NORNICKEL

MOMENTUM
OF RENEWAL

Annual report

CONTENT

ABOUT THE REPORT

We are pleased to present to you the Annual Report of MMC Norilsk Nickel and entities comprising the same group of companies (the "Group", "Nornickel", the "Company") for the year ended 31 December 2022. The main controlled entities and PJSC MMC NORILSK NICKEL's interest in their capital are listed in the 2022 consolidated financial statements in accordance with International Financial Reporting Standards (IFRS).

The Report discloses all aspects of Nornickel's operations in the context of sustainability. Nornickel has a unique resource base underpinning its strategy of production growth and operational excellence as well as its unprecedented environmental programme. This clean growth strategy not only lays out long-term ore production and capital investment targets but also sets out concrete action plans to reduce the Company's environmental footprint in its regions of operation.

This Annual Report was prepared by the Investor Relations Department, taking into account the requirements and recommendations of:

- the Bank of Russia's Regulations No. 714-p On Information Disclosure by Issuers of Issue-Grade Securities, dated 27 March 2020
- the Bank of Russia's Letter No. 06–52/2463 On the Corporate Governance Code, dated 10 April 2014
- the Bank of Russia's Information Letter No. IN-06–28/49 On Recommendations for Public Joint Stock Companies to Disclose Non-financial Information Related to Their Activities, dated 12 July 2021
- the Bank of Russia's Information Letter No. IN-06–28/96 On Recommendations for the Board of Directors of a Public Joint Stock Company to Consider ESG Factors and Sustainable Development Issues, dated 16 December 2021
- the Listing Rules of PJSC Moscow Exchange.

The Report discloses financial metrics based on the Group's IFRS consolidated financial statements for 2022 audited by Kept in accordance with International Standards on Auditing.

Interactive version of the Annual Report

Sustainability Report

Human Rights Report

PRE-APPROVED by the Board of Directors (Minutes No. GMK/18 -pr-sd dated 28 April 2023)

ACCURACY OF INFORMATION IS CONFIRMED by the Audit Commission (Opinion dated 26 April 2023)

THIS ANNUAL REPORT WAS APPROVED by the Annual General Meeting of Shareholders (Minutes No. 1 dated 6 June 2023)

VLADIMIR POTANIN
President, Chairman of the Management Board

SERGEY MALYSHEV
Senior Vice President – Chief Financial Officer

ABOUT NORNICKEL

Nornickel is the leader in Russia’s metals and mining industry and one of the world’s largest metal producer.

The Company produces metals essential for the development of a low-carbon economy and green transport.

COMPANY PROFILE

Nornickel is the leader in Russia's metals and mining industry and the largest palladium and high-grade nickel producer globally as well as a leading producer of platinum and copper. The Company also produces cobalt, rhodium, silver, gold, iridium, ruthenium, selenium, and tellurium.

The Group has more than 85 companies located in Russia and other countries. Major production assets include the Norilsk Division, Kola Division (including Kola MMC and Norilsk Nickel Harjavalta Oy nickel refinery in Finland) and also Trans-Baikal Division (including GRK Bystrinskoye, 50.01% owned by the Company).

The Company also operates a captive sales network and owns a wide range of R&D facilities, energy assets, river fleet, river and sea port terminals, a unique Arctic cargo sea fleet as well as a number of other auxiliary units.

10.8%
the Company's share in Russia's metals production

>78,000
employees

RUB 180,000
average monthly salary at the Company

>30 countries
consume the Company's products

OUR HISTORY

In recent years, Nornickel has become the leader in Russia's metals and mining industry, a reliable social partner and one of the world's largest producers of palladium and high-grade nickel.

1935-1959

Construction of the Norilsk Metallurgical Plant was launched in the Monchetundra.

The first batch of converter matte was produced. By late 1953, Norilsk Plant produced

35% of nickel,
12% of copper,
30% of cobalt, and
90% of platinum group metals (PGMs) of the Soviet Union's total output.

1960-1992

New deposits developed and new facilities put online

Major sulphide deposits of copper-nickel ores of the Talnakh deposit were discovered, giving a new lease on life to Norilsk Plant. The construction of mines and the town of Talnakh started on the Taimyr Peninsula. The first batch of carbonyl nickel was produced at Severonickel Plant on the Kola Peninsula.

Komsomolsky, Oktyabrsky and Taimyrsky Mines were launched; Talnakh Concentrator and Nadezhda Metallurgical Plant were commissioned. Severonickel Plant celebrated first production of electrolytic copper.

1993-2012

Company transformation

In 1993, the Company was transformed into RJSC Norilsk Nickel and privatised. In 2001, the Company was restructured, with shareholders of RJSC Norilsk Nickel exchanging 96.9% of their stock to shares in PJSC MMC NORILSK NICKEL. The Company shares started trading on the RTS and MICEX stock exchanges, and first American Depositary Receipts (ADRs) were issued in June.

2013–2020

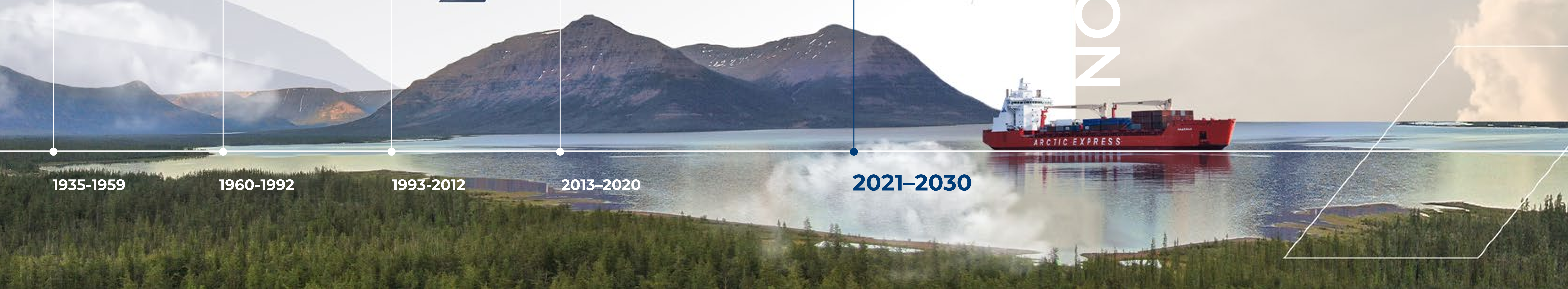
IMPLEMENTING A NEW STRATEGY

Vladimir Potanin and his new management team took the helm of the Company. The Board of Directors adopted a new long-term development strategy focused on world-class assets of the Polar Division and Kola MMC. Bystrinsky GOK, the largest greenfield project in the Russian metals industry, was constructed from scratch in the Zabaykalsky Territory. At that time, a programme was launched to improve the environmental situation across the Company's footprint, including the shuttering of Nickel Plant in Norilsk, the launch of the Sulphur Project to drastically reduce sulphur dioxide emissions and the closure of obsolete metallurgical facilities in the Murmansk Region.

2021–2030

ENVIRONMENTALLY GROWTH STRATEGY

The Company announced a new investment cycle aimed at the comprehensive development of mining assets and the expansion of processing capacities as well as the implementation of its environmentally friendly growth strategy that not only lays out long-term ore production and capital investment targets but also sets out concrete action plans to reduce the Company's environmental footprint in its regions of operation.



NORNICKEL IN 2022

- Nornickel fully delivered on its production programme, with CAPEX hitting a record USD 4.3 billion.
- Nornickel pioneered the free, prior and informed consent (FPIC) procedure in Russia to discuss a relocation programme with indigenous peoples, with FPIC obtained from Tukhard residents.
- Nornickel received equipment for the Sulphur Project and celebrated first production of limestone (23.5 thousand tonnes) from the Mokulayevskoye field. The mine will become the key producer of limestone for the Sulphur Project.
- The Company launched two icebreakers, including a nuclear-powered one, enabling future expansion of transport capacity to cover the needs of the Taimyr Peninsula.
- The Company launched an integrated control unit in Norilsk to monitor the condition of buildings and structures, which tracks the condition of permafrost soils.
- In March, Nornickel sold NordStar Airlines.
- Nornickel reached a settlement agreement with the Federal Agency for Fishery, stipulating that NTEC will ensure full in-kind compensation for accident-related damage to aquatic bioresources by releasing fry into the affected water bodies between 2023 to 2050.
- Nornickel signed an agreement with RusHydro to purchase electricity generated from renewable sources to Trans-Baikal Division. Over the next three years, Bystrinsky GOK plans to switch all its external energy consumption to carbon-free sources leveraging similar contracts and thus unlock significant GHG emission reductions.

PERFORMANCE HIGHLIGHTS

FINANCIAL

Net income and revenue (USD bn)

	Net income	Revenue
2022	5.9	16.9
2021	7.0	17.9
2020	3.6	15.5

● Net income ● Revenue

-16% -5%

EBITDA and EBITDA margin (USD bn)

	EBITDA margin	EBITDA
2022	52%	8.7
2021	59%	10.5
2020	49%	7.7

● EBITDA margin ● EBITDA

-7 p.p -17%

Capital investments (USD bn)

	Stay-in-business	Commercial	Bystrinsky project	Total
2022	3.2	1.0	0.1	4.3
2021	1.9	0.8	0.1	2.8
2020	1.2	0.5	0.1	1.8

● Stay-in-business
● Commercial
● Bystrinsky project

+55%

Debt (USD bn)

	Net debt/12M EBITDA	Net debt
2022	1.1x	9.8
2021	0.5x	4.9
2020	0.6x	4.7

● Net debt/12M EBITDA ● Net debt

+0.6% +2x

SUSTAINABILITY

GHG emissions from production assets (mln t)

	Scope 1	Scope 2	Total
2022	8.1	0.5	8.6
2020	8.5	0.5	9.0
2021	8.0	0.5	8.5

● Scope 1 ● Scope 2

-5% +7%

Social expenses for employees (USD mln)

	Housing programmes	Health resort treatment	Pension plans	Other social expenses	Total
2022	16	36	17	153	223
2021	14	28	14	123	179
2020	11	11	14	93	129

● Housing programmes
● Health resort treatment
● Pension plans
● Other social expenses

SO_2 emissions (mln t)

2022	1.8
2021	1.6
2020	1.9

+11%

Injury rates (per million hours worked)

	LTIFR	FIFR
2022	0.03	0.57
2021	0.1	0.38
2020	0.08	0.21

● FIFR ● LTIFR

-66% +50%

OPERATIONAL

Production of nickel and copper (from own feed, kt)

	Nickel	Copper
2022	219	433
2021	190	407
2020	223	487

● Nickel ● Copper

+15% +6%

Production of palladium and platinum (from own feed, kt)

	Platinum	Palladium
2022	651	2,790
2020	641	2,616
2021	693	2,820

● Platinum ● Palladium

+2% +7%

INVESTMENT HIGHLIGHTS

UNIQUE RESOURCES

The unique mineral resource base of polymetallic ores secures the most advantaged position in the global mining industry.

9 mines

over 75 years
Resources at the current production rate

1,127 mln t
Proven and probable reserves

Ni	8.3	mln t
Cu	14.9	mln t
PGMs	165	Moz

1,826 mln t
Measured and indicated resources

Ni	13.8	mln t
Cu	22.7	mln t
PGMs	254	Moz

INDISPENSABLE METALS FOR GREEN ENERGY

Nornickel is the world's largest producer of green metals which underpin the global economy's decarbonization process and the transition to renewable energy and electrified transport.

METAL PRODUCTS AND USES

Ni High-grade nickel
- Batteries
- Chemical industry
- Medicine
- Nickel electroplating
- Alloys
- Stainless steel

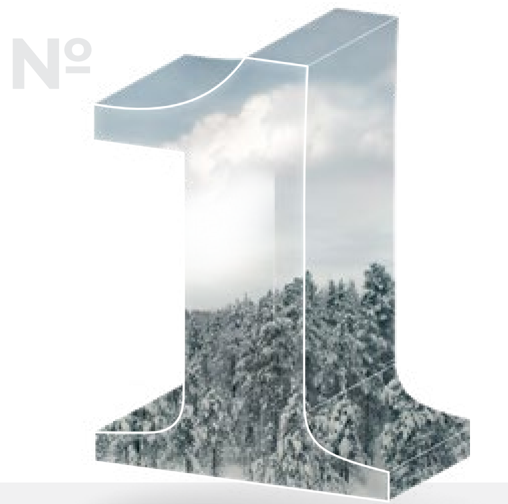
Pd Palladium
- Chemical industry
- Medicine
- Investment
- Glass fibre and optical glass

Cu Copper
- Electrical wires
- Pipes
- Architecture and design
- Antiseptic
- Copper rod

Pt Platinum
- Catalysts
- Jewellery
- Electronics
- Oil refining

LEADING POSITION IN GLOBAL MARKETS[1]

Nornickel is the global leader in palladium and high-grade nickel production.



43% Palladium

17% High-grade nickel

12% Platinum №4

8% Rhodium №5

2% Copper №12

Some of the lowest cash costs and carbon footprints of nickel production
among global producers. The carbon footprint of nickel metal production according to international standards totalled
9.7 t of CO_2
equivalent per tonne of metal.

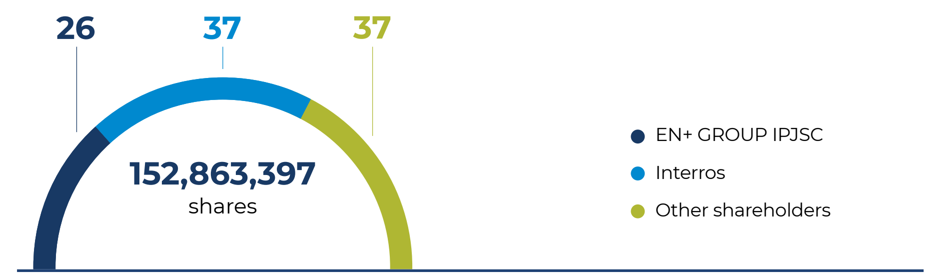
High degree of vertical integration: from ore to finished products (100% self-suffi iency).
The Company's reliance on own logistics, energy, fuel, and water supply translates to a significantly smaller share of these expenditures in cash costs vs peers.

Best-in-class feedstock mix –
natural diversification and solid long-term fundamentals.

THE MOST LIQUID SHARES IN THE MARKET

Nornickel shares have been traded in the Russian stock market since 2001. Since 2014, the shares are included on the First Level quotation list of the Moscow Exchange (ticker: GMKN).

Shareholding structure as of 31 December 2022 (%)



Analysts' recommendations on the Company shares

Nornickel shares are included in 16 indices of the Moscow Exchange, with the following weights in the main indices as of the end of December 2022:

7.39% MOEX Russia Index	**10.44%** MOEX 10 Index	**9.24%** Blue Chip Index
15.27% MOEX Metals and Mining Index	**7.32%** MOEX Broad Market Index	**4.51%** Sustainability Vector Index

[1] Data as of early March 2023. Based on refined metal (including tolling) output for palladium, nickel, platinum, and rhodium; based on contained metal production for copper.

BUSINESS MODEL

RESOURCES

Mineral resource base

1,127 mln t
Proven and probable reserves

1,826 mln t
Measured and indicated resources

>75 years
of resources at the current production rate

Workforce

~78.4 thousand employees

Mining and metallurgical assets

9 mines

4 concentrators

3 metallurgical plants

AUXILIARY ASSETS

- Transport enterprises
- Energy enterprises
- Global sales network
- R&D: Gipronickel Institute

MINING

Norilsk Division:

Produced

18.4 mln t of ore

Ni 1.27% | Cu 2.18% | PGMs 6.64 g/t

Kola Division:

Produced

7.0 mln t of ore

Ni 0.49% | Cu 0.21% | PGMs 0.10 g/t

Trans-Baikal Division:

Produced

15.0 mln t of ore

Cu 0.57%

Energy Division:

Produced

2,816 Mcm
of natural gas

91 kt
of gas condensate

CAPITAL EXPENDITURES IN 2022

USD **0.9** bn
Sulphur Project

USD **1.1** bn
Growth and development projects

USD **2.3** bn
Maintenance and upgrades of fixed assets

FINANCIAL PERFORMANCE

USD **16.9** bn / revenue

USD **8.7** bn
EBITDA

USD **5.9** bn
Net profit

52%
EBITDA margin

1.1 x
Net debt/EBITDA

Sales footprint, %

Europe	47
Asia	31
North and South America	15
Russia and the CIS	7

VALUE CREATED FOR STAKEHOLDERS

Shareholders

USD **6,196** mln
Total dividend payout in 2021

Employees

USD **211** mln
Spending on social programmes for employees

USD **2,662**
Average monthly pay

USD **17** mln
Spending on pension plans

Suppliers

95%
Share of Russian companies in supplies to Nornickel

Customers

The Company's products are supplied to
34 countries worldwide

Government

Tax and other payments to budgets:

RUB **109.2** bn
Federal

RUB **116.9** bn
Regional

ENVIRONMENT

8.6 mln t
GHG emissions from operations (Scope 1 + 2)

5.7 mln t
GHG emissions (Scope 3)

99%
of the Company's industrial waste is non-hazardous

51%
of electricity generated from renewable sources

82%
Share of reused and recycled water

STRATEGIC REPORT

Nornickel maintains its focus on growth and is currently at the peak of its investment cycle.

In 2022, CAPEX totalled to

USD 4.3 bn

In 2023, CAPEX is expected to increase to

USD 4.7 bn

CHAIRMAN'S LETTER

DEAR SHAREHOLDERS!

Having barely recovered from the COVID-19 pandemic and industrial incidents at the Taimyrsky and Oktyabrsky Mines, we faced new, even more daunting challenges in 2022. The unprecedented sanctions regimes imposed by a number of countries against Russia have had a significant negative impact on our business, challenging us to promptly adapt our operations, procurement, sales, and financial activities to the new normal.

Despite all these headwinds, Nornickel fully met its production targets for the year and ramped up its output of all metals following unscheduled production downtimes in 2021. I would particularly note that, as we restored operations at the two mines and Norilsk Concentrator, we maintained our focus on improving our health and safety management, making tangible progress in this area. The number of fatal accidents has decreased by almost three times from 11 to 4, but we are far from satisfied with this, and we will make every effort to achieve zero fatalities at the workplace.

We continue to make progress on the Sulphur Project, our flagship sustainability initiative to dramatically reduce sulphur dioxide emissions in the Norilsk Industrial District. Over 2022, we completed the bulk of the project's first phase, including the construction of furnace gas recovery facilities, a sulphuric acid neutralisation line and related infrastructure at Nadezhda Metallurgical Plant. We can confirm that these facilities will come online before 2023-end.

Amidst strong geopolitical turbulence and economic uncertainty, it is vital for any business to remain socially responsible. As such, we decided to support our employees and their families by indexing salaries above inflation in Russia, as well as paying extra bonuses last April. On top of this, we also launched a long-term programme in 2022 to renovate housing and social infrastructure in Norilsk, for which the Company plans to disburse over RUB 81 billion by 2035.

Of course, the new operating environment has forced the Company to completely rethink the scope and timelines of many investment projects. Although we remain committed to all of our previously stated strategic environmental, mining and downstream priorities, many projects in these areas are being redesigned as we need to substitute imported process equipment, source new suppliers and build alternative supply chains.

In closing, I am proud to say that despite all these challenges, Nornickel has retained its leadership in non-ferrous and precious metals, and our products remain in demand and consistently generate strong revenues and operating profit. The Company has a robust balance sheet, ready to fully meet its obligations to employees, partners, society, and the government, while retaining a compelling investment case for shareholders.

ANDREY BOUGROV
Chairman of the Board of Directors
MMC Norilsk Nickel

«

Despite all these headwinds, Nornickel fully met its production targets for the year and ramped up its output of all metals following unscheduled production downtimes in 2021.

PRESIDENT'S LETTER

DEAR SHAREHOLDERS!

The year 2022 has come to an end, and I would like to take the opportunity to look back on what we have achieved, as well as share our short-term plans as we deal with very high uncertainty going into 2023.

OPERATIONAL AND FINANCIAL PERFORMANCE

Last year, Nornickel and the broader Russian economy grappled with severe sanctions, which, coupled with high inflation and volatility rates across global commodity and financial markets, could not but affect the Company's key financials.

We have fully restored operations at the Taimyrsky and Oktyabrsky Mines and Norilsk Concentrator after incidents in 2021 and have ramped up our output of all key metals. Despite the geopolitical challenges and related disruptions to international logistics, the Company also successfully met all its obligations to customers in 2022. Meanwhile, lower prices for copper and palladium, as well as higher metal inventories in transit due to longer supply chains, have caused our revenue to fall by 5% to USD 16.9 billion.

Our cost of goods sold has also been affected. The direct impact of inflation aside, it has been affected by the additional incentives we paid to employees and the wage indexation above inflation in Russia, as well as changing the calculation of the MET rates. As a result, our EBITDA for the year was USD 8.7 billion, while EBITDA margin remained above 50%.

EBITDA for the year was

USD **8.7** bn

Our net debt has increased, but its ratio to EBITDA remains at a comfortable 1.1x. Amidst the ongoing turbulence, with Russia cut off from traditional global capital markets, leverage and liquidity management have become another top priority, and we have successfully risen to this challenge by refinancing our dollar-denominated debt through RUB- and RMB-denominated instruments.

Over the year, we also continued to ramp up our investments in growth projects and programmes aimed at reducing our environmental footprint and boosting industrial safety. As a result, our capital expenditure grew to USD 4.3 billion, an all-time high for the Company.

«

The total number of retail shareholders in the Company topped 380 thousand, evidencing the confidence that Russian investors have in our business in such challenging times.

In 2022 our capital expenditure grew to

USD **4.3** bn

CAPEX PROGRAMME

As mentioned earlier, the Company is currently at the peak of its investment cycle, which implies further growth in total capital expenditure in 2023 to about USD 4.7 billion. This money is earmarked for financing production growth projects at the Talnakh mines and the South Cluster, expanding Talnakh Concentrator and the environmental Sulphur Project, maintaining and upgrading the energy infrastructure of the Norilsk Industrial District, replacing equipment, carrying out capitalised repairs, and running social projects. Our capital expenditure for asset upgrade and replacement will remain at a consistently high level above 50% of our total investment budget.

Clearly, the extraordinary events that have led to restrictions on exports of process equipment into Russia have significantly changed our long-term strategic plans. We have redesigned a number of major initiatives to reflect these changes and are engaged in comprehensive efforts to source alternative technical and engineering solutions, equipment suppliers and contractors. We are planning to finalise this work before the year's end and present an updated investment programme for 2024–2030 in Q4 2023.

The total number of retail shareholders in the Company topped

380,000

ENVIRONMENT AND OCCUPATIONAL HEALTH

Our Environmental Strategy is centred around the project to reduce sulphur dioxide emissions in the Norilsk Industrial District. Throughout 2022, we made strong progress on the first phase of this project at Nadezhda Metallurgical Plant. At present, construction and installation works are over two thirds of the way to completion, with equipment and pipeline pre-commissioning already underway, which makes us confident that the project will be launched before year-end.

Last year also saw the completion of our CHPP-3 fuel spill response work, as well as a large-scale biodiversity study across our entire footprint and further efforts under our sanitary clean-up and remediation programme.

Nornickel continued its building and structure monitoring programme as part of its climate risk management: by late 2022, we had connected 17 of our enterprises to a special diagnostic system, monitoring over 700 structures in real time.

In 2022, we were able to demonstrate significant progress on industrial safety by considerably reducing the number of work-related fatalities across our operations. Tragically, four of our colleagues lost their lives at work during the last year. All accidents were thoroughly investigated, with the resulting reports submitted to the Board of Directors and action plans developed to eliminate their root causes. I would like to reiterate the Company's commitment to achieving zero work-related fatalities, which is our top strategic priority.

SOCIAL RESPONSIBILITY

In line with the key provisions of Norilsk's social and economic development programme, we have launched efforts to renovate housing and upgrade or overhaul local utilities and engineering infrastructure. We also continue to develop the Corporate Healthcare project to set up private healthcare facilities complementing the public healthcare system across our footprint so as to drastically improve healthcare services for local communities.

Finally, we were the first Russian company to launch a process for obtaining the free, prior and informed consent of indigenous communities, which we have used with the people of Tukhard on the Taimyr Peninsula as part of the Tukhard relocation and development programme.

This move has become an important milestone in our relations with the indigenous peoples of the North.

On a final note to our shareholders, I would like to mention that last year, the total number of retail shareholders in the Company topped 380 thousand, evidencing the confidence that Russian investors have in our business in such challenging times – I hope that we live up to your expectations.

VLADIMIR POTANIN
President,
Chairman of the Management Board
MMC Norilsk Nickel

COMMODITY MARKETS

NORNICKEL METALS' APPLICATIONS

Mechanical engineering, chemical and petrochemical industries, construction

Nickel is used in the stainless steel production. Adding nickel as an alloying element to stabilise the austenite structure enhances steel's corrosion resistance, high-temperature properties, weldability, formability, and resistance to aggressive environments. Enhanced this way by nickel, stainless steel finds its applications across many industries, including the mechanical engineering, chemical and petrochemical industries, and construction

Palladium, platinum and rhodium are used as catalysts in chemical and petrochemical processes to boost process performance

EV batteries

Nickel is used as a key element in the production of precursor cathode active materials for EV batteries. The dominating technologies include nickel-intensive NCM and NCA batteries, owing to their higher volumetric and gravimetric energy density, which increases drive range. Nickel-based batteries are also more recyclable and reusable than other types of batteries

Aerospace industry

Nickel alloys are highly resistant to heat and aggressive environments and are used in the manufacturing of aircraft engines and rocket components

Renewable energy

Nickel alloys are used in wind, solar and geothermal power generation

Copper is intensively used in the construction of wind, solar and other types of renewable power plants

Automotive industry

The automotive industry uses copper in batteries, electric motors, inverters, wiring, and charging infrastructure. Transport electrification is expected to become a key driver behind copper demand in this decade

Palladium, platinum and rhodium are used as the active material in automotive exhaust gas catalysts to minimise the vehicles' environmental impact

Construction, air conditioning and cooling systems

The construction sector uses copper in pipes and tubing, heating and cooling systems as well as in wall cladding. Electrical and communication cables are also mostly made of copper

Electronics and home appliances

Copper is used in electronics and home appliances due to its excellent electrical and thermal conductivity

Palladium has found its way into the electronics industry as material for capacitors, motherboards and other components, while platinum is primarily used in hard drives, and rhodium in coatings for connectors and contacts

Network infrastructure

Copper is used in power generation, transmission and distribution as well as in all types of wiring. A strong push for transport electrification and transition to renewable energy will require significant expansion of distribution networks

Hydrogen solutions

Platinum, palladium, iridium, and ruthenium are widely used in rapidly developing hydrogen technologies. Platinum group metals find application as catalysts in low-carbon hydrogen production as well as for hydrogen purification, transportation and use as an energy source in fuel cells

Jewellery

Palladium and platinum are widely used in all kinds of jewellery which is renowned for its beauty but also for durability

Healthcare

PGMs are extensively used as catalysts in drug synthesis. Additionally, palladium has found wide application in dentistry, while platinum is used in medical devices such as pacemakers. Platinum is also an active ingredient of anti-cancer medicines

Glass fibre and optical glass manufacturing

In the glass industry, platinum and rhodium are used to manufacture bushings for making glass fibre and optical glass

STRATEGY

GLOBAL TRENDS

COVID-RELATED RESTRICTIONS

In 2022, following the easing of pandemic-induced restrictions, supply chains affected by lockdowns started to recover. China, the largest consumer of base metals and a key producer and consumer of base and precious metals, bucked the trend, as the country, with its zero-COVID policy, kept stringent restrictions in place across major cities, slashing industrial demand for metals across a wide range of applications, from stainless steel to the automotive and jewellery industries. Meanwhile, despite the lockdowns that were in place throughout the year, China managed to boost both its production and consumption of nickel and copper products. The lifting of restrictions in late 2022 is expected to spur business activity and demand for metals in China starting from the second quarter of 2023.

STRICTER MONETARY POLICY

The year 2022 saw a substantial rise in global inflation caused by geopolitical tensions, surging energy prices, ongoing COVID-19 restrictions in China and supply chain disruptions. In response to accelerating inflation, major central banks decided to tighten their monetary policies, dampening global economic growth and, consequently, negatively impacting industrial consumption of base and precious metals. The US dollar appreciation against major currencies caused by the Federal Reserve System's (the Fed) rate hikes resulted in a retracement of commodity prices in the second half of 2022.

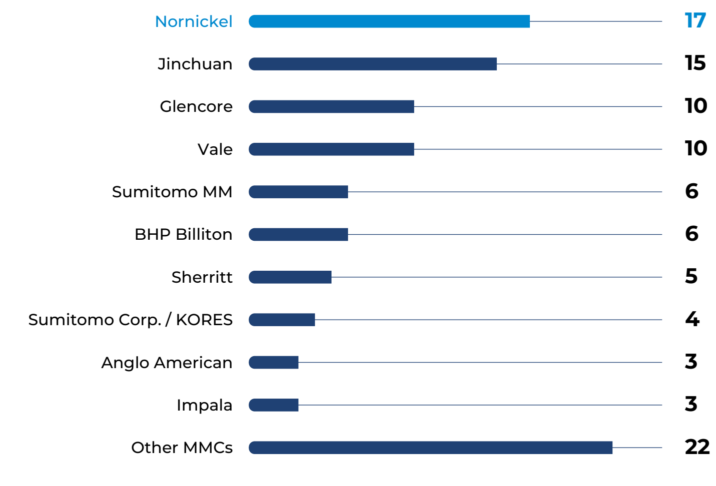
GEOPOLITICAL TENSIONS

The tensions in Ukraine in 2022 led to unprecedented sanctions against Russia. They were exacerbated by what became known as "self-sanctioning" as some international organisations shuttered their Russian operations despite the absence of any legal restrictions on working with Russian companies, which affected both inventory procurement and sales for Russian producers.

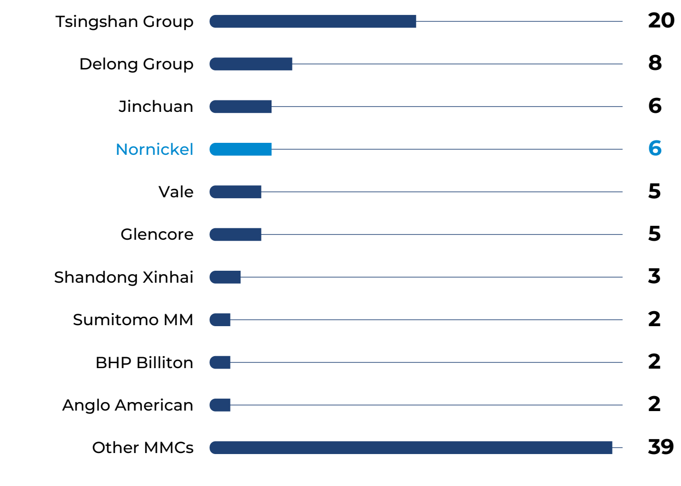
The London Bullion Market Association (LMBA) and the London Platinum and Palladium Market (LPPM) have introduced restrictions on Russian refineries and on the processing of Russian-origin precious metals in other countries. This move has affected the liquidity of Russian metals in the global market. The London Metal Exchange also considered delisting Russian base metal brands but decided against the ban following consultations with market players.

NICKEL (Ni)

Nornickel — No. 1 in high-grade nickel production(%)



Nornickel — No. 4 in primary nickel production(%)



Sources: producer reports, Company analysis as of 3 March 2023.

KEY TRENDS IN THE NICKEL MARKET

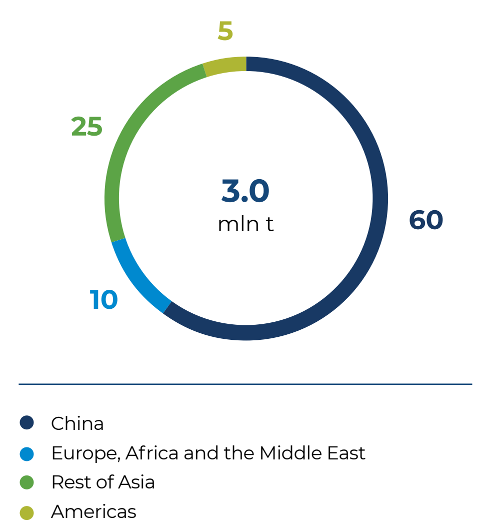
In 2022, the nickel market moved into a surplus of 114 kt, or 4% of annual consumption (compared to a deficit of 172 kt in 2021). Historically, market surpluses have been linked to the LME deliverable / Class 1 nickel. However, in 2022, the surplus was mainly represented by the low-grade nickel units, particularly nickel pig iron (NPI) and FeNi. Meanwhile, the high-grade nickel market remained in deficit, particularly as nickel inventories halved in 2022.

After a year of significant deficit in the nickel market in 2021, which resulted in a 38% increase in the annual nickel price, the price started the year buoyantly as robust speculative demand and significant spot market tightness had caused exchange stocks to dwindle further. As a result, combined with logistical bottlenecks and geopolitical tensions in Eastern Europe, the price has been pushed to an 11-year high of USD 24,000/t in mid-January, although this price spike was somewhat speculative and was accompanied by massive short covering.

In February, the nickel price dynamics were dominated by escalating geopolitical tensions between Russia and Ukraine, which was further exacerbated by the low exchange stocks. As a result, the LME nickel price increased to a new 11-year high of USD 30,000/t during the trading session of 4 March.

On 8 March, the LME was forced to suspend trading in all nickel contracts after prices jumped to a record USD 100,000/t, allegedly due to a massive short squeeze. Given the extreme price movements and low trading volumes, the LME decided to cancel all trades executed on 8 March and rewound the market to the moment when prices closed on 7 March.

Primary nickel consumption by region (%)



Source: Company data

The LME introduced new daily price fluctuation limits on nickel contracts based on the previous day's closing price, allowed nickel position transfers, restricted the opening of new short positions, and resumed trading on 16 March. For several straight sessions, the price fell by the newly established daily limits, and the first settlement price of USD 30,800/t was recorded on 22 March only, but later on, prices steadied at around USD 33,000–34,000/t, albeit at low trading volumes.

The LME nickel price was in a downtrend in April–July, retreating after its enormous volatility and wild price swings. This downturn was further exacerbated by a broader trend of a demand slowdown across all base metals with the underlying weakness in the Chinese economy, strong US dollar and aggressive monetary policy tightening in conjunction with soaring inflation and attendant recessionary fears. On top of that, high energy prices and ongoing supply chain bottlenecks widely reduced investor activity across all markets and dented the industrial demand.

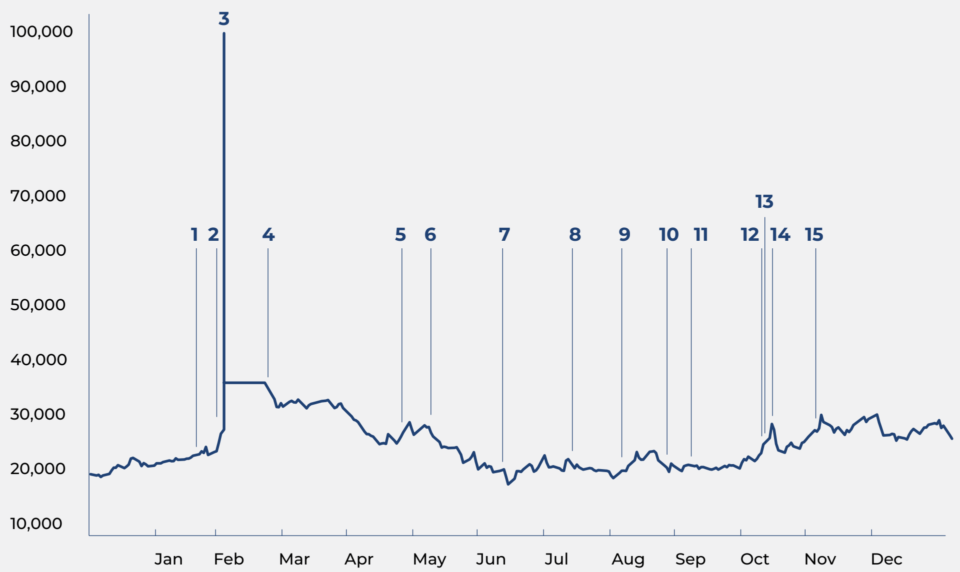
In July–September, nickel prices were rising, hitting a 3-month high of USD 25,000/t in late September, supported by increased sales in the EV market and low LME inventories, but lost all of the gains soon and plunged to USD 21,000/t in less than a week as the US dollar index hit a 20-year high, deteriorating the commodity prices.

In October, the price remained stable at around USD 21,000–22,000/t before surging to above USD 30,000/t in November. This has been caused by several factors, including speculation regarding the ban on the Russian metals by the London Metal Exchange and slower growth in the US CPI data, driving expectations that the Fed would ease the pace of its interest-rate increases with a correspondent drop of the US dollar index and a jump in prices of all major

Average annual nickel prices (USD/t)

Source: London Metal Exchange (cash settlement)

LME nickel price in 2022 (USD/t)



Source: London Metal Exchange

1. Geopolitical tensions in Ukraine
2. Massive short squeeze
3. The LME suspends trading in nickel contracts and cancels all trades after prices doubled to a record USD 100,000/t
4. Resumption of LME trading amid illiquid market
5. Strike at Glencore's Raglan nickel mine
6. LG Energy Solution launches construction of extensive nickel sulphate, PCAM[1] and CAM[2] capacities in Indonesia
7. US inflation at a 40-year high
8. US President Joe Biden signs Inflation Reduction Act 2022
9. Strike at Glencore's Raglan mine ended
10. DXY hits a 20-year high of 115
11. The London Metal Exchange announces public consultation on banning Russian metal
12. US inflation slows down to 7.7% following the DXY decline
13. The London Metal Exchange decides against banning Russian metal
14. Failed squeeze on low volumes, unconfirmed blast at CNGR's plant, Goro's leaks, and rumours about Indonesia's export taxes
15. The EU considers imposing sanctions against the Russian mining sector

[1] PCAM – Precursor cathode material.
[2] CAM – Cathode material.

commodities. These price gains were also supported by the rumours about a possible Indonesian nickel export tax, an unconfirmed report about a blast at CNGR's NPI-to-matte conversion plant in Indonesia, as well as disruptions at several nickel producing sites in Ukraine and New Caledonia. Later, however, the price retreated to USD 25,000–26,000/t.

In the first half of December, the nickel price rebounded to USD 30,000/t amid increased speculative trading, which could augur a new short squeeze attempt, but the price then retraced to USD 28,000/t. In late December, LME nickel prices stayed at USD 28,000–30,000/t in a sluggish market ahead of Christmas and New Year holidays.

Due to substantial volatility, the LME nickel price averaged USD 25,605/t in 2022, up 38% from the 2021 average.

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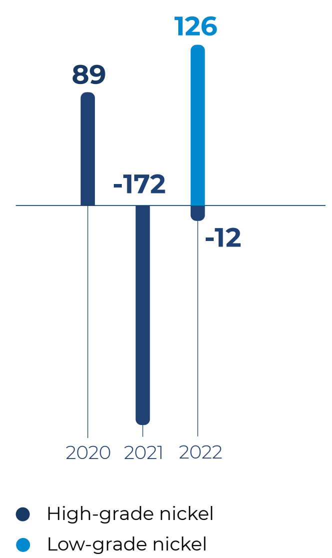
MARKET BALANCE

Primary nickel consumption grew by 5% y-o-y to 3.03 mln t in 2022. However, sluggish stainless steel production due to lower end use demand in China (on the back of the zero-COVID policy and a weak real estate sector) and in Europe (due to a wild surge in energy prices and inflation rates) was offset by a substantial increase in demand from the battery sector (up 32% y-o-y).

Primary nickel production totalled 3.14 mln t in 2022 (up 16% y-o-y). This increase was driven by the massive growth in the Indonesian NPI capacities (to 1.15 Mt Ni, or up 33% y-o-y) and the continued underlying growth of nickel compounds for the EV batteries sector, mainly fuelled by the launches of new HPAL capacities and NPI-to-matte conversion lines.

As a result, in 2022, the nickel market moved into a surplus of 114 kt, mostly in low-grade nickel. This was primarily due to lower-than-expected stainless steel output and a surge in NPI output in Indonesia, resulting in significant discounts for low-grade nickel and accumulation of NPI and FeNi stocks. Meanwhile, the high-grade nickel market saw a moderate deficit as evidenced by a decline in total nickel inventories of the LME and SHFE, which dropped by 49 kt in 2022 to 58 kt at the end of the year, or less than 10 days of global consumption.

Nickel production and consumption balance (kt)



Source: Company data

Primary nickel consumption in 2022

3.0 mln t

+5 % y-o-y

Primary nickel production in 2022

3.1 mln t

+16 % y-o-y

CONSUMPTION

Stainless steel remained the key sector of nickel use (about 65% of primary demand) in 2022. Adding nickel as an alloying element to stabilise the austenite structure enhances steel's corrosion resistance, high-temperature properties, weldability, formability, and resistance to aggressive environments.

Stainless steel production uses almost all types of nickel feed (except for some special products, such as nickel powder and compounds). However, since the quality of nickel used has almost no effect on stainless steel quality, steelmakers primarily use cheaper low-grade nickel such as NPI, ferronickel and nickel oxide. As a result, the share of high-grade nickel used in stainless steel has decreased in recent years.

In 2022, global stainless steel output declined by 5% to 56 mln t as industrial demand in China was dampened by the government's zero-COVID policy and stringent lockdowns amid continuing stagnation in the construction sector, which led to a drop in production in both China and Indonesia (by 2% and 4%, respectively). This was accompanied by a substantial decline in production in Europe and the US due to sluggish end use demand and rising energy prices, which translated to a jump in production costs. Consequently, output dropped by 16% in Europe and by 13% in the United States. Production was also stagnant in other countries around the world (Japan, South Korea, Taiwan). India was the world's only country that ramped up its stainless steel output by launching new production capacities, with its output up 1%.

At the same time, primary nickel demand in the stainless steel sector stayed flat at about 2 mln t in 2022. The overall decline in output was offset by the growing demand for Indonesian NPI, the preferred nickel feedstock for integrated stainless steel producers in China, the world's largest producer accounting for nearly 60% of global steel output. This led to a lower share of demand for scrap, i.e. secondary raw materials, and a corresponding increase in use for primary nickel.

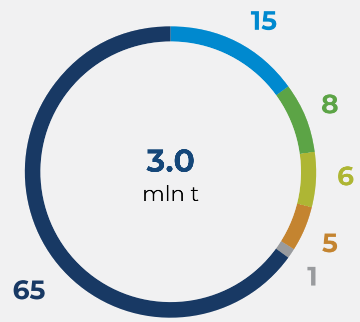
The battery industry uses nickel as a key element in the production of cathode precursors for batteries. In 2022, nickel demand continued to rise and grew 32% to 468 kt, driven by global EV support policies, rapid expansion of charging infrastructure and battery cost optimisation.

Lithium-ion batteries are the key type of batteries because of their high energy density, specific energy and long life cycle. Growth in lithium-ion battery production is primarily driven by transport electrification. In 2022, EV sales (battery electric vehicles and plug-in hybrids) rose more than 60% to 11 million units, growing at a CAGR of over 50% between 2015 and 2022. The impetus for transport electrification comes from government incentives, more stringent environmental regulations, improved battery performance, and lower production costs of battery cells.

China was the epicentre of this growth, with its sales almost doubling due to higher availability of EVs across price segments and more robust consumer demand. At the same time, sales in Europe rose only by 11% y-o-y and even declined for some months, reflecting the increasing cost of living and the pressure on consumer savings as well as the rising expenditure on energy and soaring inflation.

The growing popularity of electric and hybrid cars, along with the evolution of cathode technology towards nickel-intensive types, add to the tailwinds for significant growth in primary nickel demand in batteries in the long run. Despite the mounting competition across technologies, high-nickel formulations will remain the preferred option for automakers owing to their higher energy density, longer range and better recyclability. In our base case scenario, we estimate the nickel use in batteries

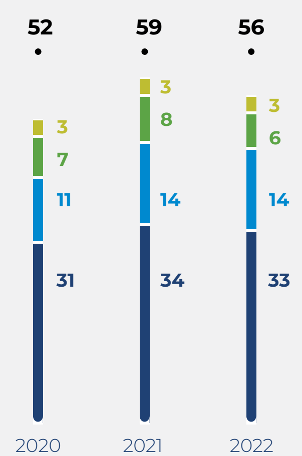
Nickel consumption by industry in 2022 (%)



- Stainless steel
- Batteries
- Alloys and superalloys
- Electroplating
- Special steels
- Other industries

Source: Company data

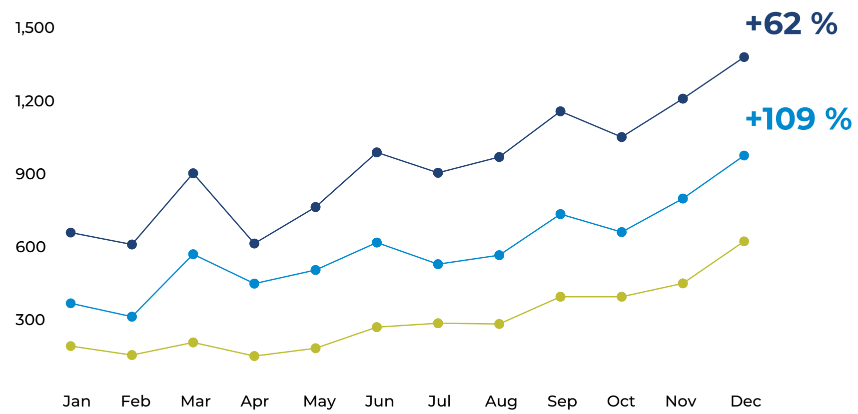
Stainless steel production (mln t)



- China
- Rest of Asia
- EMEA (Europe, Middle East, Africa)
- Americas

Sources: Eurofer, ISSF, USGS, SMR, METI, TSIIA, Company data

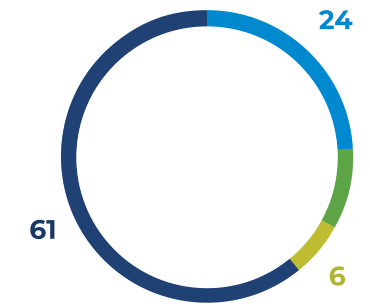
Global sales of electric vehicles (thousand units)



- 2022
- 2021
- 2020

Source: Company analysis

Sales of electric vehicles by region in 2022 (%)

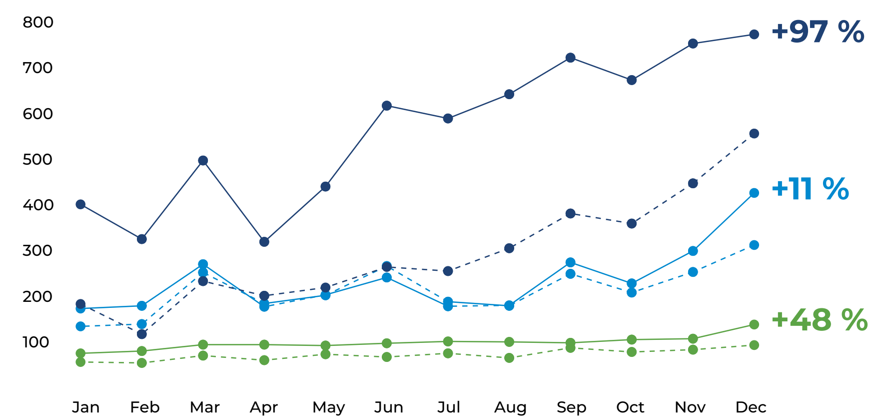


- China
- Europe
- USA
- Rest of World

to reach approximately 1.5 mln t of nickel by 2030, or 30% of total primary nickel demand (compared to 15% in 2022). Meanwhile, this figure may require further revisions given the continuous introduction of more ambitious carbon neutrality goals, subsidies-driven transport electrification and cost optimisation of battery cell production.

In 2022, nickel consumption in other industries (alloys and superalloys, plating, special steel) increased by 8%, or 43 kt, amid the gradual post-COVID recovery of industrial demand and robust economic performance in the aerospace, oil and gas, and military industries.

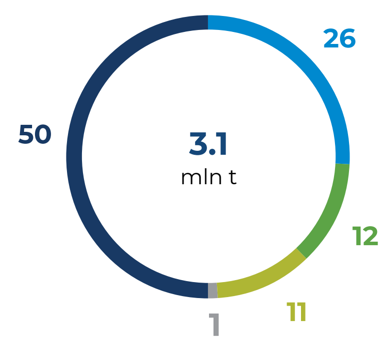
Regional sales of electric vehicles (thousand units)



- China 2022
- China 2021
- Europe 2022
- Europe 2021
- USA 2022
- USA 2021

PRODUCTION

Primary nickel production by product in 2022 (%)



- Nickel pig iron
- Nickel metal
- Nickel compounds
- Ferronickel
- Nickel oxide and utility nickel

Source: Company data

Primary nickel production can be divided into the high-grade and low-grade nickel segments.

High-grade nickel is produced in the form of nickel cathodes, briquettes, pellets and powder, rondelles, and other small shapes, as well as chemical compounds, both from sulphide and from more common and available lateritic raw materials. 2022's leading producers of high-grade nickel were Nornickel, Jinchuan, Glencore, Vale, BHP, and Sumitomo Metal Mining (SMM).

Low-grade nickel includes nickel pig iron, ferronickel, nickel oxide, and utility nickel, which are produced from lateritic raw materials only. In 2022, the key producers of low-grade nickel were Indonesian and Chinese NPI smelters, such as Tsingshan Group and Delong Group, as well as the largest ferronickel producers: POSCO, South32, Eramet, Anglo American, etc.

The nickel market, which had been fundamentally divided into the low-grade and high-grade segments, became interconnected once the practical implementation of the NPI-to-matte conversion started in early 2021 along with the massive launches of HPAL capacities.

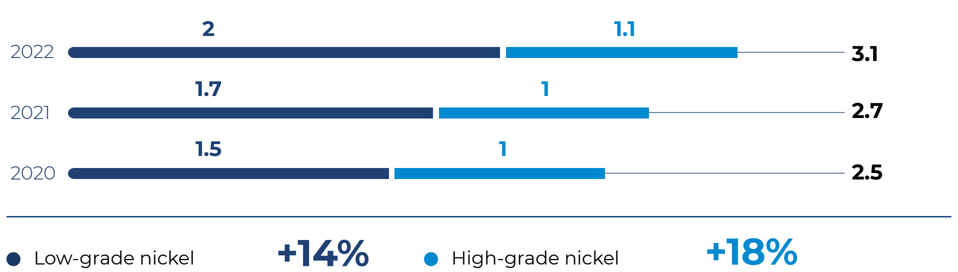
In 2022, producers around the world were faced by both geopolitical upheavals, energy crisis, operational disruptions, and pandemic-induced challenges. Nonetheless, primary nickel production in 2022 grew by 443 kt, or 16% y-o-y, to 3.14 mln t, driven by the huge growth in the Indonesian NPI capacities and the continued underlying growth of nickel compounds for the EV batteries sector, mainly fuelled by the launches of new HPAL capacities and NPI-to-matte conversion lines.

Production of high grade nickel grew 14%, or 135 kt, to 1.1 mln t in 2022.

Production of nickel metal rose 5% y-o-y to 817 kt. Nickel metal production in 2022 was slowly recovering, although several major producers reported some downturns in their output because of strikes, operational issues and rising costs on the back of the energy crisis.

For instance, Vale's Copper Cliff pellets and powder production in Canada grew year-on-year, while Long Harbour's rondelle output declined. In turn, the output of pellets and powder at the UK Clydach plant declined year-on-year due to the lower availability of PT Vale Indonesia's matte.

Primary nickel production (mln t)



Source: Company data

Primary nickel production in 2022 totalled

3.1 mln t

+16 % y-o-y

Glencore reported a lower production of cathodes and rondelles in 2022 because of the strikes at its Nikkelverk refinery in Norway and at Canada's Raglan mine (both conflicts are now resolved). The company, however, increased its production of briquettes and electrolytic powder at its Australian Murrin-Murrin plant after numerous operational disruptions in 2021.

In 2022, Australian BHP's briquette and electrolytic powder production decreased due to equipment maintenance on the back of the switch from briquettes to nickel sulphate crystals production, gradually rising following its launch in late 2021.

Japan's SMM demonstrated weak results in 2022 due to feed shortages and some operational issues in the Philippines, which adversely affected HPAL operations (Taganito and Coral Bay) that feed the Japanese refineries of SMM.

Meanwhile, Ambatovy continued ramping up briquette production in 2022 in order to achieve stable operation levels of 40 ktpa of nickel.

In 2022, Nornickel increased its nickel output as a result of postponing the repair of the flash smelting furnace at Nadezhda Metallurgical Plant to 2023 and the low base of 2021, when Oktyabrsky and Taimyrsky Mines as well as the Norilsk Concentrator were temporarily suspended.

Production of nickel compounds, including nickel sulphate from primary sources (excluding sulphate produced by Class 1 nickel dissolution), increased by 81% y-o-y to 378 kt in 2022 on the back of the massive launches of new NPI-to-matte conversion capacities and announced launches and ramp-ups of new and existing HPAL capacities in Indonesia, Australia and New Caledonia. This was caused by robust EV sales and solid nickel demand from the battery sector.

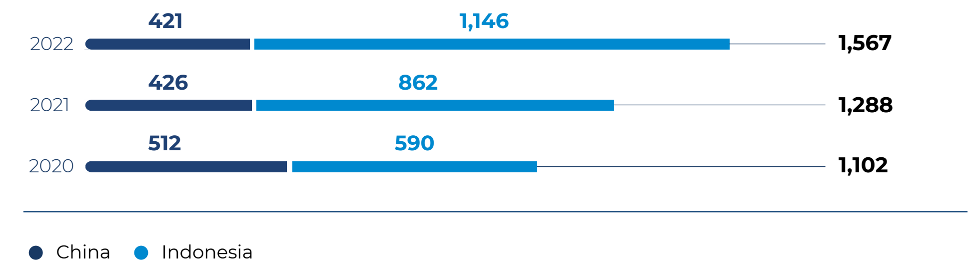
Nickel sulphate can be produced from a variety of raw materials by different processes: directly from nickel intermediates such as mixed hydroxide precipitate (MHP), mixed sulphide precipitate (MSP), nickel matte, and crude nickel sulphate (product of copper processing), or by dissolving Class 1 nickel (as nickel briquettes or powder) or from recycled materials.

