

CLIMATE AGENDA OF RUSSIAN MINING AND METALS COMPANIES: GOVERNANCE, STRATEGY AND RISKS

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mining and metals companies



This report was prepared by the **Climate Governance Initiative Russia (CGI Russia),** a local part of the Climate Governance Initiative (CGI) established by the World Economic Forum (WEF). CGI aims to develop competencies among boards of directors, enabling them to manage their business more efficiently and integrate the climate governance agenda. The CGI currently consists of 15 countries, including Russia. Moving forward, we look to unite all G20 countries and the key developing countries.

Polyus was the first Russian mining company to support the GCI and it currently acts as a key strategic partner of CGI Russia and an ardent proponent of the climate agenda in Russia. We would like to extend a thank you to Polyus for contributing to this report.

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CGI Russia looks forward to continuing robust cooperation with all our partners.

PURPOSE

We sought to assess the maturity of the selected Russian mining and metals companies in terms of introduction of the climate agenda into their governance system. Our assessment was performed with reference to certain parameters aligned with the **Carbon Disclosure Project (CDP)** and **Task Force on Climate-related Financial Disclosures (TCFD)** initiatives.

We also analysed such indicators as actual greenhouse gas (GHG) emissions and use of renewable and low-carbon energy sources.



METHODOLOGY

This report was prepared on the basis of publicly available data of selected Russian and international mining and metals companies, in particular data from their CDP climate questionnaires (a primary source), as well as keyword data gathered automatically from public sustainability reports and annual reports (for certain companies).

The term "mining and metals companies" as used in this report refers to the sample of industry players selected for our analysis. Please refer to the Appendix for the full list of companies included in the sample. The countries mentioned in this report are those where the companies under review have an established legal entity.

For our analysis, we selected a number of leading international public companies with the highest market capitalisation that operate in the mining and metals industries. Our sample of steel producers includes companies with the highest output according to the World Steel Association. The analysis also covered several major gold and precious metals companies, which were selected, among other criteria, on the basis of their market capitalisation and output.

Some of the companies were not featured in our findings owing to limitations in their public sustainability reports (no disclosures of climate targets or other governance-related data).

*The data were not verified or validated but used as provided by Exerica, with the exception of some additional data used for Russian companies.



Below is an overview of the global position of the analysed Russian companies with regard to climate agenda maturity:



Russian mining and metals companies keep pace with their foreign peers in implementing climate governance.



They are ahead of the game when it comes to SBTi targets and collaboration with international climate associations, even in the absence of an absolute climate leader.



However, Russia lags behind in implementing internal carbon pricing, which is seen as a lever for decarbonisation.



For a third of the companies under review, renewables account for over 80 per cent of electricity consumption. Hydropower is the most widely used renewable technology, although solar power got a mention as well. Direct supplies under contracts with energy producers are the prevailing model for electricity consumption from renewable sources. Other models include acquisition of I-REC certificates and on-site generation, with the latter cited by only two companies.



Active use of natural gas (a low-carbon energy source) is a characteristic feature and an advantage of the Russian companies operating in the mining and metals sectors. About half of them meet 40 or more per cent of their energy demand through natural gas, which is significantly above the global average.

Our analysis prompted the following conclusions on the maturity of climate governance at the selected Russian mining and metals companies:

Governance



Boards of directors and senior management are increasingly involved in discussing and implementing the climate agenda, as they mention in public sources.



The level of disclosure of climate-related information is still low. However, the share of companies completing a CDP climate questionnaire increased several-fold in 2015–2021 to 50 per cent. In view of data discrepancies between various public sources such as CDP climate questionnaires, sustainability reports and annual reports, the quality of data disclosed raises some questions.

Strategy



Fifty per cent of the Russian companies have developed / are developing a climate strategy – in line with the global industry as a whole.

Risk Management



Russian mining and metals companies are actively developing a climate risk assessment and management approach, as are industry leaders around the world.



However, only 70 per cent of the companies have identified climate risks and only 36 per cent have performed a scenario analysis.

Metrics and Targets



Russian companies prefer not to stretch their GHG reduction goals beyond 2028 and 20 per cent, unlike global leaders that are setting goals reaching as far as 2030–2035.



The decade from 2010 to 2019 saw the highest average global temperatures in recorded history. By 2018, climate change had caused more frequent droughts, wildfires, floods and other natural disasters all over the world. With each passing year, the global community becomes more aware of the catastrophic consequences that warming by more than 1.5C might have for the planet, which prompts the Paris Agreement signatories to set more stringent national climate goals in line with a below 2C warming trajectory. The 17 Sustainable Development Goals (SDGs) adopted in 2015 by the UN General Assembly include Goal 13: *Climate Action*, which reads:

"Take urgent action to combat climate change and its impacts by regulating emissions and promoting developments in renewable energy."

Major businesses recognise the importance of the climate agenda and the need to comply with the new low-carbon requirements introduced by regulators and investors. Industry leaders around the globe are increasingly adopting initiatives to develop their corporate climate agenda and, in particular, reduce GHG emissions. Broadly speaking, this agenda is about addressing climate-related issues and managing climate risks.

