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**Sustainable development goals implementation: evidence from Russian Mining companies**

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## **ЗАЯВЛЕНИЕ О САМОСТОЯТЕЛЬНОМ ХАРАКТЕРЕ ВЫПОЛНЕНИЯ ВЫПУСКНОЙ КВАЛИФИКАЦИОННОЙ РАБОТЫ**

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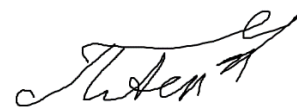
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## АННОТАЦИЯ

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Название ВКР	Реализация целей устойчивого развития на примере российских горнодобывающих компаний
Направление подготовки	38.04.02 Менеджмент
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Научный руководитель	Арай Юлия Николаевна
Описание цели, задач и основных результатов	<p>Целью данной работы является создание списка рекомендаций по реализации целей устойчивого развития компаниями горнодобывающей отрасли России. Поставлены четыре задачи:</p> <ul style="list-style-type: none"><li>- Изучить теорию устойчивого развития, цели и реализацию;</li><li>- Провести исследование внедрения целей устойчивого развития в корпоративную практику устойчивого развития;</li><li>- Проанализировать вторичные источники информации для описания ситуации в отрасли;</li><li>- Провести интервью с руководителями департаментов устойчивого развития российских горнодобывающих компаний, чтобы получить глубокое представление о существующих особенностях.</li></ul> <p>Результатом работы является модель, описывающая основные этапы реализации ЦУР с рекомендациями для улучшения всего процесса.</p>
Ключевые слова	Устойчивое развитие, цели устойчивого развития (ЦУР), горнодобывающая отрасль России, реализация ЦУР

## ABSTRACT

Master Student's Name:	Aleksandr Pliasunov
Master Thesis Title:	Sustainable development goals implementation: evidence from Russian Mining companies
Main field of study	38.04.02 Management
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Academic Advisor's Name	Yulia N. Aray
Description of the goal, tasks and main results	<p>The goal of this thesis is to create a list of recommendations on the implementation of sustainable development goals by mining companies in Russia.</p> <p>Four tasks are stated:</p> <ul style="list-style-type: none"> <li>- Study sustainable development goals and its implementation theory;</li> <li>- Conduct the research of SDGs implementation into corporate sustainability practices;</li> <li>- Analyze secondary sources of information to describe the situation in the industry;</li> <li>- Interview the heads of corporate social responsibility departments of Russian mining companies to get deep insights of present peculiarities.</li> </ul> <p>The result of the work is a model describing the main stages of the implementation of the SDGs with recommendations for improving the entire process.</p>
Keywords	Sustainable development, sustainable development goals (SDGs), Russian mining industry, SDGs implementation

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## **List of abbreviations**

CSR – corporate social responsibility;  
DJSI – Dow Jones Sustainability Index;  
FPIC – Free, prior and informed consent;  
GRI – Global reporting initiative;  
HSE – Health safety and environment;  
KLDI – Kinder, Lydenberg, and Domini index;  
KPI – key performance indicator;  
SD – Sustainable development;  
SDG – Sustainable development goal;  
UN – United nations;  
UNDP – United Nations Development Program.

## INTRODUCTION

Sustainable development (SD) is an internationally recognized concept of balanced development of the economy, society, and the planet, fixed at the level of supranational goal-setting in seventeen Sustainable Development Goals. The Sustainable Development Goals (SDGs) were adopted in 2015 by the UN, recognized in 193 countries, and became the basis for the formation of government and corporate strategies and operational documents around the world, including Russia. Over the past two or three years, Russia's relevant federal agencies, including the Ministry of Economic Development, the Ministry of Natural Resources and etc., have become actively involved in working out the agenda.

At the business level, the integration of sustainable development goals into the corporate strategy is a global trend that responds to the current challenges of depleting natural resources, global warming, increased environmental and social regulation, reassessment of investment risks, and changing consumer preferences. Russian mining and metallurgical companies, due to the specifics of their operations and their presence in international markets, are already affected by these processes. Failure to comply with international standards for doing business in accordance with the sustainability agenda may result in billions of dollars in losses for Russian companies. The exports of Russian companies embedded in global supply chains may decrease due to the introduction of barrier measures for products from countries without carbon regulation. In addition, the requirements of investors are changing. For example, the London Metal Exchange introduced commitments in 2019 to implement responsible sourcing requirements for its registered brands. At the national level, laws are being passed on the transition to a circular economy, in particular, the European Union and China, where significant customers of Russian mining and metallurgical companies are located.

The **purpose** of this thesis is:

Based on trends in the sustainable development agenda to create a list of recommendations on the implementation of sustainable development goals by mining companies in Russia.

It is also important to uncover the reasons why mining companies incorporate SDGs in their strategies. The work is focused on the cases of Russian companies.

The following **research questions** are addressed to reach the purpose:

- Why mining companies are motivated to incorporate or not to incorporate SDGs into their strategies?
- What are the possible challenges of SDGs implementation into companies' corporate strategies that managers should consider?
- How do mining companies prioritize the implementation of SDGs into their strategies?



Several objectives to be studied are represented:

1. Study corporate sustainability theory, namely, its part – sustainable development goals and its implementation.
2. Conduct the research of SDGs implementation into corporate sustainability practices.
3. Analyze secondary sources of information to describe the situation in the industry.
4. Interview the heads of corporate social responsibility departments of Russian mining companies to get deep insights into present peculiarities.

This paper assumes an exploratory research approach. This type is appropriate when researching a homogeneous sample. The research methods include the analysis of secondary data sources, such as corporate reports of companies, news publications, and reviews of consulting agencies. The results of semi-structured interviews with company representatives will be a source of primary information. Triangulation of data will be applied in order to decrease the risk of bias appearance. The approach allows one to look at the same phenomenon from different perspectives.

The thesis consists of four sections (the introduction part is included.). The second section provides a literature review. The third one describes the methods used to create a methodology, data analysis, and interview outcomes observation. The final section emphasizes conclusions and reflections. The expected result of this exploratory research is the list of recommendations on SDGs implementation by mining companies in Russia.

# **CHAPTER 1. SUSTAINABLE DEVELOPMENT GOALS: THEORY AND PRACTICE OF IMPLEMENTATION TO THE MINING INDUSTRY**

## **1.1 Theoretical overview of the phenomenon**

Six years on from the official launch of the 2030 Agenda for Sustainable Development, promoted by the United Nations as a plan of action to achieve a more sustainable future for all, there is a need to understand not only just how major companies are approaching compliance with the sustainable development goals established but also why they incorporate them into their respective strategies. For the beginning, sustainable development theory should be briefly described.

### **1.1.1. Sustainable development theory**

According to a report published in 1987 by the United Nations World Commission on Environment and Development, the definition of sustainable development is as follows: "Sustainable development is the development that meets the needs of the present without compromising the ability of future generations to meet their own needs. This definition is considered fundamental to the theory of sustainable development. The report is also known as the Brundtland Report (1987).

In fact, the concept of sustainability dates back to the 17th and 18th centuries in Europe. According to Ulrich Grober (2007), in Europe of that era came the realization that the dominant role of wood as a source for building and energy was causing the decline of forested areas. People were cutting down trees faster than they were planting them. Representatives of the industry put forward their own vision for managing forest resources. From this moment, the emergence of ecology as a science and sustainable development as a concept began. The events and ideas of that time are reflected in the development of the environmental movement of the 1960s. Rachel Carson's *Silent Spring* (1962) made it possible to see the relationship between economic growth and development and the depletion of natural resources. American economist Kenneth Ewart Boulding, in his *The Economics of the Coming Spaceship Earth*, identified the need to change the current economic system in terms of understanding the ecological system as a system with a finite number of resources (World Conservation strategy, 1980).

The first reference to sustainable development as a global priority in an official international report was made in 1980 in the world conservation strategy published by the International Union for the Conservation of Nature. And in 1987, the well-known Brundtland Report was published. At that time the concept of sustainable development included two ideas:

\* The idea of needs (according to this idea, more attention should be paid to the poor regions of the world).

\* The idea of limitations aroused from the environment and the finitude of some resources.

The concept of sustainable development has changed since the Brundtland Report. Thus, in 1992, the UN Conference on Environment and Development published the Earth Charter plan of action Agenda 21. This plan defined three directions: information, integration, and participation. This means that sustainable development depends on the information that each of us is able to convey; implies a change in traditional business approaches toward cross-sector collaboration; emphasizes the importance of involvement and participation in implementing a sustainable development strategy.

The Millennium Declaration was published based on the described concepts. The Declaration included three principles: sustainable economic, social development, and environmental protection (look at figure 1).

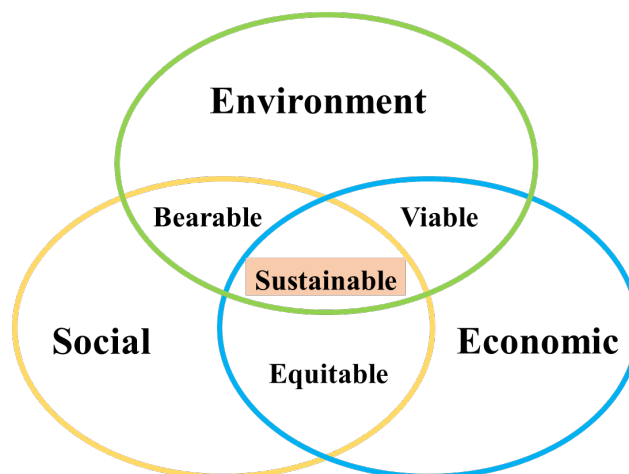


Figure 1 – The principal scheme of a sustainable development (Rene Passet, 1979)

Source: Author

Economically, it has been suggested that environmental resources should be seen as assets - natural capital. Traditional economic development (with an increase in GDP and the amount of consumption) is then subject to change. Sustainable development involves improving the quality of output and reducing resource consumption.

Ecological sustainability refers to the natural environment's current state, ability to regenerate and remain diverse.

Social sustainability includes two dimensions: politics and culture. The political component is defined as the field of practices related to basic issues of social power related to the organization, legitimation, and regulation of public social life. The development of strong cultural

policies and the promotion of a cultural agenda in society through various practices and material expressions describes the cultural component of social sustainability (Blewitt, 2017).

Thus, sustainable development is a systematic approach for growth and development in three interrelated areas: economy, ecology, and social sphere, for the well-being of current and future generations. The highlighted areas allow reflecting the complexity of modern society.

### **1.1.2. Sustainable development goals**

The 2030 Agenda for Sustainable Development was adopted by the UN adopted in 2015. The program consists of 17 goals aimed at eradicating poverty, preserving the planet's resources, and ensuring well-being. Each goal contains a set of indicators to be achieved within 15 years. Achieving them requires the joint efforts of governments, civil society, and business. These 17 goals are tied with 169 targets. They all were confirmed by 193 member-states at the United Nations General Assembly on 25 September 2015. The SDGs are a guide that responds to society's urgent needs to create a better future for all. The 17 SDGs are usually divided into three groups: economic (4), social (9), and environmental (4).

The United Nations Development Programme (UNDP) has emerged as the party that oversees the implementation of the SDGs. The Programme aims to collect, accumulate, and disseminate knowledge and experience in the implementation of the SDGs. The UNDP helps state members to integrate the SD agenda into their national strategies. Thus, the goal of the UNDP is to bring together all stakeholders: state members, the private sector, and the population to achieve the SDGs. Business is part of the private sector. That means that it is also responsible for reaching SDGs. There appears a question of the implementation of the SDGs into the business processes of companies.

The inevitable step in implementing the goals will be the presentation of progress reports. This is where global reporting initiative (GRI) standards take place. GRI standards are designed to provide a uniform reporting format to increase the transparency of published data. Using the GRI methodology, companies report on their actions in the economic, environmental, and social direction. In spite of this, GRI standards do not provide for the assessment of the achievement of SDGs by companies. This led to the creation of a unified platform for assessing the achievement of the SDGs. The UN Global Compact is a UN initiative aimed at promoting the social responsibility of business and reporting on the implementation of such policies, and GRI became the creators of such a platform. «Business Reporting on the SDGs: An Analysis of the Goals and Targets» is the report that complements GRI standards and the UN Global Compact Communication on Progress. It supports companies to report and measure the SDGs. In addition to the GRI standards, there are two other indices that describe the extent to which an organization

commits to the implementation of the SDGs: Dow Jones Sustainability Index (DJSI) and Kinder, Lydenberg, and Domini (KLD) index. GRI, in turn, is universal and aims at creating standardized reports on sustainable development (Isaksson and Steimle 2009). Among researchers, the GRI is considered the leading guideline for the creation of reports and subsequent analysis on them (Godha and Jain, 2015; Adams, Muir, and Hoque, 2014). However, the emergence and adoption of the SDGs by many companies in 2016 led to a change in companies' sustainability assessment from GRI to SDGs reporting. Nevertheless, it is nowadays unclear how SDGs are translated into corporates' sustainability practices, especially in developing countries, and how they address various sustainability issues (Toppo et al., 2017).

Although the SDGs have a global focus, the actions that are taken to achieve them are local in nature and depend on how far countries are now from achieving these goals. In addition, the level of commitment to sustainability affects a country's domestic interests and actions (Allen, 2007).

After several years of studying the SDGs, many papers have appeared describing indicators that help track progress toward the goals in different regions. These works also tell the story of the importance of studying the phenomenon of sustainable development. (Galli et al., 2018; World Bank, 2017; Muff et al., 2017; Hak et al., 2016; United Nations, 2017). In spite of this, there are very few publications on the level of achievement of the SDGs around the world. There is also little research on what challenges different regions to face in achieving the SDGs.

According to the authors, conducting research on sustainable development will help its practical expansion. According to Schmalzbauer, humanity, as a knowledge society, has an obligation to rely on a theoretical framework when moving toward a sustainable future (Schmalzbauer and Visbeck, 2016). Another author also notes the importance of conducting scientific research on sustainable development in order to increase knowledge on this phenomenon (Soini et al., 2018). It has been observed that universities around the world are beginning to see a growing need to develop sustainability themes and to cover any knowledge gaps (ICSU, 2017; Soini et al., 2018).

To conclude, the SDGs are the guide for corporate sustainability. Despite the fact that «Business reporting on the SDGs» supports connecting GRI indicators and SDGs, there is obscurity how companies in emerging markets implement SDGs into their corporate strategies and how they operate with different sustainable issues.

### **1.1.3. Sustainable development: the strategic management theory lens**

The external environment for companies' operations is very volatile. In such an environment, it is particularly important for businesses to pay attention to the formation and

effective implementation of strategic management practices in order to ensure stable functioning and strengthen the existing positions (Stattev et al., 2019). Under the pressure of internal and external factors, the strategies of companies confirm the relevance of studying the factors affecting the sustainable development of companies within the theory of strategic management.

Bilan (2017) discusses the relevance of sustainability and its global spread among companies. He notes that the concept of sustainability is gradually expanding its influence. The business world is feeling these movements in the form of changing consumer consciousness, and it must be ready to react to new expectations.

Multinational companies consider the concept of sustainable development not only in terms of their financial results but also in terms of their impact on society and the environment. The author argues that the old rules of the game are no longer valid. It is necessary to change them, taking into account the emerging new category of consumers, characterized by awareness in the consumption of goods and services. Such consumers have higher education, more access to information. This leads to a better awareness of the existing world problems and, accordingly, increased expectations from companies. The new consumer expects companies to incorporate the principles of sustainable development into their strategic agenda and value chain (Banerjee, 2001).

