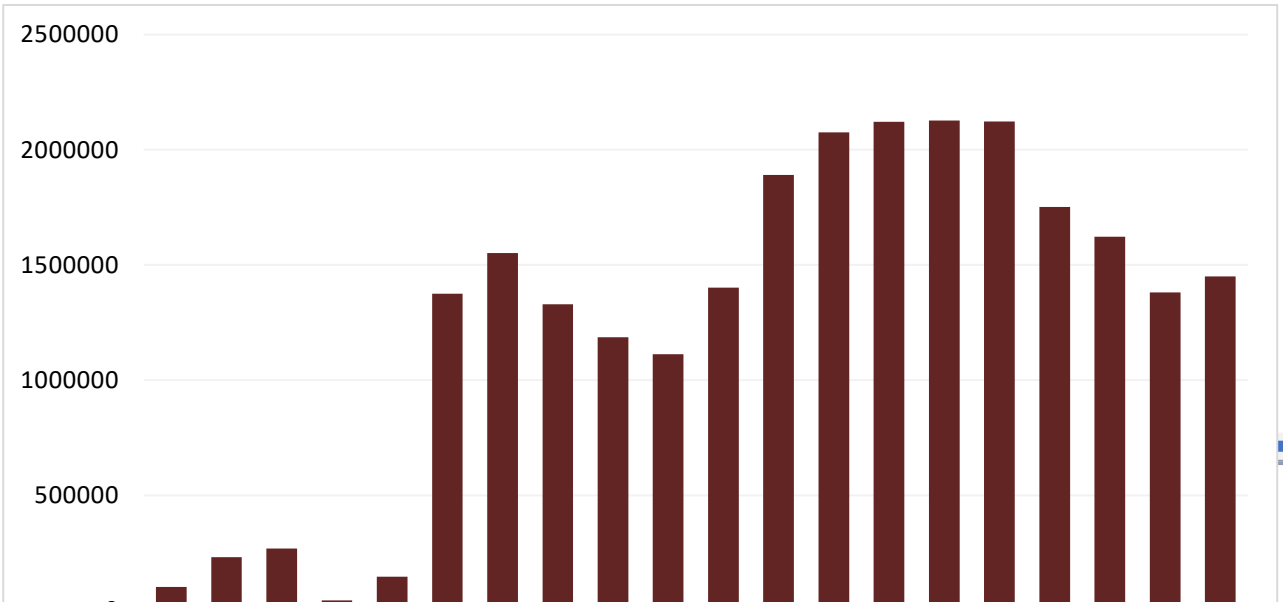

Figure 9: *Iron ore production in B&H, 2000-2019.*

Average annual production of Pb-Zn ore in the last decade is about 26.000 tons (2009-2019.). Maximal was in 2018 (28.813 tona), minimal 2009. (5.811 tons).

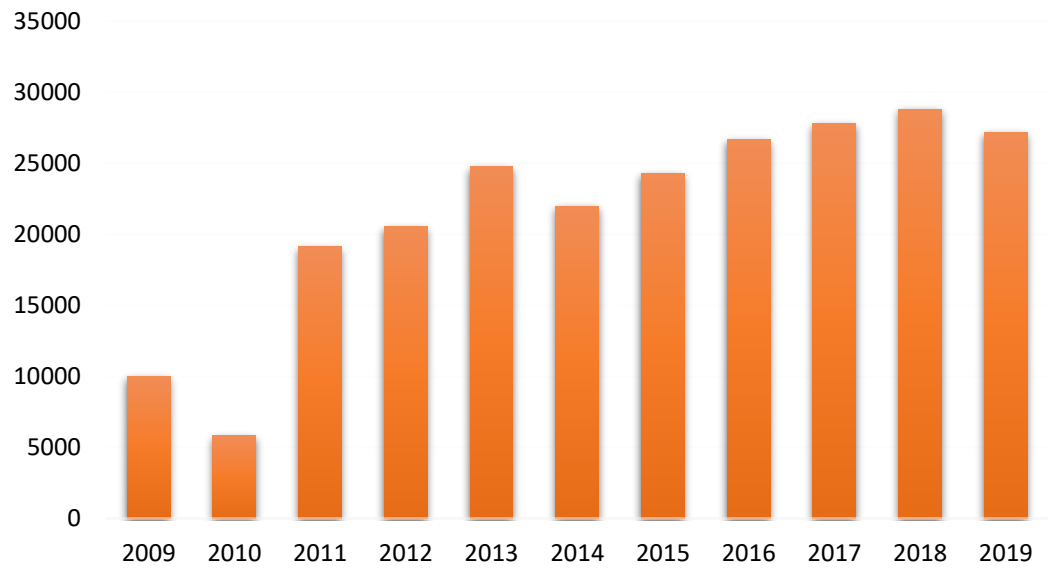

Figure 10: *Pb-Zn ore production in B&H, 2009-2019*[18]