In 2022, the expansion of HPAL capacities launched by Lygend and PT Huayue Nickel and Cobalt in 2021 as well as the launch of a new PT QMB New Energy Materials asset drastically increased total MHP output in Indonesia compared to 2021, approaching 100 kt. Huayou's fourth project, PT Huafei, is expected to be brought online in 2023, accompanied with the expansion of existing capacities, which will further boost MHP output.

Meanwhile, the waste generated by HPAL projects is becoming a severe limiting factor in terms of potential environmental effects as well as costs required to ensure their safe storage. According to CRU, if all Indonesian HPAL tailings were dry-stacked, the total electricity consumption to achieve that would exceed 300 GWh, primarily through coal combustion. For comparison, it is about 10% of the Greater London's current total electricity consumption. Moreover, this waste will require haulage resulting in nearly 40 million litres of diesel consumption, too.

In general, laterite mining is associated with substantial damage to ecosystems, including deforestation, lower biodiversity, groundwater contamination as well as soil and coastal erosion.

NPI production (kt)



Low-grade nickel output grew by 18%, or 308 kt, to 2.0 mln t..

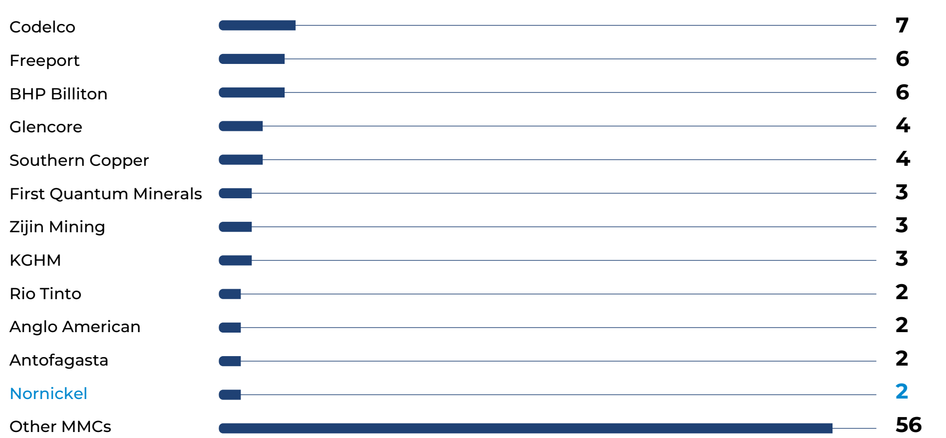
Indonesian NPI production continued to grow year-on-year, becoming the key driver behind the low-grade nickel supply growth in 2022. However, its growth rates slowed down slightly year-on-year due to both conversion of some furnaces to high-grade matte production and softer demand for stainless steel as well as skilled labour shortages in Indonesia. In addition, strict COVID regulations and more expensive airline tickets made travelling to these projects less attractive for Chinese workforce. Overall, we estimate the total 2022 NPI production in Indonesia at 1.1 mln t (up 33% y-o-y).

In 2022, China's NPI output was down 1% y-o-y to 421 kt suppressed by stronger imports of Indonesian NPI and stagnant stainless steel production. Nickel ore imports from the Philippines were down due to bad weather conditions, which kept ore prices high, putting additional pressure on the NPI production.

During the year, FeNi production declined substantially to 341 kt (down 10% y-o-y). This was due to production shutdowns across several sites, including facilities in Serbia, North Macedonia, Greece, and Ukraine, as well as technical and operational disruptions at projects in Myanmar, Guatemala, Japan, and New Caledonia. On the other hand, a number of producers in New Caledonia, Brazil, the Dominican Republic, and Colombia were able to ramp up their output and deliver consistent performance. The surplus in the low-grade nickel market resulted in significant discounts for FeNi and accumulation of its stocks.

COPPER (Cu)

Nornickel — No. 12 in copper mine production (%)



Sources: producer reports, Company analysis as of 3 March 2023

In 2022, the LME copper price averaged at

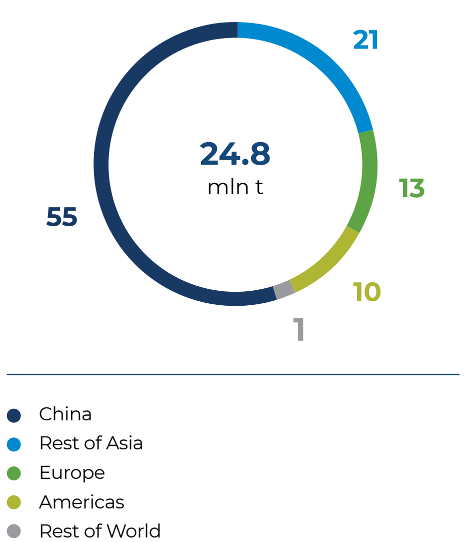
8,797 USD/t

KEY TRENDS IN THE COPPER MARKET

Macroeconomic and geopolitical factors were the main driving forces of the copper market in 2022. Volatile demand in China, tough policies by the Fed and other central banks, strikes and social unrest in Latin America, Russian metal supply risks, low exchange and warehouse stocks, the push for transport electrification, and new renewable capacity additions all combined to slow the copper market in 2022.

The metal was traded within a wide range of USD 7,000–10,700/t during the year. It peaked in March amid geopolitical concerns and mine disruptions in South America, then corrected to USD 7,000/t by the middle of summer on the back of the interest rates hikes, stronger US dollar and subdued economic activity in China. Subsequently, the copper price bounced back to the range of USD 8,000–8,900/t against the backdrop of a more dovish Fed rhetoric, the threat of strikes in Latin America, low metal inventories, and a more optimistic outlook for the Chinese economy after the Communist Party congress and the lifting of COVID-related restrictions.

Refi ed copper consumption by region in 2022 (%)



Average annual copper prices (USD/t)

Source: London Metal Exchange

In December 2022, the total exchange stocks (LME, SHFE and CME) were at an extremely low level of 190 kt, roughly flat year-on-year, while China's bonded stocks decreased dramatically by 71% since the beginning of the year to 55 kt, which is the lowest level for more than 10 years.

In 2022, the LME copper price averaged at USD 8,797/t vs USD 9,317/t in 2021 (down 6%).

LME copper price in 2022 (USD/t)

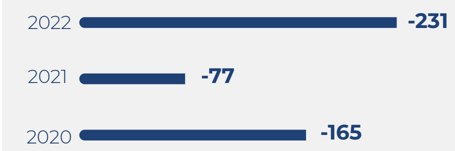
Source: London Metal Exchange

1. Geopolitical tensions in Ukraine
2. Copper price hitting an all-time high of USD 10,730/t
3. First LME statements regarding potential banning of Russian metal
4. COVID-19 outbreak in China
5. A cycle of rate hikes started by the Fed and the European Central Bank
6. A tax reform bill introduced for copper producers in Chile
7. Lowest copper price in 2022
8. DXY hits a 20-year high of 115, price rebounds on expectations of a softer-than-anticipated Fed medium-term policy
9. Aurubis and Codelco raise their copper premium offer by 85%, reports of shipment cuts to China by Codelco in 2023
10. The London Metal Exchange decides against banning Russian metal
11. The EU considers imposing sanctions against the Russian mining sector
12. China lifts all strict lockdown measures across the country
13. Protests start in Peru

MARKET BALANCE

In 2022, copper mine output increased by 4% to 21.9 mln t and refined copper production by 1% to 24.6 mln t. Global refined copper consumption totalled 24.8 mln t, up 1%. Overall, the copper market was balanced in 2022 with an immaterial deficit amounting to 231 kt, or less than 1% of global consumption.

Copper market balance (kt)



Source: Company data

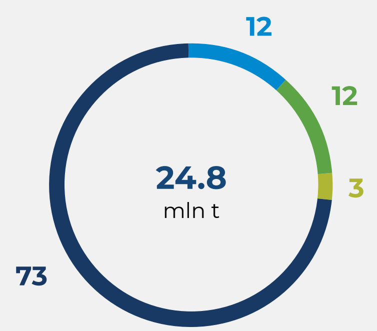
In 2022, copper mine output

21.9 mln t

+4 % y-o-y

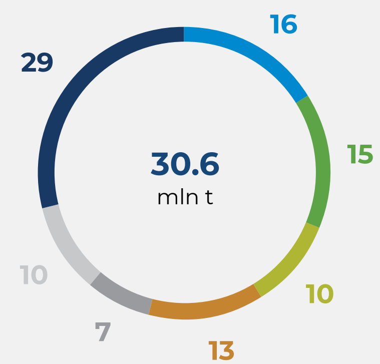
Refined copper consumption by industry

First use (%)



- Wire rod
- Pipe
- Rolled products
- Other

End use by industry (%)



- Construction
- Power grids
- Heavy engineering
- Transport
- Consumer goods
- Air conditioning and cooling systems
- Other

Source: Company data

In Russia, copper consumption stayed flat y-o-y at

about 300 kt

CONSUMPTION

Thanks to its high electrical and thermal conductivity, ductility and corrosion resistance, copper is widely used in various industries. Up to 75% of refined copper produced globally is used to make electrical conductors, including various types of cable and wire. Key copper-consuming industries include construction, electrical and electronic equipment, power industry, transport, machine building, and the production of various equipment and consumer goods. Copper is also a key material for renewable energy development (solar panels, wind farms) and transport electrification (batteries, wiring, electric motors, and charging infrastructure).

In 2022, global refined copper consumption totalled 24.8 mln t, up 1% y-o-y.

With its 55% share of global consumption, China remains the largest copper consumer globally. Despite strict COVID-related restrictions throughout the year followed by lockdown lifting, China ramped up its domestic consumption to 13.6 mln t, or up 2% y-o-y. In 2022, China increased its imports of copper products, including refined copper to 3.7 mln t, or up 7% y-o-y, scrap to 1.8 mln t, or up 5% y-o-y, and concentrates to 25.3 mln t, or up 8% y-o-y.

Demand in Europe and North America remained flat year-on-year at 3 mln t and 2.2 mln t, respectively, while Asia (excluding China) showed a 2% growth to 5.1 mln t. In Russia, copper consumption stayed flat year-on-year at about 300 kt.

PRODUCTION

Global copper mine production rose by 4% to 21.9 mln t in 2022 as a result of the commissioning of new projects and the expansion of brownfields.

In 2022, copper mine production in Chile, the world's leading producer of the metal, declined 5% y-o-y to 5.3 mln t. Peru, the world's second-largest producer of copper, managed to increase its copper mine output by 4% to 2.4 mln t.

An 18% increase in Africa's mining production to 3.4 mln t was mainly due to a higher output from mines in the Democratic Republic of the Congo.

China ramped up its production by 7% to 1.88 mln t, while copper mine production in Indonesia grew 26% to 0.95 mln t.

Production in North America was down by 2% y-o-y to 2.45 mln t, with US production up by 1%, a decline of 10% in Canada and a drop of 1% in Mexico.

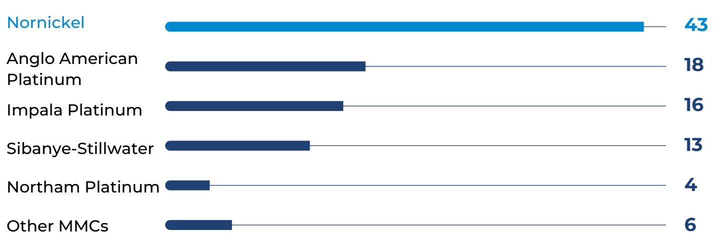
Refined copper output also rose by 1% to 24.6 mln t. In 2022, South and Central Americas produced 2.6 mln t of refined copper (down 2% y-o-y), Africa grew its output by about 12% y-o-y to 1.8 mln t, and Asia increased its refined copper production by 2% y-o-y to 14.8 mln t, including China up 2% y-o-y to 10.6 mln t and Japan up 3% y-o-y to 1.5 mln t. Europe produced 3.5 mln t, roughly 4% down y-o-y, while North America produced 1.6 mln t (down 1% y-oy).

Production of refined copper (mln t)

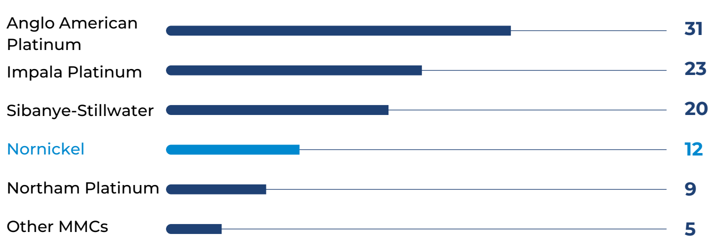
Source: Company data

PGMs

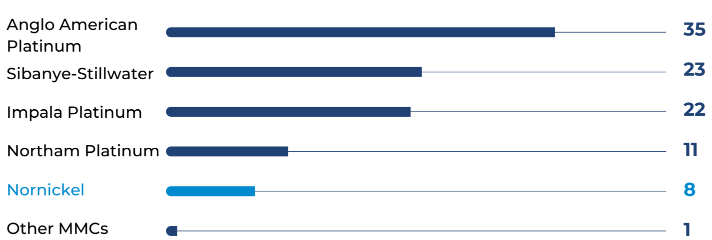
Nornickel — No. 1 in palladium production (%)[1]



Nornickel — No. 4 in platinum production (%)[1]



Nornickel — No. 5 in rhodium production (%)[1]

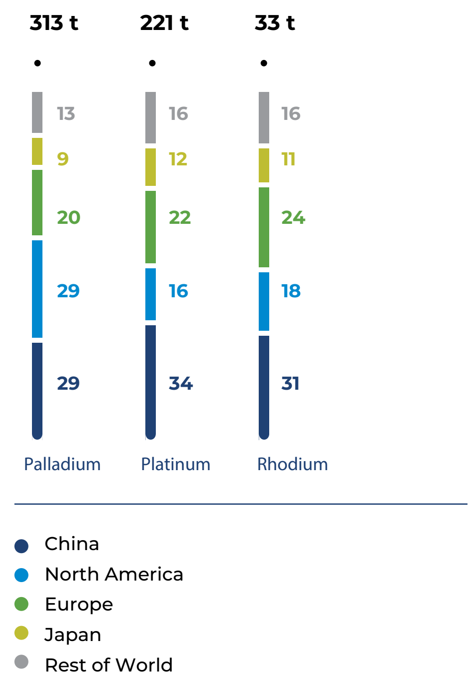


Sources: producer reports, Company analysis as of 9 March 2023

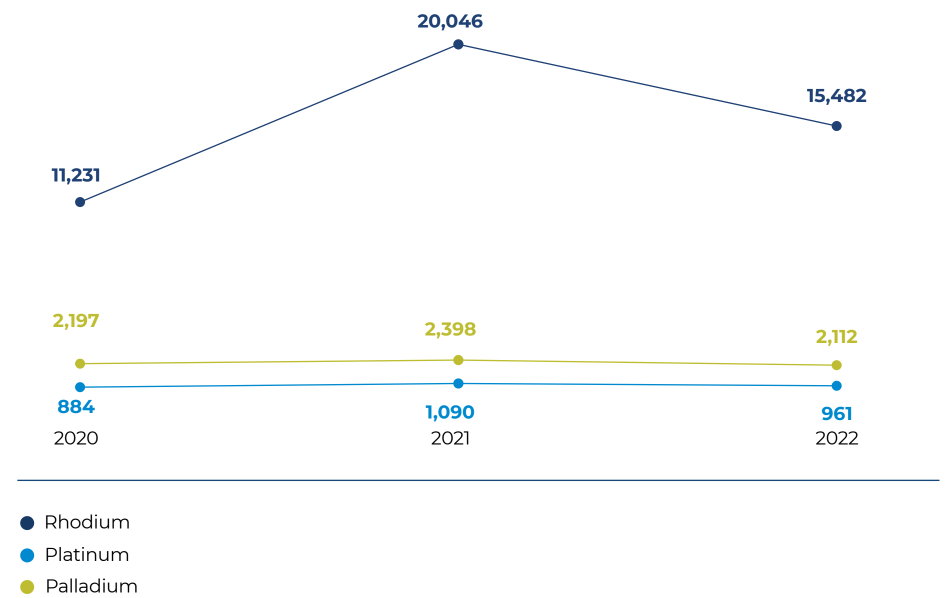
[1] Refined metal output including production from third-party feedstock and production from own feedstock by third parties under tolling agreements.

KEY TRENDS IN THE PGM MARKET

PGM consumption by region (%)



Average annual PGM prices (USD/oz)



Source: LBMA, Johnson Matthey

Palladium price started the year at around USD 1,900/oz; however, in the second half of January, it increased sharply to USD 2,432/oz, as the fear of geopolitical crisis was building up. The price shot further up to USD 2,650/oz on 24 February and skyrocketed to an all-time high of USD 3,177/oz on 7 March.

From the end of April, once the market squeeze was over, palladium was trading in the range of USD 1,800/oz to USD 2,300/oz up until late July, when it found strong support at USD 2,000/oz on the back of 2022's first year-on-year growth in monthly global auto sales, mainly caused by the easing of China's COVID-related restrictions. Since then, the price was repeatedly hitting both the upper and lower boundaries of this range without breaking through them.

A notable attempt to break the USD 2,300/oz resistance level occurred on 4 October. Although palladium closed above the USD 2,300/oz level, the relatively light trade volume did not signal the significance of the resistance level breakout. Further into the autumn, the price fall continued on the back of the new negative demand expectations related to the potential short- and mid-term production cuts by the European automotive sector.

In the middle of December, the price fell below USD 1,800/oz on the back of weak car market performance in China, the USA and Western Europe, the possible sale of consumer stocks before the end of the financial period and speculative actions (closing long and/or opening short positions) after the Fed's announcement of higher than expected peak interest rate target. The price bounced back to USD 1,800/oz level by the end of the year.

The platinum price experienced the same shocks as palladium, of which the geopolitical crisis was the most notable. It reached its local high on 8 March at USD 1,150/oz. With supply concerns subsiding, the platinum price corrected down to its year-lows of USD 838/oz at the beginning of September. Operational disruptions at South African mining assets, mostly but not exclusively caused by unstable electricity supply, have set the price of platinum on an upward trend since the beginning of September. The ETF outflow in 2022 was 0.6 Moz as elevated interest rates reduced investors' appetite for commodities.

Rhodium prices also followed the palladium pricing trends as the two metals have similar consumption breakdowns by industry. After peaking at USD 22,000/oz on 8 March, prices dipped to USD 13,500–14,000/oz in the first half of the summer, and then, despite local support from the Chinese automotive industry recovery, rhodium prices followed a downward trend, hitting a year-low of USD 12,300/oz in late December.

Palladium and platinum prices in 2022, LPPM

1. The geopolitical crisis starts
2. The LPPM suspends Russian refineries from the Good Delivery List
3. Automobile manufacturing starts to recover in China
4. The world's leading platinum producer announces lower production in 2022
5. OPEC+ commits to cut production, driving up inflation expectations. A positive trend starts in precious metals markets on expectations of a softer-than-anticipated Fed policy in the medium term
6. Daily blackouts start in South Africa
7. The Fed slows interest rate increases with a 50 bps hike but signals a potentially higher-than-expected peak interest rate target
8. Speculative sales of palladium as the fiscal year draws to a close

MARKET BALANCE

In 2022, the palladium market remained in a moderate deficit estimated at 16 t (net of investment demand), while the surplus in the platinum market shifted to a balanced market, and deficit in rhodium remained at 4 t. Demand for platinum group metals was primarily driven by slower-than-expected recovery rates in auto production after the slump caused by COVID-19 as well as by the substitution effect between platinum, palladium and to a lesser extent rhodium in automotive catalysts. In 2022, PGM supply fell due to lower recycling, the flooding of the Stillwater Mine in the USA, and the lack of smelting capacities and widespread power outages in South Africa.

In 2022, the palladium market deficit estimated at

16 t

CONSUMPTION

In 2022, industrial consumption of palladium and platinum fell by 14 t (down 4%) y-o-y and 3 t (down 1%) y-o-y to 295 t and 221 t, respectively. In 2022, industrial consumption of rhodium stayed flat at 33 t.

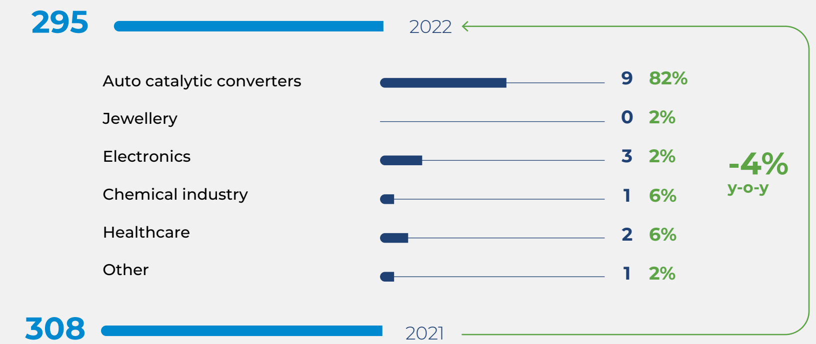
Automotive industry. Exhaust treatment systems account for the bulk of total PGM consumption. In this sector, palladium, platinum and rhodium are used in catalytic converters, which are mandatory for road transport and legally regulated in most countries. These solutions drastically reduce emissions of hazardous substances.

Due to their unique catalytic properties ensuring effective chemical reactions throughout the entire vehicle life cycle, there are almost no alternatives to PGMs in this sector.

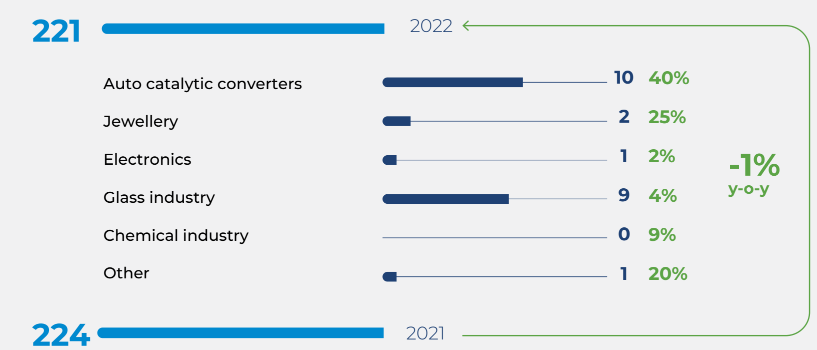
Due to their catalytic properties, palladium and rhodium are the key choice for exhaust treatment systems in petrol vehicles, while platinum is used mostly in diesel vehicles. In recent years, manufacturers of catalytic systems have been developing catalysts based on the three platinum group metals, which could be used in engines of different types, but such formulations are not widespread yet. Meanwhile, there has been a partial substitution of platinum for palladium in petrol vehicle catalysts in recent years due to the price spread between the metals.

In 2022, palladium consumption in the automotive industry decreased by 9 t as the overall automotive industry recovery was taking place in parallel with the increase in the proportion of electric vehicles in the market, which, combined with limited price-driven substitution of platinum for palladium in petrol vehicles, reduced the overall consumption of the metal by the industry.

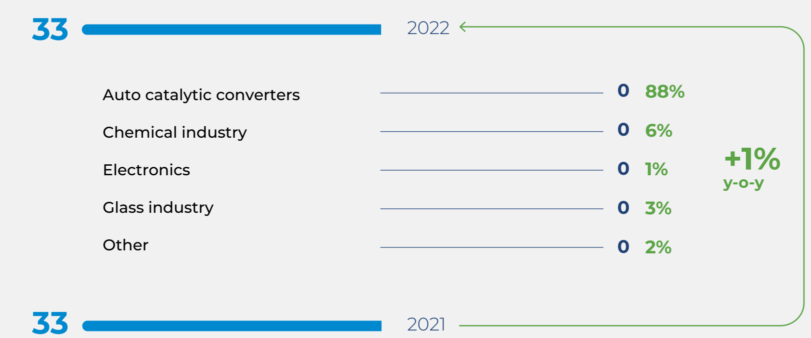
Palladium: consumption by industry (%) and by application (t) in 2022



Platinum: consumption by industry (%) and by application (t) in 2022



Rhodium: consumption by industry (%) and by application (t) in 2022



At the same time, palladium consumption in the automotive industry is supported by the declining proportion of diesel vehicles in the fleet mix as they are replaced with petrol cars and hybrids, which make greater use of palladium-based catalytic converters for exhaust fumes. The market share of diesel vehicles in Europe (27 EU countries + the UK + European Free Trade Association countries) dropped from 20% to 16% over the year. Despite the declining share of diesel vehicles, global demand for platinum from the automotive industry has grown by 10 t in 2022 driven by the partial substitution of platinum for palladium in petrol vehicles, as discussed above.

Rhodium consumption in this industry stayed flat year-on-year amid a moderate recovery in auto production offset by a partial palladium substitution for rhodium.

Electronics. Palladium has found its way into the electronics industry primarily as a material for capacitors and motherboards, while platinum is used in hard drives. In 2022, palladium and platinum consumption in the electronics industry fell by 3 t and 1 t to 17 t and 5 t, respectively, subdued by a marked decline in personal computer and smartphone shipments due to strong inventory accumulation and stocking up during the pandemic in 2019–2020.

Chemical industry.In 2022, the use of PGMs in chemical process catalysts stayed flat year-on-year.

Healthcare. Demand for palladium in healthcare dipped by 1.5 t in 2022 due to a drop in demand for the metal in dental prosthetics amid the price-driven substitution with cheaper materials. The use of platinum in healthcare grew by 0.3 t driven by an increase in scheduled high-tech healthcare services after the peak of the COVID-19 response.

Jewellery. In 2022, global demand for platinum from the jewellery industry remained flat year-on-year. Jewellery sales fell in China, which accounts for over half of global platinum demand in this sector, caused by strict COVID-related restrictions; however, this drop was offset by demand recovery in other regions. The use of palladium in jewellery did not change year-on-year.

Glass industry. Platinum is needed to produce glass fibre and optical glass. Demand for the metal in this industry fell by 9 t in 2022 as China slowed down its glass capacity expansion after a ramp-up in previous years. The use of rhodium in this industry has also declined, partially due to manufacturers of bushings for the glass industry seeking to minimise the metal's use because of its high cost.

Investments. Palladium and platinum are widely used as an investment instrument. Physical investments may vary from coins and smaller bars to investments in ETFs, which accumulate large amounts of the metals in standard bars. In 2022, palladium and platinum stocks in ETFs slipped by 2.8 t and 17.7 t to 16.0 t and 95.4 t, respectively.

Palladium stocks in ETFs decreased to

17.7 mln t

+2,8 % y-o-y

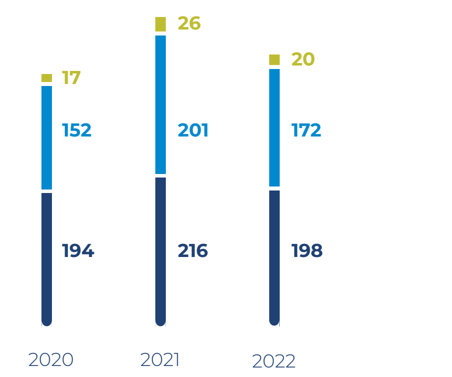
Platinum stocks in ETFs decreased to

95.4 mln t

+16 % y-o-y

PRODUCTION

Primary PGM production (t)



Rhodium **-23%**

Platinum **+14%**

Palladium **-9%**

Source: Company data

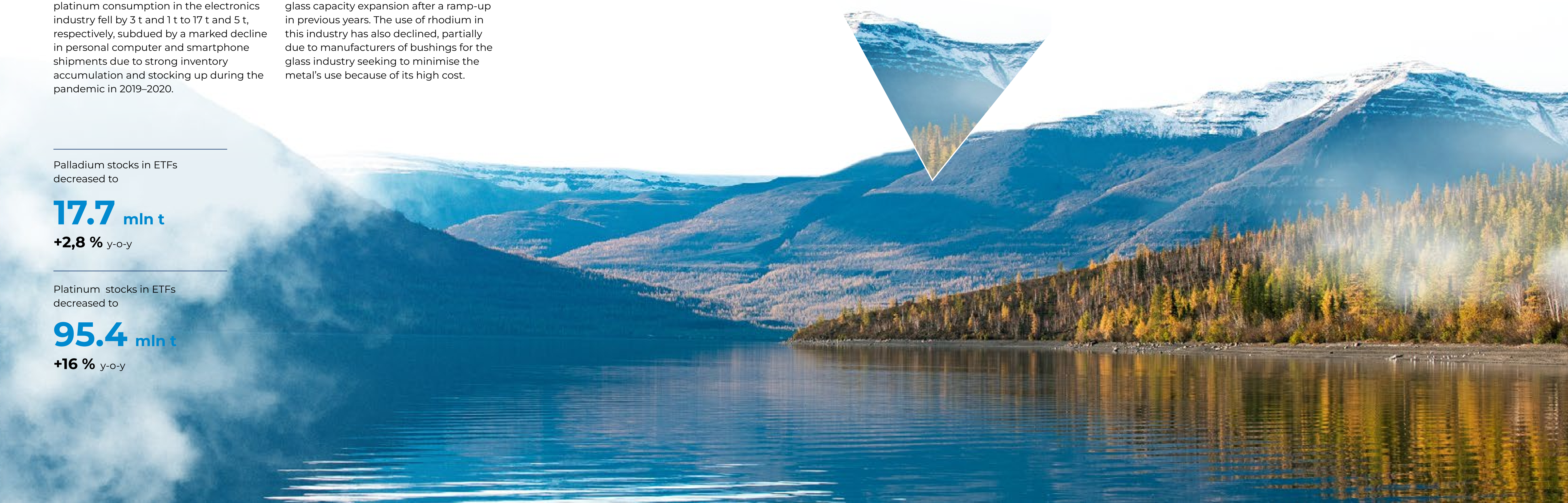
In 2022, primary refined palladium, platinum and rhodium production decreased by 9%, 14% and 23% y-o-y to 198 t, 172 t and 20 t, respectively.

Production in the Russian Federation, the key producer of palladium, grew by 5 t driven by a recovery in production after a temporary shutdown of the Oktyabrsky and Taimyrsky Mines flooded by groundwater and suspension of operations at the Norilsk Concentrator in 2021.Platinum production stayed flat at 20 t.

In 2022, South Africa, the key producer of platinum and rhodium, saw a significant drop in PGM production (down 27 t for palladium, 31 t for platinum and 6 t for rhodium) due to the high base effect of 2021 when previously built-up work-in-progress inventories were drawn down in South Africa, power supply issues and smelting capacity shortages.

Primary platinum production in Zimbabwe rose by 1 t, while palladium and rhodium output remained flat year-on-year. Palladium and platinum production in the USA was down by 1 t due to the floods in Montana in July 2022.

The main sources of recycled PGM supply are scrapped auto catalytic converters. In 2022, secondary production of palladium, platinum and rhodium declined by 9 t, 5 t and 1.5 t to 81 t, 48 t and 8 t, respectively, due to supply chain disruptions and weak new vehicle sales, which in turn impacted the supply of older vehicles for recycling.



OUR STRATEGY

STRUCTURE OF THE COMPANY'S INVESTMENT PROGRAMME

FOR 2022–2023 (USD BILLION)

THE COMPANY'S KEY PRODUCTION PROJECTS

TOF-3

Boosting the capacity of Talnakh Concentrator to 18 Mtpa, improving nickel recovery rate

NOF-2

Construction of a 9/12 Mtpa concentrator to replace the retired capacity

Sulphur Project at Nadezhda Metallurgical Plant

Construction of furnace gas recovery facilities, a sulphuric acid neutralisation line and associated infrastructure

Sulphur Project at Copper Plant

Construction of a continuous converting complex and a sulphuric acid neutralisation line

Copper refining at Kola MMC

New copper refining line using the advanced and efficient roast–leach–electrowin technology

Nickel refining at Kola MMC

Development of long-term solutions to improve performance and optimise the product portfolio

Redesign

Progress

Source: Company data

SULPHUR PROJECT 2.0

ENVIRONMENTAL ROADMAP

KOLA DIVISION

- Smelting shop Nikel (shut down in December 2020)
- Copper refining line Monchegorsk (shut down in March 2021)

NORILSK DIVISION

- Nadezhda Metallurgical Plant
- Copper Plant
- Nickel Plant (shut down in 2016)

71 %
reduction in SO_2 emissions in the border area in 2020

90 %
reduction in SO_2 emissions at Kola MMC and complete elimination of cross-border emissions in 2020

2020

Streamlining of smelting operations to reduce SO_2 emissions in the Russia–Norway border area

In December 2020, the obsolete smelting shop in Nikel was shut down

Reduction in SO_2 emissions in Nikel and Zapolyarny

-50 %[2] → 2•

2021

Shutdown of an obsolete copper refining line on the Kola Peninsula

Metallurgical shop shut down on 20 March 2021

Reduction in total SO_2 emissions at the Kola Division facilities

-85 %[2] → 7•

Progress in 2023

Launch of the Sulphur Project 2.0 at Nadezhda Metallurgical Plant to recover furnace gases

Reduction in SO_2 emissions at the Norilsk Division facilities by 2024

-45 %[2] → ~2•

Redesign in 2023

Launch of the Sulphur Project 2.0 at Copper Plant to recover furnace and converter gases[1]

Reduction in total SO_2 emissions at the Norilsk Division facilities after the design capacity is reached

up to 90 %[2] → 10•

[1] The implementation timeline for the project at Copper Plant is indicated in accordance with the Polar Division's Environmental Performance Improvement Programme (2020) taking into account Clause 6 of Appendix No. 8 to Resolution of the Russian Government No. 353 dated 12 March 2022.
[2] From a 2015 baseline.

NORILSK DIVISION

Nadezhda Metallurgical Plant (Phase 1)

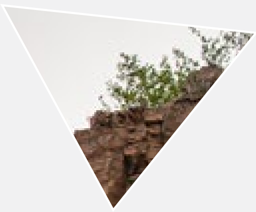
The Sulphur Project at Nadezhda Metallurgical Plant includes construction of facilities to recover SO_2 from off-gases of the main smelting units by converting them into sulphuric acid and then neutralising it with limestone to produce gypsum.

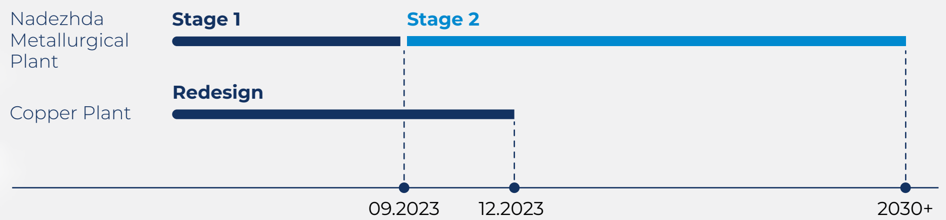
- To date, the excavation and concrete works have been finished, with foundations for the building's frame and equipment built, the building's metal frame 99% complete, and the process equipment partially installed.
- The primary dam and roads have been built, and the impervious shell of the dam has been constructed.
- Installation of the core process equipment, pipelines and electric power networks is in progress.
- The core equipment and pipelines undergo individual testing .
- Plans for 2023 include completing the construction and installation works, pre-commissioning, launch of pilot operation, and early results from the emission-reduction project.

Copper Plant (Phase 2)

The Sulphur Project at Copper Plant comprises three key initiatives: upgrades of existing and construction of new facilities to recover SO_2 and the construction of a continuous converting complex. The technology to recover SO_2 from off-gases of Copper Plant's main smelting units comprises converting such gases into sulphuric acid and then neutralising it with limestone to produce gypsum.

- Amid external restrictions, the Company is taking comprehensive efforts to refine the design solutions to incorporate technology and equipment import substitution options.
- The review of design documentation to refine design solutions is expected to be completed in 2023.





SOUTH CLUSTER:

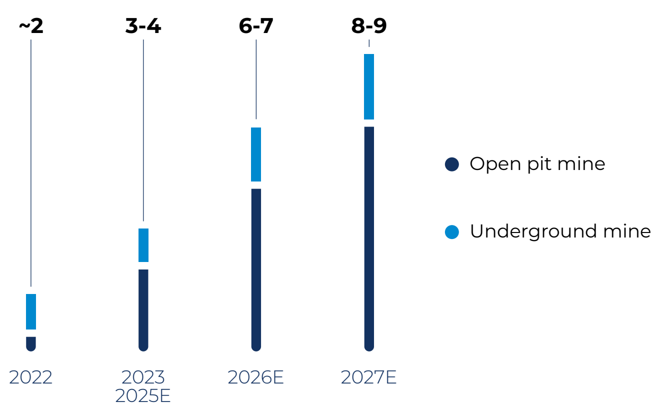
GROWING PRODUCTION VOLUMES

- A large existing deposit with a long reserve life in the bottom quartile of the PGM cost curve
- Feasibility study, design documentation and contractor selection have been completed
- In 2022, construction permits were obtained for all the mine facilities
- Construction of the underground mine and related infrastructure is in progress

143 mln t[1]
disseminated ore

25 years
reserve life

Ramp-up to design capacity in 2022–2027 (mln t)



2027–2028 mining targets

Ore	9	mln t
Ni	13+	kt
Cu	20+	kt
PGMs	750-850	koz

[1] Calculated to the JORC Code as at 1 January 2023.

BYSTRINSKY GOK

- Follow-up exploration is planned on the flanks of the Bystrinskoye deposit
- In 2022, the iron ore concentrate production section and the chemical analysis laboratory were upgraded
- Plans for 2023 include further upgrades to the concentrator's milling section

274 mln t
ore reserves, grading

Cu **~0.73 %**[1]

Fe **~14.60 %**[1]

28 years
life of mine

USD 934 mln
2022 EBITDA

50.01 %
Nornickel's interest in the mining industry's major greenfield project»

Production volumes

	2022	2023E	
Ore[2]	10.6	10.8	mln t
Cu in concentrate	67.2	66.6	kt
Iron ore concentrate	2.5	2.8	mln t

[1] Calculated to the JORC Code as at 1 January 2023.
[2] Processed ore volumes.

UPGRADE OF TALNAKH CONCENTRATOR

(TOF): STAGE 3

Project summary

Major capacity expansion based on proven technology to process growing Talnakh ore volume and to unlock strategic optionality of the South Cluster development project.

Project status

- Ore dressing and ore feeders: the metal frame is 75% complete, installation of fences and preparations to install the process equipment are in progress
- Installation of reinforced concrete and metal structures is in progress
- Deliveries of core process equipment are underway
- Power supply facilities are under construction
- The water recycling system is under construction
- The bulk of works to install the process equipment is planned for completion in 2023

Projected implementation timeline[1]

Commissioning before the end of 2024 and ramp-up to design capacity in 2025.

+8 Mtpa
capacity additions

+4 - 7 %
expected increase in metal recovery

[1] Subject to import substitution of flotation equipment and the target delivery schedule being met.

ENERGY INFRASTRUCTURE
UPGRADE PROGRAMME

THE PROGRAMME'S GOAL:

Accelerated replacement of obsolete equipment, mitigating physical risks and improving long-term reliability.

Gas and gas condensate exploration, production and transportation

- Construction of a new 70+ km gas and gas condensate pipeline (Pelyatkinskoye–Messoyakhskoye)
- Upgrade of 150+ km of gas and gas condensate pipelines
- Ramp-up of gas well drilling at the Pelyatkinskoye field beyond 2028

Heat and water supply networks

- Accelerated replacement of 110-kV and 220-kV power lines (over 1,000 km)
- Upgrades of heat and water supply networks

CONTRIBUTION TO ENERGY EFFICIENCY:

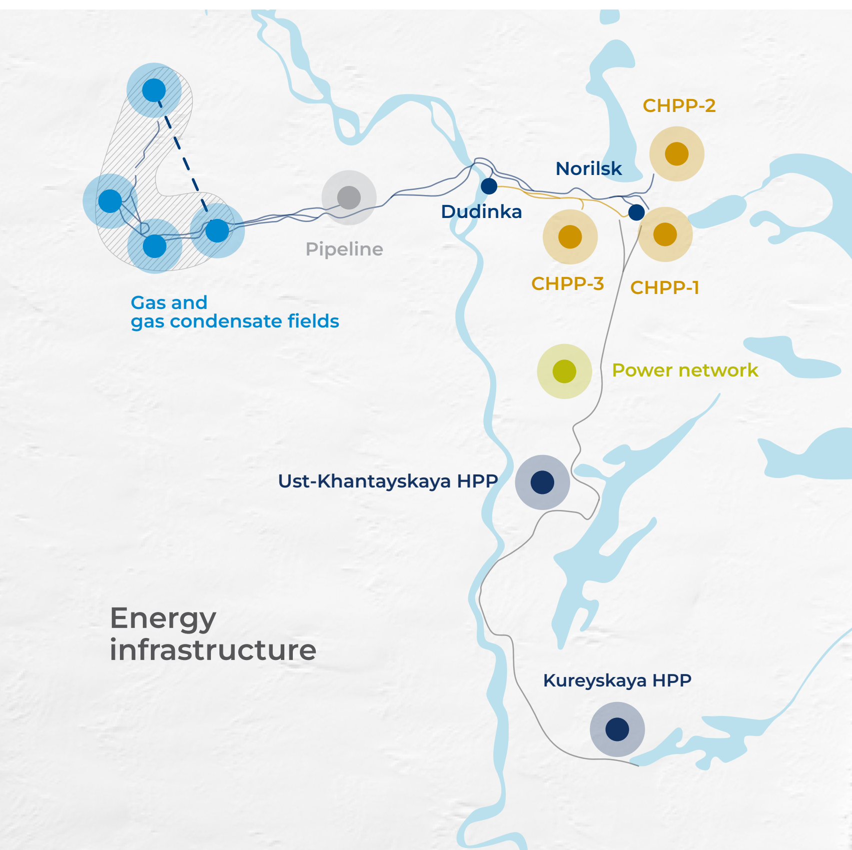
Reinforced emphasis on higher output of the new generating units at CHPPs[1] and TPPs and comprehensive energy loss reduction throughout the electricity value chain

Combined heat and power plants

- Replacement of two power generating units at CHPP-2 and installation of two new generating units at CHPP-3
- The new equipment is significantly more powerful and fuel efficient, ensuring minimal energy losses

Hydropower plants

- Upgrade of all seven hydraulic turbines at Ust-Khantayskaya HPP[2] is completed.
- Upgrade of the Kureyskaya HPP
- The HPP upgrade is aimed at expanding the installed capacity and improving efficiency to boost low-carbon hydropower capacity



Gas and gas condensate exploration, production and transportation

Combined heat and power plants

Heat and water supply networks

Hydropower plants

Gas transportation

[1] CHPP – combined heat and power plant.
[2] HPP – hydropower plant.

LOGISTICS INFRASTRUCTURE
DEVELOPMENT PROGRAMME

PROGRAMME RATIONALE

- Growing eastbound shipments of construction equipment and raw materials as the investment programme is entering its active phase, and growing westbound shipments of intermediate products as projects move to the post-investment phase
- Accelerated pace of production equipment upgrades
- Expansion of Northern Sea Route operations and increased freight volumes for major investment projects of other players using the route in the Russian Arctic

MAJOR PROJECTS

40–50 %
throughput increase at Dudinka port (the Gateway to Taimyr)

Replacement of harbour cranes at Dudinka port by 2027–2029

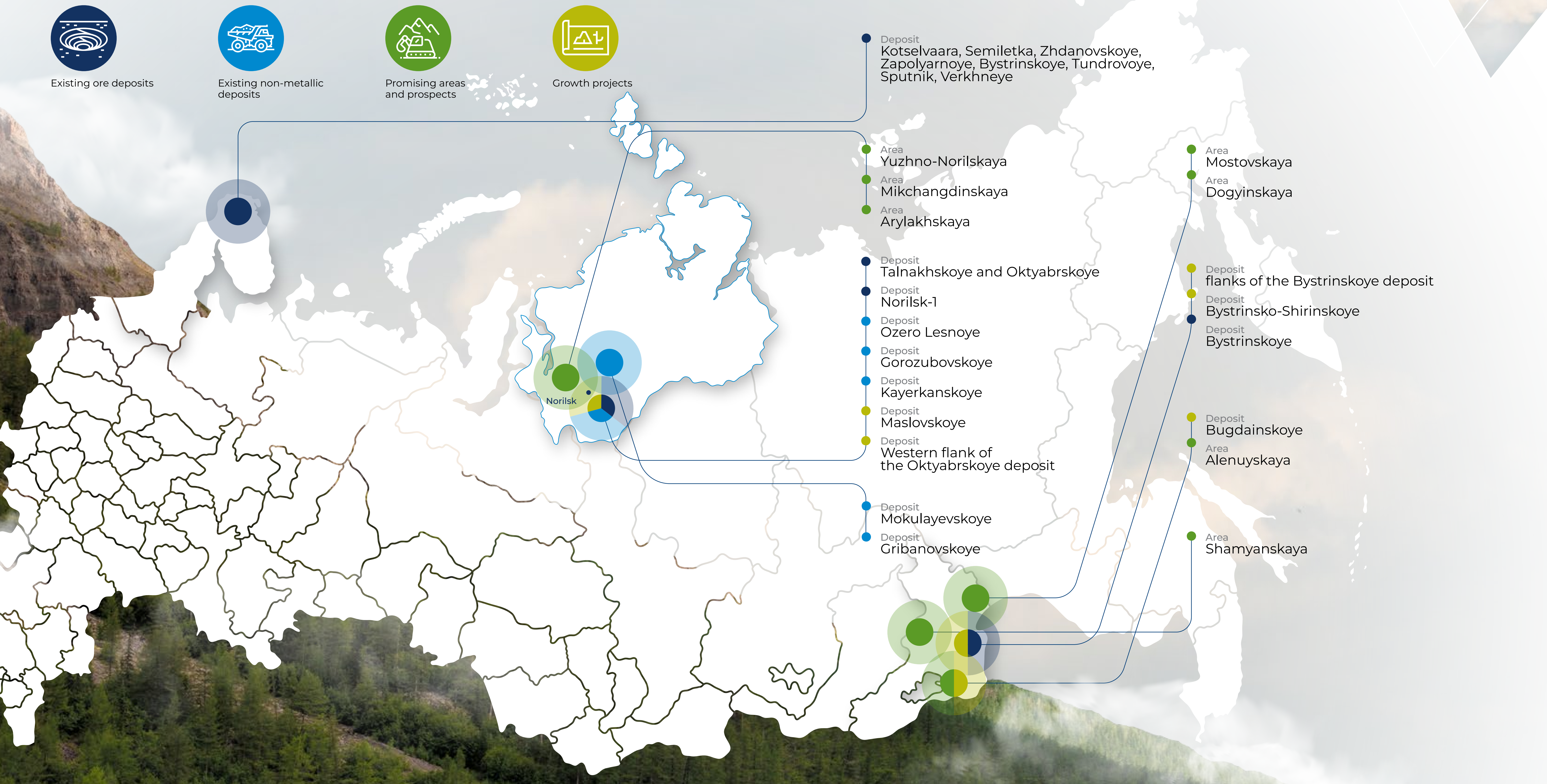
BUSINESS OVERVIEW

In 2022, the Russian economy in general and Nornickel in particular faced intense pressure, which had a material impact on the Company's business, challenging us to promptly adapt our operations, procurement, sales, and financial activities to the new normal.

Despite all these headwinds, Nornickel fully met its production targets for the year and ramped up its output of all metals.

MINERAL RESOURCE BASE

UPSTREAM PROJECTS



THE GROUP’S MINERAL RESOURCES AND ORE RESERVES AS AT 1 JANUARY 2023

Norilsk1 and Kola divisions	Ore mln t	Metal grade						Contained metal					
		Ni %	Cu %	Pd g/t	Pt g/t	Au g/t	6 PGM[4] g/t	Ni kt	Cu kt	Pd koz	Pt koz	Au koz	6 PGM[4] koz
Total proven and probable reserves	**1,127**	**0.74**	**1.32**	**3.44**	**0.95**	**0.19**	**4.55**	**8,347**	**14,870**	**124,593**	**34,259**	**6,752**	**164,823**
Total measured and indicated resources[2]	**1,826**	**0.76**	**1.24**	**3.26**	**0.91**	**0.19**	**4.33**	**13,834**	**22,681**	**191,391**	**53,505**	**10,927**	**254,156**
Total inferred resources	**876**	**0.67**	**1.11**	**2.77**	**0.74**	**0.16**	**3.62**	**5,854**	**9,749**	**77,976**	**20,819**	**4,528**	**101,958**
Norilsk division[3]													
Proven and probable reserves	**1,058**	**0.75**	**1.38**	**3.66**	**1.01**	**0.20**	**4.84**	**7,909**	**14,651**	**124,529**	**34,217**	**6,732**	**164,716**
Proven reserves	**658**	**0.73**	**1.38**	**3.57**	**0.98**	**0.20**	**4.70**	**4,789**	**9,058**	**75,543**	**20,645**	**4,182**	**99,520**
Talnakh ore field, including	617	0.76	1.44	3.59	0.96	0.20	4.70	4,684	8,918	71,358	19,028	4,009	93,366
• rich	77	2.76	3.15	6.06	1.27	0.17	7.87	2,126	2,427	15,037	3,144	411	19,523
• cuprous	76	0.74	2.51	6.15	1.59	0.38	7.84	559	1,906	15,019	3,879	934	19,137
• disseminated	464	0.43	0.99	2.77	0.80	0.18	3.66	1,999	4,585	41,302	12,004	2,665	54,707
Norilsk-1 deposit (disseminated ore)	41	0.26	0.35	3.21	1.24	0.13	4.71	105	140	4,186	1,618	173	6,154
Measured and indicated resources	**400**	**0.78**	**1.40**	**3.81**	**1.06**	**0.20**	**5.07**	**3,120**	**5,593**	**48,986**	**13,572**	**2,550**	**65,196**
Talnakh ore field, including	297	0.97	1.79	4.22	1.07	0.23	5.49	2,888	5,322	40,381	10,238	2,197	52,523
• rich	62	2.78	3.96	7.64	1.56	0.33	9.75	1,713	2,442	15,144	3,099	647	19,312
• cuprous	57	0.60	2.24	5.11	1.35	0.33	6.54	345	1,282	9,406	2,484	599	12,026
• disseminated	179	0.46	0.89	2.76	0.81	0.17	3.69	830	1,598	15,831	4,655	951	21,185
Norilsk-1 deposit (disseminated ore)	103	0.23	0.26	2.61	1.01	0.11	3.84	232	271	8,605	3,333	353	12,673
Inferred resources	**1,521**	**0.77**	**1.42**	**3.90**	**1.09**	**0.22**	**5.18**	**11,732**	**21,656**	**190,919**	**53,203**	**210,755**	**253,324**
Talnakh ore field	1,378	0.82	1.53	3.95	1.06	0.23	5.19	11,312	21,144	175,016	47,057	10,099	229,919
• rich	124	3.46	4.39	8.68	1.83	0.33	11.21	4,300	5,451	34,682	7,332	1,303	44,787
• cuprous	131	0.86	2.91	7.31	1.94	0.44	9.37	1,128	3,807	30,690	8,159	1,865	39,374
• disseminated	1,123	0.52	1.06	3.04	0.87	0.19	4.04	5,884	11,886	109,644	31,566	6,931	145,758
Norilsk-1 deposit (disseminated ore)	143	0.29	0.36	3.46	1.34	0.14	5.09	419	512	15,902	6,146	657	23,405
Inferred resources	**737**	**0.68**	**1.26**	**3.28**	**0.87**	**0.19**	**4.29**	**4,975**	**9,316**	**77,810**	**20,710**	**4,473**	**101,669**
Talnakh ore field	725	0.68	1.28	3.27	0.86	0.19	4.27	4,939	9,269	76,295	20,116	4,415	99,429
• rich	44	3.31	5.43	10.35	2.15	0.47	13.02	1,452	2,383	14,602	3,032	669	18,372
• cuprous	55	0.60	2.04	5.22	1.39	0.33	6.73	328	1,115	9,161	2,429	576	11,803
• disseminated	626	0.50	0.92	2.61	0.73	0.16	3.44	3,159	5,771	52,532	14,654	3,170	69,254
Norilsk-1 deposit	12	0.30	0.39	3.94	1.54	0,150	5.82	36	47	1,515	594	58	2,240
Kola division (disseminated ore)													
Proven and probable reserves	**69**	**0.63**	**0.32**	**0.03**	**0.02**	**0.01**	**0.05**	**437**	**219**	**64**	**42**	**20**	**107**
Proven ore reserves	35	0.59	0.25	0.03	0.02	0.01	0.05	203	87	32	23	10	56
Probable reserves	35	0.67	0.38	0.03	0.02	0.01	0.05	234	132	32	19	10	51
Measured and indicated resources	**305**	**0.69**	**0.34**	**0.05**	**0.03**	**0.02**	**0.08**	**2,102**	**1,025**	**472**	**302**	**172**	**832**
Inferred resources	**139**	**0.63**	**0.31**	**0.04**	**0.02**	**0.01**	**0.06**	**880**	**433**	**166**	**109**	**55**	**290**

[1] In 2021, SRK Consulting (Russia) completed an estimate of mineral resources and ore reserves using its own methodology.
[2] Proven and probable ore reserves are included in measured and indicated resources.
[3] The decline in ore reserves and inferred resources across the Norilsk Industrial District’s deposits was mainly driven by shifting economic parameters and changes in MET assessments, with some disseminated ores at the Taimyr ore cluster becoming less economically viable to mine beyond 2035.

[4] The six platinum group metals (PGMs) are platinum, palladium, rhodium, ruthenium, osmium, and iridium.

Zabaykalsky division[1]	Ore mln t	Metal grade				Contained metal			
		Cu %	Au g/t	Ag g/t	Fe %	Cu kt	Au koz.	Ag koz	Fe kt
Total proven and probable reserves[2]	274	0.61	0.59	2.95	14.62	1,680	5,180	26,027	40,059
Total measured and indicated resources	261	0.69	0.63	3.55	17.34	1,808	5,274	29,809	45,258
Total inferred resources	59	0.4	0.47	2.06	9.08	237	881	3,895	5,346

The Company conducts exploration in three regions of Russia – on the Taimyr and Kola Peninsulas and in the Zabaykalsky Territory. Through exploration at new and existing mine sites, Nornickel ensures increases in its high-grade and cuprous ore reserves to support future production from existing sites, viewing it as a key driver of its long-term growth.

Over **75** years
of resources at the current production rate

EXISTING ORE DEPOSITS

DEPOSITS: TALNAKHSKOYE AND OKTYABRSKOYE

Minerals: copper-nickel sulphide ores.

Location: Krasnoyarsk Territory, Norilsk. Geologically, the deposit is part of the Talnakh Ore Cluster.

