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Scoping Study Report for the Extractive Industries

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ABBREVIATIONS

AMD	Acid Mine Drainage
AGS	Albanian Geological Survey
DCM	Decision of Council of Minister
EIA	Environmental Impact Assessment
EITI	Extractive Industries Transparency Initiative
EMP	Environmental Management Plan
ESF	Environmental and Social Framework
ESIA	Environmental and Social Impact Assessment
EU	European Union
GRI	Global Reporting Initiative
HSE	Health, Safety and Environment
IFC	International Finance Corporation
ISO	International Organization for Standardization
MIE	Ministry of Infrastructure and Energy
MSG	Multi-Stakeholder Group
MTE	Ministry of Tourism and Environment
NANR	National Agency of Natural Resources
NBC	National Business Centre
NEA	National Environmental Agency
NGO	Non-Governmental Organisation
OGA	Oil and Gas Authority
PSA	Production Sharing Agreement
RED	Regional Environmental Directorate
SEA	Strategic Environmental Assessment
TAP	Trans Adriatic Pipeline
TOR	Terms of Reference
UK	United Kingdom
USA	United States of America

1. Introduction

1.1. Scope of Work

The project's overall objective is to deliver a Scoping Study for an assessment of the environmental impact of the extractive industries in Albania and implications associated with their activities nearby the communities where extractive companies operate. This report is in preparation for Albania EITI introducing environmental impact reporting to meet the requirements of the EITI Standard 2019.

In meeting this overall objective, The Consultants have:

- Analysed both the current and likely future environmental impact of extractive companies, including impacts on land, air, water (both surface and groundwater), noise, vibration and flora and fauna;
- Identified the obligations on extractive companies to assess, manage and mitigate environmental impacts under Albanian laws, regulations and the terms of mining permits, and hydrocarbon licenses and contracts as well as the relevant international standards;
- Undertaken a gap analysis between extractive companies' obligations according to the national legislation/ permit and current implementation/ application regarding the assessment, management and mitigation of environmental impacts;
- Produced two mining-related case studies to illustrate the environmental impacts of their activities, monitoring requirements and obligation compliance according to the environmental permits;
- Presented the findings and recommendations in a Workshop organised by EITI Albania with the presence of MSG and other stakeholders in the Scoping Study; and,
- Set out our findings and recommendations to the MSG, the EITI Albania National Secretariat and other stakeholders involved in the process.

The project's scope covers the industries and companies that are in scope for EITI reporting. These are companies involved in the:

- Exploration for oil, gas and minerals; and,
- Extraction of oil, gas and minerals.

As noted in the objectives above, the project's scope covers the impact of these activities on land resources, water, air, noise and flora and fauna.

Given the significant impacts of quarries on the environment, the Consultant has paid special attention to the activities of permit holders for the extraction of construction minerals.

Based on the terms of reference (attached as Appendix C) and requirements of EITI Albania, under the scope of this assignment, the Consultants have included in its scope of work the assessment of the environmental and social impacts of the mineral processing industry, with a focus on copper and chromium enrichment factories.

As for the oil extraction industry, the primary focus shall be on the assessment of adverse environmental impacts stemming from the use of hydraulic fracking technology in oil extraction.

In terms of timeframe, the project considers environmental legislation, regulations and standards in force by 20 August 2020. The project will make a general assessment of the impacts. The duration and scope of the project does not allow for a detailed assessment of the impacts of each individual extractive activity in the mining and oil and gas sectors.

Two case studies were selected based on the indications and suggestions of EITI Secretariat. Both of them are private companies that operate within the extractive industry sector; Albchrome operates an underground mine for the extraction of chromium ore and Antea Cement operates a surface mining (limestone quarry) for the extraction of raw materials to be used for cement production.

2. Overview of the Extractive Industries in Albania

Albania is rich with mineral resources and the extractive industries have a specific importance for the economic development of the country. The main geological structure of Albania (Albanides) has enabled a large and diversified distribution of minerals across the whole territory of the country. The main deposits of metal minerals are situated in the internal tectonic zones while the oil and gas deposits are found in the external tectonic zones. Being rich with minerals, the industries of exploitation of minerals and oil and gas have contributed substantially to the economic development of the country. In 2016, the extractive industries accounted for 6% of GDP and contributed $805 million in revenues to the state budget (5% of total revenues)[1].

In order to secure the sustainable development of these industries, it is important that the development policies in these industries should consider the preservation of the right of different generations of Albanians to benefit from these natural resources. In this regard, the Albanian Constitution (Article 59/1) stipulates that *"The state, within its constitutional powers and the means at its disposal, aims to supplement private initiative and responsibility with:*

- *a healthy and ecologically adequate environment for the present and future generations;*
- *rational exploitation of forests, waters, pastures and other natural resources on the basis of the principle of sustainable development".*

2.1. Mining Sector

The inventory of minerals in Albania includes ferrous and non-ferrous metals (chromium, copper, zinc, ferro-nickel, nickel-silicate, nickel sulphites, bauxites, titano-magnetics, precious metals, etc.), industrial minerals (olivenites, dolomites, clays, magnesites, gypsum, phosphorites, volcanic glass, decorative stones, basalts, quartzites, quartzite sands etc.), coal, peat and construction materials.

The development of other industries depends very much on mining, which supports further activities in those other industries, such as cement, construction materials production, metallurgical industry, and the chemical industry as well as many others. In the domestic market, the demand for gypsum, clays and cement materials is several hundred million USD and this market relies on imported minerals, although Albania not only has the opportunity to supply the domestic market with these minerals, but can be transformed into an important source of exports for the region, the EU and beyond.

Mining activity is a major source of employment especially for rural areas, where this activity before 1990 used to employ about 50% of the workforce. Although the employment rate in the mining industry is currently not high, this industry contributes significantly to maintaining a qualified rural base and is a key factor for a well-structured rural economy. According to data from the Ministry of Infrastructure and Energy, currently more than 7,000 employees are engaged in this industry, while the possibilities are for much higher numbers through strengthening the mineral processing activities as an added value to the mining industry. In addition, strengthening the mining industry will discourage further migration towards urban areas and encourage the development of rural areas including a greater diversity of industries. Exports of minerals and mineral products represent a significant economic opportunity for Albania. Although the current level of mineral production means that export values are low, trends in processing can be encouraged to increase the market value of products.

The mining sector of Albania has gone through three phases:

[1] Data taken from 2016 Albania EITI Report

Up to 1944 The first phase, which includes the period before the Second World War, was marked by two important events in the mining industry. In 1922 the first geological map of Albania was compiled; the first of its kind in the Balkans, and in 1929 a mining law, which paved the way for the exploration and exploitation of mineral resources, was adopted.

1944 - 1994 The second phase marks the period when mining activity was organized in state-owned enterprises and was conceived as one of the pillars of the country's economic development. The development of mines and related industries was based on the policies of a centralized state economy. Chromium, copper, coal, iron-nickel, clays, limestones, and some other minerals were introduced as part of this centralized planning, in support of export and employment needs.

Since 1994 The third phase is the period since 1994, when the concept of ownership and development of mining activity was divided. The development of the sector moved from the centralized model to one based on the concept of the free market. In this period, state ownership and mining activity was transferred to private mining entities on the basis of the acquisition of mining rights, based on concessions.

The transition period, which transformed the mining industry, from a basic element of the centralized state economy, to a functional market sector for the country, was realized with the adoption of the first mining law of Albania approved in February 1994, where the state retained ownership of mineral resources while the exploitation rights of minerals were transferred to the mining entities.

Albania's mineral industry has served for many decades as a foundation of industrial growth and economic linkages, building on an underlying resource endowment of chromium for which it was, until the 1980s, one of the world's biggest producers, together with nickel, iron and copper mineralization. Large industrial complexes operated across an integrated value-chain from mining through metallurgical processing to downstream metals fabrication. After a systematic expansion for three decades (1950-1980), the mining industry experienced a decline in the late 1980s and early 1990s.

Recognizing that a revived mining sector would act as a core industry and be able to stimulate economic development, the Albanian Government strived to reshape the sector so that it can become a major contributor to the macro-economy, local community development, and employment.

For these reasons, the government has given the mining industry top priority for the country's economic development. Over the last three decades, the government has adopted several strategies and sectoral legislation for the development of the mining sector. Currently the activities in the mining sector are governed by Law No.10304, dated 15.07.2010 "On mining sector in the Republic of Albania" as amended and based on a long-term strategy for this sector covering period 2010-2025 approved with the Decision of the Council of Ministers (DCM) No.479, dated 29.06.2011.

The mining strategy 2010-2025 envisages the dynamic growth and sustainable and harmonized development of the mining industry. This will include the drafting of policies and strategies that guarantee the promotion of domestic and foreign investments in the sector, the application of new technologies, increased mineral processing in the country, competition, transparency, professionalism of mining institutions along with the reinforcement and consolidation of mining capital. The vision also encompasses the realization of effective supervision and monitoring of mining activities, increase in the range of mineral products through the introduction of new minerals and the promotion and encouragement of processing of minerals to increase their value and employment in the country, respect for the environment and acceptance by the community. Also important for the mining sector's development will be coordination of mining policies and programmes with EU mining policies and complying with international standards and

best practices of the industry as well as the integration of mining industry developments with the Government's overall development plans.

In 2019 in the whole territory of Albania there were 571 active mining exploitation permits, 301 of them were permits for exploitation of metal minerals, while 270 permits were for exploitation of non-metal minerals and construction materials. The Ministry of Infrastructure and Energy issued 12 new mining permits for exploitation of metal minerals and 4 permits for exploitation of non-metal minerals and construction minerals.

The mining activities are spread across the country. 301 mining exploitation permits for metal minerals are dispersed in 20 municipalities and 270 permits for exploitation of non-metal minerals and construction materials are dispersed in 49 municipalities.

Tables 1 and 2 below set out the number of permits for metal and non-metal minerals for each municipality.[2]

Table 1. Mining Permits for metal minerals according to Municipalities

No.	Municipality	No. of Permits	No.	Municipality	No. of Permits
1.	Bulqizë	126	9.	Lezhë + Kurbin + Mirditë	9
2.	Dibër	5	10.	Librazhdi	7
3.	Elbasan	2	11.	Mat	5
4.	Fushë-Arrëz	8	12.	Pogradec	14
5.	Has	17	13.	Prrenjas	16
6.	Klos	23	14.	Pukë + Vau i Dejës	3
7.	Korçë + Devoll + Maliq	5	15.	Tropojë	32
8.	Kukës	29			
Total Permits					**301**

Table 2. Mining Permits for non-metal minerals according to Municipalities

No.	Municipality	No. of Permits	No.	Municipality	No. of Permits
1	Berat	7	26	Malësi e Madhe	1
2	Belsh	4	27	Maliq	7
3	Bulqizë	1	28	Mallakastër	3
4	Cërrik	3	29	Mat	6
5	Devoll	2	30	Memaliaj	1
6	Dibër	1	31	Mirditë	4
7	Dropull	5	32	Patos	3
8	Durrës	2	33	Përmet	5
9	Elbasan	9	34	Pogradec	7
10	Fier	6	35	Poliçan	3

[2] Data taken from the Annual Monitoring Report 2019 of National Agency of Natural Resources

No.	Municipality	No. of Permits	No.	Municipality	No. of Permits
11	Finiq	3	36	Prrenjas	5
12	Fushë-Arrëz	1	37	Pukë	2
13	Gjirokastër	1	38	Rrogozhinë	2
14	Has	1	39	Sarandë	3
15	Himarë	9	40	Selenicë	20
16	Kavajë	5	41	Shijak	4
17	Kelcyrë	2	42	Shkodër	4
18	Klos	1	43	Skrapar	20
19	Kolonjë	3	44	Tepelenë	2
20	Korçë	8	45	Tiranë	9
21	Krujë	23	46	Tropojë	2
22	Kukës	3	47	Urë Vajgurore	22
23	Kurbin	8	48	Vau i Dejës	6
24	Lezhë	9	49	Vlorë	5
25	Librazhd	7			
Total Permits					**270**

The total area licensed for exploitation of metal minerals is about 150 km^2 or 0.5% of the whole territory of Albania. The open area affected by the activities of exploitation of metal minerals is estimated to be around 4.1 km^2 or 0.014% of the whole territory of Albania.

The total area licensed for exploitation of non-metal minerals and construction materials is about 89.2 km^2 or 0.32% of the whole territory of Albania, while the total affected area by the mining activities for these minerals is about 5.73 km^2 or 0.02% of the whole territory of Albania.

The activities of mineral exploitation in Albania are supervised by the National Agency of Natural Resources (NANR), which is an agency subordinated to the Ministry of Infrastructure and Energy (MIE).

As to the activity of exploration of minerals, currently there are 9 mining exploration permits. All permits are granted for chromium exploration. All permits cover an exploration area of 32.6 km^2, which is 0.117% of the total area of Albanian territory.

The mining exploration permits are issued by MIE, while the supervision of the exploration activities of permit holders is under the responsibility of the Albanian Geological Survey (AGS).

2.2. Oil and Gas Sector

Albania's petroleum sector is relatively small by international standards but has historically been an important contributor to the economic development of the country. Oil exploration in Albania began in 1918. Since then, oil bearing fields were discovered in the onshore and offshore areas. Crude oil production in Albania began in 1929 with 750 tons of crude oil. After World War II production increased steadily and recorded its peak in 1974 with an annual production of 2.25 million tons equivalent to 38,408 barrels/day. During the years 1970-1980 Albania developed an oil refining industry, which enabled the Albanian economy to refine the crude oil and produce a number of oil by-products, which served the country's needs.

Since 1980, there has been a steep decline in production, largely owing to lack of investment in exploration. In the 1980s oil production fell under 1 million tons per year and did not pick up until 2012 when the country recorded an increase in crude oil production.

According to the National Energy Strategy (2018-2030) proven oil reserves are estimated at roughly 220 million barrels, while the natural gas reserves are estimated at approximately 5.7 billion m^3.

Albpetrol, the state-owned petroleum company owns the main oil and gas fields in the country. However, based on the domestic legislation (Law No.7746, dated 28.07.1993 "On hydrocarbons (Exploration and Production" as amended, most of the oil production over which Albpetrol has production rights, has been contracted out through Production Sharing Agreements (PSA) to a number of foreign and local companies. Currently, the majority of domestic crude oil production is exported for refining into products elsewhere. Currently, nine PSAs with the state-owned oil company Albpetrol for development and production of existing oil fields have been signed for exploitation of oil and gas.

Table 3. Companies that own PSAs with Albpetrol

No.	Region	Company
1.	Patos-Marinza	Bankers Petroleum (2004)
2.	Ballsh-Hekal	Continental Oil and Gas (2016)
3.	Cakran-Mollaj, Gorisht-Koculit,	Albpetrol
4.	Delvina	Global Energy Management (2016)
5.	Kucova	Sherwood International Petroleum (2007)
6.	Visoka	Transoil Group (2009)
7.	Amonica	Albpetrol
8.	Drashovica, Finiq-Karne and Pekisht-Murriz	Phoenix Petroleum (2013)
9.	Divjakë, Ballaj-Kryevidh, Povelce, Panaja and Frakull	Phoenix Petroleum (2013)

In addition, Shell Upstream Albania has signed with the Government two Petroleum Agreements for two blocks, Berat – Roskovec, and Memaliaj-Tepelene-Permet, where they are carrying out oil & gas exploration activities.

Due to new investment made by the private petroleum companies heavy crude oil production in Albania has tripled over the last decade to 1.29 million tons in 2015, with Bankers Petroleum (a Canadian registered oil company) driving almost the entire increase.

The petroleum sector in Albania faces significant challenges in both the upstream and downstream. Albania's yet-to-be-discovered reserves of oil and gas, both offshore and onshore, are believed to be significant, but their exploration will require the use of sophisticated technologies which are not locally available. The decline of oil prices in the international market since 2014 has caused a corresponding decline in oil production and investment in the sector in the past 4-5 years. Currently, no petroleum activities are being carried out in the offshore areas, although in the past a number of important international oil companies have performed exploration activities in the offshore areas without significant results.

The oil and gas sector are developed based on the National Energy Strategy approved by the Council of Ministers with decision no. 480, dated 31.07.2018. Albania's Energy Sector Strategy is harmonized in terms of goals, energy sector details and timeline with a number of other strategic and legal documents that are in force. Building on and complementing these documents has led to synergies in the prioritization of policies and programmes and in the development of strategic recommendations.

According to the National Energy Strategy some of the priorities and actions in the oil sector include:

- Improve management of existing petroleum rights of the National Oil Company (Albpetrol) and those that have been granted to the foreign companies for new petroleum exploration and production.
- Develop the future oil reserves through the promotion of private investment in an environmentally responsible and financially transparent manner, including strict environmental impact assessment obligations.
- Continue monitoring upstream and downstream oil and gas activities to ensure strict adherence to the Environmental Mitigation and Management Plan for each oil and gas company; and
- Make arrangements for the emergency stockpiling of oil and petroleum products in compliance with EU product Directives.

As to the production of natural gas, currently there is little production of domestic natural gas. Despite little domestic gas production, the construction of the Trans-Adriatic Pipeline (TAP) pipeline across Albania to connect the gas-fields of the Caspian region with the European market, has created an important possibility for the gasification of the Albanian economy.

Given these developments, the Government of Albania established Albgaz sh.a, a wholly-owned government company, created in the form of a combined gas transmission and distribution operator. (DCM No. 848, dated 07.12.2201 2016). Albgaz sh.a. will be engaged in the realization of important projects for the development of the gas sector in Albania, as well as for the interconnection of Albania with regional gas networks.

Albania's gas sector will face significant challenges because it is a commercial sector that will be built from the start but has the potential to act as one of the most important sectors, contributing to the diversification of energy sources and increasing the security of energy supply for the economy and the population.

Some of the main priorities and actions defined in the National Energy Strategy for the gas sector include:

- Develop plans for the establishment of the Albanian gas market and its regional integration, and for off-taking, transmission, distribution and retail sales of natural gas from the TAP and other gas sources prior to the anticipated arrival of gas.
- Consolidation and further strengthening of Albgaz sh.a., on the role of the combined gas transmission and distribution operator, as well as for the regional integration of the Albanian gas network.
- Implement market reforms with the goal to comply with Energy Community Treaty and EU acquis, the conditions for becoming an EU Member State.

3. Types of Extractive Industry Projects

3.1. Mining Industry

Mining represents the extraction of valuable minerals or other geological materials from the earth. Quarries are a type of open-pit mine from which rock or minerals are extracted. In the mining industry, materials are recovered from the minerals through different processes. Materials commonly recovered may include coal, copper, diamonds, iron, gold, lead, manganese, magnesium, nickel, phosphate, platinum, salt, silver, tin, titanium, uranium, zinc, clay, sand, cinder, gravel, granite, and limestone.

There are usually three types of mineral extraction used in mining industry: surface mining (including open pit mining), underground mining, and fluid mining (in-situ solution mining).

3.1.1. Surface Mining

There are several different forms of surface mining. These are used when deposits of minerals or rock are found relatively near the surface. All involve removing large amounts of rock which can significantly disturb the natural geology and land of the area. Excavation can use heavy machines such as dragline excavators, tractor shovels and large trucks to remove rocks, and may involve controlled blasting methods to fragment rock into smaller sizes and facilitate the extraction process. The method used on a particular mine site will depend on the material being extracted, the geology of the site and other practical considerations. Here we consider three common methods.

Open-pit mining is a method of extracting rock or minerals from the earth from an open pit or borrow. This method involves blasting and moving large amounts of material, as soil, rock and vegetation has to be removed to make the minerals accessible. Characteristic of open pit mines are large holes resembling craters with "benches" (broad ledges), so that deeper ores or mineral can be accessed with heavy machinery. These types of mines are usually used for the extraction of metals and coal, as well as for the extraction of primary raw materials such as stone, sand and gravel used in the construction industry (e.g., roads). Open pit mines usually have large surface areas. The mining rate is usually greater than 20,000 tonnes per day.