Beside coal, FB&H mining sector is currently focused on non-metallic mineral production, in the first order: salt, cement and gypsum (Table 4).
Production of limestone dominates in technical-construction stone exploitation in both, FB&H and RS.

Table 4: *Non-metal production in FB&H, 2012-2016*

Year	2012	2013	2014	2015	2016	Unit
Salt	118210	127603	129690	120269	125020	tons
Cement	845657	881580	840211	807587	840945	tons

[17]Institute for the Statistic of the Republic of Srpska
[18] Institute for the Statistic of the Republic of Srpska

Gypsum	18906	16253	13646	13607	13820	tons

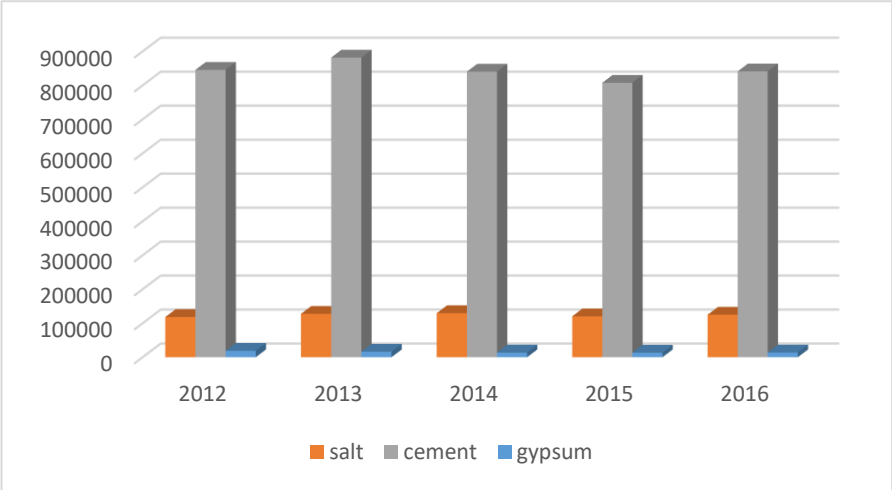

Figure 11: *Non-metal production in FB&H, data for the period 2012-2016*

3. Guidelines and Best Practices for navigating challenges for MSMEs in raw material supply business environment in Bosnia and Herzegovina (with examples)

a. Business facilitation and business registration

Establishing a business in B&H can be an extremely burdensome and time-consuming process for investors. In its "2019 World Bank Doing Business" report[19], the World Bank ranked B&H 89 out of 190 countries, a decline of five spots from its ranking the previous year.

In 2019, B&H improved in only one out of the ten areas covered in the report, dealing with construction permits. The World Bank estimates there is an average of 13 procedures, taking a total of 81 days, to complete registration of a new business e.g. in the capital city, Sarajevo. Certain administrative procedures can be especially time-consuming. For example, obtaining a construction permit can take as long as one year.

All three sub-national levels of government (entity, cantonal, and municipal) establish laws and regulations affecting businesses, creating redundant and inconsistent procedures. It can be difficult to understand all the laws and rules that might apply to certain business activities, given overlapping jurisdictions and the lack of a central information source. It is therefore critical that foreign investors obtain local assistance and advice.

In 2013, entity RS established a one-stop-shop for business registration in the RS. This reduces the required processes dramatically and the time to register a business in the RS is down to an average of one to two weeks. Registration in B&H can sometimes be expedited if a local lawyer is retained to follow up at each step of the process.

Investors in the Federation B&H may register their business as a branch office in the RS and vice versa.