The introduction of sustainability practices into the strategies of companies can have a positive effect on both business and society. The main positive effect will be a partial resolution of social problems (e.g., poverty and increased social inequality). Following a sustainable development strategy will also lead to higher rates of economic growth, and as a consequence, the well-being of citizens, including in terms of the efficient use of resources. On the other hand, companies will be able to build a new corporate culture aimed at sustainable development, reduce risks and become more competitive in their market. It can be proposed that the sustainability concept is seen as a kind of philosophical issue that affects the state of mind of all parties involved in the transition to sustainability in the corporate world (Bilan,2013).

Hahn (2013) noted in his paper that those companies that follow the direction of sustainability sacrifice their profits in the interest of society and the environment. But it is not all so clear-cut here. An organization's sustainability activities affect its competitive advantage, the number of customers, stakeholders, employees, and reputation. In addition, it leads to better relationships with the government, other corporations, and the media.

In order to create a unified approach to strategic management, the international standard ISO 26000 was issued in 2010, which describes the principles of implementing sustainable development in companies' strategies. Hahn (2013) notes that the standard sets the direction for the implementation of responsible company behavior and, finally, leads to an increase in the contribution of companies to sustainable development. The authors (D'Amato et al., 2009) also

confirm this idea even before the publication of the standard. The creation of an international standard on corporate responsibility or sustainability serves to develop topics such as business ethics, global corporate citizenship, and stakeholder management.

To summarize, organizations assign a significant place to sustainability in strategic planning, improving performance, and enhancing their competitive advantage. This role is explained by the connection to the environment, social responsibility, and economic development. For all types of organizations, developing and incorporating sustainability into strategic planning will create value for years to come. The use of sustainable development approaches in the strategic management of the organization will allow to work on the reduction of risks, to follow the trends in the market, to respond to the challenges of customers and the needs of society to protect the environment for future generations.

#### **1.1.4. Sustainable development: the stakeholders theory perspective**

Stakeholder theory is one of the popular theories used in the study of sustainable management. In the beginning, it is necessary to define the meaning of a stakeholder. According to Freeman (1984), a stakeholder is a person or group of people who can influence something or be influenced by actions related to value creation. Rhenman (1995) gives a more specific definition: individuals or groups of people who depend on the company in which they work to achieve their own goals, and those on whose performance the success of the company depends. Since there is no single and unambiguous definition of the concept of a stakeholder, it is better to understand the specifics of the application of stakeholder theory. It is important to note that the subject of this theory is not the company but the relationship between the company and its stakeholders (Freeman et al., 2010).

To achieve organizational sustainability and be able to exist in this fluid environment, modern corporations must satisfy the interests of various stakeholders. Depending on the type of organization, stakeholders may be customers, suppliers, colleagues, investors, company founders, and other groups putting pressure on the company (Freeman, 1994; Konzelmann et al., 2005; Schilling, 2000). In stakeholder theory, an organization is an organization that acts in a way that meets the expectations and needs of its stakeholders. According to Foley (2005), the goal of organizations is to maximize the quality of products/services produced for customers to meet their expectations. According to Foster and Jonker (2003), stakeholder theory has also been a factor in the evolution of quality management.

According to research (Mellahi and Wood, 2003; Banerjee, 2002), reducing government interference in corporate business opens up opportunities for more responsible interaction between corporations and stakeholders. This kind of interaction is aimed at lowering stakeholder pressure

through the voluntary implementation of sustainability strategies by corporations. Stakeholder relationship management can be seen as a concept of mediation that is neither wholly voluntary nor completely mandatory. That said, it should not be underestimated. Bosse et al. (2001) note that the time has passed when corporations could disregard the activities or opinions of those stakeholders who could not directly influence the core business of the corporation. The European Commission (2001) also confirmed this fact, noting that many European companies are starting to implement corporate social responsibility strategies in response to social, economic, and natural pressures. It was pointed out that some customers might refuse to buy goods or services from a company that ignores the principles of sustainable development (Brown, 2011). This can ultimately lead to a diminished reputation, increased costs, and decreased company value (Hill, 2001; Tapaninaho, 2019).

Stakeholder theory has been presented as a 21st-century management theory that redefines the role of business and its value to society (Freeman 2010). Researchers and business practitioners are paying increased attention to sustainability issues. This prompts consideration of existing theories in the context of sustainability (Starik and Kanashiro 2013). Stakeholder theory is no exception. Hörisch et al. (2014) evaluated the applicability of the theory in the context of sustainability management. Researchers noted the importance of incorporating sustainability theory into existing theories to avoid the need to create new theories and rules to deal with them.

Although stakeholder theory was not originally intended to address issues related to sustainable development, there is potential to develop it in this direction. The approach has been criticized for its centrality in the study of the economic sphere (Clifton and Amran 2011). Starik and Kanashiro (2013) also noted the lack of systematic consideration of sustainability issues in stakeholder research. Researchers have been urged to pay attention to the study of the phenomenon of sustainability within stakeholder theory, including research questions and assumptions (Derry, 2012).

Stakeholder relationship management implies that corporations face the economic, social, and environmental demands of stakeholders. Stakeholder relationship management must be seen as an essential transfer tool that can transfer the consideration of sustainable development from community groups to the business world.

#### **1.1.5. Sustainable development: the institutional theory approach**

Institutional theory is the basis for the study of many academic topics, from institutional economics to organization theory (DiMaggio & Powell, 1991; Jepperson, 1991). The theory examines the activities of various groups and organizations in terms of their positions and legitimacy in the current institutional environment.



According to North (1990), the term institution has the meaning of a set of rules that exist for organizations and individuals. These rules come from laws, organizational structures, and moral and legal norms (DiMaggio & Powell, 1991). Institutions create expectations that predetermine the actions of organizations and the logic that shapes laws and rules that appear natural (Zucker, 1977). Ultimately, institutions determine appropriate and unacceptable activities.

Roy (1997) noted that institutional theory considers three aspects that contribute to the survival and legitimacy of organizations: normative, social, and cultural. Scott (2007) collected and systematized the elements in his formulation of three categories of institutional forces: regulatory, normative, and cognitive. Regulative power, according to North, has its origin in economics and is a model of the behavior of a rational representative (an organization, a group of people, or a person). Institutions determine a representative's behavior through rules of the game, monitoring, and restrictions. These tools come from existing legislation, standards, and other agreements.

The second aspect, normative, is represented by patterns of organizational and individual behavior based on commitments to social, professional, and corporate interaction. Institutions guide representatives by determining what is appropriate or expected in different situations. The normative system usually consists of norms and values, which then provide the basis for rules.

Finally, the cognitive aspect represents patterns of individual behavior based on subjective rules and norms that limit actions. According to Carroll, the cognitive aspect of the theory operates in terms of culture and language, and subconscious behavior that people hardly think about.

The institutional approach focuses representatives' attention on rules and norms, which can vary widely across countries and cultures (Fang, 2010). Such rules and standards later become self-evident and are not subject to scrutiny or criticism.

Proponents of the theory of institutionalism believe that the external environment has a strong influence on development and organizations, sometimes stronger than market pressures (Bruton et.al., 2010). This often leads to the fact that innovations applied in companies are legitimized in the environment and reach a level when refusing to accept them in other companies (smaller in size) is seen as irrational. And such companies will be forced to accept such an innovation even if it does not increase the company's efficiency (Scott, 2007).

Institutional norms are often fictitiously adopted so that the organization can gain or maintain legitimacy in the institutional environment. Because legitimacy allows organizations to ensure their survival in the marketplace (Meyer and Rowan, 1991), these formal structures can reduce an organization's effectiveness and competitive advantage. In order to reduce the impact, companies often resort to separating their key operations from the impact of the environment. This

leaves the part of operations that is subject to formalization to meet the requirements of institutions. In this way, the impact of institutions on companies is reduced.

Thus, it is possible to distinguish the following features of the institutional approach in considering the problem:

- institutions are resistant to external influences and changes (Scott, 1995);
- because of the large number of institutions and the norms they create, there is a high likelihood of institutional contradictions (Friedland and Alford, 1991);
- the effect of institutional pressure is to increase the homogeneity of organizational structures in the institutional environment. Firms will adopt similar structures as a result of the three aspects described.

According to Marquis (2016), a key insight of institutional theory is imitation: companies that follow norms tend to follow the strategies of other similar companies instead of optimizing their practices and operations. According to Glover et al. (2014), institutional theory supports defining challenges that companies face while implementing sustainable practices. They also summarized previous works on sustainability implementation.

Based on the gathered information, the institutional theory may describe which policy or initiatives should be implemented locally, regionally, or nationally to encourage companies to participate in the sustainable development agenda.

## **1.2. SDGs implementation into mining companies' practices**

Organizations and businesses are some of the followers who have agreed to join the idea of the Sustainable Development Goals. What is the role of mining companies in achieving the SDGs? How are companies implementing the goals and reporting on the results?

The mining industry is a key focus of research in many countries. The reason is the increasing sustainability concerns that affect global warming and climate change. Bulky and heavy equipment consumes electrical energy, produces work, and releases large amounts of heat into the surrounding atmosphere, making the mining industry one of the most polluting, accelerating global warming, and causing the depletion of natural resources. The main goal of sustainable development in the mining industry is an increase in production that ensures low costs and high energy efficiency.

The International Council on Mining and Metals (ICMM) (2021) is the official partner of the UNDP. ICMM is an international organization designed for a sustainable mining industry.

ICMM worked with the UNDP to create a common understanding of how mining companies can integrate the SDGs into their practices. As a result, a list of guidelines was created to help shape sustainability reporting and highlight areas where companies can achieve meaningful

results. This is *Mapping Mining to the Sustainable Development Goals: An Atlas*. It includes guidelines for integrating the SDGs into company practices.

According to Atlas, the mining industry is global and typically has remote locations from major human habitation. Such locations are characterized by high environmental sensitivity and poor infrastructure. If well managed, the mining industry can create jobs and infrastructure and attract investment. In the opposite scenario, mining activities will lead to environmental degradation and a reduction in animal diversity (Bstudy, 2020). The mining industry has a huge impact on the economic, social, and environmental areas of sustainable development. In particular, companies are actively working to combat corruption, implement measures to reduce greenhouse gas emissions, improve safety, and much more. Such activities not only bring the achievement of the SDGs closer but also create best practices and standards that can be useful to companies from an emerging market.

It is also worth noting the role of the mining industry in global climate change. Mining companies are responsible for significant emissions of carbon dioxide into the atmosphere, which certainly affects the situation with global warming (Barbier, 2006). The SDGs require the global community to reckon with the risks of climate change. Mining companies are no exception. According to Atlas, the mining industry should play one of the leading roles in achieving the SDGs (IPCC, 2014).

The Atlas makes a useful contribution to the SDGs. It maps the relationship between the mining industry and the SDGs. It guides mining companies to incorporate the SDGs into their strategy.

In general, Atlas presents the following ideas:

There are opportunities to embed the SDGs into the core business of companies. Successful implementation will require action from all stakeholders. This can bring improvements in efficiency levels, cost reductions, and increased competitiveness.

The mining industry has enormous potential for the implementation of the SDGs, providing equal opportunities for all, improved infrastructure, quality products, reduced health risks for employees, and the fight against corruption (D'amato, et.al., 2009).

All of the SDGs are interconnected and require companies to take an integrated approach to their implementation. The mining industry must be a part of this integrated approach, helping to provide benefits for today's generation without harming the interests of future generations while sharing the idea of reducing the negative impact of the processes produced.

In this paper, mining companies in Russia will be considered in the context of their implementation of the SDGs.

The Russian mining sector is represented by companies engaged in the extraction and primary processing of natural resources (except oil and gas). It is the primary link in building national and global production processes. Mining is a very important industry for Russia, which affects the economy and technical development of the country. Natural resources located on the territory of Russia and waiting to be developed estimated at \$75 trillion (Rosstat, 2019). Gold, coal, and iron hold the first places in terms of mining potential. Russia is one of the leading countries in terms of diversity and volume of mineral resources, as well as the level of extraction of natural resources. There is an active development of mineral deposits on the territory of the country (Avdonin, 2005)).

Extraction of minerals forms 8-12% of the country's GDP (according to different periods). The primary task of the mining industry is to meet the needs of the country. Due to a large number of resources, it becomes possible to export abroad. In the commodity structure of exports, mineral products account for about 64% (oil and gas incl.) (Orlov, 2019).

Distinctive features of the mining sector:

- Capital intensity is caused by natural factors (mining and geological conditions of occurrence, physical and chemical properties of minerals, location of deposits). The industry requires significant investment, primarily in the material and technical production base, on equipment with long service life.
- Long-term projects. Field development is a long-term process consisting of many stages.
- The concentration of production near the location of geological reserves.
- Direct and indirect state participation.
- The volatility of world commodity prices.

Despite the large number of sanctions imposed on Russia, the country's mining industry has been almost unaffected by them. Unlike the oil and gas industry, which is mostly controlled by the state, most of the companies involved in mining and processing are in private hands and are much less affected by political processes. In the table below, the top-10 ESG-rank (2021) Russian mining companies are described.

Table 1 – Top-10 ESG rank mining companies in Russia

Company name	Focus	ESG rank	Revenue, \$ bln. (2020)
Polymetal	Gold	1	2,9
NLMK	Iron & Steel	6	10,5
SUEK	Coal	10	6,7
Severstal	Iron & Steel	14	6,9
Polyus	Gold	15	4,9
ALROSA	Non-Gold Precious Metals & Minerals	17	2,4
Rusal	Specialty Mining & Metals	25	9,7
Petropavlovsk	Gold	27	0,7
MMK	Iron & Steel	29	6,4
EVRAZ	Iron & Steel	31	9,9

The ESG rating is an opinion of the RAEX-Europe agency on the extent to which the process of making fundamental business decisions in the company is focused on sustainable development in the environmental, social, and economic spheres.

The availability of ESG rating increases the interest of investors and clients oriented to cooperate with those companies whose activities comply with the principles of sustainable development. Against the background of global climate and environmental changes, as well as the growing importance of a socially responsible approach to doing business, the need to assess the integration of sustainability principles in the business processes of companies will continue to grow (Meerson, 2014).

Mainly due to its economic and geographic location, the Russian mining industry has a significant advantage over most countries of the world in terms of the quantity and variety of minerals. This condition explains the industry's significant contribution to the country's GDP (Analytical center, Russia, 2019). The specifics of production processes imply high capital intensity and long-term implementation of projects. The industry is on the verge of change, demanding more environmentally friendly and energy-efficient solutions for operations. Industry leaders are taking a responsible approach to change processes. A series of these facts gives hope for the continued development of the mining industry in Russia in the future.

### 1.3. Summary of the theoretical part

Based on theoretical justification and recent research, incorporating sustainability goals into the strategic plan of companies in the Russian mining industry is a complex process. It does not have strict regulations and proven options for successful implementation due to its novelty. The **research gap** stems from the fact that most scientific literature is devoted to analyzing the specifics of implementing the SDGs from a theoretical point of view. In reality, there is a lack of scientific sources that describe the specifics of implementing the SDGs in the strategies of mining

companies from a practical point of view. In addition, the lack of positive trends in the business environment, which is typical for the period of general economic downturn, as well as significantly increased uncertainty and increased competition, requires companies to use appropriate mechanisms of strategic management of sustainable development, which makes this area of research relevant.

To address the defined research gap, the following research questions were formulated:

- Why are mining companies motivated to incorporate or not to incorporate SDGs into their strategies?

- What are the possible challenges of SDGs implementation into companies' corporate strategies that managers should consider?

- How do mining companies prioritize the implementation of SDGs into their strategies?