Mountaintop removal mining is a method where whole hills and mountains (or tops of mountains) are removed via surface mining processes to access minerals (often coal). This method also usually uses blasting, but brings additional environmental challenges as this blasting may need to take place on an exposed mountain side rather than in the base of a large open pit.

Strip mining is a method used to extract minerals (usually coal) which are very close to the surface and in a shallow seam. A long strip of surface rock is removed using a large excavator. The mineral is then extracted. Mining then moves to a parallel strip, with the surface rock being deposited in the hole left by the first batch of minerals. Large excavators typically move 100,000 to 200,000 tonnes per day.

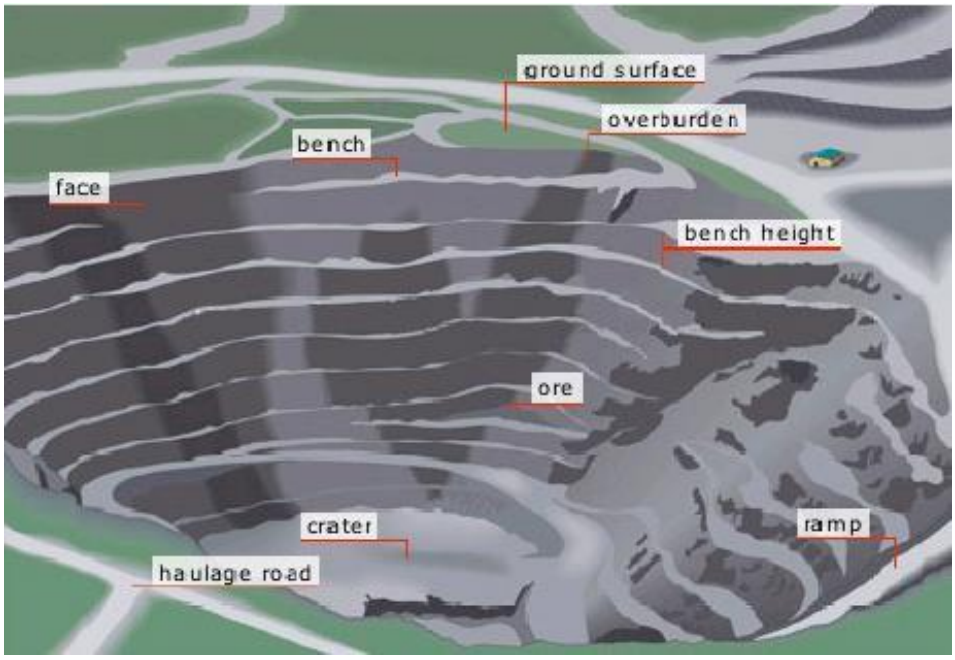

Figure 1. Schematic illustration of open pit mining

Source: *http://www.visualdictionaryonline.com/energy/geothermal-fossil-energy/coal-mine/open-pit-mine.php*

Figure 2. Illustration of a quarry site

Source: *https://pixabay.com/photos/quarry-mountain-earth-engineering-443255/*

3.1.2. Underground Mining

Underground mining includes the sinking of vertical shafts and tunnels to reach mineral deposits far below the surface of Earth. These shafts can penetrate down into the ground or sideways into a mountain side. They are mostly used for the extraction of metals such as copper, zinc, iron, chromium, gold, etc. Underground mines tend to be smaller in terms of operation works than surface/ open pit mines. Typically,

they can generate from 20,000 to tens of thousands or even million tons of ore over the lifetime of the mine and can reach up to 3,000 m in depth in certain conditions, depending on the geology and topography of the terrain. Generally, less land is disturbed in underground mining as compared to surface mining, however this may vary from one site to another. Environmental impacts are broadly considered as less significant comparing to surface or open pit mining, nevertheless groundwater resources are typically more at risk at impact from the operation activities of underground mining.

Figure 3. Illustrative photo of underground mining

Source: https://resourceglobalnetwork.com/tag/underground-mining/

3.1.3. In-situ Solution Mining

Fluid mining (in-situ solution/ leach mining) is a method in which minerals are extracted by the injection of a solution into an ore deposit. The resulting mineral solution is pumped to the surface, where the mineral or metal is extracted from the solution by processes such as precipitation, ion exchange and electrolysis. Basically, the extraction method focuses on the extraction of minerals through different physical-chemical processes where the ore body is left in place rather than being broken up and removed. In general, a series of wells are drilled into the ore body and a solvent circulated through the formation by injection through certain wells and withdrawal through others. Although in situ solution mining is not commonly used, it has been applied to uranium and copper deposits under suitable hydrogeological settings. Although there is little disturbance of the surface and underground at an in-situ operation, the effect of the operation on the groundwater quality can be significant as the chemistry of the ground water must be drastically altered by the introduced solvents and the pumping operation.

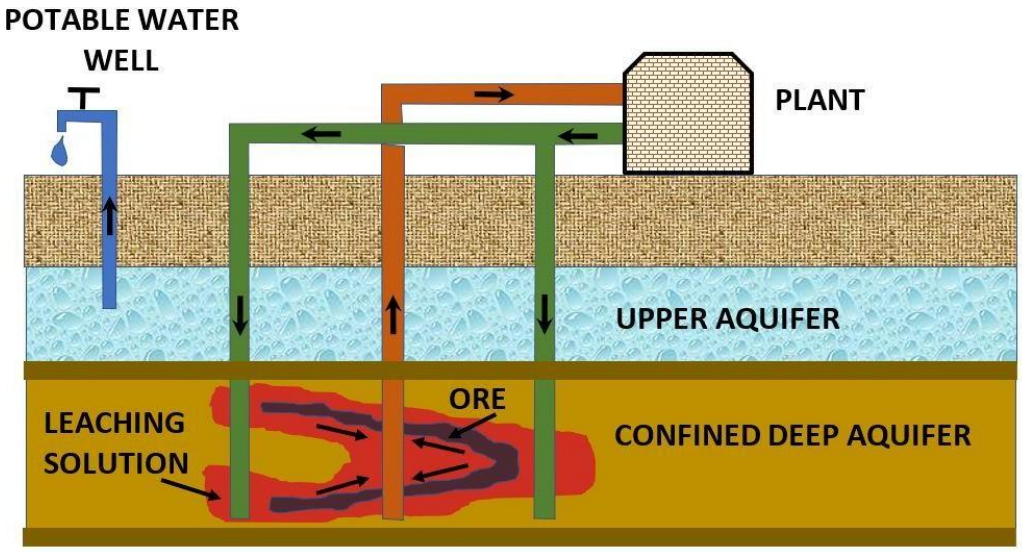

Figure 4. Schematic illustration of in-situ solution/ leach mining

Source: http://www.infinitpipe.com/solution-mining.htm

3.1.4. Abandoned Mines

Mine sites are generally considered abandoned if there are no mineral extraction, exploration or borrowed operation activities and no identified owners or operators for the facilities. As a result, abandoned mines can be defined as sites that are no longer operational, not actively managed and/or not rehabilitated, causing significant environmental and/or social problems, and for which no one is currently accountable for the site's remediation or rehabilitation.

Abandoned mines represent many physical and environmental problems. Countries with previously developed mining industries like the UK, USA, South Africa, or countries in the Western Balkans are still dealing with a diverse range of environmental and social implications that come as a result of these abandoned mine sites. Amidst the common environmental issues characterising most abandoned mine sites include altered landscape, unused pits and shafts, land no longer usable due to loss of soil, harsh pH levels, areas of steep slopes, abandoned mine waste disposal facilities, changes in ground and surface water regimes, contaminated soils and aquatic sediments, changes in vegetation cover, derelict sites with compacted soil and burning coal waste dumps and workings[3]. Contamination of water resources represents one of the most concerning issues from abandoned mines. Drainage waters from abandoned mines may contain significant/elevated concentrations of heavy metals, total dissolved solids, and may have elevated temperatures and altered pH, depending on the nature of the ore body and local geochemical conditions. These waters may become acidic over time when exposed to oxygen and, if present, pyrites or other sulphide minerals. These acidic metal-rich waters may contaminate groundwater and surface water resources. Neutral and alkaline mine waters may also contain metals in excess of water quality standards and be of significant concern to human health and the environment.

[3] A review of problems and solutions of abandoned mines in South Africa https://www.researchgate.net/publication/276061220_A_review_of_problems_and_solutions_of_abandoned_mines_in_South_Africa

3.1.5. Phases of a Mining Project

Mining projects typically include five phases: exploration, feasibility, development (preparation for commencement of production activities), exploitation (active production phase) and decommissioning (closure and rehabilitation).

Figure 5. Mining Lifecycle

Source: http://www.engaged-consulting.com/mining-lifecycle.html

Exploration

The exploration phase starts with the collection of information and relevant knowledge of the location of the mineral, type and value of the mineral and extent of the ore deposit. This phase includes surveys, field studies, drilling test boreholes and other exploratory excavations. During the exploration phase extensive operations and opening up of earth might be needed, therefore a separate EIA study is often required before the commencement of exploration activities. The exploration phase may only take 2-4 years but can last over a decade in more complex cases.

Feasibility

The feasibility phase is probably the most commercially sensitive part of the process for the mining company. It is when the economic viability of extraction is assessed and ultimately a decision is made as to whether or not to continue with the project. It also includes all the work to assess how, and over what timeframe the minerals will be extracted. This stage is often split into:

- Prefeasibility – This stage involves the preparation of a feasibility study, which will typically give a high-level overview of the logistics, costs and key challenges/risks, including broad environmental considerations. The study is intended to give the company the basic information they need to approve a project, or to decide between competing projects where there are limited funds to invest. A positive prefeasibility study will lead on to a feasibility study.

- Feasibility – A feasibility study is a much more in-depth report covering similar topics to the prefeasibility study. One of the main focuses is on the economic risks and opportunities, and other factors which could impact on that balance, such as socio-economic factors and environmental risks.
- Commercial and socio-economic analysis – Building on the feasibility study, this step involves the company making the decision as to whether the project is economically attractive given the geology, location, value of the commodity and many other factors.

Development

The development phase involves construction activities for the improvement of existing infrastructure or getting access to the project site. Common activities during this phase may include: site preparation, clearing of vegetation, opening of access roads, construction of process site facilities (e.g., offices, water supply facilities, material and equipment storage, etc.), and installation of environmental and safety protection equipment.

Depending on the project, the development phase can be relatively short. However, it can also be the most challenging and costly part of the entire mining process. It is possible for the development stage of a large, remotely located mine to cost US$ 5 billion or more. This can involve large scale infrastructure projects to facilitate the transport of minerals from the mine site to a processing plant or port.

Exploitation

The exploitation phase represents the active phase of the mine project where minerals are extracted and utilized according to the project's objective. The exact nature of the exploitation phase depends on the type of mining being undertaken (see section 3.1). In surface mining the overburden (spoil) layer is removed by use of heavy machinery such as excavators, bulldozers and dump trucks. In the same manner the ore deposits are removed, processed (if needed, depending of the type of mining industry) and further utilized. Sometimes the exploitation phase might include use of explosives and blasting activities to facilitate the extraction process.

In most projects, major mining activities may involve reworking of waste piles (often tailings) and disposal of overburden and waste rocks. These materials must be moved or excavated to allow access to the ore deposit. Sometimes these wastes may be in high volumes and may contain significant levels of toxic substances, therefore the EIA study must carefully assess the management options of this waste and related impacts. Usually, this waste is deposited on site, however in certain countries there might be specific restrictions of the disposal of these type of waste and possible requirements for disposal in dedicated disposal areas or landfills.

In addition, water is an important factor in the exploitation phase. Surface water and ground water will often need to be removed, and may contain harmful contaminants.

Decommissioning

The last phase of a mining project is decommissioning or the closure/rehabilitation phase. The closure of a mine site should be anticipated and planned for prior to the end of mining operations. The main objective of the closure plan is to ensure that the mine area is left in a functioning status with respect to the ecological, physical and chemical characteristics, with the pre-mining conditions/status as a reference point. International guidelines and best practices recommend that mine closure and rehabilitation phase should be planned well in advance, at least 3-5 years before the anticipated time of closing. But in some cases, the closure plan is an essential part of obtaining a mining licence at the start of the project.

Some of the activities that are necessary for the closure and rehabilitation phase may include: demolishing buildings within the project area, closing open pits, construction of slopes and benches, ensuring water drainage and waste deposits do not pose risks to human health and the environment, re-vegetating the affected project area with native vegetation wherever possible and ensuring proper signage for the notification of public or preventing public access into the site.

3.2. Oil and Gas Industry

The process for extracting oil and gas has four main stages: exploration, development, production and abandonment.

3.2.1. Exploration

In this stage, projects are focussed on acquiring information about the existence and extent of oil and gas resources underground. Information is acquired using two methods: seismic data acquisition and drilling exploration and appraisal wells.

Seismic data acquisition

This consists of sending sound waves through the rocks from the surface and collecting the sound waves as they bounce back. As different types of rock absorb different amounts of the sound waves, the resulting echoes can be interpreted to understand the types of rock and detect the presence of hydrocarbons. For onshore data acquisition, long lines of geophones are laid over the land and then large trucks are used to hammer the earth and send sound waves through the rocks. The resulting echoes are collected in a monitoring truck, recorded and analysed.

For offshore exploration, hydrophones are towed behind a survey ship, which sends sounds waves below the seabed. The resulting echoes are collected, recorded and analysed. The information collected during seismic acquisition is then used to inform decisions on where to drill exploration wells.

Drilling

Onshore wells require clearance of the drill site, the construction of a concrete pad and the transport of the drill rig and associated equipment to the site by truck. The site also requires access to water. Construction of temporary facilities to store drilling waste are also a typical element of the project. On completion of the drilling campaign (typically a few weeks), the bulk of the construction and facilities will be removed. A small area of concrete and a cap on the well will remain.

Offshore drilling requires a drilling rig to be sailed to the site for the duration of the campaign. All equipment will be on the rig and waste will be temporarily stored on the rig. The rig will be serviced by ship from a shore base (typically an area of an existing port). After the completion of drilling activities, the rig will sail away and a cap on the well will remain on the seabed. After drilling the first well of an exploration campaign that discovers hydrocarbons, further wells may need to be drilled to appraise or confirm the size of the discovery.

3.2.2. Development

The development phase of oil and gas extraction includes drilling wells and constructing associated facilities to produce the hydrocarbons, pipelines to transport the oil or gas and facilities for processing. There may also be a need to construct facilities to export the oil or gas to market.

Onshore

An onshore development project will typically consist of constructing permanent well sites for drilling and operating the production wells. The size and impact of each well site will be similar to exploration drilling, but these will be structures that will stay in place for many years, perhaps decades. There are also likely to be other facilities constructed as part of the development phase, including facilities to control and monitor the wells and pipelines to connect each well either to a central gathering point or to a pipeline to take the hydrocarbons for processing. The processing facilities may be located close to the drilling sites but are more likely to be some distance away and closer to the market or export facilities. Oil or gas may be developed to feed into existing processing or export facilities or may require new facilities. In the case of existing facilities, some work may be required to expand capacity or reconfigure the facilities. This will be a much smaller project than construction of new facilities. Such construction is likely to be a large project requiring a substantial area of land and construction activity over many months. Depending on the site chosen, there may be impacts on local industry, agriculture and communities including the relocation of people.

Offshore

An offshore project is also likely to have an impact onshore as well. Although the well sites will be on the seabed, the hydrocarbons are likely to need transporting to shore for processing and onwards to market. Offshore, drilling of the wells will again require a rig but the production facilities, control facilities and pipeline may all be located on the seabed and operated remotely from shore. In other cases, a production platform will be installed on the surface above the wells. The exact design of the facilities will depend on the water depth and distance from the shore. As in onshore projects the construction of any new processing plant will be a major project, probably located close to the shore.

Typically, oil and gas companies will consider the development phase of an oil or gas field as one project including the drilling of wells, installation of facilities and construction of processing facilities.

3.2.3. Production

This is the operational phase of extracting oil and gas. Oil and gas companies will rarely refer to this stage in terms of a “project”. This phase consists of the operating of the wells and other facilities installed under the development stage to produce oil and gas.

While this phase is not a separate “project”, there may be projects implemented during this phase. For example, further wells may need to be drilled to maintain production or compression facilities may need installation to maintain pressure in the oil or gas reservoir. Other projects carried out in this stage, could include enhanced oil recovery schemes, these include injection of natural gas or carbon dioxide into the oil reservoir to maintain production levels or extend the life of the field.

3.2.4. Abandonment

This stage occurs at the end of the oil or gas field’s life and involves the dismantling and removal of all the facilities in a manner that is safe and minimises the long-term environmental impact. There is typically a legal or contractual obligation on oil and companies to finance the abandonment phase.

3.3. Hydraulic fracturing (fracking): the UK experience

Fracking is a term that covers a variety of techniques used during drilling for oil and gas to extract hydrocarbons. The techniques involve injecting water and chemicals under pressure into the well to break (fracture) the rocks and allow oil or gas to flow through the drill pipe to the surface (Figure 6 below). The techniques have become associated with unconventional oil or gas exploration and production such as shale oil or tight gas where conventional drilling techniques are not able to extract the resources. The techniques are used in conventional drilling as well.

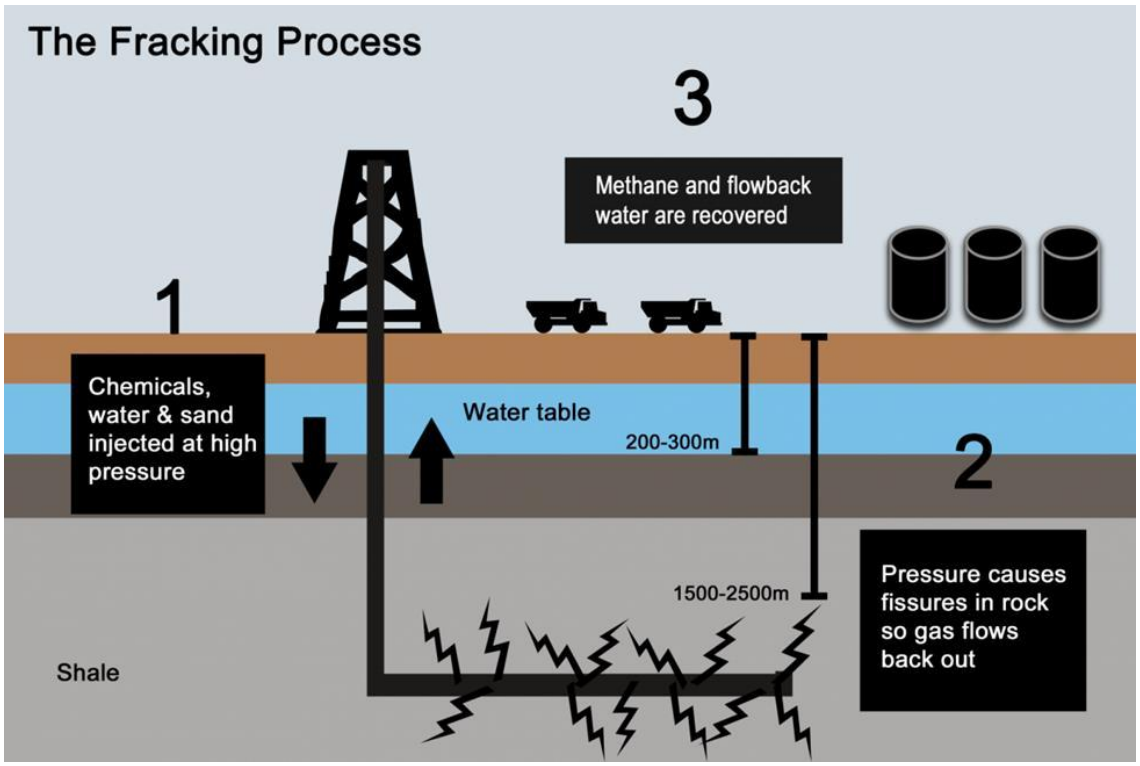

Figure 6. The basic fracking processes
Source: Energy and Climate Intelligence Unit

Fracking has entered public consciousness in the past ten years as a result of a large-scale unconventional oil and gas exploration and production in the USA and Australia. Local communities in the USA have blamed fracking for contamination of the water supply and other adverse impacts on the environment including earthquakes. Fracking has though been used since the 1970s, including in the UK, to extract oil and gas both offshore in the North Sea and onshore mainland in the UK.