Anyhow, to facilitate business establishing in B&H, the Foreign Investment Promotion Agency of Bosnia and Herzegovina provided very useful guidance.[20]

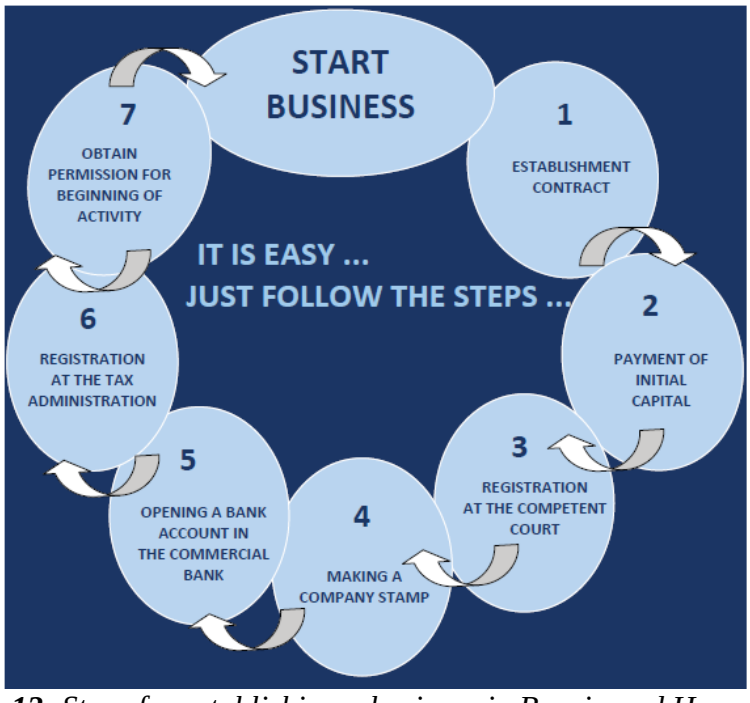

Figure 12: *Steps for establishing a business in Bosnia and Herzegovina*

[19]https://www.doingbusiness.org/content/dam/doingBusiness/media/Annual-Reports/English/DB2019-report_web-version.pdf

[20]http://fipa.gov.ba/doc/brosure/HOW%20TO%20ESTABLISH%20A%20BUSINESS%20IN%20BH.pdf

b. Policy, legal and regulations

The legal framework for foreign investment in Bosnia and Herzegovina is structured in such manner that it makes no difference between domestic and foreign investment.
The procedure of registration of the business entity in Bosnia and Herzegovina is regulated by:

- Framework Law on Registration of Business Entities in Bosnia and Herzegovina (Official Gazette of B&H No. 42/04),
- Law on Registration of Business Entities in the Federation Bosnia and Herzegovina (Official Gazette of FB&H No. 27/05, 68/05 and 43/09),
- Law on Registration of Business Entities in the Republic of Srpska (Official Gazette of RS No. 42/05 and 118/09),
- Law on Registration of Business Entities in Brčko District (Official Gazette of BD No. 15/05).

The business establishing, operation, management and termination of business in Bosnia and Herzegovina are regulated by the following laws:

In the Federation of Bosnia and Herzegovina:

- The Law on Companies of the Federation of Bosnia and Herzegovina(Official Gazette of FB&H No. 23/99, 45/00, 2/02, 29/03, 68/05, 91/07, 84/08,7/09 and 63/10)

In the Republic of Srpska:

- The Law on Companies of the Republic of Srpska (Official Gazette of RS No. 127/08 and 58/09)

In Brčko District:

- The Law on Enterprises of Brčko District (Official Gazette of BD No.11/01, 10/02, 14/02, 1/03, 8/03, 4/04, 19/07 and 34/07)

According to the above mentioned laws, a company is a legal entity, which independently performs business activities with the aim of earning profit.
Company can be established by:

- domestic natural and legal entities;
- foreign natural and legal entities;
- domestic and foreign natural and legal entities.

The company law of all three administrative units in Bosnia and Herzegovina distinguishes the following types of companies:

- Unlimited Joint Liability Company (d.n.o./o.d./UnLtd)
- Limited Liability Company (d.o.o./Ltd)
- Limited Partnership (k.d./LP)
- Joint-Stock Company (d.d. /a.d/ JSC)

c. Access to data, information and knowledge

There is an evident deficit of the relevant human resources (engineers, technicians), but their quality is more problematic then their availability.
Companies in B&H often must invest time, energy and money to improve their knowledge and skills as prerequisite to use them. On the other hand, there is a risk that employees who are "internally" educated leave and start working in competitors' company or perhaps they can establish their own company.
The MSMEs problem in supply of MRs is sometime related with less of in-house knowledge of applicable regulations and laws (no legal department, no skilled expert for foreign tax laws, levies and royalties etc.)
Generally speaking, synergy between government, industry and academia is at a low level. Thus, for example, the Mechanical Faculty of the University of Banja Luka, taking into account the equipment it has at its disposal, is available to provide services to companies in regard to product

design, production of a prototype and many other areas, however, in practice, this does not happen too often. But the Faculty, as an institution, is not enough oriented towards the companies, providing the needed support to them.
One of the observed discrepancies is that most of the academia staff has never worked in the (real) economy.
All this aspects cause the lack of knowledge, data and information share, as prerequisite for the successful MSMEs business.