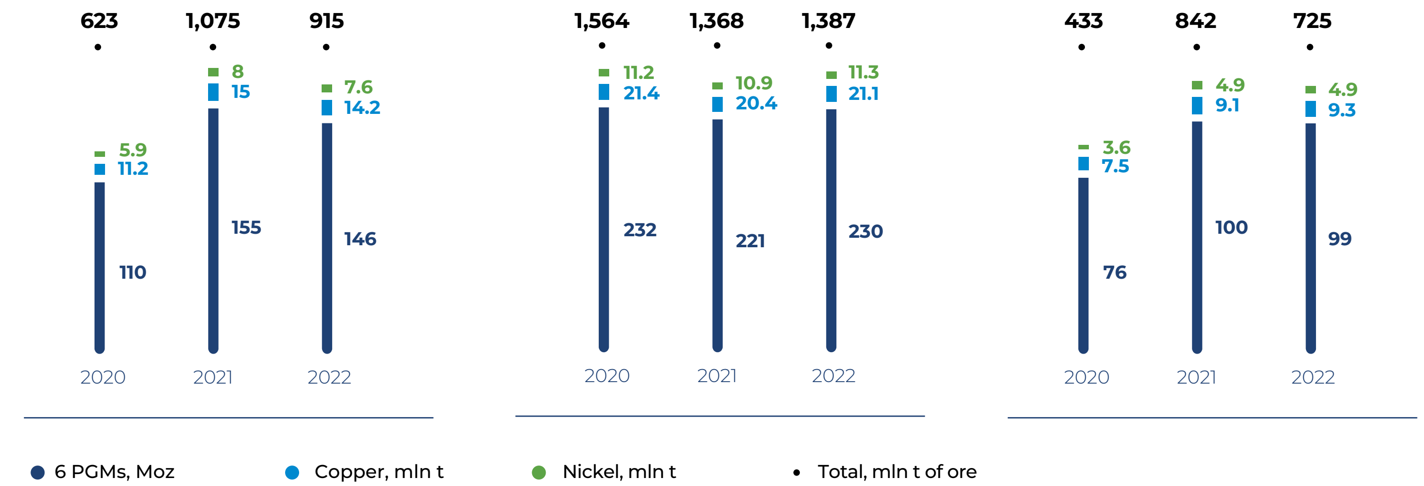
The Company has been developing the Talnakhskoye and Oktyabrskoye deposits since the early 1960s, when multiple deposits of high-grade, cuprous and disseminated ores were discovered within the area. Nornickel is still well supplied with base and noble metals from the uniquely rich and vast resource base of the Talnakh Ore Cluster deposits.

1 In 2021, CSA Global completed an estimate of mineral resources of the Bystrinskoye deposit in line with the JORC Code based on an updated resource model, which reflects both complexity and diversity of the deposit's ore types.

2 Proven and probable ore reserves are included in mineral resources. The reserves include 13.0 mln t of mined and concentrated ore stockpiles from earlier production.

Reserves and resources of the Talnakhskoye and Oktyabrskoye deposits

Proven and probable reserves | Measured and indicated resources | Inferred resources



DEPOSIT: NORILSK-1

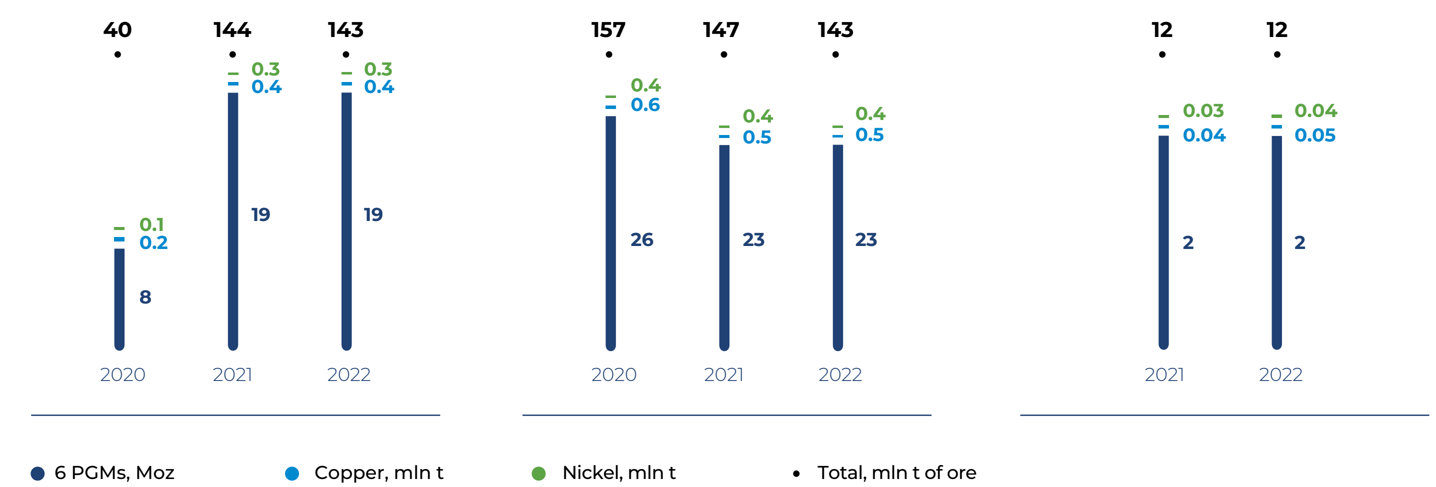
Minerals: copper-nickel sulphide ores.

Location: Krasnoyarsk Territory, Norilsk. Geologically, the deposit is part of the Norilsk Ore Cluster.

The Company has been developing Norilsk-1 since the 1930s, currently mining disseminated ores from the deposit's northern portion. In 2020, the resource estimate for the deposit was updated against new permanent exploratory standards for open-pit and underground mining.

Reserves and resources of the Norilsk-1 deposit

Proven and probable reserves | Measured and indicated resources | Inferred resources



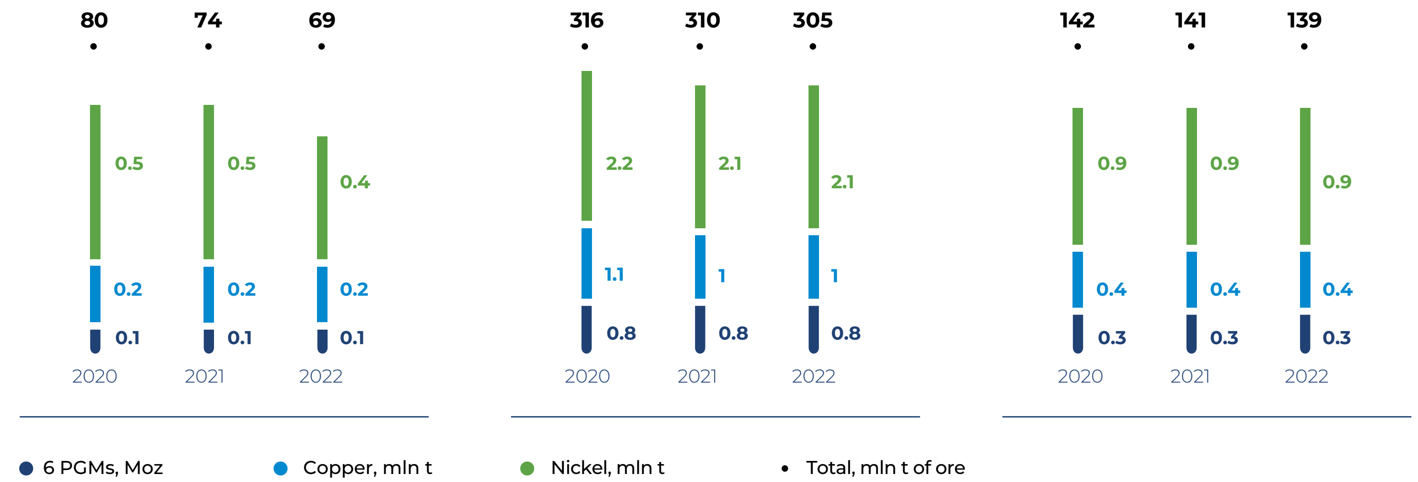
DEPOSITS: KOTSELVAARA, SEMILETKA, ZHDANOVSKOYE, ZAPOLYARNOYE, BYSTRINSKOYE, TUNDROVOYE, SPUTNIK, AND VERKHNEYE

Minerals: copper-nickel sulphide ores.

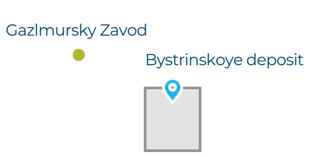
Location: Murmansk Region, Pechengsky District.

The deposits are located within a 25 km stretch between Nikel and Zapolyarny and grouped into two ore clusters: Western (Kotselvaara and Semiletka deposits) and Eastern (Zhdanovskoye, Zapolyarnoye, Bystrinskoye, Tundrovoye, Sputnik, and Verkhneye deposits). The deposits in the Western and Eastern clusters have been developed since the 1930s and 1960s, respectively.

Reserves and resources of the Kola Division



DEPOSIT: BYSTRINSKOYE

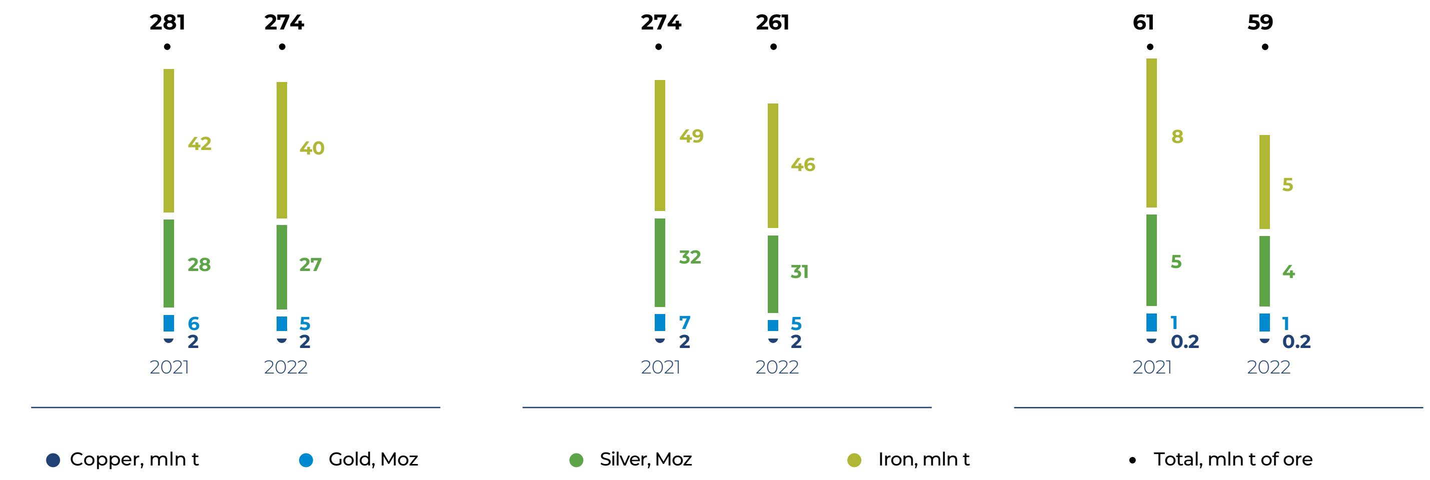


Minerals: gold-iron-copper ores.

Location: Zabaykalsky Territory, Gazimuro-Zavodsky Municipal District.

Developed since 2017, the Bystrinskoye deposit currently comprises two open-pit mines, Verkhne-Ildikansky and Bystrinsky-2, with two more – Medny Chainik and Yuzhno-Rodstvenny – scheduled to come online in 2030.

Reserves and resources of the Bystrinskoye deposit[1]



[1] In 2021, CSA Global completed an estimate of the Trans-Baikal Division's mineral resources in line with the JORC Code based on an updated resource model, which reflects both the complexity and diversity of the deposit's ore types.

EXISTING NON-METALLIC DEPOSITS

Deposit: MOKULAYEVSKOYE

Minerals: limestone.

Location: Krasnoyarsk Territory, Taimyrsky Dolgano-Nenetsky Municipal District.

The deposit lies 10 km north-west of the production sites of the Oktyabrsky and Taimyrsky Mines. The exploration and mining licence for this limestone deposit was obtained upon its discovery in 2017. In 2018, the State Commission for Mineral Reserves reviewed the feasibility study of permanent exploratory standards and the reserve statement for the deposit. It included the deposit's limestone reserves into the State Register of Mineral Reserves for potential use in cement and lime production and in sulphuric acid neutralisation. The deposit can be developed through open-pit mining.

Its B + C_1 + C_2 balance reserves of limestone are 135,661 kt.

In 2022, an exploration campaign was completed to look into dolomite overburden within the Mokulayevskoye limestone deposit. In 2021 was confirmed 1.2 Mcm of reserves at the Verkhne-Mokulayevskoye dolomite deposit, which will be used to construct roads for a project to develop the limestone deposit.

Deposit: OZERO LESNOYE

Minerals: magmatic rock (basalts).

Location: Krasnoyarsk Territory, Norilsk.

Located 22 km to the north of Norilsk, the deposit consists of two adjacent licence areas (No. 1 and No. 2) which share a common boundary. The deposit is developed within licence area No. 1. In 2017, Nornickel obtained a survey, exploration and mining licence for the magmatic basalt reserves at licence area No. 2.

In 2022, Nornickel updated its reserve estimate for the deposit's two licence areas to 189.2 Mcm and developed a case for the best option to further develop the deposit, enabling mining the two licence areas as one open-pit mine to ensure continuous production.

Deposit: GRIBANOVSKOYE

Minerals: sand.

Location: Krasnoyarsk Territory, Taimyrsky Dolgano-Nenetsky Municipal District.

In 2020, Nornickel obtained an exploration and mining licence upon the discovery of the Gribanovskoye deposit, located on the Yenisei River, 22.5 km south of Dudinka. Exploration phase activities were completed, and a pilot operation was started at the deposit in 2020. A state expert review of the feasibility study of permanent conditions and the reserve statement was conducted in 2021. 87,798 kt of sand reserves used for operational needs were confirmed as C_1 + C_2 reserves. Sand production was launched in 2022.

Deposit: GOROZUBOVSKOYE

Minerals: anhydrite.

Location: Krasnoyarsk Territory, Norilsk.

In 2020, following further examination of the deposit's flanks carried out as part of follow-up exploration of the Gorozubovskoye anhydrite deposit, the reserves were reclassified from C_2 to C_1. As a result, the deposit's reserves were recalculated. A certificate issued by the State Commission for Mineral Reserves confirmed the parameters of updated standards; anhydrite reserves were confirmed as follows: C_1 balance reserves at 81,830 kt, C_2 balance reserves at 12,484 kt and A + B + C_1 + C_2 off-balance reserves at 1,640 kt. In 2022, a detailed geological study of the deposit was continued.

Deposit: KAYERKANSKOYE

Minerals: quartzose sandstone, coal, tuffaceous argillite.

Location: Krasnoyarsk Territory, Norilsk.

Since 1967, the Kayerkanskoye deposit has been supplying the needs of the Company's Polar Division plants in materials used to produce fluxes for concentration and metallurgical processes at the metallurgical plants, as well as to manufacture building materials.

In 2022, exploration within the Kayerkanskoye multi-mineral deposit confirmed C_1 overburden (basalt) reserves at 7.87 Mcm.

GROWTH PROJECTS

Deposit: BYSTRINSKO-SHIRINSKOYE

Minerals: gold ore.

Location: Zabaykalsky Territory, Gazimuro-Zavodsky Municipal District.

In 2022, a feasibility study of permanent exploratory standards and the reserve statement were completed for the deposit, with the results submitted in December 2022 for a state expert review.

Deposit: BUGDAINSKOYE

Minerals: molybdenum and associated elements.

Location: Zabaykalsky Territory, Alexandrovo-Zavodsky Municipal District.

The deposit's mineral reserves were included into the State Register of Mineral Reserves in 2007. In 2014, Nornickel halted the development of the Bugdainskoye deposit for three years amid a low-price environment across the global molybdenum market and in 2017 extended the suspension of operations for another five years, until 31 December 2022.

B + C_1 + C_2 mineral reserves

	Reserves
Total ore	813 mln t
Mo	600 kt
Au	360 koz
Ag	6,221 koz
Pb	41 kt

Deposit: WESTERN FLANK OF THE OKTYABRSKOYE DEPOSIT

Minerals: copper-nickel sulphide ores.

Location: Krasnoyarsk Territory, Norilsk. Geologically, the deposit is part of the Talnakh Ore Cluster.

Licensed for prospecting in 2017, the area shares a boundary with the earlier licensed mining area at the Oktyabrskoye deposit. In 2022, appraisal was started at the Zapadny section, where prospecting had earlier confirmed the presence of copper-nickel ores, suggesting potential for reserve additions of 500 kt in high-grade ores, 2,140 kt in cuprous ores and 546 kt in disseminated ores. Plans for 2023 include securing a state expert review and a reserve statement approval.

Deposit: FLANKS OF THE BYSTRINSKOYE DEPOSIT

Minerals: lode gold, iron ore, copper ore.

Location: Zabaykalsky Territory, Gazimuro-Zavodsky Municipal District.

Licensed for prospecting in 2021, the area shares a boundary with the earlier licensed exploration and mining area at the Bystrinskoye deposit. In 2022, to grow the gold-iron-copper ore and gold ore reserves in its the mineral resource base, the Company launched exploration phase activities and conducted surface geophysical and geochemical prospecting over the area. Further plans include drilling the identified targets, followed by a resource estimate against provisional exploratory standards. According to a preliminary estimate, the deposit flanks have a potential for reserve additions of 368 kt in copper and 32 tonnes in gold.

Deposit: MASLOVSKOYE

Minerals: copper-nickel sulphide ores.

Location: Krasnoyarsk Territory, Norilsk. Geologically, the deposit is part of the Norilsk Ore Cluster.

The Company obtained the licence to explore and mine the Maslovskoye deposit upon its discovery in 2015.

A feasibility study of permanent exploratory standards and a reserve statement for the Maslovskoye deposit were approved by the State Commission for Mineral Reserves, and its copper-nickel ore reserves were included into the State Register of Mineral Reserves.

B + C_1 + C_2 mineral reserves

	Reserves	Metal grade
Total ore	206.8 mln t	
Pd	33,087 koz	5.0 g/t
Pt	13,040 koz	2.0 g/t
Au	1,268 koz	0.2 g/t
Ni	711 kt	0.3%
Cu	1,098 kt	0.5%
Co	26 kt	0.01%

PROMISING AREAS AND PROSPECTS

Area: YUZHNO-NORILSKAYA

Minerals: copper-nickel sulphide ores.

Location: Krasnoyarsk Territory, Taimyrsky Dolgano-Nenetsky Municipal District.

In 2019, the Company obtained exploration licences for the Morongovsky and Yuzhno-Yergalakhsky copper-nickel sulphide ore prospects within the Yuzhno-Norilskaya area. In 2021–2022, prospecting of the areas was completed, including prospecting drilling.
A preliminary estimate of the resource potential is currently being prepared. After laboratory tests are completed in 2023, a report on the area's potential and an opinion on further prospecting will be prepared.

Area: MIKCHANGDINSKAYA

Minerals: copper-nickel sulphide ores.

Location: Krasnoyarsk Territory, Taimyrsky Dolgano-Nenetsky Municipal District.

In 2019–2020, the Company obtained exploration licences for the Neralakhsky, Yuzhno-Neralakhsky, Snezhny, Yuzhno-Ikensky, and Medvezhy prospects within the Mikchangdinskaya area. Prospecting drilling conducted in 2021 confirmed that the area has a potential for containing copper-nickel sulphide ores. In 2022, the Company decided to continue prospecting drilling, to be completed in 2023–2024.

Area: ARYLAKHSKAYA

Minerals: copper-nickel sulphide ores.

Location: Krasnoyarsk Territory, Taimyrsky Dolgano-Nenetsky Municipal District.

In 2020, the Company obtained exploration licences for the Yttakhsky, Samoyedsky and Mastakh-Salinsky prospects within the Arylakhskaya area. In 2021–2022, prospecting drilling was completed at prospects identified by geophysical and geochemical prospecting across areal zones. In 2023, after the ongoing laboratory tests are completed, a report on the area's potential and an opinion on further prospecting will be prepared.

Area: ALENUYSKAYA

Minerals: gold-copper porphyry ores.

Location: Zabaykalsky Territory, Alexandrovo-Zavodsky District.

In 2020, the Company obtained exploration licences for the Severo-Alenuysky and Yuzhno-Alenuysky prospects within the Alenuyskaya area. In 2022, prospecting drilling was completed at prospects identified by geophysical and geochemical prospecting across areal zones, confirming signs of copper porphyry mineralisation that extends beyond the licence area. The Company applied for a subsoil licence for the adjacent Tsentralno-Alenuyskaya area, with plans to continue prospecting in 2023.

Area: MOSTOVSKAYA

Minerals: gold-silver ores, copper ore, molybdenum ore.

Location: Zabaykalsky Territory, Mogochinsky District.

In 2020, the Company obtained exploration licences for the Zapadno-Mostovsky and Vostochno-Mostovsky prospects within the Mostovskaya area. In 2022, prospecting drilling was completed at prospects identified by geophysical and geochemical prospecting across areal zones. In 2023, after the ongoing laboratory tests are completed, a report on the area's potential and an opinion on further prospecting will be prepared.

AREA: DOGYINSKAYA

Minerals: gold-copper and gold-silver ores.

Location: Zabaykalsky Territory, Gazimuro-Zavodsky District.

In 2021, the Company obtained exploration licences for the Severo-Dogyinsky and Yuzhno-Dogyinsky prospects within the Dogyinskaya area. In 2022, the Company conducted geophysical and geochemical prospecting across areal zones and identified drilling targets to confirm the geology. Started in 2022, the drilling campaign will continue in 2023. A report on the area's potential will be prepared based on drill results from the drilling campaign.

Area: SHAMYANSKAYA

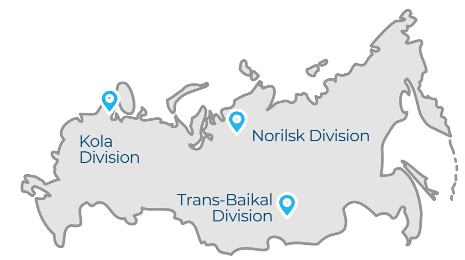
Minerals: gold ore, copper-molybdenum ore.

Location: Zabaykalsky Territory, Zabaykalsky District.

In 2021 and 2022, the Company obtained exploration licences for the Zapadno-Shamyansky, Tsentralno-Shamyansky and Vostochno-Shamyansky prospects within the Shamyanskaya area. In 2022, the Company conducted geophysical and geochemical prospecting across areal zones and identified drilling targets to confirm the geology in 2023.

OPERATIONAL PERFORMANCE

The Company does not mine or manufacture its products in areas of conflict and/or to finance conflicts. Nornickel's mining and production comply with human rights policies.



The Company owns three production assets: the Norilsk and Kola Divisions mining copper-nickel sulphide ores and the Trans-Baikal Division producing gold-iron-copper ores.

The Norilsk Division is the Group's flagship asset includes the Company's two major production assets – the Polar Division and Medvezhy Ruchey (100% stake), as well as a number of support assets. The Norilsk Division's assets are located on the Russian Taimyr Peninsula – in the Norilsk Industrial District (northern part of the Krasnoyarsk Region, within the Arctic Circle) – and linked to other Russian regions by the Yenisei River, the Northern Sea Route and by air.

Located on the Kola Peninsula in the Murmansk Region, **the Kola Division** includes two Nornickel's wholly owned subsidiaries: Kola MMC, a production company; and Norilsk Nickel Harjavalta. Norilsk Nickel Harjavalta is located in Harjavalta, Finland. Founded in 1959, Harjavalta is now the only nickel refinery in Finland and one of the largest in Europe with a total throughput capacity of 65 ktpa of nickel products.

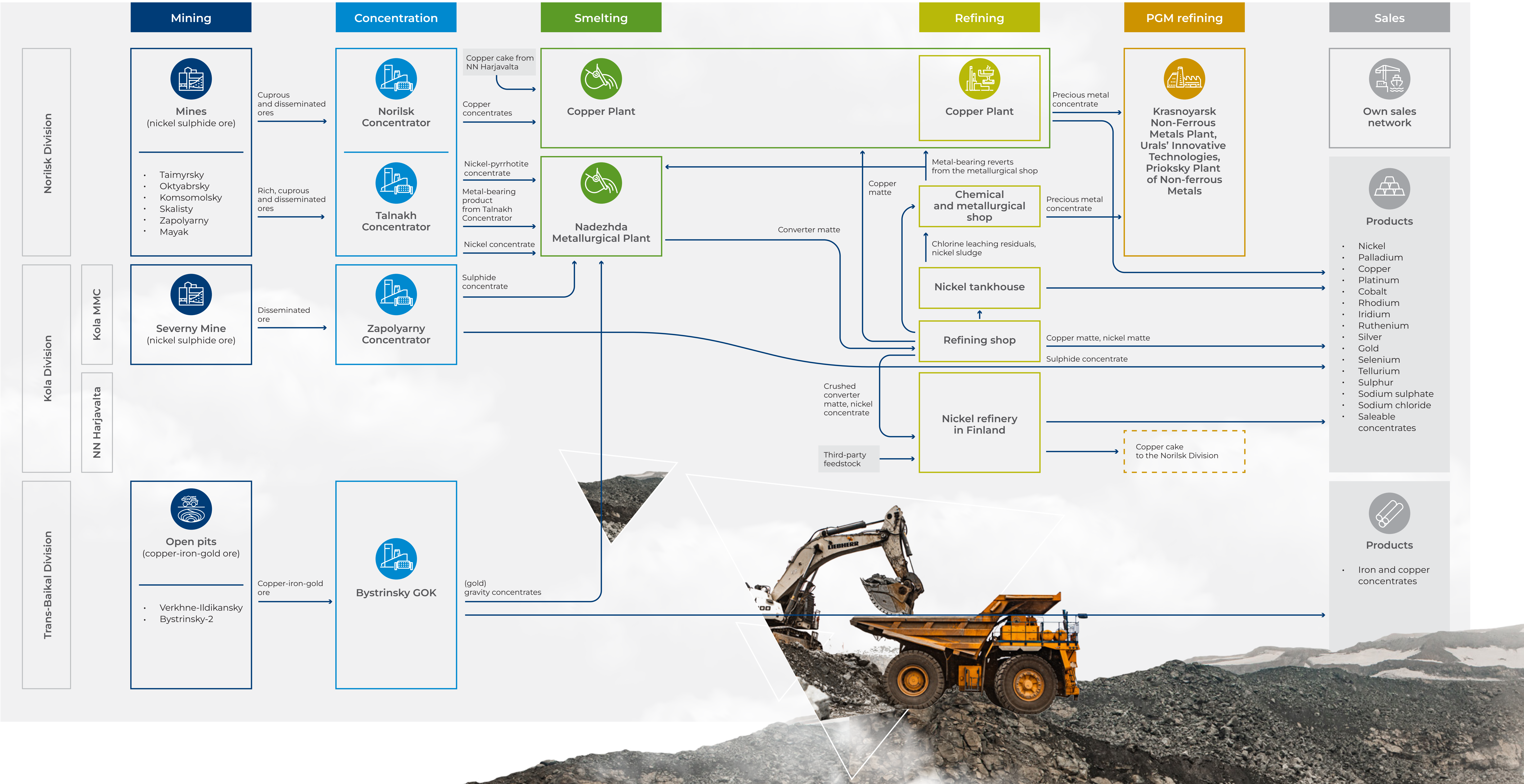
The Trans-Baikal Division is located in the Zabaykalsky Territory of Russia, 350 km away from Chita. The Division includes Bystrinsky GOK (via 50.01% held in GRK Bystrinskoye), the construction of which was started by Nornickel in 2013 (put into commercial operation in 2019). This asset includes open-pit ore mining operations and a mining and processing plant with full infrastructure, including a power line, a 227 km Borzya–Gazimursky Zavod railway line (25% held by Nornickel and 75% by the government), as well as a rotation camp.

The Norilsk Division
- **The Polar Division**
- **Medvezhy Ruchey**
- the Russian Taimyr Peninsula

The Kola Division
- **Kola MMC**
- Kola Peninsula, Murmansk Region
- **Norilsk Nickel Harjavalta**
- Finland, Harjavalta

The Trans-Baikal Division
- **Bystrinsky GOK**
- The Zabaykalsky Territory of Russia, 350 km away from Chita

PRODUCTION FLOW



MINING

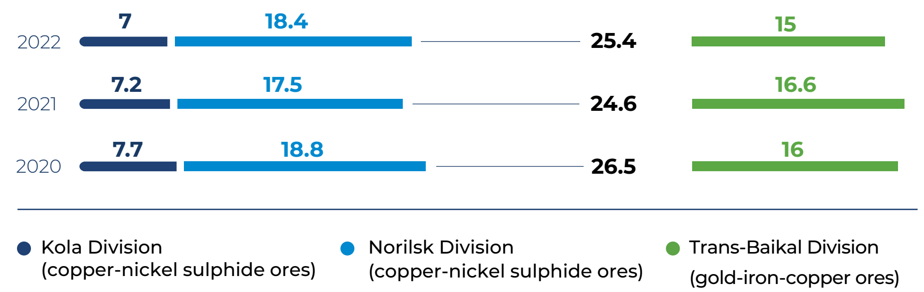
The Norilsk and Kola Divisions mine copper-nickel sulphide ores of three grades: high-grade ores with a higher content of base and precious metals; cuprous ores with a higher copper content as compared to nickel; and disseminated ores with a lower content of all metals. The Trans-Baikal Division mines gold-iron-copper ores of the Bystrinskoye deposit.

The Norilsk Division develops the Talnakhskoye and Oktyabrskoye deposits through underground mining at the Taimyrsky, Oktyabrsky, Komsomolsky, Skalisty, and Mayak Mines. The mines deploy slicing and room-and-pillar methods with the cut-and-fill system, with stopes refilled with backfill mixtures.

The Norilsk-1 deposit is developed by the Zapolyarny Mine of the Norilsk Division through open-pit and underground mining. Underground mining is carried out through sublevel caving using front ore passes and self-propelled vehicles.

In 2022, total ore production by the Norilsk Division was 18.4 mln t, up 1.0 mln t y-o-y (+6%). High-grade ore production increased by 22% (+1.3 mln t), while production of cuprous ores decreased by 4% (–0.2 mln t). Changes in ore production were planed in the mining option for 2022. Disseminated ore production decreased by 1.8% (–0.1% mln t). The year-on-year decrease in the production of disseminated ores was due to the repair of the backfilling facility at the Mayak Mine and the rescheduling of ore mining at the Zapolyarny Mine (with mining operations suspended) to process higher-grade feedstock from the Talnakhskoye and Oktyabrskoye deposits.

Group ore output (mln t)



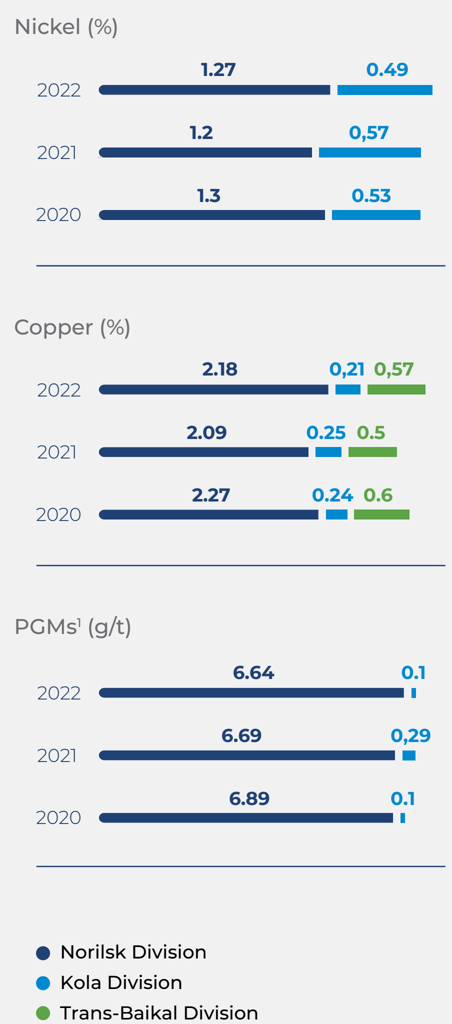
The Kola Division mines disseminated ores at four deposits: Zhdanovskoye, Zapolyarnoye, Kotselvaara, and Semiletka. Kola MMC uses various ore mining methods. The Zhdanovskoye and Zapolyarnoye deposits use three mining methods: gravity caving with front ore passes, sublevel caving with room-and-pillar ore removal and room-and-pillar mining. The Kotselvaara and Semiletka deposits primarily use stoping from sublevel drifts and sublevel caving. Room-and-pillar short-hole and long-hole stoping is also used on a limited scale.

In 2022, Kola MMC produced 7.0 mln t of ore (down 2% y-o-y). The decline in ore production was caused by the decrease in the regulatory requirements for reserves prepared for development and ready for extraction at the Severny Mine (shortage of self-propelled-diesel machinery, lack of spare parts and termination of aftersale support for mining equipment in Russia by Western companies due to sanctions).

The Trans-Baikal Division mines gold-iron-copper ores of the Bystrinskoye deposit through open-pit mining at the Verkhne-Ildikansky and Bystrinsky-2 mines.

In 2022, total ore production by the Trans-Baikal Division was 15.0 mln t, down 1.6 mln t y-o-y. The decline in ore production was scheduled in the mining option for 2022.

Average metal content in mined ore



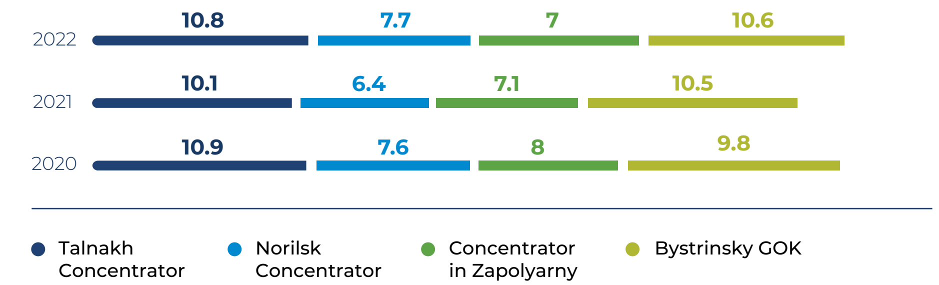
[1] The PGMs include palladium, platinum, rhodium, ruthenium, and iridium.

CONCENTRATION

CONCENTRATORS

- Talnakh Concentrator, Norilsk Industrial District
- Norilsk Concentrator, Norilsk Industrial District
- Concentrator, Zapolyarny
- Bystrinsky GOK, Zabaykalsky Territory

Concentrators' throughput (mln t)



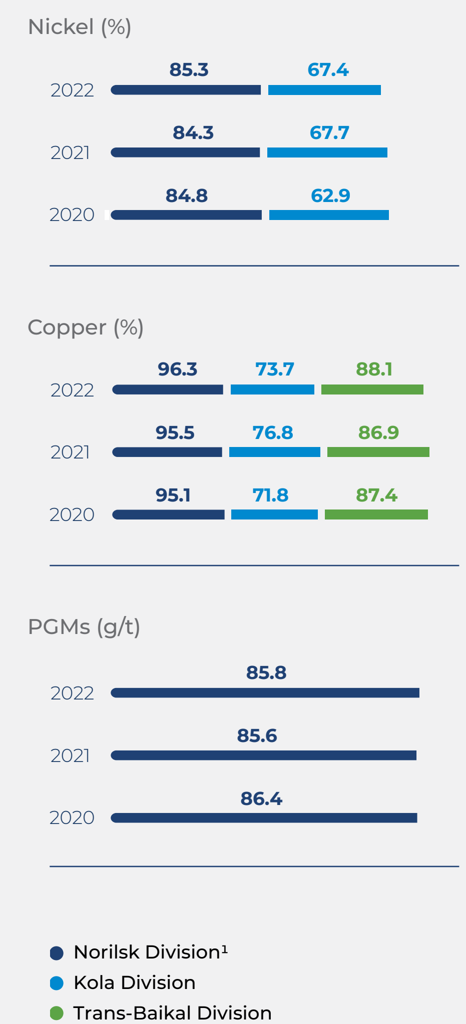
Talnakh Concentrator processes high-grade, cuprous and disseminated ores from the Oktyabrskoye and Talnakhskoye deposits to produce nickel-pyrrhotite and copper concentrates, as well as metal-bearing products. Its key processing stages include crushing, milling, flotation, and thickening. In 2022, Talnakh Concentrator increased its ore processing by 7% to 10.8 mln t.

Norilsk Concentrator processes all disseminated ores from the Norilsk-1 deposit, cuprous and disseminated ores from the Oktyabrskoye and Talnakhskoye deposits, and some metal-bearing products from Talnakh Concentrator to produce nickel and copper concentrates. Its key processing stages include crushing, milling, flotation, gravity concentration, and thickening. In 2022, Norilsk Concentrator increased its ore processing to 7.7 mln t, up 1.3 mln t year-on-year. The resulting thickened concentrates from Talnakh Concentrator and Norilsk Concentrator are transported via slurry pipelines to the metals operations of the Norilsk Division for further processing.

Concentrator in Zapolyarny processes disseminated ores from Kola MMC deposits. The concentrator produces nickel sulphide concentrate, which is then sold via third parties or partially shipped to the Norilsk Division for further processing. In 2022, the concentrator processed 7.0 mln t of ore, down 0.1 mln t year-on-year due to a decrease in ore production.

Bystrinsky GOK processes ores of the Bystrinskoye deposit into copper, iron ore and gold concentrates. Its key processing stages include crushing, milling, flotation, thickening, filtration, and end product packaging. The concentrator has two processing lines. Copper and iron ore concentrates are sold via third parties, while gold concentrates are further processed at the Norilsk Division. In 2022, Bystrinsky GOK processed 10.6 mln t of ore, up 0.13 mln t year-on-year. Metallurgy and refining.

Metals recovery in concentration across the Group



[1] Metals recovery into bulk concentrate.

SMELTING AND REFINING

DOWNSTREAM FACILITIES

- Nadezhda Metallurgical Plant, Norilsk Industrial District
- Copper Plant, Norilsk Industrial District
- Metallurgical shop of Copper Plant, Norilsk Industrial District
- Chemical and metallurgical shop, Monchegorsk
- Refining shop, Monchegorsk
- Nickel tankhouse, Monchegorsk
- Nickel refinery, Harjavalta

PRODUCTION CHAIN

Norilsk Division

The produced nickel concentrates, including steam-cured sulphide concentrate[1], secondary materials and metal-bearing feed from Kola MMC, are fed into flash smelting furnaces at Nadezhda Metallurgical Plant. The matte produced in flash smelting furnaces is then converted into high-grade converter matte.

Copper Plant processes all of the copper concentrate from the Company's concentrators, metal-bearing products from Kola MMC and copper cake from Norilsk Nickel Harjavalta to obtain copper cathodes, elemental sulphur and sulphuric acid for the operational needs of the Norilsk Division. Copper Plant's metallurgical shop recycles sludge from the copper tankhouses of Copper Plant to produce precious metal concentrates, commercial selenium and tellurium.

Kola Division (Kola MMC)

Kola MMC's refining facilities in Monchegorsk refine converter matte from the Norilsk Division[2]. Converter matte is crushed, milled and separated into copper and nickel concentrates by flotation, while part of the converter matte after crushing is immediately sent for processing to Norilsk Nickel Harjavalta. The resulting copper concentrate is sent to the Norilsk Division's Copper Plant. The nickel concentrate flow is then separated, with some of it after magnetic separation and recovery of precious metals sent to Norilsk Nickel Harjavalta for further processing. The remaining nickel concentrate is processed at the roasting and electric furnace sections to produce tube furnace nickel powder, anodes and granulated nickel alloy. Anodes are processed using the conventional electrorefining technology at Tankhouse 1 to produce cathodes. Tube furnace nickel powder is processed at Tankhouse 2 using a new technology involving leaching plus electrowinning to produce cathodes. The granulated nickel alloy is processed at the nickel carbonyl section to produce pellets and powder.

The production of nickel cathodes at Tankhouse 1 and Tankhouse 2 results in semi-finished products with a high content of precious metals. These semi-products are processed at the chemical and metallurgical shop to produce precious metal concentrates. The production of nickel cathodes at Tankhouse 1 and Tankhouse 2 also generates primary cobalt cake, which is used by the cobalt section to produce saleable cobalt concentrate and cobalt cathodes.

Norilsk Nickel Harjavalta

Norilsk Nickel Harjavalta uses sulphuric acid leaching with high metal recovery rates – above 98%. The refinery processes nickel feedstock (matte and crushed converter matte) supplied by Kola MMC and small amounts of feedstocks purchased from third parties (nickel salts). Once leached, copper cake is sent to the Norilsk Division or sold to third parties, while purified nickel solutions are sent for further processing to produce nickel cathodes, nickel briquettes, powder, salts, as well as salts and solutions of cobalt.

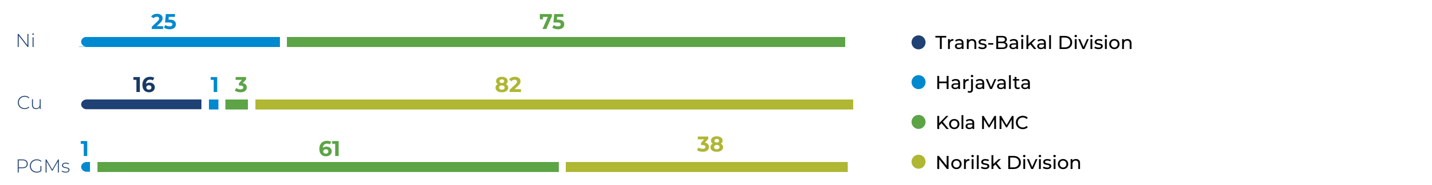
Precious metals produced by Nornickel are refined under tolling agreements at Krastsvetmet, Urals' Innovative Technologies and Prioksky Plant of Non-ferrous Metals.

Metals recovery in smelting (%)

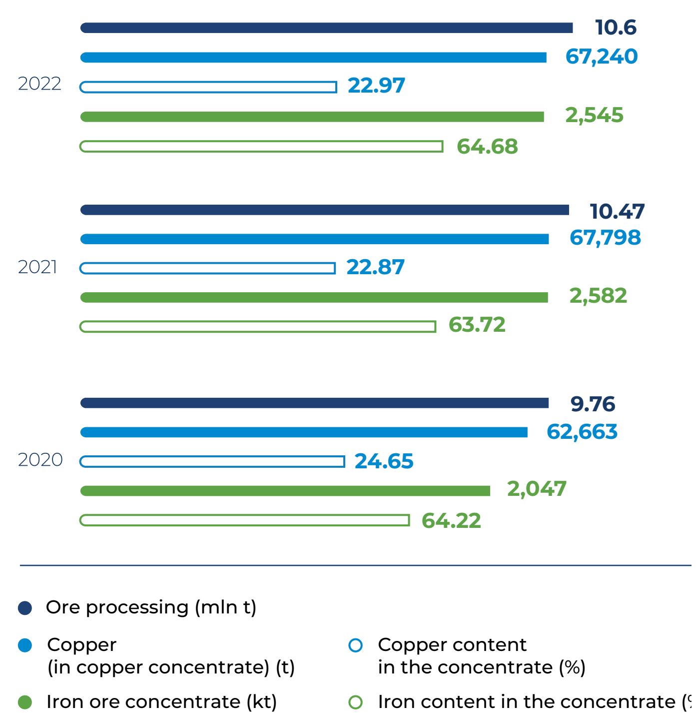
[1] Hydrometallurgical product.
[2] The production and processing of own converter matte has been discontinued following the shutdown of the smelting shop in December 2020.
[3] Feedstock to finished products.
[4] In refining, converter matte to finished products.

PRODUCTS

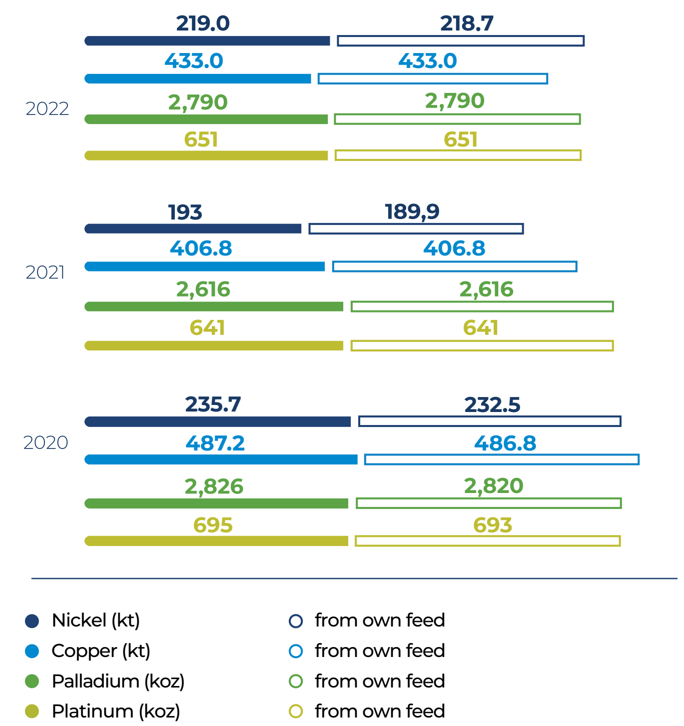
Finished products manufactured in 2022
(percentage of the Group's total output, %)



Production volumes by Bystrinsky GOK



Finished product output by the Group



The Group's saleable products

Norilsk Division:
- Copper cathodes
- Commercial sulphur
- Selenium
- Tellurium ingots
- Precious metals

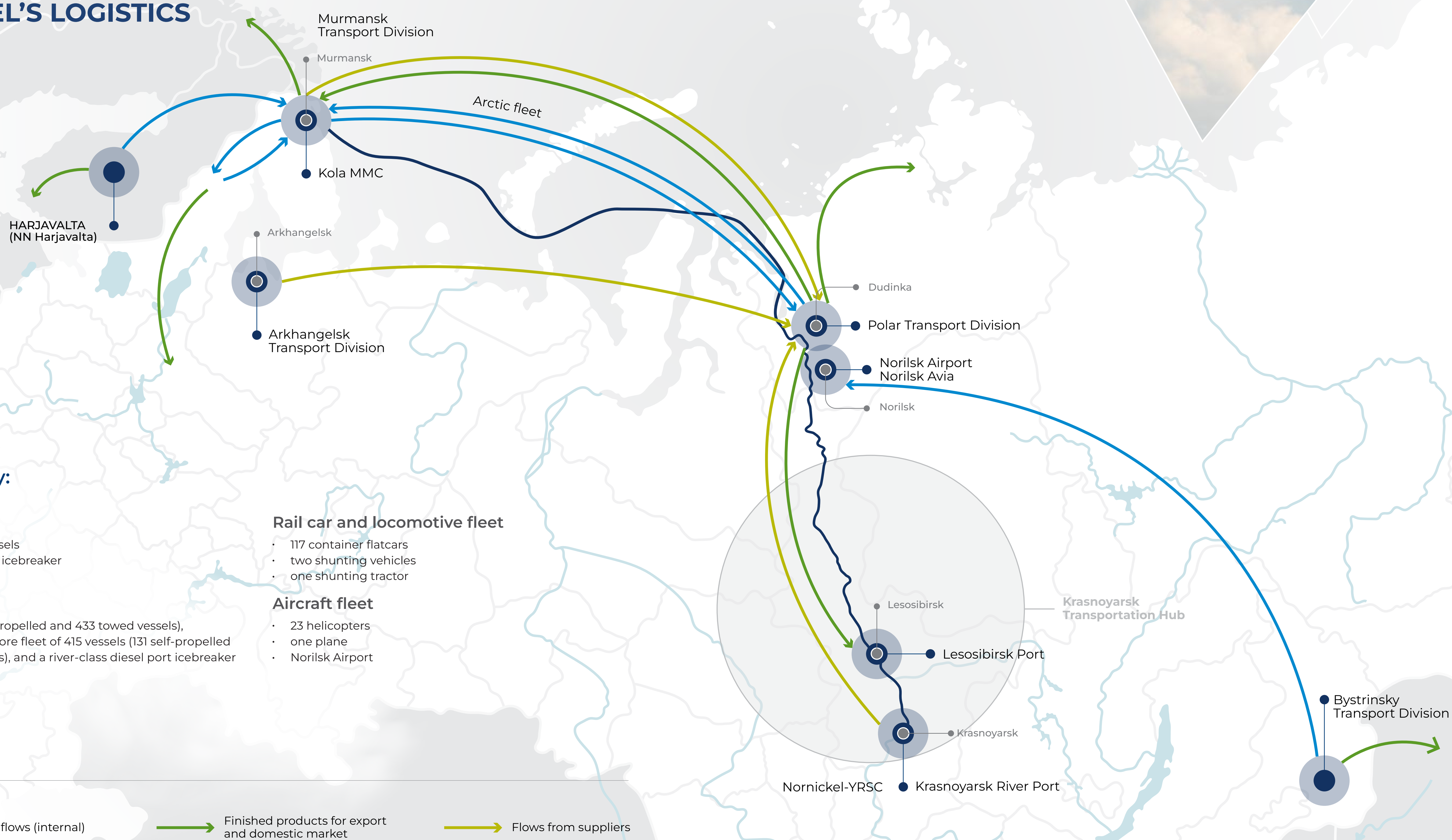
Kola Division:
- Nickel cathodes and carbonyl
- Nickel sulphide concentrate
- Nickel matte
- Copper matte
- Cobalt cathodes, cobalt concentrate
- Precious metals
- Sulphuric acid

Harjavalta:
- Nickel salts, briquettes, cathodes, powders, and solutions
- Copper cake
- Cobalt sulphate, cobalt solutions

Trans-Baikal Division:
- Iron ore concentrate
- Copper concentrate

LOGISTICS OPERATIONS AND PRODUCT SALES

NORNICKEL'S LOGISTICS MAP



Asset summary:

Sea fleet

- six heavy ice-class vessels
- a sea-class diesel port icebreaker

River fleet

- 633 vessels (200 self-propelled and 433 towed vessels), including the active core fleet of 415 vessels (131 self-propelled and 284 towed vessels), and a river-class diesel port icebreaker

Rail car and locomotive fleet

- 117 container flatcars
- two shunting vehicles
- one shunting tractor

Aircraft fleet

- 23 helicopters
- one plane
- Norilsk Airport

TRANSPORT AND LOGISTICS ASSETS

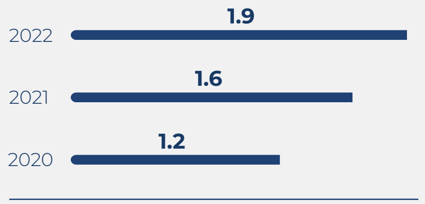
Nornickel has a unique Arctic fleet capable of breaking through Arctic ice up to 1.5 m thick without icebreaker support, which enables the Company to provide year-round dry and liquid cargo shipping services between Dudinka, Murmansk and Arkhangelsk sea ports while also serving other destinations.

In addition to sea transportation with its own fleet of Arc7 heavy ice-class vessels, the Company engages a fleet of lower ice-class Arc4/Arc5 vessels to transport additional cargo for major investment projects in Taimyr. These sea vessels require icebreaker escort in the Yenisei River, the Yenisei Bay and the Kara Sea between November and May, with three icebreakers providing this support. Arc7 ice class vessels require just one icebreaker to make and maintain ice channels in the Yenisei River and the Yenisei Bay on a regular basis to ensure commercial speed of piloting.

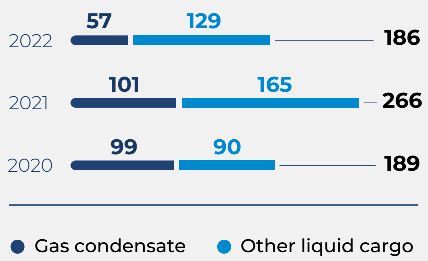
In 2022, Nornickel signed a long-term contract with ROSATOM (valid until 2041 and renewable until 2051) to engage a nuclear-powered Project 22,220 icebreaker with a shaft power of about 60 MW to make sure the Company's strategic needs for icebreaker support are fully covered. After these two icebreakers are retired upon reaching the end of their service life (in 2027 and 2029), the Project 22220 vessel chartered by Nornickel will ensure stable icebreaker support for the Company's vessels and cargo transportation services.

The Company owns Dudinka port on the Taimyr Peninsula, which is Taimyr's main cargo gateway with no

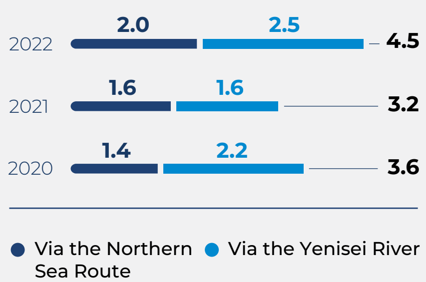
Dry cargo transportation by fleet (mln t)[1]



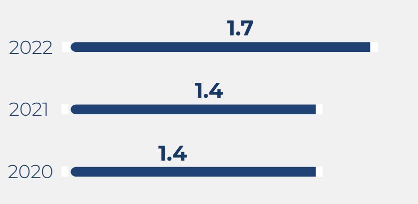
Liquid cargo shipments (kt)[1]



Cargo traffic at Dudinka port (mln t)



Cargo traffic at the Murmansk terminal (mln t)



reasonable alternative. In addition, Dudinka is the world's only port that gets flooded every year during the spring thaw. From November to May, its water area and the Yenisei River freeze over. At this period, Dudinka port handles only sea vessels using icebreakers to de-ice the berths and provide support during manoeuvring and mooring operations. In May and June, during the flooding, the service is suspended to be resumed for sea and river vessels when ice flows pass and the water level goes down.

The port transships cargoes for the Norilsk Division and for residents of the Taimyr Peninsula. In summer, river vessels deliver equipment and materials (sand, round timber, clinker, process materials, etc.) for process needs from Krasnoyarsk and Lesosibirsk. Sulphur is shipped from Dudinka partly by river and partly by sea. Converter matte and metal products are shipped by sea from Dudinka throughout the year.

To support major investment projects, the port's cargo traffic is projected to increase up to 1.5 times compared to the current average of 3.5 million tonnes, which will require expanding the port facilities. In 2022, we increased the volumes of cargo handled by the port by up to 30% versus the average rate, having invested more than RUB 6 billion over the past four years in upgrading and expanding the port facilities.