Fracking has proved controversial in the UK and faced opposition from local communities where fracking activities have occurred or been proposed, environmental activists and politicians from all the major political parties. The ruling Conservative party has supported fracking since it came to power in 2010 and encouraged companies to use the technique to explore for gas, especially in the north of England. The national government changed the regulations on issuing permits for fracking in 2015 after local Conservative politicians rejected applications in northern England. In Scotland and Wales where regulation of energy matters is the responsibility of the devolved governments, a moratorium was placed on fracking, preventing any activity.

The link between fracking and earthquakes has caused particular concern in the UK as the UK is not in an earthquake prone area and therefore unaccustomed to dealing with seismic activity. In 2011, one of the

first wells to be drilled in northern England using a high-pressure fracking technique caused two earthquakes. The government commissioned a scientific study which concluded that the risk of fracking triggering earthquakes was minimal bit recommended some changes in regulations as a precaution. The government's support for fracking received a further setback in March 2019 when the High Court in London ruled its policy unlawful as it did not take into account the impact on climate change.

On 1 November 2019, the UK government announced a "ban" on fracking. This followed the decision in September 2019 to suspend drilling at a well in northern England after a series of earthquakes. The UK oil and gas regulator produced a scientific study which concluded that it was not possible to predict the magnitude of earthquakes that fracking could trigger or the extent of resulting damage. The "ban" was reported as covering all fracking activity but was not absolute. In reality, the "ban" was only on high pressure fracking techniques. Fracking at lower pressures was still permitted and drilling using these techniques continues in other parts of England, especially southern England. Political considerations as well as environmental and safety factors appear to have influenced the government's decision. The "ban" announcement came during a general election campaign during which the Conservative party was targeting voters in northern England where fracking was unpopular. Lower pressure techniques are used in southern England where the Conservative already enjoyed strong support.

4. Legal and Regulatory Review

4.1. National Sectorial Legislation

Given the importance of the activities in the extractive industries, Albania has developed and adopted specific primary and secondary legislation governing the mining and petroleum sectors. Below is a short description of the primary legislation governing mining and hydrocarbons sectors, which is relevant for the purpose of this scoping report.

Law no. 10304, dated 15.07.2010 "On mining sector in the Republic of Albania" as amended

Any activity in the mining sector is governed and regulated by law no.10304, dated 15.07.2010 "On mining sector in the Republic of Albania" as amended and secondary legislation (Decisions of the Council of Ministers, Orders and Instructions of Minister responsible for mining sector) enacted for implementation of this law.

This law establishes the rules for carrying out mining and post-mining activities in Albania with the purpose of promoting the mining activities in the country through ensuring transparency and free competition in these activities, maximise the public benefits from the mining activities and protection of the environment and public health from the mining risks and from waste of the mining industry.

Law no 10304 is fully in compliance with the Directive of the European Parliament and Council 2006/21/EC of 15 March 2006 "On the management of waste from extractive industries".

Article 3 of the law stipulates that any mineral in natural shape located in the Albanian territory is publicly owned. The engagement of private persons either domestic or foreign is authorized through mining permits issued according to the procedures and requirements established in this law.

The mining activities are carried out based on the following principles:

- Mining activity is an activity with public interest.
- Any decision-making in the area of mining activity is made under the conditions of transparency and is preceded by consultation with the local communities and written opinion of the relevant local authorities.
- Mining activity shall be carried out in such a way as to respect the principle of sustainable development and protection of the environment.
- The mining right is an outstanding and independent right from land property rights.
- The government institutions owning or administering public land affected by a mining permit may enter into agreements with the subject holding a mining right without being subject to competitive procedures.
- The mining permit holder is responsible for any damage caused to third parties while carrying out the mining activity.

All mining activities are carried out in line with the long and medium-term policies of the mining sector including:

a) mining sector strategy;
b) action plan for implementation of the mining strategy;
c) annual mining plan.

The mining sector strategy is the main policy document defining the policies, development priorities, actions and programmes for managing the mineral resources for a period of 15 years in line with the objectives of the national development strategy. As mentioned above, the current mining strategy 2010-2025 was

approved by the Council of Ministers with decision no.479, dated 29.6.2011.

The Action Plan for implementation of the mining strategy is a three-year plan which amongst other matters contains:

a) directions for the development of the mining sector;
b) promotion of mining areas which shall be granted through mining permits;
c) promotion of mining areas based on the digital mineral map;
d) programme of main geological exploration activities;
e) forecast of overall annual mineral production in the country;
f) needs for development of human resources for the mining activities; and
g) rules for protection of environment and its rehabilitation.

The last 3-year action plan was approved by the Council of Ministers with decision no. 664, dated 10.10.2019 for the period 2019-2021.

In line with the 3-year action plan, the Minister responsible for minerals approves the annual mining plan, which is prepared by the NANR after consultation with the ministries responsible for environment, agricultural land, forests, culture heritage, tourism and defence, and the respective local authorities. The annual mining plan after approval is published on the website of the Ministry responsible for minerals and in the Official Journal.

According to Article 10 of the law, minerals are classified in four groups:

a) metal, non-metal, coals and bitumen minerals;
b) construction minerals;
c) precious and semi-precious minerals;
d) radioactive minerals.

The same Article defines the mining activities subject to mining permits issued by the competent authorities. The activities include:

a) exploration-discovery activity
b) exploitation activity
c) combination of above activities (exploration-discovery-exploitation)

The mining permits are issued by the National Business Centre according to the procedures defined in the law and the decisions of the Council of Ministers no. 320, dated 21.04.2011 “On approval of competition procedures and criteria and deadlines of reviewing of the requests for obtaining mining permits in competitive areas” and law no.942, dated 17.11.2010 “On approval of procedures and documentation for obtaining mining permits in open areas” as amended.

Among other requirements, any applicant for a mining permit should submit to the authorities:

- An environmental rehabilitation plan according to the requirements and rules of the environmental protection legislation and mining technical rules;
- A plan for closing the mining activity and a plan for waste management.

The law requires the Council of Ministers to define the responsible institutions for supervision and monitoring of the activities of permit holders. According to the decision of the Council of Ministers no. 232, dated 23.03.2011, the responsible institution for supervision and monitoring of mining exploration activities is the Albanian Geological Survey (AGS), while the supervision and monitoring of subjects holding an exploitation permit is the responsibility of the NANR.

The law stipulates that entities carrying out exploration mining activities are obliged to:

a) report to the responsible structure (AGS) finding of any mineral resources with economic interest in the area approved for exploration within 10 days;
b) complete the minimum work programme defined in the design of the mining activity;
c) keep detailed records of works completed for exploration of minerals;
d) take all necessary measures to prevent damage to the environment or other properties;
e) rehabilitate all damage to the terrain during exploration activities;
f) submit every quarter to the responsible institution, information on the realization of investment, mining works and operations for rehabilitation of the environment according to the form approved by the Minister responsible for the mining industry;
g) submit to the responsible institution every year not later than 30 days from the end of the year, the financial and technical report of all completed operations;
h) present to the responsible institution not later than 30 days before the end of the year an annual work plan for the next year in line with the terms of the permit. The content of the work plan shall comply with the orders and instructions of the Minister responsible for the mining industry;
i) report at the end of the permit term to the responsible institution detailed information on the investment made during the exploration according to the form approved by the Minister.

Entities holding an exploitation permit are obliged to:

a) complete the investment programme foreseen in the annual mining plan and in the design of the mining activity;
b) submit to the responsible institution (NANR) every three months, but not later than the 15th of the next month after the reporting quarter information on the production, investment, value of sold minerals, mining works realized and operations carried out for rehabilitation of the environment and management of wastes according to the terms of the mining permit;
c) submit to the responsible institution every year but not later than 30 days from the end of the reporting year the technical and financial report for all operations carried out in line with the terms of the permit. The report shall be prepared according to the form approved by the Minister responsible for the mining sector.

This law introduced, for the first time, financial guarantees required from the permit holders for carrying out mining activities. Article 31 of the law stipulates two types of financial guarantee:

a) a financial guarantee for rehabilitation of the environment for exploration and exploitation permit holders;
b) a financial guarantee for realization of the minimum work programme for exploration permit holders and a financial guarantee for the investment programme for exploitation permit holders.

The financial guarantees are calculated by the AGS for exploration activities and by the NANR for exploitation activities. The methodologies for calculation of financial guarantees were approved by the Council of Ministers (decision no.440, dated 16.06.2011). The financial guarantee is required to be set on behalf of the Ministry responsible for the mining sector who may execute them in case the permit holders do not comply with the specific requirements of the permit.

The law has specific provisions regarding the obligations of permit holders to rehabilitate the area of the mining permit. Article 37 of the law provides for:

- A permit holder for any mining activity has the obligation that during the mining activity and at the end of it should implement the mine closure plan, environmental rehabilitation plan and the plan for management of wastes as approved by the responsible institution.

- Rehabilitation of mining area is carried out progressively by the permit holder or third parties contracted by the permit holder according to the time schedule and according to the mine closure plan and environmental rehabilitation plan.
- The implementation of the respective plans for mine closure and rehabilitation of the environment is controlled by the responsible institution, which after the inspection reports to the Minister responsible for the mining sector. Rehabilitation is considered completed only after the approval of the final report by the Minister. After the approval, the financial guarantee is returned to the permit holder.
- In cases where the permit holder abandons the mining, area or does not complete the environmental rehabilitation plan, the rehabilitation of the area is carried out by specialized companies selected by the responsible institution, while the costs are born by the funds of the financial guarantees.

Petroleum Law (Exploration and Production) (Law no. 7746, dated 28.07.1993) as amended

The activities in the hydrocarbons sector are regulated and governed by the Petroleum Law (Exploration and Production) (Law no.7746, dated 28.07.1993) as amended.

Article 3 of the law provides that the hydrocarbon resources that exist in the natural form within the territory of Albania, including the sea area, are exclusive property of the Albanian state represented by the Ministry responsible for hydrocarbons, and all these resources shall be used for the benefit of the Albanian people.

The law also stipulates that no person shall explore, develop and produce hydrocarbons in Albania without being authorized by the Ministry and according to the terms and conditions of a Petroleum Agreement. Exploration and exploitation of the hydrocarbons can be carried out only by entities with whom a hydrocarbons agreement is signed.

The Ministry responsible for hydrocarbons may enter into a Petroleum Agreement with any Person authorizing the latter to explore, develop and produce hydrocarbons in the zone of the Agreement according to the terms and conditions of the Agreement. The Ministry may also authorize the state-owned oil and gas company Albpetrol through a licence to enter into a Petroleum Agreement with a private company provided the latter has the financial resources and technical competences to fulfil the obligations under the Agreement.

The Petroleum Agreement gives the Contractor the right to explore, discover and exploit the hydrocarbons in a defined area. The normal term for exploration activity is 5 years, but if the Contractor provides the right arguments it may be extended up to 7 years. The maximum exploitation term is 25 years.

The law also provides that a Petroleum Agreement may contain clauses that guarantee to the Contractor a fixed fiscal regime (stability clause) with the following conditions:

- These clauses may not be applicable for a term longer than 12 years from the date of starting of production of hydrocarbons;
- Stability clauses shall not be applicable for laws and regulations related to national security, labour relations, protection of nature and environment, protection of human life and the international treaties and agreements ratified by Albania.

A Petroleum Agreement shall contain the following obligations for the Contractor:

- Carry out hydrocarbons operations according to the Petroleum Law, provisions of the effective legislation on protection of environment, regulations enacted under the Petroleum Law and the best practices of the petroleum industry;

- Report to the Ministry responsible for hydrocarbons the discovery of hydrocarbons in the contract area within a certain number of days;
- Prepare and submit to the Ministry for approval the plan of evaluation of the discovery;
- In case of a commercial discovery, prepare and submit to the Ministry its development plan;
- Ensure the efficient utilization of hydrocarbon resources;
- Safeguard the environment and the wellbeing of the community living the in the area of hydrocarbon operations;
- Compensate the state for any claims from third parties with respect to injuries, losses or damages resulting from the operations carried out by the Contractor or its subcontractors;
- Give priority to the employment and qualification of Albanian citizens and local services and goods in line with the requirements included in the Development Plan provided they are competitive on prices and comparable in quality.

The law authorizes the Ministry responsible for hydrocarbons to develop regulations related to:

a) Registration of the Contractors;
b) Format on how the Contractors shall submit reports, data, information and accounting;
c) Measures regarding the safeguarding of petroleum resources, safety, health, environment and prevention of leaks, waste, pollution and accidents;
d) Separation of the areas with hydrocarbon potential in zones or blocks;
e) The right of using public and private land for carrying out hydrocarbon operations;
f) Any other regulation that may be considered necessary by the Ministry for regulating petroleum activities.

Although the Law authorizes the Ministry to develop and publish Model Petroleum Agreements, under the current practice, no Model Petroleum Agreements have been developed and published. All Petroleum Agreements signed up to date have been negotiated with each Contractor.

The Petroleum Law (Article 9) makes specific reference to the Extractive Industries Transparency Initiative (EITI). The law obliges all Contractors having a Petroleum Agreement, administration of tax and customs authorities as well as the central and local authorities to report according to the EITI standards and requires that secondary legislation should comply with the obligations established by EITI. The law also requires the Albania EITI Secretariat to publish data on the petroleum industry according to EITI standards.

The law provides the establishment of a state agency responsible for hydrocarbons, which is subordinated to the Ministry responsible for hydrocarbons (Ministry of Infrastructure and Energy). The role of the state agency responsible for hydrocarbons is vested with the NANR, which is established based on the decision of the Council of Ministers (DCM no. 547, dated 09.08.2006 as amended).

The NANR has the following roles in the petroleum sector:

a) Implements government policy in the field of hydrocarbons;
b) Participates in the negotiation of Petroleum Agreements according to the provisions of relevant regulations;
c) Prepares the necessary documentation and practices for granting permits, licences and authorizations according to the Petroleum Law;
d) Supervises the petroleum activities and monitors the implementation of the Petroleum Agreements.

While the law on the mining sector contains specific requirements for the development and adoption of secondary legislation governing and regulating the mining sector, the Petroleum Law does not contain mandatory provisions for development and adoption of secondary legislation. Experience to date shows that the supervision and monitoring of the petroleum activities of the Contractors is governed by the clauses of specific Petroleum Agreements as the primary legislation does not contain any provisions regulating them.

The same issue also relates to the financial guarantees required by the Petroleum Contractors for environmental damage and liabilities. The amount of the financial guarantees for any environmental damage or liability is specific to each Petroleum Agreement.

4.2. International Environmental Standards and Guidelines

4.2.1. International Environmental Reporting Context

Reporting on environmental issues by extractive companies and permit holders has become increasingly sophisticated over the past twenty years. International oil, gas and mining companies, as a matter of course, now publish a wide range of information on the environmental impacts of their activities. This information is typically published on an annual basis in the company's sustainability report or similar document. The information includes description of the company's environment strategy, targets, actual performance measured against a range of metrics including emissions into air and water, energy efficiency, water management and waste management as well information on any contingency (management) plans for incidents as well as any remediation and rehabilitation measures.

A combination of legislative requirements and demands from investors and other stakeholders have driven the increasing sophistication of environmental reporting by extractive companies. As stakeholder expectations have developed about the environmental impacts of extractive companies, so governments and standard setting bodies have reacted with the introduction of regulatory requirements and enhanced standards. On a global level, key standards include ISO 14001, which is the standard on environmental management systems. Communication and publication of information is an important part of the standard and companies must provide evidence that they are providing clear communications both internally and externally. Extractive companies use their sustainability reports to demonstrate how they are meeting ISO 14001 requirements. Extractive companies also use the Global Reporting Initiative (GRI) as a framework for reporting, including on environmental issues. GRI provides a standard for reporting on a wide range of environmental issues including emissions, water and waste management. For banks providing finance to extractive companies, the Equator Principles provide a framework to assess environmental (and social risk) in the projects to which they are lending.

As a result of this extensive eco-system of environmental reporting, there is already considerable information available from international extractive companies on their environmental impact and performance. The newly introduced EITI environmental reporting requirements (see below), demand that companies report a limited set of information that forms a subset of information that many already publish. The one area where EITI provides innovation is environmental payments to government. These are not typically reported by extractive companies as a matter of course and may be included in more general financial reporting and so can be disaggregated from financial reporting systems to meet EITI Requirements.

4.2.2. EITI Environmental Reporting

Albania has an opportunity to demonstrate leadership in EITI environmental reporting and to shape best practice in this area. Requirements to report on environmental issues were introduced in the 2019 version of the Standard. The 2019 introduced three environmental reporting measures, one mandatory and two that are encouraged and therefore voluntary. The mandatory requirement is contained in Requirement 6.1.b and requires the reporting of all environment payments to government that are mandated by law, regulation or contract. The two voluntary reporting measures are contained in Requirement 6.4 and are:

1. An overview of legal and regulatory requirements and actual practice. Suggested areas for reporting include requirements related to environmental impact assessment obligations,

certification schemes, licencing and rights, the role of government agencies. EITI also suggests reporting on any reforms planned or underway; and,

2. Information on environmental monitoring, sanctions, liabilities and remediation and rehabilitation programmes.

In the previous 2016 Standard, there were no environment-related requirements or encouraged actions. As a result, there are few examples of environmental reporting contained in EITI reports as most of the current reports available were prepared under the 2016 Standard. Many EITI implementing countries are still in the process of producing their first report under the 2019 Standard. Where environmental issues are reported, they are covered either as part of the description of the legal framework for the extractive industries or limited data is given on payments where there are identifiable environmental tax or fee payments. For example, Ukraine in its 2017 report includes reconciliation of environmental tax payments, but does not provide any context on environmental impact. Armenia in its 2016-2017 report includes details of the rates for various environmental payments, but does not provide details on actual payments by companies.

Mongolia provides an example of good practice in implementing the 2019 environmental Requirements. Its 2018 report includes a specific section on environmental impact and reports on all elements covered by Requirements 6.1.b and 6.4. Nigeria in its most recent reports has also attempted to implement the 2019 environment standards. Its reports for both oil and gas and solid minerals covering payments in 2018 (prepared in 2019 after the Standard was published) contain information covering all three elements of the environmental Requirements. Nigeria EITI used a reporting template that asked companies to provide information on EIAs conducted in the year, environmental monitoring activities and payments made and environmental incidents (such as spillages) along with payments made to government and communities as a result. An updated template was used to collect information for the 2019 reports.

Recommendations

1. Albania EITI establishes a process to collect, analyse and publish all the environmental information required by the 2019 EITI Standard clauses 6.1, b and 6.4 i.e., both mandatory and encouraged information.
2. Albania EITI bases its reporting template for environmental data on the attached template (Appendix D).
3. Albania EITI conducts awareness raising activities with companies and government agencies in scope for reporting to explain the environmental reporting requirements and the information required to complete the reporting template.
4. Where possible, Albania EITI should use relevant environmental information already in the public domain.

4.2.3. The World Bank Environmental and Social Framework (ESF)

Since October 1, 2018, the World Bank has applied the Environmental and Social Framework (ESF) to all new project financing. The World Bank ESF sets out the World Bank's commitment to sustainable development, through a Bank Policy and a set of Environmental and Social Standards that are designed to support Borrowers' projects, with the aim of ending extreme poverty and promoting shared prosperity.

The ten Environmental and Social Standards establish the standards that the Borrower and the project will meet through the project life cycle, and are shown in Figure 7.