The peculiarities of the implementation of SDGs by Russian mining companies will be considered through the prism of the stakeholder theory. This theory dominates the consideration of issues related to sustainable development (Bosse et al., 2009; Lin, 2018). The approach allows to see the dynamically changing environment and propose effective measures to implement.

The result of the research is based on the analysis of three mining companies operating in Russia. In addition, the peculiarities of how chosen companies implement SDGs are described using the adjusted framework. In the end, the list of implementation recommendations for corporate social responsibility departments of mining companies operating in Russia is presented as the **research result** of the work. The representatives of the sustainable development department of mining companies in Russia may take these implications to develop the sustainable development strategy precisely.

## **CHAPTER 2. SUSTAINABLE DEVELOPMENT GOALS IMPLEMENTATION: RESULTS OF EMPIRICAL ANALYSIS**

The chapter is devoted to the description of the methodology that the author used in the research. The aim is to introduce the process of how the research was created and then conducted. The topic of SDGs implementation in the mining industry has not received complete researchers' exploration. That is why it is essentially important to create a precise research strategy.

### **2.1. Methodology**

Researchers use a large number of different research methods and structures to design the study. This is due to the variety of issues and tasks at hand. Appropriate data collection and presentation methods and the use of the right data analysis techniques are necessary to conduct the study. The researcher faces the challenge of choosing the appropriate design and approach (quantitative or qualitative) to conduct their own research. That is why it is so important to pay attention to the study of possible frameworks, data collection, and analysis (Bryman and Bell, 2003).

#### **2.1.1. Research approach**

To determine the research approach, it is necessary to choose between quantitative and qualitative methods. The main difference lies in the type of data used in the study. Qualitative research focuses on words and their collection and analysis, while quantitative research uses numbers as the main source of data. Moreover, qualitative research takes an inductive approach between theory and research, with the goal of extending existing theory. Quantitative analysis takes a deductive approach in which the existing theory is tested (Bryman and Bell, 2003).

The study is aimed at studying the specifics of the implementation of sustainable development goals by mining companies, the impact of various factors on the formation of the strategy to follow certain SDGs. The information collected can be classified as purely qualitative. The results of the study will not be explained in terms of numbers, so a qualitative approach to the assignment will be used.

Before moving on to the choice of research strategy, proof of industry choice is presented. First, the author relied on his previous education related to engineering in the mining industry. Second, based on the literature review, the idea that mining companies in Russia make experience difficulties in adopting the SDGs into their strategic agenda was confirmed. Finally, having the appropriate contacts from the scientific supervisor confirmed the choice of the industry. My citizenship and the fact that I live in Russia also influenced the choice of companies within the

industry. This does not mean that the companies have exclusively Russian "roots". The criterion for selecting companies was the fact that the companies are doing business in Russia.

### **2.1.2. Research strategy and design**

There are several types of different research strategies. A strategy forms the framework for collecting and analyzing data. In other words, this strategy is the overall plan for how the researcher will answer the research questions.

According to Bryman and Bell (2003), there are five main researches categories:

- experiments;
- comparative design;
- case study design;
- cross-sectional design (survey research);
- longitudinal design (e.g., the panel study).

Among the options under consideration, the case study is the most appropriate strategy for designing the research. This type of research strategy involves the use of two or more identical cases. The object of the study or case is a company within the mining industry. Since the author uses multiple cases, this strategy can be called a multiple case study. The main method's advantage is that it allows the extension of the existing theory (Eisenhardt K., 1989; Bryman and Bell, 2003). According to research (Eisenhardt, 1989), by analyzing multiple cases, the researcher has a better chance of obtaining versatile material. It has also been noted (Yin, 2009) that a case study helps researchers see and understand the relationship between the phenomenon being studied and the context in which it is presented.

### **2.1.3. Data sample**

When considering the list of companies included in the study, it is also necessary to note those companies that may also have come under consideration. Initially, a list of mining companies with assets in Russia and sustainability reporting was compiled. This list included the following ten companies: JSC SUEK, PJSC Alrosa, LLC Metalloinvest, UC Rusal, PJSC Nor Nickel, Evraz Group, PJSC Severstal, Polymetal International plc, PJSC Polyus, PJSC En+ Group. Contacts of these companies' representatives of corporate social responsibility departments were found. The networks of contacts of the supervisor and the author of the paper were engaged. First, an introductory letter of invitation to participate in the interview was sent, which briefly described the content of the research paper, the interview format, and other details regarding the author of the paper. In the second stage, calls were made to those recipients who could not be answered



within ten days. According to the results of these stages, representatives of three companies responded positively to the interview conduction - LLC Metalloinvest, Polymetal International plc. and PJSC En+ Group. Four companies from the list did not respond to the letter or phone call. Three representatives of companies reported a busy work schedule and inability to allocate time for the expert to conduct interviews. A detailed description of the companies whose representatives agreed to participate in the interview is provided in appendix 1.

#### **2.1.4. Data collection**

The author had to carefully consider what methods of data collection to choose to directly answer the research questions and reach the research goal. The process of collecting information consists of several stages and is exploratory in nature. At the initial stage, the available sources of secondary data that relate to the topic of SDG implementation in company practices in the world in general and in Russia, in particular, were analyzed. Such sources as scientific articles, annual reports of companies, reports of consulting companies placed in the public domain were analyzed.

The second stage consisted of the search and collection of information about the companies selected for the study of the mining industry in Russia. During this stage, the following indicators were analyzed: the company's founding date, its origins, board composition, and key financial indicators. This information is necessary to understand the company's background. As a result, it is possible to make balanced conclusions on the results of the analysis. The completion of this stage was the compilation of a semi-structured interview guide.

According to Bryman and Bell (2003), a semi-structured interview is an interview in which the researcher has a list of pre-prepared questions related to the research topic. Despite this, the interviewee has the choice of how to answer the question posed. The questions displayed in the list do not have to be asked in a strict order. During the interview, the interviewer is allowed to ask additional questions that were not included in the list of original questions but that disclose deeper some aspects touched upon. Nevertheless, experience shows that all prepared questions will be asked, and all conducted interviews will be conducted in a similar manner.

Saunders et al. (2007) defined semi-structured interviews as a qualitative research technique. The interview contains a series of questions to reveal the topic of the study. The sequence of questions can be changed depending on the progress of the conversation. In doing so, it is acceptable to include questions that were not previously on the list in the conversation. The nature of the answers to open-ended questions implies keeping an audio recording in order not to miss details of the answer to the questions and to eliminate the response bias.

Semi-structured interviews are used to gather the information that will later be processed using qualitative methods (Saunders et al., 2007). The authors of the articles note that the

information obtained in semi-structured interviews helps to answer the "why?" questions. In the list generated, the questions aim to find out the reason why certain sustainable development goals are being implemented, what barriers exist in the way of its implementation. It is also easier for company representatives to give answers to open-ended questions.

The final stage of the research consists of 3 in-depth semi-structured interviews with companies' representatives. Interviews are provided both in-person and via Skype.

There are several sets of questions used in the interview guide:

- 1) General information about the company;
- 2) The ways how to implement SDGs;
- 3) The reasons why to implement SDGs into corporate practices.

The Interview guide is structured in a special way as to get answers to the research questions posed and to learn the specifics of each of the companies under study. The first part of the questions collects information about the company, the division that deals with sustainable development, its structure. The second set of questions seeks an answer to the first research question about the company's motivation to participate or not to participate in the sustainability agenda. The third set of questions aims to answer the question regarding the difficulties the company faces in implementing the SDGs. During the interviews, questions were also asked regarding personal perceptions of the problem of implementing the SDGs in companies' strategies. Representatives of companies voiced possible reasons for the current state of affairs in the studied area.

The interview guide is created in the Russian language and then translated into English to include in appendix 2. The conversations with companies' representatives were conducted in Russian to be more natural and unambiguous. Each interview lasted from 45 to 75 minutes. With the permission of companies' representatives, the interviews were recorded in audio format. Afterward, the transcripts of the interviews were translated into English, and their samples are represented in the discussion part of the thesis. Table 2 shows the specifics of the information collection process for each company.

Table 2 – Summary of the data collection process

Name of indicators	LLC Metalloinvest	Polymetal International plc.	PJSC En+ Group
Number of sustainability reports studied	4	5	2
Reporting study period	12.2020-03.2021	12.2020-04.2021	12.2020-03.2021
Number of interactions with a company representative	3	3	3
Company representative	<b>Anastasia Savelieva</b> , Head of Sustainable Development Department	<b>Aleksandra Devier</b> , Sustainability Directorate Specialist	<b>Anastasia Zhdanova</b> , Head of the Project Office for Sustainable Development; <b>Aleksandra Gundobina</b> , Specialist of the Project Office for Sustainable Development
Period of interaction	02.2021-04.2021	02.2021-04.2021	02.2021-04.2021
Duration of the interview conducted, type	45 minutes, Semi-structured int.	75 minutes, Semi-structured int.	65 minutes, Semi-structured int.
Number of analyzed independent sources about the company's activities (media, consulting reports)	6	6	8

### 2.1.5. Data analysis method

The primary sources of secondary data will be the annual sustainability reports of the selected companies. In the reports, companies place information about the results of activities in the direction of sustainable development for the past year. The reports are available and posted on the official websites of the companies.

The reports are prepared with the external audit from consulting companies — for example, the Polymetal International plc. Annual Report 2020 was designed and audited by PricewaterhouseCoopers (PwC). An audit by an independent and reputable company allows us to confirm the objectivity and relevance of the data presented in the reports of the selected companies. In order to increase the reliability of the study, secondary data from news sources will be used in the discussion part.

The reports will be analyzed according to the SDGs and the indicators outlined in their descriptions. The results will be compared to the recommendations described in the Atlas created by UNDP (Figure 2).



# Mining and Poverty Eradication (SDG1)



Figure 2 - An example of UNDP Atlas recommendations for SDG 1

Source: UNDP Atlas for mining industry

The analysis will be conducted according to the steps described in the Figure 3.

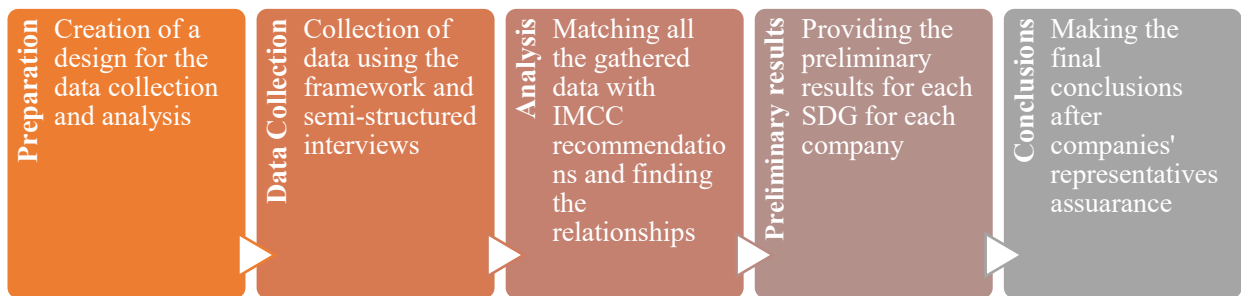


Figure 3 - Research design

Source: Author

According to the results of the 4<sup>th</sup> stage (Figure 2), preliminary results will be obtained. They will be discussed with representatives of the corporate sustainability departments of the investigated companies. This is necessary in order to confirm or refute the results and thereby increase the objectivity of the overall work.

The following parts contain research analysis and findings, recommendations for applying the results in theory and practice, and directions for future researches.

## 2.2. Research analysis

This part of the paper presents an analysis of the actions that the chosen companies take to achieve the Sustainable Development Goals. We also compared the implemented actions with the recommendations of the UNDP mining Atlas and highlighted the peculiarities of the implementation of certain SDGs in the practices of companies.

### 2.2.1. Comparative analysis: Atlas' recommendations and companies' activities

#### SDG1. No poverty: end poverty in all its forms everywhere.

Atlas's recommendations: to publicly disclose details of payments to governments, develop local supplier capacity, strengthen local value chains, fully restore resettled communities. The necessity to collaborate to leverage resources for poverty alleviation is also mentioned.

LLC Metalloinvest	Polymetal International plc.	PJSC En+ Group
<b>Actions and results</b>		
<p>The company is actively engaged in activities aimed at protecting human rights: it maintains competitive wages, provides employees with a decent social package, and prohibits forced labor.</p> <p>The Company provides targeted assistance to employees in need and residents of the cities where it operates.</p> <p>Metalloinvest has an impact on the regions where it operates, seeking to maximize its positive contribution and reduce the possible negative impact of doing business.</p> <p>Indirect economic impact includes paying taxes to the government.</p> <p>Results: The amount of taxes paid to consolidated budgets was over 36.3 billion rubles; Average wage above the market; 5.9 billion rubles - total investment in external social programs.</p>	<p>Polymetal provides competitive remuneration, which is above the regional average, and comfortable working conditions, as well as motivating career development opportunities.</p> <p>Increasing the share of local procurement and thus supporting entrepreneurship and contributing to better quality of life in remote locations.</p> <p>The company contribute to the national wealth and economic development of our countries of operation through making all applicable tax payments to state and local authorities.</p> <p>It strives to provide local people with job opportunities and work closely with local colleges and institutions to provide training and development opportunities in our communities.</p> <p>Results: The total tax payments in 2020 amounted to \$432 million.</p>	<p>En+ Group closely monitors equal employment.</p> <p>The hiring of local people is regulated. They are given priority for employment.</p> <p>The company guarantees its employees a safe and inclusive work environment, fair treatment, decent wages and benefits.</p> <p>Results: Average wage growth was 10.7% year-over-year.</p>
<b>Comparison with Atlas's recommendations</b>		
Through its actions, the company tries to influence, first	Polymetal contributes to the achievement of SDG1 in terms of	In its report, En+ focuses on describing the

and foremost, the well-being of its employees and their families by providing a decent level of income. The company also pays attention to vulnerable groups in the cities where it operates. It makes significant tax deductions to the national budget and contributes to regional development. These actions correlate with the main idea of SDG1.	ensuring decent wages for employees and creating good working conditions. In addition, the company seeks to develop relationships with local suppliers and, where possible, to hire residents of the cities where it operates for open positions, thereby supporting the well-being of the regions as a whole.	conditions it creates for its employees that allow them to provide a decent standard of living. The company tries to support the regions where it operates. By hiring employees who live in them.
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### Findings

It can be noted that in all companies under consideration SDG1 is not a priority goal. They strive to achieve it by direct and indirect methods: regular indexation of wages, creation of good working conditions, giving priority to hiring local people. Companies also make tax payments to regional budgets, thereby making a secondary contribution to their development. Polymetal stands out by striving to develop entrepreneurship in the regions where it operates. Otherwise, the activities of the companies in achieving SDG1 are similar.

### **SDG2. Zero hunger: end hunger, achieve food security and improved nutrition and promote sustainable agriculture.**

Atlas's recommendations: to manage water resources wisely, minimize land take, share infrastructure benefits with agricultural community, conduct baseline and ongoing geochemical surveys. The necessity to partner with agricultural sector is emphasized.

LLC Metalloinvest	Polymetal International plc.	PJSC En+ Group
<b>Actions and results</b>		
Since 2017, Metalloinvest has been implementing a large-scale Program for Development of Employee Nutrition Services. The program integrates catering services for employees on the basis of a single operator. The implementation of the project makes it possible to introduce uniform standards, improve the quality of catering and the level of service, reduce costs, and set attractive prices for employees.	The company did not provide the results of its activities in this area	The company did not provide the results of its activities in this area
<b>Comparison with Atlas's recommendations</b>		
The company takes care of the nutrition of its employees by providing the necessary conditions. Actions aimed at the development of regional farms are not covered in the report.	The company's report does not cover any of the areas of work proposed by Atlas.	The company's report does not cover any of the areas of work proposed by Atlas.
<b>Findings</b>		

Obviously, this direction is not a priority for companies. Companies work within the legislation of the Russian Federation and comply with the requirements of the supervisory authorities, which specify the need to save water and land resources in the conduct of activities. This may be the reason for the lack of descriptions of the actions taken by companies to achieve SDG 2.