Nornickel's own **terminal in Murmansk** ensures year-round transshipment of the Company's finished metal products (primarily those produced by the Norilsk Division) for export, acceptance of converter matte from Dudinka and its shipment by rail to the Kola Division, shipment of semi-products to Dudinka for further processing at the Norilsk Division facilities as well as of procured equipment, materials and cargoes to meet the needs of the Norilsk Region.

The Company also own aviation assets, including Norilsk Avia and Norilsk Airport, offering air transportation services to local communities across the Taimyr Peninsula. The air carrier has its own fleet of 23 helicopters and one plane and provides air services related to the operations of the Norilsk Nickel Group, emergency medical flights, search and rescue operations, and local passenger services.

Norilsk Airport is the only transport infrastructure facility that provides year-round connections between the Norilsk Industrial District and other Russian regions.

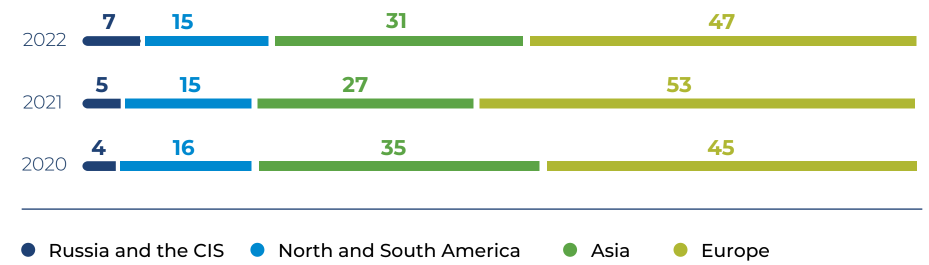
In March 2022, as part of its response to the current situation, Nornickel sold 100% of NordStar Airlines shares to the airline's managers to focus on its core business, the production and sale of non-ferrous and precious metals. That said, NordStar Airlines remains the main air carrier based in Norilsk Airport, providing uninterrupted air services between Norilsk and major Russian cities.

PRODUCT SALES

Nornickel's products are listed on the London Metal Exchange and the Shanghai Futures Exchange

In 2022, the Company supplied its products to 34 countries around the world, with Europe remaining the major consumer. The Company operates its own global network of representative and sales offices in Russia, China, USA and Switzerland, prioritising direct sales to consumers. .

Sales by region (%)



SALES STRATEGY

Sales, along with production, have traditionally been a key focus area of Nornickel's business. One of the Company's key sales objectives is to promote and ensure a favourable environment for sustainable demand for its products now and in the future.

The Company's nickel product sales mix matches the global nickel consumption mix, with stainless steel, plating and alloying as its main segments. At the same time, the battery sector is increasingly gaining importance.

To capture the expected mid- and long-term growth in nickel demand from the battery sector, Nornickel continues implementing a number of initiatives to enhance and expand its existing product range supporting the battery supply chain to secure nickel for its future investments.

Hundreds of companies (more than 95% of them – industrial consumers) purchase Nornickel's nickel products.

When it comes to **nickel products, the sales strategy** focuses on achieving a healthy balance between supplies to stainless steel producers and shipments to other industries to secure a stable position in the market.

Electric vehicles and batteries are a priority segment in the nickel consumption mix, as its growth rates suggest that in the long term, it can become the key source of demand for high-grade nickel. Given the Company's wide range of low-carbon nickel products, high reliability of supply, own global sales platform, and long-term experience of partnering with automakers and chemical companies, Nornickel sees its role as a key element in the development of the electric vehicle market and related value chains. The Company is strongly focused on building long-term relationships with key market participants and considers various forms of cooperation with the battery sector players. Nornickel also conducts research in battery recycling and works on developing integrated solutions for the future battery supply chain.

In the alloys, special steels and electroplating sectors, the Company seeks to maximise the use of its product portfolio advantages and improve product quality to boost its share in high-quality, premium segments.

The automotive industry and the production of other process catalysts, as well as the jewellery and medical products industries remain the key market segments for **PGM products.**

[1] Includes a third-party fleet.

At the same time, Nornickel engages in various initiatives to further promote the use of palladium in future industrial applications.

Nornickel's PGM products are purchased by dozens of companies, 80% of them being industrial consumers.

As the world's largest producer of palladium, the Company continues to follow its strategy of entering into direct contracts with end consumers in the **PGM market** to sustain strong demand. Speaking about the future PGM uses, we should name several of those related to the hydrogen economy. Palladium can find important application in hydrogen storage. Moreover, palladium may be a good component in the systems of hydrogen transportation based on liquefied organic hydrogen carriers (LOHC). In the longer run, palladium may find new applications in electrolysers and fuel cells.

Moreover, palladium may play an important role in hydrogen safety. Among other promising areas where palladium can find its future use, we can name water treatment systems, electronic sensors (including those for autonomous vehicles), palladium coatings and alloys in aerospace and electronic applications, energy density enhancing dopings for Li-ion batteries as well as biofuel catalysis, carbon dioxide capturing devices, cancer drugs and pharmaceutical catalysts, and others.

Nornickel together with its partners is working on accelerated adoption of hydrogen technologies and other applications mentioned above to bring closer a cleaner and more sustainable future and ensure the effective energy transition essential to achieve net-zero goals set by the Paris agreement on climate change.

PRODUCT SALES

In 2022, Nornickel once again confirmed its reputation as a reliable supplier of high-quality products. Every year, the Company conducts customer satisfaction analysis in line with ISO 9001 to get feedback from its customers. Customer feedback is reviewed and incorporated into initiatives to improve product and service quality. Nornickel is committed to continuous improvement. The integrated index of customer satisfaction with the Company's products and services was fully in line with our target for 2022.

Despite the geopolitical challenges and related logistical issues, the Company successfully met all its obligations to customers in 2022, having never failed to deliver on its commitments. In 2022, we developed and set up backup routes to ensure uninterrupted product supplies to consumers.

Nornickel has successfully retained all of its major customers in 2022, none of whom defaulted on contractual obligations, enabling the Company to meet its sales targets. This solid performance was to a large extent driven by the Company's longstanding policy of independent positioning in the market and building direct relationships with consumers.

ENERGY ASSETS

Natural gas production
2,816 Mcm

Gas condensate production
91 kt

Share of renewables across the Group
51%

Nornickel operates its own energy assets, which are managed by the Energy Division and comprise four natural gas fields, three combined heat and power (CHP) plants, two hydropower plants (Ust-Khantayskaya HPP and Kureyskaya HPP), as well as gas pipelines and power lines. Electricity is generated from renewable (hydropower) and non-renewable (natural gas) sources.

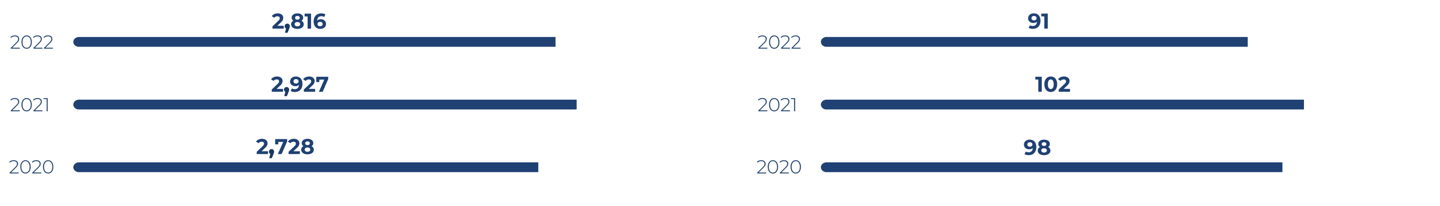
Norilskgazprom produces gas and gas condensate from the Pelyatkinskoye, Yuzhno-Soleninskoye and Severo-Soleninskoye gas condensate fields, as well as the Messoyakhskoye gas field.

Start of production
1969

Gas reserves
250.4 bcm

Gas condensate reserves
4,606 kt

Production volume[1]



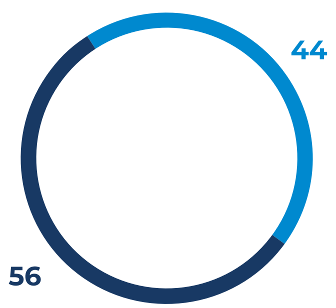
Norilsktransgaz transports natural gas and gas condensate from fields to consumers. The string length of its gas and condensate pipelines totals 1,639 km. The pipelines were commissioned in 1969.

Taimyr Fuel Company is a strategic supplier of light and heavy oil products to the Far North, performing important commercial and social functions, as well as exporting gas condensate to consumers. The company's operations span vast areas of Russia, including the Norilsk Industrial District, the cities of Krasnoyarsk and Dudinka, Murmansk Region, and Zabaykalsky Territory. Taimyr Fuel Company supplies petroleum products to mining, exploration and transport companies and municipal enterprises. Its key consumers are the Norilsk Nickel Group enterprises.

NTEC is an electricity and heat generation, transmission and distribution company. Energy is generated from both renewable (hydropower) and non-renewable (natural gas) sources. NTEC supplies electricity, heat and water to Norilsk households, as well as to all industrial and commercial consumers in the Norilsk Industrial District. The local electricity grid is operationally and geographically isolated from the national grid (the Unified Energy System of Russia), which means stricter reliability requirements. NTEC operates five generating facilities: three thermal power plants with a total installed capacity of 1,115 MW and two hydropower plants with a total installed capacity of 1,111 MW. The total installed capacity of all plants is 2,226 MW.

[1] Gas condensate production figures include production losses (carryover with separation gas).

Power generation mix in the Norilsk Industrial District in 2022 (%)



- Renewables (hydropower)
- Natural gas

Ust-Khantayskaya and Kureyskaya HPPs are NTEC's two renewable electricity generation facilities. In 2022, the share of renewables in total electricity generation stood at 51% for the Group and 56% for the Norilsk Industrial District.

The Kola and Trans-Baikal Divisions purchase electricity on the wholesale electricity and capacity market (WECM). Harjavalta sources electricity from the Finnish electricity market.

The Company's investment programme includes a number of projects to boost the share of renewables such as hydropower, capture fuel and energy savings and improve the reliability of energy and gas supplies.

The Company's key projects to improve equipment reliability and energy efficiency and to boost output include:

- construction of a new water intake on the Norilskaya River
- construction of stormwater and industrial wastewater treatment facilities
- construction of five new gas wells at the Pelyatkinskoye gas condensate field
- upgrade of emergency diesel fuel tanks at Norilsk CHPP-1, CHPP-2, CHPP-3, Dudinka boiler house, Ust-Khantayskaya HPP, and Kureyskaya HPP
- upgrade of the Norilsk utility tunnels
- upgrade and development of utility infrastructure in Tukhard
- comprehensive upgrade of the Norilsk, Dudinka and Kayerkan tank farms
- upgrade of electric power networks
- upgrade of heat and water pipelines
- upgrade of trunk and distribution gas pipeline systems
- replacement of generating units at CHPP-2 and CHPP-3 in Norilsk

INNOVATION AND DIGITAL TECHNOLOGY

CONTRIBUTION TO THE UN SDGs

Nornickel extensively relies on innovative solutions such as artificial intelligence and machine learning at all stages of its production process, from exploration to smelting, while fostering an overall culture of innovative transformation and digital literacy among its employees. The use of technology streamlines operating processes while also making production safer both for employees and the environment.

However, technological innovation at Nornickel is not only about research, development and rollout of promising technologies and solutions but also about building the Company's proprietary R&D platform and research centres, shaping internal policies and fostering a culture of high-tech developments.

Nornickel is also progressing initiatives to manufacture production-critical components for its core operations as part of embedding computer modelling and 3D printing into its processes. For this purpose, the Company has set up a platform featuring available scanning, design, modelling, and prototyping technologies which already enable Nornickel to efficiently jump-start component manufacturing. The Company has used 3D printing to reproduce the full cycle of manufacturing pilot components. These solutions enable the Company to significantly expand its capacity to manufacture in-house more items required by its enterprises.

Nornickel's uniform approach to managing its intellectual property greatly contributes to driving its innovative growth and building a competitive portfolio of R&D assets.

The Company's coordination centre responsible for managing its intellectual property registers exclusive patent rights and copyrights both in Russia and abroad.

As at 1 January 2023, the Company owned the intellectual property rights in the following items registered in Russia:

- 18 inventions
- Four utility models
- Four software applications
- 18 trademarks

Moreover, the invention patent for the method for continuously converting nickel-containing copper sulphide materials, which underlay the continuous conversion project at Copper Plant, has been registered in the USA, Kazakhstan, China, Canada, Finland, Sweden, and Chile.

TECHNOLOGY BREAKTHROUGH 2.0

Since 2015, Nornickel has been running its Technology Breakthrough programme, focused on building an automated operational control system and improving labour productivity and safety, including by integrating advanced information support and automation tools into its production processes.

In 2019, all previous results from the Technology Breakthrough programme were analysed to transform it into the Technology Breakthrough 2.0 project portfolio, with its initiatives more focused on ensuring operational continuity, securing technological independence and achieving operational safety and environmental goals.

By December 2022,

9 IT projects

had been successfully delivered as part of the Technology Breakthrough 2.0 project portfolio.

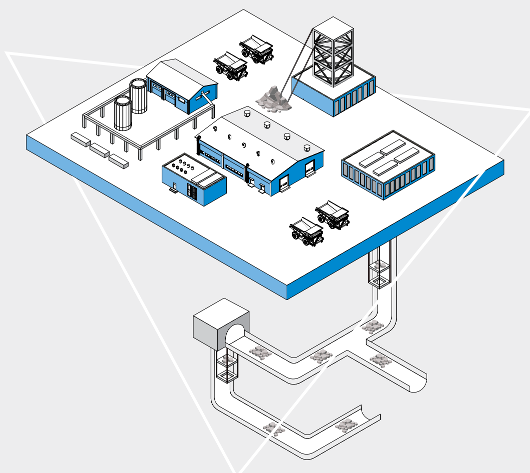
AUTOMATION OF THE GLUBOKAYA MINE (SKALISTY MINE)

Human presence in the mine needs to be minimised given its challenging mining conditions (mining depth over 2 km, temperature of +46 °C, high pressure).

Offsetting the projected decline in the automation level, which was maintained **at 50%** instead of a drop from 80% to 20% expected by now.

Confirmed **automation of five core processes:**

- Crushing
- Skip hoisting
- Rock conveyor delivery
- Drainage
- Ventilation



Backfilling can be automated **by 70%:** this requires manual installation of backfill bulkheads and adjustments to shutoff gates and switches at branched workings.

Five areas do not currently lend themselves to autonomous or remote control and require human presence:

- Drilling and blasting
- Supporting
- Rock haul by self-propelled diesel equipment
- Rock pressure control
- Mine surveying

Further development of a domestic geological and mining information system is ongoing. Once adopted by the Company, the product has proved highly effective, enabling Nornickel to update its mineral resource base and streamline its mining plans.

Further improvements are continuously made to simulation modelling, dispatch and mining management systems, with an emphasis on verifying and tracking production targets, boosting the equipment utilisation rate, and so on.

The Company has made further progress on its ambitious project to minimise human presence in deep mines. Currently, Nornickel is exploring the concept of autonomous and automated mining processes at the Glubokaya mine (part of the Skalisty Mine) leveraging forward-looking technical solutions that can minimise human presence in underground workings.

During 2022, the Company improved the quality of its finished products by:

- changing the topology of the circuit for zinc recovery from leaching solutions
- changing the topology of cobalt and lead recovery circuits
- adopting abrasive material with a reduced content of impurities
- improving the performance of the extraction cascade within the zinc recovery process (from 43 m^3/h to 53–55 m^3/h)
- improving raffinate precipitation after zinc recovery
- improving the performance of the circuit for raffinate neutralisation after zinc recovery.

These improvements have reduced the content of copper, iron and lead impurities in Nornikel's nickel cathodes by 9% year-on-year for copper, 12% year-on-year for iron and by over 30% year-on-year for lead.

INDUSTRIAL SAFETY TECHNOLOGY

VIDEO ANALYTICS

To improve safety culture at its operations, Nornickel is actively adopting solutions that use AI-enabled video analytics.

The Company's proprietary solution to monitor the use of personal protective equipment by operational staff was further improved in 2022. New safety incident detection models were, detecting open fire, etc.). The solution was integrated with personnel tracking and face recognition modules to monitor compliance with safety rules.

In particular, the Company is planning to leverage video analytics to detect four out of the six safety violations with the highest risk of injury listed in Nornickel's golden rules:

- Working at height without a safety harness
- Moving loads with people under a suspended load or dangerously close to the load
- Employees staying near unfenced rotating (moving) machinery or equipment components
- Transferring people in vehicles not designed for these purposes

In 2022, the Norilsk Division launched pilot tests of a video analytics system at its industrial facilities. As part of this project, server infrastructure was deployed and mock violations of industrial safety rules were staged for a quality test of machine learning algorithms.

Plans for 2023 include looking into the potential use of computer vision at construction sites to monitor compliance with industrial safety rules by contractors. Nornickel also plans to continue pilot testing and implementation of other solutions based on video analytics (assessment of discharge turbidity, identification of cathode grades on the cutting line, monitoring for oversized ore pieces, etc.) at the production facilities of the Norilsk Division, following which the accuracy of the algorithms and their impacts will be assessed.

In 2022, Nornickel teamed up with the Federal Environmental, Industrial and Nuclear Supervision Service of Russia (Rostechnadzor) to set up an experiment to deploy a remote industrial safety compliance monitoring system. The system was piloted at Kola MMC and provided continuous risk-based supervision, monitored compliance with the requirements for operating conditions and the actual status of industrial safety at hazardous production facilities, analysed the current situation at hazardous production facilities predicted potential adverse events, and transmitted information to automated information system of Rostechnadzor.

EMERGENCY MONITORING

The Company has stood up an information and diagnostic system in its Norilsk Division to detect and prevent negative trends and emergencies. A large-scale building and structure monitoring system has been created to consolidate data on the condition of soil, bearing elements of buildings, satellite monitoring data, and data from predictive models. The resulting insights inform the Company's proactive initiatives to prevent climate change impact. In 2022, the project won gold at the ComNews Awards and silver at the MineDigital competition held as part of the 18th MINEX Russia Mining & Exploration Forum.

GREEN TECHNOLOGY AND ESG

ENVIRONMENTAL MONITORING

Environmental monitoring of water bodies is part of StikhiyaEco, the corporate environmental protection and monitoring system.

Tools for environmental monitoring of water bodies enable online tracking of changes in metrics over time to prepare mitigation measures

Environmental monitoring

- Monitor the environment by aspect: air, climate, water, soils, tailings
- and waste, biodiversity, emergency preparedness

Related projects:

- Project to install an automated control system covering emission sources at Nadezhda Metallurgical Plant
- Digital Plant (Nadezhda Metallurgical Plant): digital mock up. Environmental monitoring. Prototype
- Development of a predictive emission monitoring system (PEMS)
- Implementation of an environmental tracking system (ETS)
- Smart City: piloting an air quality monitoring system in Norilsk
- Air quality monitoring in Monchegorsk, Nikel and Zapolyarny

Data records

- Registers and records of facilities with negative environmental impacts
- Registers and archives of permits and licences
- Registers of waste storage facilities
- Data sheets of metering and other equipment

Environmental planning and management

- Predict above limit levels of environmental impacts
- Submit data to supervisory bodies

Report generation

- Operational and statistical reports on environmental performance
- Paid use of natural resources (calculate environmental fees, environmental tax, water use fees)

Data visualisation panels (dashboards)

- Operational data by aspect: air, climate, water, soils, tailings and waste, biodiversity, incidents
- Environmental performance by aspect

Tracking environmental indicators

- Sulphur emissions
- Carbon footprint
- Oil spills
- Remediation of legacy pollution
- Clean-ups and other activities

The Company is implementing automation projects in ecology / environmental protection.

For example, an environmental water drone has been successfully piloted to speed up the tracking of performance against targets over time.

Completed activities

- Tested an environmental water drone
- Analysed the correctness of collected data
- Exploring potential data transmission to a digital plant to build a prototype

Tools for environmental monitoring of water bodies enable online tracking of changes in metrics over time to prepare mitigation measures

Environmental monitoring of water bodies is part of StikhiyaEco, the corporate environmental protection and monitoring system.

Another tech-enabled initiative within our ESG agenda was the development of a prototype of an environmental monitoring system at Nadezhda Metallurgical Plant based on a digital twin. The pilot will be the first step towards creating an integrated information and analytics platform relying on a uniform methodology for calculating environmental (air, water and soil) impacts. The system will be capable of interpreting and verifying the data obtained, generating forecasts and reports as well as performing mathematical and simulation modelling of environmental processes.

An automated pollutant emissions monitoring system has been piloted at Copper Plant. The pilot solution will allow Nornickel to evaluate the potential for using Russian equipment, taking into account the Company's process and production profiles.

In 2023, Nornickel will also start developing a mathematical model of industrial emissions, with the relevant software suite expected to become an alternative to expensive and complicated instrumentation to monitor emissions. The development of this information system has been supported by an industrial competence centre. Going forward, this product is also planned to be offered to third-party industrial enterprises. As part of the engagement with industrial competence centres, amendments are also being made to the existing regulatory framework.

MINE WATER TREATMENT

A pilot test project was launched in 2022 to treat mine waters at the Komsomolsky Mine. The pilot also included parallel operation of several mine water treatment plants using reverse osmosis and electrodialysis to bring water quality to the standards required by Russian laws. Conducting tests in this format helps us understand which technology performs better given the biochemical profile of mine waters at the Komsomolsky Mine.

A pilot test plan has been approved, with the pilot slated for completion in 2023. The pilot's results will inform the preparations for the Komsomolsky Mine development project and help make the optimal decision when selecting the best mine water treatment technology.

HIGH-TECH MATERIALS

Metals produced by Nornickel are currently central to high-tech manufacturing. In 2022, the Company produced its first physical samples of innovative high-tech materials (powders, alloys, catalysts) which can potentially boost its product margins several times over. New palladium-containing catalytic products (hydrogen separation and purification membranes) offers the potential to expand palladium sales and build value chains from palladium production to vehicle fuel batteries. Pilot tests are ongoing as part of an experimental battery unit.

The Kola Division continues exploring technical and design solutions for the manufacturing of new types of saleable products: premium quality nickel cathodes for electroplating and superalloys, as well as rondelles.

MODIFIED SULPHUR

The Company has tested an innovative technology for producing modified sulphur, which could become a promising feedstock for the construction industry. Work is underway to produce pilot samples of asphalt featuring modified sulphur instead of BND 100/130 grade bitumen. Asphalt pilot samples have been produced to confirm that the asphalt concrete mixtures meet the requirements for operation in the Far North, with the production of a pilot batch of sulphur-extended asphalt and sulphur concrete being set up at the asphalt concrete plant in Norilsk. The project's potential throughput capacity is 30 ktpa of sulphur. Up to 20 ktpa of modified sulphur are planned to be additionally used in the production of reinforced concrete products to beautify the city.

GANGUE MINERALISATION

The Company is exploring the ability of waste from concentration of polymetallic ores to absorb CO_2 from the atmosphere. Gangue mineralisation is a natural process, but no prior research has been conducted into using gangue from ore concentration to reduce carbon footprint. Solutions involving artificial waste mineralisation are being developed in parallel. Accelerated mineralisation is being tested as part of the pilot project. The new technology may also find application at Nornickel's assets.

TECH-ENABLED CONSTRUCTION

CONSTRUCTION MANAGEMENT PLATFORM

Nornickel is testing a platform that provides a common data environment based on a Building Information Model (BIM) to connect all construction process stakeholders and drive end-to-end digitalisation of capital construction projects throughout their life cycles. The platform ensures comprehensive monitoring of construction project timelines and budgets. Competitive pilot tests were conducted in 2022 on capital construction projects of various types (social infrastructure and residential facilities) at all stages of their life cycles. The Company tested the functionalities of products offered by different vendors. In 2023, the Company is planning to digitise construction monitoring and test additional features of vendor products via pilot projects.

The platform's value proposition

1. **Process acceleration through:**
   - end-to-end digitisation of the construction process
   - access for all stakeholders to a single source of truth for data
2. **Addressing potential errors by** preventing conflicts and using BIM models
3. **Timely identification of ariances in the construction process through** specialist services embedded into the process

LASER SCANNING BASED ANALYTICS

The tool increases the speed and accuracy of detecting deviations in construction and installation.

STEP 1. The customer collects data using LIDAR and transmits the information to the vendor's cloud-based platform.

STEP 2. Information is processed and compared by machine vision and AI-based tools against the BIM project parameters and work schedule.

STEP 3. An analytical report is prepared regarding the quality (compliance with geometric parameters) and work progress.

The solution helps improve work quality and accelerate timelines while tracking and visualising construction progress as well as improving communication between project stakeholders.

In 2022, the first pilot phase was completed under a project to construct a church complex of the Russian Orthodox Church in Norilsk, with the pilot construction of a residential building launched as part of the Norilsk renovation programme. In 2023, Nornickel is planning to roll out the technology in residential construction as well as at the Company's industrial facilities to confirm its economic and non-financial impacts across different types of projects and different construction stages.

UAV-ENABLED MONITORING

UAV-enabled analytics is used to build a regularly updated 3D model of the construction project, enabling better monitoring of progress on groundworks and improving communication between project stakeholders.

In 2022, a pilot was launched to validate the value proposition of the software for UAV data analysis conducted as part of groundworks for the surface backfilling preparation complex at the Mayak Mine.

TECHNOLOGY IN OPERATIONS

CONCENTRATION OPTIMISATION

A pre-feasibility study was conducted, and the potential technical impact was calculated in 2022 for the introduction of an intelligent automated process control system for disseminated ore flotation to improve operational performance of Norilsk Concentrator. In 2023, the Company is planning to create a prototype of this assistant system, first in an automated version and then in an automatic version, with the system to be eventually rolled out if the study results are validated.

A prototype assistant using statistical data was developed in 2022 for the copper flotation circuit of Norilsk Concentrator. The system currently runs in an automated mode across normal operating modes of the production process. The assistant's algorithms for emergency operation are also being described and prepared for testing for the subsequent automatic operation and rollout of the system. In parallel with the prototyping of these assistants on the copper and disseminated ore circuits, Norilsk Concentrator, in particular its flotation line, is being retrofitted with sensors and process data collection equipment to boost the assistants' performance and step up the overall performance and process effectiveness.

Industrial tests of a pilot pneumatic flotation cell were also carried out at Norilsk Concentrator. Data were obtained to support the case for retrofitting of scavenging facilities at Norilsk Concentrator using impellerless pneumatic flotation cells.

Among other things, Nornickel is planning to draft an operating procedure in 2023 for the processing of disseminated and cuprous ores at Norilsk Concentrator's upgrade project (NOF-2) based on a relevant ore dressability study. The resulting operating procedure will be used to design NOF-2.

Since 2019, a number of projects have been ongoing across Talnakh Concentrator's value chain to digitise production processes for increased productivity and improved recovery of precious metals. These projects include process cruise control systems for process engineers as well as machine vision sensors used across the process stages. A digital granulometer has already come online, and a nickel flotation optimisation system and a low-nickel pyrrhotite flotation optimisation system were successfully piloted. Going forward, Nornickel plans to scale up these optimisation systems to the entire flotation capacity and test the flotation froth control systems in real time.

CONVERTING OPTIMISATION

A converting monitoring system is planned to be developed in order to boost the recovery of non-ferrous metals from converter matte. The experiment will involve determining the correlation between iron content of converter matte and the colour of the converter's off-gas flame using optical analysis tools. This will help increase the average iron content in converter matte and boost the recovery of non-ferrous metals such as nickel, cobalt and copper leveraging iron's shielding properties during matte converting. The system will operate remotely in real time. Material balance calculations carried out by Gipronickel Institute corroborate the potential impact from its adoption. Initially, the system will learn how to determine iron content by analysing the off-gas flame spectrum. When the target state is reached, the system will be able to prompt the operator about the optimal time to complete the converting based on the composition of off-gases as determined by an analysis of their flame spectrum.

In 1H 2023, Nornickel is planning to create a prototype for one converter of Nadezhda Metallurgical Plant. If proven effective, the solution will be rolled out to the plant's other converters, and its use in the converter operations of Copper Plant will also be considered.

HYDROCYCLONE CONTROL OPTIMISATION

The development of an assistant system to optimise hydrocyclone control at the Trans-Baikal Division's concentrator was launched in 2022. Hydrocyclone control is essentially about stabilising a set pressure by controlling the pump operation rate, about keeping density within a set range by controlling the water flow rate in the sump subject to relevant restrictions, and about adjusting the feed density by opening/closing cyclones when the sump level limits are reached. Optimising hydrocyclone operating modes will stabilise the proportion of the material meeting target parameters and, consequently, boost copper recovery into copper concentrate.

The Company has developed a pump hydrocyclone control concept, evaluated the potential impact from the solution's implementation using historical data and drafted a prototyping plan. By mid-2023, Nornickel is planning to test the model, make preliminary impact estimates and prototype the solution in real-life industrial settings.

MILLING OPTIMISATION

In 2021, a diagnostic was run on Bystrinsky GOK, resulting in a decision to apply optimisation algorithms to boost the milling circuit's performance. The key hypothesis behind the project was that a digital assistant would boost the autogenous mill's throughput. As part of Step 1, Company specialists analysed historical data and developed a control algorithm for the autogenous mill to confirm this hypothesis. Once the hypothesis was verified using the site's historical data, it was decided to prototype with real data. The test results have confirmed the key hypothesis, with the solution boosting the mill's throughput. Preparations are underway for a review by the investment committee, which will decide on whether to allocate funds for the project. The Company's objective for 1H 2023 is to start moving the solution to the commercial launch stage.

In order to improve the semi-autogenous mill's throughput, an AI-based assistant was developed, adjusted and tested at Talnakh Concentrator in 2022. The tests have confirmed that the system is applicable and delivers a performance impact. Plans for 2023 include testing a feeder control system for the semi-autogenous mill in automatic mode and moving the finished assistant prototype to fully automatic operation. The mill is also expected to be retrofitted with sound sensors to ensure more accurate modelling and build the mill's DEM model. These improvements will enable more data feeds from in-mill processes while unlocking control of the milling process and extending the mill liner lifetime.

MONITORING TAILINGS STORAGE FACILITIES AND FLUE-GAS STACKS

Starting from 2022, Talnakh Concentrator and Nadezhda Metallurgical Plant have been testing a platform to analyse UAV data. As part of this initiative, pilots were conducted to monitor the operation of Talnakh Concentrator's tailings storage facility and flue-gas stacks of Nadezhda Metallurgical Plant.

The tests at the tailings storage facility included:

- monitoring changes in the condition of dams and hydraulic structures over time
- visualising the liquid tailings inflow distribution
- estimating the area covered by solid tailings.

The tests at flue-gas stacks included:

- detecting cracks in the protective layer of concrete
- evaluating the condition of service platforms, ladders, stack tips, and signal lights
- evaluating the condition of stack's metal structures and portals.

The tests have confirmed the product's functionality and provided preliminary estimates of its economic and non-financial impacts. Going forward, the Company is planning to launch a second testing phase to confirm the product's value proposition in harsher winter conditions. Moreover, the second phase will involve testing the technology on new types of the Company's assets (power lines and pipelines) and completing the calculations of economic and non-financial impacts from the technology rollout across all facilities.

LOWERING MAGNESIUM CONTENT IN CONCENTRATE

The initiative to lower magnesium content in concentrate run at the Kola Division is important to the Company since higher magnesium content translates to a potentially lower price of finished products. The project bets on automated on-stream analysis of gangue sample mineral composition to improve separation of magnesium-bearing minerals from ore and enable predictive adjustments to the concentration process. A comprehensive characterisation of minerals and their phases in all ores mined by the Kola Division was conducted in 2022 using advanced 3D microscopy and digital core analysis methods. Recommendations were drafted for a range of laboratory studies to streamline existing concentration processes, planned to be completed in 1H 2023. The laboratory studies will support subsequent pilot tests to trial the highest-potential solution for improving the sulphide concentrate production process.

PRODUCING HIGH-GRADE NICKEL CATHODES

An initiative was launched to produce higher grade nickel cathodes by reducing the impact of zinc-emitting sources. The initiative will identify key zinc emission sources and provide recommendations on reducing and stabilising their impact on the quality of nickel cathodes.

[1] Discrete element method.

LIDAR SCANNER

The Company has adopted mobile LIDAR scanners to survey mining operations across all of its mines.

LIDAR scanning is the most effective method of sourcing digital models for underground workings and the ground surface. It performs high-precision surveys of mine workings in motion in minutes, with 3D visualisation taking place in real time. An accurate high-res digital model of the scanned location is obtained through instant processing of laser beam reflections. A scanning range of up to 200 m can be achieved underground, at a rate of 300 thousand measurements per second.

LIDAR scanning systems allow Nornickel to conduct more than 1.5 thousand surveys per year, covering over 40 km of mine workings. Most importantly, these scanners ensure more accurate geometric measurement of underground workings, including stopes. This level of accuracy helps mine managers to make faster and better decisions on how to proceed with their mining operations.

A rate

of **300** thousand measurements per second

A scanning range of up to

to **200** m

RESEARCH AND DEVELOPMENT

R&D is a major driver behind the implementation of the Company's strategic priorities. The Company's key strategic priorities include driving fundamental improvements in environmental protection, developing and implementing projects to upgrade existing and construct new production facilities so as to increase output and supply of key metals to the global market as well as maintaining the Company's financial stability as its major investment projects are brought online. Gipronickel Institute, which is part of the Group, is Nornickel's core R&D platform. It is one of Russia's largest research and design centres for mining, concentration and metallurgy.

DIGITAL PROJECTS

Technological advancements are the most essential tool used to improve Nornickel's business processes and workplace safety. Despite the geopolitical risks and external challenges of 2022, the Company continued its digital projects while taking steps to maintain business continuity.

The strategy previously adopted by Nornickel and its proactive management decisions helped the Company achieve strong IT stability amid unprecedented uncertainty and external pressure.

RUB **12.3** billion

was allocated to digital, innovative and IT projects in 2022, including initiatives to gain technological independence.

TECHNOLOGICAL INDEPENDENCE

Gaining technological independence has become a new priority focus area in the Company's IT strategy. Nornickel's information systems have been isolated in advance, with additional equipment and spare parts purchased. An evaluation of the Company's IT landscape for technological independence has demonstrated that 18% of its systems (barring the process control system, PCS) use imported software, while one third of these systems require additional measures, including renewal. The remaining systems can be operated without running any material risks for several years. The Company has developed criteria for ranking IT projects by impact of relevant restrictions. Key considerations include availability of Russian alternatives, in-house development capabilities, available purchased licenses, availability of updates, and technical support.

In 2022, the Company put a huge effort into securing technological independence in industrial automation. Imported process control systems make up 92% at the Company while 21% requires renewal in the nearest future. To reduce exposure to imported equipment, the Company has run a detailed analysis of alternative Russian-made equipment items and data collection and operational control systems, approving four primary Russian manufacturers of controllers and preparing scheduled PCS upgrade programmes for each of its divisions. A targeted programme has been developed and put in place to train Nornickel specialists in the new equipment. Dedicated testing laboratories and an expert centre are being set up to test solutions.

ICC Metallurgy will develop proprietary alternatives for critical mining tools, including a geological and mining information system, a mining planning system and an underground dispatch system ICC Ecology will create a digital twin to simulate industrial emissions leveraging PCS data.

Pursuing projects announced by Nornickel is a task of industry-wide significance that requires appropriate corporate procedures and implementation approaches; therefore, a separate legal entity, Norsoft, was established to ensure product development. The establishment of a dedicated legal entity focused on ICC projects was prompted by the need to apply a flexible product-based approach, streamline efforts to develop industry-specific solutions, ensure transparent management of project implementation and financing, register and exercise intellectual property rights, and conduct follow-up monitoring. Major companies in the Russian mining, metallurgical and chemical industries have shown interest in the products under development.

In 2022, Nornickel launched a new strategy to promote the uniformity of measurements, which includes an initiative aimed at import substitution and stronger technological independence. When searching for Russian alternatives, we selected over 360 manufacturers across 119 principal groups of measurement instruments. Their production capacities and the quality of their products meet the Company's requirements. In particular, an alternative Russian-made nuclear density gauge, PR-1K, produced by ROSATOM was selected and tested in a real-life operational environment at the Medvezhy Ruchey site. The successful testing prompted the decision to run in-depth durability tests to build experience and test operational performance.

In addition, a Russian-made automated system for streamlining the work of metrological services (NERPA software) was piloted in 2022 with a view to building a single information environment to combine measurement standards, measurement instruments, testing equipment, and reference standards.

In order to improve digital literacy among employees who operate existing software and to reduce the risks associated with the adoption of new information systems and tools, the Company has successfully launched an educational ecosystem to meet current needs and promptly deliver training. In 2022, Nornickel's in-house experts trained over 12 thousand employees in various software applications while almost 20 thousand employees were involved in digital literacy initiatives.

In 2022, Nornickel's in-house experts trained

>12 thousand employees

Were involved in digital literacy initiatives

~20 thousand employees

DIGITAL FINANCIAL ASSETS

In 2022, Nornickel placed a pilot issue of digital financial assets (DFAs) on Atomyze, an open asset and process digitisation platform. The DFAs issued by the Company were dubbed New Money Market (NMM) and are set to become a promising financial product in short-term trade finance and highly liquid and reliable investments. These assets serve as Nornickel's unconditional financial obligation to repay the funds to the investor (DFA holder) in such amount and on such date as determined by the offering documents. The NMM digital financial assets combine the advantages of traditional paper-based financial products such as factoring instruments and short-term bonds. As such, the DFAs represent Nornickel's pure credit risk and rank among the best debt assets in Russia in terms of quality and reliability.

With this pilot project, Nornickel seeks to test the platform functionality and operating specifics when issuing and transacting in DFAs. If successful, the pilot project opens up broad prospects for scaling up the circulation of NMM DFAs and expanding the range of digital financial assets through new platform solutions and products for other needs of issuers and investors.

IT INFRASTRUCTURE CONTINUITY

In 2022, Nornickel teamed up with Russian infrastructure solutions market participants to carry out an ambitious testing programme for import-independent IT equipment for compliance with existing corporate standards and information security requirements as well as for compatibility with the current IT landscape.

Nornickel has launched a large-scale initiative to pilot and phase in a multifunctional Linux-based infrastructure solution into its corporate environment. The transition to Linux infrastructure will imply a particular emphasis on corporate business processes and users.

A programme to build backup computing capacity in key corporate data centres has been completed. This move will reduce the potential negative impact on the continuity of IT services caused by the shortages of equipment and components following the withdrawal of foreign manufacturers from the Russian market.

The Company continues to implement data centre development projects. The construction of a new data centre in Moscow in cooperation with IXcellerate was completed in 2022, and functional systems to support IT equipment were put into operation. Land plots for the construction of new data centres in Monchegorsk and Norilsk have been found and selected.

The Company has launched a new wave of the programme to upgrade service facilities that are critical for its production systems. Based on lessons learned, the relevant corporate standard has been updated with requirements for the creation and operation of the relevant class of physical infrastructure.

THE DATA LAKE PLATFORM

Technology-wise, mining production of base metals is one of the most challenging industries. The journey from ore mining to selling the finished product involves collecting terabytes of data that must be processed to boost plant productivity and make work more comfortable. To collect and process big data across production sites and embed best practices, the Company has put in place a project to create a Data Lake digital platform. The Data Lake is essentially a technologically advanced platform that leverages big data, artificial intelligence and machine learning to address business tasks.

In 2022, infrastructures to launch several business initiatives leveraging artificial intelligence and machine learning (including a containerisation platform) were developed based on the Data Lake. For example, a prototype was launched for a prediction algorithm to control the dissolution and filtration processes in the nickel tankhouse at Kola MMC (on one of the four dissolution units). The system is comprised of machine-learning models that receive input data using several dozens of data tags in near real time and display resulting insights on dashboards across dedicated screens in the control room. The prototype's early results were evaluated in the first quarter of 2023. Going forward, we plan to roll out a series of solutions leveraging machine learning to the other three dissolution units.

At the same time, as part of the programme to gain technological independence, we initiated migration of the data platform from foreign to Russian-made software. To date, three of the four project phases have been completed. We expect that new Russian-made software will be used to support the platform development strategy, in particular, to design the Data Lake's geo-distributed infrastructure.

In addition, a dedicated platform is being set up to develop solutions leveraging machine learning. The platform helps address tasks such as data discovery, model development and launch of applications leveraging machine learning and runs on a high-performance cluster.

DEVELOPING COMMUNICATIONS NETWORKS

The Company continues its programme to develop service data networks. In 2022, the construction of a high-performance service network at the production sites of the Polar Division was completed; similar projects were initiated at Kola MMC and NTEC. To implement unmanned mine and remote equipment control technologies, communications networks must meet tough bandwidth and data speed requirements. With this in mind, the Company partnered with a number of Russian manufacturers of telecommunications equipment to initiate in 2022 the development of a switch with enhanced performance to be subsequently used in mines. By mid-2023, we expect to complete testing of selected developments. Delivering both enhanced performance and stronger security is a challenging task for developer teams; once implemented, this solution will not only cover the existing needs but also accommodate future growth in data traffic from production automation.

HIGH-SPEED INTERNET IN THE NORILSK INDUSTRIAL DISTRICT

Given that mobile and fixed-line connectivity remains a key prerequisite for high quality of life in the modern world while driving the growth of digital services, Nornickel launched the construction of a 956-km Novy Urengoy–Norilsk fibre-optic line back in 2017.

The project seeks to cover the Company's production-driven demand for high-speed connectivity and improve the quality of life in the Norilsk Industrial District by offering broadband internet access, enhancing the quality of services, including public ones, and expanding the range of communications services.

High-speed data services are available in the Norilsk Industrial District as well as in communities along the fibre-optic line route since 2017. An in-house maintenance service has been set up to service the communications line, comprising a call centre, a single network management centre and highly skilled field teams experienced in working in a similar environment and set up with specialist equipment and a fleet of custom-built all-terrain vehicles.

For more reliable operation, the capacity of the existing backup communications line across the Yenisei River was expanded from 1 to 40 Gbps and stabilised. The new line will both expand the total radio bandwidth and reduce the impact of weather conditions on data speed.

Work is ongoing on backing up the existing communications line between Novy Urengoy and Norilsk. The project is carried out by an approximately 200-strong construction and installation team set up specifically for this purpose, with a dedicated fleet of construction equipment. These efforts, including measures to enhance the line's reliability, have ensured an SLA[1] of at least 97%, with emergency recovery within 72 hours.

To improve connectivity given the growing demand for data services from the Norilsk Industrial District's residents, the Company has expanded the backhaul network's bandwidth from 40 to 200 Gbps, enabling an increase of up to 85 Gbps for data traffic passing through client communications channels, while the Company's own traffic requires less than 1% of this capacity.

CITY ONLINE

City Online is a project aimed to improve the quality of life of people living in small and medium-sized towns in the Far North and the Far East by providing infrastructure and digital services in various areas of life and making habitual services more accessible in remote areas.

In line with advanced trends, the City Online business model offers integrated solutions and promotes digital social services combined into ecosystems/platforms.

Its key solution comprises an integration platform and a range of integrated B2C, B2B and B2G services selected from existing market products based on a needs analysis of cities. The platform is an entry-level product and a key element in the Company's positioning in the Smart City market.

The platform is available both online and as a mobile app in five cities: Norilsk, Dudinka, Monchegorsk, Murmansk, and Krasnoyarsk. The number of registered users exceeds 180 thousand, with almost 1.5 million unique visitors. The mobile app has been installed about 55 thousand times. The platform enjoys positive user feedback as shown by surveys and regular Net Promoter Score assessments.

The web and mobile versions of the platform currently offer 28 and 16 services, respectively. The most popular services are GO.Media, Playbill, Broadcasts (available only in the web version), Map, and Transport.

Services that support seamless interaction of municipal employees with each other and with local residents within a shared information space will be further enhanced. More effective city management decisions will be enabled by leveraging real data, including through infrastructure products represented by hardware and software solutions for the automation of municipal infrastructure.

Examples of infrastructure services implemented as part of City Online include an air quality monitoring programme and a predictive environmental assessment model covering Norilsk, Monchegorsk, Nikel, and Zapolyarny and seeking to improve the urban environment and the quality of life as well as a mobile-based school education system introduced in the Murmansk Region in 2022, offering improved and socially inclusive education and minimising the impact of weather-related school cancellations.

ENHANCING CORPORATE BUSINESS PROCESSES

Key focus areas of Nornickel's digitalisation efforts include the continued automation and development of core processes within the corporate ERP[2] template.

Currently, all key financially significant Group enterprises are already included into the unified business template and relevant automation systems such as the supplier relationship management (SRM) system and warehouse logistics management system, with the groundwork laid to further increase the maturity of related business processes and improve their operational efficiency.

The corporate template covers over 50% of the Company's core business processes, with the centralised platform encompassing 37 enterprises engaged in different areas (core and auxiliary operations, sales, supply and logistics, construction, energy, services, and project management). The system supports business functions and interaction for more than 15 thousand users while ensuring integration with 40 related automation systems that make part of the corporate architecture.

To ensure independence from imported ERP solutions, the Company works on migrating to a composite ERP architecture.

Warehouse operations are improved via projects that automate warehouse logistics management. As part of these efforts, Nornickel has launched a specialist system at the warehouses of Kola MMC and the Polar Division, which can be rolled out to other corporate assets, while its functionality related to cargo management at ports and logistics within divisions can also be expanded.

Novy Urengoy–Norilsk fibre-optic line

956 km

For data traffic passing through client communications channels

85 Gbps

[1] Service Level Agreement.
[2] Enterprise Resource Planning. It is a business process management software solution that is used to integrate and manage finance, supply chains, operations, trading, reporting, production, and human resources.

FINANCIAL PERFORMANCE (MD&A)

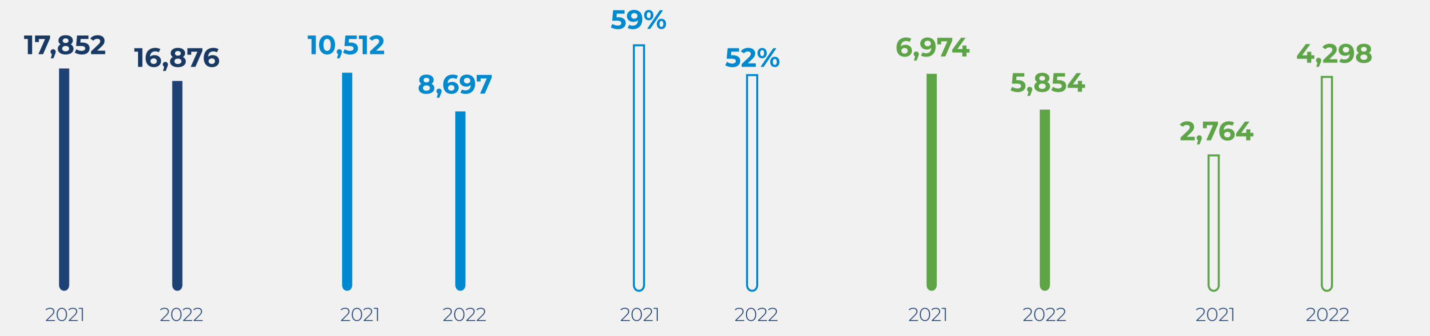
FY2022 HIGHLIGHTS

- Consolidated revenue decreased 5% y-o-y amounting to USD 16.9 billion. Higher nickel and cobalt prices and recovery of production volumes following the liquidation of damages caused by incidents at Oktyabrsky and Taimyrsky mines and Norilsk concentrator were negatively offset by lower copper and PGM prices as well as decline in metal sales volume driven by logistics disruptions and reorientation of sales to new markets that requires additional time;
- EBITDA decreased 17% y-o-y to USD 8.7 billion owing to lower revenue, higher operating cash costs driven mainly by increase in labour expenses and repairs. EBITDA margin amounted to 52%;
- Net income was down 16% y-o-y to USD 5.9 billion mostly driven by lower EBITDA;
- CAPEX increased 55% y-o-y to a record USD 4.3 billion driven by growth of investments into flagship environmental, mining and metallurgical projects as well as capital repairs aimed at improvement of industrial safety and mitigation of physical risks of production assets;
- Net working capital amounted to USD 4 billion driven mostly by increase in metal inventories as well as amortization of advance payments form customers and termination of factoring services;
- Free cash flow decreased from USD 4.4 billion to USD 0.4 billion driven mostly by lower EBITDA, increase of net working capital and higher CAPEX;
- Net debt doubled y-o-y to USD 9.8 billion following the decrease of free cash flow and payment of dividends. Net debt/EBITDA ratio as of December 31, 2022 was at 1.1x. The Company continues to duly service all its debt liabilities;
- In September 2022, the Company received the consent of holders of 5 issues of eurobonds for the total amount of USD 3.75 billion to amend transaction documents in order to split payments to Russian and foreign investors, simplify cancellation of notes and appoint new Trustee. This was the largest deal of that kind in Russia both in terms of total amount and number of issues;
- In October and December 2022, Nornickel placed 9.75% RUB 25 billion exchange-traded bonds on the Moscow Exchange and two issues of CNY bonds in the total amount of CNY 9 billion, respectively;
- Economic restrictions imposed on Russia by a group of countries pose risks for operating, commercial and investment activities of the Company. To mitigate these risks Nornickel is developing relationship with alternative clients and suppliers, setting up new logistic routes and exploring new capital markets.

Key Segmental Highlights[1] (USD million)

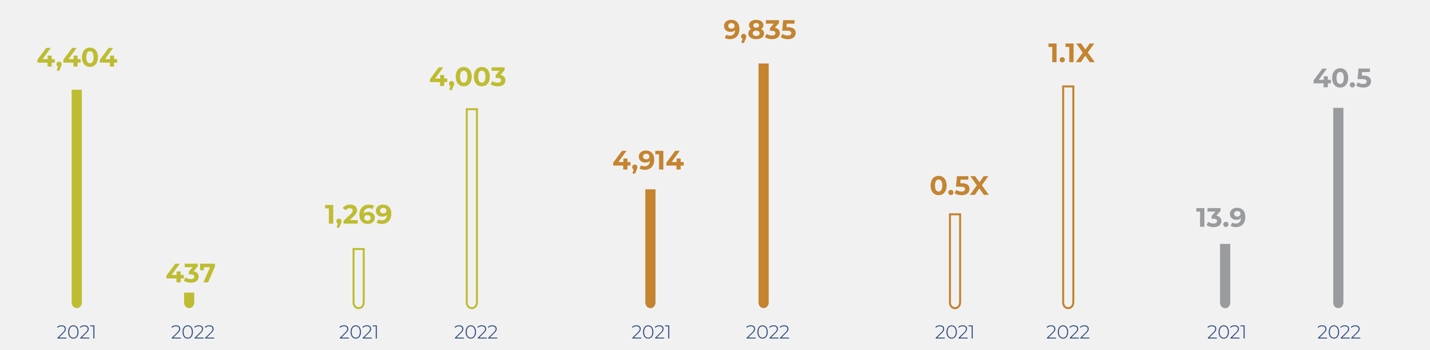
Indicators	2022	2021	Change
Revenue	**16,876**	**17,852**	**–5%**
GMK Group	12,242	11,836	3%
South cluster	972	767	27%
KGMK Group	10,451	9,893	6%
NN Harjavalta	2,363	1,493	58%
GRK Bystrinskoye	1,325	1,346	–2%
Other mining	1	28	–96%
Other non-metallurgical	1,558	1,533	2%
Eliminations	–12,036	–9,044	33%
EBITDA	**8,697**	**10,512**	**–17%**
GMK Group	4,316	5,456	–21%
South cluster	450	397	13%
KGMK Group	3,915	3,758	4%
NN Harjavalta	157	59	3x
GRK Bystrinskoye	934	1,076	–13%
Other mining	–11	–16	–31%
Other non-metallurgical	9	11	–18%
Eliminations	–9	716	n.a.
Unallocated	–1,064	–945	13%
EBITDA margin	**52%**	**59%**	**–7 p.p.**
GMK Group	35%	46%	–11 p.p.
South cluster	46%	52%	–6 p.p.
KGMK Group	37%	38%	–1 p.p.
NN Harjavalta	7%	4%	3 p.p.
GRK Bystrinskoye	70%	80%	–10 p.p.
Other mining	н.п.	–57%	n.a.
Other non-metallurgical	1%	1%	0 p.p.

Key Corporate Highlights (USD million, unless stated otherwise)



- Revenue ˜5%
- EBITDA[1] ˜17%
- EBITDA margin ˜7 P.P.
- Net profit ˜16%
- Capital expenditures 55%

[1] A non-IFRS measure, for the calculation see the notes below.



- Free cash flow[2] -90%
- Net working capital[2] 3x
- Net debt[2] 2x
- Net debt/12M EBITDA 0.6X
- Dividends paid per share (USD)[3] 3x

[1] Segments are defined in the consolidated financial statements.
[2] A non-IFRS measure, for the calculation see an analytical review document ("Data book") available in conjunction with Consolidated IFRS Financial Results on the Company's web site.
[3] Paid during the current period.

In 2022, revenue of GMK Group segment increased 3% to USD 12,242 million primarily due to the increase of sales following the recovery of operations at Oktyabrsky and Taimyrsky mines and Norilsk Concentrator after incidents in 2021, which was partly negatively offset by lower metal prices.

Revenue of South cluster segment increased 27% to USD 972 million primarily driven by higher volume of tolling services realized to GMK group due to the recovery of operations at Oktyabrsky and Taimyrsky mines and Norilsk Concentrator after incidents in 2021, and higher realized prices of semi-products.

Revenue of KGMK Group segment increased 6% to USD 10,451 million primarily owing to higher sales of semi-products delivered to GMK group and NN Harjavalta.

Revenue of NN Harjavalta increased 58% to USD 2,363 million driven by higher realized nickel prices and higher semi-products revenue.

Revenue of GRK Bystrinskoye decreased 2% and amounted to USD 1,325 million.

Revenue of Other mining segment decreased 96% owing to the termination of Nkomati's operations in 1H2021.

Revenue of Other non-metallurgical segment increased 2% to USD 1,558 million primarily due to higher revenue from other sales that was partly negatively offset by lower revenue from metal resale.

In 2022, EBITDA of GMK Group segment decreased 21% to USD 4,316 million owing to higher cash operating costs primarily driven by increased mineral extraction tax, higher labour, repair and maintenance costs, which were partly positively offset by higher revenue, decrease in social expenses, as well as cancellation of Nickel and Copper export custom duties in 2022.

EBITDA of South cluster segment increased 13% to USD 450 million primarily owing to higher revenue that was partly negatively offset by increase in cash operating costs due to higher labour, repair and maintenance costs.

EBITDA of KGMK Group segment increased 4% to USD 3,915 million primarily owing to higher revenue.