4.2.4. The IFC Performance Standards

The IFC applies Performance Standards to manage social and environmental risks and impacts and to enhance development opportunities in the private sector. The Performance Standards may be applied by other financial institutions electing to apply them to projects in emerging markets. Together, the eight Performance Standards establish standards that a project must meet throughout the life of an investment by IFC or other relevant financial institution. Based on IFC Performance Standards on Environmental and Social Sustainability, approved January 1, 2012, there are 8 Performance Standards, and these are shown in Figure 7.

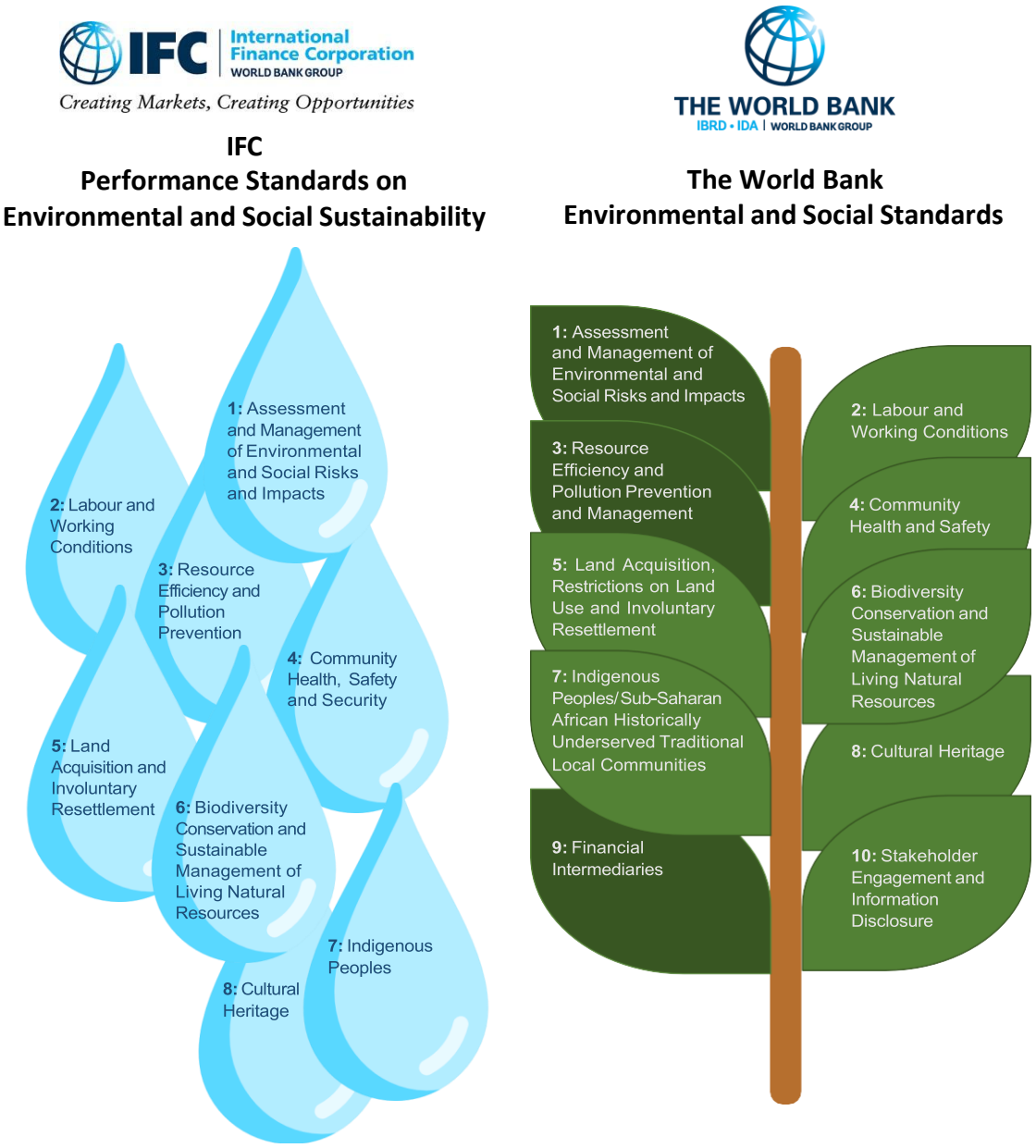

Figure 7. Environmental and Social Standards

Source: http://www.engaged-consulting.com/environment.html

4.3. EIA and Permitting

4.3.1. National legal framework for Environment

The activities of extractive industries (minerals and hydrocarbons) can have major impacts on the environment. Compliance with the relevant environmental legislation should therefore be a top priority of extractive companies and the relevant state authorities.

Albania has developed and adopted an extensive framework of environmental primary and secondary legislation. Although the first law on environmental protection in Albania dates to 1992, in the past decade environmental legislation has seen considerable progress. Albania has approved a wide variety of primary environmental legislation including laws on environmental protection, strategic environmental assessment, environmental impact assessment, environmental permits, protected areas, protection of quality of air, protection of biodiversity, integrated management of waste and integrated management of water. In addition, Albania has signed and ratified a number of international treaties, conventions and protocols related to the protection of the environment making them part of the national legislation.

Below is provided a short overview of the main laws, which are most relevant for this scoping study.

Law no.10 431, dated 9.06.2011 "On protection of environment" as amended

This law defines general principles, requirements, responsibilities, rules and standards for guaranteeing high-level protection of the environment.

The law fully transposes the EU Directive 2004/35/EC of the European Parliament and Council of 21 April 2004 "On environmental responsibility, prevention and repairing of damages on the environment" as amended.

The main principles of environment policies established by this law include:

- Principle of sustainable development;
- Principle of prevention and taking of precautionary measures;
- Principle of preservation of natural resources;
- Principle of substitution and/or compensation;
- Principle of integrated approach;
- Principle of reciprocal responsibility and cooperation;
- Principle "Polluter pays";
- Principle of the right of information and participation of public;
- Principle of promotion of activities for protection of environment.

The law stipulates that the environmental protection policies should follow an integrated approach to protection of all elements of the environment, including air, water, land, biodiversity and climate change taking in consideration the interaction between them.

Article 24 of this law stipulates that for plans and programmes in the field of agriculture, forestry, fishery, energy, industry, mines, transport, telecommunication, waste management, water management, territorial planning and for plans and programmes of national, regional and local development, strategic environmental assessment is required.

Based on this Article, any plan or programme for the development of oil, gas and mines should be subject to a strategic environmental assessment. The process of the strategic environmental assessment is defined and regulated by law no.91/2013 "On Strategic Environmental Assessment" described below.

The law also authorises the Government to set the norms for quality of the environment and the technical norms for emissions in the environment for any economic activity.

According to Article 44 of the law all operators carrying out any economic activities subject to environmental permits shall be obliged to monitor emissions from its activity in line with the provisions of the law on environmental permits and the terms and conditions of the environmental permit.

The monitoring can be carried out through the accredited equipment or instruments in possession of the economic operator or through an accredited specialized laboratory. The results of the self-monitoring are submitted to the relevant authorities according to the legislation and environmental permit terms and conditions.

Based on the provisions of Article 44 all entities carrying out an activity for exploration and production of hydrocarbons and minerals shall be subject to environmental self-monitoring.

Law no.91/2013 "On Strategic Environmental Assessment"

The Law on Strategic Environmental assessment defines the institutions and their rights and responsibilities for carrying out a strategic environmental assessment (SEA).

This law fully transposes the EU Directive 2001/42/EC of the European Parliament and Council of 27 June 2001 "On assessment of the effects of certain plans and programmes on the environment".

The law defines the process of strategic environmental assessment (SEA) as the preparation of a special report on the impacts on the environment of a plan or programme, carrying out consultations with stakeholders and taking into consideration the results of the report and of consultations in the final decision for the plan or programme.

In line with the provisions of the law on protection of the environment (law no.10 431, dated 09.6.2011), Article 2 of the law on SEA, energy and the mining industry are included in the list of sectors subject to the requirement to undertake an SEA.

The same article provides that the detailed list of plans and programmes with significant negative impacts on the environment that shall be subject of an SEA shall be approved by the Council of Ministers upon proposal by the Minister of Environment.

According to Article 7 of the law the phases of an SEA process include:

a) Notification of the Ministry of Environment by the proposing authority;
b) Consultation with stakeholders on the issues that will be covered in the SEA Report;
c) Preparation of the preliminary consultation report with stakeholders and the general public and preparation of the preliminary SEA Report;
d) Preparation of the final SEA Report;
e) Review of the proposal and issuance of declaration by the Minister of Environment;
f) Decision of the approving authority;
g) Monitoring and reporting of impacts on the environment of the plan or programme.

According to Article 10, the preparation of the SEA Report is the responsibility of the proposing authority and it is prepared by a physical or legal subject certified and licensed by the Ministry of Tourism and Environment and the National Business Centre.

In line with the requirements of Article 2 of this law, the Council of Ministers with the decision no. 507, dated 10.6.2015 has approved the detailed list of plans and programmes that will be subject to SEA approval according to the law. The list includes:

- strategies, plans, programmes and other planning documents that are subject to mining sector legislation;
- strategies, plans, programmes and other planning documents that are subject to legislation of hydrocarbons (exploration and production).

Based on the above, all strategies and plans developed for the sector of mines and hydrocarbons should be subject to strategic environmental assessment approval according to the procedures defined in the law.

Law no.10 440, dated 07.07. 2011 "On environmental impact assessment" as amended

The law on environmental impact assessment (EIA) defines the requirements, responsibilities, rules and procedures for evaluation of the significant negative environmental impacts of proposed projects either private or public.

This law fully transposes the EU Directive 85/337/EEC of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment, as amended.

This law is applied for all proposed projects, either private or public, which may have significant negative impacts, direct or indirect, on the environment due to their size, nature or location. According to Article 4 of this law the general requirements for the environmental impact assessment of a project include:

- The definition, description and evaluation of expected direct or indirect environmental impacts for implementation or not of the project.
- Environmental impacts of a project are evaluated in relation to the current conditions of the affected site when the EIA report for the project is submitted.
- EIA should include preparation, implementation execution and closing of the project and consequences of closing of the activity and decontamination/cleaning and restoration of the area to the original condition if this is required by the law.
- Evaluation of the project also includes the proposal of necessary measures for prevention, reduction, mitigation, minimisation of such impacts or increase of positive environmental impacts during the implementation of the project, including the evaluation of the expected impacts of proposed measures.

Article 7(2) of the law defines two types of the environmental impact assessment:

a) Preliminary process of environmental impact assessment
b) In-depth process of environmental impact assessment

The projects that are subject to in-depth EIA include:

- Extraction of oil and gas for commercial purposes when the extracted volumes are higher than 50 tons/day of oil and 10 000 m^3/day of gas.
- Quarries and open pits with an area larger than 0.5 ha or sites for extraction of peat with an area larger than 1 ha.

The projects that are subject to preliminary EIA include:

- Projects of quarries, open pits and extraction of peat, which are not included in Appendix I of the law that are subject to in-depth EIA.
- Underground mines.

- Extraction of minerals from marine or river sludge.
- Deep drilling.
- Surface industrial installation for extraction of coal, oil, natural gas, minerals and bitumen-clay.

The national methodology of the EIA process, including the requirements for preparation of the EIA report, and the rules, responsibilities and deadlines for conducting an EIA process are approved by the Council of Ministers upon proposal of the Minister of Tourism and Environment.

The template of the content of a preliminary EIA report and of an in-depth EIA report are attached to this Report as (see section 4.3.3).

The application for approval of an EIA by the project developers is filed with the Ministry of Tourism and Environment and should include:

a) For projects subject to a preliminary EIA process (part of Appendix II of the law):
   i) Preliminary EIA report prepared by a licensed environmental expert/company according to the type of the project;
   ii) Technical report/ design of activity;
   iii) Invoice of payment of service fee, which for preliminary EIA is 30,000 Lek.

b) For project subject to an in-depth EIA process (Part of Appendix I of the law):
   i) Environmental Interaction Report – initial phase;
   ii) In-depth EIA report prepared according to the type of the project;
   iii) Non-technical summary of EIA;
   iv) Technical report/ design of activity;
   v) Information on public information and consultation;
   vi) Invoice of payment of service fee, which for in-depth EIA is 50,000 Lek.

In case of a preliminary EIA, the National Environmental Agency (NEA) reviews the report and it may decide that the proposed project subject to an in-depth EIA report if it finds that the project has a considerable environment impact. If not, the NEA approves the preliminary EIA report. The decision is sent to the Ministry of Tourism and Environment (MTE), which notifies the project developer.

In case of the in-depth EIA process, the application filed through the online platform e-Albania is sent to the MTE and then forwarded to the NEA. The NEA has to publish the EIA report in order to receive comments or observations from the interested parties and general public. In the process of reviewing the EIA report, the appropriate regional environmental agency and other relevant institutions provide their opinions on the EIA report.

A key element for the in-depth EIA process/ procedure is the requirement that the NEA should organise public hearings open to the general public and interested environmental NGOs to receive their opinion before a decision is made. The public hearings are organised in collaboration with the local authority and project developer.

In the case where the NEA finds the EIA report complying with the requirements it prepares the draft Environmental Declaration and forwards it to the Minister of Tourism and Environment for final approval and signature. If the Minister does not have any objection, he/she signs the Declaration and forwards it to the project developer.

The law pays special attention to the projects that may impact special protected areas. Article 21 of the law stipulates that when the NEA or the MTE comes to the conclusion that the proposed activity/ project, alone or in combination with other existing or proposed activities or projects may have a significant negative impact on the integrity of a special protected area, the responsible authority covering the area of the project may not approve the development of the project unless:

a) there are no other alternative solutions;
b) proposed activity has to be carried out for the purpose of an important public interest;
c) all compensation measures should be taken in order to ensure the implementation of "Natura 2000[4]" requirements.

The law also contains provisions enabling any project developer subject to the EIA process to file an administrative complaint if he/she finds that the authorities do not comply with legal procedures.

Law no.10 448, dated 14.07.2011 "On environmental permits" as amended

The law on environmental permits defines:

a) rules for permission of development of the activities that cause environmental pollution;
b) measures for prevention of such pollutions, and in case this is not possible, measures for mitigation of their gas, liquid and solid emissions in air, water and on land.

This law has fully transposed the Directive 2008/1/EC of the European Parliament and Council of 15 January 2008 "On the integrated control and prevention of pollution" as amended and the Directive 2001/80/EC of the European Parliament and Council of 23 October 2001 "On the limitation of emissions of certain pollutants into the air from large combustion plants".

According to the law, all activities that cause environmental pollution should get an environmental permit. The law has introduced two types of environmental permits, type A and type B depending on the estimated level of pollution of the activity.

The law requires that any activities for exploration or extraction of oil and gas whatever the size of the project should get a type A environmental permit, while the activities of extraction of minerals and construction materials either by underground mine or by an open pit shall be equipped with a type B environmental permit.

The specific procedures and requirements for review of the applications for environmental permits, their transferring from one entity to another, and terms and condition of the permits are approved with the decision of the Council of Ministers.

The applications for environmental permits are filed with the National Business Centre, which is the institution that also issues the permits.

An application for type A permit should include:

a) Information on the proposed activity for which the permit is required including:
- purpose of the activity and the expected date for commissioning of installations;
- description of the location where the activity will be performed accompanied with illustrative maps and pictures;
- description of technological processes of the activity;
- type, volume, consumption and production of raw materials;
- detailed information on the emissions in the environment;
- information on the quality of air and surface waters in the area where the emissions in the environment will take place;

[4] Natura 2000 is a network of core breeding and resting sites for rare and threatened species, and some rare natural habitat types which are protected in their own right. It stretches across all 27 EU countries, both on land and at sea. https://ec.europa.eu/environment/nature/natura2000/index_en.htm

- location points with coordinates where the emissions in air and where polluted waters will be affected;
- potential risks/ accidents in the environment from the activity and the measures for prevention of accidents or minimization of the damage to the environment;
- measures for capturing and treatment of emissions in the environment;
- self-monitoring programme of emissions in the environment;
- rehabilitation plan for the activities that use mineral resources;
- emergency management plan for the activities that use, produce or deposit materials hazardous to the environment and human life;
- certificate of the environmental expert that has prepared the information;
- information on the consultation with the public where the opinion of the public is documented.

b) Copy of the application service tariff as approved by the Council of Ministers (the application tariff for type A permit is 50,000 Lek, while for type B permit is 30,000 Lek).
c) Other permits and authorizations that the project developer may have obtained for the activity.

The permit application is checked and verified by the NEA, which provides its opinion to the Minister of Tourism and Environment whether a permit should be issued or not. The Minister of Tourism and Environment signs the act of approval of the Environment Permit.

The environmental permit contains conditions on the level of emissions as approved by the Council of Ministers and other conditions that may be relevant for the type of the activities such as the collection and treatment of solid waste, or collection and treatment of polluted waters.

One important requirement of the environmental permit, which is in line with the provisions of the law is the obligation of the permit holder to undertake regular environmental self-monitoring and provide the monitoring reports to the environmental authorities (NEA, Regional Environmental Directorate, Environmental State Inspectorate).

The law also authorises the NEA to change and modify the terms and conditions of an environmental permit in order to comply with changes in the environmental legislation.

The compliance with the permit's terms and conditions by the permit holder may be subject to inspection by the Environmental State Inspectorate. The law provides severe penalties in cases when the permit holders violate the terms and conditions of the permit or the requirements of the environmental legislation, including the proposal by the NEA to the Minister of Tourism and Environment for revocation of the environmental permit for serious violations.

4.3.2. International practices

International best practice in the extractive industries demands that all exploration and exploitation projects assess, monitor, mitigate and report on all the environmental impacts of the project. The conduct of environmental impact assessments for proposed oil, gas or mining project has become the norm for reputable international oil and gas companies. Indeed, this norm has evolved so that best practice is that an environmental *and social* impact assessment is conducted for a proposed project. Any EIA or ESIA should occur at an early stage of the project. The exact timing will depend on the project, but sufficient information should be available on the nature of the project to allow stakeholders to understand the potential impacts and risks. Consultation with stakeholders, including local residents, is an essential part of the EIA (or ESIA) process. The conduct of an EIA or ESIA to recognised international standards (e.g., in line with EU Directives) is typically a condition of government and regulatory approval and securing finance.

Once finalised, the EIA report should be published along with the plan setting out how the project's proponents will address the EIA's findings and mitigate the impacts. The plan should set out how emissions

and other impacts will be monitored and mitigated. The project's proponents should ensure regular (e.g., annually) public reporting of actions to address environmental impacts. International best practice includes developing, implementing and regularly revising a comprehensive stakeholder engagement plan. Regulations may demand that companies report the results of environmental monitoring to the regulatory agency more frequently (e.g., monthly or quarterly). International best practice also demands that companies put in place a grievance mechanism to allow any member of the public, employee or other stakeholder (e.g., a supplier) to report suspected breaches of environmental protection obligations. Such a mechanism should be easily accessible in the local language (e.g., a dedicated e-mail address or free phone number), allow anonymous reporting, undertake a thorough investigation, keep a log of complaints and provide feedback to the complainant in a timely manner on the outcome of the complaint.

4.3.3. National practices for EIA/ environmental permits of the extractive industries

All types of extractive industries including quarries, mining and oil and gas are fully covered by the existing environmental legislation of Albania, therefore they are obliged to comply with the respective legal requirements, DCMs, orders and regulations according to their type of technology and respective categories of industries. The legal framework on the Environmental Impact Assessment (EIA) procedure in Albania is based on Law No. 10440 "On Environmental Impact Assessment", approved on 07.07, 2011 and later amended with Law No. 12/2015 "On some changes to the law No. 10440, dated 07.07.2011, On Environment Impact Assessment" and Law No. 10448, dated 14.07.2011 "On Environmental Permits" amended. Key legal documents on the EIA procedure also include:

- DCM No. 686, dated 29.07.2015 "On the rules, responsibilities, timelines for the EIA procedure and the transfer procedure of the decision for the environmental declaration", amended;
- DCM No. 247, dated 30.04.2014 "On the determination of rules, requirements and procedures for public information and involvement at the environment decision making process";
- DCM No. 419, dated 25.06.2014 "On the approval of special requests for review of environmental permits requirements of type A, B and C, for the transfer of permits from one subject to another, the conditions for the respective environmental permits as well as the detailed rules for their review by the competent authorities until the issuance of these permits by NBC", amended.