d. Entrepreneurship skill facilitations

B&H suffers from a skills shortage. In 2009, a World Bank study found that one third of managers of exporting companies cited skills shortages as a problem in doing business. Despite the high unemployment rate, firms claimed that finding qualified employees was a key problem (World Bank, 2009). After 2009, there is also evidence of very intensive a "brain drain" to more developed countries, highlighting disconnection between the education system and commercial pre-requisites, and a lack of incentive for young people to stay and work in B&H.
Bosnia's biggest challenge is in terms of human resources. Some crucial changes are necessary.
First, the educational system must provide young people with stronger skills in fields that tend to be associated with innovation such as engineering and computer science.
Second, young people with relevant skills must be persuaded to stay in Bosnia rather than go abroad. The continuation of ongoing reforms related to the business environment will be helpful in this regard as would a reduction in political tensions. The emergence of a venture capital finance industry would also encourage potential entrepreneurs, armed with the knowledge that there are funding options available, to start companies.[21]
National and international institutions and companies provide all kinds of training on the internet like entrepreneurship skill facilitation.
To support entrepreneurship government establish different incentives. A number of incentives exist, or have been offered in the past to support business start-ups.
It includes:

- tax subsidies for training, retraining and the recruitment of employees with high school or college diplomas;
- small loans and grants available to start-up companies in a range of different industries, with specific eligibility criteria, especially agricultural and craft-related enterprises;
- specialised "free zones" where companies can import goods without paying VAT; and
- low (10%) corporate tax rate.

e. Market access

Most companies in metal industry are quite passive – they wait for potential customers, to come with their technical drawings and design, asking for the cheapest offer for production, to offer their services, while the customers are always trying to find the one amongst them to offer them the lowest price.
A relatively small number of companies have their own products. Quality of their core products is good (even or better in comparison with competitors), but aesthetics could be better (industrial design).
Local manufacturers do not recognize themselves or their local competitors as leading firms, so that only international companies are perceived as the leading ones. Since the metal industry is highly globalized, the leading companies in the Western Balkans are from EU and worldwide. These companies have concentrated significant financial and human resources, and they have strong

[21] EIB Report, 2016

research and development capacities. The leading companies create and establish product and business standards, which other companies have to follow.
Thus, over 90% of input materials for producing hydronic heating boilers in B&H is imported. MSMEs as producers of hydronic heating boilers usually buy input materials (e.g. sheet metal) from distributors from B&H who import them directly from producers in Italy, Germany, Slovakia and other EU countries. Payment conditions are quite unfavourable payment in advance or in quite a short period. Only one of the bigger companies buys sheet metal directly from the producer in Slovakia. Other components for hydronic heating boilers (motors, heaters, fans,etc.) are bought either directly from producers or from their distributors in EU.

f. Access to finance

Due to the pandemic crisis, many MSMEs are likely to experience problems in liquidity and repayment for loans. Countries which leave their MSMEs alone, defenceless, and eventually insolvent with governmental support will meet with dramatic disruption in their value chains. The loss of MSMEs will lead to massive reduction of productivity end economic losses.
Thus, financial supporting mechanisms for MSMEs are very important to save economic stability, especially in developing countries.
Although formally the highest in B&H, the state level government does not have great powers to implement all economic measures as they are within the competence of lower levels of government, primarily the entities. Nevertheless, the state level has a significant role in issues such as: indirect taxes, flow of goods and services and borrowing from international financial institutions, issuing visas in diplomatic and consular missions of B&H, the work of the judicial and other bodies of Bosnia and Herzegovina during the state of natural or other disaster and the movement and entry of foreigners in B&H.
A large number of financial institutions operate in B&H relative to its small size. Most of these, however, are foreign-owned, which is likely to account for the stability of the financial infrastructure. Table below shows the number of financial institutions operating in B&H.