We chose the mining and metals sector because it accounts for about eight per cent of global GHG emissions¹. In Russia, mining and metals companies produce approximately 11 per cent² of the national GHG emissions so accelerated initiatives seeking to bring down the carbon footprint of these industries would help the country meet the requirements of the Paris Agreement.

We analysed publicly available data from 75 mining and metals companies in 19 countries, including Russia, the United States, China, Japan and South Africa³ to identify global patterns and compare the maturity of climate governance in Russia and abroad. Figure 1 shows the distribution of the selected companies by their core business. Each sector in the pie chart represents the number of companies engaged in the relevant business.



- Diamonds and gems
- Other mining industries
- Non-ferrous metals
- Platinum and precious metals

We focused mainly on gold and steel companies (61 per cent) and, to a lesser extent, on companies representing other segments, such as coal, diamonds, aluminium, etc. Our choices were driven by the mining and metals sector being responsible for a significant share of the global GHG emissions.

Figure 1. Analysed companies by core business ⁴

Background

¹ https://www.eea.europa.eu/data-and-maps/indicators/greenhouse-gas-emission-projections/greenhouse-gas-emission-projections-assessment-2

² https://rosstat.gov.ru/storage/mediabank/nmV0UuE3/Ochrana_2020.pdf

³ Please refer to the Appendix for the full list of the countries and companies. All data is as of 2020.

⁴ Based on publicly available reports and CDP climate questionnaires

We thoroughly analysed the data on fourteen Russian mining and metals companies: ALROSA, EVRAZ, Metalloinvest, MMK, NLMK, Nornickel, Petropavlovsk, Polymetal, Polyus, RUSAL, Severstal, Uralkali, PhosAgro, and Nordgold. Figure 2 shows the distribution of these companies by their core business.



Diamonds and gems

- Non-ferrous metals
- Other mining industries
- Gold
- Cast iron and steel

Figure 2. Analysed Russian companies by core business⁵

For the purpose of our research, we gathered company data for FY 2020 using the following metrics:

- energy sources used;
 - Scope 1 and Scope 2 GHG emissions;
- revenues;
- imp
 - implemented climate risk assessment framework;
- target-driven reductions in GHG emissions; a completed CDP climate questionnaire (-s);
 - science-based climate targets established in line with the SBTi criteria;

- integration of the climate agenda into the governance structure and the board's role in this;
- collaboration with international climate organisations (UNGC, ICMM, EITI, etc.);
- implemented climate strategy;
- ii 🗸
 - internal carbon pricing;
- comp
 - completed scenario analysis of climate risks;
- \checkmark
 - identified material climate risks.

⁵ Based on publicly available reports and CDP climate questionnaires



In addition, we looked at how many CDP climate questionnaires have been completed over the last few years and whether Russian companies used renewable energy sources in 2020.

The structure of our report follows the TCFD recommendations. Climate-related information is disclosed across four categories:



Strategy — climate risk impact on corporate strategy and business;

Metrics and targets — metrics used to quantify climate risks and emission targets.

In addition to covering the key aspects of the climate agenda, the TCFD approach enables companies to be benchmarked against standardised maturity criteria, which gives a better picture of climate action trends around the world and the Russian mining and metals industry's role in these developments.



GLOBAL STANDING OF **RUSS**IAN MINING AND METALS COMPANIES

The level of a company's maturity in terms of its climate agenda can be determined from a number of qualitative and quantitative indicators. This section addresses climate agenda aspects relating to implementation of an integrated climate risk management approach, as well as specific plans and tools for reducing GHG emissions.

For the purpose of assessing the current position of the companies in our sample and the scale of the requisite decarbonisation efforts, we also present data on aggregate GHG emissions of the companies we analysed and a comparison of quantitative indicators of carbon intensity of Russian mining and metals companies in relation to their revenues (carbon intensity does not depend on the product so can be used for company-by-company comparisons).



GOVERNANCE MATURITY

The analysis covered 72 major industry players. For the full list of the companies reviewed, including those selected for analysis in more detail, please see the Appendix. The findings for each of the aspects we looked at depend on whether publicly available sources contained any information about that specific aspect. The eight aspects were:



science-based	climate	targets;
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climate change officers;



collaboration with international associations;



climate strategy;



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internal carbon pricing;
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identified climate risks;



climate-related risk management system;



scenario analysis of climate risks.



Figure 3. Climate governance maturity: implementation of various aspects of the corporate climate governance agenda⁶

Figure 3 shows the results of our analysis and illustrates the average standing of Russian companies globally.

average, companies On Russian have implemented four of the eight climate governance aspects, which is very close to the global average. The graph does not have an upper border line for Russia because the upper extremity coincides with the 75th percentile. This may point to a lack of a clear national leader in the climate governance domain. The findings show that Russian companies generally with their foreign peers in keep pace implementing the climate governance agenda and have similar levels of maturity across the selection.

Russia is in the top four regions of the world in terms of average numbers of implemented climate governance aspects.