**SDG3. Good health and well-being: ensure healthy lives and promote well-being for all at all ages.**

Atlas’s recommendations: to promote workplace health, provide healthy canteen food options and hygiene protocols, reduce dust emissions, set up confidential counseling programs. The Atlas stresses the importance of recognizing and strengthening traditional medicinal practices.

LLC Metalloinvest	Polymetal International plc.	PJSC En+ Group
<b>Actions and results</b>		
<p>The company has 18 social facilities, including medical institutions, recreation centers, children's camps, and sports facilities. Sports, cultural and recreational events for employees, their families and former employees (pensioners) are held annually at social facilities.</p> <p>Results: Adoption of the Human Rights Policy; The Company allocated 417 million rubles, or 14% of all funds allocated for internal social programs. An automated system of medical examinations was implemented.</p>	<p>Implementing infrastructure projects to ensure a decent quality of life for local communities, including health and childcare support for mining and non-mining workers and their families.</p> <p>Dedicated contractors are responsible for ensuring the highest hygiene standards, while employees receive regular medical check-ups (including daily health checks with an automated health monitoring system) and paid time off work for health appointments.</p> <p>Results: Cyanide Management System was implemented. Numerous health events were conducted.</p>	<p>The health and well-being of employees are fundamental principles of the company. They lie at the heart of the company's emergency response strategy.</p> <p>Results: Transitioning office workers to telecommuting; Organization of leisure time for employees; Counseling and training; Modernization of medical offices; Making changes to work schedules; Supporting retirees with grocery kits; Assisting and purchasing necessary equipment for medical facilities; Developing a strategic plan to change the company's safety culture; Implementing sports programs; Upgrading equipment at the company medical center.</p>
<b>Comparison with Atlas’s recommendations</b>		
<p>Metalloinvest emphasizes the importance of following the SDG 3 in its strategy. Measures have been created and implemented to</p>	<p>Polymetal creates conditions to monitor the health and well-being not only of its employees, but also of local residents. Internal policies governing the organization of medical</p>	<p>En+ Group focuses its health and well-being efforts on its employees and retirees, providing the necessary screenings, support programs. The company for the most part implements SDG 3.</p>

comprehensively support the health and well-being of employees and their families. The company is implementing SDG 3 for the most part.	examinations have been developed. The company is implementing SDG 3 for the most part.	
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**Findings**

Companies are taking a responsible approach for implementing the SDG 3. The main impact is aimed at current employees. In addition, Polymetal strives to develop medical care for the population in the regions where it operates, which distinguishes the company. Companies recognize the importance of traditional medical approaches and formulate their actions based on this understanding.

**SDG4. Quality education: ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.**

Atlas’s recommendations: to routinize skills baseline assessments and gap analyses, sponsor scholarships and graduate programs, train workforce in technical and management skills, ensure training opportunities to employees at all levels. The importance to participate in classrooms and workshops is emphasized.

<b>LLC Metalloinvest</b>	<b>Polymetal International plc.</b>	<b>PJSC En+ Group</b>
<b>Actions and results</b>		
<p>Metalloinvest forms corporate training programs aimed at the development of professional competencies of employees of all levels and positions. Five educational projects have been created and are being implemented for this purpose.</p> <p>Results: 1,755 employees trained in Business System tools; The average number of training hours for employees increased by 37.5%;</p> <p>Metalloinvest Corporate University was established; Social and economic partnership program with the regions of operations was implemented; Cooperation program with universities and colleges is deployed.</p>	<p>Polymetal aims to develop the potential of employees, their training and development. The company promotes innovative new training solutions and provides a flexible learning environment for all staff, including those in very remote locations.</p> <p>Scaling up training and development of locally hired personnel; broadening opportunities for them to progress into senior management positions.</p> <p>Results: 126 training hours per employee.</p>	<p>En+ actively works in the area of education for employees.</p> <p>The results: Conducting additional educational courses on personal waste reduction; conducting courses informing about sustainable development; Cooperating with the organization "Let's Protect Baikal Together"; Program for children of the Irkutsk Region to the unique local ecosystems is deployed; Free educational courses from the corporate university for all employees; Supporting the younger generation - mentoring institute, visits to educational institutions with lectures about the company's activities.</p>
<b>Comparison with Atlas’s recommendations</b>		



The company follows all of the recommendations described in the Atlas and emphasizes the importance of developing competencies in current and potential employees.	The Company follows all the recommendations described in the Atlas. Polymetal is interested in the diverse development of employees at all levels.	The company follows all the recommendations described in the Atlas. It implements educational programs inside and outside the company. A separate area has been set up to educate the younger generation.
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**Findings**

The companies under consideration are actively involved in the educational agenda. They create and implement programs aimed at developing employees at various levels. The programs also reach out to young people, giving them the opportunity to learn about their future profession while they are still in school.

**SDG5. Gender equality: achieve gender equality and empower all women and girls.**

Atlas’s recommendations: to pay women and men equally, provide gender-sensitive career development plan, include men and women in negotiations. The Atlas calls to remain vigilant against gender-based violence.

LLC Metalloinvest	Polymetal International plc.	PJSC En+ Group
<b>Actions and results</b>		
<p>The Company completely eliminates the gender factor in determining remuneration and making decisions on employee promotions. Metalloinvest is then careful to ensure that determination and decisions on salary increases are made solely on the basis of individual performance and conscientious fulfillment of work duties. Going forward, the Company plans to continue its efforts to promote gender equality within the Company.</p> <p>The result: Among all employees of the company, 27% are women - a high figure for the industrial industry.</p>	<p>The company works for increasing gender diversity in every function and eliminating the gender pay gap.</p> <p>Advancing human rights auditing practices and preventive measures across upstream and downstream supply chain contractors.</p> <p>There is a zero-tolerance approach to any form of discrimination or harassment. Polymetal enables employees to raise any issues or concerns without retribution and ensure adequate remediation steps.</p> <p>Results: 21% of employees are women, with 25% of women in the Talent Pool.</p>	<p>While complying with all industry restrictions related to women's employment in certain areas, En+ continues to work to create a more inclusive and diverse work environment at our facilities.</p> <p>The company joined the "30% Club," an international initiative aimed at achieving gender equality and increasing the representation of women in the governing bodies of commercial organizations.</p> <p>The result: Of all the company's employees, 26% are women - a high percentage for the industrial industry.</p>
<b>Comparison with Atlas’s recommendations</b>		
The company partially complies with the recommendations of Atlas regarding equal employment conditions.	Polymetal actively integrates gender diversification into its policies. A zero-tolerance policy on discrimination has been created. The Atlas recommendations are partially covered.	En+ Group confirms the importance of gender equality and is implementing practices that partially cover the Atlas recommendations.
<b>Findings</b>		

Because of the nature of the mining industry, there is a relatively low percentage of women working in companies. Nevertheless, these results are higher than they were a decade ago. This was also influenced by changes in the country's legislation, which allowed women to work in “hard work”. There is a positive trend in the implementation of the SDG 5 among companies.

**SDG6. Clean water and sanitation: ensure availability and sustainable management of water and sanitation for all.**

Atlas’s recommendations: to recycle metals from wastewater, use alternative water sources, integrate technical, social, economic and political water concerns, incorporate water reporting and disclosure. The Atlas stresses the importance of supporting local capacity-building in water and sanitation management.

LLC Metalloinvest	Polymetal International plc.	PJSC En+ Group
<b>Actions and results</b>		
<p>The company actively carried out measures to replace and modernize treatment facilities.</p> <p>Work is underway to switch to a closed-loop water recycling system.</p> <p>Results:</p> <p>The total volume of reused and recycled water in the water supply systems of the Company's enterprises in the reporting period was 2,656.4 million m<sup>3</sup>, which is 1.2% less than in 2018.</p>	<p>Polymetal is aimed to implement projects aimed at sustainable management of water resources.</p> <p>Implementing technologies for safer waste management/disposal.</p> <p>Continue to reduce fresh water use.</p> <p>There are projects to increase water recycled/reused.</p> <p>Results:</p> <p>36% y-o-y decrease in fresh water use for processing per unit of production;</p> <p>89% of water reused/recycled (+2% y/y).</p>	<p>En+ is involved in the clean water care and control agenda.</p> <p>Regular discussions on microplastics and coordination of actions to remove them from waters;</p> <p>A program for regular monitoring of water quality has been launched. A series of actions will be formed going forward;</p> <p>Grant competition to invest in new promising projects;</p> <p>Modernization of the equipment in use, which has reduced the risk of lubricants leaking into the water.</p>
<b>Comparison with Atlas’s recommendations</b>		
<p>The company partially complies with the recommendations of Atlas on SDG 6. More attention is paid to water recycling and reduction of water consumption.</p>	<p>The company takes a comprehensive approach for implementing SDG 6. For the most part, it follows the recommendations of Atlas in terms of a comprehensive approach to reducing water consumption and recycling.</p>	<p>En+ is partially implementing the Atlas recommendations. The main actions are to upgrade existing equipment and work with the risks of water pollution.</p>
<b>Findings</b>		
<p>Companies are aware of the importance of SDG 6. Water consumption is significant in operational activities. Companies try to reduce consumption and increase the efficiency of water use from two aspects: social and technical. Each of the companies has a policy of open reporting on the volumes of water used and recycled.</p>		

**SDG7. Affordable and clean energy: ensure access to affordable, reliable, sustainable and modern energy for all.**

Atlas’s recommendations: to undertake energy audits, reduce energy demand onsite, diversify power sources for reducing outages, replace diesel generators. The Atlas calls to support local energy initiatives.

LLC Metalloinvest	Polymetal International plc.	PJSC En+ Group
<b>Actions and results</b>		
<p>Metalloinvest has developed and approved the Comprehensive Program for Improving Energy Efficiency of Production.</p> <p>A program is being implemented to convert transport Gas motor fuel and modernization of roasting machines.</p> <p>Results:</p> <p>A comprehensive program to increase energy efficiency at the production facilities was developed and approved</p> <p>An Energy Efficient Technologies and Energy Audit Center was created</p> <p>Reduction of energy consumption by 0.7% compared to 2018</p>	<p>Increasing generation of renewable energy.</p> <p>Installing systems that reduce energy consumption.</p> <p>The company develops building projects for alternative energy sources (wind and solar power).</p> <p>Result:</p> <p>A policy for energy efficiency was created.</p>	<p>The company continuously invests in new research, initiatives and programs to improve operations, with renewable energy generation at its core.</p> <p>Results:</p> <p>Construction of a hydroelectric power plant;</p> <p>Research in the field of solar power;</p> <p>64.2 billion kWh of clean electricity were generated.</p>
<b>Comparison with Atlas’s recommendations</b>		
<p>The company fully implements the Atlas recommendations. It takes a thorough approach to the process of reducing energy consumption based on audits conducted.</p>	<p>The company fully implements the Atlas recommendations. The main area of achieving the goal is the diversification of energy sources used.</p>	<p>The company is partially implementing Atlas' recommendations. It seeks to optimize financial costs by generating its own electricity at the hydroelectric power plant.</p>
<b>Findings</b>		
<p>Companies are interested in using modern technologies to reduce energy consumption. They create and implement projects to switch to alternative energy sources. The main incentive for the transition is the reduction of economic costs.</p>		

**SDG8. Economic work and economic growth: promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.**

Atlas’s recommendations: to provide decent work, clearly communicate the capital-intensive nature of mining, diversify local economies and train local suppliers how to meet corporate supply requirements. The Atlas notices the necessity to connect suppliers with external markets.

LLC Metalloinvest	Polymetal International plc.	PJSC En+ Group
<b>Actions and results</b>		
<p>Salaries of the Company's employees ensure a decent level of welfare in accordance with regional standards.</p> <p>The Company's salaries are higher than the market median and are indexed annually to account for inflation. From 2014 to 2019, the average monthly income of employees increased by 43% to 51%.</p> <p>The Company continued to digitize its HSE activities, including the creation of the Automated HSE Management System</p> <p>Results: 43,453 employees were provided with new jobs; Wage fund increased by 10%; Metalloinvest received the highest - Platinum SAP Value Award in the "People are the most valuable capital" category; RUB 1.5 billion invested in HSE measures.</p>	<p>Enhancing supply chain contractors' engagement practices, particularly in remote locations and often in extreme temperatures.</p> <p>Polymetal increases operational efficiency to gain competitive advantage and financial sustainability, thus contributing to national and local economic growth.</p> <p>Building local workforce capacity while reducing the social and environmental burden of fly-in-fly-out employment.</p> <p>Results: 43% of purchases are local; 9296 suppliers are screened for business ethics; 88 contractors were audited for environmental compliance; Wages are regularly indexed.</p>	<p>The company takes a responsible approach to organizing safe work for its employees; maintains a decent level of wages and strives to develop its employees.</p> <p>Results: Support for the work of the Corporate University; Three-year strategic plan for safety culture development launched.</p>
<b>Comparison with Atlas's recommendations</b>		
<p>Metalloinvest provides employees with decent, annually indexed salaries. The company works with local suppliers. Thus, the recommendations of Atlas are partially fulfilled.</p>	<p>The company fully complies with Atlas' recommendations and actively works with local suppliers.</p>	<p>En+ cares about decent wages and safe working conditions for employees. At the same time, work with local suppliers is not covered in the report.</p>
<b>Findings</b>		
<p>Companies strive to create decent working conditions for employees in order to maintain the company's brand and recognition within the industry and among investors. Polymetal is most active in working with local suppliers, conducting audits and thereby minimizing the risk of reproducing poor quality products. Companies consider SDG 8 meaningful and show good results in achieving it.</p>		

**SDG9. Industry, innovation and infrastructure: build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.**

Atlas's recommendations: to upgrade an expertise of local suppliers, share rail, road, power and water infrastructure, improve quality of locally produced goods. The Atlas calls to use business profile to create horizontal linkages.

LLC Metalloinvest	Polymetal International plc.	PJSC En+ Group
<b>Actions and results</b>		
<p>The company holds regular meetings and retreats with its partners, participates in industry exhibitions and conferences.</p> <p>Results:</p> <p>Launch of the digital business process management platform;</p> <p>Completed the second wave of the Industry 4.0 program;</p> <p>Implementation of major investment projects;</p> <p>Automated system for medical examinations implemented;</p> <p>Implementation of a project to switch to electronic document management with suppliers and contractors;</p> <p>Automation of personnel management functions.</p>	<p>Polymetal works for improving infrastructure, telecommunications, power and water supplies for communities in or near Polymetal operations and associated areas.</p> <p>To considering the new projects' deployment biodiversity data in the investment decision-making process is included.</p>	<p>The board and management establish a common approach to engaging with local communities, reviewing results annually and discussing plans for future periods</p> <p>Results:</p> <p>A Regulation on Social Investments has been adopted, which sets out the approach to management and sets out the main areas of social support;</p> <p>A corporate social responsibility strategy was developed to manage social projects.</p>

<b>Comparison with Atlas's recommendations</b>		
<p>Metalloinvest pays more attention to building horizontal business links in the value chain. In doing so, the company partially helps local suppliers to participate in achieving SDG 8</p>	<p>Polymetal is partially implementing the Atlas recommendations towards the efficient use and creation of infrastructure in the cities where it operates.</p>	<p>According to the reports, En+ is setting up work internally in order to begin activities to achieve SDG 8. At this stage, the company is partially covering Atlas' recommendations.</p>

<b>Findings</b>		
<p>The companies are at different stages of implementing SDG 8. Each of the companies notes the need to develop new technologies and create horizontal business links. The company has a high share of vertical business connections.</p>		

### **SDG10. Reduced inequalities: Reduce inequality within and among countries.**

Atlas's recommendations: to establish baseline welfare statistics before mining, include excluded groups in local procurement and supply chains. The Atlas notices the essence to work with local partners to target social investments to marginalized populations.