EBITDA of NN Harjavalta increased 3-fold to USD 157 million owing to higher revenue, which was partly offset by increase in cash operating costs mainly due to higher reagents and energy costs.

EBITDA of GRK Bystrinskoye segment decreased 13% to USD 934 million primarily due to increase in cash operating costs driven by higher labour, repair and maintenance costs.

EBITDA of Other mining segment remained almost unchanged at negative USD 11 million.

EBITDA of Other non-metallurgical segment remained almost unchanged y-o-y and amounted to USD 9 million.

EBITDA of Unallocated segment decreased by USD 119 million and amounted to a negative USD 1,064 million mainly due to higher administrative expenses.

METAL SALES

In 2022, revenue from metal sales was down 6% (or -USD 1,030 million) y-o-y to USD 16,073 million primarily driven by lower sales volume (-USD 704 million) as well as lower realized metal prices (-USD 153 million) as well as the decrease of revenue from the resale of metals purchased from third parties (-USD 173 million). Lower metal sales volumes driven by the extension of logistics and reorientation of sales to new markets (-USD 2,040 million) were partly compensated by the production recovery (+USD 1,336 million) following the temporary suspension of Oktyabrsky and Taimyrsky mines and Norilsk Concentrator in 2021. Lower palladium, copper, rhodium and iron prices were partly compensated by higher nickel and cobalt realized prices.

OTHER SALES

In 2022, other sales increased 7% (or +USD 54 million) to USD 803 million primarily due to an increase in oil product sales, resale of icebreaking and sea transportation services, increase of waste-product prices and Russian rouble appreciation, which was partially negatively offset by the sale of "NordStar" airline.

COST OF SALES

COST OF METAL SALES

In 2022, the cost of metal sales increased 21% (or +USD 1,051 million) to USD 6,108 million, driven by the following factors:

- increase in cash operating costs by 34% (or +USD 1,667 million);
- increase in depreciation and amortization by 20% (or +USD 172 million);
- comparative effect of change in metal inventories y-o-y leading to the cost of metal sales reduction of USD 788 million.

CASH OPERATING COSTS

In 2022, total cash operating costs increased 34% (or +USD 1,667 million) to USD 6,541 million mainly due to increase in labour costs (+ USD 717 million), increase in mineral extraction tax and other levies (+USD 565 million), increase in third party services (+ USD 374 million), and increase in materials and supplies (+ USD 354 million), partly offset by the cancellation of nickel and copper export custom duties in 2022 (- USD 442 million).

Inflationary growth of cash operating costs amounted to +USD 352 million while Russian rouble appreciation against USD amounted to cash operating costs increase of +USD 273 million.

Cost of metal sales (USD million)

Indicators	2022	2021	Change
Labour	2,123	1,406	51%
Mineral extraction tax and other levies	1,192	627	90%
Materials and supplies	1,069	715	50%
Third party services	784	410	91%
Purchases of refined metals for resale	437	581	–25%
Transportation expenses	275	130	2x
Fuel	166	122	36%
Electricity and heat energy	136	118	15%
Purchases of raw materials and semi-products	33	95	–65%
Export custom duties	-	442	–100%
Other costs	326	228	43%
Total cash operating costs	**6,541**	**4,874**	**34%**
Depreciation and amortisation	1,015	843	20%
Increase in metal inventories	–1,448	–660	2x
Total	**6,108**	**5,057**	**21%**

Labour

In 2022, labour costs increased 51% (or +USD 717 million) to USD 2,123 million amounting to 32% of the Group's total cash operating costs driven by the following factors:

- +USD 232 million – indexation of salaries and wages above the CPI in line with the terms of collective bargaining agreement;
- +USD 127 million – increase in headcount in Norilsk industrial region;
- +USD 77 million – one-off incentive bonus to personnel;
- +USD 177 million – other increase in labour costs mainly due to increase in provisions, primarily unused vacation provision, driven by the increase in labour costs;
- +USD 104 million – effect of the Russian rouble appreciation against US dollar.

Mineral extraction tax and other levies

In 2022, mineral extraction tax and other levies increased 90% (or +USD 565 million) to USD 1,192 million, which was partly offset by the cancellation of nickel and copper export custom duties in 2022 (-USD 442 million). The main factors of the change were:

- +USD 527 million – increase of costs primarily due to the change in mineral extraction tax legislation in 2022;
- +USD 38 million – effect of the Russian rouble appreciation against US dollar.

Materials and supplies

In 2022, expenses for materials and supplies increased 50% (or +USD 354 million) to USD 1,069 million driven by the following factors:

- +USD 223 million – higher consumption of materials primarily due to increased repairs as part of the programme for improvement of fixed assets;
- +USD 78 million – inflationary growth of materials and supplies;
- +USD 53 million – effect of the Russian rouble appreciation against US dollar.

Third-party services

In 2022, cost of third-party services increased 91% (or +USD 374 million) to USD 784 million mainly driven by:

- +USD 306 million – primarily due to increase in repairs as part of the programme for improvement of fixed assets;
- +USD 38 million – inflationary growth of third-party services;
- +USD 30 million – effect of the Russian rouble appreciation against US dollar.

Purchases of refined metals for resale

In 2022, purchases of refined metals for resale decreased 25% (or -USD 144 million) to USD 437 million owing to lower purchases of palladium.

Transportation expenses

In 2022, transportation expenses increased 2 times (or +USD 145 million) to USD 275 million driven by the following factors:

- +USD 129 million – primarily due to transportation expenses growth in Norilsk industrial region driven by increase in sea transportation volume and icebreaking services;
- +USD 8 million – inflationary growth of expenses;
- +USD 8 million – effect of the Russian rouble appreciation against US dollar.

Fuel

In 2022, fuel expenses increased 36% (or +USD 44 million) to USD 166 million driven by the following factors:

- +USD 23 million – increase of fuel expenses due to growth of production volume after recovery of operations at Oktyabrskiy and Taymirskiy mines;
- +USD 12 million – inflationary growth of fuel price;
- +USD 9 million - effect of the Russian rouble appreciation against US dollar.

Electricity and heat energy

In 2022, electricity and heat energy expenses increased 15% (or +USD 18 million) to USD 136 million driven by the following factors:

- +USD 10 million – inflationary growth of expenses;
- +USD 9 million – effect of the Russian rouble appreciation against US dollar.

Purchases of raw materials and semi-products

In 2022, purchases of raw materials and semi-products decreased 65% (or -USD 62 million) to USD 33 million due to decrease of raw materials consumption at NN Harjavalta and termination of Nkomati's operations.

Other costs

In 2022, other costs increased 43% (or +USD 98 million) to USD 326 million primarily due to price inflation, effect of the Russian rouble appreciation against US dollar and growth of industrial security and health and safety expenses.

Depreciation and amortisation

In 2022, depreciation and amortisation expenses increased 20% (or +USD 172 million) and amounted to USD 1,015 million mainly due to transfers from construction in progress as well as effect of the Russian rouble appreciation against US dollar.

Increase in metal inventories

Comparative effect of change in metal inventory amounted to -USD 788 million resulting in a respective decrease of cost of metal sales mainly due to increase in metal inventories in 2022 driven by the extension of logistics chains and reorientation of sales on new markets.

COST OF OTHER SALES

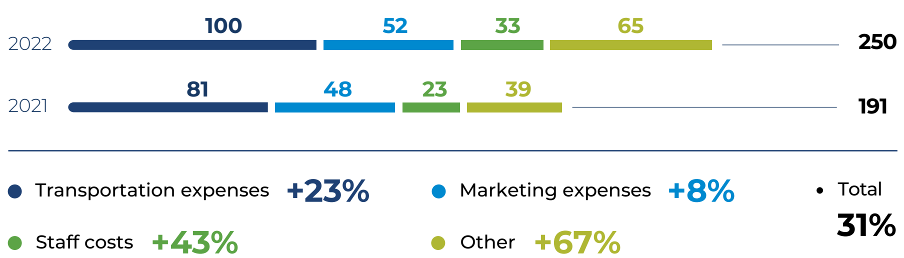
In 2022, cost of other sales increased by USD 70 million to USD 816 million due to higher oil products sales, resale of icebreaking and sea transportation services, Russian rouble appreciation, as well as higher labour and repairs costs, which was partially compensated by the sale of NordStar airline.

Other sales increased

USD **816** million

SELLING AND DISTRIBUTION EXPENSES

Selling and distribution expenses (USD million)



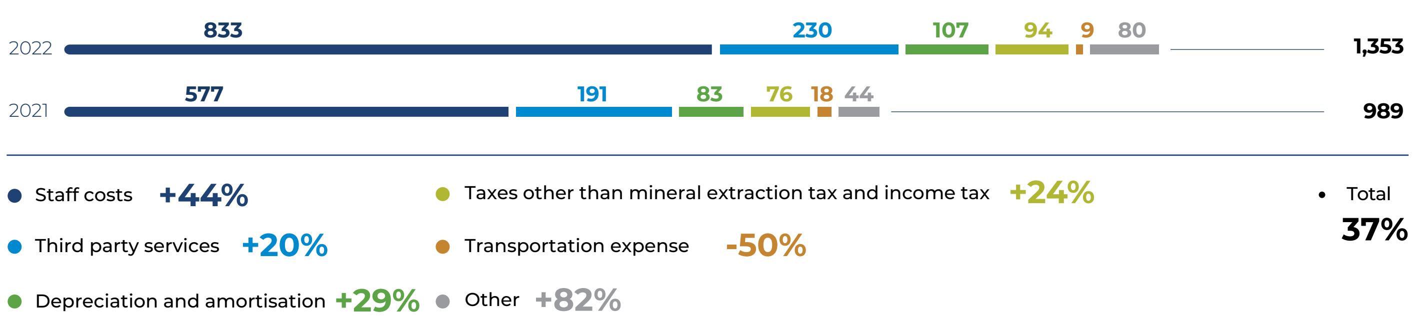
Selling and distribution expenses

USD **250** million

In 2021, selling and distribution expenses increased 10% (or +USD 17 million) to USD 184 million primarily due to increase in transportation expenses (+USD 9 million).

GENERAL AND ADMINISTRATIVE EXPENSES

General and administrative expenses (USD million)



In 2021, selling and distribution expenses increased 10% (or +USD 17 million) to USD 184 million primarily due to increase in transportation expenses (+USD 9 million).

In 2022, general and administrative expenses increased 37% (or +USD 364 million) to USD 1,353 million. Negative effect of the Russian rouble appreciation amounted to +USD 70 million. Changes of the general and administrative expenses in real terms were primarily driven by the following factors:

- +USD 209 million – increase in staff costs, including salary indexation and one-off payments to personnel;
- +USD 26 million – increase of third-party services primarily driven by repair and maintenance, security, fire safety and consulting services;
- +USD 59 million – increase of other administrative expenses primarily driven by property tax, depreciation and business travel expenses.

Administrative expenses

USD **1,353** million

OTHER OPERATING EXPENSES

Other operating expenses, NET (USD million)

Indicators	2022	2021	Change
Social expenses	407	1,048	–61%
Environmental provisions	93	176	–47%
Loss on disposal of property, plant and equipment	70	35	2x
Change in other provisions and liabilities	43	–3	n.a.
Expenses on industrial incidents response	35	69	–49%
Change in provision on production facilities shut down	14	–3	n.a.
Change in decommissioning obligations	12	–5	n.a.
Other, net	4	–32	n.a.
Total	**678**	**1,285**	**–47%**

In 2022, other operating expenses, net decreased by USD 607 million to USD 678 million driven by the following factors:

- -USD 641 million – decrease in social expenses liabilities;
- -USD 83 million – primarily due to lower environmental provision related to compensation for environmental damages;
- +USD 46 million – change in other provisions and liabilities primarily due to increased allowance for expected credit losses;
- +USD 35 million – increase in loss on disposal of property, plant and equipment following the liquidation of damages caused by incidents at Oktyabrsky and Taimyrsky mines.

FINANCE COSTS

Finance costs, NET (USD million)

Indicators	2022	2021	Change (%)
Interest expense, net of amounts capitalised	330	225	47%
Unwinding of discount on provisions and payables	185	59	3x
Loss/(gain) from currency conversion operations	111	–24	n.a.
Fair value loss/(gain) on the cross-currency interest rate swap contracts	18	–68	n.a.
Interest expense on lease liabilities	16	15	7%
Changes in fair value of other non-current and other current liabilities	–	66	–100%
Income received as a result of early debt repayment	–172	–	–100%
Other, net	5	6	–17%
Total	**493**	**279**	**77%**

In 2022, finance costs, net increased by 77% to USD 493 million primarily driven by the following factors:

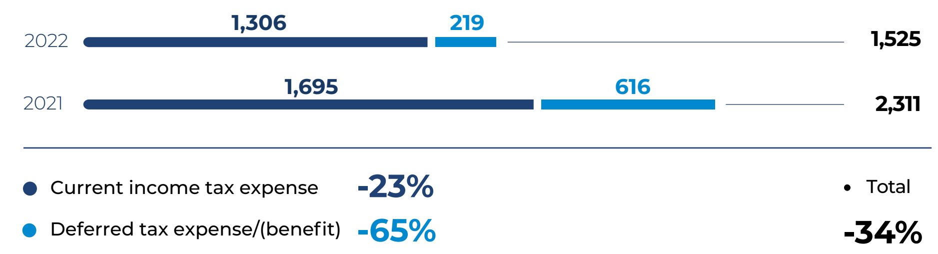
- +USD 105 million – an increase in interest expenses as the Company drew on RUB-denominated revolving loan facilities with high nominal interest rates in order to refinance Company's debt amidst deteriorating external environment and also as a result of significant increase in LIBOR and Term SOFR rates during the course of 2022;
- -USD 66 million – the Company ceased revaluating the put option related to transactions with owners of non-controlling interest in Bystrinsky GOK following its expiration on 31.12.2021;
- +USD 135 million – to a larger extent, the accounting effect related to the results of foreign currency conversion transactions that were exercised during the periods of extreme intraday volatility when the Company had to comply with the regime of the mandatory sale of foreign currency revenues;
- +USD 126 million – an increase in unwinding of discount on provisions and payables primarily due to accrual of social provisions at the end of 2021 as well as significant volatility of discount rates during 2022;
- -USD 172 million – one-off income derived from an early repayment of the loan at a discount.

INCOME TAX EXPENSE

In 2022, income tax expense decreased by USD 786 million driven mostly by lower profit before tax as well as the provision for income tax related to the compensation of damages to water resources and soil in 2021.

In 2022, the effective income tax rate of 20.7% was above the Russian statutory tax rate of 20%.

The breakdown of the income tax expense (USD million)



The breakdown of the current income tax expense by tax jurisdictions (USD million)

Indicators	2022	2021	Change (%)
Russian Federation	1,288	1,668	–23%
Finland	20	5	4x
Rest of the world	–2	22	n.a.
Total	**1,306**	**1,695**	**–23%**

EBITDA

EBITDA (USD million)

Indicators	2022	2021	Change
Operating profit	7,581	9,536	–21%
Depreciation and amortisation	1,026	928	11%
Loss on disposal of property, plant and equipment	90	48	88%
EBITDA	**8,697**	**10,512**	**–17%**
EBITDA margin	**52%**	**59%**	**–7 p.p.**

In 2022, EBITDA decreased 17% (or -USD 1,815 million) to a USD 8,697 million driven by lower revenue and higher cash operating costs.

STATEMENT OF CASH FLOWS

Statement of cash fl ws (USD million)

Indicators	2022	2021	Change
Cash generated from operations before changes in working capital and income tax	**8,897**	**11,479**	**–22%**
Movements in working capital	–3,184	–2,226	43%
Income tax paid	–1,127	–2,211	–49%
Net cash generated from operating activities	**4,586**	**7,042**	**–35%**
Capital expenditure	–4,298	–2,764	55%
Other investing activities	149	126	18%
Net cash used in investing activities	**–4,149**	**–2,638**	**57%**
Free cash flow	**437**	**4,404**	**–90%**
Interest paid	–599	–315	90%
Other financing activities	–4,465	–3,732	20%
Net cash used in financing activities	**–5,064**	**–4,047**	**25%**
Effects of foreign exchange differences on balances of cash and cash equivalents	962	–1	n.a.
Net change in cash and cash equivalents	**–3,665**	**356**	**n.a.**

In 2022, free cash flow decreased 90% to USD 0.4 billion following the decrease in cash generated from operating activities and increase of cash used in investing activities.

In 2022, net cash generated from operating activities decreased 35% to USD 4.6 billion. Increase in cash operating costs and more explicit working capital increase in 2022 were partly compensated by decrease in income tax payments and comparative effect of repayment of environmental damages in 2021.

In 2022, net cash used in investing activities increased 57% to USD 4.1 billion primarily driven by the increase in capital expenditures.

Reconciliation of the net working capital changes between the balance sheet and cash fl w statement is presented (USD million)

Indicators	2022	2021
Change of the net working capital in the balance sheet	**–2,734**	**–557**
Foreign exchange differences	–218	15
Change in income tax payable	–165	524
Change of long term components of working capital included in CFS	–51	–56
Provisions	–160	–2,145
Other changes	144	–7
Change of working capital per cash flow	**–3,184**	**–2,226**

Capital investments breakdown by project is presented (USD million)

Indicators	2022	2021	Change (%)
Polar Division, including:	1,543	843	83%
• Skalisty mine	90	95	–5%
• Taymirsky mine	83	38	2x
• Komsomolsky mine	40	32	25%
• Oktyabrsky mine	14	10	40%
• Talnakh Concentrator	356	167	2x
• Capitalised repairs	222	139	60%
• Purchase of equipment	322	272	18%
• Other Polar Division projects	416	90	5x
Kola MMC	350	205	71%
Sulfur project	893	526	70%
South cluster	298	304	–2%
Energy and gas infrastructure modernization	465	316	47%
Chita (Bystrinsky) project	72	62	16%
Other production projects	607	490	24%
Other non-production assets	70	18	4x
Total	**4,298**	**2,764**	**55%**

In 2022, CAPEX increased 55% (or +USD 1,534 million) to USD 4,298 million driven by investments in key projects. Sulfur Programme investments increased by 70% to USD 893 million, while investments in Kola GMK and Talnakh Concentrator expansion increased by 71% and 2-fold respectively. Another significant CAPEX growth factor was an increase in capital repairs, improvement of industrial safety and modernization of core assets.

DEBT AND LIQUIDITY MANAGEMENT

Debt and liquidity (USD million)

Indicators	As of 31 December 2022	As of 31 December 2021	USD million	Change %
Non-current loans and borrowings	7,189	8,616	–1,427	–17%
Current loans and borrowings	4,295	1,610	2,685	3x
Lease liabilities	233	235	–2	–1%
Total debt	**11,717**	**10,461**	**1,256**	**12%**
Cash and cash equivalents	1,882	5,547	–3,665	–66%
Net debt	**9,835**	**4,914**	**4,921**	**2x**
Net debt /12M EBITDA	1.1x	0.5x	0.6x	

As of December 31, 2022, the Company's total debt increased by 12% compared to December 31, 2021 and amounted to USD 11,717 million. The increase in total debt was primarily driven by utilization of RUB-denominated revolving loan facilities in order to refinance Company's debt amidst deteriorating external environment.

As of December 31, 2022, the Company's net debt increased by USD 4,921 million due to a decrease in cash as a result of increased capital expenditures and dividend payments during 2022.

The Company fully honors its financial obligations in line with transactional documentation and in full compliance with existing regulations.

In November 2022, Russian rating agency "Expert RA" confirmed the Company's credit rating at the highest investment level "ruAAA". International rating agencies withdrew and currently do not publish Russian companies' credit ratings due to sanctions imposed on Russia.

REPORT ON PAYMENTS

Nornickel publishes a report on payments in the countries where it operates.

The report confirms the Company's compliance with the highest standards of corporate governance and business transparency.

Income tax payments are recorded in accordance with the taxpayer's belonging to a particular reporting segment. The amounts of income tax payments for a consolidated taxpayers group are therefore reflected in the GMK Group reporting segment since the designated member of the consolidated taxpayers group belongs to this segment.

Tax and other payments in 2022 by asset (USD million)

Asset	Income tax	MET	Licences and similar payments	Total payments
GMK Group	1,035	969	0	2,004
South Cluster	64	87	0	151
KGMK Group	0	33	0	33
NN Harjavalta	2	0	0	2
GRK Bystrinskoye	1	6	0	7
Other mining	8	0	0	8
Other non-metallurgical	17	0	0	17
Total	**1,127**	**1,095**	**0**	**2,222**

Tax and other payments in 2022 by country (USD million)

Asset	Income tax	MET	Licences and similar payments	Total payments
Russia	1,108	1,095	0	2,203
Finland	2	0	0	2
Switzerland	15	0	0	15
Other	2	0	0	2
Total	**1,127**	**1,095**	**0**	**2,222**

SUSTAINABLE DEVELOPMENT

Nornickel is committed to promoting sustainability practices.

Nornickel maintains its focus on ESG principles as a fundamental factor that will shape the global agenda in the coming years.

STRATEGIC APPROACH

Despite global uncertainties and emerging economic and political challenges, Nornickel maintains its focus on sustainability principles as a fundamental factor that will shape the global agenda in the coming years.

Promoting sustainability practices, the Company, on the one hand, adapts to the strategic landscape and market changes and contributes to more effective risk management, and on the other hand, fosters a motivating and innovative corporate culture, builds beneficial relationships with stakeholders and supports principles that are key to maintaining a healthy and rich environment.

To effectively integrate sustainability principles across all activities, Nornickel has adopted over 20 internal documents[1]. At the strategic level, the Company has in place the Environmental and Climate Change Strategy and is developing the Social Development Strategy to be approved in 2023.

Contribution to the UN SDGs

To effectively integrate sustainability principles across all activities, Nornickel has adopted over

20

internal documents

	E Environmental and climate	S Social responsibility	G Governance
KEY ACHIEVEMENTS	• Reduction of SO_2 emissions on the Kola Peninsula following shutdown of the Company's smelting operations (down 90% from 2015) • The lowest CO_2 emission level (Scope 1, 2 and 3) among global metals and mining peers	• Reputation of a socially responsible business • Comprehensive support of local communities and national projects • Long track record of supporting indigenous peoples; pioneering the process to obtain their free, prior and informed consent to projects	• Sustainable corporate governance and risk management • Including ESG targets in short-term and long-term KPIs • Balanced and effective Board of Directors
STRATEGIC PRIORITIES	• Meeting the key SO_2 reduction targets for the Norilsk Industrial District • Clean-up of accumulated waste and remediation following environmental incidents in Norilsk • Assessing biodiversity impact and preparing a scientific rationale for a biodiversity conservation programme • Further developing the physical risk management system across the Company's footprint • Supporting environmental initiatives across the Company's geography	• Zero work-related fatalities • Reducing the impact of operations on indigenous peoples in the regions of operation • Refurbishment of housing and social infrastructure in Norilsk	• Fostering a new sustainability culture across the Company • Compliance with key international sustainability initiatives

[1] https://nornickel.ru/investors/disclosure/corporate-documents/#accordion-corporate-codes-and-policies

The principles of sustainable development are being actively introduced into the corporate culture of the Company. In 2022, Nornickel:

held 17 dedicated workshops and trainings, up almost 2.5 times from 2021

provided training in ESG for **>1,300 employees**

conducted **6 ESG audits**

Actively used stakeholder engagement mechanisms through dialogues, surveys, public discussions of internal documents, and public consultations on projects.

In 2023, the Company plans to continue implementing measures to align its activities with the guidelines and standards, such as ICMM and IRMA, TCFD recommendations, and other. The plans include:

- deeper integration of ESG principles into strategic planning and risk management procedures
- analysis of Global Industry Standard on Tailings Management (GISTM) requirements in relation to Company facilities
- cascading adopted policies to subsidiaries for implementation
- setting additional ESG-related KPIs and evaluating performance
- establishing a human rights due diligence system (until the end of 2024)
- implementing the supply chain to all supplier categories
- holding stakeholder dialogues and publishing new reports on climate change and human rights.

Nornickel's sustainability management fl wchart in 2022

Sustainable Development and Climate Change Committee
chaired by an independent director

- monitors the progress on the strategy Implementation and evaluates its effectiveness;
- oversees the progress on sustainability goals and programmes;
- provides the Board of Directors with an opinion on the effectiveness and quality of key developed and implemented sustainability projects

Board of Directors
approves the Company's internal documents and strategic goals

Audit Committee
chaired by an independent director

President

Risk Management Committee of the Management Board
chaired by the Company President

Senior Vice President
Operational Director

Vice President
Energy Division

Vice President
Investor Relations and Sustainable Development

- participates in developing sustainability strategies;
- monitors and coordinates the implementation of the Company's sustainability polices and internal procedures

Vice President
Internal Control and Risk Management

Vice President for Ecology and Industrial Safety

Technical Supervision Department

Ecological Monitoring Centre

Renewable Energy Project Management Office

Inspection Department for Monitoring Technical, Production and Environmental Risks

Ecology Department
Environmental risk management and Independent internal control over environmental protection matters

H&S Department

Sustainable Development Department

- provides a systematic approach to building an effective model of sustainable development management and its compliance by the Company;
- develops and implements systems for evaluating the Company's performance for compliance with the requirements of international standards

Environmental units

Sustainability KPIs for management

Sustainability **KPIs**

50% in team KPIs

Long-term **KPIs**

30% KPI Meeting the H&S targets (20% reduction in FIFR from 2021)

20% KPI Annual reduction of absolute greenhouse gas emissions from production operations

30% KPI Meeting the environmental strategy goals, including SO_2 emission reduction

International sustainability standards at the end of 2022

Standard	Certified assets	Status
• ISO 14001–2015 • ISO 9001:2015 • ISO 45001:2018	• MMC Norilsk Nickel (Head Office, Polar Division, • Polar Transport Division, and Murmansk Transport Division) • Kola MMC • Norilsk Nickel Harjavalta	• Bureau Veritas Certification • Surveillance audits – annually • Recertification audits – every three years
• ISO/IEC 27001:2013	• Kola MMC, • Murmansk Transport Division, • Nadezhda Metallurgical Plant, • Copper Plant, • Talnakh Concentrator	• TUV Austria • Surveillance audits – annually • Recertification audits – every three years

Global ESG initiatives at the end of 2022

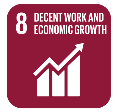
Initiative	Status
Together for Sustainability (TfS) initiative	The Company's compliance with the requirements of the initiative was confirmed by the 2021 audit
International Platinum Group Metals Association (IPA)	Member since 1999
Nickel Institute	Member since 2005
UN Global Compact	Member since 2016
Responsible Sourcing Blockchain Network (RSBN)	Member from December 2020 to July 2022
Responsible Minerals Initiative (RMI)	In 2022, RMI suspended cooperation with the Company's Russian assets. Norilsk Nickel Harjavalta (the Company's asset in Finland) was included in the RMI Conformant/Active Smelters lists based on RMI RMAP audit results
Initiative for Responsible Mining Assurance (IRMA)	In 2022, IRMA suspended cooperation with the Company's Russian assets. In the same year, Nornickel independently assessed its mining assets for compliance and readiness for the certification
Global Battery Alliance (GBA)	Member since 2021

ESG ratings at the end of 2022

Rating	Status
EcoVadis	ESG score – 62
MSCI	ESG rating – B, score – 3.0 out of 10
Sustainalytics	ESG risk score – 43.9 out of 100, on a scale from 1 (low risk) to 100 (high risk)

HR MANAGEMENT

Contribution to the UN SDGs



HUMAN RESOURCES

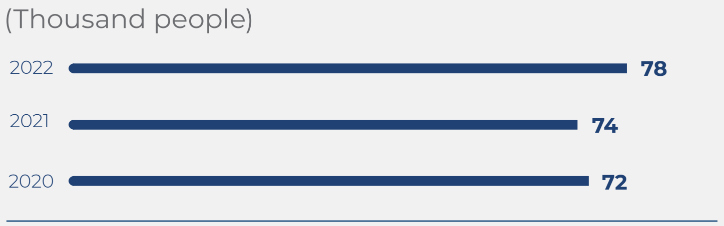
HR policy: investing in human capital

RUB 182.5 thousand[1]
average monthly salary of the Norilsk Nickel Group employees

6%
proportion of the benefits package in the compensation package[1]

25.8%
average wage growth[2] across the Norilsk Nickel Group in 2022

Nornickel retains leadership in key Russian and international rankings of the best employers



NORNICKEL'S MAIN VALUE IS ITS PEOPLE.

The Company is committed to providing safe and high-quality working conditions, decent wages and a benefits package. Nornickel views its employees as its key asset and invests in their professional and personal development while creating an environment promoting employee performance and engagement.

THE COMPANY'S STANCE ON HUMAN RIGHTS

The Company respects the rights and freedoms of its employees as well as those of its stakeholders – partners, investors, contractors, local communities, customers, and consumers.

Nornickel upholds the principles of international standards such as the UN Global Compact, the Universal Declaration of Human Rights and the International Labour Organisation's Declaration on Fundamental Principles and Rights at Work. Nornickel complies with the laws of the countries in which it operates.

The Company implements programmes for the development and social support of its employees, upholding their rights in respect of social security, education, family welfare, shelter, freedom of artistic expression, and participation in cultural life.

The Company has created workplaces tailored for people with disabilities. According to the employment quotas, the share of such employees starts from 2% of the average headcount, excluding employees involved in hazardous or dangerous work. We provide necessary working conditions for this category of people with regard to the work and rest schedule, duration of the annual paid leave, extra days off, additional financial assistance, and other parameters.

The Company strictly adheres to the following principles with respect to its employees:

- Zero tolerance for the use of child labour, forced or slave labour
- Zero tolerance for the employment of persons aged under 18 for hazardous and/or dangerous work
- Zero tolerance for violence or discrimination
- The Company does not engage female employees in extreme or dangerous working conditions
- The Company ensures its employees' right to safe working conditions
- The Company makes sure all employees enjoy equal rights and opportunities regardless of gender, age, race, nationality, and origin
- The Company provides all employees with equal opportunities for unlocking their potential. Employee performance is evaluated on a fair and impartial basis, and recruitment and promotion decisions are tied exclusively to professional abilities, knowledge and skills
- The Company respects the right to form trade unions and does not prevent employees from joining them.

The Company has adopted internal labour regulations, which are approved in consultation with the trade union organisation and which establish employees' working hours. The Company has a standard working week of 40 hours as determined by the applicable Russian laws and regulations. Employees involved in hazardous or dangerous work enjoy a reduced working week of not more than 36 hours. Women employed in the Far North and equivalent areas work 36 hours per week unless a shorter working week is stipulated by Russian laws and regulations. The Company arranges for accurate work time control for each employee.

2%
employment quotas for people with disabilities

[1] Data for 2022.
[2] Including one-off payments.

AWARDS AND INDUSTRY RECOGNITION

In 2022, Nornickel entered a number of best employer lists:

- Best employer in the metals industry for students of leading universities according **to Changellenge's Best Company Award ranking;**
- Gold in **Forbes' ranking** of Russia's best employers;
- Best employer in the metals industry as well as 8th best employer for its target audience in **Future Today's ranking** based on a survey of Russian university students;
- Best employer in the metals industry as well as 12th place (out of more than 600 companies) among the largest companies in **the national employer ranking by HeadHunter and RBC.**

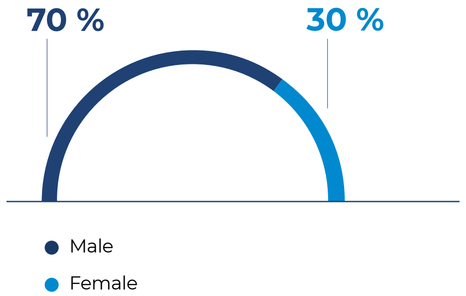
Since 2020, Nornickel has been a co-founder of **Women in Mining Russia**, a project to support women's development in the mining industry. In 2022, 134 female employees of Nornickel submitted applications to participate in the all-Russian contest **Talented Woman in the Extractive Industry,** with 34 of them short-listed and 12 winning the contest.

Average headcount

Location	2020	2021	2022
Russia	71,447	73,061	77,980
Africa	519	151	38
Europe	323	317	331
Asia	15	15	15
USA	10	10	10
Australia	5	3	0
Total	**72,319**	**73,557**	**78,374**

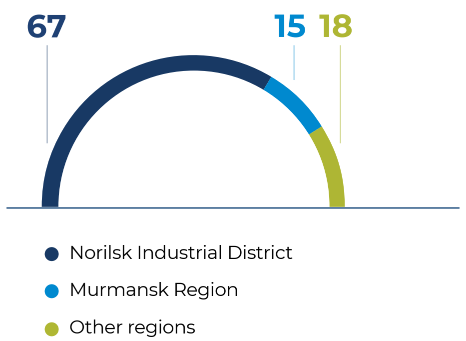
STAFF COMPOSITION

78.4
thousand employees
The average headcount of Nornickel employees in 2022



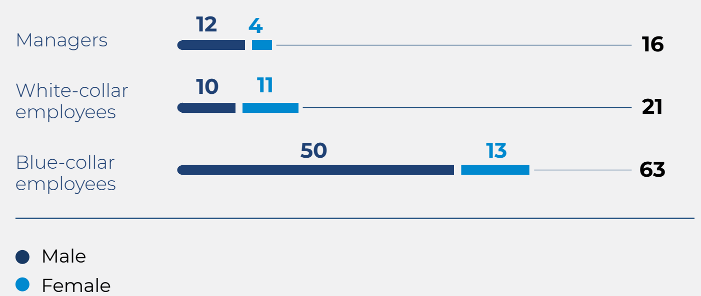
83 %
of Nornickel employees
work in Russia's single-industry towns

99.7 %
local population accounts

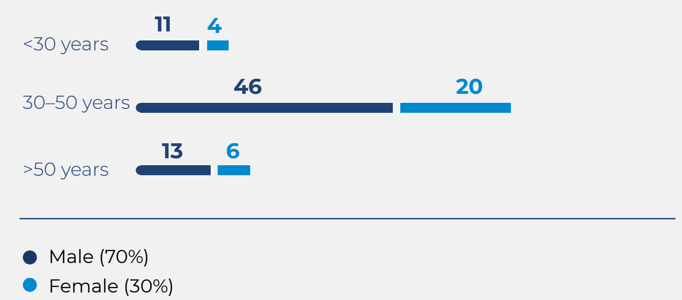


In 2022, the Group's average headcount was 78.4 thousand employees, of which 99% were employed by its Russian companies. In 2022, the Company's turnover rate stood at 10.5%. Nornickel is among the main employers in the Norilsk Industrial District and Kola Peninsula, employing 67% and 15% of the regional workforce, respectively. Local population accounts for 99.7% of the headcount. The average headcount increase in 2022 was driven by the Company's investment strategy as well as organisational and technical changes. Since Nornickel is a production company, the proportion of men in its workforce is significantly higher than that of women.

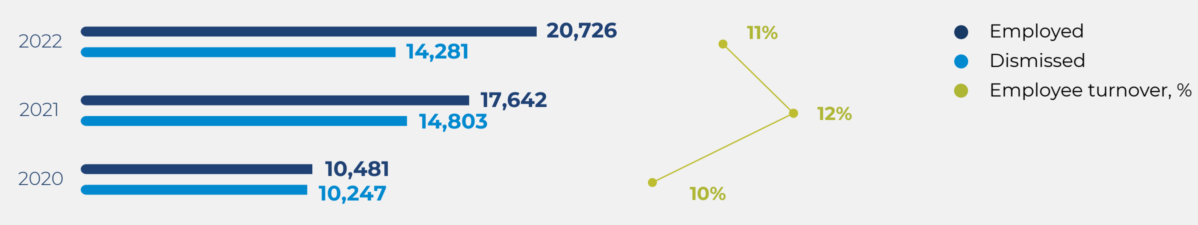
Headcount by category and gender (%)[1]



Headcount by age and gender (%)



Employee turnover (people)[2]



[2] Russian enterprises.
[3] The ratio of resignations, dismissals for breach of labour discipline and negotiated terminations, to the average headcount as of the year-end.

RECRUITMENT

In 2022, the Company's recruitment efforts included off-site events in cities across the Krasnoyarsk Territory and the Republic of Khakassia. Nornickel's HR specialists met with more than 1 thousand applicants for positions within the Company.

In 2022, Nornickel opened recruitment centres in Yekaterinburg, Orsk and Ufa, where applicants could promptly receive advice on open vacancies within the Company and on employment terms and conditions.

ENGAGING YOUNG PEOPLE

To spark the interest of young people in professions of mining and metallurgical engineers and the industry on the whole, the Company has launched programmes for undergraduate and graduate students of Russian industry-related universities.

The Company focuses on training and upskilling students majoring in professions that are highly valued at Nornickel. For example, our standard format of the Conquerors of the North educational programme moved online and became available to a wider audience of students from Russian universities involved in the industry.

The Conquerors of the North online educational course has served as a tremendous library of knowledge for students. The programme comprised 10 modules and 37 video lectures, and its participants did a case study to consolidate their knowledge. Nornickel was the first Russian mining company to engage undergraduates and graduates in addressing real business challenges and promptly move the programme online in response to the pandemic spread in Russia.

In 2022, an online apprenticeship programme was run remotely for the Moscow office. The best graduates of the leading Moscow universities took part in the programme.

The Company continues to support talented students from industry-related universities, with the Company's corporate scholarship awarded to 76 students in 2022.

2,724 students
applied for participation

978 people
participated in the programme

236 participants
were recommended for further employment and internships at Nornickel

76 students
Company's corporate scholarship awarded

EMPLOYEE DEVELOPMENT

Nornickel offers ample opportunities for retaining and developing human capital as the Company's key resource. One of Nornickel's priority goals in 2022 was to build a proactive training ecosystem that enables employees to achieve the Company's business goals, which underlay our training strategy for 2022–2025.

The transition to the ecosystem approach helps solve the following tasks:

- Build a culture of continuous learning;
- Boost managers' professional qualities;
- Improve professional skills;
- Build critical competencies.

To address these challenges, the Company's training strategy highlights key priorities of the new training system.

ENERGY OF CHANGE (TOP 100)

In 2022, we launched Energy of Change, a modular corporate development programme for Top 100 managers. The programme was delivered in a mixed format and included the following modules.

1. Energy of Change (change management)
2. Energy of the Manager (the manager's awareness)
3. Energy of the Team (teamwork)
4. Energy of Performance (ownership of the result)
5. Energy of Well-being

A total of 106 managers were trained. The programme was built around three focus areas:

- Way of thinking
- Mastering new skills
- Effective interaction

ON THE PATH TO EFFICIENCY

In 2022, the Company continued implementing its On the Path to Efficiency programme online. The programme traditionally includes training and project activities. A particular feature of the programme includes the transformation of middle managers' online behaviour: they develop the habit of acquiring knowledge in a digital environment and interacting with each other. For many participants, this transformation has meant a dramatic change in their attitude – from passive online listeners to active doers.

The programme participants completed five modules aimed at improving the management skills of middle managers. In addition, the programme was supplemented with workshops on topics critical for the Company, such as ESG, safety culture and risk management.

A total of 113 people from the Company's 22 branches completed the training, including 106 managers and seven young specialists.

360-DEGREE MANAGEMENT

In 2022, management training under the updated 360-Degree Management programme was continued, with 360-degree assessment of managers' skills.

The programme focused on the development of corporate and management skills. Participants could select training topics themselves based on their assessment results and development areas highlighted in their individual development plans. In 2022, the programme was substantially modified to include basic courses in management skills and enrichment courses in line with current trends. Training was offered on seven topics:

Basic courses:

- Management Decision Making
- Ambitious Management
- Leadership Driving Development
- Master of Management Communication

Enrichment courses:

- Change Management
- Leveraging a Resourceful State
- Team Management

The programme stands out for its concise, hands-on format that includes interactive training sessions, business games, real-life cases, and a review of real-life management situations.

A total of 252 managers from the Company's 17 branches completed the training.

106 managers
trained in the Energy of Change programme

113 employees
from 22 Company branches completed the On the Path to Efficiency training

106 managers | **7** young specialists

252 managers
from 17 Company branches completed the updated 360-Degree Management online programme

TRAINING IN NEW SKILLS AND TECHNOLOGIES

Developing digital skills and improving employees' digital literacy remains a key area of training. With this in mind, the Company continues implementing its Digital Nornickel educational programme focusing on digitalisation and designed to offer all employees an opportunity to learn the technology and skills required to work in a modern digital production environment and live in a digital environment.

A total of 65.5 thousand people completed the course by the end of 2022.

The educational project seeks to explain in simple terms what digital solutions, technologies and tools are available on the market today, what Nornickel has in place, and what everyone can leverage in their work.

In addition to the training course for its employees, the Company expanded the target audience by launching the Digital Nornickel.Junior project in September 2022 for employees' children aged between 8 and 12.

Digital Nornickel.Junior is a fascinating quest where a child can learn about Nornickel's advanced digital technologies in a gamified format by taking tests and completing tasks. Simple tasks show the course participants how digitalisation is linked to daily work and why it is critical to development and progress.

BUILDING AN ENVIRONMENT FOR CONTINUOUS LEARNING

The Company places a strong emphasis on building a modern learning environment by creating technological learning spaces. In 2022, with the commissioning of a new campus in Monchegorsk, the Company expanded its corporate university's area by almost 1 thousand sq m.

The Company continues to develop training courses across its assets, offering professional training and skills practice on simulators. In 2022, industrial tourism gained wide popularity. The Company's underground training base was among its production facilities actively involved in promoting industrial tourism.

Nornickel Academy is Nornickel's core educational digital resource featuring training courses designed to develop employees' professional competencies across all relevant areas, a reading room with free books on personal growth, as well as materials presenting the latest trends in training and specific tools that can help employees in their work.

In addition to the physical and digital environment, the Company supports its concept of continuous learning through educational events (Biblionight, Knowledge Every Day, New Life on Monday), public lectures, masterclasses (Tribune, workshops for schoolchildren), and regular communications (L&D Digest, posts on social networks, publications in mass media).

ASSISTANCE PROGRAMME

Since the Company's production sites are located in remote areas, Nornickel actively sources staff for its production facilities from other regions of Russia. The Assistance programme helps new hires adapt to their new environment and settle into their new communities on the Taimyr Peninsula. The programme targets not only highly qualified specialists and managers but also young talent and workers with hard-to-find skills. Today, it covers 3,224 of Nornickel employees, including 1,659 new participants, who joined in 2022. With this programme, the Company seeks to provide the participants with comfortable living conditions and reimburse them for relocation and resettlement costs.

RELOCATION PROGRAMME

Since the beginning of 2022, the Company has been running the Employee Relocation programme aimed at implementing a range of measures to support employees relocating to another region with their current employer or through internal transfers to other employers within the Group following changes in job duties. Along with the reimbursement of general travel, baggage and subsistence costs, a relocation allowance and an additional leave for settling in, the programme's distinctive feature is a supplementary payment for relocation (up to 40% of the salary) offered to employees. The amount of this relocation payment is capped depending on the new job's location.

Relocation to a new place of work provides employees with opportunities for growth and development, both personal and professional. The programme benefits the Company by addressing its staffing needs in a particular region where candidates with the right skills are absent from the local labour market or the local workforce.

65.5 thousand people

trained in the Digital Nornickel course

by ~**1,000** sq m

expansion of the corporate university area

3,224 employees

participate in the Assistance programme

up to **40** %

of the pay – supplementary payments to relocating employees

CORPORATE CULTURE DEVELOPMENT

Nornickel nurtures its corporate culture to build corporate communities bringing together activist employees of different professions and from different enterprises as well as to enhance the engagement of production site employees in achieving the Company's strategic objectives and involve them in the corporate and social activities of Nornickel's facilities and regions of operation.

FOCUS ON SAFETY CULTURE

In 2022, the Company paid particular attention to fostering a strong safety culture, with a dedicated project launched to set up the function of corporate safety culture coaches. Within the project, we selected and trained 43 coaches and seven supervisors, who will provide training and mentoring under the Dynamic Risk Assessment and Behavioural Safety Audit programmes. The financial incentive framework was also updated to encourage risk identification and elimination. By 2022-end, corporate coaches had already conducted more than 700 training sessions for employees.

YOUTH PROGRAMME "IN A GOOD COMPANY"

Nornickel's youth programme, In a Good Company, is designed to create a community of young employees aged under 35, encourage their professional and creative growth and unlock their potential in various areas and spheres. The programme's another focus area is to identify gifted students and young talents from outside the Company and bring them to Nornickel, ensuring their onboarding in the fastest and most effective way.

An analysis of expectations among young people (aged between 18 and 35), who account for a third of Nornickel employees, showed that their needs are primarily related to experience build-up, individual development, recognition, and self-fulfilment. They also need not just to be part of a team, but work in an environment of like-minded people. And this is what the Company is ready and willing to offer them. Over 4.4 thousand users registered on the programme's unified mobile platform during a few months pilot.

THOSE WHO CARE PROGRAMME

The Those Who Care programme targeting activist employees of different professions runs in the Kola and Norilsk Divisions. The programme is designed to bring together a business customer who has a task to solve and proactive employees who, working as a team, offer a solution and bring it to life. The matters discussed are not limited to production and can deal with any activities, from waste recycling, more efficient use of resources, and internal communications to a culture of training, industrial safety, and recruitment.

In 2022, the programme became the gold winner of the Employer Brand Award & Summit in the People Management category.

Since the programme's inception, the following results have been achieved:

726 employees

applied for participation in the programme

31 managers

have become business customers

33 out of the **56** business tasks

have been addressed as part of relevant projects

35

project teams

33

design solutions have been accepted for implementation

10 %

of active programme participants have made career moves within the Company

1.3 billion rubles

the economic effect of the proposed solutions.

CORPORATE VOLUNTEERING

The Plant of Goodness project is the main example of cooperation among the business, local communities, the Company, and its employees: it has institutionalised and consolidated Nornickel's existing experience and traditions of social and environmental initiatives. Today, the programme is implemented across all the regions of Nornickel's operation, including Norilsk, Monchegorsk, Zapolyarny, Chita, Krasnoyarsk, Saratov, and Moscow. Each year, around 3.5 thousand employees along with representatives of non-profit organisations and action groups volunteer as part of the Company's Plant of Goodness project. After being active volunteers for some time, Nornickel employees often come up with their own initiatives. The skills and expertise they obtained doing this kind of work help them not only in everyday life but also in their career pursuits as well as in developing beyond their professional competences.

DIALOGUE BETWEEN SENIOR MANAGEMENT AND EMPLOYEES

Nornickel is strongly focused on engaging with its employees and continues to promote regular practices that expand the dialogue between its senior management and employees. To that end, the following activities were held in 2022:

- Nornickel Live, a Q&A session;
- Spring corporate dialogues.

Employees' sustained interest in the programme is reflected in a large number of questions from employees (more than 5 thousand over the year) and the audience's active involvement. For instance, over 15 thousand viewers joined the direct line while about 3 thousand people participated in corporate dialogues.

Nornickel places a particular emphasis on building communications about the most important topics: remuneration, bonuses, social support, and safety. Specifically, in 2022, the Company ran eight major information campaigns on:

- salary increase from 1 January;
- additional payments in April;
- increase in the business performance bonus;
- golden rules of safety;
- Nornickel with You programmes;
- pulse survey about engagement;
- VHI;
- improvements to the Together We Decide – Together We Do and Let Everyone Be Heard programmes.

Effective engagement within such programmes is supported by both the multichannel format and a vast number of in-house speakers. In 2022, the Company trained over 1 thousand in-house speakers, who maintained live contact and engaged with employees.

The total audience of the information campaigns exceeded 250 thousand people (i.e. each employee was contacted on average more than three times over the year). Effective communication channels between management and employees and an open information environment help build trust, reduce stress and increase employee engagement.

In addition, the Company conducts regular targeted polls and surveys to measure employee engagement and assess social programmes.

ENGAGEMENT

Nornickel goes through the engagement management cycle every year to maintain an environment conducive to integration.

This cycle includes three phases:

- The Let Everyone Be Heard. What Do You Think? survey
- Analysing the survey findings
- Developing and implementing resulting solutions.

According to the survey, the Company's engagement index grew by 8 p.p. to 63% in 2022. The following factors had progressed the most over four years:

- Trust in, and accessibility of, senior management: +22 p.p. (driven by an open dialogue with management and consistent delivery on promises);
- Career opportunities: +18 p.p. (driven by increased availability of information about vacancies, the internal career moves programme, active communication about internal promotions, training and development programmes);
- Remuneration and recognition: +18 p.p. (driven by regular and anticipatory wage increases, elimination of imbalances in the remuneration system, and grading of information campaigns on wages).

The survey includes polling and focus groups. In 2022, 50.5 thousand employees were covered by the survey, up 6% y-o-y.

All governance levels, from units of individual entities to the Group as a whole, are involved in both survey data analysis and the development and implementation of improvements.

ADOPTION OF THE BUSINESS ETHICS CODE

To ensure that employees understand and embrace the principles and basics of the Business Ethics Code, the Company continued relevant training in 2022 to explain its employees the Code's content. A training module on the Code is integrated into the Our Values programme, the Nornickel Live – Direct Live Line with Vice Presidents project, and corporate dialogues. By 2022-end, training in the Business Ethics Code covered 80% of the Company's headcount.

~3.5 thousand employees
volunteer as part of the Company's Plant of Goodness project

>15 thousand viewers
tuned into the Nornickel Live broadcast

~3 thousand people
participated in corporate dialogues

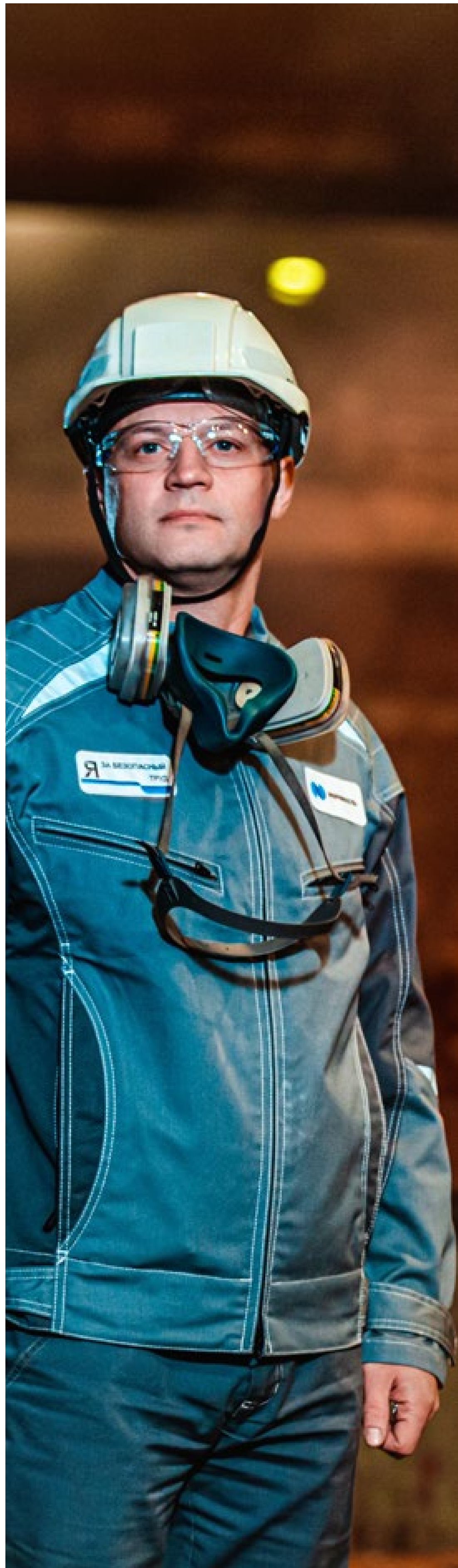
>1,000 in-house speakers
trained in 2022

>250 thousand people
total audience of information campaigns

63 %
increase in the engagement index in 2022

80 %
of employees covered by training in the Business Ethics Code

50.5 thousand employees
participated in the employee engagement survey



REMUNERATION

KEY PERFORMANCE INDICATORS

Nornickel's remuneration system is linked to key performance indicators (KPIs) for different job grades. KPIs include social responsibility, occupational safety, environmental safety, operational efficiency, and capital management metrics, with due consideration of cross-functional interests. In 2022, more than 18 thousand employees of the Group were assessed against their KPIs.

KPI setting is driven by the Company's well-established principles of balance, regularity, KPI achievement validation, decomposition, and ambition as well as the SMART criteria. Cascading is one of the tools used in KPI setting: a manager breaks down their KPI into components and cascades them to subordinates. Therefore, when each employee meets their KPI targets, their superiors' KPIs are also achieved.

The KPI framework is instrumental in streamlining performance evaluation criteria, identifying top priority targets for managers and employees for the current year (aligned with the Company's strategy) and link an employee's pay to their performance.

The Company has a procedure in place for evaluating the performance of the Head Office employees and, separately, of Group company managers. In 2020, a new incentive system was introduced for all employees of project management offices (PMOs): project bonuses and traditional annual bonus were replaced with a project completion bonus. Bonuses are paid for the achievement of key project parameters and are aimed at motivating and retaining key project employees until project completion. In 2022, the project bonus system was used to evaluate the performance of 1.5 thousand employees of the Group's PMOs.

The performance evaluation process is supplemented with an automated 360-degree assessment procedure run at 30 Group enterprises. In 2022, the 360-degree assessment covered almost 4 thousand managers at all levels, including top management, and 3.8 thousand specialists. Following the assessment, employees receive feedback from their superiors, discuss further development areas with them and build their individual development plans for the year.

In addition to remote learning opportunities offered by the Nornickel Academy platform, employees who develop individual development plans based on the 360-degree assessment results can benefit from access to the corporate electronic library and take training on the 360-Degree Management programme.

SALARY AND BENEFITS PACKAGE

Nornickel has in place a comprehensive employee incentive system, which comprises both financial and non-financial components.

The employee incentive system is aimed at improving operational efficiency and boosting labour productivity, delivering robust performance as well as retaining highly skilled employees.

The Company prohibits any discrimination in terms of setting and changing wages based on gender, age, race, nationality, origin, or religion.

The use of financial rewards is governed by the Company's remuneration policy. The Company's compensation package comprises salary and benefits. The salary consists of fixed and variable components, with the latter linked to the Company's operational performance and achievement of relevant KPIs.

Nornickel has in place a grading system, which is a key tool to develop and implement various HR-related programmes. Positions are graded using the point rating method, which takes into account the required knowledge and skills, the complexity of tasks involved, and the responsibility level in each job.