⁶ Sources: public reports, CDP, Exerica. This type of graph is called a "box and whiskers diagram" (or plot)", where the bottom and top of a box is the 25th and 75th per centile of the distribution of responses. The borders of the vertical lines show the lower and upper extremities, the line inside the boxes shows the median for the sample, the cross symbols show average values, and the line going through the boxes connects the averages for various regions.

The absolute global leaders in this respect are five companies from five countries: Vale (Brazil), Newmont Mining Corporation (USA), Sibanye Stillwater (South Africa), Thyssenkrupp (Germany), and SSAB (Sweden). With all eight climate governance aspects in place, these companies demonstrated the best result across the sample.



Figure 4. Maturity of climate governance: implementation of various aspects of the climate governance agenda⁷

⁷ Sources: public reports, CDP, Exerica Abbreviations For. Co. – foreign companies; Rus. Co. – Russian companies.

Additionally, we performed a comprehensive maturity assessment of the Russian companies with respect to each individual aspect against the global average. The results are presented on Figure 4.

The graph on Figure 4 incorporates the above climate governance aspects and summarises the data from our research where responses were provided in a "Yes/No" format. Below is an overview of the key findings for the Russian companies compared to other industry players, broken down by positive, neutral and negative trends

Russian companies are on top of certain global climate agenda trends:

SBTi targets: Thirty per cent of the Russian companies have set science-based targets in line with the SBTi initiative (12 percentage points above the global average).





Engagement with the international associations selected for our analysis and adherence to their principles (for more detail, please see the "Metrics and Targets" section of this report).

t Russian companies keep up with global climate action in:



having a long-term climate strategy;



performing a scenario analysis of climate risks;



using a climate risk management system.

Russian companies are falling behind the rest of the world in such aspects of their climate agenda as:



internal carbon pricing. Thirty per cent of the foreign companies already use this indicator in their operations, compared to none of the Russian companies we analysed.

GHG EMISSIONS

Disclosure of various aspects of their agenda does not mean that companies actually deliver on their decarbonisation pledges. This follows from our analysis of their carbon intensity and use of renewables as a lever for reducing GHG emissions.

The aggregate GHG emissions of the companies we analysed was estimated at ca. one million kt (1 Gt) or about two per cent (47.6 Gt⁸) of the world's total GHG emissions in 2018 (according to Climate Watch⁹) and about three per cent (31.5 Gt) of the world's total GHG emissions from energy generation in 2020 (according to the IEA¹⁰).



Figure 5. Scope 1 and Scope 2 GHG emissions of the analysed companies $^{\rm 11}$, kt of CO2-eq

⁸ Sources: public reports, CDP, Exerica The Nordgold data covers only Scope 1 GHG emissions, as no data on Scope 2 GHG emissions is available ⁹ <u>https://www.climatewatchdata.org/countries/RUS_</u>, With the exception of land-use change and forestry

¹⁰ https://ourworldindata.org/emissions-by-sector

¹¹ Sources: public reports, CDP, Exerica The Nordgold data covers only Scope 1 GHG emissions, as no data on Scope 2 GHG emissions is available.

The GHG emissions of the Russian companies in our sample are distributed as follows: 89 per cent of the Scope 1 and Scope 2 emissions are attributable to iron and steel companies (EVRAZ, NLMK, Severstal, MMK, and Metalloinvest) and the aluminium producer RUSAL (see Figure 5).

The remaining 11 per cent of Scope 1 and Scope 2 GHG emissions are produced by all the other mining companies. This uneven allocation is mainly explained by the energy intensity of the metals industry and use of coalfired industrial processes. In 2020, the aggregate GHG emissions of the Russian companies included in our research totalled nearly 200,000 kt or about eight per cent of Russia's total GHG emissions for 2018 (2.55 Gt of CO₂ equivalent¹²). This figure correlates with the global share of GHG emissions from production of iron, steel and other metals (more than 7 per cent¹³): most of the emissions produced by the Russian companies in our sample are attributable to metals companies and one aluminium producer.

In addition, we calculated the CO_2 equivalent in tonnes per million dollars of revenue (see Figure 6).

Similar to gross GHG emissions, the highest carbon intensity is demonstrated by the metals companies, namely EVRAZ, MMK, Severstal and NMLK, and the aluminium producer RUSAL. The carbon intensity rating of the reviewed companies does not differ significantly from their gross GHG emission rating, and we can see a link between carbon intensity and revenue. For example, NLMK ranks second in terms of gross emissions and fourth in terms of carbon intensity. Another example is MMK, which is the fifth-biggest gross emitter of GHG but the second in terms of carbon intensity.



Other non-metals companies have similar carbon intensity levels, with the exception of PhosAgro, whose figure is double that of Uralkali, a Russian producer of potash fertilisers. Petropavlovsk, Polyus, Polymetal and ALROSA demonstrate a significantly lower carbon intensity, which may be due to the high cost of their end product.

Figure 6. Carbon intensity: Russian companies¹⁴, t/USD million

¹² <u>https://www.climatewatchdata.org/countries/RUS_</u>, With the exception of land-use change and forestry ¹³ https://ourworldindata.org/emissions-by-sector

¹⁴ Sources: public reports, CDP, Exerica The Nordgold data covers only Scope 1 GHG emissions, as no data on Scope 2 GHG emissions is available.