LLC Metalloinvest	Polymetal International plc.	PJSC En+ Group
<b>Actions and results</b>		
<p>The company strives to build long-term partnerships with suppliers, contractors and consumers, taking a responsible approach to the selection of its counterparties. The Company takes into account compliance</p>	<p>The company actively works to incorporate and implement human rights in its programs and agreements.</p> <p>Results:</p>	<p>The Company works with suppliers. All contractors and suppliers in the Group's supply chain comply with applicable Russian and international requirements in all major areas. Thus, the agreements signed</p>

with human rights, labor and environmental legislation in its relations with partners. The company strives to choose local partners for interaction. Result: A plan for developing of classifying suppliers; Improved quality of products.	Implemented human rights clauses in all contracts with business partners;	contain mandatory provisions on environmental protection, occupational health and safety and enshrine the social obligations of contractors and suppliers. Results: Internal regulation of the processes of interaction with suppliers was finalized; Field audits were conducted.
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**Comparison with Atlas's recommendations**

Metalloinvest partially implements Atlas recommendations in terms of working with local partners. Work aimed at attracting marginalized groups to activity is not carried out.	Polymetal partially implements the Atlas recommendations in terms of working with local partners. Work aimed at engaging marginalized groups is not carried out.	En+ partially implements the recommendations of the Atlas regarding work with local partners. The work aimed at attracting marginalized groups to activity is not carried out.
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**Findings**

SDG 10 is not a priority for any of the companies in question. This may be due to the risks posed by hiring people from marginalized groups for hard work. Nevertheless, the companies are working with local social investment communities.

**SDG11. Sustainable cities and communities: make cities and human settlements inclusive, safe, resilient and sustainable.**

Atlas's recommendations: to mine unconventional deposits and plan land use carefully. The Atlas calls to collaborate with local authorities to develop green space, including decommissioned mines.

LLC Metalloinvest	Polymetal International plc.	PJSC En+ Group
<b>Actions and results</b>		
The Company takes a proactive approach to its social policy and focuses its efforts on regional development. The Company contributes to shaping the cultural, sports, and business agendas of the cities where it operates. Metalloinvest works under re-mining tailings. Results: Launch of the spatial strategy project in Gubkin; Renovation of the central city embankment in Stary Oskol Reconstruction of the municipal park in Zheleznogorsk;	The Group actively monitors economic and political developments on an ongoing basis. The company aims to maintain open working relationships with local authorities in the towns where the company operates. Results: The Company has designed and implemented a Group Sanctions Compliance Policy, outlining General principles and approaches to sanctions compliance in the Group's operations;	En+ engages with local authorities and stakeholders on the sustainable development of its locations of operation. Results: Creation of land remediation plans prior to site development; development and implementation of land reclamation operations program for attracting investments and ensuring socio-economic growth of cities was created and is in

Implementation of corporate charity programs.	Thoroughly elaborated tailings development plans are being designed.	place - 22 settlements have been improved
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**Comparison with Atlas's recommendations**

Metalloinvest is actively involved in the SDG 11 agenda and follows all recommendations from the Atlas. Special attention is paid to the sustainability of the cities of presence.	Polymetal is actively involved in the SDG 11 agenda and follows all recommendations from the Atlas. Particular attention is paid to the sustainability of cities of presence.	En+ is actively involved in the SDG 11 agenda and follows all recommendations from the Atlas. Particular attention is paid to working out plans for the development and restoration of the field area.
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**Findings**

SDG 11 is implemented at the level of three companies. Each of the companies is working in two areas: technological aspects of development and working with government representatives. This allows them to fully cover the recommendations of Atlas and have a positive impact on the regions where they operate.

**SDG12. Responsible consumption and production: ensure sustainable consumption and production patterns.**

Atlas's recommendations: to minimize resource use and waste and incorporate life cycle thinking. The Atlas emphasizes engagement of consumers about mining and connection the consumers with raw materials.

LLC Metalloinvest	Polymetal International plc.	PJSC En+ Group
<b>Actions and results</b>		
<p>Metalloinvest is engaged in the processing of overburden and tailings into secondary resources.</p> <p>During steel production, the metallurgical cycle also generates a number of wastes, some of which are recycled and/or reused.</p> <p>A program for separate collection of paper and cardboard has been initiated in order to transfer them to third parties and further recycle them into secondary material resources.</p> <p>Conducting exploratory research work to further extract total iron from the waste tailings and, as a result, reduce the volume of ore processing waste.</p> <p>Results: Iron ore production was 40.2 million tones;</p>	<p>Construction, development, operation, acquisition and maintenance of transportation infrastructure with a lower environmental impact.</p> <p>Launching transmission lines projects that will allow us to connect our sites to renewable energy sources.</p> <p>Projects aimed to increased recycle or reuse.</p> <p>Results: 17% of waste reused (+3 % y/y); Sulphur dioxide emissions intensity decreased by 26% to 0,055 t per kt of ore processed.</p>	<p>Programs are being implemented in each of the Company's offices and administrative buildings to minimize waste and increase the share of recyclable waste and the use of secondary raw materials. The Group is also actively improving waste management processes, renovating and upgrading existing facilities to ensure safe storage and disposal.</p> <p>Results: Introduction of closed-loop water systems; Technology for creating new products from waste; implementation of a project to dispose of waste from alumina production.</p>

A specialized subdivision - Center for Energy Efficient Technologies and Energy Audit - was created		
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**Comparison with Atlas’s recommendations**

Metalloinvest covers most of Atlas' recommendations in SDG 12 in terms of resource recycling and lean manufacturing. The report does not describe customer-focused activities.	Polymetal covers most of Atlas' recommendations in SDG 12 in terms of resource recycling and lean operations. The report does not describe customer-focused activities.	En+ partially implements the Atlas recommendations in SDG 12 in terms of resource recycling and lean manufacturing. The report does not describe activities aimed at working with customers.
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**Findings**

Companies aim to reduce emissions and optimize resource consumption patterns. The next step is for companies to communicate the importance of wise use of resources in the mining industry.

**SDG13. Climate action: take urgent action to combat climate change and its impacts.**

Atlas’s recommendations: to reduce emissions, build climate change resilience and recognize climate change in planning and investment. According the Atlas, it is required to participate in climate-related R&D and pilots (e.g. emissions trading) and to publicly support carbon pricing (Cross-border carbon regulation, 2020).

LLC Metalloinvest	Polymetal International plc.	PJSC En+ Group
<b>Actions and results</b>		
<p>As part of a large-scale project to reduce greenhouse gas emissions in 2019, a full inventory of CO<sup>2</sup> emissions at the Company's industrial emissions at the Company's industrial sites. In order to reduce greenhouse gas emissions, steelmaking furnaces were modernized.</p> <p>Results: Total expenses for environmental protection activities in 2019 amounted to 7.6 billion rubles, which is 5.1% more than in 2018.</p>	<p>The company is actively working to obtain green financing. There are projects in the realization devoted to transition from diesel energy to grid energy. Update climate change scenarios and implement mitigating actions required to achieve the 2°C trajectory in 2021.</p> <p>Results : 4% decrease in GHG intensity compared to 2019; 3,586 GJ of renewable energy generated – less than 1% of total generation; \$125 mln Green Loan with Societe Generale.</p>	<p>En+ is committed to transparency in its operations and since 2016 has conducted annual independent audits of reports on the direct and indirect greenhouse gas emissions of aluminum and alumina assets, aluminum carbon footprint</p> <p>Results: Sharing insights with industry peers, other sectors, and leading scientific experts; Testing a revolutionary technology to reduce energy consumption during aluminum production; Procurement of at least 95% of the power for aluminum smelters; Electricity is generated from hydropower plants and other low-carbon generation sources.</p>



<b>Comparison with Atlas's recommendations</b>		
<p>Metalloinvest has a high degree of implementation of the Atlas recommendations. As a recommendation, the company needs to share its R&amp;D experience with local authorities in the regions where it operates.</p>	<p>Polymetal is actively working to implement the recommendations described in the Atlas. The changes help the company in obtaining third-party financing for the development of green projects. Polymetal needs to use the potential in joint R&amp;D projects.</p>	<p>En+ Group has for the most part implemented the recommendations offered by Atlas. The company should take into account the method of carbon pricing.</p>

**Findings**

Companies have a high stake in the implementation of SDG 13. They have well-organized projects to reduce CO<sub>2</sub> emissions in the environment. Companies need to pay more attention to interaction with third parties aimed at developing joint impact measures. Also, the next step could be the development of the method of carbon pricing in the evaluation of projects.

**SDG14. Life below water: conserve and sustainably use the oceans, seas and marine resources for sustainable development.**

Atlas's recommendations: to incorporate life under water into impact assessments and approach seafloor mining cautiously. The Atlas calls to develop multistakeholder coastal zone management plans and to collaborate with local authorities to establish conservation areas and marine reserves.

<b>LLC Metalloinvest</b>	<b>Polymetal International plc.</b>	<b>PJSC En+ Group</b>
<b>Actions and results</b>		
<p>Due to the specific nature of the company's business and the absence of oceans and seas in the cities of presence, this goal is not covered by the company's activities and is not a focus.</p>	<p>According to the data represented in the Polymetal's report, the company does not operate in regions of water stress. However, its mining operations rely on water and the company receives permissions for limited water use to control its impacts on local water bodies.</p>	<p>En+ seeks to build a coalition of stakeholders by 2025 that aims to reduce the impact of microplastics on ecosystems through collaborative programs and research. To date, En+ Group has financed a scientific expedition to Lake Baikal and signed an agreement with the Institute for Problems of Ecology and Evolution of the Russian Academy of Sciences to conduct joint research on nano- and microplastics in ecosystems and their impact on living organisms.</p> <p>Results:            Joint work with the Institute for Water Problems of the Russian Academy of Sciences to select the mode of operation of power plants            Funding a fish breeding program to maintain species diversity.</p>

<b>Comparison with Atlas's recommendations</b>		
Metalloinvest, due to the nature of its business, does not implement the recommendations described in the Atlas.	Polymetal is in the early stages of SDG 14, forming directions for future work.	En+ Group has a well-established structure for implementing the recommendations of the Atlas. The stakeholder approach to project implementation is used.

**Findings**

Since SDG 14 is not a priority goal for companies, there is a low level of engagement in its implementation at this stage. En+ Group is the most responsive to Atlas' recommendations. It can also be noted that Polymetal notes the importance of implementing this goal and is working on a plan to implement it as part of its operations.

**SDG15. Life on land: protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.**

Atlas's recommendations: to achieve net positive or net loss impact and preserve ecosystem services. The necessity to support projects that link communities and biodiversity and collaborate in research initiatives is noted.

<b>LLC Metalloinvest</b>	<b>Polymetal International plc.</b>	<b>PJSC En+ Group</b>
<b>Actions and results</b>		
<p>Metalloinvest regularly monitors the biodiversity of flora and fauna and supports institutions involved in the study and preservation of typical and unique ecological systems.</p> <p>Metalloinvest, has joined the initiative to restore Siberian taiga.</p> <p>The company carries out bioreclamation - planting plants, preserving the soil from wind erosion.</p> <p>Results:  Recultivation on an area of 6.5 hectares was carried out;  Preventing and cleaning up aftermaths of fires and emergencies.  Fighting with consequences of fires and emergencies.</p>	<p>Leading technologies applied at mine closures to ensure constant improvement of mine lifecycle management.</p> <p>Advancing land rehabilitation and reclamation practices.</p> <p>Conducting biodiversity monitoring and planning prevention and mitigation measures</p> <p>Results:  25952 hectares of land managed;  1560 trees planted  0 significant biodiversity impacts reported.</p>	<p>En+ has initiated Russia's first large-scale forest preservation and reproduction project, which involves planting 1 million trees;</p> <p>Aerial forest preservation is the best way to control the situation and respond quickly to fires that can lead to forest destruction.</p> <p>Results:  Collaboration with the Krasnoyarsk Forest Fire Center on a project to protect more than 500,000 hectares of forests in Siberia  Purchasing firefighting equipment and recruiting and training new firefighting aviation personnel;  Ecological monitoring of animal biodiversity.</p>

<b>Comparison with Atlas's recommendations</b>		
Metalloinvest fully implements the Atlas recommendations. The company actively participates in scientific projects for the	Polymetal has for the most part implemented the recommendations outlined in the Atlas. Polymetal	En+ Group fully implements the recommendations allocated by Atlas. The company is actively involved

conservation of flora and fauna biodiversity.	needs to focus on projects aimed at working with stakeholders to transfer experience and develop new initiatives.	in working with local rescue services.
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### Findings

Companies take a responsible approach to the issue of restoring biodiversity on the sites where they operate. There are internal programs to minimize the effects of interference of companies in nature. It is also noted the desire of companies to involve local authorities in participation in joint environmental projects.

### **SDG16. Peace and justice and strong institutions: promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.**

Atlas's recommendations: to prevent and preempt conflict and respect indigenous rights. The Atlas calls to facilitate peaceful working environment and good community relationships and to promote the rule of law.

LLC Metalloinvest	Polymetal International plc.	PJSC En+ Group
<b>Actions and results</b>		
<p>The Company approved a Human Rights Policy describing the significance and key aspects of the human rights approach.</p> <p>Combating Fraud and Corruption and Preventing Unfair Economic Activities</p> <p>The Company began a survey of its counterparties to understand the extent to which sustainability aspects are integrated into companies' management systems and their daily business practices.</p> <p>Results:</p> <p>Updating the Anti-Corruption Policy;</p> <p>Training of employees on the Anti-Corruption Policy.</p>	<p>Enhancing human rights training and assessment practices across Polymetal sites and business units.</p> <p>Dissemination and promotion of human rights requirements and best practices across upstream and downstream supply chain contractors.</p> <p>Result:</p> <p>Conduction of an online human rights training to employees</p>	<p>En+ Group respects personal freedom and human rights, provides equal opportunities for all and condemns any form of discrimination in the workplace.</p> <p>Results:</p> <p>The Company is developing new policies: Code of Corporate Ethics, Human Rights Policy, Board Diversity Policy.</p>

### Comparison with Atlas's recommendations

Metalloinvest is partially working on the Atlas recommendations. More attention is aimed at solving problems related to corruption and creating a peaceful working environment.	Polymetal is in full compliance with Atlas' recommendations.	En+ group partially implements Atlas tasks. The company has developed internal regulatory documents. It is necessary to proceed to their active implementation.
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### Findings

Companies, for the most part, are pursuing the goals recommended by the Atlas. To achieve the goal, it is necessary to create special programs aimed at creating and maintaining good relationships with the indigenous populations of the regions where they are present.

### **SDG17. Partnerships for the goals: strengthen the means of implementation and revitalize the global partnership for sustainable development.**

Atlas's recommendations: to engage in public-private partnerships and facilitate trust with government and communities. The important points are: applying SDG indicators, strengthening coordination between initiatives and joining with bottom-up grassroots movements and top-down leadership initiatives.