Overall, the procedure for the Environmental Impact Assessment (EIA) in Albania can be summarized in the following three phases:

Figure 8. The EIA Process

1) **Preliminary assessment (screening and scoping):** the proponent shall perform a screening analysis of the intended project based on Law No. 10440 dated 07.07.2011 "On Environmental Impact Assessment (amended)" for the initial categorization of the project based on the Annexes of the law. If the proposed activity is listed in the projects of Annex II, the proponent shall provide a

preliminary EIA report. If the proposed activity is listed in the projects of Annex I, the proponent shall first provide an Environmental Interaction Report. In both cases these reports are submitted to the Ministry of Tourism and Environment (MTE), which further delivers it to the NEA. The NEA makes the final decision for the subsequent EIA process. The NEA through an official letter, communicates with the applicant/proponent on the issues or topics that have to be taken in consideration during the implementation of the project. If according to the NEA the project is categorized under Annex II, it will only require a preliminary EIA. If the NEA classifies the project under Annex I, the proponent will first provide an Environmental Interaction Report and further conduct an in-depth EIA study.

2) **Local Consultation Phase:** This stage involves the acquisition of the formal "no objection" statement by the local government (Municipalities and Administrative Units) and local community. No public consultation is required for projects that require preliminary EIA reports only. Public Consultation is required only for the in-depth EIA and includes the following steps:
   i) The proponent sends a Non-Technical Summary of the EIA and the application for a public hearing/consultation. Both documents are published on the official website of the NEA for 20 calendar days in order to be accessible by the local community, stakeholders and other interested parties;
   ii) The proponent in coordination with the NEA and the relevant Regional Environmental Directorate (RED) organizes a public consultation/hearing event with stakeholders, including participants from the administrative unit(s), municipality, local community, civil society, and other interested parties;
   iii) The council of the municipality expresses an opinion on the project and also the opinions of the administrative unit, local community and other third parties are taken into consideration;
   iv) The suggestions, comments, question and answers of the public consultation/hearing are included in the in-depth EIA Report.
3) **Approval by the MTE and NEA:**
   i) After the submission of the Final EIA Report and evaluation from the NEA, the MTE issues the environmental statement/declaration if the project fully complies with all legal requirements;
   ii) The application for the EIA permit is submitted to the NBC for licensing which forwards the documents to the NEA;
   iii) NEA evaluates the documents, perform field surveys (if necessary) in collaboration with RED(s) and other related directorates and prepare their opinion on the project including specific permitting requirements;
   iv) Based on the opinion of the NEA, the MTE issues the permit and sends it to the NBC which then transmits it to the applicant.

Preliminary EIA requirements: Projects that are subject to the preliminary EIA should comply with the requirements set in the DCM No. 686, dated 29.07.2015 "On the rules, responsibilities, timelines for the EIA procedure and the transfer procedure of the decision for the environmental declaration", amended. The proponent shall submit a Technical Report of the Project as set out in the DCM No. 686 (amended) and a Preliminary EIA Report including the following structure and topics:

1. Description of the vegetation cover in the proposed project area, including photos from the site;
2. Information on the presence of water resources in the project area and its vicinity;
3. Identification of potential adverse/negative impacts on the project environment, including impacts on biodiversity, water, soil/land, and air;

4. Description of possible discharges into the environment such as wastewater, dust and gas emissions, noise and vibration emissions, as well as generation of waste;
5. Information on the likely duration of the identified negative impacts;
6. Data on the possible spatial extent of negative impact on the environment, including the physical distance from the project's location and affected aspects/values from the project development;
7. Possibility of rehabilitation of the affected environment and possibility for the restoration of the affected environment/area in the same conditions as before the commencement of the works, including approximate costs of the rehabilitation measures;
8. Possible measures for the avoidance/ prevention and mitigation of negative impacts on the environment;
9. Possible trans-boundary impacts (if the project causes such impacts).

In-depth EIA requirements: Projects that are subject to an in-depth EIA should comply with the requirements set out in the DCM No. 686, dated 29.07.2015 "On the rules, responsibilities, timelines for the EIA procedure and the transfer procedure of the decision for the environmental declaration", amended. The proponent shall initially submit a Technical Report of the Project and an Environmental Interaction Report (similar to the preliminary EIA report) as set out in the DCM No. 686 (amended). After the evaluation of the documents from the MTE and NEA, the proponent conducts a detailed EIA study, prepares a Non-Technical Summary of the in-depth EIA and performs a Public Consultation/Hearing with all relevant stakeholders. Upon completion of these steps, the proponent again submits a revised version of the Technical Report and the In-depth EIA Report including the following structure and topics:

1. Information on the scope of the EIA and methodology applied;
    a. Description of the aim and objectives of the EIA;
    b. Short description of the legal framework on the environment;
    c. Description of the methodology applied for the preparation of the in-depth EIA;
2. Description of the project, including:
    a. Scope of the proposed project;
    b. Project location and plan, including coordinates of the project area;
    c. Sketches and plans of the project's buildings and structures;
    d. Description of the construction and technological processes, including production/ manufacturing capacities, quantities of raw materials needed and final products of the project;
    e. Necessary infrastructure required for connection to the energy network, water supply, discharges of wastewater and generation of waste, as well as information on the existing access roads or construction of new roads;
    f. Construction programme, planning period, operation period, rehabilitation phase;
    g. Methods used for the construction of project's facilities;
    h. Primary/raw materials that will be used for the construction phase and the way they will be secured (raw materials, water and energy);
    i. Information on the possible connections/interaction of the project with other existing projects nearby;

j. Use of materials during the operation phase, including necessary water quantities, energy, fuels needed and the ways they will be secured;

k. Other activities needed for the implementation of the project, such as construction of camp or buildings. Information on the permits and licences needed for the project, as required by the existing law in force and relevant government authorities for the approval of the permits/ licences of the project;

3. Description of the project's alternatives for the implementation of the project or other specific components needed (e.g., access roads, waste and wastewater management, types of fuels, location of the project, etc.), as well as justification of the key alternatives proposed, taking in consideration the environmental impacts of each alternative, and if applicable consider the suggestions and opinions of the relevant government institutions involved in the project.
4. Description of the existing baseline conditions of the environment, which can be affected by the proposed project, including:
    a. Description of the physical characteristics of the project area (climate, geomorphology and seismicity, geology and land, surface waters and groundwater);
    b. Description of the biodiversity in the project area (habitats, flora and fauna species, their national and international preservation status, protected areas and natural monuments);
    c. Description of the existing quality of the environment and existing impacts (water quality, air quality, noise levels, management of wastes, other issues such as soil erosion, fires, historical pollution, key pressures on the environment such as vegetation cuttings, and other pollution factors;
    d. Description of the social characteristics on the proposed project area (administrative units, population and key economic activities, land use, cultural heritage values and monuments, management of waste and wastewater);
5. Description of key adverse/negative impacts of the proposed project on the environment.
    a. Negative impact on the environment, including impacts on the physical environment, impacts on habitats and biodiversity, impacts from discharges and generation of waste, cumulative impacts of the project, social impacts (change of land use, disturbances from noise generation, air pollution, use of natural resources, etc.);
    b. Characteristics of the negative impacts on the environment, including methodology applied for the prediction of negative impacts, physical distribution and length of the impact (magnitude), type of impacts (direct and indirect), possibility of mitigation measures and proper justification of these measures for the anticipated impacts, sensible areas that might be affected from the project's activities (protected areas, habitats, inhabited areas, water resources, cultural heritage area, etc.);
6. Possible trans-boundary impacts (if the project causes such impacts).
7. Positive impacts on the environment (and social impacts) from the project development.
8. Proposed mitigation measures for each of the negative impacts, as identified in section 5 above.
9. Environmental monitoring programme during the operation phase of the project.
10. Environmental management and monitoring plan, including roles and responsibilities for the proposed mitigation and management measures, respective costs for the protection of the

environment and rehabilitation phase, communication and information plan with public, local community and stakeholders;

11. Appendices of the in-depth EIA report, including:
    a. Non-technical summary;
    b. Specific requirements of the NEA and other institutions during public consultations, information on the methods used for the consulting process, results/information gained, contacts of the participants during public consultations, addressing of issues raised during the consultations;
    c. Detailed lists of flora and fauna species, including their protection/preservation status at national and international level;
    d. References and sources of information used in the in-depth EIA report;
    e. Certificate of the expert(s) that prepared the EIA report.

Environmental Permitting requirements: upon approval of the environmental statement/declaration for the EIA report (preliminary or in-depth), the project proponent applies for the environmental permit. Depending on the type of extractive industry, surface area utilised and technology/methods applied, the project is classified according to the requirements set by the Law No. 10448, dated 14.07.2011 "On Environmental Permits" amended. The MTE and NEA evaluate the EIA report, mitigation measures proposed and residual impacts from the project, and set out the obligations of the project proponent in terms of environmental commitment. For example, the environmental permit may set out the specific environmental monitoring requirements of the project, including periodicity of air quality measurements, noise and vibration levels, water quality measurements during the operation phase. Furthermore, details on waste and wastewater discharges are required, as well as relevant mitigation and management measures are specified in the environmental permit. MTE and NEA may require additional mitigation measures to be implemented during the operation phase, including management plans and rehabilitation/restoration plans. The Permit Holder is obliged to comply with all the requirements set out in the environmental permit, and report the information or environmental monitoring accordingly based on the timeframes foreseen by the Law/DCM and/or permit itself.

4.3.4. Environmental and rehabilitation obligations according to the contract/permit/ law

All types of extractive industries, quarries, mining and oil and gas, are obliged to comply with the requirements set out in the environmental permit. Referring to the environmental aspects, before 2010 the legal requirements and obligations for the extractive industries were less strict, not only within the legislation framework, but also during the implementation/operation phase and monitoring from relevant institutions. With the commencement of the TAP Project, in particular after 2015, part of the national legal framework was updated/amended. So, the TAP project, which demonstrated best practice and applied international environmental standards, contributed to enhancing both the legal framework and actual practice in Albania. At present, the government authorities require a large set of mandatory documents from extractive industries to meet the environmental permitting obligations. Environmental and rehabilitation obligations of the extractive industries according to the environmental permit requirements include the following documents to be submitted by the permit holder during the operation phase:

1. ***Monitoring of air emissions*** – periodic monitoring of air emissions by the permit holder. Measurements shall be conducted by an accredited environmental laboratory.

2. ***Monitoring of water discharges*** – monitoring of water discharges (if present) that may come as a result of the implementation of activities. This also includes discharges into the sewerage system and/or discharges from the water treatment plant (if present).
3. ***Monitoring of surface water quality and groundwater quality*** – periodic monitoring of the water resources quality. Measurements shall be conducted by an accredited environmental laboratory.
4. ***Grievance register*** – it is required that the permit holder should keep a dedicated register for any grievances/complaints from the local community and/or other stakeholders during the operation activities. The NEA and RED are directly involved in this process, and they initiate verification steps in case there are any grievances.
5. ***Register for discharge of pollutants and transfers*** – as according to the DCM No. 742, dated 09.09.2015 "On the functioning and management of the register of discharge pollutants and their transfer, approval of the action list and pollutants, which are subject of this register as well as the declaration form of discharge data and transfer of pollutants from the operator", the permit holder shall keep track of any emissions and related level of pollutants in a dedicated register as required by the DCM. The results shall be submitted to the NEA at regular intervals.
6. ***Monitoring programme for noise (and vibrations) emissions*** – periodic monitoring of noise and vibration emissions by the permit holder. Measurements shall be conducted by an accredited environmental laboratory.
7. ***Environmental Management Plan (EMP)*** – the permit holder shall prepare an Environmental Management Plan, including related appendices based on objectives and duties set out in the environmental permit. The EMP is revised once per year.
8. ***Risk Management Programme*** – the permit holder shall identify any risks associated with the extractive industry project and undertake relevant mitigation measures to tackle these risks, avoid and/or minimize them as much as reasonably applicable.
9. ***Annual Environmental Report*** – the permit holder shall submit an annual report to the NEA including all related results, emissions and mitigation measures undertaken throughout the year.
10. ***Emergency Plan*** – the permit holder shall prepare an Emergency Plan, which identifies any risks/ hazards from spillages, fires and/or potential explosions during the operation phase. Relevant mitigation measures, equipment, HSE practices and signage shall be put in place in order to adequately react in a timely manner in case of an unpredicted event and/or emergency.
11. ***Compliance Plan*** – the permit holder shall submit a Compliance Plan according to the timeline set by the NEA and MTE in the environmental permit.
12. ***Register for waste generation and transfer*** – the permit holder shall keep track of the type of waste generated during their activities, including relevant quantities of waste transferred. The permit holder shall have an official contract with state institutions (e.g., municipality) and/or private companies for waste disposal and waste recycling. The permit holder shall keep a transfer note during waste transferring at all times, signed both by the permit holder and respective company. All the data on waste shall be regularly submitted.
13. ***Training Plan*** – it is required that the permit holder should develop a training programme for its employees regarding environmental protection and management during the implementation of the project. The permit holder shall keep its commitments regarding the environmental (and social) aspects, and raise the awareness of the staff on these matters.

14. ***Closure and Rehabilitation Plan*** – the permit holder shall submit a Closure and Rehabilitation Plan to the government authorities, including a detailed implementation plan and related costs. This plan is usually updated every year and submitted to the government authorities.

15. ***Monitoring Report*** – the permit holder shall submit a Monitoring Report to the NEA according to the timelines set in the environmental permit (monthly, 3-monthly, semi-annual, etc.). This report typically includes data on air and water quality measurements, noise and vibration measurements, data on wastes, their types and quantities, and other relevant data related to the project activities and environmental aspects.

16. ***Environmental Audit Report*** – provides an objective third-party evaluation for the environmental performance of the project activity, and a corrective action plan aimed at improving it. The Environmental Audit report is performed once per year.

17. ***Action Plan, only for quarries*** – referring to Order No. 67, dated 11.03.2018 "On the Approval of the Action Plan for Mining Activities (Quarries)", the permit holder shall prepare an Action Plan for mining industries that produce construction materials such as quarries. This plan is similar to a method statement used for the site organisation during operation activities, and should include data about any design plans, location of buildings or structures, location of waste storage/bins on site, storage of equipment and materials needed for project's activities, etc.

4.3.5. Gaps

This section identifies gaps in the current national environmental legislation, requirements during the EIA phase, and implem entation phase and monitoring from government authorities regarding extractive industries in Albania. Gaps in the EIA legislation and monitoring during the operation of activities have been evaluated and compared with the requirements of international legislation, standards and best practices used in the extractive industry.

Table 4. Gaps in the national environmental legislation, and monitoring practices for the extractive industry, and requirements/ applications according to the international legislations, standards and guidelines

No.	Reference Topic/ National Legislation	Gap(s) within the National Legislation	Requirements/ Applications according to the International Legislations, Standards/Guidelines and Best Practices
1.	EIA legislation and procedure as according to the: • Law No. 10440, dated 07.07.2011 "On Environmental Impact Assessment" amended; • DCM No. 686, dated 29.07.2015 "On the rules, responsibilities, timelines for the EIA procedure and the transfer procedure of the decision for the environmental declaration" amended; • DCM No. 247, dated 30.04.2014 "On the determination of rules, requirements and procedures for public information and involvement at the	The Albanian EIA legislation contains some gaps during the application and scoping process, not only for the extractive industry, but also for other types of projects. These gaps can affect the EIA phase and ongoing project in a negative manner, in particular for the extractive industry which may represent larger environmental and social impacts. 1) The Albanian EIA process and initial application is often confusing for the project proponent or applicant. There's a ministerial instruction, specifically Instruction No. 6, dated 27.12.2006, which is supposed to act as a screening and scoping checklist for the preliminary assessment of the project. This instruction has adhered to the EU EIA Guidance for screening and scoping phase, in which a proposed project is classified based on its impacts on whether it needs a preliminary EIA or an in-depth EIA. Nevertheless, in the Albanian EIA procedure this instruction is rarely used during the initial application process. There is no clear procedure on the EIA screening	With respect to the Albanian requirements for the EIA, the international legislation (e.g., EU), IFC Performance Standards and World Bank Environmental and Social Framework require additional steps and studies. In particular, for the extractive industries these standards should also be combined with good environmental and social practices, and specific guidelines based on experience/case studies. The application of international legislation and standards for the EIA process requires the following additional processes: 1) Focus on screening phase – preliminary assessment of the project and related impacts. As a result of this phase the project can be classified based on the requirements of the EIA, whether it needs a preliminary or in-depth study. Use of a screening checklist would facilitate the

No.	Reference Topic/ National Legislation	Gap(s) within the National Legislation	Requirements/ Applications according to the International Legislations, Standards/Guidelines and Best Practices
	environment decision making process"; • Instruction No. 6, dated 27.12.2006 "On the Approval of the Methodology of the Preliminary Assessment of Impacts on the Environment of an activity".	and scoping phases of proposed project, instead this is summarized in a process commonly named 'initial or preliminary assessment'. This is done by the project proponent and/or consultant, however inputs from NEA and MTE at this stage are minimal or none. There are certain cases where the proponent evaluates that an extractive industry project needs a preliminary EIA study, instead the government authorities might decide that the project must be subject to an in-depth EIA study, therefore starting the whole application process from the beginning. This incoherence on timing and procedure can create a major gap during the EIA process, as well as problems during the baseline studies and impact assessment phase. 2) Stakeholder engagement and consultation with the public and/or interested parties are limited in the national legislation. If a project is classified with a preliminary EIA study no consultation or stakeholder engagement is required by the law. For projects that need an in-depth EIA study, only one round of public consultation is required before the submission of the final report to the NEA. This represents a major gap in the law, providing no opportunities for project revision or changes by the proponent, and not involving the public, local community, government authorities and other stakeholders in the decision-making process. Tensions can be created between the project	process. Guidance on screening is recommended to be conducted in compliance with Directive 2011/92/EU as amended by 2014/52/EU. 2) Focus on scoping phase – a process by which stakeholders are consulted to contribute to the identification of key issues to be investigated as part of the EIA. Use of a scoping checklist would facilitate the process. Guidance on scoping is recommended to be conducted in compliance with Directive 2011/92/EU as amended by 2014/52/EU. The methodology of the EIA is defined in this phase, as well as relevant baseline studies that will be conducted in the following phases. A Scoping Report for the EIA is prepared in application of this requirement. 3) Stakeholder Engagement Plan and public consultations – comprises a comprehensive approach to the communication and consultation with the identified stakeholders throughout the whole project lifecycle. This includes local community, local government authorities, regional and national authorities, including NGOs and other interested parties. International standards

No.	Reference Topic/ National Legislation	Gap(s) within the National Legislation	Requirements/ Applications according to the International Legislations, Standards/Guidelines and Best Practices
		proponent and public, increasing the risk of the project's failure. Furthermore, even if the project has been approved by the government authorities during the operation phase it may cause disturbances, nuisance and irritation with the local community, in particular when the extractive industry causes air, water, noise and waste pollution. 3) The Albanian EIA process and EIA legislation does not fully reflect the need to focus on social impacts. According to the law, the preliminary EIA does not include any section or study of social aspects. Similarly, the in-depth EIA includes only a minor section within the report. As a consequence, there is little data from the extractive industries on social aspects and assessment of social impacts. This represents a major gap in the existing EIA process. The government authorities during the in-depth EIA focus more on the final public consultation/ hearing, which very often does not reflect the real picture of the social aspects as a result of the 'poor' or limited stakeholder engagement and lack of profound consideration of social baseline findings and related impacts due to the project's implementation.	recommend at least 2-3 public consultations for an in-depth EIA project. 4) Focus on social issues – whereas the Albanian legislation mainly refers to environmental impacts, international standards such as the IFC also focuses on the identification of social impacts on the affected communities and subsequent definition of necessary mitigation measures.
2.	Similarity between the structure of the preliminary EIA report and the	Referring to the DCM No. 686, dated 29.07.2015 (amended) there is a great similarity between the preliminary EIA report and Environmental Interaction	The international legislation and standards refer to different processes and structures of the reports for the preliminary EIA and in-