USE OF RENEWABLES AND OTHER ENERGY RESOURCES

The move to renewable energy is an important practical expedient for reducing carbon footprints. Our analysis of how the companies use renewable energy technologies for electricity consumption and generation allows us to conclude what steps they actually take to contribute to the decarbonisation effort. Leaders in this sphere may differ from those in the area of implementing governance aspects of the climate agenda. For the first group, the most pressing task is often to translate existing decarbonisation activities into clearly defined, institutionalised strategic goals. For the second group, on the other hand, the strategic goal at the current stage is to move from the established governance structure to actual measures reducing their carbon footprint.

Figure 7 shows the companies that use renewables as a primary source of generated energy. Only six of the 75 companies publicly reported consumption of energy from renewable sources (alongside fossil fuels) for operating purposes in 2020.



Figure 7. Share of renewables in own generation¹⁵

With almost 100 per cent of the energy used for operations coming from renewable sources, SQM (Chile) is the clear leader among the foreign companies. Glencore and Vale purchase about 30–40 per cent of the heat and electricity they consume.

This fact necessitates an additional review of their energy sources, since third-party providers may generate the energy using carbon-intensive sources, which may subsequently distort the overall picture of energy consumption from renewables.

¹⁵ Sources: public reports, CDP, Exerica

According to their sustainability reports, Polyus and Polymetal also generate some energy using renewable technologies. The share of renewables in their energy mix is 76 per cent and less than one per cent, respectively. In Russia, as in most other countries, renewables are rarely if ever used as a primary energy source, but they are actively used as a source for electricity consumption, as can be seen from our analysis presented in Figure 8.

Direct supplies are currently the prevailing model for electricity consumption from renewable sources (e.g., for Polyus, ALROSA, RUSAL and Petropavlovsk). Other options include acquisition of I-REC certificates (Polyus) and own generation (Polyus, Polymetal). Figure 8 shows the share of electricity consumption from renewable sources for the selected Russian mining and metals companies in 2020.



Figure 8. Share of renewables in purchased/generated electricity consumption of the Russian mining and metals companies in 2020¹⁶

All other companies in our sample did not disclose consumption of electricity from renewable sources in their public reports.

Implementation of cutting-edge technologies is essential for minimising environmental impact. Renewable energy technologies are a good and important way of cutting down GHG emissions.

Yet achieving a meaningful benefit from alternative energy sources takes time.

Moreover, consumption of renewable energy might outpace transformation of a company's climate governance.

This is one reason that the list of companies leading in this regard might differ from those leading in climate governance disclosure as outlined above.

¹⁶ The Nordgold data covers only Scope 1 GHG emissions, as no data on Scope 2 GHG emissions is available. Sources: public reports, CDP, Exerica The share of renewables in Polyus's energy consumption in 2020 includes its I-REC certificate. No such data is available for other companies. Severstal did not specify the types of consumed energy. For Petropavlovsk, we relied on the 2019 data as no data for 2020 could be found in public sources at the time when this report was prepared.

Figure 9 shows the energy balance of the companies that disclosed consumption of various types of fossil fuel in their publicly available reports.



Figure 9. Fossil fuels used by Russian companies, million GJ¹⁷

When analysing the energy sources used, we focused additionally on natural gas as the least carbon-intensive among the most common fossil fuels (see Figure 10). The graph in Figure 10 presents the top 15 reviewed metals and mining companies in terms of natural gas consumption. For all the other companies in our sample, natural gas makes up less than 45 per cent of the energy mix.

¹⁷ Sources: public reports, CDP, Exerica



As can be seen in Figure 10, several Russian companies, namely Uralkali, PhosAgro, RUSAL, Nornickel, and Metalloinvest, prioritise natural gas, which accounts for over 60 per cent of the total energy generation.

This results in lower gross GHG emissions and carbon intensity compared to their peers in Russia.

For example, Metalloinvest, with its high share of consumed natural gas, demonstrates the lowest gross GHG emissions and carbon intensity levels among all the Russian metals companies we analysed. At ALROSA, Polymetal, Petropavlovsk and Polyus, natural gas makes up less than 12 per cent of energy generation.

Figure 10. Share of natural gas in the energy consumption of the Russian and foreign companies 18

The other players did not disclose the types of fossil fuel they use.

The CO₂ factor for natural gas is almost half that of coal and 20–30 per cent lower than that for diesel and fuel oil¹⁹, which produces a corresponding reduction in GHG emissions from energy generation using natural gas. This gives a certain advantage to the Russian companies that use natural gas as their key energy source. However, this can also drive less ambitious targets for reducing GHG emissions by using new technologies.

 18 Sources: public reports, CDP, Exerica 19 2006 IPCC Guidelines for National Greenhouse Gas Inventories Year()

(https://www.ipcc-nggip.iges.or.jp/public/2006gl/russian/pdf/2_Volume2/V2_2_Ch2_Stationary_Combustion.pdf)

GOVERNANCE

This section follows the requirements in the identically named section of the TCFD recommendations on climaterelated financial disclosures. It examines the role played by the board of directors and senior management in relation to the climate agenda. The section covers the following areas:



Setting of strategic climate targets;



Implementation of a system and setting of frequency of alerts for board members and senior management about climate impact on the company's operations;



Consideration of climate-related risks in planning the company's strategy, budget, risk management policies, business performance metrics, etc.;



Monitoring progress towards the climate goals;



The role of the board of directors and senior management in assessing climate risks.