LLC Metalloinvest	Polymetal International plc.	PJSC En+ Group
<b>Actions and results</b>		
<p>The company develops and participates in programs to support and develop social infrastructure characterized by investment in city and regional projects initiated jointly with local authorities. The company actively participates in the activities of national, regional and international organizations and associations.</p> <p>Result: Joining the UN Global Compact; Participation in external initiatives and business events.</p>	<p>The company complies with all laws and regulations and engage transparently, particularly on mining legislation issues. Polymetal have also recently joined the Anti-Corruption Charter of Russian Business to actively support the voluntary implementation of special anti-corruption programs by Russian companies.</p> <p>Result: 34 – number of partnership agreements.</p>	<p>En+ Group engages with stakeholders at the national and international levels, exchanging experience with representatives of states, scientific and public communities, as well as with business partners to address the global challenges of today.</p> <p>Results: Active support for the UN Global Compact as part of the Business Ambition for 1.5°C project and the Energy Transitions Commission (ETC). "Partnership for Sustainable Development" as an additional benchmark for our business; Aluminum for Climate Initiative; Russian Partnership for Climate Conservation.</p>

### Comparison with Atlas's recommendations

<p>Metalloinvest for the most part complies with Atlas' recommendations. Actions are aimed at creating new partnerships and relationships. The company needs to more actively implement SDG indicators.</p>	<p>Polymetal has for the most part complied with Atlas' recommendations. Nevertheless, it needs to work out a mechanism for implementing the SDG initiatives within the company.</p>	<p>En+ Group fully complies with the recommendations described in the Atlas.</p>
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### Findings

Partnerships to achieve the SDGs are an integral part of companies' strategies. Companies are at different stages of implementing the Atlas recommendations. In order to achieve SDG 17,

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a mechanism needs to be created to evaluate the implementation of the SDGs within companies. Interaction with each other can serve as an excellent starting point for its creation.

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As a result of the analysis, there are some statements to be noted:

- 1) The level of implementation of each company's sustainability goals is different, despite the similarity of the environment in which the companies operate.
- 2) Not all SDGs are covered by companies within the scope of their activities.
- 3) In shaping strategy and actions towards sustainable development, the studied companies rely on a long-term perspective.
- 4) Companies look favorably upon the goals proposed by the global community, share them, and are willing to get actively involved to achieve them.
- 5) Stakeholders influence the choice of priority for the implementation of the SDGs by companies.

### **2.2.2. Motivation of Russian mining companies to incorporate SDGs into strategy**

The issue of motivation is always relevant to the corporate sector (Freeman, 2010). Some people do not see any benefits associated with the implementation of SDGs in companies' strategies. Nevertheless, there are works (PWC, 2018, Deloitte, 2019) highlighting factors that motivate companies to implement SDGs. Two factors are most often mentioned: the focus on reducing the detrimental impact on the environment and increasing investment attractiveness among investors. The latter factor was reflected in each of the responses from company representatives.

#### **Metalloinvest:**

*«Greater openness of data that appears to any stakeholder. The openness of information forces companies to be more transparent and understandable. Openness, among other things, generates changes in business processes and increases investment attractiveness».*

#### **Polymetall:**

*«Adopting and following the SDC concept is important for us, as a public company, in terms of attracting Western investors. Communication of our achievements is able to attract new investors both directly and through analytical agencies that periodically publish their ratings.*

*The motivation also comes from directly saving money on those projects that aim to minimize costs and increase the efficiency of water and electricity consumption.*

*Another reason is the opportunity to obtain "green" financing for projects aimed at achieving the SDGs. The economic benefit is achieved through a reduced interest rate on the loan».*

**En+ Group:**

*«We have an international agenda. We have to adjust to this agenda in order to maintain our competitive edge and be attractive to investors. And without it, competitive advantage is now very difficult to prove».*

**En+ Group representative told another incentive devoted to climate change:**

*«Climate issues are now at the forefront of the SDGs. That is why companies from various industries have to deal with this agenda. Speaking of En+, the group has been actively involved in the climate agenda since long before the SDGs».*

**Metalloinvest representative had added two more points:**

*«The motivation is our desire to attract highly qualified personnel. There is always a struggle in the market for personnel and modern young personnel. These are people who look at the business differently and are willing to change it according to new agendas. To attract them, we have to meet high standards».*

*«Manufacturing and changing production processes also motivate the company to implement the SDGs. Modern technology allows us to save resources and produce less waste. And this brings us closer to participating in solving the world's global challenges».*

**2.2.3. Possible challenges of SDGs implementation**

According to a report by Deloitte (2019), companies face the challenge of communicating the need to implement the SDGs to external stakeholders.

**Metalloinvest' representative told:**

*«The first and most important problem is that few people understand what sustainability is. This is true at the top and middle management level as well».*

**Polymetall' representative added:**

*«The challenge in implementing the SDGs is communicating the results of their implementation. The company has many stakeholders who want to hear the information of interest to them. And at the moment, there are no universal standards that would regulate the detail of reports for each stakeholder».*

**Representative of En+ Group also noticed similar point:**

*«Another difficulty is about the level of awareness within the sustainable development phenomenon. It seems that compared to other developed countries, we have a low level of awareness on this issue. Because of this, it is difficult to implement the planned projects».*

One of the next obstacles to implementing the SDGs is the financial aspect (Mio et al., 2020, PWC, 2018). For the most part, SDG implementation projects are capital-intensive, requiring a significant cash reserve. Metalloinvest expert also highlights this challenge.

**Metalloinvest:**

*«As a second difficulty, we can highlight the need for large investments. All sustainability projects are expensive, and the main goal of the company is still to make a profit. It is necessary to prioritize projects».*

**En+ Group:**

*«There are opinions that the financial side of projects is a challenge for companies. On the contrary, it seems to me that sustainability projects are the basis for creating the green economy of the future. It makes a company more sustainable. It means attracting new investors, improving credit ratings, and increasing cash flow».*

There is no unequivocal opinion on this issue among company representatives and academics.

The third challenge that stands out in the discussion is a regulatory one. The SDGs describe a global agenda without regard to the specifics of the regions, which creates additional difficulties in adapting them to the conditions of different countries.

**Metalloinvest:**

*«It is also necessary to note the regulatory and legal field. It is not elaborated and it is not always possible to implement a particular project on sustainable development, based on a clear norm».*

**Polymetall:**

*«Since the UN recommendations for the implementation of the SDGs are universal, they do not take into account the specifics of countries. We can highlight legislative specifics that are not adapted to all global goals and sometimes cannot interpret a particular action».*

**En+ Group:**

*«Since the SDGs are international, they do not take into account the specifics of each country. Each country has its own legislation, which also has its own peculiarities. Therefore, it is not always possible to act within the law».*

The representative of Metalloinvest also highlighted the challenge associated with the lack of clear tools for the implementation of SDG practices.

*«Another challenge is the lack of clear mechanisms for the implementation of certain practices. At the moment, it takes a lot of time to develop, implement and use one or another practice».*

A description of a similar challenge was found in Monteiro et al. (2019). They also noted the need for unified mechanisms for the implementation of SDG practices.

#### **2.2.4. The way companies prioritize SDGs implementation**

According to data provided by PWC (2018), only 50% of the companies surveyed identified priority SDGs to achieve. Making decisions and choosing among many options is a difficult task for any company and individual. Company representatives told what they are guided by when prioritizing SDGs for implementation.

##### ***Metalloinvest:***

*«The company and its management proceed from the goals they have in prioritizing the SDGs. Each company has its own regional specifics. Some goals are impossible to achieve, as in the case of no sea or ocean presence in the region. It seems to me that it is right to prioritize goals and contribute to them more than to try to succeed in all goals at the same time and not achieve a meaningful result. At the same time, key goals should be chosen based on specific business objectives».*

##### ***Polymetall:***

*«To prioritize the SDGs, we engaged consultants and conducted a collaborative study, followed by a meta-analysis and a review of the scientific literature. We also interviewed people in the mining industry from different companies and different levels of position. They talked about the impacts of mining on the world around them and compared the SDGs with our capabilities. This identified the priority goals to which the company could contribute the most. As for the other goals that were not prioritized, they are also being worked on in our projects, but with less effective because of the nature of our industry».*

##### ***En+ Group:***

*«The prioritization of goals is based on an expert decision by the management team. For us, these are the eight goals that the company can have the greatest impact on. We have looked at all 17 SDGs, but given the specifics of our business, we have chosen a category in which we can focus. I would like to note that we are working on projects under all 17 SDGs, among which eight are priorities».*

All respondents noted the need to cooperate with stakeholders to comprehensively analyze the choice of priority goals. As noted by the En+ representative, it is impossible to achieve and select goals without the involvement of other stakeholders. At this stage of the research, the most frequent option for the prioritization of SDGs is the use of expert opinion represented by professionals of various levels. This conclusion correlates with the findings of PWC (2018) and Deloitte (2019). It can be noted that there is no unified tool for prioritizing goals for SDGs implementation.



### 2.3. Research findings and discussion

The study of materials presented in official reports on sustainable development, comparing them with the recommendations of the Atlas, and discussing specifics with company representatives provided insights into the specifics of implementing the SDGs in the activities of companies in the Russian mining industry. The purpose of this part is to formulate summarizing comments on the specifics obtained during the research.

According to the first research question, the motivation of companies to follow the SDGs was studied (WEF, 2015). The following model combines the key factors based on the empirical part (Figure 4).

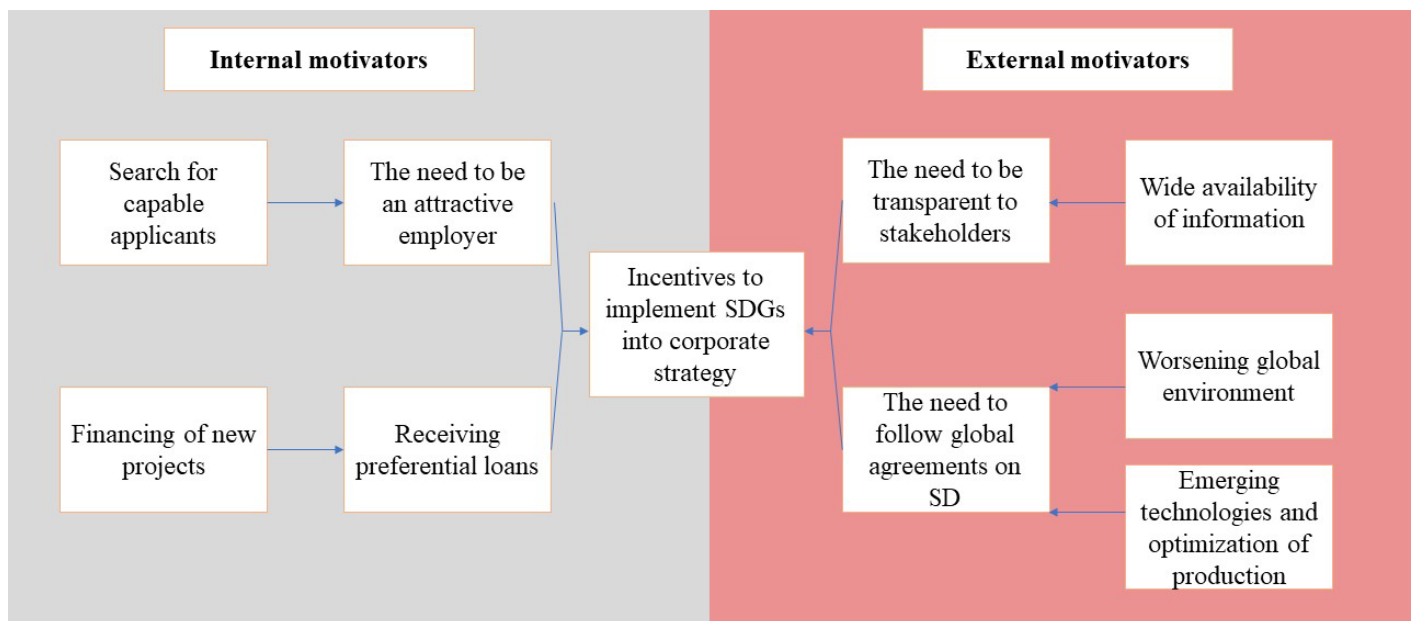


Figure 4 - Model: Companies' incentives to implement SDGs

Source: Author

The presented model clearly demonstrates the main external and internal motivators of companies. Separately, it is necessary to highlight the intrinsic motivator - the search for a capable applicant - there was no mention of this motivator in the previously studied literature. In terms of quantity, external motivators outnumber intrinsic motivators. This fact correlates with the stakeholder theory, within which this study is considered.

The answer to the second research question revealed the main challenges that companies face when implementing the SDGs into their practices. The main challenges are listed below:

1. lack of awareness among stakeholders in understanding sustainable development;
2. lack of a unified format for sustainable development reporting;
3. high capital intensity of projects aimed at achieving the SDGs;
4. inadequate legal and regulatory framework;

5. lack of mechanisms and best practices of SDG implementation (WEF, 2016);
6. lack of suppliers that meet the sustainable requirements.

During the interviews, the experts named factors that overlap or fully coincide with those outlined in the academic literature. Thus, it was possible to cross-check the data and understand that the principle of data triangulation was achieved.

The analytical report prepared by Skolkovo and Unilever (2016) considers the identified challenges and their impact on the development of the concept of sustainable development in Russia. The highlighted challenges are reflected in the report. An interesting barrier to implementation was the predominance of short-term planning. It is highlighted in the report as one of the most frequent barriers in Russia. This cannot be said about mining companies. On the contrary, they build their strategy and projects based on a long-term perspective.

Finally, answering the third research question, the interviewees described similar mechanisms of SDG prioritization. When making a decision, company representatives take into account the many characteristics inherent in their companies: the geography of operations, the number of employees, the peculiarities of the implementation of the technological process, and many others. The second step is the comparison of the received features with the objectives, which are prescribed in each of the 17 SDGs. The possibility and completeness of the company's influence on one or another goal are evaluated. The company chooses six to eight priority goals which, when achieved, will make the greatest contribution to the sustainability agenda. After that, the process of developing measures and selecting tools for their implementation and control begins. In the last two stages, the proposed measures are implemented and their success is tracked through KPIs. Thus, the process of prioritizing the SDGs for elaboration can be visualized as follows (Figure 5).

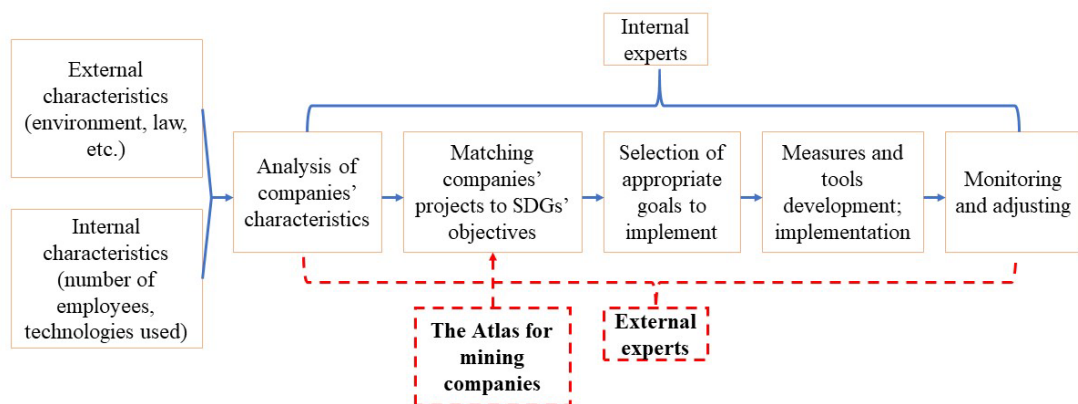


Figure 5 - The model: typical SDGs prioritization scheme and proposed recommendations

Source: Author

The involvement of third-party consultants in the stages of analyzing company activities, selecting priority goals, and developing SDG implementation programs can improve the quality and applicability of the implemented measures. The blocks highlighted in red are those recommended for companies to incorporate into their model of SDG prioritization and implementation. It should also be noted that all of the companies reviewed assume to contribute to all 17 SDGs. At the same time, they clearly understand that the quality of goals implementation depends on their quantity. To achieve meaningful results, it is important to properly assess existing projects, to understand how it is possible to adapt production processes to the requirements of the Atlas. The comparative analysis allows us to identify those SDGs to which companies pay the most and the least attention.