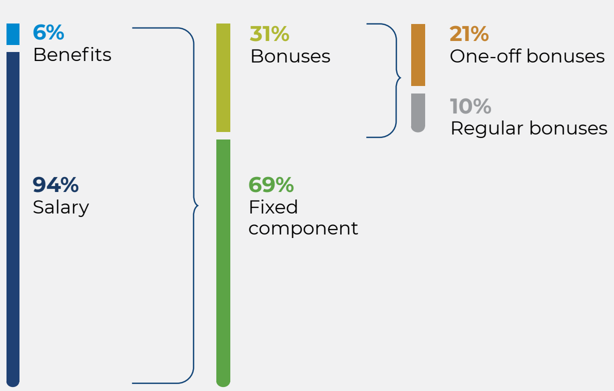
As far as annual bonuses are concerned, back in 2021, the annual bonus rate policy for employees covered by the performance management system was aligned with an approach according to which the annual bonus rate depends on the employee's job grade. In 2022, the transition to target annual bonus rates was completed. This approach ensures higher transparency of the Company's remuneration system.

In 2022, we also continued our efforts to transform the bonus system for employees of PMOs. The updated incentive system, which is linked to the achievement of key project indicators, aims to motivate and retain key project employees until project completion.

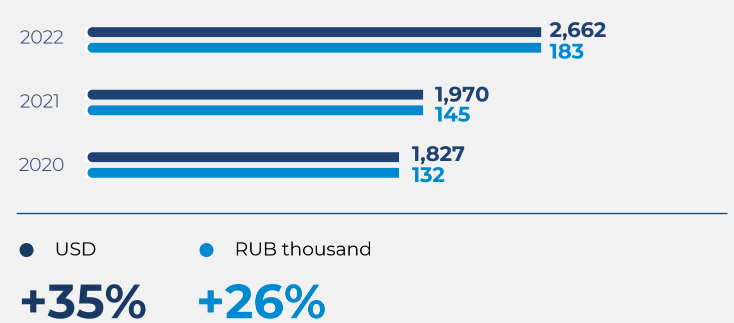
The Company makes regular reviews of pay levels and trends as well as the cost of living – both the nation-wide averages and the average figures for each of its operating regions, with wage indexation done annually based on the review results. From early 2022, Nornickel increased employee remuneration by 20% in Norilsk and in the Krasnoyarsk Territory and by 10% in the Murmansk Region and other regions. In April 2022, the Company also decided to provide additional support to employees and pay a one-off bonus for their Q1 performance, equal to the monthly base salary but at least RUB 50 thousand per employee.

The Company constantly evaluates its pay levels to make sure they are not below the established living wage. Monitoring results suggest that all employees at the Company are paid above the minimum living wage.

Employee compensation package breakdown



Average monthly salaries of Nornickel employees[1]



[1] Based on the average annual RUB/USD exchange rate given at the end of the Report.

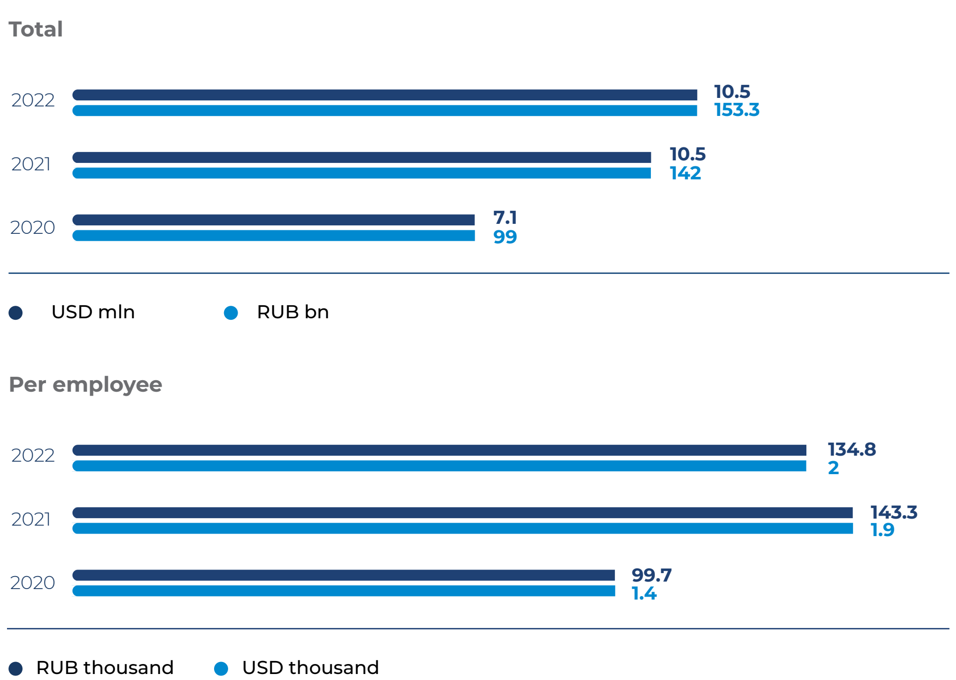
Minimum living wage and employee remuneration by region

Region	Established minimum living wage		Average monthly salaries of Nornickel employees	
	RUB thousand	USD	RUB thousand	USD
Norilsk Industrial District	39.7	580	185.6	2,708
Murmansk Region	35.1	513	128.3	1,872
Moscow and other regions of Russia	23.5	343	298.8	4,359
Krasnoyarsk Territory (excluding NID)	24.4	357	98.5	1,437
Zabaykalsky Territory	22.9	334	170.4	2,486

The benefits ackage includes the following benefits a d compensations:

- Voluntary health insurance (VHI) and major accident insurance coverage
- Discounted tours for health resort treatment and recreation of employees and their families
- Reimbursements of holiday travel expenses for a round trip and baggage fees for employees and their families living in the Far North and territories equated thereto
- One-off financial assistance to employees experiencing major life events or in difficult life situations
- Complementary corporate pension plan
- Other types of social benefits under the existing collective bargaining agreements and local regulations

Benefits ackage costs at Nornickel's Russian entities



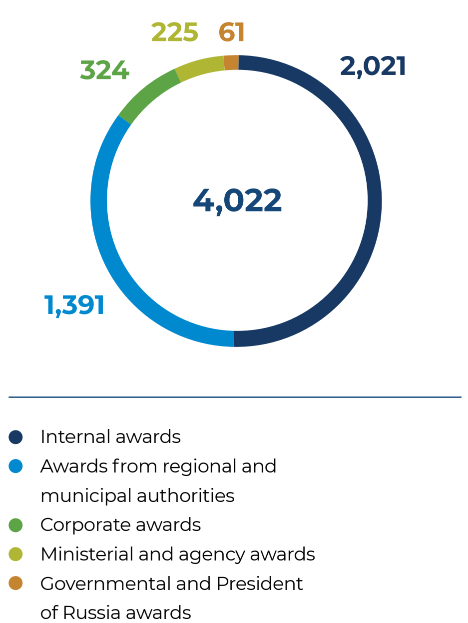
ADDITIONAL EMPLOYEE INCENTIVES

Nornickel's Award Policy is closely linked to its values and strategic priorities. The Company rewards its employees for outstanding professional achievements and contribution, innovations that drive growth and add value, efforts going beyond formal agreements with Nornickel, and contribution to overall performance of the business.

There are several levels of awards and incentives.

1. Governmental, agency and regional awards. Nornickel welcomes recognition of its employees and nominates those who achieved outstanding results in operations and management and made a significant contribution to production development.
2. Corporate incentives. Company-wide awards assigned by resolution of the Company's President.
3. Internal incentives at enterprises. Initiated and awarded to employees on behalf of the enterprise where they work.

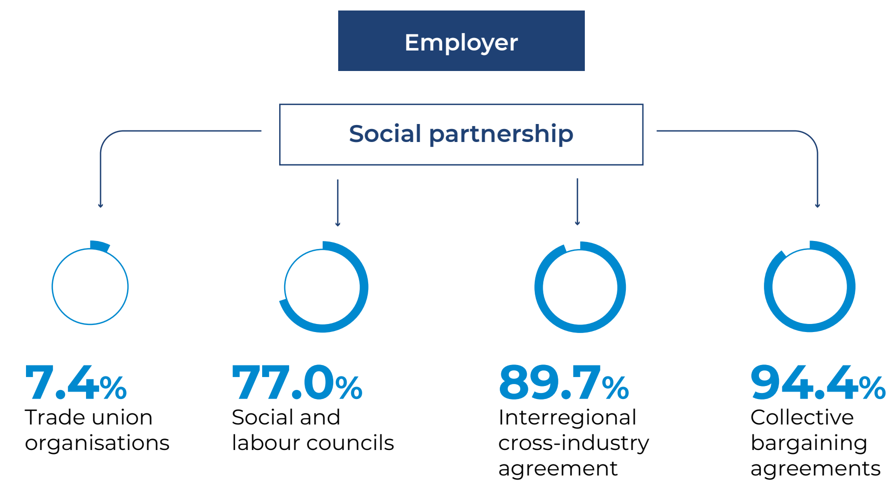
Employee awards in 2022



SOCIAL PARTNERSHIP

We establish social partnerships regulating labour relations as a key tool to build dialogue with our people. Moreover, the Company has in place offices for social and labour relations, a response centre and task forces at branches.

Social partnership framework at Nornickel



TRADE UNION ORGANISATIONS

The Group has 58 primary trade union organisations united into local trade union organisations of the Norilsk Industrial District and Murmansk Region, which are part of the Trade Union of MMC Norilsk Nickel Employees, an interregional public organisation.

The trade unions of transport and logistics divisions of the Krasnoyarsk region are members of the Yenisey Basin Trade Union of Russia's Water Transport Workers, headquartered in Krasnoyarsk.

In 2022, trade unions contributed to:

- collective bargaining on a three-year extension of Collective agreements at 10 Group enterprises
- inspecting the quality of public catering and dietary meals
- conducting a special assessment of employees' working conditions.

In 2022, the trade union was also involved in an information campaign run by the employer to inform employees about the change in the corporate approach to the bonus system. The Company sees such meetings as an opportunity to maintain a constructive dialogue with employee representatives and receive timely feedback on changes introduced at the Company.

SOCIAL AND LABOUR COUNCILS

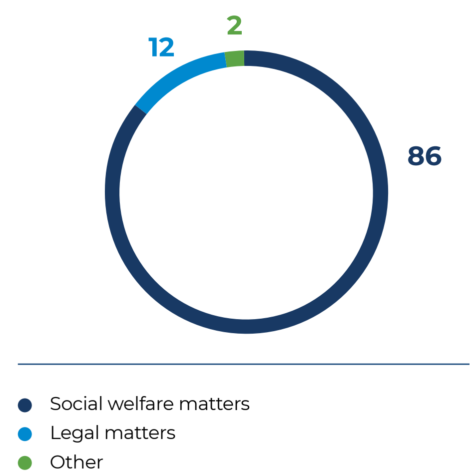
Social and labour councils have been in place since 2006 to represent the interests of all employees within the framework of social partnership at the local level. Social and labour councils are authorised to raise matters relating to health resort treatment, recreation and leisure programmes for employees, disease prevention, provision of personal protective equipment, workplace and catering arrangements, and much more.

In addition to the Corporate Trust Line speak-up programme, the Group set up offices for operational, social and labour matters back in 2003. They are primarily tasked with response to employee queries, follow-up, and prompt resolution of conflicts. On a regular basis, the offices monitor social environment across operations, enabling timely responses to reported issues.

Queries submitted to offices are reviewed by relevant specialists or forwarded to functional or production units depending on the issue raised in the query. The offices control turnaround time and quality of responses. When handling complaints, the offices adhere to the principle that precludes sending complaints to the managers whose actions are being challenged. In 2022, Group enterprises in the Norilsk Industrial District operated 27 offices, which received over 52 thousand queries and requests from employees (81%), former employees (18%) and other individuals (1%).

Offices for operational, social and labour matters

Main topics of queries and requests (%)



COLLECTIVE BARGAINING AGREEMENTS

Collective bargaining agreements at the Group's Russian enterprises comply with the applicable laws and adequately reflect employee expectations.

In 2022, the Group enterprises extended for another three years 10 collective bargaining agreements, which have historically provided one of the industry's best benefits packages. Every year, Nornickel reimburses holiday travel expenses for employees and their families, offers medical insurance, health and recreation programmes as well as a complementary corporate pension plan and develops housing and professional training programmes.

At present, all collective bargaining agreements of the Group's Russian enterprises are based on unified approaches to regulating social and labour relations within the social partnership framework.

No breaches of collective bargaining agreements and no strikes or mass layoffs were recorded across the Group enterprises in 2022.

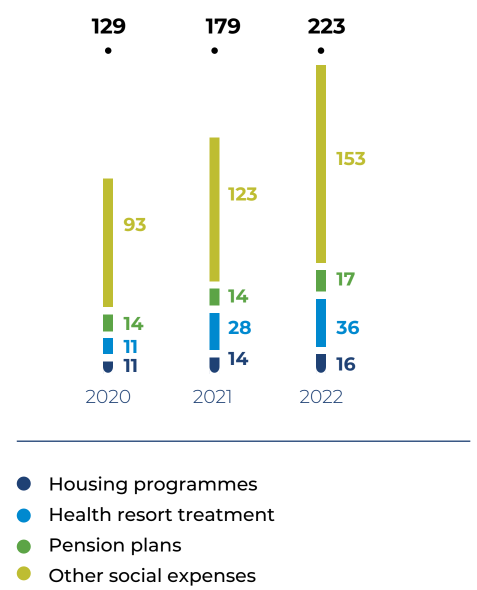
INTERREGIONAL CROSS-INDUSTRY AGREEMENT

The interregional cross-industry agreement, along with collective bargaining agreements, regulates social and labour relations at the Group enterprises. Participants in the agreement define uniform corporate approaches to compensation, provision of guarantees, allowances and benefits to employees, work and rest hours, occupational health, and other matters, enabling the implementation of a uniform corporate social policy across Group enterprises operating in different industries.

In December 2021, the agreement was extended for 2022–2025 with a number of amendments. Currently, the Association of Employers comprises 21 entities.

SOCIAL PROGRAMMES FOR EMPLOYEES

Social expenses for employees (USA mln)



HEALTH IMPROVEMENT PROGRAMMES

The Company has been consistently investing in health improvement programmes for employees and their families living in the harsh climate of the Far North. Health resort treatment programmes are among the most popular programmes offered by Nornickel as part of its social policy.

In 2022, 17.8 thousand employees and their family members improved their health at the corporate Zapolyarye Health Resort in Sochi; 7.4 thousand employees spent their holidays at other health resorts, with 1.5 thousand employees' children visiting children's health resorts. The Company compensates its employees an average of about 86% of the trip voucher cost.

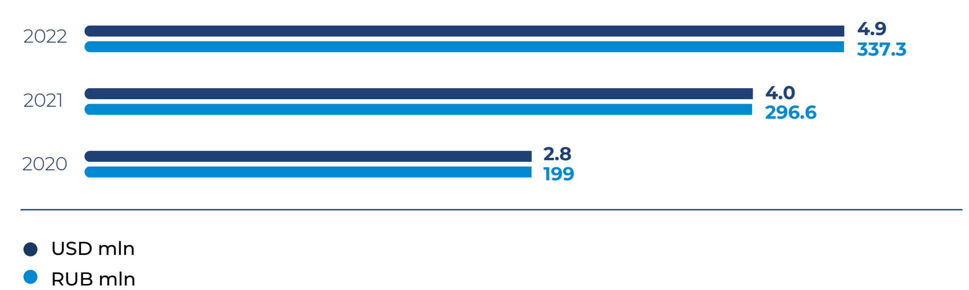
SPORTS PROGRAMMES

Nornickel offers its employees, most of whom work in the Arctic Circle, a wide range of social support programmes. Promotion of corporate sports and a healthy lifestyle among employees is one of the key priorities on Nornickel's social agenda.

The Company regularly holds corporate-wide sporting events. The programme aims to improve the quality of life, build a more attractive employer brand and make sports more accessible to employees and local residents. The Company support sports in its regions of operation by joining efforts with various sports federations that provide training support to coaches, run masterclasses and promote a healthy lifestyle.

Nornickel pays special attention to corporate mass sports events, with hockey, futsal, volleyball, basketball, alpine skiing, snowboarding, swimming, and family sports contests being particularly popular with employees.

Sports expenses



The Night Hockey League with teams made up of Nornickel employees was established to encourage involvement in amateur hockey.

Other activities include annual Spartakiads and mass sports events involving both Nornickel employees and local residents across the Company's footprint.

In 2022, the Company collaborated with Hero Race to organise the Nornickel Run Race at the Norilsk and Kola Divisions. This format gave a new impetus to the event and attracted a larger number of participants.

A total of 24 thousand employees participated in sports and recreational activities in 2022. All corporate competitions were broadcast live in 2022, with the total reach exceeding 60 thousand views.

VOLUNTARY HEALTH INSURANCE PROGRAMME

Voluntary health insurance (VHI) covering all Group employees is an important form of social support for Nornickel employees. In addition, the Company allows employees to insure one close relative at the attractive corporate rate.

The VHI policy entitles employees to various healthcare services. Employees living in the Far North can use their VHI policy in the region of permanent residence as well as outside this region. The range of services is the same under all insurance programmes. The programmes for different employee categories differ only in the level of clinics and the region of coverage.

In addition, Company employees can do specialised genome sequencing tests and get advice from geneticists to help identify and assess potential risks of serious diseases.

HOUSING PROGRAMMES

In 2022, Nornickel continued its housing programmes, Our Home / My Home and Your Home, whose participants were able to purchase ready-to-move-in apartments on preferential terms across Russia. The Our Home / My Home and Your Home programmes cover employees of the Norilsk and Kola Divisions.

Under the programmes, Nornickel purchases ready-for-living apartments at its own expense and provides them to eligible employees under co-financing agreements. Under the programmes, the employer pays up to 50% of the apartment cost (but in any case no more than RUB 3 million (USD 44 thousand)) with the rest paid by the employee within a certain period of employment with Nornickel (from five to ten years). The cost of housing remains unchanged for the entire period of the employee's participation in the programme.

Under both programmes, the property title is registered in the name of the employee: under the Our Home / My Home programme, at the end of the employee's participation (the participant, however, may move in immediately after the apartment is purchased); under the Your Home programme, from the start of participation (with the title encumbered by a mortgage, and encumbrance removed from the property once the employee fully repays the debt to the seller).

In 2014–2022, apartments were purchased in the Moscow and Tver Regions, Krasnodar Territory and Yaroslavl; the Company purchased closely located properties to create a more comfortable living environment for employees by developing additional infrastructure and optimising maintenance of residential premises for the property management company.

A total of 5,842 apartments have been provided to Nornickel employees since the start of the programmes.

Nornickel also operates the Corporate Social Subsidised Loan Programme offering Nornickel employees an interest-free loan to pay the initial instalment and reimbursing a certain percentage of interest paid to the bank on the mortgage loan. Overall, more than 1.3 thousand employees have already taken part in the programme that covers the Norilsk and Kola Divisions.

SUPPORT PROGRAMMES FOR FORMER EMPLOYEES AND THEIR FAMILIES

The ongoing support of its former employees is part of the Company's corporate social policy. The Company's Veterans programme has been designed to support unemployed pensioners who permanently reside in Norilsk. The main eligibility criterion is the employee's length of service at the Company.

The Pensioner Financial Aid Fund grants financial aid to former employees who retired prior to 10 July 2001 provided they had been employed by the Company for more than 25 years and permanently reside outside of the Norilsk Industrial District. The Fund relies on voluntary monthly contributions from employee salaries and charitable contributions from the Company's budget.

The Company also provides targeted assistance to its former employees and their families to pay for health improvement, medicines or funeral services, and help in difficult life situations.

5,842 apartments

have been provided to Nornickel employees since the start of the programmes.

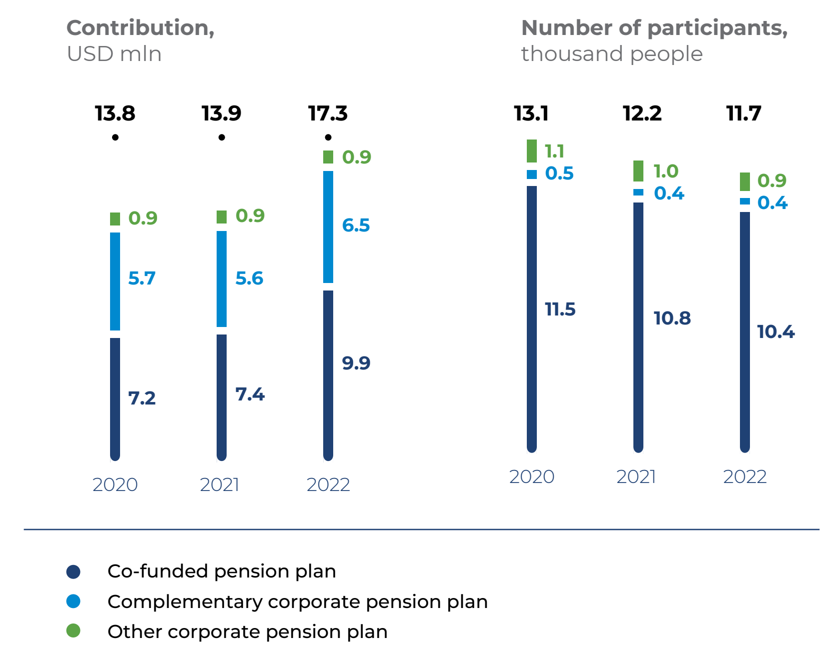
>1.3 thousand employees

have taken part in the Corporate Social Subsidised Loan Programme

CORPORATE PENSION PLANS

Nornickel offers its employees private pension plans. Under the co-funded pension plan, Nornickel and its employees make equal contributions to the plan. The complementary corporate pension plan provides incentives for pre-retirement employees with considerable job achievements and a long service record at Nornickel enterprises.

Contributions to, and participation in, corporate pension plans



HEALTH AND SAFETY

In 2022, the Company updated its key strategic objectives in health and safety for 2023–2025. Efforts in this area are primarily focused on achieving zero fatalities and an industry average injury rate.

Contribution to the UN SDGs

3 Хорошее здоровье и благополучие

8 Достойная работа и экономический рост

Strategic goals

Zero work-related fatalities

The Company pursues a zero-tolerance policy on work-related fatalities

No major accidents at production sites

Measures to prevent accidents at the Company's facilities and the associated negative impact on local communities in operating regions or operational performance

Work safety

Safe working conditions and mitigation of ore mining and processing risks

Key performance indicators

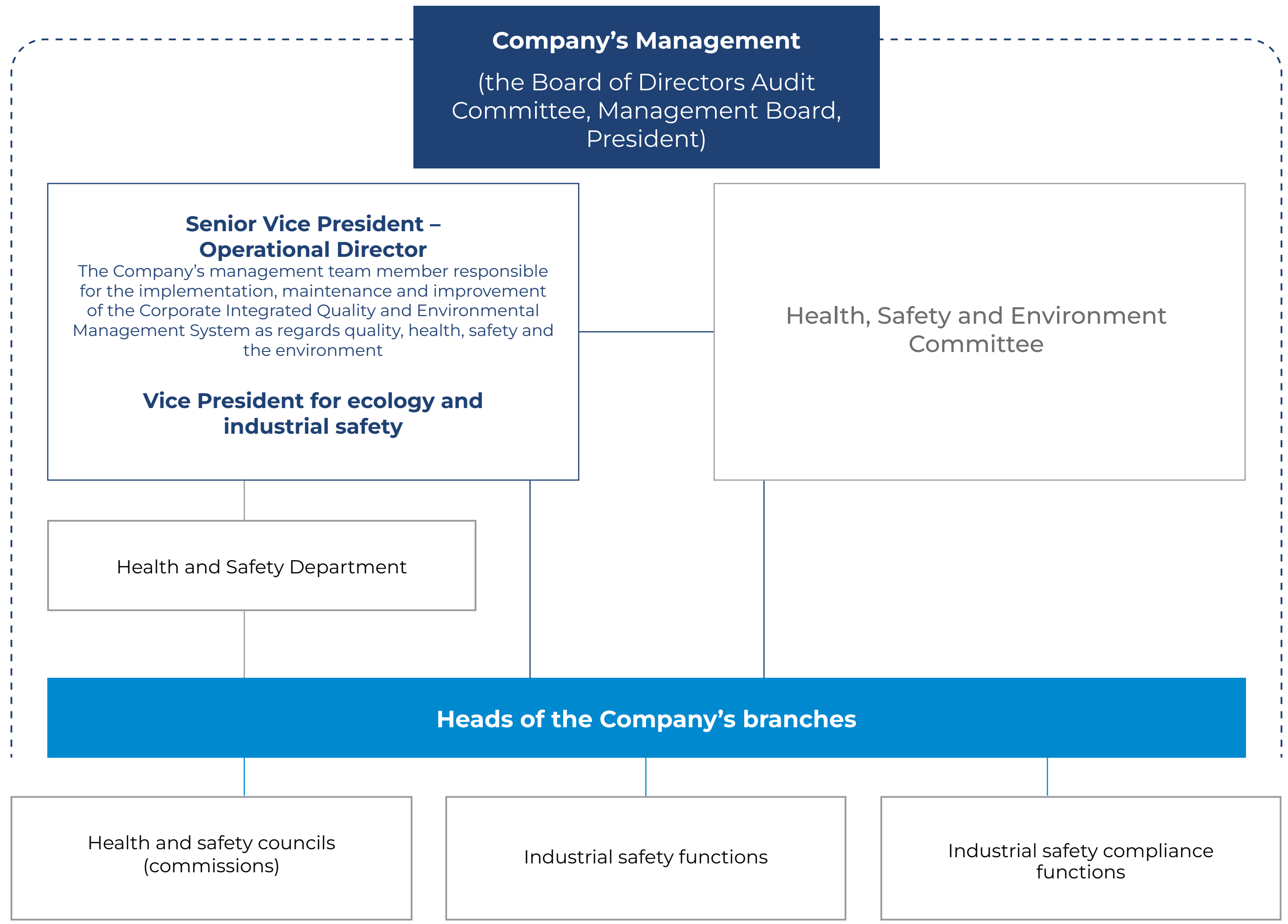
20% **in team KPIs of all employees**

Goal: Deliver on the action plan in health and safety and reduce FIFR by 20% or more year-on-year

12–28% in individual KPIs of production site managers

Goal: Deliver on the injury prevention plan and achieve zero work-related fatalities

MANAGEMENT SYSTEM



The Audit Committee deals with industrial safety matters. The Committee reviews management reports on industrial safety performance every quarter, with management participating in the Committee's meetings, providing detailed account of causes of accidents, measures taken to prevent similar accidents in the future and disciplinary actions taken against the employees at fault.

The Company's Health, Safety and Environment Committee, led by the Senior Vice President – Operational Director, is focused on improving performance and accountability in health and safety. The Committee meets quarterly at various production sites of the Group.

Remuneration payable to all heads of production units is linked to work-related injury rates. They are personally responsible for the life and health of each of their subordinates. Industrial safety metrics weigh between 12% and 28% in individual KPIs of production site managers. Failure to prevent a fatality blocks performance bonuses. In addition, team KPIs for all employees include injury rate and FIFR[1] reduction by 20% or more (20% of the team KPIs).

[1] Fatal Injury Frequency Rate is the number of fatalities per 1 million hours worked.

Certifications and audits

As at the end of 2022, 47% of the Group companies had health and safety certification.

Certificate	Certified assets	Auditor
ISO 45001	MMC Norilsk Nickel Kola MMC Pechengastroy Norilsk Nickel Harjavalta	Bureau Veritas Certification

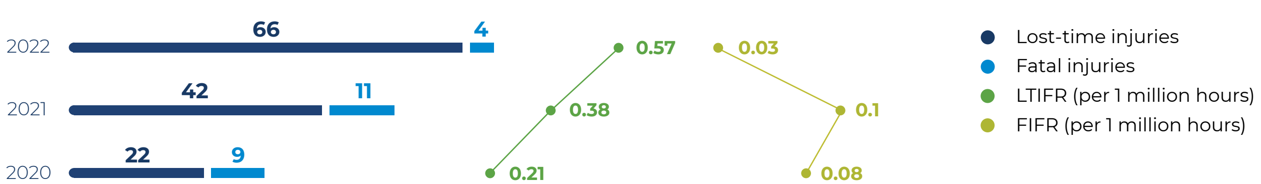
In 2022, surveillance audits confirmed compliance of the occupational health and safety management systems of MMC Norilsk Nickel facilities (Head Office, Polar Division, Polar Transport Division, and Murmansk Transport Division) with ISO 45001:2018 international standard. The auditor, Bureau Veritas, noted a high level of maturity and development of the occupational health and safety management system and confirmed the system's compliance with the standard.

The Group's production units are also regularly audited for compliance with applicable health and safety requirements. A total of 52 audits took place in 2022 in accordance with the approved schedule, with production site managers and their deputies also involved in the audits.

WORK-RELATED INJURIES

In 2022, the number of fatalities fell to 4 from 11 in 2021, as a result of measures to improve the occupational health management system and the implementation of injury prevention programmes. The decrease was driven mostly by the Norilsk Division, delivering a 4-fold reduction in fatalities, and the Trans-Baikal Division and Energy Division, achieving zero fatalities. Growth in the number of lost-time incidents (66 vs 42 in 2021) was linked to higher transparency in accident reporting.

Work-related injuries across the Group



Causes of fatalities

Item	2020	2021	2022
Fall from height	0	1	1
Falling objects	2	0	0
Moving objects/parts	1	3	0
Rock fall	2	2	2
Road traffic accident (RTA)	0	0	0
Electrocution	3	1	0
Exposure to extreme temperatures	0	0	0
Explosion	0	0	0
Other	1	4	1
Total	**9**	**11**	**4**

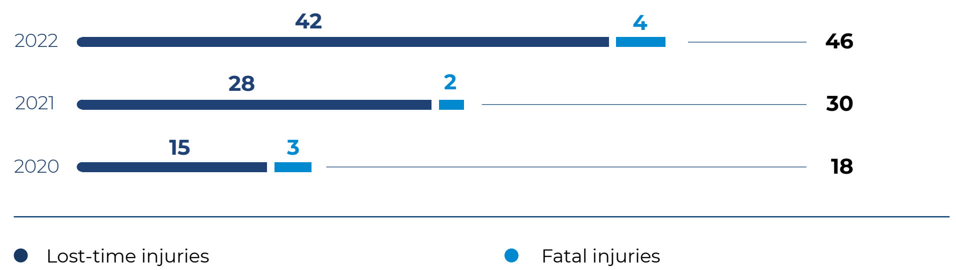
Two fatalities were caused by rock falls, one in the Kola Division and one in the Norilsk Division. Investigations into these mining accidents resulted in a number of measures: the Company developed and implemented technical measures to support mechanised mining, purchased a face drilling rig and automated temporary supports and conducted a series of audits to monitor the implementation of mine surveyors' instructions. Another fatality was due to a fall from height when operating a crane. To prevent similar accidents in the future, a multidisciplinary team will regularly inspect bridge cranes, evacuation routes and emergency evacuation equipment. Plans for 2023 include equipping bridge cranes with remote control systems and safe ways to access crane runways. A mine accident that occurred when operating an electric locomotive triggered investigation, resulting in measures to set up transport arrangements for employees to safely access their work area, prevent unauthorised use of electric locomotives and review the mine rail infrastructure repair programme.

All accidents were thoroughly investigated, with the resulting reports submitted to the Board of Directors and action plans developed to eliminate their root causes. Nornickel's management reinforces the Group's commitment to achieving zero work-related fatalities and sees fatality-free operations as its strategic priority. The Company continues to implement dedicated programmes to prevent and avoid accidents and work-related injuries. A comprehensive review of industrial safety standards and requirements has been scheduled for 2023 to prioritise focus areas for reducing safety breaches that may result in fatalities or serious injuries.

CONTRACTOR RISK MANAGEMENT

The Company's industrial safety standards also apply to its contractors.

Contractors' work-related injuries



The increase in work-related injuries among contractors in 2022 was linked to 50% higher staffing levels required to implement major investment projects. In the reporting year, the Company reviewed the general terms and conditions related to occupational health in its contracts with contractors to emphasise the achievement of zero fatalities and the compliance with the golden rules of safety in line with the Company's goals and also to enable contractors to take proactive action on occupational health. In 2022, Nornickel regularly monitored its contractors' compliance with the H&S requirements, including through joint inspections of compliance with work safety requirements and meetings of health and safety councils (committees) involving contractor representatives.

To improve control and safety of work performed by contractors at its facilities, in 2022, Nornickel updated the standard that sets out relevant requirements for H&S management at all stages. Prior to the commencement of any work, contractor employees are required to receive induction and targeted briefings on occupational health. The standard provides for fines where a contractor's non-compliance has been identified.

RISK MANAGEMENT

The Company has a zero-tolerance approach to unsafe behaviours, as prevention of safety breaches plays a critical role in reducing injuries and accidents.

To keep employees well-informed about safety measures, we regularly develop and update H&S guides, videos, presentations, and other visuals highlighting the most important guidance to protect life and health in various situations or when performing certain types of work.

In 2022, the Company revised its incentives around occupational health performance. Starting from 2023, employees will be rewarded for identifying risks in their workplace.

In 2022, Norilsk Concentrator launched a safety culture transformation project focused on a risk-based approach. The project involved a diagnostic of safety culture and certain processes, a strategy session to identify key systemic measures, training for pilot shops, and a review of the risk identification and assessment system. To date, the project has identified 462 risks, of which 101 have been eliminated and 222 were reported by workers. The project will continue in 2023.

GOLDEN RULES

In 2022, the Company revised and updated its Golden Rules of Safety, using an analysis of fatalities in 2017–2021. Employees who violate these rules are now subject to termination.

Breaking golden rules of safety can be fatal

1. No working at height without a safety harness
2. No operations in workings with unbolted and/or loose roof
3. No loading, unloading or moving loads near people
4. No maintenance or repair of equipment without completely disconnecting it first and blocking the power supply
5. No energised electrical work on electrical installations or electrical equipment
6. No driving or transferring people in vehicles not designed for these purposes

Nornickel's production enterprises have process-, job- and operation-specific regulations and guidelines in place containing dedicated industrial safety sections. For instance, workers with on-site production experience of less than three years wear special red helmets with the word "Caution" on them and protective clothing with "Caution" badges that make them stand out.

PREVENTION AND CONTROL MEASURES

Nornickel has developed and put in place an H&S monitoring system featuring multi-tier control with ad hoc, targeted and comprehensive H&S inspections. The first tier control involves the line manager (aided by designated members of the occupational health team) and focuses primarily on workplace set-up. The second and higher control tiers involve special H&S commissions with representatives of management and employees.

In 2022, the incident reporting procedure was changed to accelerate responses, and the incident classification system was improved to enhance further analysis. The investigation and root cause identification process was significantly transformed to further boost accident prevention capabilities.

In addition to the above prevention and control initiatives, the Company has set up and conducts regular behavioural safety audits. The prevention and control team has identified and disciplined over 7 thousand non-compliant employees, including by partially or completely stripping them of their bonuses.

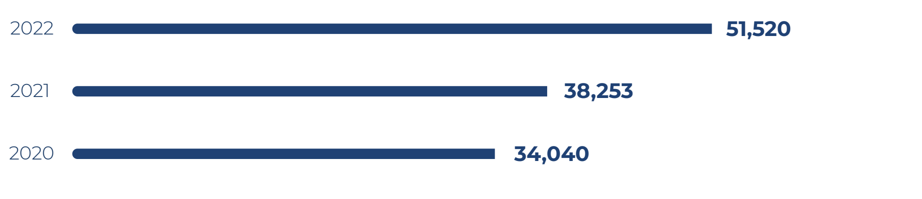
In 2022, Nornickel further improved and integrated the Control, Management, Safety Automated System (CMS AS) into the corporate IT architecture, introducing more than five new algorithms to notify responsible persons via the corporate email, as well as integrating it with related SAP ERP, SAP BW (ACS) and the Nika virtual assistant. In December 2022, the corporate data warehouse was integrated with the Unified System of Corporate Reporting Indicators, enabling rapid generation of annual reports online to deep dive into injury rates across the Group.

INSTILLING A SAFETY CULTURE AMONG EMPLOYEES

The Company is committed to ensuring its people have all the necessary knowledge, skills and capabilities to perform their duties in a safe and responsible manner.

Training starts immediately after an employee is hired, with a health and safety induction and subsequent on-the-job briefings. Briefings are then repeated regularly in accordance with the existing corporate programmes. There are also interactive training courses for employees in main occupations. In 2022, over 51 thousand Group employees were covered by these trainings and briefings. All Group employees also regularly take online industrial safety trainings and final tests.

Employees trained in workplace safety



In 2022, the Company launched a project to establish a corporate safety coaching institute. The project covers 18 enterprises with 42 dedicated safety culture coaches among them, currently offering two training courses – Dynamic Risk Assessment for blue-collar employees and Behavioural Safety Audit for line managers. A training course comprises active classroom sessions, engaging all participants, followed by practice sessions in real workplace settings, such as a mine or a production shop. By 2022-end, 750 trainings were delivered to a total 5,268 employees.

42 coaches
on safety culture joined the Company in 2022

750 trainings
held by 2022-end

5,268 employees
trained under the safety culture project

OCCUPATIONAL DISEASES AND THEIR PREVENTION

Newly identified o cupational diseases

Contribution to the UN SDGs

The Company is implementing a large-scale environmental program aimed at reducing harmful emissions into the atmosphere to minimise the risk of occupational diseases. The Company also promotes disease prevention and healthy lifestyle among its workforce, with management focused on communicating to all employees the importance of complying with occupational safety requirements and protecting one's own health.

Nornickel also seeks to introduce meaningful occupational health initiatives taking into account both workplace and individual risk factors. Production enterprises have dedicated medical aid posts to perform pre-shift health checks and provide medical assistance on request during working hours.

Employees are provided with safety clothing, footwear and other personal protective equipment to mitigate the adverse impact of work-related harm.

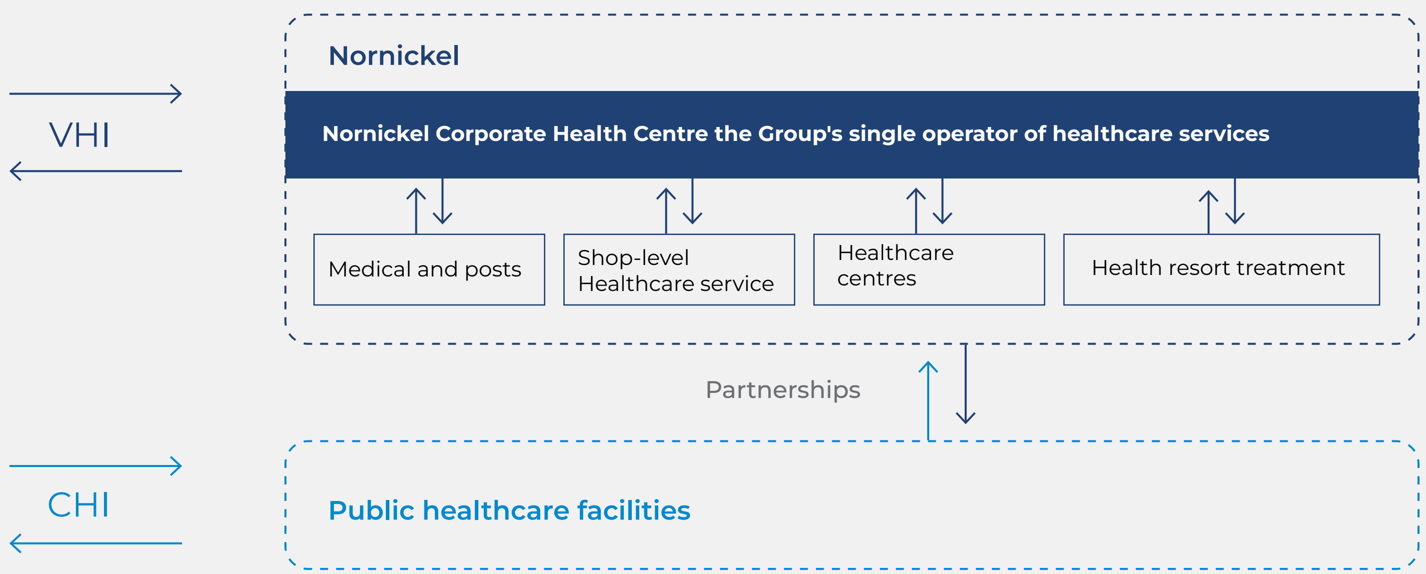
Employees working in contaminated conditions are provided with free-of-charge wash-off and decontaminating agents.

The Company offers its staff regular disease prevention screening in line with recommendations from the healthcare authorities. All employees regularly undergo mandatory medical examinations paid for by the Company, and special examinations at occupational pathology centres are provided to employees exposed to hazardous substances.

Employees working in harmful and hazardous conditions receive free food, milk and other nutritional products for therapeutic and preventive purposes to promote health and prevent occupational diseases.

The Russian Federal Service for Surveillance on Consumer Rights Protection and Human Wellbeing (Rospotrebnadzor) constantly scrutinises the impact of emissions on the health of the local population in the Company's operating regions as the healthcare system is almost entirely state-run. Sulphur dioxide emissions in Norilsk have decreased by 30%–35% over the period since Nickel Plant shutdown in 2016. According to Rospotrebnadzor, the total number of newly diagnosed cases in the Norilsk Industrial District decreased by 19% in 2021 (from a 2016 baseline), specifically for disorders of blood and blood-forming organs, as well as other disorders, including the immune system (down 50%), tumours (down 64%) and cardiovascular diseases (down 30%).

Nornickel's medical care framework



Digital Healthcare

DIGITAL HEALTHCARE

Single health data repository	Contains health data of more than 70 thousand employees across the Company's entire workforce
Electronic health check-up system	Automates health check-ups and enables analyses of employees' health data
Telemedicine	Enables a doctor from anywhere in the country to consult with experts from central clinics
Radiology system	AI-based system for analysing and processing medical images
Biosensors	Round-the-clock health data monitoring with wearable sensors
Disease risk assessment	Tracks changes in the body that can lead to a disease, enabling early prevention

CORPORATE HEALTHCARE

The Company has a Corporate Healthcare programme in place to improve the availability of medical care in the regions of its operation for both employees and members of their families. To this end, the Company set up a dedicated subsidiary, Nornickel Corporate Health Centre, and started to roll out its own network of corporate healthcare centres across its footprint, equipped with latest medical equipment and staffed by highly qualified healthcare workers. Under this programme, Company employees enjoy a wide range of quality medical care and timely medical aid services both at its healthcare centres and enterprises.

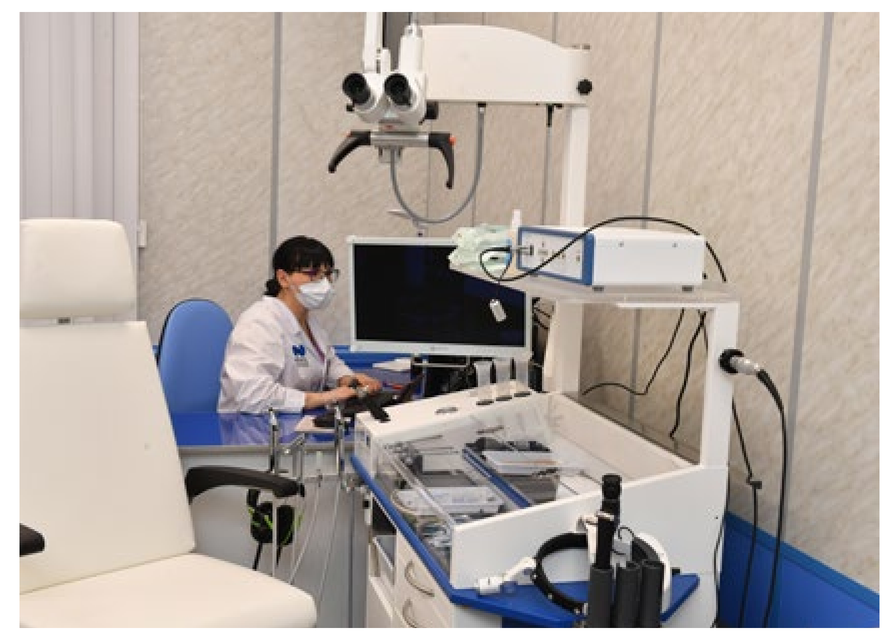
In December 2021, Nornickel opened its first corporate healthcare centre under the Z-Clinic brand in Norilsk to primarily focus on patients under the VHI programme. The centre currently provides 246 types of medical services across 12 primary care specialties. Over its first year of operation, the centre accommodated about 70 thousand patient visits. The average appointment wait time for many doctors ranges from 7 days to 1 month, which confirms the high local demand for medical care.

In 2022, the Company continued to develop its network and started work of opening two more healthcare centres – in the Talnakh District of Norilsk and in Monchegorsk. Another focus area is a programme to set up smaller healthcare units in remote areas.

The Company is running to establish healthcare centres across its footprint to serve all local residents under the CHI programme. In the reporting year, two new healthcare facilities were repaired and equipped: an MRI centre in Monchegorsk and a healthcare centre in Dudinka. The centres are expected to welcome their first patients in the first half of 2023.

The Workshop Medical Service has started its work, designed to bring quality medical care closer to employees at work and strengthen the prevention of disease detection.

The Company also rolled out its **Digital Healthcare** programme to implement innovative IT solutions in medical technology. Introduced in 2021 at Zapolyarye Health Resort, the programme was launched in Norilsk in 2022 and is expected to cover healthcare facilities on the Kola Peninsula in 2023. Employees can now use a new mobile app to quickly access their medical records, make an appointment with a doctor and get all the information they need about the clinics' services. Development plans include fully digitising key medical documents (an electronic health record project), setting up a new automated system for advanced diagnostics and rolling out a disease risk assessment system.



ENVIRONMENTAL PROTECTION AND CLIMATE CHANGE

Contribution to the UN SDGs

ENVIRONMENTAL STRATEGY

In 2020, Nornickel developed its Holistic Environmental Strategy which sets clear goals across key focus areas: climate change, air, water, soil, waste, and biodiversity. In 2021, the Strategy was further detailed and approved by the Board of Directors, with an update scheduled for the second quarter of 2023.

For more details on the Environmental Strategy, see the Company website.

ENVIRONMENTAL MANAGEMENT SYSTEM

Nornickel's Environmental Management System (EMS) is part of the Corporate Integrated Quality and Environmental Management System. This ensures coordination between all environmental matters and other areas, enhancing the Company's overall performance on environmental safety.

System audit

At the end of 2022, 44% of Group companies (by average headcount) were certified to ISO 14001:2015, an international environmental standard.

Certificate	Certified assets	Auditor
• ISO 14001:2015	• MMC Norilsk Nickel (Head Office, Polar Division, Polar Transport Division, and Murmansk Transport Division) • Kola MMC • Norilsk Nickel Harjavalta	• Bureau Veritas In 2022, a surveillance audit was conducted (annual) In 2021, a recertification audit was conducted (once every three years)

The recertification audit conducted in 2021 confirmed the Company's compliance with ISO 14001:2015, with a certificate of compliance issued for another (sixth) certification period. Following the second surveillance audit of the sixth certification period in November 2022, the auditors concluded that the Company successfully demonstrated that it had deployed and was maintaining and continuously improving its Corporate Integrated Quality and Environmental Management System, as well as confirmed its compliance with ISO 14001:2015.

CLIMATE CHANGE

OUR APPROACH

The current approach and further development of the climate risk management system are based on the TCFD (Task Force on Climate-related Financial Disclosures) framework, covering strategy, corporate governance, risk management, metrics, and targets.

The Company has in place the Sustainable Development and Climate Change Committee of the Board of Directors, the Board-approved Climate Change Policy and the management-approved TCFD Compliance Roadmap.

We aim to be a sustainable and reliable partner. One of our key priorities is to retain a competitive carbon footprint while boosting metals production to enable the global transition to a green economy.

9.7 t CO_2 per tonne of metal

the carbon footprint of nickel metal production in 2021, in line with international standards

In line with its TCFD Compliance Roadmap, the Company has developed three scenarios of the global economy development and climate change until 2050.

Rapid Transition	Sustainable Palladium	Global Growth
Probability 25%	Probability 70%	Probability 5%
Human and environmental well-being	Continuation of current socio-economic and technological trends	Hydrocarbon-driven rapid technological advancement and economic growth
+1.7 °C[1]	+2.0 °C[1]	+2.5 °C[1]

The Company has chosen the Sustainable Palladium as its baseline scenario, according to which traditional industries are expected to continue playing a significant role amid a growing green economy. In particular, internal combustion engine vehicles are expected to retain a large market share, resulting in a steady long-term demand for palladium. The other two scenarios will be used by the Company to stress-test climate-related risks.

[1] Projected temperature increase above pre-industrial levels by 2050.

PERMAFROST MONITORING

The key risk entailed by global climate change for the Northern climatic zone covering the Norilsk Industrial District includes permafrost thawing, which can significantly reduce permafrost bearing capacity. To minimise such risks, improve the Company's asset life cycle management and forecast the potential negative impact of higher soil temperatures on buildings and structures, the Company has taken proactive mitigation measures, including:

- measures to identify climate risk factors;
- developing and testing a model to assess the impact of climate change risk factors on the Company's assets;
- introducing the building and structure monitoring system in the Norilsk Industrial District.

The large-scale automated monitoring programme aims to equip the Company's buildings and structures with an array of sensors, which will feed real-time data to the main control centre. In total, the programme is planned to install sensors across at least 1,500 facilities in the Norilsk Industrial District.

Key activities implemented in 2021–2022:

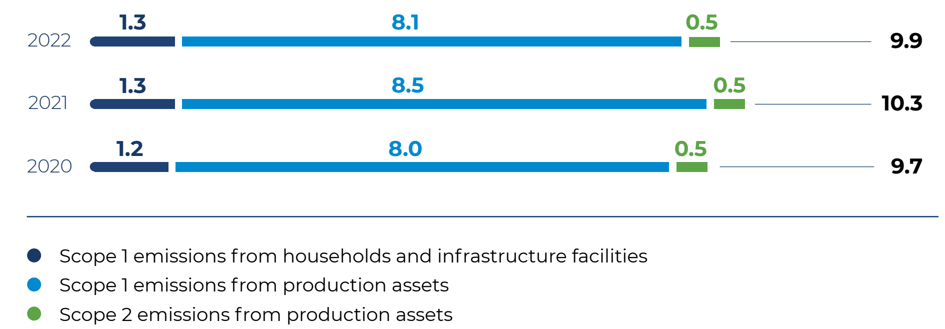
- Creating and launching an IT platform to process both automatically and manually collected data from sensors and the Company's geotechnical monitoring business process;
- Launching systems for automated monitoring of foundation soil temperature, foundation deformations and the temperature and humidity in ventilated crawl spaces across 165 buildings and structures;
- Satellite monitoring of the Company's assets, which provided a set of data on land surface displacements to bring dedicated management focus to identified issues when conducting field studies of buildings and structures;
- Completing the design of automated monitoring systems for the programme's Phase 2 buildings and structures (production facilities of NTEC and tailings storage facilities of the Company's Norilsk Division). Phase 2 deployment of the monitoring system will be completed by 2025.

In 2022, the Company focused on building a research and practice framework for its asset life cycle management strategy. Efforts to this end included drilling deep monitoring wells (200 m) in populated areas of the Norilsk Industrial District to study the permafrost soil temperature range and assess the impact of global climate change on permafrost (including restoring a deep well in the centre of Norilsk, where temperature measurements have been taken since as early as the 1960s). The Company has partnered with leading expert and R&D organisations studying permafrost as well as construction and operation of buildings and structures in northern climates. The Company constantly collects, compiles and analyses data on permafrost soil composition and properties, including historical data from engineering surveys that were carried out in the Norilsk Industrial District throughout its history from the very beginning. Plans include building and implementing predictive models as well as shifting to advanced smart manufacturing technologies, big data processing systems, machine learning, and AI to support decision making around construction and operation of buildings on permafrost.

GHG EMISSIONS

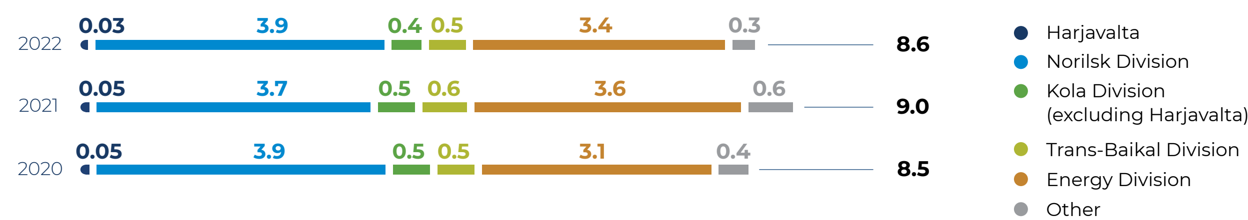
In 2022, direct and indirect greenhouse gas emissions (Scope 1 + 2) from operations were 8.6 mln t [1], down 6% y-o-y. The decrease was due to streamlining CHPP operating modes and HPP loads as well as the weather factor – in 2022, the heating period was shorter than in 2021 due to a warmer winter.

Scope 1 + 2 GHG emissions (mln t of CO_2 eq)[2]



Indirect emissions (Scope 2) were calculated using the location-based method, including regional emission factors. Notably, Bystrinsky GOK, the key enterprise of Nornickel's Trans-Baikal Division, signed an unregulated bilateral agreement to purchase 118.3 mln kWh of electricity to reduce its impact on the climate.

GHG emissions from operations by division in 2022, Scope 1 + 2 (mln t of CO_2 eq)



Nornickel's key production facilities are located in the Norilsk Industrial District, in the Arctic Circle, and operate in sub-zero temperatures for about eight months of the year. Since the Norilsk Industrial District is isolated from the federal energy infrastructure, Nornickel generates electricity and heat locally at its own generating facilities (100% owned by the Group). As a result, the bulk of GHG emissions comes from the Company's energy assets. At the same time, as Nornickel is the only producer of electricity and heat in the Norilsk Industrial District, the Company also fully meets the demand for energy and heat from social infrastructure facilities and the local population. The share of GHG emissions generated by infrastructure facilities and households in Nornickel's regions of operation is on average 12% of total Scope 1 and 2 GHG emissions.