No.	Reference Topic/ National Legislation	Gap(s) within the National Legislation	Requirements/ Applications according to the International Legislations, Standards/Guidelines and Best Practices
	Environmental Interaction Report used in the in-depth EIA process.	Report. This often creates confusion for the project proponent during the application process and poses a risk of conflict with the government authorities. The Environmental Interaction Report is supposed to substitute the Scoping Report (as suggested by the international standards), however the structure of the report and requirements does not reflect this. Another gap is that engagement with stakeholders is not foreseen in this phase, causing other gaps in the upcoming phases of the in-depth EIA.	depth EIA. The structure of the Scoping Report is very different from the structure of the preliminary EIA report. The scoping report represents a tool for the EIA methodology, relevant studies that will be undertaken and disclosure of information with various stakeholders. In this way a comprehensive process is conducted and all interested parties in the project are proactively involved. Another useful component of the scoping phase and scoping report is the scoping checklist, which can be added as an appendix or separate document during public consultations and initial application for the EIA.
3.	Environmental (and Social) Management Plan(s). Documents required for periodic submission of the permit holder according to the environmental permits and national law for the extractive industry.	Referring to the DCM No. 686, dated 29.07.2015 (amended), the EMP is required within the structure of the in-depth EIA report. For the preliminary EIA report the EMP is not required. However, during the operation phase it is usually required within the environmental permit. Nonetheless, there is often confusion concerning the EMP. Based on the review of several environmental permits from the extractive industries, the permit holder during the operation shall submit the following documents (as mentioned above in section 4.4.4): 1) Monitoring results of air emissions;	IFC standards refer to the Environmental and Social Management Plan(s) as a set of documents needed during the operation phase of an activity which takes in consideration all relevant environmental and social topics that might cause disturbances/ nuisances, and pollution, and are addressed through different mitigation measures to minimize or prevent any remaining impacts. Typically, the Environmental and Social Management Plans include many sub-plans and related monitoring or inspection forms

No.	Reference Topic/ National Legislation	Gap(s) within the National Legislation	Requirements/ Applications according to the International Legislations, Standards/Guidelines and Best Practices
		2) Monitoring results of water discharges; 3) Monitoring results of surface water quality and groundwater quality; 4) Grievances register; 5) Register for discharge pollutants and transfers; 6) Monitoring results for noise (and vibration) emissions; 7) Environmental management plan; 8) Risk management plan; 9) Annual environmental report; 10) Emergency plan; 11) Compliance plan; 12) Register for waste generation and transfer; 13) Training plan; 14) Closure and rehabilitation plan; 15) Monitoring report; 16) Environmental audit report; 17) Action plan, only for quarries. As can be observed, many of these plans are actually part of the Environmental Management Plan. Often the EMP is considered of low importance or a separate document, which does not comprise other sub-plans or specific mitigation measures that should	that will be used during the operation phase, such as: • Water Resources Management Plan; • Waste Management Plan; • Biodiversity Management Plan; • Employers Management Plan; • Health and Safety Management Plan; • Local Community and Investment Plan; • Stakeholder Engagement Plan; • Noise and Vibration Management Plan; • Air Quality Management Plan; • Environmental Monitoring Plan; • Emergency Response Management Plan; • Closure and Rehabilitation Plan; Similarly, international standards and guidelines refer to the Environmental Monitoring Report as a document that should comprise periodic data on the most important issues as specified in the environmental permit such as: • Air emissions;

No.	Reference Topic/ National Legislation	Gap(s) within the National Legislation	Requirements/ Applications according to the International Legislations, Standards/Guidelines and Best Practices
		be implemented on site. Furthermore, the EMP is not fully defined within the existing EIA legislation. There should be a structured definition of the EMP and related plans that will be needed during the operation phase. Similarly, there should also be a structure of the Environmental Monitoring Report, as well as related documents/ appendixes needed (e.g., air, water, noise emission monitoring results, etc.).	• Noise and vibration emissions; • Water discharges, including relevant quantities; • Water quality assessment and measurements; • Waste generation, including type of waste, quantities, transfers and contract agreements with other recycling companies; • Information on the biodiversity around the project area; • Social issues, grievances and complaints; • Any data on accidents, emergency cases; • Training of employees,
4.	Action Plan, as per Order No. 67, dated 11.03.2018 "On the Approval of the Action Plan for Mining Activities (Quarries)".	Referring to stakeholder engagement meetings, it is unclear if this Ministerial Order is actually being applied within the mining sector (quarries). It is also unclear if any document is produced by the permit holder in fulfilment of the requirements of the ministerial order. The Action Plan as described in this ministerial order is intended to be a site organisation plan or method statement within the project area during operation	According to international standards, guidelines and best practices, it is necessary that every project, not limited only to the extractive industry, should produce an action plan or method statement during the implementation/operation of the project. Well-organized project sites will perform better, minimize health and safety risks and environmental and social impacts.

No.	Reference Topic/ National Legislation	Gap(s) within the National Legislation	Requirements/ Applications according to the International Legislations, Standards/Guidelines and Best Practices
		phase. The Action Plan requires specifications on the entrance road path, storage of material and equipment, waste management, topsoil stockpile area, bench construction details, etc.	
5.	Closure and Rehabilitation Plan.	The Closure and Rehabilitation Plan is a key component of the EIA process, and other project phases, in particular operation and decommissioning/ abandonment. The majority of projects related to the extractive industries do not have a sufficiently detailed plan for the rehabilitation and restoration of the project area after the completion of their activities. In particular, Albanian companies provide minimal effort, and funds for the rehabilitation phase. There are other cases where there is 'confusion' on the rehabilitation measures/ plan and their prediction during the EIA process between the government authorities and the developer. There are no defined criteria from the Albanian legislation and/ or the government for a specified percentage of the investment costs that shall go for the rehabilitation phase. Sometimes there are strict requirements from the government authorities for a very detailed Closure and Rehabilitation Plan within the EIA report and EIA application phase. Currently there is no defined structure with the EIA report/ procedure of the rehabilitation plan and components it should comprise. This represents another gap in the process as the very detailed plan shall be designed and prepared during the implementation of the project. Furthermore, the	Currently the Closure and Rehabilitation Plan for the extractive industry in Albania is updated every year in line with the legislation requirements. The lack of definition of the Closure and Rehabilitation Plan structure within the EIA report/ procedure represents an important gap. Besides this, a key improvement within the Albanian environmental legislation would include setting of a specified percentage of the capital investment that should go for the rehabilitation phase. This amendment in the Environmental Protection Law or EIA Law would be in full compliance with international guidelines and best practices developed in European Countries.

No.	Reference Topic/ National Legislation	Gap(s) within the National Legislation	Requirements/ Applications according to the International Legislations, Standards/Guidelines and Best Practices
		detailed plan shall be updated in a timely period during the operation phase and further monitored by the government authorities for the correct implementation of the measures on-site.	
6.	Environmental Monitoring process. Frequency of monitoring measurements (e.g. air, water, etc.).	The environmental monitoring parameters, specific requirements and frequency of measurements for each of the extractive industry projects are defined within the environmental permit. However, there is not a clear regulation, order or instruction on how these environmental monitoring parameters are set for each type of industry, or any other data on the frequency/ periodicity of measurements according to the typology of the project. There are also other gaps observed during the review of different environmental permits for different types of extractive industries. For example, for the projects equipped with an Environmental Permit Type A it was observed that some of the most common requirements were related to periodic air emission modelling (every 6-months) and the energy audit report. Referring to the air emission modelling requirement, there might be certain projects such as major quarries used for limestone extraction that might not need periodic air emission modelling, especially if they are located in mountain/ hilly terrains far from inhabited areas. Referring to the energy audit requirement, this is something new for the Albanian legislation. The regulatory framework for energy audit and auditors was only approved in 2019, yet today	There should be a clear set of regulations regarding monitoring activities that specify the type of monitoring, data to be collected, the receiving agency for reports and the schedule of monitoring and reporting. The schedule of monitoring and reporting can differ for different types of activities and projects.

No.	Reference Topic/ National Legislation	Gap(s) within the National Legislation	Requirements/ Applications according to the International Legislations, Standards/Guidelines and Best Practices
		there are no licensed energy auditors that could perform this kind of study for the industry.	
7.	Cooperation between government authorities, MTE, NEA, REDs, NANR and Environmental Inspectorate.	Neither sectoral legislation nor the environmental legislation contains specific requirements for collaboration of authorities responsible for extraction industries (MIE, NANR) with the environmental authorities (MTE, NEA, REDs) in cases of execution of financial guarantees for rehabilitation of the environment.	One approach adopted in other countries e.g., the UK is to set up a single regulator for a specific industry. In the UK, the government established the Oil and Gas Authority (OGA) in 2015 to regulate all aspects of the upstream oil and gas sector. This followed a major review into the industry and how it was regulated that recommended major reforms.
8.	Use of revenues from royalty tax for environment.	The legislation does not contain any provision which would oblige the Government to use part of revenues coming from the royalty tax applied in the extraction industry for the purpose of environment protection or rehabilitation in the areas where the extraction industry activities take place.	The Law on National Taxes should be amended allocating a percentage of revenues from royalty tax be used for purpose of mitigation of environmental and social impacts from the extractive industries.
9.	Standardisation of monitoring and reporting requirements in the petroleum industry.	Given the lack of secondary legislation and template Petroleum Agreements, the monitoring and reporting requirements established in each Petroleum Agreement may create disparity and problems with the monitoring of different Contractors.	In line with the requirements of the Petroleum Law (Exploration and Production), the National Agency of Natural Resources should develop and prepare standard Petroleum Agreements where specific clauses for monitoring and reporting requirements in the upstream petroleum activities will be included.

No.	Reference Topic/ National Legislation	Gap(s) within the National Legislation	Requirements/ Applications according to the International Legislations, Standards/Guidelines and Best Practices
10.	Standardisation of financial guarantees for environmental liabilities for the Petroleum Contractors.	No uniform clauses are used in all Petroleum Agreements regulating and governing the financial guarantees for environmental protection.	In line with the requirements of the Petroleum Law (Exploration and Production), the National Agency of Natural Resources should develop and prepare standard Petroleum Agreements specific clauses on the environmental liabilities and financial guarantees required to be provided by the Contractors for these liabilities.
11.	EITI Environment Reporting.	Lack of process in place in Albania.	EITI Albania has recently started the process of collecting data on the extractive sector in Albania and provide the environmental monitoring transparency with the general public. Besides EITI's work, the process will need a very close and good cooperation with government institutions such as NEA, NANR, MTE, MIE, etc. and private companies (permit holders) that operate in the extractive sector in Albania.

4.3.6. Conclusions and Recommendations

Recommendations for the EIA, Monitoring and Management of Extractive Industries in Albania

- ✓ The Environmental Legislation in Albania needs further amendments and full adherence with the international legislation, standards (e.g., IFC, WB ESF) and guidelines.
- ✓ It is recommended that the DCM No. 686, dated 29.07.2015 "On the rules, responsibilities, timelines for the EIA procedure and the transfer procedure of the decision for the environmental declaration" (amended), should be improved/ updated in regard of the following topics:
  - More clear definition of the Environmental (and Social) Impact Assessment procedure;
  - Clear definition of the Screening Phase and Scoping Phase of the EIA;
  - Change of the report structure of the Preliminary EIA Report and Environmental Interaction Report required for the in-depth EIA study. According to EU Guidelines and international legislation these two reports should not be similar in contents;
  - Clear definition of the Environmental and Social Management Plans, subplans and other method statements needed for the construction and operation phases;
  - Clear definition of the preliminary Closure and Rehabilitation Plan structure required within the EIA study and detailed plan required during the implementation of the project;
  - Require more focus on social issues and social impacts assessment, both for the preliminary and in-depth EIA procedures.
- ✓ It is recommended that the DCM No. 247, dated 30.04.2014 "On the determination of rules, requirements and procedures for public information and involvement at the environment decision making process", should be improved/ updated in regard of the following topics:
  - Require more focus on Stakeholder Engagement and Public Consultation;
  - The Preliminary EIA should include at least 1 public consultation according to international standards and best practices;
  - The In-depth EIA is recommended to include at least 2-3 public consultations. Two public consultation are usually conducted during the EIA Scoping phase if the project applies IFC or WB standards. The third public consultation is required after the completion of the in-depth EIA draft report.
- ✓ It is recommended that the Instruction No. 6, dated 27.12.2006 "On the Approval of the Methodology of the Preliminary Assessment of Impacts on the Environment of an activity" should be updated in line with Screening and Scoping Guidance of the Directive 2011/92/EU as amended by 2014/52/EU. Use of the Instruction No. 6, dated 27.12.2006 should set the initial/ preliminary assessment of the project's categorisation and EIA procedure.
- ✓ The Environmental Monitoring process should comprise a clear set of regulations regarding monitoring activities that specify the type of monitoring, frequency, data to be collected, structure of the report, the receiving agency for reports and the schedule of monitoring and reporting.
- ✓ It is recommended that the Action Plan, as per Ministerial Order No. 67, dated 11.03.2018 "On the Approval of the Action Plan for Mining Activities (Quarries)", should be required for all types of projects, including extractive industries project. The Action Plan or otherwise known as Method Statement for the site organization during works should be part of the Environmental and Social Management Plan.
- ✓ It is recommended a strong cooperation between the government authorities such as the MTE, MIE, NEA, NANR, REDs and Environmental Inspectorate since the early phase of a project proponent and continuous collaboration during the construction, operation, monitoring and rehabilitation phases.

- ✓ It is recommended that the Law on National Taxes should be amended, and allocate a specified percentage of revenues from royalty taxes to be used for the purpose of mitigation of environmental and social impacts from the extractive industries.
- ✓ It is necessary a full standardization of the environmental monitoring requirements and financial guarantees within the extractive industry sector, in particular for the hydrocarbon/ petroleum sector.

Conclusions and Recommendations for Albania EITI

- ✓ EITI Albania establishes a process to collect, analyse and publish all the environmental information required by the 2019 EITI Standard clauses 6.1, b and 6.4 i.e., both mandatory and encouraged information.
- ✓ EITI Albania includes contextual information on the practical nature of mining and oil and gas activities e.g., types of project to put environmental impacts in context Albania EITI bases its reporting template for environmental data on existing templates used in existing countries.
- ✓ EITI Albania conducts awareness raising activities with companies and government agencies in scope for reporting to explain the environmental reporting requirements and the information required to complete the reporting template.
- ✓ Where possible, Albania EITI should use relevant environmental information already in the public domain.
- ✓ EITI Albania should encourage oil and gas companies using fracking techniques to be transparent about the types of techniques used and the potential impact.

5. Desktop Research - Environmental Impacts of Extractive Industries

5.1. Impacts on Biodiversity

Extractive industry projects may cause negative impact on the biodiversity (flora and fauna). Activities like quarries and mining are anticipated to have a larger impact on the biodiversity in comparison with oil and gas projects due to the larger area of utilization for the project activities. Typically, oil and gas projects are distributed in relatively small exploration sites in several locations around a region or large surface area, therefore minimizing the effect of vegetation clearance and large habitat fragmentation. However, this may vary from one case to another, depending on the type of project.

Habitat fragmentation occurs when large areas of land are broken up into smaller and smaller areas, causing loss of flora species and making dispersal by native fauna species from one patch to another difficult or impossible, and cutting off migratory routes. Isolation may lead to local decline of fauna species, or genetic effects such as inbreeding. Fauna species that require large areas of forest simply disappear or they may move long distances to seek appropriate habitats. Extractive industry projects may cause direct and indirect impacts or damage to flora and fauna. Direct impacts may include vegetation clearance and loss of natural habitat. Indirect impacts may include disturbance of fauna species due to excavations, generation of noise, vibrations and air pollutants, mainly dust. Some impacts are short-term and confined to the project site, instead others may have far-reaching, long-term effects. The magnitude and severity on impacts will depend on the approach that the permit holder undertakes. If the permit holder commits to apply appropriate mitigation and management measures during exploration and exploitation activities the impact will be minimized to an acceptable level in compliance with specific legal requirements. To a certain extent, extractive projects like quarries and mines can compensate for the disappearance of the original habitats, supporting re-vegetation of the project area with native flora species and generating diversified biotopes for fauna species such as amphibians, reptiles, insects, and birds, similar to the conditions before the commencement of operation activities. In the oil and gas industry the rehabilitation of affected areas/ habitat might prove more difficult due to the operation/exploitation of the sites over long time periods. However, the permit holder in these cases should commit to restore all affected areas during the exploration phase and minimize the impacts on habitat and biodiversity and restricting them within the working sites where the exploitation occurs.

5.2. Impacts on Geology, Soil Quality, Land Use and Landscape

Extractive industries may cause major impacts on the geology, soil, land use, landscape and visual amenity. For most quarrying and mining projects, large excavations provide major changes on the geology and topography of an area. Due to changes in the topography, the potential for soil and sediment erosion increases, therefore posing risks for degradation of soil quality and degradation of surface water quality. Erosion control is therefore an important consideration from the start of projects. Erosion may cause significant flow of sediments to nearby water bodies (surface waters and ground waters), especially during severe storms and high snow melt periods. Quarrying and mining can contaminate or degrade the quality of soil over a large area. If in close proximity, agricultural activities may also be affected. Excavations in these types of extractive projects modify the topography and landscape by exposing previously undisturbed soil and rock. Besides the abovementioned impacts, quarries and mine sites often represent large visual impacts during operation activities, as well as after site closure if the rehabilitation or restoration of the site in not properly conducted. In Albania there are many mining sites that represent problems with the rehabilitation process, lack of proper re-vegetation and benching (terraces). This approach creates negative impacts on landscape and visual amenity, in particular when the extractive project sites are in close

proximity to inhabited areas and/or close to the main roads. For example, similar cases can be noticed in Bulqizë, Tomori Mountain area, Krujë and Fushë-Krujë areas, Dimal area (previously named Urë-Vajgurore), Berat area, etc.

Similar impacts can as well be observed in onshore oil and gas projects. Impacts from this type of project are usually lower than those in quarries and mining. However, during the exploitation phase there may be considerable impacts on the geology and soil quality due to drilling processes and hydraulic fracturing. Hydraulic fracturing can result in significant impacts on geology due to injection of water for the extraction of hydrocarbons. Depending on the most favourable site for extraction of hydrocarbon, project sites can be located in a wide variety of terrain types, including close to inhabited areas, hilly/mountainous areas and agricultural lands. In the case of agricultural lands, the area will be converted from a cultivated land to an industrial site, which as a result of project's activities could be contaminated (spillages) and/or degraded due to various extraction processes. In terms of landscape impacts, the magnitude can be lower in oil and gas projects compared with quarries and mine projects. However, impacts on visual amenity can be long-term due to the length of the period of hydrocarbon exploitation. Extractive equipment and machinery may create visual nuisances on local communities and visitors. These types of impacts can be reduced through various mitigation and management measures if good practices are followed at all times.

5.3. Impacts on Air Quality

Air pollution remains amongst the most concerning environmental issues in the extractive industries. Air emissions may occur during each stage of the extractive industry project cycle, in particular during exploration, preparation of activities, exploitation and operational activities. The largest sources of air pollution in extractive industry operations are:

- Particulate matter (mainly $PM_{2.5}$ and PM_{10}) as a result of excavations, blasting (e.g., quarries), transportation of materials, wind erosion (more frequent in open-pit mining), fugitive dust from tailings facilities, stockpiles, waste dumps, and road traffic;
- Exhaust emissions from mobile sources (cars, trucks, heavy machinery/equipment) may also contribute to the increase in particulate matter levels, as well as release of gas emissions (NO_x, SO_x, CO, etc.);
- Dust emissions from mineral and hydrocarbon processing and traffic movement, especially on unpaved roads; and,
- Gas emissions from the combustion of fuels in stationary and mobile sources, explosions (blasting), and mineral and hydrocarbon processing.