Based on the data gathered from the comparison process and interviews conducted, recommendations for implementing the SDGs into companies' strategies were formulated. The model below (Figure 6) presents the common steps of SDG implementation with recommendations for the respective stages.

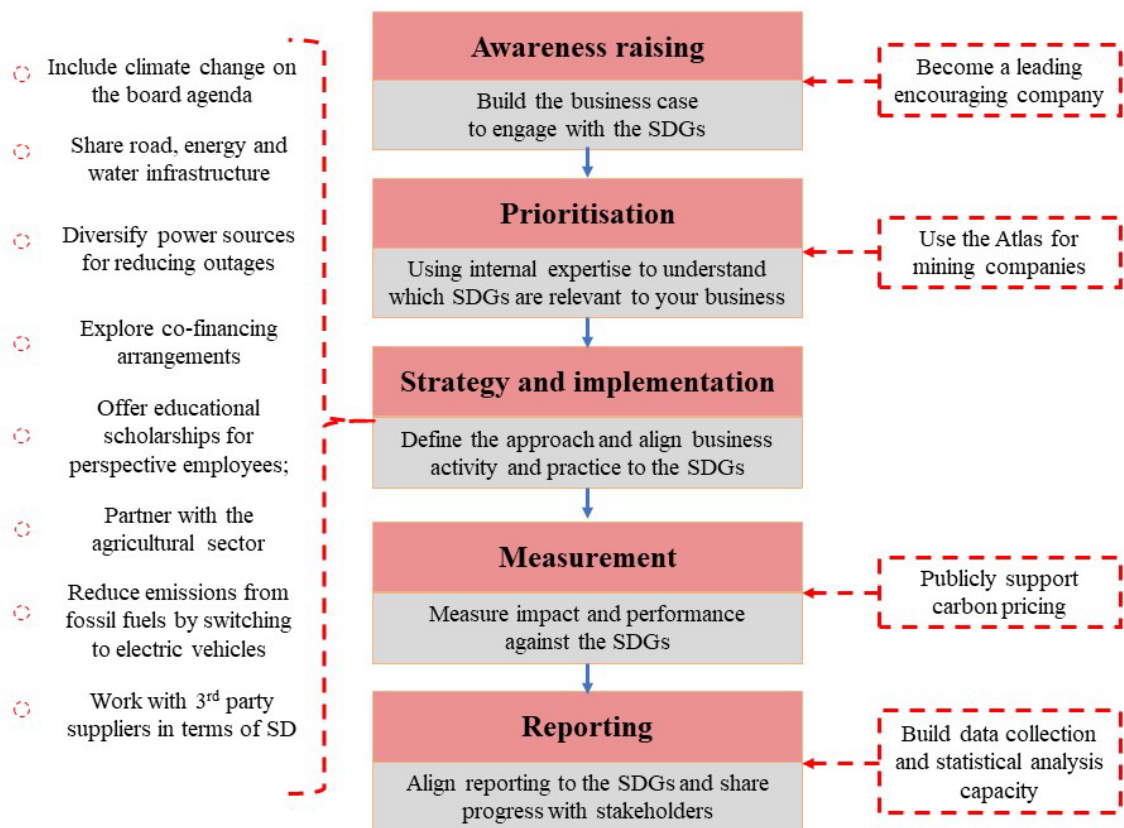


Figure 6. The model: Typical steps for SDGs implementation with recommendations founded  
Source: Author

The process of implementing the SDGs consists of five steps. The process begins with an understanding of what the SDGs are, what their definitions and objectives are. There is a presentation of the concept of sustainable development. At this step, the company is recommended

to become a leader, demonstrating the desire to be a part of the global agreement, inspiring other companies to participate in the agenda. It is necessary to start with the research, assess the relevance of implementing one or another SDG into their practice, and understand which of them have the greatest potential for implementation.

The second important step is to prioritize the SDGs for implementation. The Atlas for Mining Companies discussed earlier can help with this. It is necessary to assess which SDGs the company will be able to contribute the most to. Potential risks and opportunities from their implementation should also be assessed during this step.

The third stage is the most resource-intensive. It involves identifying new opportunities for revenue growth through sustainability projects. At this stage, there is a selection and application of tools for the implementation of priority SDGs. As for recommendations, the following are highlighted:

- Include climate change on the board agenda – company management must share the value of the company's contribution to the SDGs.
- Share road, energy and water infrastructure – The design of transport logistics, resource flows should take into account the possibility of joint use of infrastructure with 3<sup>rd</sup> parties.
- Diversify power sources for reducing outages – diversification can be achieved by introducing alternative energy sources that will be effective in the region where the company operates (wind generators, solar panels, etc.).
- Explore co-financing arrangements – the implementation of projects in the mining sector involves the participation of many stakeholders. When planning projects aimed at achieving the SDGs, it is recommended to seek stakeholders for co-financing.
- Offer educational scholarships for perspective employees – because employees are valuable to the company, it is necessary to support them and provide opportunities for development and training within the company.
- Partner with the agricultural sector – Mining companies have a negative impact on the land where technological operations were carried out (KPMG, 2016). It is necessary to cooperate with specialists from the agricultural sector for effective restoration of land and its further useful use.
- Reduce emissions from fossil fuels and transportation by switching to electric vehicles – The recommendation is aimed at reducing the level of CO<sub>2</sub> polluting the atmosphere and accelerating the emergence of the greenhouse effect (Unepcom, 2020).
- To keep focus on 3<sup>rd</sup> party suppliers. They should meet the SD requirements – when working with suppliers of services and goods, it is necessary to carry out thorough work aimed at improving their attitude to the topic of sustainable development. Based on the accumulated

experience in the implementation of the SDGs, it is possible to provide information support to the 3<sup>rd</sup> party organizations (Govindan et.al., 2016).

The fourth step is to measure the performance of sustainability projects. During the interviews, a difficulty was identified due to the lack of a single method for evaluating the effectiveness of sustainability projects. One solution to this issue is to use the method of carbon pricing (S&P Global, 2020). Using its principles, it will be possible to assess the economic efficiency of the implemented project.

The final step is reporting. This step involves the preparation of a sustainability report outlining the achievements of each of the SDGs (Wayback et.al, 2013). For automatic collection, storage and processing of information, it is recommended to implement data management systems.

## CONCLUSION

Over the next nine years, the Sustainable Development Goals set the global direction for social, environmental, and economic development (Stevens and Kanie, 2016). Companies of various levels play an important role in the successful implementation of the identified SDGs. They are called to be drivers of development, creating value for the business, society, and nature (Porter and Kramer, 2011; Banks et al., 2016).

This research is aimed at studying the sustainability agenda in Russia, identifying within it the specifics of SDG implementation and, as a result, formulating recommendations for the implementation of SDGs in the strategies of companies in the mining industry. The study is a qualitative analysis of data obtained from secondary sources of information (sustainability reports, analytical and industry reviews) and clarified through interviews with company experts.

The research questions posed at the beginning of the work allow for a comprehensive assessment of companies' motivations to implement the SDGs, the challenges they encounter in their implementation, and an understanding of how the priority of implementation is determined. This information is needed to develop detailed recommendations for companies that are already starting to implement the SDGs in their strategy and for those that are just thinking about it.

The context of stakeholder theory was used to consider the phenomenon of sustainable development. As defined, stakeholders influence decisions made within the framework of the SDGs and their implementation in the companies' strategy.

A multiple case study of a homogeneous sample of three mining companies in Russia was used as the research method. This approach is effective when considering a previously little-studied phenomenon and allows us to find insights. In the qualitative research method, it is important to use the principle of data triangulation in order to improve the quality of the results obtained. Thus, three sources were used for this purpose: third-party analytical reviews and industry news, interviews with experts, and official sustainability reports.

Based on the results of this work, the following list of recommendations was drawn up for the implementation of the SDGs in the strategies of companies in the mining industry.

### **The list of recommendations**

- Build data collection and statistical analysis capacity.
- Publicly support carbon pricing.
- Become a leading company, encouraging other companies in the industry to follow the SDGs, setting an example for them by disclosing information.
- Use the Atlas for mining companies to adjust SDGs.
- Include climate change on the board agenda.

- Share road, energy and water infrastructure.
- Diversify power sources for reducing outages.
- Explore co-financing arrangements.
- Offer educational scholarships for perspective employees.
- Partner with the agricultural sector.
- Reduce emissions from fossil fuels and transportation by switching to electric vehicles.
- Keep focus on 3<sup>rd</sup> party suppliers. They should meet the SD requirements.

To summarize, this study provides insights into the specifics of implementing the SDGs in the strategies of Russian mining companies using a homogeneous sample as an example. The study analyzed the specifics of SDG implementation. As a result, similarities and specifics for each company were highlighted.

It should also be noted that mining companies in Russia use the SDGs from a tactical point of view. In general, there is a tendency to use sustainability trends throughout the country, despite the fact that government officials are stating the importance of the SDGs and the need for companies to become more involved in the sustainability agenda.

### **Theoretical implication**

The study describes a significant theoretical implication based on three case studies. It describes the specifics of implementing the SDGs in the strategies of mining companies.

This study aims to fill the research gap with relevant information. It contributes to the existing literature on the topic of sustainability and its implementation in the corporate environment (Bansal P., 2005; Blagov Y., 2016; Gorman M., 2018). Most of the current literature is of a general introductory nature, not highlighting the specifics of different industries. The Russian reality is that due to the rich raw material base, the oil and gas and mining industries are actively developing in Russia. They, in turn, have a significant role in shaping the sustainable development of the regions where they are present. That is why it is so important to consider the specifics of SDG implementation on the example of companies in the mining industry in Russia. In addition to the peculiarities, the paper highlights the difficulties that mining companies encounter in the implementation of SDGs. According to the results of the work, the motives that guide companies in making decisions to implement the SDGs in their practices have been highlighted, which complements the existing research (Norgaard, 2010; Starik M., 2013; Galimova M., 2016; Shahjadi H. et al., 2019; ,) in terms of industry specifics.

## **Managerial implication**

Considering sustainability projects, decisive management decisions are important to a company's operations. The analyzed companies are able to use the results of the comparison with the Atlas recommendations to develop current sustainability projects. For example, En+ Group needs to revise the procedure for prioritizing the SDGs for implementation. The company is recommended to engage external expert consultants to conduct an independent expert review in order to avoid biases.

With regard to the use of the results, mining companies can use the information to form a sustainability strategy for their operations. The challenges of implementing the SDGs discussed above will allow new companies to better plan for the facilitation of potential threats. Finally, the framework associated with the Atlas can serve as a guide for companies to further incorporate the SDGs into their corporate strategies.

## **Limitations**

When preparing conclusions for the exploratory type of research, the author may make inaccuracies associated with incorrect interpretation of the information obtained, which is due to a lack of relevant information or the complexity of the context under study. The companies studied demonstrate advanced approaches to corporate sustainability, but the insights gained cannot be extrapolated directly without future research.

The study is based on information taken from companies' public reports for the 2017-2019s. This is a short period of time, during which it is not easy to achieve significant results related to the implementation of the SDGs.

Another limiting factor is the regional specifics. As cases, companies carrying out their main activities on the territory of Russia were considered.

## **Future researches**

The study reveals the specifics of the implementation of SDGs by companies in the mining industry in Russia. Nevertheless, there remain uncovered theoretical and practical issues for further research. For example, leaving the same industry, it is possible to further determine the factors influencing the level of implementation of SDGs by companies.

For further research, it is possible to study the peculiarities of implementing sustainable development strategies by mining companies in a crisis - in the context of the Covid-19 pandemic, for example. The results obtained during the study can be compared with those of the author in his



work. This kind of work will help answer the question of the extent of influence of crises on the implementation of SDGs.

The sample of companies included in the study is homogeneous in terms of the type of activity and sources of raw materials. The companies under consideration extract raw materials for metal production. Alternatively, a comparative analysis can be made between companies engaged in metal production and those extracting coal for further processing. Comparative analysis may be made between companies in developed and developing countries.

Since the sustainability goals were adopted relatively recently, many companies have not yet had time to adapt them into their strategies. Further research could be based on the study of more companies.

## REFERENCES

### *Literature in English*

- About ESG ratings (2020). [Online resource]// - access <https://raexpert.ru/ratings/esg/about/> (date 19.01.2021).
- Allen, W. (2007). *Sustainable development and community resilience*. Retrieved January 17, 2021 [Online resource]// - access <https://learningforsustainability.net/susdev/> (date 12.02.2021).
- Banks, G., Scheyvens R., & Hughes, E. (2016). *The Private Sector and the SDGs: The Need to Move Beyond 'Business as Usual'*. *Sustainability Development*, 24, 371–382.
- Bansal P. (2005). *Evolving sustainably: a longitudinal study of corporate sustainable development*. *Strategic Management Journal* 26(3):197–218.
- Barbier, E. B. (2006). *Natural Resources and Economic Development*. Great Britain: Cambridge University Press.
- Bilan Y. (2017). *Sustainable Development of a Company: Building of new level relationship with the consumers of XXI century*. *Business and Sustainable Development*, 15, 687-701.
- Blagov, Y., and Petrova-Savchenko, A. (2016). *Corporate Strategies for Sustainability: The Experience of Leading Russian*. Sustainable Development Knowledge Platform. Crowdsourced briefs 2016 [Online resource]// - access [https://sustainabledevelopment.un.org/content/documents/1080473\\_Yury%20et%20al.\\_Corporate%20Strategies%20for%20Sustainability-the%20Experience%20of%20Leading%20Russian%20Companies.pdf](https://sustainabledevelopment.un.org/content/documents/1080473_Yury%20et%20al._Corporate%20Strategies%20for%20Sustainability-the%20Experience%20of%20Leading%20Russian%20Companies.pdf) (date 16.12.2020).
- Blewitt, J. (2017). *Understanding Sustainable Development* (3<sup>rd</sup> ed.). London: Routledge, 426.
- Bonchek M.S., Shepsle K.A. (1996). *Analyzing politics: Rationality, behavior and institutions*. New York: W.W. Norton & Co.
- Bosse D.A., Phillips R.A., Harrison J.S. (2009). *Stakeholders, reciprocity, and firm performance*. *Strategic Management Journal* 30(4):447–456.
- Brown, L. R. (2011). *World on the Edge: How to Prevent Environmental and Economic Collapse*. U.S.: Norton, 174.
- Brundtland Commission (1987). *Report of the World Commission on Environment and Development*. United Nations.

Bruton G.D., Ahlstrom D., Li H.L. (2010). *Institutional theory and entrepreneurship: where are we now and where do we need to move in the future?* Entrepreneurship Theory and Practice: Baylor university: 421-440.

Bryman, A. and Bell, E. (2003). Business research methods. Oxford University Press.