Table 5: *Number of financial institutions in B&H*

Financial Institution	Number
Banks	27
Leasing companies	8
Micro-credit organisations	19
Stock markets	2

All banks work with MSMEs to some degree, though some tend to focus on the larger end of the market. Until recently, there has been little legislative encouragement for venture capital/private equity investment.
Currently, opinions vary on the banking system's ability to provide sufficient credits to the MSMEs sector. The EIB (2016) estimated that the total supply of loans available to MSMEs matches demand (and was growing in line with economic growth) and that the rejection rate for loan application was low (3.8%). However, it acknowledged there were funding gaps in some areas, particularly for start-ups and 'informal' businesses.
Banking sector regulation and supervision have been strengthened in the last decade. New banking laws have been passed, aligning the regulations more closely with the Basel framework. It aim to make banks safer and more sound, meaning MSMEs in Bosnia and Herzegovina will be less exposed to bank funding constraints in the long term.[22]

[22]SME Policy Index: WesternBalkansand Turkey, OECD/ETF/EU/EBRD 2019

The recently prepared bankruptcy laws in the both entities include many features that lay the foundation for efficient insolvency procedures. In the Republic of Srpska, MSMEs in financial difficulty no longer need to file for bankruptcy, and they can initiate debt-restructuring processes. In less than two years, 11 debt settlements were initiated in B&H, saving 600 jobs.

Covid-19 related measures

During Covid-19 banking agencies in both entities have the responsibility to primarily protect the banking system as the only institutions that contribute to and influence the financial liquidity of the FB&H and the Republic of Srpska. Banking Agencies in both entities, according to the Decisions on Provisional Measures that the bank applied to mitigate the negative economic consequences caused by Covid-19, prescribed jurisdictions of banks during the pandemic as following:

- granting benefits to bank customers who are directly or indirectly affected by the negative effects,
- special rules for credit risk management, which the bank applies in the event that approve special measures
- for the client preventive measures aimed at preserving the capital of banks.[23]

A key area of the World Bank Group's working in B&H is focus to improve MSMEs' access to finance and find innovative solutions to unlock sources of capital. The approach is holistic, combining advisory and lending services to clients to increase the contribution that MSMEs can make to the economy including underserved segments such as women owned MSMEs.
Here are many other activities for financial support to MSMEs in B&H.
In August of 2020 the European Investment Fund (EIF) and some banks in Bosnia and Herzegovina signed a guarantee agreement allowing the bank to increase its lending capacity to offer €12 million of new financing with improved terms and conditions MSMEs in Bosnia and Herzegovina. The EIF's guarantee to the banks is provided under the COSME Loan Guarantee Facility, as part of its coronavirus economic support package. This tool helps provide working capital to European MSMEs for the recovery.

Thierry Breton**,** Commissioner for Internal market, said: *"Small and medium sized enterprises are heavily affected by the corona virus pandemic. We reacted very quickly to provide them with immediate liquidity. Thanks to this rapid action, the corona virus measure under the COSME Loan Guarantee Facility is already available in more than 20 European countries. With today's agreement SMEs in Bosnia and Herzegovina will benefit from the EU support for recovery as well."(2020)*

g. Access to technology

As it mentioned, the country has significant reserves of brown coal and lignite and very intensive coal mining, reclined in supply chain to closely located TPPs and electricity production.
Other important mining sectors are iron, zinc and lead. There are also two aluminium and aluminium oxide processing plants situated near bauxite mining operations. Further, numerous limestone, dolomite and gravel quarries operate country wide as well as cement factories.
For this purposes, modern technology is necessary, unavailable at the local market, regional as well.
The industry has shifted its focus to improving productivity by "sweating" existing assets, but this strategy will go only so far. Despite the industry's booms and busts, the nature of mining has stayed the same for decades. Achieving a breakthrough on productivity performance demands rethinking how mining works.
Looking ahead, many existing mines are maturing, resulting in the extraction of lower ore grades and longer haul distances from the mine face; ore-body-replacement rates are in decline; and new-

[23] Economic Impact Assessment of COVID-19 in Bosnia and Herzegovina Report May, 2020

mine-development times are increasing. In general, mining activity from 2004-2014 is in decline stage (Figure 10), and new technologies, not just in exploitation but also exploration, are one of the key elements to turn this trend.
The potential to achieve such a breakthrough is now coming within the industry's reach through digital and technology innovations that could transform key aspects of mining.