Despite Russia as a whole lagging slightly behind the global average in terms of climate governance, business leaders recognise the importance of aligning with the global climate agenda. The key aspects analysed as part of this section include senior management, the board of directors and board committee involvement in the climate agenda and relevant references in public sources.

Ninety per cent of the Russian companies mentioned publicly discussion of the climate agenda by their board of directors, senior management and board committees, which is eight percentage points above the global average. This means Russian companies do address climate risks at the corporate level, even though their climate-related disclosures could have been fuller and better, including those made as per international guidelines.

One possible area for improvement is disclosures for CDP scores. These must include a description of the company's climate governance system and other structured data on its emissions and climate-related risks, which also requires leadership involvement.

Disclosure of climate-related information for CDP scores creates a need for collaboration with CDP Worldwide, namely completion of standardised climate questionnaires.

As can be seen from Figure 11, half the Russian mining and metals companies selected for our analysis have completed CDP climate questionnaires and put them in the public domain, which is a good result compared to their international peers with a figure of 60 per cent.

However, a significant share of the reviewed Russian companies (more than 30 per cent or almost three times more than the global average) do not publish their CDP questionnaires in public sources, which makes it difficult to analyse and collect data in a standardised format. Having no CDP questionnaires in the public domain may be a signal that the company is not willing to disclose climate information publicly in more detail.



Figure 11. . CDP disclosures²⁰



good improvement. The level of participation by the Pussian mining and metals companies

Overall, the share of the Russian

with

questionnaires was 86 per cent versus

70 per cent for the foreign companies.

On a positive note, none of the 14

refused to participate in the initiative.

Yet increasing the share of publicly

available questionnaires would be a

we

companies

completed

analysed

companies

Russian

The level of participation by the Russian mining and metals companies in CDP disclosures has increased several-fold over the past few years (see Figure 12).

Figure 12. Participation by Russian companies in the CDP climate scores initiative²¹

²⁰ Sources: CDP, Exerica ²¹ Sources: CDP, Exerica



Only 20 per cent of the companies completed a CDP questionnaire in 2015 versus more than 90 per cent in 2021. This massive explosion of CDP disclosures by Russian companies possibly opens up an opportunity for the sector to close the gap quickly and even gain a competitive edge globally. Below is a breakdown of the reviewed companies by the number of CDP climate questionnaires completed over the past seven years (seven is the maximum and zero the minimum number):



To recap, board and leadership involvement in the climate agenda and CDP disclosures are well-covered aspects at the Russian mining and metals companies. However, there is room for improvement when it comes to the transparency of their climate-related disclosures, especially CDP questionnaires that cover the most important items on the climate agenda. As such, willingness to disclose information and focus on climate leadership are the clearest signals that a company is ready to step into the new reality.





This section focuses on various questions around company strategies and financial planning including assessment of the actual and potential impact of climate-related risks on the organisation's sustainability. Pursuant to the TCFD recommendations, it is structured as follows:



Description of the climate-related risks impacting on the organisation in the medium and long term;



Description of the impact of climate-related risks on the organisation's strategy, financial planning and organisational structures in the following categories:



- Supply chain;
- Risk adaptation and mitigation measures;
- **R**&D;





Description of the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower global temperature rise by 2050.

This element evaluates the disclosure of a climate strategy or any reference to its development in public reports and CDP questionnaires, and the description of scenario analysis in the organisation's disclosures.



The percentage of companies in our sample that have announced the launch of a climate strategy in their most recent annual reports (for 2020 or 2019) and/or CDP questionnaires is presented by country in Figure 13. Around half the Russian and international companies mentioned that such a strategy is in place or under development.



Figure 13. Companies with climate strategies, percentage of companies surveyed²²

Europe (Germany and Poland), Korea and Taiwan are the most mature markets in this respect. Among Russian companies in our sample, Polymetal, Nornickel, Severstal, PhosAgro and Uralkali have already disclosed information about a developed climate strategy.

Other companies, such as Polyus, noted that they were planning to develop a climate strategy in the coming year.





Another important aspect of the Strategy section is analysis performed by the companies to assess the possible economic impact of climate scenarios and describe use of its results in developing a general strategy.

Figure 14 shows whether scenario analysis information was disclosed in CDP questionnaires.



Figure 14. Scenario analysis information disclosed²³

Among Russian companies in our sample, Severstal, PhosAgro, Nornickel and Polymetal have disclosed scenario analysis information.

Polyus and Uralkali noted that scenario analysis had been carried out and its results were expected be included in the strategy over the next two years.

So, the following important conclusions may be drawn on maturity of Russian mining and metals companies in terms of strategic planning:



50 per cent of the companies in the selection have developed / are developing a climate strategy – in line with the global industry as a whole.



scenario analysis is used by 36 per cent of the companies, which also corresponds to the industry's global average.