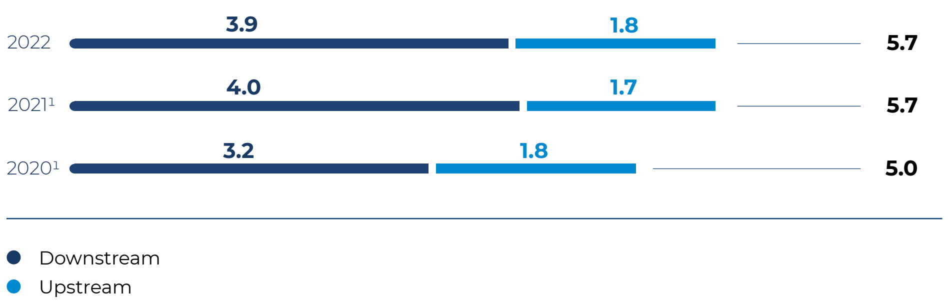
[1] Including the emissions allowance for the Sulphur Project and excluding GHG emissions from heat and electricity supplies to household consumers.
[2] GHG emissions were calculated as per the GHG Protocol Guidelines. Estimates of greenhouse gas emissions for the Group included the following greenhouse gases: direct emissions of carbon dioxide (CO2) – 9.7 mln t, nitrogen oxide (N2O) – 53.31 kt and methane (CH4) – 2.5 kt, mostly from gas transportation, including the Sulphur Project, and heat and electricity supplies to household consumers.

Scope 3

In 2022, the Company published its first Scope 3 upstream GHG emissions estimate. Emissions were estimated across all categories of the GHG Protocol. The bulk of the emissions is related to the purchase of goods and equipment from third-party suppliers as well as the consumption of energy and fuel not included in Scope 1 and 2. In 2022, the Company continued to quantify its Scope 3 downstream GHG emissions in line with GHG Protocol.

Downstream emissions include those associated with transportation of sold products from the Company to the customer and first use of the product. Iron ore concentrate accounted for the largest share of the total emissions (86%) as its processing is a highly carbon-intensive process. Due to the mix and size of its product portfolio, Nornickel's Scope 3 downstream emissions are lower than those of its global metals and mining peers.

Scope 3 GHG emissions (mln t)



RENEWABLES AND ENERGY EFFICIENCY

The Company's key renewable energy source is hydropower generated by the Group's Ust-Khantayskaya and Kureyskaya HPPs. In 2022, the share of renewables in total electricity generation stood at 51% for the Group and 56% for the Norilsk Industrial District.

Nornickel has its own energy assets located in the Norilsk Industrial District, in the Arctic Circle, operating in sub-zero temperatures for about eight months of the year. Since the Norilsk Industrial District is a remote area isolated from the federal energy infrastructure, Nornickel has historically been fully self-sufficient in building its operations, including in terms of electricity/energy generation and transmission. As the only producer of electricity and heat in the Norilsk Industrial District, the Company also supplies energy to social infrastructure facilities and the local population.

Natural gas and renewables (hydropower) are the core low-carbon sources for energy generation. Diesel fuel, fuel oil, petrol, and jet fuel are used by Nornickel's transport assets. Use of coal by energy assets is minimised to only small amounts in certain production processes.

The use of other renewables, such as solar and geothermal energy, is impracticable as Nornickel's core production assets are located in the Arctic Circle in the Norilsk Industrial District, in harsh climatic conditions. As to wind farms, the Company considered them as part of a feasibility study in 2022. While there are currently no viable options to construct a wind farm in the Norilsk Industrial District, the Company will continue exploring available opportunities.

[1] In 2022, the calculation procedure was improved by updating a number of GHG emission factors for the production of metals and concentrates sold by the Group. The 2020 and 2021 data were recalculated using the updated 2022 emission factors.

Due to harsh climates, not all renewables are available in the Arctic Circle

SOLAR POWER

~ 8 months a year — air temperatures below freezing point

~ 100 days — duration of polar nights and twilights

~ 70 days per year — sunny days

GEOTHERMAL ENERGY

Permafrost — **300 to 500 m deep**

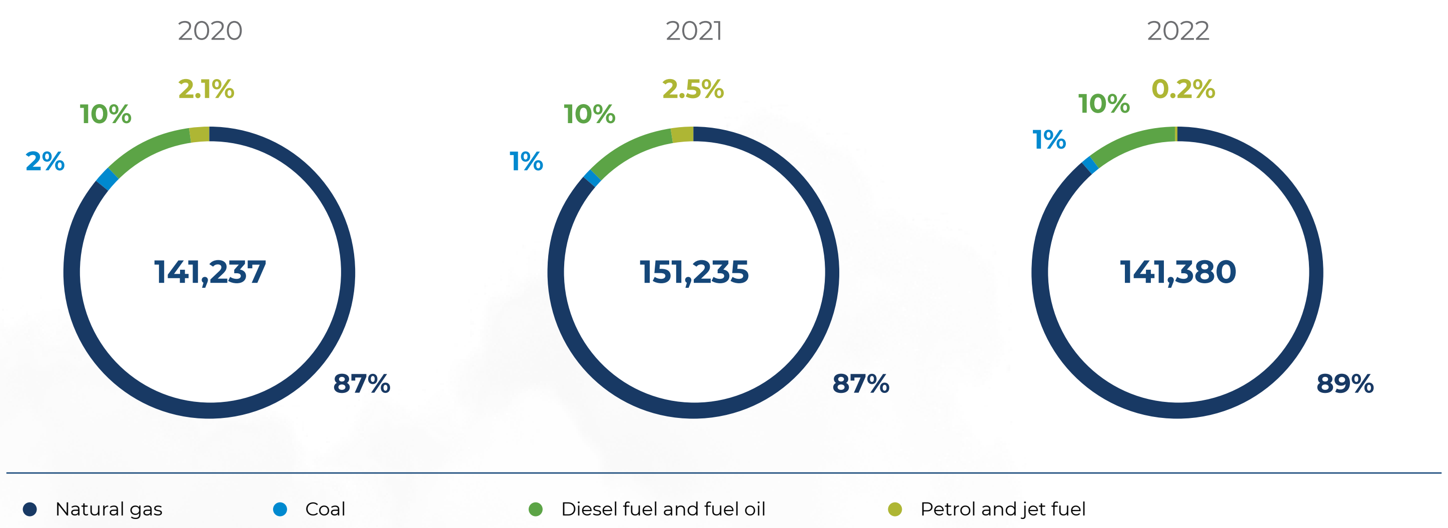
The Group's own energy assets produce about 54% of total energy and 83% of electricity consumed by the Group. The Group also supplies electricity and heat to external consumers, primarily local social infrastructure and local communities in the Norilsk Industrial District.

Energy generation and consumption by the Group[1] (TJ)

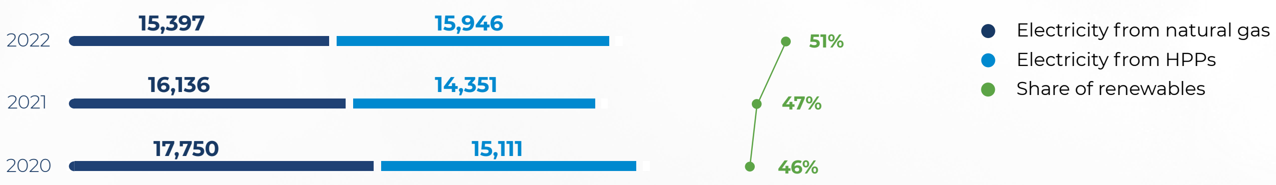
Item	2020	2021	2022
Fuel consumption by the Company[2]	141,237	151,235	141,380
• Natural gas	122,216	130,867	125,933
• Diesel fuel and fuel oil	13,939[3]	15,097	13,581
• Petrol and jet fuel	2,902	3,715	311
• Coal[4]	2,180	1,557	1,555
Electricity and heat from own renewable sources (HPPs)	15,310	14,586	16,152
Electricity and heat purchased from third parties	11,200	10,891	11,005
Sales of electricity and heat to third parties	17,254	19,974	18,968
Total consumption of electricity and fuel[5]	**150,128**	**156,383**	**149,274**

[1] For a detailed breakdown of the Group's energy consumption by enterprise, see Nornickel's Sustainability Report 2022.
[2] Including the fuel used to generate electricity for Norilsk.
[3] Including the diesel fuel spill in May 2020.
[4] Coal is only used in production processes, with the Kola Division accounting for 60% of total consumption, the Trans-Baikal Division 20% and the Norilsk Division 20%.
[5] Including losses.

Fuel consumption (TJ)



Electricity consumption (TJ)



The 7% y-o-y decrease in fuel consumption was primarily driven by reduced gas consumption (down 4%) due to the growing share of renewable electricity and by lower jet fuel consumption (down 92%) due to the sale of NordStar Airlines.

The Group attaches great importance to improving the energy efficiency of its existing and future production sites, focusing on keeping GHG emissions within the declared targets under its comprehensive environmental programme. In 2022, the Company invested more than USD 450 million in upgrading its energy infrastructure. The investments cover a wide range of projects related to equipment replacement at thermal and hydropower plants and upgrades of fuel tank storage facilities, power grids and gas pipelines.

Electricity savings totalled 111,759 thousand kWh in 2022, with 45 energy-saving initiatives implemented.

> USD 450 mln

invested in upgrading the energy infrastructure in 2022

111,759 thousand kWh

total energy savings in 2022

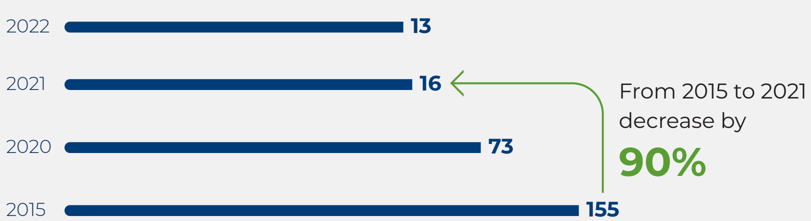
AIR

High sulphur dioxide emissions from the smelting of sulphide concentrates with high sulphur content are a key environmental issue for the Company.

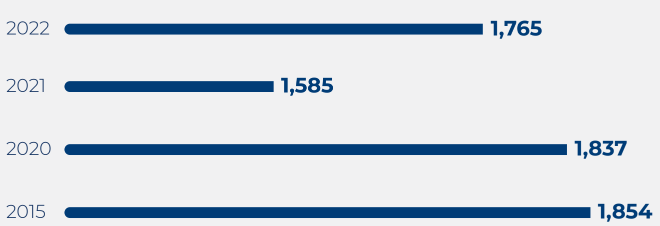
OUR TARGETS

Nornickel's strategic plan is to transform the Company into an environmentally clean and safe business by implementing Sulphur Project 2.0 across the Norilsk and Kola Divisions and thus cutting its sulphur dioxide emissions.

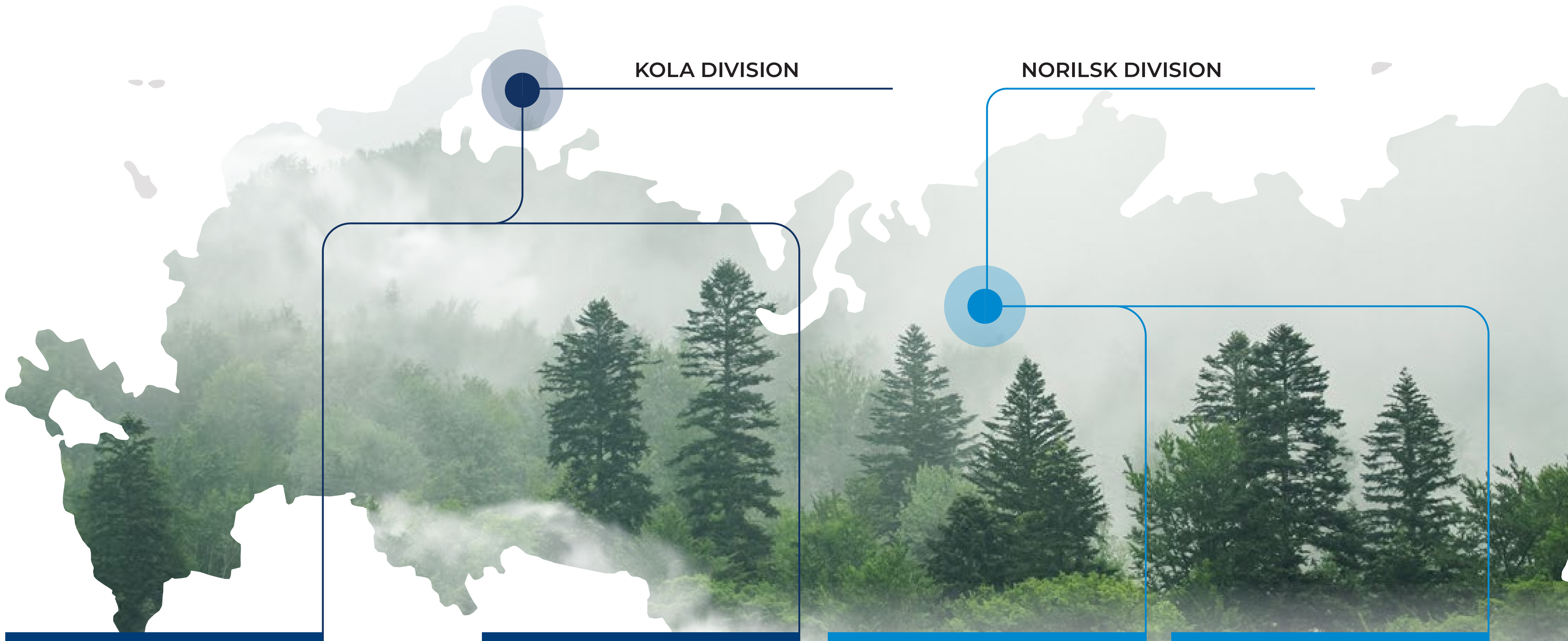
SO2 emissions from Kola Division, kt



SO_2 emissions Norilsk Division, kt



SULPHUR PROGRAMME 2.0: REDUCTION IN SO_2 EMISSIONS



KOLA DIVISION

2020

Optimization of smelting operations to cut SO_2 emissions in Russia-Norway border zone

Target: 50%[1]
reduction in SO_2 emissions in Nickel town and city of Zapolyarny

Fact:
Outdated smelting shop was shut down in Nickel town in December 2020

by 71%[1] — 2ˊ

SOˇ emissions were reduced in Nickel town and city of Zapolyarny in 2020

2021

Complete shut-down of the obsolete Copper refining line and metallurgical shop on the Kola Peninsula

Target: 85%[1]
reduction in total SO_2 emissions at Kola Division

Fact:
Metallurgical shop was shut down in March 2021

by 90%[1] — 7ˊ

SOˇ emissions were reduced in 2021 at Kola Division

NORILSK DIVISION

2023

Programme 2.0 project at Nadezhda smelter to capture furnace gases

Target: 45%[1]
reduction in SO_2 emissions at the Norilsk Division facilities once the design capacity is reached. The design capacity is expected to be achieved in 2024

~2ˊ

In progress

Redisign

Launch of Sulphur Programme 2.0 at Copper Plant to capture furnace and converter gases[2]

Target: up to 90%[1]
reduction in SO_2 emissions at the Norilsk Division facilities after the design capacity is reached

~10ˊ

Redesign (2023) and in progress

[1] Compare to «base» 2015 year.
[2] The mplementation timene for the project at Copper Plant is indicated in accordance with the Polar Division's Enveonmental Performance invitere Progranime (2020) taking into account Clause 6 of Appendix No. 8 to Resobtion of the Russian Government No. 353 dated 12 March 2022.

Item	2020	2021	2022
Across the Norilsk Nickel Group	**1,968**	**1,647**	**1,819**
Sulphur dioxide (SO_2)	1,911	1,601	1,778
Nitrogen oxide (NO_x)	10	11	10
Particulate matter	15	9	11
Other pollutants	31	25	21
· **including the Norilsk Division**	**1,858**	**1,604**	**1,782**
Sulphur dioxide (SO_2)	1,837	1,585	1,765
Nitrogen oxide (NO_x)	1	1	1
Particulate matter	4	5	7
Other pollutants	16	13	8
· **including the Kola Division**	**83**	**20**	**16**
Sulphur dioxide (SO_2)	73	16	13
Nitrogen oxide (NO_x)	2	2	1
Particulate matter	6	1	1
Other pollutants	2	1	1
· **including the Trans-Baikal Division**	**5**	**3**	**4**
Sulphur dioxide (SO_2)	1	0	0
Nitrogen oxide (NO_x)	0	0	0
Particulate matter	3	2	3
Other pollutants	2	1	1
· **including other entities**	**22**	**20**	**18**
Sulphur dioxide (SO_2)	0	0	0
Nitrogen oxide (NO_x)	7	9	7
Particulate matter	2	0	0
Other pollutants	12	11	11

In 2022, the Group's pollutant emissions totalled 1.8 mln t, up 10.5% y-o-y. The increase was caused by production recovery in the Norilsk Division after a decline in 2021 that followed suspension of operations at Norilsk Concentrator and the temporary shutdown of two mines due to flooding. The Kola Division continued reducing its emissions with the closure of certain obsolete production facilities: total gross emissions were down 18% from 2021.

WATER

The Company's assets are located in regions with sufficient water resources. In 2022, as in previous years, no shortage of water was reported as enterprises and households were supplied with sufficient amounts of water.

Nornickel is extremely careful about its use of fresh water and strictly complies with restrictions applicable to industrial water withdrawal.

Nornickel's key production facilities use closed water circuits to keep water withdrawal on a relatively low level. Furthermore, the Company never withdraws water from protected natural areas. The water we used was mostly withdrawn from surface and underground water bodies, in addition to third-party wastewater and natural water inflow. The total water withdrawal remained flat y-o-y in 2022. Natural water inflow and meltwater accounted for 17.6% of the total water withdrawal in 2022. All facilities using water have programmes in place to monitor water bodies and water protection areas.

In 2022, 81.8% of all water used was recycled or reused, in line with the Company's strategic goals.

Nornickel is committed to responsible and sustainable use of water resources and prevention of water body pollution.

Total fresh water withdrawn[1] (Mcm)

Water consumption and wastewater discharge in 2022

Water withdrawal

353 Mcm

Surface sources **- 233 Mcm**

Underground sources **- 24 Mcm**

Wastewater **- 24 Mcm**

Natural water inflow **- 62 Mcm**

Other **- 9 Mcm**

Consumption

1,351 Mcm =

246 (fresh water)

+

1,105 (reused and recycled water)

27 Mcm - water reused in other production processes (2%)

1,078 Mcm - recycled water (80%)

Wastewater discharge

168 Mcm

Clean **- 90 Mcm**

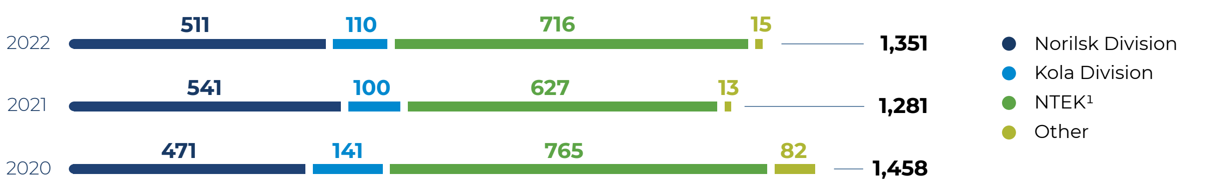
Treated **- 4 Mcm**

Insufficiently treated **- 34 Mcm**

Contaminated **- 41 Mcm**

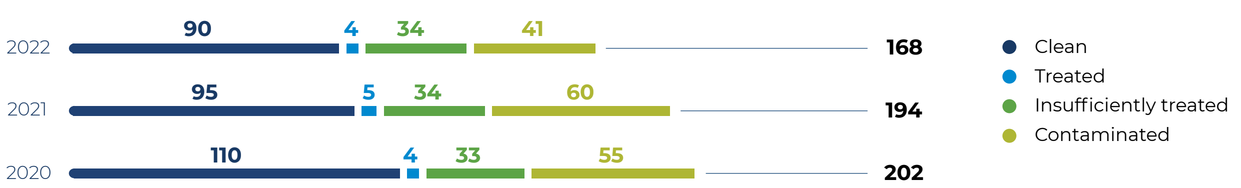
[1] With the exception of mine waters for production activities.

Water consumption (Mcm)



The slight increase in water consumption in 2022 was due to the commissioning of new facilities at the Kola Division, the nickel carbonyl section reaching high capacity and the concentrate shipment unit at the Concentrator ramping up to design capacity.

Wastewater discharge (Mcm)



Wastewater discharge into water bodies also does not exceed the approved limits or have any material impact on biodiversity of water bodies and related habitats. In 2022, the Company decreased its total wastewater discharge by 13.4% y-o-y and also untreated wastewater discharge by 32.5% y-o-y.

In 2022, the mass of pollutant discharges decreased by 12% y-o-y. The decrease in wastewater and pollutant discharges was attributed to a lower volume of water inflow into underground workings due to weather conditions.The Company makes every effort to ensure that substance concentrations in wastewater are kept within regulatory limits, with all division-level programmes at the Company containing measures to this end.

by 13.4%

decrease in wastewater discharge in 2022

Water risk management

The Company's ongoing procedures to assess the risks of its impact on water resources include:

- wastewater inventory
- monitoring of wastewater discharge volume and quality at discharge sites
- observation of surface water bodies at control points upstream and downstream of discharge sites
- investments in improving the performance of water treatment systems and building new systems
- monitoring of wastewater treatment processes at treatment facilities and implementation of organisational and technical measures to improve treatment effectiveness.

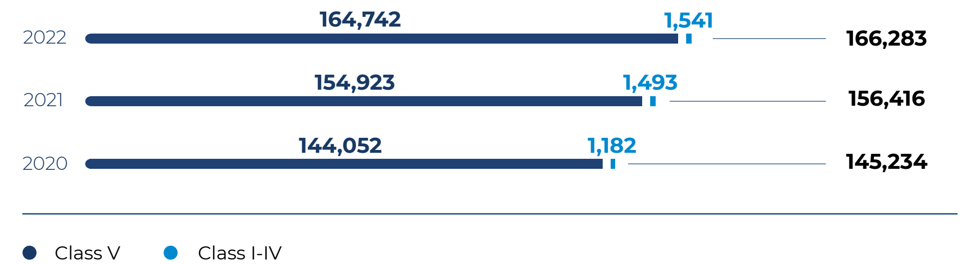
[1] NTEC is part of the Energy Division.

WASTE

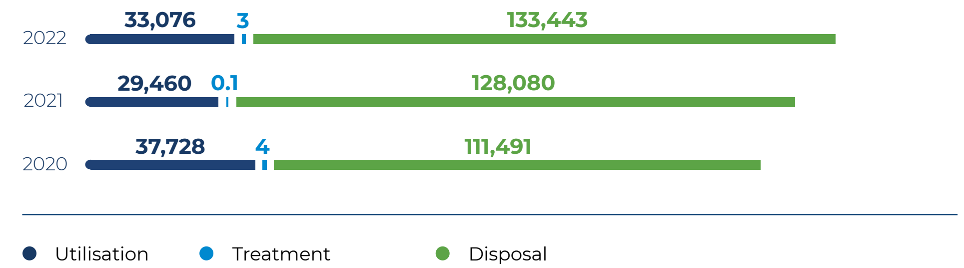
The Company reuses most of its industrial waste in its own operations as approximately 99% of the waste generated is non-hazardous (hazard class V). Such waste includes rock and overburden, tailings and metallurgical slags. Ore extraction waste is placed in tailings and used as backfill for underground workings and open pits, road fill or for tailings dam reinforcement.

In 2022, the total weight of waste generated increased due to higher mining and concentration volumes as well as the Company implementing a programme to clean up the sites of unused (dilapidated) facilities and dismantle these facilities, which drove the generation of construction waste.

Waste generation by hazard class (kt)



Waste management (kt)



TAILINGS

Nornickel currently operates six tailings storage facilities: four in the Norilsk Division, one at Kola MMC and one at Trans-Baikal Division.

While all tailings storage facilities operated by the Company are located at a significant distance from production facilities and local communities, Nornickel recognises these facilities as higher-risk assets with significant potential environmental and social impacts. This is why the Company regularly monitors the condition of hydraulic structures and inspects discharge sites as well as adjacent areas.

BIODIVERSITY

Although Nornickel has for years supported protected areas in its regions of operation, it was not until 2022 that the Company decided to establish a dedicated biodiversity impact management system, also laying the first foundation for it by conducting baseline biodiversity surveys.These studies became another milestone in Nornickel's history of partnering with scientists for biodiversity conservation.

The baseline survey project, known as the Great Scientific Expedition, was a comprehensive study of the ecosystems near the Company's operations, including its exploration, mining, concentration, metallurgical, transport, logistics, and energy facilities. Geographically, the surveys covered three regions: the Zabaykalsky Territory, the Murmansk Region and the Taimyr Peninsula, partially including even the Northern Sea Route. This biodiversity survey became the most extensive ecosystem study since the Soviet era. The obtained data were used to establish the key parameters needed to build the system:

- Delineating the areas where ecosystem biodiversity is exposed to negative impacts
- Reference areas, adverse impacts and threats to biodiversity
- Indicator species for local ecosystems
- Biotic and abiotic indicators of ecosystem health
- Key biodiversity values
- The current state of biodiversity within selected affected areas
- Other

For more details on the survey findings, see the Biodiversity section on the Company website.

The expedition will span beyond 2022: it will be continued with in-depth research in 2023, gradually evolving into an ecosystem monitoring programme while also serving as a source of data for assessing biodiversity impacts.

The 2022 survey data were used to establish estimated radii of impact on biodiversity and changes in ecosystem health vs reference areas. This principle was incorporated into the technique developed specifically for Nornickel to check ecosystem health using key biodiversity indicators, with differentiation by impact radius. The technique served as the basis for a methodology to establish the integrated ecosystem indicator (IEI), which will measure the Company's progress towards its goal of zero net biodiversity losses and zero negative ecosystem changes caused by its production and mining operations. In other words, the IEI will become a tool to track the performance of the biodiversity impact management system.

Starting from 2022, divisions will conduct annual biodiversity monitoring to track changes, and the IEI will also be annually calculated using the methodology and the updated biodiversity monitoring data submitted by each division. The zero net biodiversity losses goal is planned to be achieved through the Prevent – Mitigate – Restore – Offset principle, implementing biodiversity conservation plans.

Such plans will be drawn up to drive the performance of the biodiversity impact management system designed by the Company in parallel with the baseline surveys. To develop this system, a draft corporate Standard for biodiversity conservation was developed in 2022. Next steps for further developing the Company's biodiversity impact management system include the rollout of the corporate Biodiversity Standard and the development and implementation of division-level long-term biodiversity conservation programmes and annual activity plans based on the standard. The divisions are expected to develop and implement these documents in the 2023 year.

Also in 2022, monitoring was continued for the ecosystems cleaned up after the spill – the efforts known as the “Great Norilsk Expedition”. This was the first large-scale study of biodiversity, which also highlighted the need to study and conserve the ecosystem biodiversity. The data collected by the Great Norilsk Expedition were included in the data analysis of the Great Scientific Expedition.

In a separate programme, the basin of the Pyasina River was studied to explore opportunities for naturally improving the productivity of its water bodies; the results showed a good potential for piloting the latest ecosystem restoration methods.

Another highlight of 2022 was an agreement between Nornickel and the Russian Ministry of Natural Resources and Environment on polar bear conservation, which resulted, inter alia, in two separate operations to rescue polar bears, Dikson and Slastena, with the Company's management matching any donations to help treat Dikson.

COOPERATION WITH NATURE RESERVES

There are no nature reserves in the proximity of Nornickel's operations. In the Murmansk Region, the Pasvik and the Lapland nature reserves are 10 to 15 km away from the Kola Division production facilities. In the Krasnoyarsk Territory, the boundaries of the Putoransky Nature Reserve buffer zone are at a distance of 80 to 100 km from the Norilsk Division production sites.

The Company regularly organizes volunteer actions, supports nature reserves and finances research of red Book animals, in line with its long-term strategy to maintain biodiversity in its regions of operation and to preserve the unique Arctic nature. In the Zabaykalsky Territory, the Company supports the development of research and technical capabilities of the Uryumkansky Nature Reserve.

SOCIAL STRATEGY

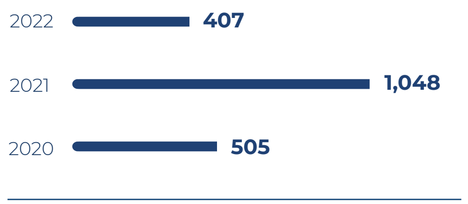
Contribution to the UN SDGs

Nornickel is playing an important role in the Russian economy. Due to its geography and financial strength, the Company has a strong impact on the social and economic life in the regions in which it operates. With its enterprises located mostly in single-industry towns, Nornickel seeks to foster a favourable social climate and comfortable urban environment, providing its employees and their family members with ample opportunities for creative pursuits and self-fulfilment.

The core principle behind this social contribution is a partnership involving all stakeholders in the development and implementation of social programmes based on the balance of interests, cooperation and social consensus.

The harsh climate faced by Nornickel employees in life and at work, the remoteness of the Company's key industrial facilities and the increasing competition for human capital across the industry call for a highly effective, human-centred social policy that would promote Nornickel's reputation as an employer of choice.

Social expenses (USD mln)[1]



2022 saw a decrease in social spending, primarily due to the high base effect of 2021, when significant reserves were accumulated to finance the Comprehensive Plan for the Social and Economic Development of Norilsk.

SUPPORT FOR INDIGENOUS PEOPLES

Indigenous peoples of the North, such as Nenets, Dolgans, Nganasans, Evenks, and Enets, currently residing on the Taimyr Peninsula, count over 10 thousand people. The Company also engages with the Kola Sámi in the Lovozersky Municipal District of the Murmansk Region.

Nornickel respects the rights and protects the ancestral lands, traditional culture and trades, historical heritage and interests of indigenous peoples within the Company's footprint and delivers on its commitments to enhance and foster good neighbourly relations.

Nornickel adopted the Indigenous Rights Policy, which defines Nornickel's key related commitments. Nornickel compiles with all applicable international standards and regulations regarding the support for indigenous peoples of the North and recognises the rights of local communities to preserve their traditional lifestyle and indigenous trades. The Company's metals and mining assets are located outside indigenous territories in the Taimyrsky Dolgano-Nenetsky Municipal District. The Company's voluntary commitments and arrangements with the indigenous peoples of Taimyr are formalised by agreements and minutes of meetings with representatives of indigenous family communities.

To support the indigenous peoples of Taimyr, Nornickel implements a programme to promote the social and economic development of the Taimyrsky Dolgano-Nenetsky Municipal District in 2020–2024, with a total funding of RUB 2 billion. The programme comprises over 40 activities across a number of areas such as support for traditional trades of indigenous peoples; infrastructure development, e.g. construction of housing and social facilities in Taimyr villages; improved accessibility of medical care; promotion of education, culture, sports, and tourism.

In 2022, the annual World of Taimyr project contest continued, aimed at supporting social-impact projects and fostering the sustainable development of indigenous territories on the peninsula. The contest features a grant financing system and only accepts project from representatives of indigenous peoples of Taimyr and non-profit organisations acting in the interests of the indigenous peoples. The winners started implementing their projects in June 2021 and completed them in November 2022. A total of 28 social projects received the grants. The success of the first contest, with projects implemented in 2021–2022, proved the popularity and relevance of this initiative.

The Company not only consistently fulfils its obligations to support and develop the indigenous peoples of Taimyr as part of its five-year support programme but also provides additional assistance on matters relevant for indigenous communities, including:

- strengthening the infrastructure of indigenous communities and helping them prepare for autumn and winter (the hunting and fishing seasons)
- transporting passengers and cargo to Taimyr villages by helicopter; supporting holidays that resonate with the indigenous peoples of Taimyr – the Reindeer Herder's Day, the Fisherman's Day, etc.

In 2022, the Company continued the Taimyr Students targeted programme launched in 2020 to provide education at the Fedorovsky Polar State University for representatives of indigenous peoples living in the Taimyrsky Dolgano-Nenetsky Municipal District. At the moment, 40 indigenous students are studying at the university under the targeted programme. The Company finances tuition fees, accommodation in Norilsk during the study period, round-trip travel expenses, and a scholarship of RUB 20 thousand (monthly for full-time students and during exams requiring full-time attendance in Norilsk for part-time students).

In 2022, Nornickel completed projects under a cooperation agreement with the Kola Sámi Association which represents the interests of the indigenous peoples of the North of the Murmansk Region. The Company supported the Sámi people in developing their culture and preserving their traditional lifestyle, leveraging the best practices tried and tested in Taimyr. In particular, Nornickel financed a project to create a single Sámi alphabet and the publication of pre-school Sámi language textbooks and supported the establishment of an open-air Sámi museum in Murmansk.

In 2022, the Company spent a total of

RUB 412 mln

on projects to support the indigenous peoples of the North

For Nornickel, these projects are much more than just spending items. These are joint initiatives that can only be delivered efficiently through ongoing collaboration and close contacts with indigenous communities and tribes, supported by mutual understanding and regular dialogues driven by a sense of inclusion.

[1] According to IFRS statements.

YOUTH PROGRAMMES

Shine art festival

In 2022, Nornickel supported the first Shine public art festival held in Monchegorsk. The festival's key message was that we can and should improve the environment we live in, and public art is an excellent tool to do just that.

The city's residents and guests had the opportunity to express themselves creatively in the urban environment. During the festival, more than 2 thousand city residents attended creative laboratories, masterclasses and workshops. The programme covered several arts: street art, singing, music, and dance. In the run-up to the festival, a campaign was held to collect scrap metal, which the festival participants later turned into unique art objects to decorate the city. The festival was open for everyone, and the most active participants received prizes.

Add Colours to Your Town project

For nine years, Nornickel has been holding its annual Add Colours to Your Town art contest for children and youth living in Norilsk and Monchegorsk. The main idea of the project is to engage the younger generation in transforming cities through art, foster their feeling of attachment to the city and build a vision of their future intertwined with the city's.

Early career guidance for children

On 1 September each year, the Company provides all first-graders in its host cities with A Book on How Metals Helped Build Cities presenting metals and mining jobs in a compelling and informative way.

Systematic career guidance efforts build up children's patriotism and instil a sense of pride and ownership in the metals and mining champion while introducing them to cultural heritage, promoting science and boosting its appeal to the younger generation by telling them about the Company's production processes.

Green Brush online camp

Nornickel supported the Green Brush online children's camp aimed at fostering green behaviours and a safety culture among the younger generation and offering early career guidance.

The project lays a foundation for training future environmental engineers and H&S professionals by teaching school students to be environmentally responsible and considerate and conscious of their own safety and the safety of those around them.

Over 500 schoolchildren aged between 8 and 14 participated in webinars, creative workshops and online quizzes hosted by practicing environmental engineers, geologists, occupational safety specialists, and education experts. Guided by professional consultants, students developed projects that helped them practise the new knowledge and hands-on skills.

LET'S ROLL ENVIRONMENTAL DRIVE

Run since 2016, the annual Let's Roll environmental drive includes environmental awareness initiatives in addition to urban development activities. The event is divided into four stages focused on communication, projects, nature reserves, and partnerships. In 2022, 184 volunteer teams and 1.2 thousand employees took part in the drive, completing over 200 environmental projects. The environmental volunteering programme focuses primarily on the Arctic: Nornickel employees joint forces to implement projects aimed at preserving the harsh but beautiful and vulnerable nature of the Far North.

ARCTIC LESSONS

In 2022, to highlight the value of the Arctic nature and draw public attention to the problems of its conservation, the Seven Wonders of the Arctic interactive lesson was developed as part of the Let's Roll environmental drive.

The lesson was designed as a universal educational tool to be used by the Company employee volunteers at educational institutions or online, easily adapting it to different ages: the tasks and lesson plans are different for elementary and middle school students. The lesson contributes to the UN Sustainable Development Goals.

The Arctic is one of the few places on Earth with almost pristine nature, but also one of the most vulnerable regions of the world. When the global average temperature rise by 2 °C is mentioned, it means a rise by 5 °C in the Arctic, or even 10 °C in some places. Such changes have huge consequences: accelerated melting of sea ice and permafrost, changing sea currents and destroyed shores, animal habitats and engineering infrastructure facilities.

With its footprint extended as far as the Arctic Circle, Nornickel contributes to preserving this region by supporting and organising monitoring and research, promoting landscape and species conservation initiatives and engaging its employees to provide volunteer assistance.

CHARITY PROGRAMMES

To incorporate and promote the sustainability agenda across its operating regions, Nornickel runs the World of New Opportunities charity programme focused on supporting community initiatives and fostering sustainable development in local communities.

In 2022, the projects and initiatives under the World of New Opportunities programme were integrated into an ecosystem of related elements: education – expert community – support for initiatives. A systematic approach to engaging local communities ensures sustainable results: stronger competence of non-profit organisations, introduction and adoption of new social technologies, support for public initiatives as well as rolling out successful practices across national and regional expert community platforms.

In 2022, about 30 thousand people from across the Company's regions of operation took part in the World of New Opportunities events.

30,000 people

from across the Company's regions of operation took part in the World of New Opportunities events.

The programme's key areas in 2022:

Develop!

- **We Are the City**! social technologies forum
- Socially Responsible Initiatives Competition
- **World of Taimyr** project contest
- Social Engineering Bureau
- **Peremena:** Change Starts with You education project

Invent!

- **IMAKE** engineering marathon
- **IN'HUB** International Forum of Innovators

Act!

- An accelerator for regional entrepreneurs and an investment session

Create!

Projects by regional development institutions:
- Norilsk Development Agency
- Second School centre for community initiatives in the Pechengsky District
- Monchegorsk Development Agency

SOCIALLY RESPONSIBLE INITIATIVES COMPETITION

To support public initiatives that lay fertile ground for sustainable development of local communities, the Company holds the annual Socially Responsible Initiatives Competition for non-profit organisations. In 2022, 114 socially beneficial initiatives were implemented in Nornickel's regions of operation. In 2021–2022, the Company tended to focus on mutually beneficial regional and cross-regional partnerships among the competition applicants. Pandemic-driven constraints and the new reality drove closer cooperation within the non-profit sector. The non-profit sector set an example of achieving positive social impacts by joining efforts and pooling resources.

The contest-winning projects span various social activities: a new interactive children's climbing wall, a modern environmental awareness and tourism centre, a robotics olympiad for children, career guidance clubs and assistance in choosing a professional path, collection and recycling of waste and litter in the tundra.

The programme experts and staff note the positive impacts of the established ecosystem supporting non-profit and municipal organisations. Travel grants enabled applicants to improve their professional skills during internships and bring fresh ideas to the regions where Nornickel operates. The social technology forum enables experience sharing and serves as a platform to present successful practices. The Social Engineering Bureau and other educational initiatives provide an opportunity to educate new contestants and pass on the values and principles. All in all, the ecosystem drives the project resilience and teams' professional competence, thus contributing to meaningful results and positive social impacts.

2022 saw a lot of career guidance projects helping school students choose their professional paths.

PEREMENA: CHANGE STARTS WITH YOU EDUCATION PROJECT

In 2022, the Company continued the Peremena: Change Starts with You education project aimed at facilitating communication between children, their parents, teachers and other stakeholders in a joint effort to improve the education process. In early 2022, the project experts held a series of in-person trainings for teachers and school students from remote areas. The main topics were gamification tools and managing motivation in education. In the reporting year, the education project covered more than 2 thousand people from 13 communities.

In 2022, the Peremena: Change Starts with You project won the GRADUATE AWARDS as the Best Schoolchildren Engagement Programme. In 2021, it received international recognition and, along with Nornickel's other education programmes, was included in the compendium of best practices following the UN's open call.

IMAKE LEAGUE PROJECT

This is a club for aspiring, seeking, thoughtful young makers, future engineers and scientists. Through this project, Nornickel supports a system of scientific and educational activities to promote a culture of scientific creativity among children and teenagers. The project comprehensively involves children in the R&D process, stimulating their interest, motivation and development in this area.

2022 saw such key initiatives under the project as yet another IMAKE Camp shift in Vladivostok, the IMAKE engineering marathon (intensive courses and workshops in different cities, consultations for participants, online presentations of inventions and prototypes), IMAKE. May Day (maker family weekend), and participation in inventor forums. In 2022, more than 3.5 thousand school students from the Company's regions of operation took part in the project events.

Members of the IMAKE League presented their scientific and engineering inventions at various online presentations and meetings. Young League members (children and teenagers aged between 8 and 17) as well as their parents, experts and invited specialists are gradually becoming ambassadors for the IMAKE League project. In 2022, the LIGA IMAKE: Producers of Ideas project was praised by experts and won the first prize in the GRADUATES & INTERNS category of the HR IMPACT competition.

IN'HUB PROJECT

Nornickel co-organised the IN'HUB international innovations salon aimed primarily at supporting and promoting inventors and innovators. As part of this project, an innovative project competition was held in 2022, with projects such as Interval Train Traffic Control System, Stereotech Hybrid 5D Printer, BIO Industrial Air Cooling System, and others named among the winners. As part of the IN'HUB series of events, 1,300 applications were submitted for the competition in 2022, of which 490 were formally reviewed and 204 were presented at the Forum and posted on the marketplace. Projects by 30 foreign inventors from Switzerland, Austria, Israel, Egypt, Iran, Indonesia, Kazakhstan, and Belarus were presented at the IN'HUB International Forum, along with Russian inventions and developments from 42 regions.

The Company's social investments are aimed, first and foremost, at encouraging the development of our children while also developing the human capital in regions and thus contributing to their sustainable development.

For more details on the World of New Opportunities programme, see Nornickel's 2022 Sustainability Report.

RESPONSIBLE SUPPLY CHAIN

APPROACH TO MANAGEMENT

Nornickel's procurement system focuses on timely and fully meeting the Company's needs for required materials and services of specified quality and at an acceptable price.

Nornickel takes a responsible approach to sourcing, prioritising partners who comply with applicable laws and regulations, ensure safe working conditions and care for the environment. The Company expects its suppliers to comply with international best practices and standards in sustainability and environmental stewardship.

The following key documents guide supply chain management at Nornickel:

- Business Ethics Code;
- Human Rights Policy;
- Supplier Code of Conduct;
- Responsible Sourcing Policy;
- Internal corporate procurement standards

PROCUREMENT

Nornickel engages with suppliers via open tender procedures. In 2022, the Company signed over 4.4 thousand contracts for centralised procurement of materials and equipment worth around RUB 143 billion.

Procurement process

Nornickel's procurement process is certified to international standards ISO 9001 and ISO 14001.

The Company procures over 40 aggregated purchasing categories, from heavy industrial equipment to food. In doing so, the Company provides equal competitive opportunities for large, medium and small businesses alike, guided by generally accepted standards of fair business practices and the principles of avoiding conflicts of interest. To maximise procurement effectiveness and transparency, the Company's procurement activities are mostly centralised at its Head Office through automated systems and electronic trading platforms.

Depending on the budgeted cost, procurement can follow a tendering, simple or simplified procedure. Based on the materiality and parameters of purchases, the qualification results and the winning bidder in the procurement process are approved by the collective procurement body composed of representatives from various functions of Nornickel. The contract with the winning bidder is signed in accordance with the approved results of the procurement procedure. All details of the Group's centralised procurement transactions are published on the website.

As the Company aims to work with reliable suppliers who will meet their obligations regarding delivery dates and the quantity and quality of products supplied, during the procurement procedure all suppliers undergo mandatory qualification screening against formalised criteria and rules.

Nornickel gives preference to local suppliers to provide social support to its operating regions. Along with saving jobs, this policy supports unique enterprises whose continuous operation is essential to both the well-being of their employees and the social fabric of local communities.

Nornickel has in place a hotline that can be used by counterparties to report any violations.

Supplier engagement

Nornickel has in place a supplier relationship management (SRM) system to drive seamless and effective engagements with suppliers.

The Company's supplier engagement efforts are focused on establishing effective feedback mechanisms. The SAP SRM automated management system gives suppliers anytime access to information about the Company's procurement procedures.

Sign-up for the supplier relationship management (SRM) system is free of charge and does not impose any obligations on users.

If a counterparty faces difficulties with signing in or operating the system, they can seek help and advice via e-mail at

suppliers@nornik.ru

or by phone at

+7 (495) 783–00–45, ext. 6 (for calls within Moscow);
8 (800) 700–59–11, ext. 6 (toll-free federal number).

As at 2022-end, over 10 thousand potential suppliers had registered in the system, of which over 9.5 thousand had been accredited.

ESG FACTORS IN THE SUPPLY CHAIN

Nornickel seeks to create a common information space and set of values with its suppliers. The Company employs a proprietary multi-tier system to evaluate its suppliers. The criteria for selection, evaluation and re-evaluation of external suppliers have been determined in line with the requirements of ISO 9001:2015 Quality management systems. Nornickel is particularly focused on building relationships with suppliers whose equipment is unique and critical for the stable operation of the Company's production facilities.

In 2021, the Company approved its Responsible Sourcing Policy covering all of the Company's activities related to supplier selection in the supply chain of raw materials, goods and services. The purpose of the Policy is to define the Company's approach to responsible sourcing and declare standards and principles to be followed by the Company and its suppliers.

Together with the Policy, the Company approved its Supplier Code of Conduct, which encourages the Company and its business partners to introduce procedures for responsible sourcing in accordance with ESG requirements in all of Nornickel's supply chains.

In the reporting period, the Company also developed and deployed a due diligence management system (DDMS) for mineral suppliers, focused on identifying potential risks affecting the sustainability of business processes in the mineral supply chain while also minimising risks of human rights violation, corruption and misinformation about minerals, as well as risks relating to illegal control of mines and support for non-state armed groups.

The OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas and a five-step model for risk-based due diligence on supply chains provide a methodological framework for developing the DDMS.

The DDMS is driven by the following requirements and recommendations:

- London Metal Exchange responsible sourcing policy
- Standards and principles of leading sustainable development initiatives in the industry: ICMM, IRMA, RMI, and JDDS, as well as the Chinese Due Diligence Guidelines for Responsible Mineral Supply Chains of the China Chamber of Commerce of Metals, Minerals & Chemicals Importers & Exporters (CCCMC)
- Requirements of the Company's customers

In 2022, Nornickel conducted due diligence of metallic mineral suppliers to the Polar Division and Kola MMC, having inspected 100% of relevant suppliers, with zero risks confirmed.

Contracts with suppliers were supplemented with an anti-corruption clause and a clause on ESG compliance, which, in particular, provides for access to Nornickel's Corporate Trust Line. In 2022, the ESG compliance clause was included in 1,313 contracts and master agreements with suppliers.

The Company plans to roll out due diligence to all categories of suppliers, including those not involved in supplying minerals. To this end, a new tool within the DDMS will be launched in 2023 – a supplier self-assessment questionnaire covering environmental, social and governance (ESG) aspects. Its objective is to assess compliance of suppliers of minerals, goods, works and services with the requirements of the Supplier Code of Conduct.

In 2022, the Norilsk and Kola Divisions as well as Nornickel's Head Office underwent annual RSBN audits. The audits assessed the maturity of the DDMS and its compliance with the OECD guidance. As a result, in 2022, the Company improved its performance by 35% year-on-year.

Given the risk of potential negative environmental impact of cargo in transit, the Company's master agreement sets explicit requirements for cargo packaging. Goods to be shipped must meet the cargo standards and requirements of GOST 26653-2015 Preparation of general cargoes for transportation and GOST 15846-2002 Production for transportation to the areas of the Far North and similar regions. Packaging, labelling, transportation and storage. Mandatory requirements are established for the transport containers and product packaging that should ensure cargo integrity during multiple transshipments and transportation to the Far North.

Environmental impact is assessed throughout the life cycle of procured products: production, transportation, storage, use, and disposal. Nornickel requires its contractors to have a functioning environmental management system in place and to ensure that all services and products delivered by them comply with local environmental laws.

CORPORATE GOVERNANCE

Continuous improvement of corporate governance is Nornickel’s absolute priority.

CHAIRMAN'S LETTER

«

As one of the world's largest metals companies, Nornickel is strongly committed to good corporate governance.

Throughout 2022, despite a new wave of shocks that hit the economy following the sanctions introduced by several countries against Russia and the challenging geopolitical environment and economic uncertainty, Nornickel's Board of Directors consistently provided strategic leadership to the Company and monitored the achievement of the goals set for the management team.

In terms of improving the quality of corporate governance, the reporting year was marked by a number of important decisions. Nornickel's corporate practices cover most of the principles and recommendations of the Corporate Governance Code recommended by the Bank of Russia.

To further improve corporate governance and incorporate the Bank of Russia's recommendations, the Company updated its internal documents regulating disclosure, prevention of unlawful use of insider information and market manipulation as well as the documents dealing with internal audit, internal control and prevention of corruption and fraud.

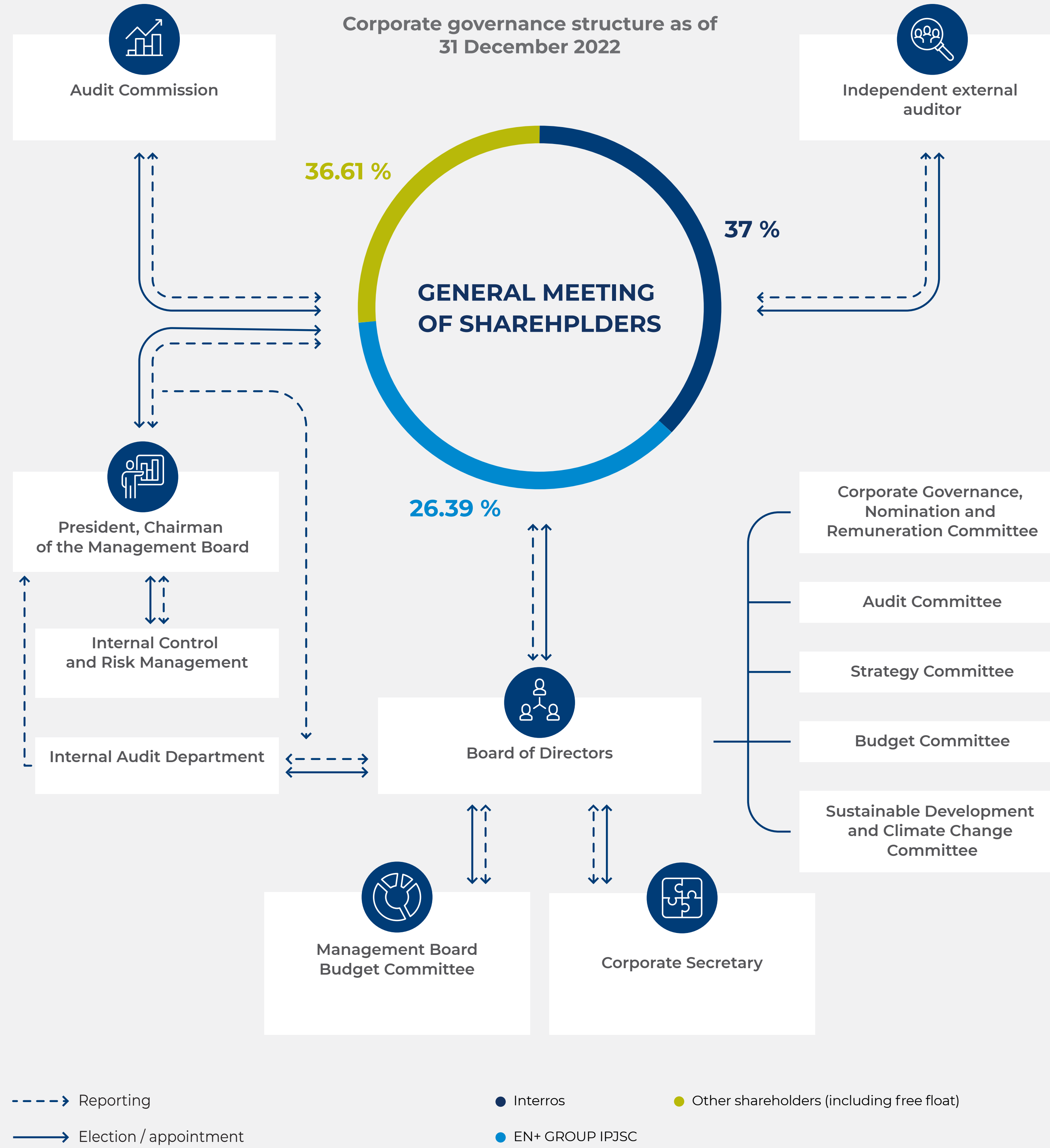
For more details on the Company's approved and updated internal documents, please see Corporate Governance Results section of this Annual Report.

The new developments that the Company had to deal with in 2022 gave its management a new perspective on the Company's priorities and its global goal – building safe and green cutting-edge production while driving sustainable business growth. The Company's business processes were promptly adapted to the new environment in 2023 to maintain its leading position in the global market.

Dear shareholders, despite all the challenges of the reporting year, Nornickel achieved all its 2022 targets. The Company's robust balance sheet allows it to fully meet its obligations to employees, partners and the state while continuing to be a compelling investment case for shareholders and remain upbeat about the outlook on progress towards its long-term priorities.

Andrey Bougrov
Chairman of the Board of Directors
MMC Norilsk Nickel

CORPORATE GOVERNANCE STRUCTURE



KEY PRINCIPLES

In its corporate governance practice, Nornickel is governed by the applicable Russian laws, the Listing Rules of PJSC Moscow Exchange, and the Corporate Governance Code recommended by the Bank of Russia[1]. Nornickel's corporate governance system is designed to balance the interests of its shareholders, the Board of Directors, management as well as employees and other stakeholders.

Key corporate governance principles

1. Equitable and fair treatment of every shareholder
2. Enabling shareholders to exercise their rights and legitimate interests in the most reasonable and convenient manner
3. Professionalism and leadership of the Board of Directors, and engaging independent directors in governing the Company
4. Strategic management by the Board of Directors, its efficient control over executive bodies and oversight of the risk management and internal control framework
5. Sound, diligent and efficient management of the Company's day-to-day operations by executive bodies accountable to the Board of Directors and the General Meeting of Shareholders
6. Strong business ethics
7. Zero tolerance for corrupt behavior
8. Full, transparent, reliable, and timely disclosure by the Company
9. Robust internal control and risk management framework
10. Adherence to sustainability principles

[1] The Bank of Russia's Letter No. 06-52/2463 On the Corporate Governance Code, dated 10 April 2014.

CORPORATE GOVERNANCE PERFORMANCE

In order to meet the Bank of Russia's recommendations to raise information transparency of the securities market, Nornickel has updated its internal documents regulating disclosures and identified events/facts with a potential to materially influence the price of the Company's securities.

To further improve its corporate governance and meet the Bank of Russia's recommendations on risk management, internal control and internal audit processes, in the reporting year, Nornickel developed new versions of the Regulations on the Internal Audit Department and Internal Control Policy as well as the Internal Audit Policy. The above documents were amended as follows:

- According to the new version of the Regulations on the Internal Audit Department, the Department has been tasked with the evaluation of the Company's corporate governance and the performance audit of its corporate sustainability risk management system;
- The Internal Control Policy was updated in terms of the composition of internal control entities and the Company's committees; its provisions regulating the division of responsibilities among the Company's departments were amended;
- The Internal Audit Policy has been developed bearing in mind the position of the Bank of Russia and the International Professional Practices Framework. The main purpose of the document is to regulate the internal audit procedures of the Company, ensure their compliance with the principles of setting up and executing an internal audit, and define the scope of duties and control procedure for internal audit quality assurance and improvement.