Once pollutants are released into the atmosphere, they undergo physical and chemical changes before reaching a receptor. These pollutants can cause serious adverse effects to human health and to the environment, in particular to the biodiversity (fauna and flora). Large-scale mining and/or oil and gas activities have the potential to contribute significantly to air pollution, especially in the operation or exploitation phase. The most problematic cases are anticipated to be extractive activities that are operated close to communities and/or within inhabited areas.

The most concerning air pollutant releases from different types of extractive industries, are as follows:

1) **Quarries** – dust emissions (particulate matter) coming from site clearing, blasting activities, excavation, rock crushing and fractioning and traffic movement.
2) **Mining** – most concerning air pollutants are related to dust emissions due to potential blasting activities, operation activities and traffic movement. There can also be gas emissions during

processing of minerals and metals (processing of ore into metal), however this will depend on the technology used for specific processing and the type of mineral.

3) **Oil and Gas** – most concerning air pollutants are related with gas emissions, in particular SO_x, NO_x, CO, CO_2, etc., during operation or exploitation activities. During exploration activities there might be drilling activities, which generate particulate matter pollutants. Dust generation may also occur due to traffic movement; however, this is considered a lesser issue in these types of activities.

5.4. Impacts on Surface Water and Groundwater

Amongst the most significant impacts of extractive industry projects are their effects on water quality and availability of water resources within the project area. Key uncertainties are whether surface and groundwater resources will remain un-diverted, uncontaminated and/or fit for human consumption (e.g., groundwater), and whether the quality of surface waters in the project area will remain adequate to support native aquatic life and terrestrial wildlife. Depending on the type of extractive activities there are different impacts on surface water and groundwater resources.

1) **Quarries** – most issues with quarries are often related to impacts on groundwater. In particular in Albania, quarries or open pit mining sites are located in elevated terrains such as hills and mountains. These sites are predominately far from large surface water resources (e.g., rivers, creeks). There may be small watercourses in proximity or within the project area, but the highest probability of water resources that can be located in these sites is related to groundwater resources. Potential impacts on water resources that can be associated with open pit mining activities may include: i) loss or diversion of surface water/groundwater resources due to blasting activities and excavation of minerals; ii) deterioration of groundwater quality due to operation/exploitation activities, which as a consequence may be associated with impacts on human health in cases where groundwater is used for human consumption (very common in villages); iii) deterioration of surface water quality which can be associated with adverse impacts on aquatic biodiversity.

2) **Mining** – impacts on water resources in the mining sector vary due to the type of mineral to be extracted and the production processes. Very often in the extraction of minerals, groundwater resources from the site are used for the production processes. Mineral production typically cannot be achieved without water. Therefore, there is an impact on the availability or exploitation of groundwater resources. Another potential impact is related to the contamination or deterioration of groundwater quality due to excavation and exploitation activities. In particular in underground mining impacts on groundwater quality and groundwater diversion (or even loss) are anticipated to be more significant. Impacts on surface water are also rated to be high in mining extraction projects. There may be watercourses or creeks located within the project area which might be directly affected by the exploration and exploitation activities. There may be rivers located in proximity of the project sites which could also be affected by the project's activities. In addition, there are r impacts anticipated with drainage water or surface water runoffs. These impacts are equally significant for both active and non-active (abandoned) mining sites because of the large concentration of metals found on these sites. For example, both active and abandoned coal mine sites produce acid mine drainage (AMD) waters which can contain large concentrations of iron (as well as other heavy metals). These low pH waters with high concentration of heavy metals pose major risks for contamination of groundwater resources and other surface water resources. For instance, in developed countries such as the UK, Japan and the USA, drainage waters coming from the mine's sites are treated through different active or passive treatment methods before being released to the environment. In Albania, there are still no regulations for the treatment of mine drainage waters from active and/ or abandoned mine sites.

3) **Oil and Gas** – impacts on water resources in the oil and gas sector may also vary depending on the extractive processes and technology used. Oil and Gas drilling activities may cause disturbance, loss of groundwater resources and deterioration of the water quality. Exploration activities can involve water injection underground. There are cases when the injected water used in the process is salty or brackish. This technique can lead to negative impacts on groundwater quality, through causing the inflow of salty or brackish water. Techniques have been developed which use drinking water or treated water for underground injection. As for potential impacts on surface water, spillages during exploration and exploitation processes can lead to the contamination of surface waters and cause negative impacts on the aquatic biodiversity and environment in general. Other impacts on surface water resources from the oil and gas sector relate to the mismanagement of hydrocarbon waste.

5.5. Impacts from Noise and Vibration Generation

Noise pollution

Noise pollution associated with the extractive industries may include noise generation from vehicle and machinery engines, excavation processes, loading and unloading of rock into steel dumpers, chutes, blasting and drilling activities, exploitation activities, and other related sources. Cumulative impacts of shovelling, ripping, drilling, blasting, transport, crushing, grinding, and stock-piling can significantly affect wildlife and nearby residents in particular when several processes occur at the same time. Best practice requires that major noise generation processes should not be conducted simultaneously, but as separate processes as well as conducted within working hours at an appropriate time during the day (usually not lunch time and/or night-time).

In every case, there should be a distinction between persistent and intermittent noise due to their origins being different and creation of different types of impacts/ disturbances. Typical persistent noises are those created by vehicle traffic along the main roads in the project area. The noise usually produced by quarries, mineral processing and oil and gas activities seldom falls into this category, most of it being intermittent or even sporadic. Some persistent noise however might occur, e.g., from an excavator operating in the quarry or from a dust extractor or a conveyer belt or a drilling activity. Processing plants may also create persistent noise but, it is generally kept under control by means of insulation. As this low-level persistent noise is part of the prevailing background noise, its impact is typically minor and usually well tolerated.

Intermittent noise is produced by specific operations: mainly blasting, but also the daily starting of engines, the loading of rocks into dumpers, the unloading into the steel entry chutes of primary crushers, etc. When it is not following a periodic cycle, or when the period is long, it can be qualified as sporadic noise. To prevent and control noise pollution from extractive industry activities, there should be specific mitigation measures on site and a management plan (noise abatement plan). If not properly managed, noise nuisances may cause major disturbance on human receptors and wildlife.

Vibration nuisance

In the extractive industries, blasting (in mining) and hydraulic fracking process (oil and gas) are the major vibration source. Equipment and machinery used during exploration and exploitation activities can also cause vibrations. For example, blasting in quarries is often required, especially before the commencement of exploitation activities. This involves drilling blast holes in the rock. Each hole is then filled with explosive material, primed and detonated. The explosion creates vibration waves which causes ground shakes similar to a seismic event, therefore it is a process that for a short period may create disturbances to human receptors and wildlife. Blasting activities may also negatively affect the stability of soil/rock layers and groundwater resources, in particular for underground mining where the impacts are directly distributed on the ground and vibration effects are much stronger than in open mining.

In the oil and gas industry, hydraulic fracking has created issues due to vibrations. This technique is used to extract hydrocarbons by injecting water (and chemicals) under pressure to fracture rocks and allow the release of oil and gas to the surface. This technique may cause movement of underground soil and rock layers, which as a consequence may cause ground disturbance, layer movements, vibration and earthquakes. Besides the potential environmental impacts, vibrations due to hydraulic fracking can cause disturbance and severe social impacts to local communities close to oil and gas exploitation areas.

Studies show that vibrations have affected the stability of local infrastructure, houses, buildings, and recreational activities located near extractive industry operations (quarries, mines, and oil and gas activities). Sudden shocks and vibrations as a result of blasting activities and/or hydraulic fracking can lead to noise and dust generation, damage or collapses of structures in surrounding inhabited areas and disturbance to wildlife. Therefore, it is very important that these activities should be properly planned, and managed by the permit holders. Best practice requires that permit holders should conduct proper notification of local communities before the commencement of any blasting or fracking activities or any other activities that may generate vibration. In cases of high vibration nuisances or triggering earthquakes and damage on property, the permit holder should comply with all obligations for compensation as required by the existing law in force.

5.6. Impacts from Waste Generation

Waste from extractive industry operations is among the largest waste streams in the EU and USA. Open pit mining (quarries) and metal mines (extraction of minerals) can generate large volumes of overburden and waste rock, as well as tailings remaining after minerals have been extracted from the ore. For example, waste resulting from the exploration process of mining and quarrying activities, including physical and chemical treatment of minerals can include:

- waste from mineral excavation;
- waste from physical and chemical processing of metalliferous minerals;
- waste from physical and chemical processing of non-metalliferous minerals;
- drilling muds and other drilling wastes.

In limestone quarries most of the materials generated include topsoil and overburden soil and rocks, however these materials can be easily reused during the rehabilitation phase of the site or even as mixture materials during crushing or fracturing of rocks. Typically, limestone quarries do not produce large volumes of waste, as all materials generated are usually utilised and (re)used within the scope of the project.

In the mining of minerals, there may be large quantities of waste rocks and tailings after ore extraction. These residues or waste have the potential to damage the environment, pollute water resources and cause damage to the biodiversity due to their composition and presence of toxic metals such as iron, zinc, arsenic, cadmium, etc. Stockpiling of this waste without proper management or disposal in approved sites may cause severe environmental problems. When storm water comes into contact with such waste, it creates drainage wastewater that may contain elevated concentrations of heavy metals, therefore posing risks for the contamination of surface water and groundwater resources. In the EU, waste rocks and mineral tailings are often classified as hazardous waste, therefore their disposal is associated with high operation and transportation costs.

In the oil and gas sector contamination may occur during exploration and exploitation activities. Once extracted, hydrocarbon substances are considered as hazardous materials due to their composition and toxic properties that may cause damage and/or contamination to the environment (water resources, biodiversity) and human health. Accidental spillages can cause major impacts on the environment. Soil

contaminated with hydrocarbon substances is considered hazardous waste and should be properly managed and disposed according to legal requirements in dedicated disposal areas or landfills. Other hazardous materials such as old equipment, machinery, storage tanks and other substances is also considered hazardous waste. Typically, this waste may be contaminated with hydrocarbon substances and other chemicals. In Albania, there are many 'hot spots' sites such as Marinza, Ballsh, Kucova, etc., that present environmental and social hazards due to old hydrocarbon drilling equipment left on site, hydrocarbon spillages and/or other types of hazardous materials abandoned from previous extractive industrial activities. Often these hazardous materials and substances represent severe concerns for the local community due to potential release of odours, contamination of water resources and land, in particular during the summer period. Permit holders should fully comply with the requirements of the legislation and provide best practice management for the disposal, treatment and reuse (if available) of waste generated from their activities.

5.7. Impacts on Infrastructure and Traffic

Impacts on infrastructure and traffic can be both positive and negative. Quarries, mines and oil and gas projects can lead to the construction of new infrastructure such as roads and bridges, or improve the existing condition of the road infrastructure. Companies operating in mining and the oil and gas industries often commit to improve local infrastructure and invest in the project area (e.g., new or renewal of health centres, schools, water supplies, etc.). This approach is often welcomed by the local community and provides good opportunities for the development of an area as well as promotion of new business initiatives.

Nevertheless, there are many other cases where the company does not provide local investment in the area, but makes use of existing local infrastructure. In these cases, local infrastructure is at risk of deteriorating faster over time due to the increase in traffic movement. Increased traffic can also be an issue in the project areas of extractive industries. Disturbance from traffic is due to the higher volume of cars, trucks and transfer of minerals between extraction and processing sites. A traffic management plan is best practice in order to ensure transport safety for the employees, community and visitors, and to avoid potential disturbances during project implementation.

5.8. Impacts on Local Community

The social impacts on local communities of large-scale quarries, mining and oil and gas projects are controversial and complex. Extractive industry development can create wealth, employment at a local, regional and national level, but it can also cause considerable disruption in particular when best practices are not followed at all times. Extractive projects may create new jobs, roads, schools, promote businesses initiatives and increase the demands of goods and services in remote or impoverished areas, but the benefits and costs may be unevenly shared. If communities feel they are being unfairly treated or inadequately compensated, extractive projects can lead to social tension and in extreme cases, violent conflict. The balance between positive and negative impacts on local communities results from the extent to which the permit holder fulfils its mandatory and voluntary environmental and social commitments

5.9. Non-Compliance Cases of the Extractive Industries in Albania

The extractive industries are among the most complex sectors to be managed and monitored by the government authorities. In Albania, extraction of raw materials (e.g., limestone) from quarries is an economically important and widespread activity throughout the country which has existed since historical times. However, in spite of its contribution towards economic development, some adverse impacts have occurred, especially where extraction is carried out without proper planning and use of modern technology and inadequate management methods and plans. The lack of proper rehabilitation measures is the most

common failing of existing permit holders that operate quarries in Albania. Several cases of poor practice have been identified in Mountain Tomori, Fushë-Krujë and Urë-Vajgurore regions. Since 2017, the MTE and NEA have performed strict monitoring of the quarries located in these regions, and have suspended the environmental permits for a number of quarry operators an unlimited period of time. Nevertheless, a considerable number of companies are still operating in these areas, causing major impacts to the environment and adverse social impacts on local communities. To date there has been no thorough evaluation of the environmental and social impacts of these quarries by the government authorities. Although this presents a real challenge, EITI Albania could potentially provide a different perspective of 'best practices' applied in the surface mining sector and contribute to the improvement of the current situation through collaboration with key environmental authorities.

6. Case Study 1 - Albchrome

6.1. Description of the project activities

Albchrome shpk conducts mining activities in Bulqiza region. The company carries out the extraction of chromium ore through underground mining in Bulqiza. The project site was initially opened in 1948 during the communist period and has continued to be utilized and operated without being interrupted for more than 72 years. The approved project area for exploitation is 3.506 km^2 (underground tunnels) and the projected capacity is 120,000 tonnes/year. Besides Bulqiza underground mine Albchrome manages and operates other assets such as the enrichment plant in Bulqiza, selection plat in Klos, Mat, and two ferro-chromium smelting factories in Elbasan and Burrel. However, subject of this case study is only the underground mine of Bulqiza.

Figure 9. Location of the mining site operated by Albchrome

6.2. Description of contract, permits, licences obtained

Bulqiza underground mine is part of a number of other assets under administration of Albchrome shpk, which from its part if owned 100% by the BALFIN Group, an Albanian company with different commercial activities throughout the country and the Balkans.

6.2.1. Concession Agreement

While Albchrome shpk was established in 1991 as a commercial company owning the main assets of the chromium industry, in 2000 and 2001, the most important assets such as chromium mines in Bulqiza and Prresnjas, smelters in Elbasan and Burrel, and enrichment plant in Bulqiza, and selection plant in Klos were given through concession agreements to a private company, DARFO Spa. In 2009 the company was sold to a Russian-Austrian company, which re-sold the company to Balfin Group in 2013.

The chromium mines of Prrenjas and Pojska and ferro-chromium smelter if Elbasan was granted with the Concession Agreement approved by the Parliament with Law no.8590, dated 23.03.2000 amended with Law no.80/2016, while the chromium mine and enrichment plant of Bulqiza, and smelter in Burrel were granted with the concession agreement approved by the Parliament with the Law no.8791, dated 10.05.2001 amended with the Law no.79/2016.

Based on the amended concession agreements made in 2016 all assets shall be used by Albchrome for a term up to 31 December 2040. Concession agreements provide that after the expiring of the concession term all assets shall be transferred to the Government.

It has to be underlined that both concession agreements do not contain any provisions establishing any environmental requirements for the company.

6.2.2. Environmental Permit

Based on the environmental legislation all activities carried out by Albchrome are required to be carried out with specific environmental permits. The Consultants have verified that the company has obtained for each activity a specific environmental permit as provided below:

- A type B Environmental Permit for the underground chromium mine of Bulqiza with no.1450, dated 12.09.2013 issued by the National Agency of Environment.
- A type B Environmental Permit for the selection plant in Klos, Mat with no.1450, dated 12.09.2013.
- Two type A Environmental Permits for two smelting plants in Elbasan and Burrel, respectively with PN-1531-12-2015, dated 04.10.2019 for Elbasan smelting plant and PN-0855-09-2015, date 16.09.2015 for Burrel smelting plant.

Brief description of the main requirements of the Environmental Permit for Bulqiza underground chromium mine.

The type B Environmental Permit is issued by the National Agency of Environment for the activity of exploitation of the chromium mineral with underground mine gallery. The permit is issued for an undetermined term, therefore is effective till the end of the commercial activity of the company (31 December 2040).

The permit contains a number of specific conditions and obligations that are to be observed by the permit holder.

a) Obligations of environmental monitoring and reporting

The permit requires the Company either by using its inhouse experts or contracted outsources to carry the environmental self-monitoring of the activity, which shall be made based on the monitoring program. The self-monitoring program should cover the following issues:

- Monitoring of potential impacts on the environment and its elements that may arise as a result of the mining activity;
- Monitoring of the implementation of the terms and conditions of the environmental permits;
- Monitoring of the progress with the rehabilitation measures and their effectiveness;
- Reporting of environmental data to the government authorities, NEA and MTE.

The permit establishes a number of requirements for reporting of the environmental data including:

- Permit holder is required to perform a perioding environmental assessment of its activities not less than once every quarter;
- Permit holder should prepare a special register for keeping the information on environmental monitoring;

- Self-monitoring data shall be provided to the environmental authorities every three months for the period of construction and every six months during the exploitation phase;
- Permit holder should notify the Regional Environmental Agency for any planned change in technology or in operation that were not provided in the EIA Report;
- Permit holder shall inform the Regulatory Environmental Agency any accident if emergency situation with negative impact on the environment;
- Permit holder is required to train all employees and have them know the terms and conditions of the permit.

b) Management of mining wastes

Given the specifics of the mining activities, the permit establishes a number of requirements for the management of wastes deriving from the mining activity of Permit Holder. The permit requires that the wastes shall be used for the mining activity whenever it is possible. In case this is not possible, the Permit Holder shall agree with the Local Authority and the Regional Environmental Agency on the sites where the wastes shall be deposited.

c) Other terms conditions

The permit contains also a number of other conditions, including the payment of an annual service fee of 5,000 Lek and administrative sanctions enforced by the authorities in case of violation of the terms and conditions of the Environmental Permit and requirements of the effective environmental legislation.

It is however important to highlight that the Environmental Permit does not establish any specific limits for emissions in air, water and soil quality which may be affected during the mining activities.

6.3. Key environmental, social, and cumulative impacts

The company has performed a preliminary EIA study according to Albanian legislation. Environmental, social and cumulative impacts have been assessed within the EIA report. Key impacts as reflected in the EIA report include: impacts on biodiversity, air, water resources (surface water and groundwater), soil and geology, noise and vibrations, landscape/ and visual amenity and waste. Table 5 below provides a summary of potential impacts of the activity.

Table 5. Summary of potential impacts addressed in the preliminary EIA report

No.	Environmental/ Social Aspect	Impacts/ Implications
1.	Biodiversity	Clearance of vegetation (this is minor as the area has been utilized for several years and the vegetation was already removed when the site was opened). Disturbance of fauna species due to movement of vehicles, exploitation works through machinery and equipment.
2.	Air	Dust emissions from drilling or blasting (when necessary) activities, and movement of vehicles on-site. Gas emissions from vehicle and machinery engines.
3.	Water	No significant impacts on surface water bodies. Potential impacts from surface water runoffs on-site. Potential impacts on groundwater resources due to excavation works for chromium ore.