²³ Sources: public reports, CDP, Exerica

Strategy

RISK MANAGEMENT

Identification, assessment and management of climate-related risks is becoming increasingly important for metals and mining companies. Both physical risks and ones related to transition to a lower-carbon economy might entail significant costs due to emerging regulatory requirements and direct damage to assets caused by more frequent extreme hydrometeorological events.

Organisations should monitor and manage such risks to avoid financial dislocations caused by climate change. Investors are also concerned about disclosures related to climate change, so the TCFD recognises risk management as a separate element of disclosures. According to the TCFD, the following climate risk management disclosures are required:



Description of the organisation's production cycle for identifying significant climate-related risks;



Description of the organisation's processes for identifying significant climate-related risks;



Description of the framework for integrating climate-related risks into the organisation's overall risk management system.

The research shows that, in these respects, Russian companies are not lagging behind their global peers and are even slightly in the lead over their international competitors in having climate-risk management (Figure 15).



Figure 15. Climate-related risk management system, percentage of companies in the sample²⁴

Climate-related risks and the risk assessment process are at different stages of development. Some foreign companies, such as Newmont, publish separate climate strategy reports²⁵, including a detailed description of scenario analysis results and climate-related risks identified in the regions where they operate.

However, there is still a large proportion of companies that have not yet approved a climate-related risk management system at the corporate level or do not disclose information about such mechanisms. The results of the analysis indicate whether the organisation has identified significant climate-related risks.

²⁴ Sources: public reports, CDP, Exerica

 $^{25}\ https://s24.q4cdn.com/382246808/files/doc_downloads/sustainability/2020-report/Newmont-Climate-Strategy-Report.pdf$

Climate-related risks and the risk assessment process are at different stages of development. Russian market players have only recently started developing climate-related risk assessment and scenario analysis practices but intend to expand the boundaries of such assessment and provide a detailed description of climate-related risks by asset. For example, Polyus — one of the Russian sector companies that assessed climate-related risks in its 2020 Sustainability Report²⁶ — describes its assessment of climate-related (including financial) risks for one of its assets and intends to carry out a more profound assessment of climate-related risks for other assets located in other regions.

Moreover, the analysis showed that almost all companies with identified climate-related risks (Figure 4) had developed a relevant approach to managing them. It confirms the idea that determination of the subject for assessment (in this case, climate risks) is at the heart of this approach. Scenario analysis (its results are presented in the Strategy section) closely related to climate risk assessment was found in 36% of Russian and 38% of foreign companies.

Russia's result is similar to the global one but, compared to climate-related risk assessment, in percentage terms this aspect was reflected by the companies to a lesser extent.

In general, Russian mining and metals companies are actively building their climate-related risk management and identification approach, as are the industry's leaders around the world (70 per cent in Russia vs. 56 per cent globally). At the same time, there is still massive room for improvement in these areas, as only 36 per cent of Russian market players have performed any scenario analysis of climate change risks.

²⁶ https://sustainability.polyus.com/upload/files/Polyus_SR_2020.pdf

METRICS AND TARGETS

This section looks at whether the selected companies have metrics and targets in place related to climate risk governance and GHG emission reduction efforts. As part of its recommendations, the TCFD discusses the following aspects associated with disclosures:



Climate-related risk metrics for investors, including information about the risk management strategy and framework;



Scope 1, 2 and 3 emissions, including related risks;



Risk control and performance metrics for climate-related targets.

The companies are assessed by whether they have adopted internal carbon price and climate-related targets, as well as how broad their engagement is in working with international associations / communities towards the climate agenda.

Engaging with international associations, initiatives and non-profit organisations while committing to their declared climate-related principles helps businesses refine their vision and climate risk management approach, as well as unifying disclosure standards and sharing knowledge with other market players. More active engagement enables companies to become more deeply involved as they transform their business along climate-related regulatory lines. So, the scale of a company's climate-related engagement network serves as an indicator of how far it has progressed with the climate agenda.

We have analysed whether the selected companies engage with the international associations, organisations and initiatives listed below, as well as whether they are committed to related principles: UNGC, ICMM, EITI, UNSDGs, GRI, WGC, TCFD, CDP, WSA, UNGP, OECD, SASB, IPA, IRMA, WHC, WEF, EUROFER and CGI Russia.

The analysis identified four countries where the companies engage with the highest number of associations and organisations:

- Canada (11 organisations);
- Russia (11 organisations);
- South Africa (10 organisations);
- USA (9 organisations).

It is worth noting that Russia and Canada share first place out of 18, indicating Russian companies' achievement in terms of their engagement in the climate agenda. However, most cases see companies on the Russian market alone report one organisation out of the associations/organisations listed above — UNGC. Based on this metric for climate-related international engagement, these companies can be named as leaders:

- Polyus (4 organisations);
- Nornickel (3 organisations);
- Polymetal (2 organisations);
- Petropavlovsk (2 organisations);
- NLMK (2 organisations).