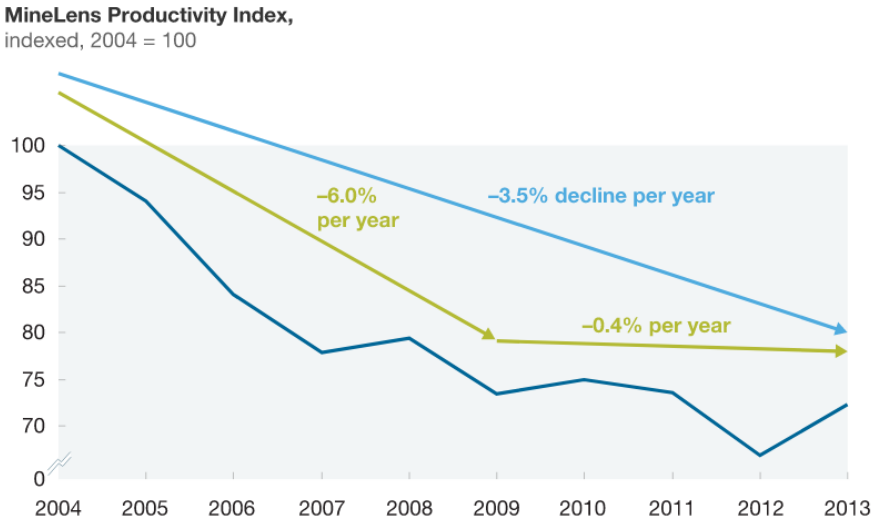

Figure 13: *Global decline in mining productivity 2004-2014*[24]

Rapid advances in technological innovation, including through automation, digitization, and electrification, are having a fundamental impact on the mining sector. A few technologies reshaping the sector include autonomous vehicles, automated drilling and tunnel boring systems, drones and smart sensors.
The World Economic Forum estimates autonomous machines will be common place by 2025, and having these machines operating 24 hours a day, every day, at high levels of productivity and with lower personnel costs could add USD 56 billion in value to the industry.
However, there are concerns that the fundamental relationships underpinning the social license of mining companies to operate become increasingly strained due to the downward labour pressures associated with automation. Governments will need to ensure automation and artificial intelligence technologies do not undermine shared value efforts, such as employment and investment in local communities or dividing the sector into low-paying, low-skilled jobs and high-paying jobs for individuals who can take advantage of the shift to new technologies.[25]
Sub-sectors, as heavy mining equipment, including bulldozers, tractors, excavators, surface mining conveyor systems, and heavy trucks are those crucial for mining operations.
For the example, Power Utility of FB&H has committed to investing $497 million in the long term in rehabilitation of the mines, primarily through heavy mining equipment procurement and upgrade that should increase the coal mines' efficiencies. The procurement process has been slow due to lack of available funds and the lots of the equipment has not been purchased yet.[26]
Because very limited domestic market possibilities, the import of the technologies for mining sector is only option. For the sector, as one of the key in the country, supporting and facilitating import measures must be considered urgently.
To facilitate approach to technologies the Council of Ministers adopt decree in April 2018 on custom-free import of machines and tools.

[24] https://www.mckinsey.com/industries/metals-and-mining/our-insights/how-digital-innovation-can-improve-mining-productivity
[25]https://www.igfmining.org/technological-innovation-impacting-mining-sector/
[26] https://www.trade.gov/country-commercial-guides/bosnia-and-herzegovina-mining

h. Logistics and supply chains

The Covid-19 pandemic debilitated supply chains across the world while, necessitating the need for smooth, efficient logistics. Amid the crisis, it was the MSMEs in the logistics industry that faced challenges at multiple levels.

Right from a reduced capacity to depleting capital with no sources of fresh funding, a rapid, large-scale shift in consumer behaviour and expectations that resulted in a surge in online shopping, there were radical changes in nearly every aspect of logistics.

Furthermore, logistics MSMEs also face obstacles in the form of the rising cost of transportation, rise in fuel prices, and digitizing operations that larger platforms can tide over with ease, due to a lack of capital. Moreover, they also struggle to achieve supply chain visibility and target global markets. While these challenges are faced by all players in the logistics industry, the impact is greater on small and medium businesses as tackling these challenges would require capital infusion.

Companies in the mining and energy sectors in B&H face many of the same supply chain challenges of other industries. Transportation services, warehouse management, and global services are intertwined in moving equipment and supplies to the work site and shipping cargo to customers. These challenges make it difficult to predict the likely system impact of local decisions or how changes in one part of the system cause undesirable effects to other divisions.