Bstudy (2020). Sustainability development factors influencing metal industry. [Online resource]// - access - [https://bstudy.net/787042/ekonomika/factory\\_ustoychivogo\\_razvitiya\\_metallurgicheskoy\\_otrasli\\_kontseptsii\\_inklyuzivnogo\\_rosta](https://bstudy.net/787042/ekonomika/factory_ustoychivogo_razvitiya_metallurgicheskoy_otrasli_kontseptsii_inklyuzivnogo_rosta) (date: 09.02.2021).

Clifton D., Amran A., (2011). *The stakeholder approach: a sustainability perspective.* Journal of Business Ethics 98(1):121–136.

D'amato, A.; Henderson, S.; Florence, S. (2009), *Corporate Social Responsibility and Sustainable Business: a guide to leadership tasks and functions.* North Carolina: Center for Creative Leadership, 104.

Deloitte (2019). *How can you implement the SDGs in your business?* [Online resource]// - access <https://www2.deloitte.com/dk/da/pages/strategy-operations/articles/implement-the-SDGs.html> (date 23.12.2020).

Derry R. (2012). *Reclaiming marginalized stakeholders.* Journal of Business Ethics 111:253–264.

Eisenhardt K.M. (1989). *Building Theories from Case Study Research.* Academy of Management Review, 14: 532–50.

ESG rating [Online resource]// - access [https://raex-rr.com/country/RAEX-600/ESG\\_rating#cart](https://raex-rr.com/country/RAEX-600/ESG_rating#cart) (date 20.02.2021).

Fang T. (2010). *Asian management research needs more self-confidence: Reflection on Hofstede (2007) and beyond.* Asia Pacific Journal of Management, 27(1), 155–170.

Freeman RE (1984). *Strategic management: a stakeholder approach.* Pitman, Marshfield, MA, 276.

Freeman RE (1994). *The politics of stakeholder theory: some future directions.* Journal of Business Ethics Q 4(04): 409–421.

Freeman RE (2010). *Managing for stakeholders: trade-offs or value creation.* Journal of Business Ethics 96: 7–9.

Friedland R. & Alford R. (1991). *Bringing Society Back in Symbols, Practices, and Institutional Contradictions.* Ed. by Powell W.W., DiMaggio, P.J. The New Institutionalism in Organizational Analysis. Chicago, IL: University of Chicago Press, 232-263.

Glover J.L., Champion D., Daniels K., Dainty A. (2014). *An Institutional Theory perspective on sustainable practices across the dairy supply chain*. International Journal of Production Economics, 152, 102–111.

Gorman, M.R., Dzombak, D.A., (2018). *A review of sustainable mining and resource management: transitioning from the life cycle of the mine to the life cycle of the mineral*. Resources, Conservation and Recycling. 137.

Govindan K., Shankar M., Kannan D., (2016) *Supplier selection based on corporate social responsibility practices*. International Journal of Production Economics, 353-379.

Grober, U. (2007). *Deep roots: A conceptual history of 'sustainable development'*. WZB Discussion Paper, No. P 2007.

Hahn, R., (2013) *ISO 26000 and the Standardization of Strategic Management Processes for Sustainability and Corporate Social Responsibility*. Business Strategy and the Environment, 22, 442–455.

International Council on Mining&Metals (2021). *Society and economy*. [Online resource]// - access <https://www.icmm.com/ru> (date: 24.03.2021).

IPCC Fifth Assessment Report (2014). *Climate Change 2014: Impacts, Adaptation and Vulnerability*, Geneva (Switzerland): IPCC, 167.

James P., (2014). *Assessing Cultural Sustainability: Agenda 21 for Culture*. [Online resource]// - access [http://www.agenda21culture.net/sites/default/files/files/documents/en/newa21c\\_paul\\_james\\_eng.pdf](http://www.agenda21culture.net/sites/default/files/files/documents/en/newa21c_paul_james_eng.pdf) (date 20.01.2021).

Jepperson R. (1991). *Institutions, institutional effects, and institutionalism*. Ed. by Powell W.W., DiMaggio, P.J. The New Institutionalism in Organizational Analysis. Chicago, IL: University of Chicago Press, 143-163.

KPMG (2016). *Metals and Mining in Russia*.

Leal Filho W. (2011). *About the role of universities and their contribution to sustainable development*. Higher Education Policy. 24:427–438.

Marquis C., Tilcsik A. (2016). *Institutional Equivalence: How Industry and Community Peers Influence Corporate Philanthropy*. Organization Science. 27 (5): 1325–1341.

Meyer J.W., Rowan B. (1991). *Institutionalized organizations: Formal structure as myth and ceremony*. Ed. by Powell W.W., DiMaggio, P.J. The New Institutionalism in Organizational Analysis. Chicago, IL: University of Chicago Press, 41-62.

Monteiro N.B., Silva E.A., Neto J.M. (2019). *Sustainable development goals in mining*. Journal of Cleaner Production. 228. 509-520.

Newsletter on current trends Russian economy (2019). [Online resource]// - access <https://ac.gov.ru/files/publication/a/21979.pdf> (date 22.03.2021).

Norgaard, R.B. (2010). *Ecosystem services: From eye-opening metaphor to complexity blinder*. *Ecological Economics*, 69, 1219-1227.

North D.C. (1990). *Institutions, institutional change and economic performance*. New York: Cambridge University Press.

Passet, R.(1979). *L'Économie et le vivant*. Paris: Payot., 287.

Porter M., Kramer, (2011). *Creating Shared Value*, Harvard Business Review. Vol. 89. Issue ½. P.62–77.

PWC (2018). From promise to reality: Does business really care about the SDGs?

PWC (2020). Mining industry 2020.

Shahjadi H.F., Nazmul H., Parvez M., Saidur R., (2019). *A review on the impact of mining and mineral processing industries through life cycle assessment*. *Journal of Cleaner Production*, 1201-1205.

Skolkovo, (2016). *Sustainable development in Russia*. [Online resource]// - access [https://iems.skolkovo.ru/downloads/documents/SKOLKOVO\\_IEMS/Research\\_Reports/SKOLKOVO\\_IEMS\\_Sustainable\\_Business\\_Lab\\_Research\\_2016-07-13\\_ru.pdf](https://iems.skolkovo.ru/downloads/documents/SKOLKOVO_IEMS/Research_Reports/SKOLKOVO_IEMS_Sustainable_Business_Lab_Research_2016-07-13_ru.pdf) (date: 20.01.2021).

S&P Global, (2020). *What is Carbon Pricing?* [Online resource]// - access <https://www.spglobal.com/en/research-insights/articles/what-is-carbon-pricing> (date: 20.04.2021).

Starik M, Kanashiro P (2013). *Toward a theory of sustainability management: uncovering and integrating the nearly obvious*. *Organ Environ* 26(1):7–30.

Stattev, S.V., Boiarchuk, A., Portna, O., Dielini, M., Pylypiak, O. (2019). *Formation of a System of Anti-Crisis Entrepreneurship of Services Companies*. *Journal of Entrepreneurship Education*, 22, 1-6.

Stevens C., & Kanie N. (2016). *The transformative potential of the Sustainable Development Goals (SDGs)*. *International Environmental Agreements*, 161 393–6.

Tapaninaho, R., Kujala, J. (2019). *Reviewing the stakeholder value creation literature: Towards a sustainability approach*. In W. Leal Filho (Ed.), *Social responsibility and sustainability*. World sustainability series, 3–36.

UNEP/COM (2020). *New global industry standard for the management of mining tailings to improve their safety*. *Global tailings review*. <http://www.unepcom.ru/news/news2020/3657-200805industry.html> (date: 06.03.2021).

W. Richard Scott (2007). *Institutions and Organizations*. Ideas, Interests and Identities. Paperback: 360 pages Publisher: Sage.

Wayback L.M., Scerri A. James P., James A., Deng H., Cahill F., (2013). *Reframing social sustainability reporting: Towards an engaged approach*. Environment, Development and Sustainability, 15, 225–243.

World Conservation Strategy (1980). *Living Resource Conservation for Sustainable Development*. International Union for Conservation of Nature and Natural Resources.

World economic forum (2015). *Mining & Metals in a Sustainable World 2050*, 1-44.

World Economic Forum (2016). *Mapping mining to the sustainable empowered lives. Resilient nations*. Development goals: an Atlas. [Online resource]// - access <https://www.undp.org/content/undp/en/home/librarypage/poverty-reduction/mapping-mining-to-the-sdgs--an-atlas.html> (date: 24.01.2021).

Yin, R. K. (2009). *Case Study Research: Design and Methods*. Beverly Hills, California: Sage, 219.

Zucker L. (1977). *The role of institutionalization in cultural persistence*. American Sociological Review, 42, 726–743.

### ***Literature in Russian***

Галимова М.С., Хайруллина Э.И. Корпоративная социальная ответственность промышленных компаний России // Российское предпринимательство. - 2016. - Т. 17. - № 8. - С. 967–980.

Геология и полезные ископаемые России: в 6 тт. / М-во природ. ресурсов Рос. Федерации и др.; Гл. ред. В. П. Орлов. - СПб.: Изд-во ВСЕГЕИ, 2000 - Журнал "Горная Промышленность" №6/2019, стр.62.

Меерсон М.Г. Трансформация институциональной структуры российской экономики [Текст]: дис. канд. экон. наук: 08.00.05. — Саратов, 2004.

Месторождения металлических полезных ископаемых : учебник для студентов высших учебных заведений, обучающихся по направлению «Геология и разведка полезных ископаемых» / В. В. Авдонин [и др.] ; Моск. гос. ун-т им. М. В. Ломоносова, Геол. фак., [Федер. прогр. «Культура России» (подпрогр. «Поддержка полиграфии и книгоизд. России»)]. — 2-е изд., доп. и испр. — Москва: Трикста: Академический проект, 2005. — 717, [1] с.: ил., карт.; 21 см.

Российский статистический ежегодник. 2019: Стат.сб./Росстат. - Р76 М., 2019 – 708 с. [https://rosstat.gov.ru/storage/mediabank/Ejegovodnik\\_2019.pdf](https://rosstat.gov.ru/storage/mediabank/Ejegovodnik_2019.pdf)

Трансграничное углеродное регулирование, Nov. 24, 2020 // Website of Газета Коммерсантъ – URL: <https://www.kommersant.ru/doc/4584233> (Access date: 24.12.2020).

**LLC Metalloinvest**

Company's description	A company with a high level of vertical integration and a high degree of processing of raw materials. The company is a supplier with a diversified customer base and a focus on emerging markets. The company has two segments: mining and metallurgy.
Company's mission	To be a supplier of high-quality iron ore and metallized raw materials to support global technological development with a primary focus on sustainable development.
Company's priorities	1) Safe production; 2) Employee health care; 3) Minimization of environmental impact along the entire chain of product redistribution at own facilities and at customer facilities.
Number of employees	43000+ employees
Revenue, \$ bln.	6,96
Management style	Democratic style

***The principle of prioritizing the SDGs to be achieved***

The selection of essential topics is important in determining the content of the report. The process of determining material topics and their ranking took place in several stages. At the first stage, a comparative analysis of material topics disclosed by leading companies in the industry was conducted. Based on the results obtained at this stage, a primary list of topics was compiled. This list formed the basis of the stakeholder survey. In the second phase, a stakeholder survey was conducted to identify the most relevant topics. A total of over 500 representatives from various stakeholder groups, including employees, customers, business partners, contractors, and suppliers, were interviewed. Based on the results of the second stage, a materiality "radar" was compiled, reflecting the significance of the listed material topics for the stakeholders and the Company itself. Top 5 priority goals: #3, #4, #6, #8, #9.

In 2019, the Company confirmed its compliance with the "Silver" level of the EcoVadis ESG rating. The Company's rating improved by 3 points to 60 points with an industry average of 43 points, which is a logical result of Metalloinvest's sustainability efforts. The comprehensive EcoVadis assessment helps the Company to identify its strengths and growth areas in the field of sustainable development.

The Company has a Sustainable Development Policy and a Stakeholder Engagement Policy, which sets out the Company's commitments to its key stakeholder groups.

The following principles apply when working with stakeholders: openness, materiality, consistency, completeness, responsiveness.

## Polymetal International plc.

Company's description	Polymetal International plc is a leading precious metals mining group, operating in Russia and Kazakhstan. A major employer in its regions of operation, Polymetal is one of the most sustainability and responsibility-driven companies in the sector.
Company's mission	Responsible and efficient mining can be a force for good for society. Aspiration to be equal to the challenge and deliver benefits to all impacted by company's corporate existence.
Company's priorities	1) Robust performance; 2) Delivering growth; 3) Securing the future; 4) Governance and sustainability
Number of employees	12000+ employees
Revenue, \$ bln.	2,86
Management style	Democratic style

### *The principle of prioritizing the SDGs to be achieved*

We have mapped strategic impact areas to relevant SDGs and targets. This was based on a four-step process that helped us to identify and prioritise key issues; then set data dimensions and finally allocate the contributions of Polymetal and our investors to those issues. The impact areas have been identified in partnership with stakeholders and by studying best practice.

Risk Management System is designed and successfully implemented in Polymetal. It helps to minimize operational, financial and sustainability risks.

Several corporate guidelines are designed to manage goals in health and safety: Health and Safety Policy, Occupational Health and Safety Management System, Code of Conduct. Overall, more than 10 corporate guidelines devoted to employees, climate change, water, wastes, biodiversity and communities are designed and implemented into company's culture.



## PJSC En+ Group

Company's description	The largest producer of low-carbon aluminum in the world. Vertical integration ensures outstanding operational efficiency
Company's mission	To achieve vertical integration and self-sufficiency in resources throughout the aluminum value chain (energy, raw materials and finished products), maintain and increase aluminum production with high margins and low risk, as well as maintain financial stability and increase returns to shareholders and dividend payments.
Company's priorities	1) Employee health and safety; 2) Uninterrupted operation of facilities; 3) Further performance of contractual obligations.
Number of employees	64000+ employees
Revenue, \$ bln.	10,35
Management style	Democratic style

### *The principle of prioritizing the SDGs to be achieved*

The prioritization of goals takes place according to the results of a joint expert meeting, which is attended by employees of different positions and work areas. Decision-making is based on the specifics of production operations, their impact on the social, ecological and economic sides of En+ business. The company emphasizes taking several objectives as the focus and working through them in the best possible way.

### **Interview guide**

The interview began with the parties introducing themselves and briefly describing themselves, their positions, and the specifics of work. The permission of audio recording during the interview was also discussed. The author also announced the plan of the interview and the approximate time to conduct it. After confirmation obtaining, the interview began, the plan and examples of which are outlined below.

#### ***1) General information about the company;***

- Please, tell about the company's activities in Russia and give me the main performance indicators.
- How the work of the sustainability department is built in the company?

#### ***2) The ways how to implement SDGs;***

- How is the priority determined, what does it depend on?
- Which SDGs are a priority for the company?
- How does a company implement the SDGs?
- While developing a strategy to achieve the identified SDGs, do you use the expertise of outside companies/organizations?
- What benefits does the company gain from implementing programs aimed at achieving the SDGs?
- Are you familiar with the Atlas for the mining industry companies - recommendations from the United Nations to the mining sector?

#### ***3) The reasons why to implement SDGs into corporate practices.***

- Why does a company implement SDGs into its strategy?
- What challenges does the company face in implementing the objectives to achieve the identified SDGs?
- What are the obstacles to prompt implementation of the SDGs?
- What impact does the stakeholders have on the process of achieving the SDGs?
- What impact does the institutional environment have on the process of achieving the SDGs?
- Is progress toward the identified goals being tracked? How does it happen?

After the interview, the author thanked the company representatives for their time, attention and willingness to share information on the topic. He answered the available questions of the representatives and agreed on possible ways of further communication to clarify the details.