3

5

Metrics and targets

UNGC, ICMM and EITI are among the most mentioned in public disclosures, with 30, 28 and 16 companies reporting related commitments, respectively. Polyus and Nornickel are the only companies mentioning more than two international associations from the list above. Polyus is the first Russian mining company to join the CGI Russia as a strategic partner.

Internal carbon pricing is another metric that can be used to assess climate agenda maturity. Internal carbon pricing enables the company leadership to develop a systemic investment approach to climate-related initiatives. This method allows management to assess how much the company needs to invest in advanced technology or green energy (solar, wind, water, etc.) on an annual basis, given the current level of GHG emissions. Internal carbon pricing helps companies automate allocation of decarbonisation funds. With carbon fees forecast, this method also provides companies with broader opportunities for planning their future cash flows.

The analysis indicates that companies in the Russian metals and mining sector have not yet adopted internal carbon pricing while the global adoption rate stays at 27 per cent. Russia has the lowest internal carbon price adoption rate, lagging behind other global industry leaders. So, this is an area of particular focus for Russian companies.

Finally, our research looks at carbon reduction targets set by Russian companies as one of the most important benchmarking metrics. Figures 16 and 17 analyse targets set by the companies, including information about target years to reflect the evolution of emission reductions planned by the selected companies.



Figure 16. Climate-related targets set by mining and metals companies in Russia, with reference to baseline years, including indicative reductions²⁷

²⁷ Sources: public reports, CDP, Exerica

Metrics and targets



Figure 17. Climate-related targets set by mining and metals companies in other countries, with reference to base years, including indicative reductions²⁸

²⁸ Sources: public reports, CDP, Exerica



Out of 18 foreign companies analysed, only four companies have announced goals covering the period up to 2050– 60. Most industry players (ten) have set targets with a time horizon of 2030–35. The graph above shows how planned emission reductions are distributed by time horizon. As for the Russian industry, 6 out of 7 companies report targets with a shorter time horizon (until 2028 or below), which might be indicative of them not being prepared for longer-term planning. EVRAZ and RUSAL are the only Russian companies with reduction targets set for the period up to 2030. FosAgro also has a similar reduction target in place up to 2028. In addition, emission ambitions reported by the Russian companies tend to remain below 20 per cent even for a 2030 time horizon, with RUSAL as the only company committed to a 35 per cent reduction by 2030. As an example from the international space, ArcelorMittal has announced plans to achieve net zero emissions as early as 2030.

Figures 18 and 19 show emission reduction forecasts for the selected Russian and international companies, with emissions for 2020 set as 100%. The graphs also compare the forecasts against the historical data.

As regards plans for SBTi targets, Russia is 12 pp ahead of global trends. About 30 per cent of Russian companies have set science-based targets or are planning to do so, compared to 18 per cent globally. Most Russian and international companies that have committed to the Science-Based Targets Initiative (SBTi) remain at the "Committed" stage. The next step for them will be to validate and confirm science-based goals with the SBTi, which may also require adjustment where goals lack consistency. This prompts the conclusion that their science-based goals are a long way from maturity. However, it is worth noting that some Russian companies are committed to independently verifiable science-based goals.



Figure 18. Russian companies: Emission reduction forecasts compared against 2020 as the base year²⁹

²⁹ Sources: public reports, CDP, Exerica

Metrics and targets



Figure 19. International companies: Emission reduction forecasts compared against 2020 as the base year³⁰

³⁰ Sources: public reports, CDP, Exerica

Metrics and targets

Below are the key findings from this section:



Russian companies are generally more likely to report cooperation with international associations and organisations such as UNGC, ICMM, EITI and/or announce commitment to such organisations/associations' principles. However, the reported cooperation network tends to be limited and could be significantly expanded. Polyus is the first Russian mining company to join the CGI Russia as a strategic partner.



While internal carbon pricing is one of the most relevant decarbonisation steps, no Russian company has directly reported adopting this mechanism. So, this is the focus area for companies to improve on as part of the climate agenda, especially considering the EU's import tax plans for carbon-intensive products.



Unlike leaders in the international industry, Russian companies tend to be significantly less ambitions about their climate-related goals, including planning horizons and expected emission cuts.



At the same time, the selected Russian companies are 12 pp ahead of their international counterparts when it comes to disclosure of plans for validating climate-related goals with the SBTi, indicating commitment to reliable goals.



Using the data available for the research, we have assessed the selected metals and mining companies for maturity across the reporting dimensions proposed by the TCFD, including more detailed analysis of company energy sources.

The analysis prompts the conclusion that, as regards governance and efficient steps for reducing emissions, the selected Russian companies not only keep pace with the global climate-related trends but also demonstrate performance that slightly exceeds the average in some respects.

Most importantly, potential is seen in boards of directors committed to discussing climate-related issues and taking steps to that end. As another important point, Russian companies collaborate with industry bodies while committing to supporting the climate agenda promoted by international associations.

Recent years have seen increasingly rising numbers of organisations participating in the ratings run by CDP and focusing more on identifying climate risks. However, not all Russian companies appear to be ready to make comprehensive public disclosures about their climate-related performance. This may be because government and investment community incentives have not yet had the required effect on the strategies developed by most Russian companies. However, the gap between Russian companies and international leaders in this respect is clearly set to improve in the near future.