A survey-based analysis conducted by the Foreign Trade Chamber of Bosnia and Herzegovina identified transportation, storage, and logistics sectors as being the most adversely affected by the COVID-19 pandemic. Of the key issues related to negative indirect impact, firms cite containment measures affecting trade, transport logistics, and sales, as well as behavioural changes in customers and business partners. [27]

[27] The Foreign Trade Chamber of B&H, Business Difficulties Due to Corona virus

4. Summary of Guidelines and Best Practices in Critical Raw Material Supply for MSMEs and Conclusions

a. Recommendations for MSMEs in Bosnia and Herzegovina

The deep and far reaching impact of the ongoing crisis, caused by the COVID-19 pandemic, call for additional financing to support MSMEs in Bosnia and Herzegovina, including to underserved market segments such as women-inclusive enterprises, young firms, and firms in lagging regions. As a result of the increased uncertainty due to the ongoing crisis, commercial banks have been cautious in intensifying their lending activity to enterprises at a time when demand by MSMEs for additional financing has increased.

MSMEs create employment that lift people out of poverty. The latest global estimate suggests that 11 percent of the world's population, or 783 million people, lived below the extreme poverty threshold in 2013. Most of the poor in developing countries are not employed or do not earn enough to lift themselves out of poverty.

Job creation in the private sector has proven to be a main driver in the fight against poverty. Over the past 30 years, the private sector has contributed to a sharp decline in the share of the population in the developing world living below the poverty line from 52 percent to 22 percent. MSMEs contribute significantly to the employment creation process of the private sector. In emerging markets, 4 out of 5 new positions in the formal sector were created by MSMEs, which is about 90 percent of total employment.[28]

The participation of MSMEs in some branches is not ultimately positive. For the example, MSMEs have the potential for becoming more energy efficient. While individual small businesses have low environmental footprints, their combined impact can exceed that of large businesses. MSMEs may produce more pollution than big businesses because of their informal nature and the resulting lack of regulations and supervision. Studies have estimated that these businesses can contribute up to 60-70 percent of pollution levels in developing economies. [29]

But anyhow, with appropriate measures (green technology) it could be ideal solution.

MSMEs can be incentivized by larger enterprises to integrate sustainable practices in their operations.

Economic and investment plan of EU for the western Balkan countries intend to provide 9 billion dollars grant for green transition of the economy and public sector. This initiative emphasizes that future economic growth of the countries must not be based on excessive resource exploitation and energy production must be less as possible on fossil fuels.[30]

Based on the comprehensive analyses, the set of recommendations for MSMEs in B&H should be summarized as:

- creation, identification, and/or provision of business opportunities;
- mechanism for providing of all kinds of training like entrepreneurship skill facilitation, market and business access, access to finance etc., especially related with MRs extraction and processing;
- centralised and modern IT based access to relevant information;
- strengthen of the branches association roles and their connection with relevant international bodies;

[28]Lessidrenska, T (2019) SMEs and SDGs: challenges and opportunities OECD Development Matters Blog.

[29] Micro-, Small- and Medium- Enterprises (MSMEs) and their role in achieving the Sustainable Development Goals (SDGs), DESA

[30]https://www.ekologija.gov.rs

- Development of communication tool between the local MSMEs and the leading industries (where metal processing industry is one of the key);
- Comprehensive and concentrated support for potential MSMEs for the linkages;
- Promotion of regional industrial development projects;
- Encouraging MSMEs to adopt green technology and other environmentally friendly strategies, as essential to do progress toward Goal 7 and 13, including pilot projects on short-term interventions supporting decarbonisation of MSMEs business operations;
- Consider development of environmental management practices for CMRs.
- Access to technologies by negotiations and support agreements with different countries and companies where this technologies are introduced;
- Maximizing the use of near markets;
- Making the MSMEs business environment more agile and responsive;
- General upgrading of the infrastructure and digitalisation processes;
- Promotion of communications between the potential buyers and the potential suppliers, and upgrading of capability of MSMEs in technology and management to meet the requirements of the leading industries;
- Expansion of bases of the supporting industries, considering that the number of MSMEs, which have potential as suppliers of parts and services to the leading industries, is limited;
- Preparation and official adoption of the MRs management strategic documents;
- Trigger state/entities supported (or financed) programme of the exploration of CMRs, because here is reasonable possibility for its discovery, where MSMEs make majority of companies;

General recommendation is that B&H (institutions), entities as well, need to prepare comprehensive document deal with "survival" tactics for MSMEs ("Strategy") during and especially in post Covid-19 period ("for decarbonisation and green energy era"), with detail analyses of the above mentioned recommendations.

b. Policy recommendations applicable for Bosnia and Herzegovina

Bosnia and Herzegovina's institutional framework for MSMEs policies is still underdeveloped at the state level. In fact, MSMEs policies only exist at the entity level. There is still a lack of vertical co-ordination and linkages to help align MSMEs policy objectives across the entities, and policy co-ordination remains weak.