No.	Environmental/ Social Aspect	Impacts/ Implications
		Potential impacts from spillages that may occur during operations in case of unplanned events.
4.	Soil and Geology	Excavation of underground tunnels. Potential impacts from spillages that may occur during operations in case of unplanned events.
5.	Noise and Vibrations	Noise and vibrations from drilling and blasting (when necessary) activities. Noise generation from exploration and exploitation activities, as well as from movement of vehicles.
6.	Waste	Generation of waste ore and tailings from operation activities. Potential impacts from mismanagement of non-hazardous waste and other possible hazardous waste generated during the operation activities.
7.	Landscape and Visual Amenity	Landscape and visual impacts identified. The site has been utilized for more than 72 years, first by the state (during the communist period) and now by Albchrome, (private company).
8	Cumulative impacts	Landscape and visual impacts identified, because in the area there are several other companies that also operate underground and surface mines.

6.4. Mitigation, and monitoring measures

Albchrome has prepared an Environmental Management and Monitoring Plan, which addresses all relevant mitigation measures to be undertaken in order to comply with obligations in Albanian law and requirements of the Environmental Permit. The company has a dedicated department that manages all issues related to environmental, social, health and safety aspects. The Environmental Permit sets out the obligations of the company regarding the environmental performance during operation. The Permit Holder (Albchrome shpk) is equipped with all documents required by the Environmental Permit, as listed in section 4.3.4. above (Environmental and rehabilitation obligations according to the contract, permit and law).

Albchrome prepares an Environmental Monitoring report every 6-months, which provides relevant measurements on air quality, water quality and noise and vibration parameters. These measurements are conducted by a third-party accredited laboratory which assesses and evaluates the measured levels and confirms that they are in compliance with norms set by Albanian legislation. Regarding waste, Albchrome has contracted with licensed recycling companies that transport, store, dispose and recycle non-hazardous and hazardous wastes generated during the operation activities. Albchrome has also prepared a detailed Rehabilitation Plan which is implemented on a periodic basis, and revised every year as required by Albanian legislation.

6.5. Main findings and recommendations

The Permit Holder, Albchrome shpk, fully complies with Albanian legal requirements and obligations set out in the Environmental Permit. Nevertheless, for a more comprehensive approach towards international standards and best practices the Permit Holder could develop a new Environmental and Social Policy that tends to apply IFC Performance Standards and World Bank Environmental and Social Framework. This approach would help them set new objectives towards a more sustainable implementation of the project and ensure they continue to meet international best practice. For example, a new objective could relate to

going beyond the Albanian legal obligations on the Rehabilitation Plan with regard to the revegetation and restoration of the area.

7. Case Study 2 – Antea Cement

7.1. Description of the project activities

Antea Cement shpk, part of the Titan Group, has constructed a cement factory in “Boka e Kuqe”, Borizanë area, Albania. The project was financed by EBRD and IFC, which invested about 40% of capital costs, and Titan Group 60% of the overall costs. Currently, Titan Group is the only shareholder and operator of Antea Cement. The daily production of the cement plant is 3,300 tonnes of clinker per day. The plant utilizes raw materials from the limestone quarry (surface mining) shown in Figure 10 below. The exploitation of this quarry started in 2008 when Antea Cement started production. The quarry has a total surface area of 0.988 km^2 and produces approximately 1.4 million tonnes/year.

Figure 10. Location of the quarry site “Boka e Kuqe”, Antea Cement

7.2. Description of contract, permits, licenses obtained

7.2.1. Mining Permits

Antea Cement has started its commercial activity in Albania in 2007. For the purpose of using the flysch and limestone minerals the company signed a specific mining agreement, which was approved by the Albanian Parliament with the Law no.9813, dated 01.10.2007. The mining exploitation agreement is the main legal document for the mining activity of Antea Cement, which was based on the previous Mining Law (Law no.7796, dated 17.02.1994) with a term of 99 years. According the law, such long-term mining agreements were justified in cases of an ***important investment*** that the investor would make for the use of extracted minerals, similar to the case of the investment made by Antea Cement for the construction and operation of the cement factory.

The company also has obtained in 2007 two mining permits for exploitation of limestone and for flysch and clay, respectively no. 988/1 and 987/1, which were renewed for 10 more years in 2017. As it was the case with Albchrome, neither the main mining exploitation agreement nor the two new mining permits contain any provisions or terms regarding the impact on the environment.

7.2.2. Environmental Permits

Due to different activities carried out by the company, it has obtained and holds a number of environmental permits for various activities, including mining activities, technological installations for burning of raw materials, and production of clinker.

This case study is focused on the surface mining activity (quarry) of Antea Cement. For the activity of limestone mineral exploitation in the main quarry, initially the company obtained the Environmental Permit PN-0570-07-2010, dated 05.07.2010. The permit was issued for an undetermined timeframe.

As the initial permit was issued based on the previous environmental law (Law no.8934, date 5.09.2002), after the enactment of new environmental legislation, the environmental permit was updated, and a new Type B Environmental Permit Nr.5595, dated 01.9.2016 was issued by Ministry of Tourism and Environment. The Environmental Permit is valid for the whole period covered by the Mining Exploitation Agreement approved with the Law no.9813, dated 01.10.2007.

The new permit contains a number of terms and obligations for the permit holder to be observed during the activity. Below are provided the main terms and conditions of the permit:

- ✓ **Training of employees**

Permit holder is required to train all employees regarding the requirements of the environmental permit and legislation.

- ✓ **Register of discharges and transferring polluters and documentation of environmental information**

Permit holder is required to prepare and maintain a register for keeping all discharges and transferring polluters and the documentation for any environmental information. The register of discharges shall be prepared and submitted to the National Agency of Environment within three months from the issuance of the permit.

- ✓ **Plan of compliance and time schedule**

The permit requires from the company the implementation of the Plan of Compliance along with the time schedule, which is defined in the term of permits. The plan contains a number of actions and measures together with the necessary budget to be spent by the company.

- ✓ **Limits of water discharges and noise levels**

Permit establishes a number of limits for discharges in air, in channels and surface waters, and for the noise. The permit requires that the average daily discharges should not be higher than the limits established in the permit, while the noise levels shall always be lower than those established in the legislation. The measurement of level of discharges and noise shall be made by an accredited laboratory

- ✓ **Management of waste**

The permit contains several terms and conditions for the management of wastes deriving from the mining activity and workforce of the company.

- ✓ **Use of raw materials and energy**

The permit requires from the company to use efficiently the raw materials and energy. It requires that an auditing report should be prepared for the use of raw material and energy, including measures for reduction of the energy consumption. The auditing report shall be included in the annual environmental report of the company.

- ✓ **Environmental monitoring**

The permit requires from the Company that all environmental parameters established in the permit shall be continuously monitored. The Company should take samples, make measurements and tests for these parameters.

- ✓ **Documentation and reporting**

Company is required to keep the environmental monitoring results and provide to the National Agency of Environment every 6 months reports for the levels of discharges in air, discharges of liquids in water channels and in surface waters. The company is also required to prepare a Program of Noise and an Environmental Monitoring Plan within three months from the date of issuance of permit.

The company is also required to submit to the National Environment Agency an annual environmental report. The report includes all information collected and gathered during the year according to the requirements of the permit and environmental legislation.

- ✓ **Incidents and emergency situations**

The company is required that within four months from the date of issuance of permit to prepare and approve a policy document for prevention of incidents and accidents with an impact on the environment, while within 6 month it has to prepare and approve the procedure of handling the incidents and emergency situations.

- ✓ **Deinstallation, rehabilitation and control after the termination of activity**

The permit contains several terms and conditions for the closure and rehabilitation of area impacted by the activity. The Rehabilitation Plan of the quarry shall be updated every year and approved by the NEA.

- ✓ **Other terms conditions**

The permit contains also a number of other conditions including the payment of an annual service fee of 5,000 Lek and administrative sanctions enforced by the authorities in case of violation of the terms and conditions of the Environmental Permit and requirements of the effective environmental legislation.

7.3. Key environmental, social, and cumulative impacts

Antea Cement prepared an in-depth ESIA for the limestone quarry in line with Albanian legislative requirements and international standards (EBRD, IFC). Environmental, social and cumulative impacts have been thoroughly assessed within the ESIA report. Table 6 below provides a summary of potential impacts of the limestone quarry addressed within the in-depth ESIA report.

Table 6. Summary of potential impacts addressed in the preliminary EIA report

No.	Environmental/ Social Aspect	Impacts/ Implications
1.	Biodiversity	Clearance of vegetation within the boundaries of the quarry site. Disturbance of fauna species due to movement of vehicles, excavation works through heavy machinery and other equipment.
2.	Air	Dust emissions from blasting activities (when necessary), and movement of vehicles along the access road.

No.	Environmental/ Social Aspect	Impacts/ Implications
		Gas emissions from vehicle and machinery engines.
3.	Water	No significant impacts on groundwater and surface water resources.
4.	Soil, Geology and Erosion	No significant impacts on soil quality as the area is largely composed of limestone rocks. Potential risk of soil erosion due to excavation works.
5.	Noise and Vibrations	Noise and vibrations from excavations and blasting (when necessary) activities. Noise generation from movement of vehicles and heavy machinery during operation.
6.	Waste	Generation of inert waste from operation activities. Potential impacts from mismanagement of non-hazardous wastes and other possible hazardous waste generated during the operation activities.
7.	Landscape and Visual Amenity	Landscape and visual impacts identified. The site will be utilized for many years, as Titan Group and Antea Cement shpk possess a contract for the exploitation of the area for 99 years.
8	Cumulative Impacts	Landscape and visual impacts due to excavations works and changes to topography. In case of mismanagement there could be potential cumulative impacts on air quality due to proximity with the main cement production plant.

7.4. Mitigation, and monitoring measures

Besides the requirements of Albanian legal requirements, Antea Cement applies international standards and best practice for the cement production plant and limestone quarry. The company fully implements the requirements of ISO 14001 for the Environmental and Social Management System. The Environmental and Social Management Plan includes the following procedures, reporting, subplans and mitigation measures:

- Air Quality Management and Monitoring Plan;
- Site Management of the Limestone Quarry;
- Monitoring of Noise;
- Management of Energy;
- Management of Point/ Stationary Emissions;
- Management of Solid and Liquid Wastes;
- Monitoring of Vibrations;
- Management of Soil, Surface Waters and Groundwaters;
- Management of Landscape and Visual Aspects;
- Management of Water Resources, including groundwater, wastewater management and treatment;
- Register of pollutant discharges (air, water and soil);
- Short-term and long-term planning for the exploitation of the quarry;
- Grievance Register and Stakeholder Engagement Plan;
- Corrective Action Plan;
- Training for environmental and social matters;
- Pollution Prevention and Management Plan;
- Emergency Plan;
- Rehabilitation and Reclamation Plan;

- Documentation – regular reporting to NEA and RED.

The Environmental Monitoring Report for the limestone quarry is performed every 6-months in line with the Environmental Permit requirements. The Rehabilitation and Reclamation Plan of the quarry represents one of the key milestones of Antea Cement. The quarry is managed, exploited, and restored through a very precise and detailed plan. The implementation of the rehabilitation activities includes the following steps:

1) ***Back-filling of benches with soil*** – use of topsoil according to the specifications (thickness, type of soil and filling with inert material) described in the ESIA study and best practice;
2) ***Revegetation and planting*** – evaluation of choices for the selection of plants and quantity according to the site need for rehabilitation;
    a) Use of native vegetation species;
    b) For benches, a combination of bushes, shrubs and trees;
    c) For the slopes, hydroseeding and other plants with ability to hold the soil and prevent erosion;
    d) For the access road, tall trees;
3) ***Planting period*** – planting usually is conducted from December to February, before the start of rainfall and spring;
4) ***Maintenance of plants*** – besides the requirements of Albanian standards, the company applies best practice for irrigation frequency, quantity of water needed and periodic fertilization.
5) ***Protection of rehabilitated areas*** – planted areas are protected from potential damage by animals feeding on the plants. Whenever appropriate a fencing mesh is installed on site to prevent possible disturbance and damage of the planted areas.

7.5. Main findings and recommendations

The Permit Holder, Antea Cement shpk, fully complies with international standards and best practice for the exploitation of the limestone quarry, surpassing the Albanian legal requirements and obligations set out in the Environmental Permit. The Site Management, and Rehabilitation and Reclamation Plan of the quarry are applied to the highest standards. Antea Cement limestone quarry can be considered an example of best practice in Albania.

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9. Appendices

9.1. Appendix A - Photos from the site, Albchrome

9.2. Appendix B - Photos from the site, Antea Cement

9.3. Appendix C – TORs of the assignment

2. Objectives of the assignment

On behalf of the Government of Albania and the Albanian MSG, the EITI Albania seeks a competent and credible Consultant on Extracting Industry Planning and Environmental Impact, free from conflicts of interest, to provide Consultancy Services in accordance with the Albanian Legislation and this Terms of Reference.

The objective of the assignment is to assess the Environment impact of the Extractive industries in the communities living in areas where Extractive companies operates. The assignment will:

a) Provide analysis of the current environment impact in communities, the likely impact on each of the identified environmental component: Land environment, Air environment, Water Environment (surface and groundwater), Noise Environment, Biological Environment, etc., and where the Extractive industry impacts the most;

b) Identify what components of Environmental impact are included in the mining and hydrocarbon activities licenses, and assess what environmental and rehabilitation obligations the extractive companies have according to the contract/license;

c) Analyze what obligations the companies have according to the license and what is really done and provide recommendations and suggest which aspects of the contracts and permits on this regard can be improved;

d) Provide for a Case Study (mining activity related) comparing generic environmental and economic implications associated with different industrial development options in Albania and provide recommendations, taking into consideration also the local revenues from the sector, trade and foreign investment, economic impacts and poverty alleviation of the cumulative impacts of

[2] The text of the Protocol is available at and sites selected
https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-4-b&chapter=27&lang=en

the activity: mining zone/activity to be chosen by prior agreement with the MSG and the EITI Albania National Secretariat;

e) Present the findings of the Scoping Study in a Workshop to be organized by EITI Albania with the presence of MSG and other stakeholders on the Scoping Study;

f) Provide the Final Report for the needs of the MSG, the EITI Albania National Secretariat and other stakeholders involved on the process.

3. Scope of service and tasks

The Consultant will be expected to undertake the following tasks:

- Undertake Legal and Regulatory Review with regard to Environmental Impact of the Extractive Industries with a focus on:
  a) Reviewing local legal and regulatory framework to help identify the set of laws and regulations that are already in place regarding the Environmental Impact of the Extractive Industries,
  b) Reviewing the existing contracts, permits and license of companies already operating in the extractive sector in Albania, identify and consider the requirements regarding the Environmental Impact of the Extractive Industries,
  c) Reviewing national practice with regard to Environmental Impact of the Extractive Industries,
  d) Asses what environmental and rehabilitation obligations the extractive companies have according to the contract/ license,
  e) Identify gaps and advise on better practices to be followed in the future.

- Conduct desktop research to identify all major corporate responsibility/ environmental Standards, in use by the Extracting Industry (mining and hydrocarbons), and identify those which contain/ target the Environmental Impact.

- Provide for a Case Study (mining activity related) comparing generic environmental and economic implications associated with different industrial development options in Albania and provide recommendations, taking into consideration also the local revenues from the sector, trade and foreign investment, economic impacts and poverty alleviation of the cumulative impacts of the activity: mining zone/ activity to be chosen by prior agreement with the MSG and the EITI Albania National Secretariat.

The Consultant should deliver the following capacity building activities:

- Half day Workshop to present the findings of the Scoping Study and introduce the exercise and the methodology. Participants should include the MSG, Government

representatives, local government representatives, Extractive companies' representatives, as well as other relevant stakeholders.

- One-day Event presentation for all the stakeholders on presenting the findings and the Final Study. Advise on better practices to be followed in the future. A statement on the findings from the research, gaps and best practices.

It is expected that the number of attendees will not exceed 60 participants.

4. Deliverables

The assignment is expected to commence in August 2020 culminating in the finalization of the assignment by September 30, 2020.

The Consultant will have a period of 40 calendar days to prepare the assignment.

The Study will be prepared in both English and Albanian language.

- The Consultant will prepare and present the Inception Report describing the methodologies to be used and the work to be conducted including detailed workplan to the EITI Albania Secretariat for review and comment within 3 days from the date of the assignment;

- The Consultant will prepare and present the draft Scoping Study on Environmental Assessment of the Extractive Industries, to the EITI Albania Secretariat for review and comment within 20 days from the date of the assignment;
- EITI Albania Secretariat will deliver comments to the Consultant within the next 7 calendar days.
- The Consultant will prepare the presentation of the Final Study, within 10 calendar days from delivery of comments.

The proposed schedule is set out below:

Signing of Contract	August 2020
Submission of Inception Study	3 calendar days after contract signing
Submission of Draft Scoping Study	20 calendar days after contract signing
Workshop for Draft Scoping Study	22 calendar days after contract signing
Submission of Final Study	37 calendar days after contract signing
Event Presentation for stakeholders	40 calendar days after contract signing

9.4. Appendix D - EITI Environment Data Reporting Template

9.4.1. Introduction

Purpose of template		
To meet the requirements of the 2019 EITI Standard to identify material environmental payments and report on the environmental impact of extractive industry activities.		
Requirement 6.1.b states, "Where material payments by companies to the government related to the environment are mandated by law, regulation or contract that governs the extractive investment, such payments must be disclosed."		
Requirement 6.4 states, in part, "Implementing countries are encouraged to disclose information on the management and monitoring of the environmental impact of the extractive industries."		
This workbook comprises the following sheets:		
	* Environment Impact Assessment (EIA)	
	* Environment Monitoring & Evaluation (EME) - Post Commencement	
	* Environment Disaster Management (EDM)	
Instructions:		
1	Enter the name of the reporting company in the box below. This should be the company that holds the licence and should be the legal form of the company name as recorded in the company registry.	
2	**Complete ONLY the sheets that apply to your company activities**	
3	**Enter details only for environmental incidents or payment that occurred or were made in the reporting period, financial year 2019.**	
3	**All boxes coloured orange must be completed. If nil submission please state so in each orange box**	
4	Send PDF electronic copies of the following documents, if relevant, with the return of this template:	
	i)	EIA Reports
	ii)	EME Reports
	iii)	EDM Reports
5	If you need to report for more than one field or facility under the same company, please make copies of the relevant sheets	
Name of Reporting Company		
Upon completion, please submit the populated forms and scanned source documents, by e-mail		

9.4.2. Environmental Impact Assessment (EIA) Data

Subject	Environmental Impact Assessment (EIA)											
Description of Project (Project means JV (i.e. collection of assets), license area or mine	Location (i.e. State, Offshore)	Coordinates	Date of EIA Visitation	Government Agency Responsible	Initiator of the EIA	Environment Payment for Carrying-out EIA		Company's Observation (For Entity Initiated EIA)		Third Party Observation (For Third Party Initiated EIA)		Remarks (On Response Strategy on the identified Exceptions)
						Local currency	USD	Specific Observation (exceptions only)	General Observation (exceptions only)	Specific Observation (exceptions only)	General Observation (exceptions only)	

9.4.3. Environment Monitoring & Evaluation (EME) - Post Commencement Data

Location where monitoring or evaluation occurred	Date of EME Visitation	Government Agency Responsible	Initiator of the EME	Entity Responsible to carry-out the EME	Environment Payment for Carrying-out EME (USD)	Company's Observation (For Entity Initiated EME)		Third Party Observation (For Third Party Initiated EME)		Environment Payment for violating the Environment (USD)	Remarks (On Response Strategy to identified Exceptions)
						Specific Observation (exceptions only)	General Observation (exceptions only)	Specific Observation (exceptions only)	General Observation (exceptions only)		

9.4.4. Environment Disaster Management Data

Subject:	Environment Disaster Management Data										
COMMERCIAL ARRANGEMENTS - JV											
Field or Facility Name											
Name of Operator											
Description of Disaster											
		Number of Occurrences or incidents	Place/Location of Occurrences	Human/ Non-financial Loss	Payment to Government		Payment to Community		Total Payment		Description of Recovery Strategy
					LC	USD	LC	USD	LC	USD	
Water Pollution (Oil Spillage, etc)											
Air Pollution (Soot's, Smoke, Fire, etc)											
Land Pollution (Violence, Sabotage, accident, etc.)											

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