Apart from identifying and assessing climate-related risks, the development of climate risk management should result in scenario analysis followed by implementation of the results into business strategy. There is a clear potential for this.

Certain important aspects related to the climate agenda require Russian companies to step up their efforts to keep up with best international practices. Raising the bar on both the planning horizon and emission reduction targets is currently of utmost importance. Implementing internal carbon pricing is another important aspect. The research results suggest that an internal carbon price serves as an indicator of the greatest maturity of climate initiatives and a commitment to substantive action on decarbonisation.

As for GHG reduction efforts, we can mention a further increase in the share of natural gas as the fuel with the lowest carbon intensity. In addition, developing "in-house" renewables needs to be prioritised.

Over recent years, Russian companies have made significant progress, continuing to develop climate-related strategies and implement decarbonisation initiatives. Considering that Russia recognised the need for climate governance later than the countries in the lead with respect to the climate agenda and given the high speed at which Russian companies are adapting to global changes, Russian market players clearly have significant potential and rich opportunities when it comes to the global climate agenda.



APPENDIX

Listed below are the companies selected for the research:

Company	Industry	Country		Company	Company Industry
	Foreign com	panies		SAIL	SAIL Cast iron and steel production
Agnico-Eagle Mines Group	Gold mining	Canada	1	SSAB	SSAB Cast iron and steel production
Alamos Gold	Gold mining	Canada		Sumitomo Metal Mining	Sumitomo Metal Mining Cast iron and steel production
AngloGold Ashanti	Gold mining	South Africa		Tata Steel Group	Tata Steel Group Cast iron and steel production
B2Gold Corp	Gold mining	Canada		Thyssenkrupp	Thyssenkrupp Cast iron and steel production
Barrick Gold	Gold mining	Canada		US Steel	US Steel Cast iron and steel production
Compania de Minas Buenaventura	Gold mining	Peru		ВНР	BHP Other mining operations
Endeavour Mining	Gold mining	Canada		Freeport-McMoRan Copper & Gold	Freeport-McMoRan Copper & Gold Other mining operations
Franco-Nevada Corp	Gold mining	Canada		Glencore	Glencore Other mining operations
Fresnillo	Gold mining	Mexico		Grupo México	Grupo México Other mining operations
Gold Fields	Gold mining	South Africa		Newcrest Mining	Newcrest Mining Other mining operations
Kinross Gold	Gold mining	Canada	Nutrien		Other mining operations
Kirkland Lake Gold	Gold mining	Canada	South32		Other mining operations
New Gold	Gold mining	Canada	Teck Resources		Other mining operations
Newmont Mining Corporation	Gold mining	USA	The Mosaic Company		Other mining operations
OceanaGold	Gold mining	Australia	Vale		Other mining operations
Wheaton Precious Metals	Gold mining	Canada	Vedanta Limited		Other mining operations
Yamana Gold	Gold mining	Canada	Antofagasta		Non-ferrous metals
Zijin Mining Group	Gold mining	China	ATT Metals		Non-ferrous metals
China Shanhua Enorgy Company		China	Rolidon		Non formus metals
	Platinum and procious motals		China Malyhdanum Company Limitad	-	Non forrous metals
	Platinum and precious metals	ON Courth Africa		+	Non formus metals
	Platinum and precious metals	South Africa		+	
	Platinum and precious metals	South Africa	SQM		Non-rerrous metals
	Platinum and precious metals	South Africa	41.5054	Γ	Russian companies
Sibanye Stillwater	Platinum and precious metals	South Africa	ALROSA		Diamonds and gems
Rio Tinto	Aluminium production	UK	Nordgold*		Gold mining
ArcelorMittal	Cast iron and steel production	India	Petropavlovsk	╞	Gold mining
BlueScope	Cast iron and steel production	Australia	Polymetal		Gold mining
China Steel	Cast iron and steel production	Taiwan	Polyus	+	Gold mining
Cleveland-Cliffs	Cast iron and steel production	USA	EVRAZ	-	Cast iron and steel production
CSN Mineração S.A	Cast iron and steel production	Brazil	Metalloinvest	+	Cast iron and steel production
Fortescue Metals Group	Cast iron and steel production	Australia	MMK*		Cast iron and steel production
Gerdau	Cast iron and steel production	Brazil	NLMK		Cast iron and steel production
HYUNDAI Steel Company	Cast iron and steel production	South Korea	Severstal		Cast iron and steel production
JFE Holdings, Inc.	Cast iron and steel production	Japan	PhosAgro		Other mining operations
JSW Steel	Cast iron and steel production	India	Uralkali		Other mining operations
Kumba Iron Ore	Cast iron and steel production	South Africa	Nornickel		Non-ferrous metals
Nippon Steel	Cast iron and steel production	Japan	RUSAL		Non-ferrous metals
POSCO	Cast iron and steel production	South Korea		andra.	

* This company has not been analysed across qualitative dimensions of its climate agenda governance, including country-by-country climate-related benchmarks on Figures 3, 4, 13, 14 and 15.

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