With a score of 2.62, Bosnia and Herzegovina is the lowest performer in this dimension in the WBT (West Balkan and Turkey) region. However, its score has improved since 2016 (when it was 2.22, see figure below).

This is mainly due to some progress at the state level on regulatory impactanalysis (RIA) and public-private consultations (PPCs), as well as some developments at the entity level, principally in the Republic of Srpska, in each of the three sub-dimensions (Table 6).

Legislative simplification is being undertaken at the entity level during last decade and their implementation record is successful, especially in the RS where a regulatory guillotine has been continuously in use. Since its launch in 2009, it has eliminated 25% of unnecessary formal procedures for businesses and 60% of redundant inspection procedures.

In FB&H over the same period, the application of a regulatory guillotine has led to the simplification of business permits (65% of the total number identified for simplification) and to significant savings for the private sector. In 2016, the FB&H adopted a new law on enterprises which aimed to simplify the procedures for starting a business.

Table 6: *Score for Dimension 3 – Institutional and regulatory framework for MSMEs policy making*

Dimension	Sub-dimension	Thematic block	BiH	WBT average
Dimension 3: Institutional and regulatory framework for SME policy making	Sub-dimension 3.1: Institutional framework	Planning and design	2.79	4.06
		Implementation	3.09	4.06
		Monitoring and evaluation	2.94	3.92
		Weighted average	**2.97**	**4.03**
	Sub-dimension 3.2: Legislative simplification and regulatory impact analysis	Planning and design	2.24	4.00
		Implementation	2.10	3.25
		Monitoring and evaluation	1.71	3.23
		Weighted average	**2.06**	**3.47**
	Sub-dimension 3.3: Public-private consultations (PPCs)	Frequency and transparency of PPCs	2.84	3.86
		Private sector involvement in PPCs	3.09	4.26
		Monitoring and evaluation	1.67	2.73
		Weighted average	**2.71**	**3.79**
BiH's overall score for Dimension 3			**2.62**	**3.79**

However, during the last few years the intensity of the simplification efforts has decreased in B&H. On the other hand, enterprises can play a vital role both in responding to the crisis and in propelling a sustainable and resilient recovery. For this to happen, governments, together with employers' and workers' organizations, must act swiftly to mitigate the economic crisis. Policy responses should be grounded in specific country contexts and circumstances.

Governments, particularly in less developed countries like B&H, will face significant limitations to make large investments in support of enterprises; therefore, a comprehensive mix of public-private investment measures and international cooperation is needed.[31]

Unlike large enterprises, most MSMEs do not have funds and human resources sufficient to make major initiatives that can accomplish the above development challenge by themselves. Nor do they have sufficient management expertise.

It is therefore imperative to provide public support for MSMEs and their development efforts. In moving toward the development goal set in the foregoing section, the government/s should address the following policy framework for MSME development.

Simplifications of laws and regulations, which can significantly improve the situation of MSMEs in the long term including, include:

- Facilitation of business registration;
- Un-bureaucratic aid measures such as simplifying import regulations for MSMEs;
- Stimulate policy for MSMEs regarding taxes, subsides from new employment etc., particularly for those who explore and mine CMRs;
- Adoption of policy deal with incentives for the companies consume national produced MRs and support the export of final products;
- Supporting measures for enterprises to temporarily convert their production to help respond to the pandemic;
- Financial mechanisms helping enterprises to cover their fixed costs;
- Provision of tax holidays and prolongation of credit payments;

[31]Interventions to support enterprises during the COVID-19 pandemic and recovery, International Labor Organization, 2020

- Supporting measures for enterprises to adapt to new market circumstances;
- Easing access to credit and other financial services;
- Rolling-out a demand policy;
- Develop a fully-fledged and transparent early warning system;
- New education policy related to MRs sector.