During the reporting year, the Company approved a number of internal documents dealing with the prevention of corruption and fraud. In March 2022, the Board of Directors approved the Corporate Fraud Policy. The main purpose of the document is to prevent, identify and mitigate the risks of corporate fraud as well as to build and implement a corporate system of measures and mechanisms to prevent corporate fraud.

In addition, the Company updated its Procedure Rules for Anti-corruption Due Diligence of Internal Documents by the Head Office of MMC Norilsk Nickel as well as the Regulations on the Prevention and Management of Conflicts of Interest. The new version of the Regulations on the Prevention and Management of Conflicts of Interest includes a requirement to sign a conflict of interest declaration when entering into a contract with a sole proprietor or transactions with individuals, including former government and municipal employees. The amendments also stipulate that a notice of a pre-conflict situation and/or a conflict of interest (arising as part of the contractual procedure) should be filed with the Corporate Trust Line, or a notification should be sent to the employee who initiated the contract.

In addition, with a view to codifying the existing practice and further improving the regulatory framework to prevent unlawful use of insider information and market manipulation, the Company has updated its Internal Control Rules for Preventing, Detecting and Stopping the Unlawful Use of Insider Information and/or Market Manipulation, and the Regulations on the Procedure for Keeping the List of Insiders. The updated Regulations take into account the amendments made to the Bank of Russia's regulations on maintaining insider lists.

In 2023, Nornickel intends to continue improving its corporate governance practice.

Given the importance and significance of anti-corruption procedures, the Company plans to approve an internal document to regulate the identification, assessment and management of corruption risks in 2023.

COMPLIANCE WITH THE CORPORATE GOVERNANCE CODE

Nornickel's corporate governance standards are based on the principles and recommendations of the Bank of Russia's Corporate Governance Code, and the Company continues to consistently incorporate and implement them.

The Company's compliance with the Corporate Governance Code's principles and recommendations in 2022 was evaluated using a format recommended by the Bank of Russia's Letter No. IN-06-28/102 dated 27 December 2021.

Nornickel's corporate practices cover most of the Corporate Governance Code's principles and recommendations. In case of a partial non-compliance, the Company provides an appropriate explanation and description of the corporate governance mechanisms and tools used by it instead of those recommended by the Code. For the full 2022 Corporate Governance Code Compliance Report, including comments, please see an Appendix to this Annual Report.

Compliance with the Corporate Governance Code recommendations in 2022[1]

Corporate governance principles	Full compliance		Partial compliance		Non-compliance	
	2021	2022	2021	2022	2021	2022
Rights and equal opportunities for shareholders in exercising their rights	9	10	4	3	-	-
Board of Directors	28	25	8	11	-	-
Corporate Secretary	2	2	-	-	-	-
Remuneration system for members of the Board of Directors and senior management	6	7	4	3	-	-
Risk management and internal control framework	5	5	1	1	-	-
Company disclosures	4	4	3	3	-	-
Material corporate actions	3	3	2	2	-	-

[1] The data are given for 2021 and 2022, since the form of the Corporate Governance Code Compliance Report was changed in 2021 (the Bank of Russia's Letter No. IN-06-28/102 dated 27 December 2021).

STAKEHOLDER RELATIONS

To achieve operational excellence and further improve corporate governance, Nornickel is strongly focused on engaging its stakeholders in corporate governance, taking their needs into account when making important decisions.

At the end of the reporting year, Nornickel presented its 2022 sustainability results. The Company annually invites a wide range of experts to a dialogue in order to take into account the opinions of all its stakeholders. Nornickel's strategy is underpinned by its sustainability agenda. The Company regularly engages with stakeholders to understand expectations and take the pulse of public opinion on corporate environmental and social sustainability. This year's results were presented by the Company's top managers in an online format. More than 200 people attended the conference, including Company employees, government authorities, businesses, local communities, environmental and other non-profit organisations, and industry bodies.

A well-built and clear corporate governance framework which is transparent for both Russian and foreign shareholders and investors as well as active stakeholder engagement directly affect the investment decisions and the price of the Company securities.

DIALOGUE WITH INVESTORS

The Company is committed to making mandatory disclosures in line with global best practice. To make its disclosures more meaningful and comprehensive, Nornickel uses an array of disclosure tools, including press releases, presentations, annual and sustainability reports, issuer reports, corporate action notices, and interactive tools. Nornickel ensures parallel disclosure of all material information both in Russian and English, with the latter being done via a regulatory information service approved by the UK regulator.

Nornickel's quarterly disclosures made via its official website include its operating results and RAS financial statements. IFRS financial statements are released on a semi-annual basis To maintain strong investor relations, the Company makes extensive use of various communication tools, including conference presentations, road shows, site visits for investors, etc.[1]

For more details on investor relations, please see the Investor Relations section of this Annual Report.

DIALOGUE WITH EMPLOYEES

The Company regularly runs open online conferences between employees and senior management to identify strengths and weaknesses in communication and improve corporate governance. A challenging geopolitical environment, production upgrades and ambitious investment projects transform the approaches to work, routines, sustainability, safety, and environmental protection. To retain its leadership in the market, the Company needs to address new challenges, which is next to impossible without employee involvement. During the Nornickel Live annual broadcast, Nornickel's vice presidents answered employee questions and discussed the Company's news and future plans. March 2022 saw another Direct Line live broadcast, with top management fielding questions from Nornickel employees. The key topic was social support for Company employees in a challenging economic environment. Over 5 thousand questions from Nornickel employees were received during the live event. The issues discussed during the event included, among others, wage indexation across the Company's footprint, payment of a one-time, first-quarter extra bonus in the amount of a monthly base salary and the Company's decision to increase its financial assistance fund for employees in difficult life situations. All in all, RUB 20 billion were allocated to the above measures, with the total amount of employee support in 2022, including the indexation earlier this year, reaching RUB 50 billion (including deductions to budgetary funds).

[1] Information on upcoming events is posted in the IR Calendar on the Company website.

PARTNERSHIP AND COOPERATION

Nornickel is building a multipurpose sports complex in Moscow. It will include a basketball centre, which will serve as a home arena for the CSKA basketball club (Professional Basketball Club CSKA is part of the Norilsk Nickel Group). The total area of the new sports complex on Leningradsky Avenue will be approximately 55 thousand sq m. The complex is expected to be completed by the end of 2023.

Nornickel is stepping up its cooperation on environmental protection with the Russian academic circles. During the reporting year, Nornickel launched a large-scale biodiversity study in the three Russian regions hosting the Company's operations. The study seeks to delineate the areas affected by the Company's operations and assess the current ecosystem biodiversity status. The findings by researchers will feed into the design of the biodiversity impact management system and help develop the biodiversity conservation and monitoring programmes. In addition, these findings will enable the identification and implementation of priority measures necessary for biological diversity conservation. The biodiversity-focused Great Scientific Expedition builds on the successful partnership between Nornickel and the Siberian Branch of the Russian Academy of Sciences, which started in 2020 with the Great Norilsk Expedition. By initiating voluntary large-scale environmental studies across its operating regions, the Company collects up-to-date information about the current condition of the environment across its footprint while also unlocking opportunities to further reduce its environmental impact.

In April, Nornickel signed a cooperation agreement with ROSATOM. The parties agreed to pursue a number of strategic projects in the Russian Arctic to enhance the Northern Sea Route infrastructure and Arctic shipping, including to implement shipbuilding projects and further develop the nuclear-powered icebreaker fleet. The agreement also contemplates a joint project to develop the Kolmozerskoye lithium deposit in the Murmansk Region and launch further deep processing of lithium raw materials. Kolmozerskoye is the largest and most promising deposit of lithium ores, accounting for 18.9% of domestic reserves. Nornickel and ROSATOM have established Polar Lithium, a 50-50 joint venture with equal governance rights, to implement the project by combining the parties' assets and capabilities. Lithium mining will help set up the first domestic production of lithium-containing products as well as the production of lithium-ion traction batteries.

Also in 2022, Nornickel entered into two agreements to bolster its energy assets.

- Nornickel will hand over control and dispatch functions in the Norilsk energy system to the System Operator of the United Power System (SO UPS). The agreement contemplates the transfer of control and dispatch functions in the technologically isolated territorial power supply system in the Taimyrsky (Dolgano-Nenetsky) Municipal District to the Krasnoyarsk Regional Dispatch Office, a branch of SO UPS. The transfer will be phased and is expected to be completed by the end of 2023, with the parties working closely to expand the areas of dispatch responsibilities for SO UPS. In addition, the parties will bring their information systems in sync with each other to facilitate the exchange of process data between NTEC and SO UPS as part of the dispatch and technological control. This is necessary to streamline interoperability and harmonise technologies used by power supply entities across Russia. Going forward, these steps will make it possible to integrate the operational parameters of the isolated territorial power supply system of the Taimyrsky (Dolgano-Nenetsky) Municipal District into the information model developed by the Unified Energy System of Russia in line with the national standards.
- The other energy-related agreement was signed by Nornickel with Rosseti North-West, a power grid company. Nornickel plans to fully abandon the use of fuel oil at the Company's Monchegorsk site. This investment project will help reduce pollutant emissions and facilitate Nornickel's transition to modern green technologies.

In 2022, Nornickel entered into an agreement with RusHydro for the purchase of hydropower. The agreement marked another step in the implementation of the Company's environmental strategy, which, among other things, provides for the gradual transition to carbon-free energy in the Company's operations. The new agreement will enable Bystrinsky GOK to transition approximately 30% of its energy needs to carbon-free sources. This will lead to a reduction of GHG emissions by 100 thousand tonnes of CO2 equivalent in absolute terms in 2022 and also contribute to the Company's environmental KPIs, e.g. cut its Scope 2 emissions. In addition, the plant continues to improve its energy efficiency and is currently assessing the feasibility of building new renewable energy facilities in the Zabaykalsky Territory.

In December 2022, Nornickel and Atomflot signed a long-term charter contract for a new Project 22220 icebreaker. The signing ceremony took place in Saint Petersburg as part of the Arctic: Today and the Future forum. This is a new long-term contract, unique in its duration. According to the document, the nuclear-powered icebreaker of the 22220 series will be used to escort vessels navigating the Northern Sea Route in the interest of Nornickel for a period through 2041, with an extension option until the end of 2051. Currently, Nornickel is using Sibir, a nuclear-powered icebreaker, under a short-term charter contract. Since early 2022, the icebreaker has supported year-round navigation on the Murmansk/Arkhangelsk – Dudinka route, escorting ships at a service speed in the Yenisei Bay. The new contract is part of a far-reaching strategic partnership between Nornickel and ROSATOM, which aims to further develop the Northern Sea Route. It meets the long-term interests of both parties: as a major consumer of icebreaker escort services, Nornickel receives guaranteed icebreaker support for the long term, while ROSATOM, as the Northern Sea Route infrastructure operator, secures orders for its current icebreaking fleet and a source of funding for the construction of new icebreakers.

RUB **2** bn

programme to support the indigenous peoples of Taimyr

the Coordination Council includes

53 indigenous local communities

DIALOGUE WITH INDIGENOUS MINORITIES

Nornickel's engagement with the indigenous peoples of the North inhabiting Taimyr is based on respect for the customs, traditions and culture of the indigenous communities. It takes place on a regular basis, covers all areas of mutual interest and relies on a holistic approach.

In May 2021, the local indigenous communities spearheaded the creation of the Indigenous Communities Coordination Council to engage with the tribal communities involved in traditional economic activities in Taimyr. Currently, the Coordination Council includes 53 indigenous local communities. The Coordination Council facilitates cooperation between indigenous communities and Nornickel, including under the Company's RUB 2 billion five-year programme to support the indigenous peoples of Taimyr.

The programme was set up with the direct and immediate participation of representatives of indigenous communities and covers all aspects of indigenous life – social, economic, cultural, and linguistic, taking into account the needs and demands, values and views, ethnic traditions, and culture of the indigenous peoples inhabiting Taimyr.

A department responsible for liaising with indigenous peoples of the North was set up within the Polar Division to promote a direct dialogue. The new format of the Company's direct dialogue with indigenous communities has significantly expanded the scope for engagement and created conditions to build their sustainability capacity by further improving rural infrastructure, advancing the economy by creating new industries based on traditional uses of natural resources that ensure processing of agricultural products and higher added value as well as by preserving historical traditions and cultural heritage.

Within its efforts to further improve its indigenous engagement formats, the Company pioneered the use of the free, prior and informed consent (FPIC) procedure for indigenous peoples in the Russian Arctic, offering relocation and community development options to indigenous people living in the Tukhard settlement area. Tukhard was founded in the 1970s as a rotation camp for the Norilskgazprom construction project workers. The new infrastructure and improved transportation options attracted nomadic indigenous people from nearby, who settled in the construction trailers abandoned on site. With a view to improving the living conditions in Tukhard, the Company proposed to build a new settlement and relocate the residents. Although the FPIC procedure is not part of the Russian law, Nornickel proposed to solve the relocation problem in line with international standards codified in the UN Declaration on the Rights of Indigenous Peoples.

Nornickel held initial consultations with the indigenous communities in the settlements of Lovozero and Krasnoshchelye in the Murmansk Region in view of the looming start of the Kolmozerskoye lithium mining project. Sámi, Nenets and Komi as well as representatives of reindeer farms, and independent experts on indigenous rights attended the meeting, the main purpose of which was to set up a two-way dialogue between the Company and indigenous peoples, to inform local communities about the upcoming project, and to listen to and record suggestions and comments put forward by local indigenous organisations. During the consultations, Nornickel representatives told the audience about the Company's principles of engagement with indigenous people and about the Kolmozerskoye project. Geological studies of the Kolmozerskoye deposit were conducted back in the 1950s, and much of the project data has yet to be verified. The parties also discussed basic approaches to ethnographic and sociological research. The Company confirmed its intention to collect and verify all possible information on the range, nature and scale of traditional trades, sacred sites and burials, to identify the range of people potentially affected by the project, and to make detailed maps of the project area in the near future. The research will be carried out with the involvement of leading scientific institutions and in cooperation with indigenous peoples.

In October 2022, Murmansk hosted the Public-Private Partnership for the Sustainable Development of Indigenous Peoples, an international forum sponsored by Nornickel. Organised by the Federal Agency for Ethnic Affairs, the Ministry for the Development of the Russian Far East and Arctic, the Ministry of Foreign Affairs of the Russian Federation, and Nornickel, the event welcomed more than 200 delegates from Russia and other countries. The participants included representatives of federal and regional authorities, businesses, associations of indigenous peoples, international organisations as well as reindeer herders and leaders of tribal communities of Taimyr, Yamal, Chukotka, and many other regions. The forum is included in the work plan for the Russian chairmanship of the Arctic Council. The forum participants discussed best indigenous engagement practices of industrial companies. Generally accepted global approaches in this area include due diligence policies requiring targeted consultation by businesses with indigenous peoples when engaging in industrial operations in indigenous territories.

GOVERNMENT RELATIONS

The Company's representatives also take part in parliamentary hearings and round table discussions organised by the Federation Council and State Duma of the Federal Assembly of the Russian Federation, the Government of the Russian Federation, the Russian Union of Industrialists and Entrepreneurs (RSPP), the Civic Chamber of the Russian Federation, the Chamber of Commerce and Industry of the Russian Federation, the Association of Managers interregional non-governmental organisation, etc.

Nornickel's experts are involved in discussing draft regulations through anti-corruption expert reviews and regulatory impact assessments. This all helps to maintain a constructive dialogue with the government, cut red tape and improve the country's business climate. Nornickel's representatives also sit on various working groups created by federal executive authorities to help implement the regulatory guillotine mechanism.

In 2022, Nornickel and the Federal Supervisory Natural Resources Management Service signed cooperation agreements. The first agreement provides for the exchange of information and joint implementation of environmental initiatives. The second one is a pilot project, being the first agreement in the Russian Federation that contemplates receiving advice from the Federal Supervisory Natural Resources Management Service for Nornickel's future investment projects.

Nornickel has supported the development of IN'HUB, a platform that will enable the creation of a global innovation centre in Russia in cooperation with international partners. The project initiated by Nornickel has been endorsed by more than 20 foreign associations and inventors' organisations. As a responsible corporate citizen, Nornickel took the lead in proposing an innovation accelerator in Russia to help identify industrial applications for various inventions and technologies developed by scientific and operational teams, businesses and organisations, or any creative individual in general.

In June 2022, about 200 participants from more than 100 largest tech companies from Russia, Kazakhstan and Belarus as well as representatives of federal, regional and municipal authorities came to Norilsk by the invitation of Nornickel. For two days, participants of the forum discussed the capability of the domestic manufacturing sector to meet the needs of Nornickel and other large Russian businesses in all necessary supplies and equipment. A lot of attention was paid to government-sponsored business support measures and incentives for entrepreneurs in the Arctic region. The focus of the forum was on import substitution – one of the most important themes for the entire Russian manufacturing sector.

Nornickel has a long and successful history of cooperation with many Russian companies. Over 30 letters of intent were signed during the two days of the forum to formalise joint import substitution efforts between Nornickel and its potential suppliers.

In October 2022, the Federation Council, the upper chamber of Russia's parliament, hosted a photo exhibition of the Clean Arctic project pursued in partnership with Nornickel. The most active participants in the Arctic Environmental Initiative, including the Company, were awarded letters of acknowledgment.

MANAGING CONFLICTS OF INTEREST

Nornickel has developed measures to prevent potential conflicts of interest involving shareholders, Board members and senior managers.

The Company's Articles of Association set forth the procedure for approving transactions by shareholders who hold more than 5% of voting shares. Such transactions are only made if approved by a qualified majority of Board members (at least 10 out of 13 votes).

Transactions that have the attributes of interested-party transactions are regulated by the law on joint stock companies.

The Company also has in place the Code of Conduct and Business Ethics for Members of the Board of Directors, which aims to reinforce high standards of ethics and business conduct among members of the Board of Directors and serves as guidance in the event of ethical risks and conflict of interest situations.The Code provides for the obligation of members of the Board of Directors and the Management Board are to refrain from actions that may result in a conflict of interest, and if such a conflict arises, they should promptly inform the Corporate Secretary in writing about such conflict.

If a Board member has a direct or indirect personal interest in a matter reviewed by the Board of Directors, they should inform other members of the Board of Directors before the matter is reviewed or a relevant resolution is passed, and refrain from participating in the review and from voting on the matter. In 2022, no notifications of conflicts of interest were received from members of the Board of Directors.

GENERAL MEETING OF SHAREHOLDERS

The General Meeting of Shareholders **is the highest governance body** of MMC Norilsk Nickel responsible for making decisions on matters most critical to the Company's performance. Matters within the remit of the General Meeting of Shareholders are listed in the Company's Articles of Association, and the procedures for convening, preparing and holding general meetings are detailed in the Regulations on the General Meeting of Shareholders.

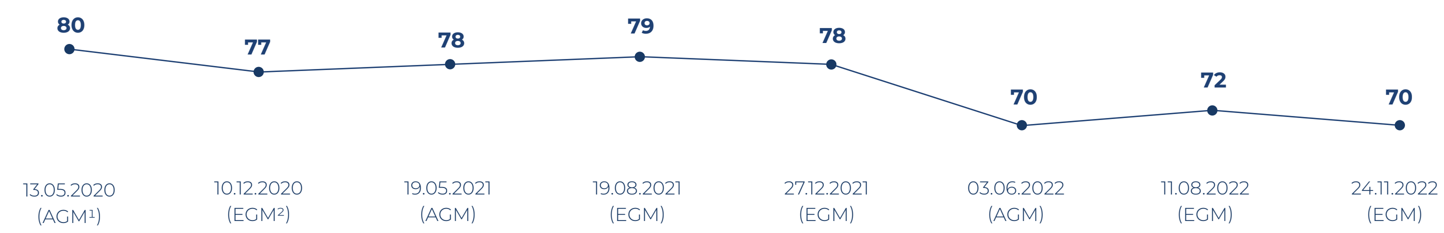
The notice of a General Meeting of Shareholders is published on Nornickel's website at least 30 calendar days prior to its convocation date. Except for the cumulative voting to elect members of the Board of Directors, each voting share represents one vote at the General Meeting of Shareholders.

Three General Meetings of Shareholders were held in 2022. All meetings were held in absentia via an easy-to-use and reliable e-voting service. The e-voting service for general meetings of shareholders is provided by IRC – R.O.S.T., the Company's registrar (official website: Shareholder's Personal Account, rrost.ru). Each time, more and more shareholders take advantage of this service enabling them to vote regardless of their location.

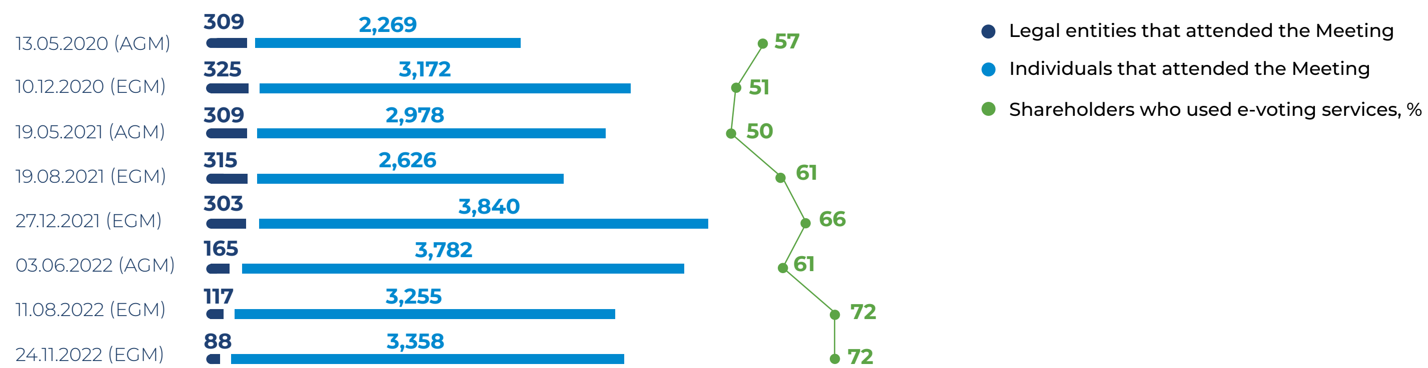
General Meetings of Shareholders held in 2022

Meeting date	Agenda
3 June 2022 – an Annual General Meeting of Shareholders (held in absentia)	The Meeting approved the Annual Report, annual accounting statements and consolidated financial statements for 2021. Profit for the period was distributed, and the resolution on FY 2021 dividend payout was passed. A new Board of Directors and Audit Commission were elected; resolutions on their remuneration were passed. The auditor was approved to audit Nornickel's Russian accounting (financial) statements for 2022, consolidated financial statements for 2022 and interim consolidated financial statements for 1H 2022. An interested party transaction (liability insurance of members of the Board of Directors and the Management Board) and related interested party transactions (indemnification of members of the Board of Directors and the Management Board) were approved.
11 August 2022 – an Extraordinary General Meeting of Shareholders (held in absentia)	The Meeting resolved to reduce the Company's authorised capital by cancelling the shares repurchased by the Company.
24 November 2022 – an Extraordinary General Meeting of Shareholders (held in absentia)	The Meeting resolved to terminate early the powers of Board members and elect a new Board of Directors.

Meeting quorum, %



Attendance at General Meetings of Shareholders

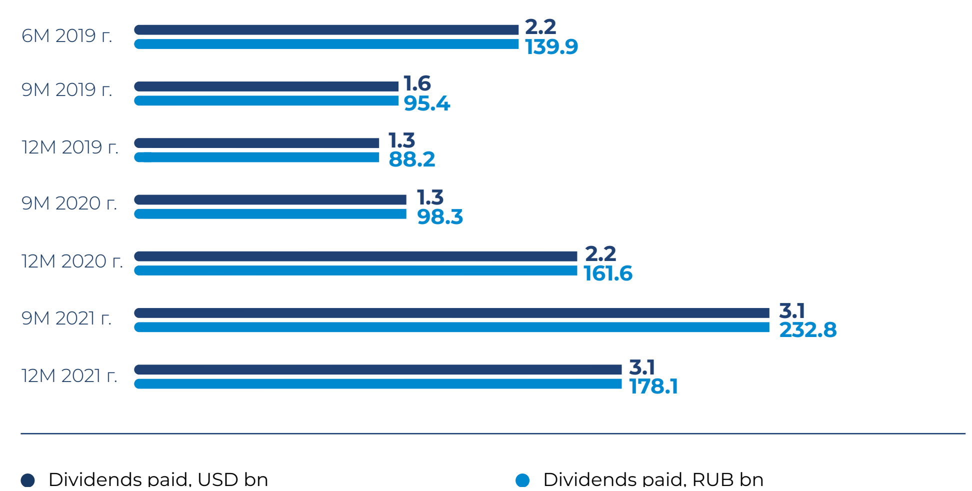


DIVIDENDS

Dividends in 2022

On 28 April 2023, the Company's Board of Directors recommended that the Annual General Meeting of Shareholders resolve not to pay a final dividend for the financial year 2022. The resolution will be passed at the Annual General Meeting of Shareholders on 6 June 2023.

Dividend history



[1] AGM – Annual General Meeting of Shareholders.
[2] EGM – Extraordinary General Meeting of Shareholders.

BOARD OF DIRECTORS AND BOARD COMMITTEES

COMPOSITION OF THE BOARD OF DIRECTORS

The Board of Directors plays a crucial role in designing and developing the corporate governance system, ensures the protection and exercise of shareholder rights and supervises executive bodies. Guided by the principles of mutual respect and humanism.

The Board's authority and formation process, as well as the procedure for convening and holding Board meetings are determined by the Company's Articles of Association and Regulations on the Board of Directors.

According to Nornickel's Articles of Association, the Board of Directors has 13 members. The current size of the Board of Directors ensures a balanced mix of professionalism, expertise and experience required for the Board to properly perform its functions and best align its activities with the Company's goals and objectives. All Board members enjoy an impeccable business reputation and recognition (including among investors) and have no conflicts of interest with Nornickel. The current Board of Directors comprises six independent directors. An objective judgement that independent directors bring to the table, along with their constructive feedback, is a valuable contribution to the Board's leadership and the Company's operations on the whole. The independent directors' contribution to decision making helps align the interests of various stakeholder groups while improving the quality of management decisions.

As at 1 January 2022, the Board of Directors consisted of Sergey Barbashev, Sergey Batekhin, Alexey Bashkirov, Sergey Bratukhin, Sergey Volk, Marianna Zakharova, Sergey Luchitsky, Roger Munnings, Gareth Penny, Maxim Poletaev, Vyacheslav Solomin, Evgeny Shvarts, and Robert Edwards, who were elected at the 2021 Annual General Meeting of Shareholders.

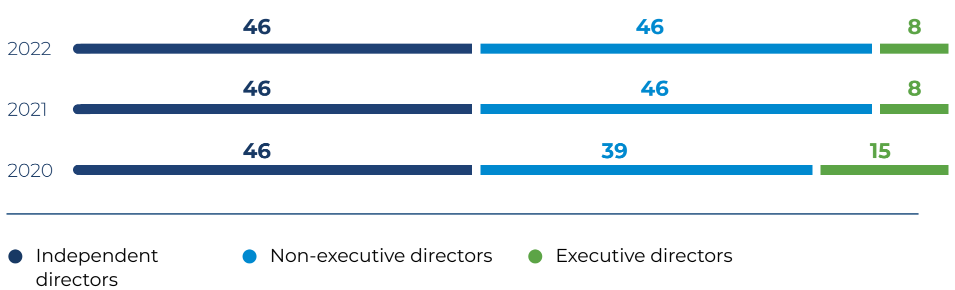
In March 2022, foreign nationals Gareth Penny, Roger Munnings and Robert Edwards announced their resignation from the Board of Directors.

Following the Annual General Meeting of Shareholders that took place on 3 June 2022, Sergey Bratukhin, Sergey Barbashev and Vyacheslav Solomin stepped down from the Board of Directors, and Denis Alexandrov, Andrey Bougrov, Alexey Germanovich, Alexey Ivanov, Vsevolod Rozanov, and Egor Sheibak were elected as new Board members.

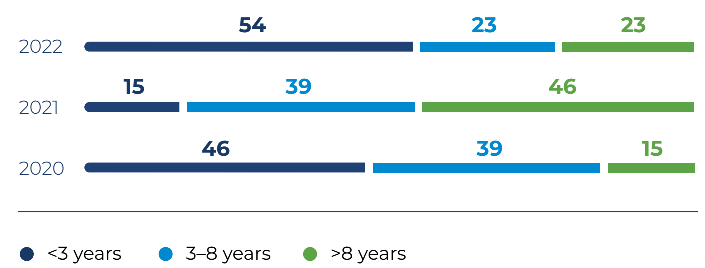
Following the Extraordinary General Meeting of Shareholders that took place on 24 November 2022, Maxim Poletaev and Vsevolod Rozanov stepped down from the Board of Directors, with Elena Bezdenezhnykh and Alexandra Zakharova elected as new Board members.

As at 31 December 2022, the Board of Directors had 13 members, including:
- six independent directors: Denis Alexandrov, Alexey Germanovich, Sergey Volk, Alexey Ivanov, Stanislav Luchitsky, and Evgeny Shvarts
- six non-executive directors: Andrey Bougrov, Sergey Batekhin, Alexey Bashkirov, Elena Bezdenezhnykh, Alexandra Zakharova, and Egor Sheibak
- one executive director: Marianna Zakharova

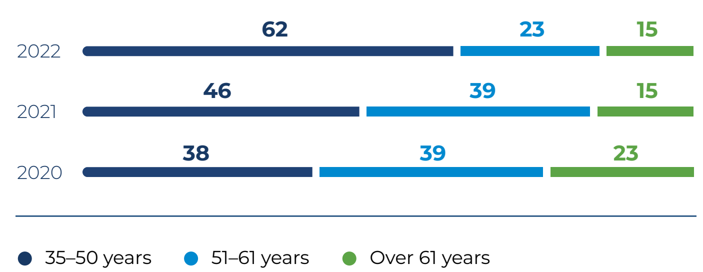
Status of Board members (%)



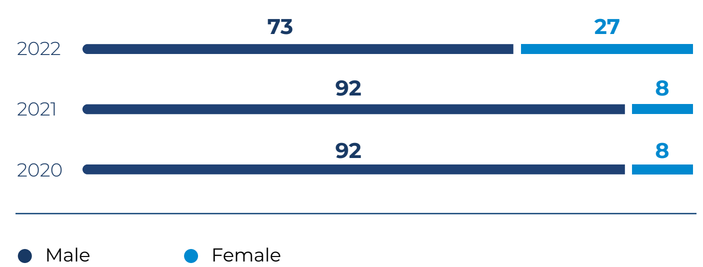
Tenure on the Board of Directors (%)

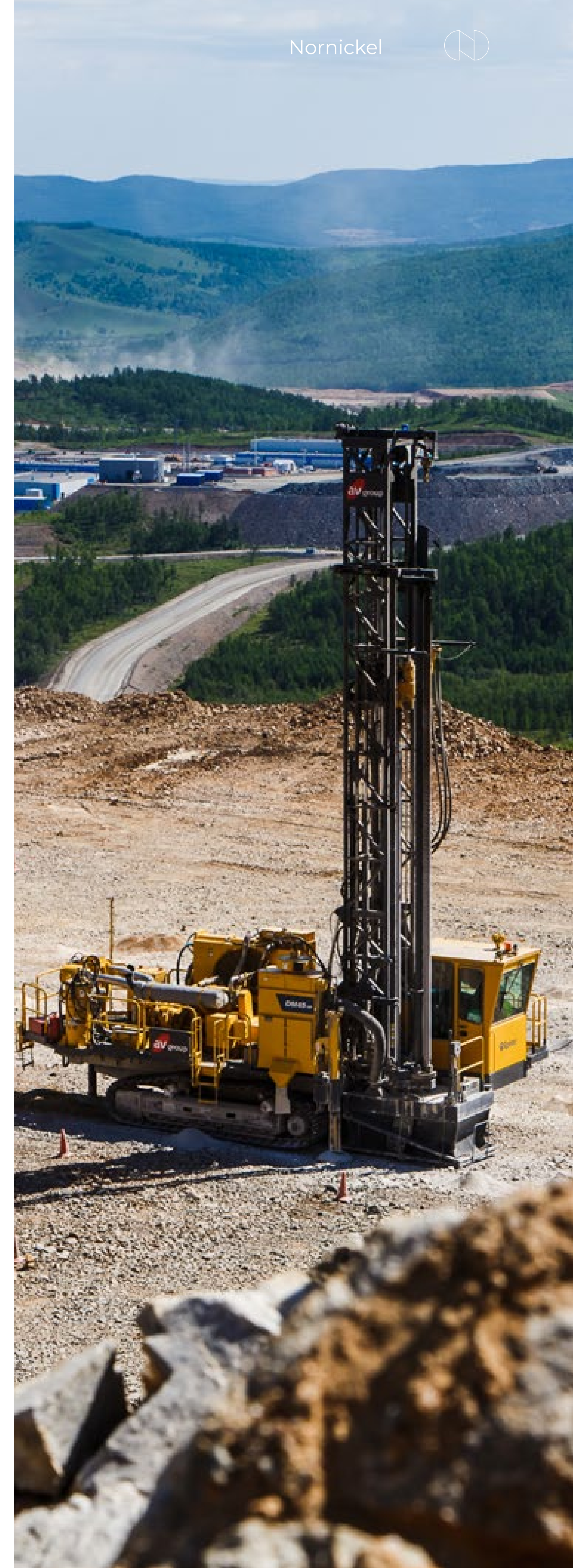


Board composition by age group (%)



Board composition by gender (%)





Chairman of the Board of Directors

The Chairman of Nornickel's Board of Directors leads the Board of Directors, convenes and chairs its meetings, ensures constructive collaboration between the Board members and corporate management.

Since March 2013, the Board of Directors was chaired by Gareth Penny, who in line with global best practice was an independent director. In March 2022, due to the challenging geopolitical situation, independent non-executive directors Gareth Penny, Roger Munnings and Robert Edwards decided to step down from the Board of Directors. Since Gareth Penny could not perform his duties as the Board Chairman, the Board of Directors decided to delegate the functions of convening and holding the Company's Board meetings, organising the keeping and signing of their minutes, as well as presiding over its meetings to Sergey Batekhin, Deputy Chairman of the Company's Board of Directors.

The increased pressure of sanctions on the Company and the dramatically wider scope of strategic challenges called for a better coordination within the entire management team. Non-executive Director Andrey Bougrov was elected as Chairman of the Company's Board of Directors in June 2022 for the Board to effectively handle its tasks. Andrey Bougrov's long track record at the Company offers a range of advantages since he knows the ins and outs of the Company's operations and its internal business processes, which helps better understand them and facilitates fast but high-quality decision making. In his role as Senior Vice President for Sustainable Development, Andrey Bougrov focused on aligning the Company's development strategy with the sustainability agenda, monitoring corporate internal procedures, policies and organisational structure for compliance with the requirements of international sustainability associations and certification procedures, as well as on preparing and further improving the Company's sustainability reporting to bring it closer in line with international non-financial reporting standards. Andrey also oversaw the Company's investor relations. Andrey Bougrov also boasts a vast track record of serving on expert councils on governance and sustainability, and chairs the Share Issuers Committee of Moscow Exchange.

For more details on Andrey Bougrov's biography, please see this Annual Report and the Company website.

Independent directors

Independent directors assist the Board in making decisions that take into account the interests of various stakeholder groups while improving the quality of management decisions.

In 2022, in line with corporate governance best practice, Nornickel's Board of Directors regularly evaluated Board nominees and new members against the independence criteria set out in the Company's Articles of Association and the Listing Rules of PJSC Moscow Exchange. If a sign/signs of relationship was/were identified, the nature of such relationship was comprehensively assessed. Where the identified relationship was established to be formal in nature, the Company's Board of Directors determined whether the Board member in question met the independence criteria based on a recommendation by the Corporate Governance, Nomination and Remuneration Committee. Thus, Board member Alexey Germanovich was determined to be independent despite his formal relationship with the Company's contractor since such relationship did not affect his ability to exercise independent, fair and unbiased judgement. Alexey Germanovich has signed a relevant statement, under which the Director committed to represent the interests of all shareholders and the Company, despite the fact that he meets a formal relationship criterion, and inform the Board of Directors if he might start to meet any other relationship criteria or have a conflict of interest, or other ethical issues.

Over the year, the Company was in compliance with the requirements of the Listing Rules of PJSC Moscow Exchange as regards the number of independent directors on the Board.

Thus, as of 31 December 2022, 6 out of the 13 Directors, or 46.2%, were independent (Denis Alexandrov, Sergey Volk, Alexey Germanovich, Alexey Ivanov, Stanislav Luchitsky, and Evgeny Shvarts).

The Board's experience and skill mix

Name	Tenure on the Board of Directors	Key skills: Strategy	Law and corporate governance	Finance and audit	Metals and mining / engineering	International economic relations	ESG
Composition of the Board of Directors as at 2022-end							
Andrey Bougrov Non-executive Director, Chairman of the Board of Directors	2002–2020 2022 — to date		●		●	●	●
Denis Alexandrov Independent Director	2022 — to date	●		●			●
Sergey Batekhin Non-executive Director	2020 — to date	●	●	●		●	
Alexey Bashkirov Non-executive Director	2013 — to date	●	●	●		●	
Elena Bezdenezhnykh Non-executive Director	2022 — to date	●	●		●		
Sergey Volk Independent Director	2019 — to date		●	●			
Alexey Germanovich Independent Director	2022 — to date		●	●			●
Marianna Zakharova Executive Director	2010 — to date		●		●		
Alexandra Zakharova Non-executive Director	2022 — to date			●	●		●
Alexey Ivanov Independent Director	2022 — to date			●			
Stanislav Luchitsky Independent Director	2021 — to date	●	●		●		●
Evgeny Shvarts Independent Director	2019 — to date	●			●		●
Egor Sheibak Non-executive Director	2022 — to date		●	●	●		
As at 31 December 2022, the average tenure on the Board of Directors was 4.8 years		**6**	**9**	**8**	**7**	**3**	**6**
Board members who stepped down in 2022							
Gareth Penny Independent Director	2013–2022	●			●	●	●
Roger Munnings Independent Director	2018–2022			●	●		●
Robert Edwards Independent Director	2013–2022		●	●	●		●
Sergey Barbashev Non-executive Director	2011–2022		●				
Sergey Bratukhin Independent Director	2013–2022	●	●	●	●		
Vyacheslav Solomin Non-executive Director	2019–2022			●			
Maxim Poletaev Non-executive Director	2019–2022	●		●		●	
Vsevolod Rozanov Independent Director	2022		●	●			●

SELECTION CRITERIA AND SUCCESSION

The performance of the Company's Board of Directors is largely driven by a mix of skills, qualifications, experience, independent judgement, and degree of independence on the Board. The number of Board members and the composition of the Company's Board of Directors enable fair and comprehensive review of matters, most informed decision making, timely detection and prevention of conflicts of interest, as well as effective performance of the Board's other functions. When electing members to the Board of Directors, the Company is guided by the principles recommended by the Bank of Russia:

- Having a mix of skills on the Board of Directors that enables it to work as a close-knit team of professionals to drive informed and professional collective decision making by the Board;
- Balanced composition, whereby the experience, expertise and skills of the Company's Board members complement each other and help the Board of Directors exercise fair and impartial judgement, timely identify strategic risks and assess their potential impacts;
- diversification, whereby the Board of Directors is able to review matters from different perspectives, bring up new ideas for discussion and make more balanced decisions;
- Tailored approach, whereby the Company itself decides on the optimal composition of the Board of Directors and its committees and maintains succession plans for them considering the Company's objectives, business profile and other factors;
- Independence, whereby the Board of Directors strives to make the most fair and independent decisions. Independent directors on the Company's Board of Directors play an important role in maintaining a balance of interests between various shareholder groups and working out the best possible solutions;
- Information transparency, whereby shareholders are provided with timely information about candidates, their professional qualities, experience, and skills.

TRAINING OF BOARD MEMBERS

In order to update the knowledge of the Company's Board members and better involve them in the Company's processes, in July 2022, the Company's management prepared and held a webinar for Board members on safety culture leadership, with training courses on handling insider information delivered on a regular basis for directors.

In September 2022, to keep up to date with local developments and progress on ESG adoption, the Company's top managers and Board members visited production sites at Norilsk. A number of informal discussions and meetings took place during the visit.

BOARD OF DIRECTORS' PERFORMANCE

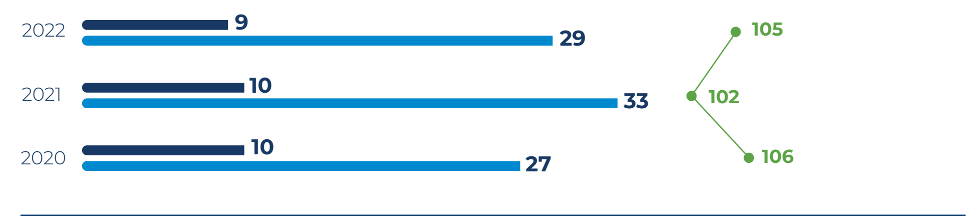
In 2022, the Company's Board of Directors held

38 meetings

9 meetings in person

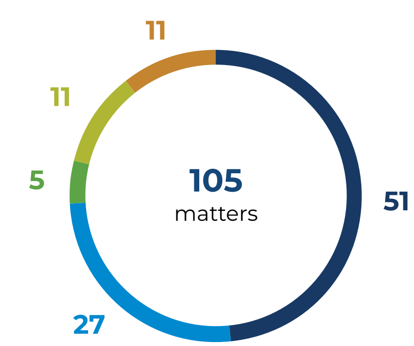
105 matters reviewed

Number of Board meetings



During the year, the Board of Directors continued to focus on matters critical to the Company's sustainable growth, investor relations strategy, and operational and financial performance.

Matters reviewed in 2022 (%)



Attendance of Board and committee meetings in 2022[1]

In 2022, attendance at Board meetings was 100%.

Name	Status	Attendance at Board meetings			Attendance at committee meetings				
		Total	In person	In absentia	Strategy Committee	Budget Committee	Audit Committee	Corporate Governance, Nomination and Remuneration Committee	Sustainable Development and Climate Change Committee
Andrey Bougrov	Non-executive Director / Chairman of the Board of Directors	21/38	7/9	14/29					
Denis Alexandrov	Independent Director	21/38	7/9	14/29	3/4		11/15		2/4
Alexey Bashkirov	Non-executive Director	38/38	9/9	29/29	4/4	2/3	4/15		1/4
Elena Bezdenezhnykh	Non-executive Director / Chairwoman of the Strategy Committee	6/38	3/9	3/29	2/4				
Sergey Batekhin	Non-executive Director / Chairman of the Budget Committee	38/38	9/9	29/29	4/4	3/3	3/15	19/19	1/4
Sergey Volk	Independent Director / Chairman of the Corporate Governance, Nomination and Remuneration Committee	38/38	9/9	29/29		1/3	14/15	19/19	1/4
Alexey Germanovich	Independent Director / Deputy Chairman of the Corporate Governance, Nomination and Remuneration Committee	21/38	7/9	14/29			11/15	11/19	2/4
Marianna Zakharova	Executive Director	38/38	9/9	29/29					
Alexandra Zakharova	Non-executive Director	6/38	3/9	3/29			4/15		0/4
Alexey Ivanov	Independent Director / Chairman of the Audit Committee	21/38	7/9	14/29			11/15		
Stanislav Luchitsky	Independent Director / Chairman of the Sustainable Development and Climate Change Committee	38/38	9/9	29/29	4/4			2/19	3/4
Evgeny Shvarts	Independent Director	38/38	9/9	29/29				8/19	4/4
Egor Sheibak	Non-executive Director	21/38	7/9	14/29		2/3		11/19	
Before the Extraordinary General Meeting of Shareholders on 24 November 2022									
Vsevolod Rozanov (from 3 June 2022 to 24 November 2022)	Non-executive Director	13/38	3/9	10/29		1/3	7/15	9/19	2/4
Maxim Poletaev	Non-executive Director / Chairman of the Strategy Committee	30/38	6/9	24/29	2/4	2/3			
Before the Annual General Meeting of Shareholders on 3 June 2022									
Gareth Penny	Independent Director / Chairman of the Board of Directors / Chairman of the Sustainable Development and Climate Change Committee	5/38	0/9	5/29					1/4
Sergey Barbashev	Non-executive Director	17/38	3/9	14/29		1/3		4/19	
Sergey Bratukhin	Non-executive Director	17/38	3/9	14/29	1/4	1/3	4/15	8/19	1/4
Roger Munnings	Independent Director / Chairman of the Audit Committee	5/38	0/9	5/29			1/15		1/4
Vyacheslav Solomin	Non-executive Director	17/38	3/9	14/29			4/15		
Robert Edwards	Independent Director / Chairman of the Corporate Governance, Nomination and Remuneration Committee	5/38	0/9	5/29			1/15	4/19	1/4

[1] The attendance by Board members is represented as X/Y, where X is the number of meetings attended by the director, and Y is the total number of meetings held.

PERFORMANCE EVALUATION OF THE BOARD OF DIRECTORS

The procedure for evaluating the performance of the Company's Board of Directors is regulated by the Performance Evaluation Policy for the Board of Directors approved by resolution of the Company's Board of Directors. The Policy provides for internal evaluation by surveying the Board members as well as external evaluation involving professional independent consultants.

In line with the recommendations of the Corporate Governance Code, corporate governance best practice and the Performance Evaluation Policy for the Board of Directors, in 2022, the performance evaluation of the Company's Board of Directors for 2021 was carried out by an external organisation, IDA Academy.

Detailed questionnaires were sent out to participants to evaluate the performance of the Board and its committees, along with the directors' individual contributions. The results were supplemented by comments and feedback from certain chairmen given during one-on-one interviews. Following these activities, IDA Academy prepared a preliminary evaluation report submitted to the members of the Corporate Governance, Nomination and Remuneration Committee and the Corporate Secretary and reviewed by the Company's Board of Directors.

During the reporting year, the Board of Directors' efforts focused on the areas for improvement identified by the external evaluation as well as on consolidating the progress made in priority areas.

Following the lifting of COVID restrictions, the Board of Directors and top managers resumed the practice of reviewing matters related to the Company's business and strategic priorities at in-person meetings, including informal ones. In September 2022, to keep up to date with local developments and progress on ESG adoption, the Company's top managers and Board members visited production sites in Norilsk. The visit involved, among other things, the discussion of charity matters.

To reflect stakeholders' views and interests in the decision-making process, the Corporate Governance, Nomination and Remuneration Committee continued interacting with the Company's management during 2022 when resolving on changes in the composition of the Company's Management Board and discussing approaches to developing individual KPIs for top 10's.

KPI improvement was an important topic discussed in 2022 at meetings of the Corporate Governance, Nomination and Remuneration Committee, the Audit Committee, and the Sustainable Development and Climate Change Committee. The Sustainable Development and Climate Change Committee approved the Company's KPI system (including environmental and health and safety metrics). Members of the Audit Committee also regularly reviewed health and safety reports and made recommendations to improve the effectiveness of relevant efforts.

In 2022, the Strategy Committee reviewed matters related to the long-term investment programme aimed at the Company's development, future production programme and the implementation status of several projects (development concept for the Company's design services, IT Programme, and exploration strategy).

In line with global best standards, in early 2023, the Company summarised the Board of Directors' performance in 2022 through continued Board of Directors' self-evaluation, thus ensuring the continuous development and improvement of Nornickel's corporate governance.

The internal performance evaluation of the Board of Directors in 2022 was carried out by the Corporate Governance, Nomination and Remuneration Committee in line with the resolution of the Board of Directors dated 7 February 2023.

Evaluation of the Board of Directors' performance in 2022 showed that:

- the current composition of the Board of Directors is well-balanced in terms of directors' qualifications, experience and business skills. The qualitative and quantitative composition of the Board of Directors matches the scale and profile of the Company's business, its business objectives and risk profile, and meets the Company's current and anticipated needs and shareholder interests;
- the composition of the Board committees is aligned with the Company's goals and objectives; there is no need to set up additional Board committees;
- the Chairman of the Board of Directors organises the Board of Directors' activities in the most efficient way, ensures its communication with other bodies of the Company and facilitates the best performance of assigned duties.

At its meeting on 28 April 2023, the Board of Directors reviewed the Report on the Internal Performance Evaluation of the Board of Directors and the recommendations of the Corporate Governance, Nomination and Remuneration Committee, and acknowledged that in 2022 the Board of Directors, the Board Chairman and the Board committees discharged their duties effectively.

The Corporate Governance, Nomination and Remuneration Committee used the self-evaluation results to identify areas for improvement and make recommendations concerning the Board of Directors' respective functions that require performance improvement measures.

The Board of Directors will continue incorporating the recommendations of the Corporate Governance, Nomination and Remuneration Committee in its work in 2023.

BIOGRAPHICAL DETAILS OF BOARD MEMBERS AS OF 31 DECEMBER 2022[1]

For more detailed biographies of the Board members, please see the Company's website, and for biographies of the members who stepped down after the Annual General Meeting of Shareholders, please see the 2021 Annual Report.

In the reporting year, Board members made no transactions with MMC Norilsk Nickel shares, with only Elena Bezdenezhnykh (0.00115%) and Egor Sheibak (0.00003%) holding shares in the Company.

Andrey Bougrov

Non-executive Director, Chairman of the Board of Directors since 2022

Born in: 1952

Nationality: Russian Federation

Education

Degree in International Economic Relations, Economist for Foreign Trade, PhD in Economics, Moscow State Institute of International Relations (MGIMO University)

Experience in the last fi e years

since 2002: positions at Nornickel: member of the Board of Directors (2002–2020), Chairman of the Board of Directors (2010–2013, 2022 to date), Deputy Chairman of the Board of Directors (2013–2020), Senior Vice President (2016–2020), Senior Vice President for Sustainable Development (2020–2022), member of the Management Board (2013–2022);

since 2006: member of the management board of the RSPP;

since 2013: vice president of the RSPP;

since 2015: member of the National Council on Corporate Governance non-profit partnership;

since 2016: chairman of the Share Issuers Committee of Moscow Exchange;

since 2018: chairman of the RSPP Council on Non-financial Reporting;

since 2020: member of the RSPP Climate Policy and Carbon Regulation Committee;

since 2021: member of the RSPP Coordination Council on Sustainable Development, member of the International Advisory Panel of the Asian Infrastructure Investment Bank (AIIB);

since 2022: member of the working group on ESG agenda and energy transition under the Russian Government Expert Council;

since 2022: member of the Expert Council on Sustainability and Green Finance under the Subcommittee on Sustainability and Green Finance of the State Duma Committee on the Financial Market at the Federal Assembly of the Russian Federation

[1] Positions are indicated as at 2022-end.

Sergey Batekhin

Non-executive Director since 2020

Chairman of the Budget Committee, member of the Corporate Governance, Nomination and Remuneration Committee, member of the Strategy Committee of the Board of Directors

Born in: 1965

Nationality: Russian Federation

Education

Degree in Military and Political Translation, Foreign Languages (German and French), Assistant Translator/Interpreter, Red Banner Military Institute of the Ministry of Defence of the USSR, 1987

Degree in Finance and Credit, Economist, Plekhanov Russian Academy of Economics, 1998

Master of Business Administration, Moscow International Higher School of Business MIRBIS, 1998

Postdoctoral degree in Philosophy, International Information Technology Academy, 2002

Speaks French, German, English, and Italian

Experience in the last fi e years

since 2020: chairman of the supervisory board of the Digital Capital

2019–2022: member of the board of directors of Jokerit Hockey Club Oy

since 2019: chairman of the presidium of the Night Hockey League non-profit amateur hockey foundation

since 2018: member of the board of directors of LLC Kontinental Hockey League

2013–2020: positions at Nornickel: member of the Management Board (2013–2020), Vice President (2015–2016), Senior Vice President – Head of Sales, Commerce and Logistics (2016–2018), Senior Vice President – Head of Sales, Procurement and Innovation (2018–2020)

Denis Alexandrov

Independent Director since 2022

Member of the Strategy Committee, member of the Audit Committee, member of the Sustainable Development and Climate Change Committee of the Board of Directors

Born in: 1974

Nationality: Russian Federation

Education

Degree in International Economic Relations and Management, Far Eastern State University, 1996

Bachelor of Science in Business and Management, University of Maryland, 1995

Experience in the last fi e years

2016–2020: CEO of Russdragmet (Highland Gold Mining Limited Group)

since 2020: CEO of the public gold mining company Petropavlovsk PLC (POG)

since 2020: general director, LLC Atlas Mining

since 2021: member of the board of directors of Pokrovskiy Mine, a Petropavlovsk Group company

since 2021: member of the board of directors of PHM Engineering, a Petropavlovsk Group company

since 2022: member of the board of directors of Petropavlovsk-Avia, a Petropavlovsk Group company

since 2022: member of the Council of the Union of Gold Producers of Russia

Alexey Bashkirov

Non-executive Director since 2013

Member of the Audit Committee, member of the Strategy Committee of the Board of Directors

Born in: 1977

Nationality: Russian Federation

Education

Degree in International Economic Relations, Moscow State Institute of International Relations (MGIMO University)

Experience in the last fi e years

since 2015: managing director at Winter Capital Advisors

Elena Bezdenezhnykh

Non-executive Director since 2022

Chairwoman of the Strategy Committee of the Board of Directors

Born in: 1973

Nationality: Russian Federation

Education

Degree in Law, Lawyer, Krasnoyarsk State University, 1996

Experience in the last fi e years

2015–2018: Vice President, State Secretary and Head of Government Relations at MMC Norilsk Nickel

2018–2019: vice president for regional policy and government relations at RUSAL Global Management B.V.'s branch

since 2019: vice president for regional policy and government relations at RUSAL Management

since 2022: member of the board of directors at Yenisei Siberia Development Corporation

Sergey Volk

Independent Director since 2019

Chairman of the Corporate Governance, Nomination and Remuneration Committee, member of the Budget Committee and member of the Audit Committee of the Board of Directors

Born in: 1969

Nationality: Ukraine

Education

Master of Business Administration (majoring in Finance), University of Texas at Austin (USA), 1998

Experience in the last fi e years

2019-2022: member of the board of directors of Fortenova grupa d.d. (Zagreb, Croatia)

2018-2022: member of the supervisory board of Mercator d.d. (Ljubljana, Slovenia)

Marianna Zakharova

Executive Director since 2010, member of the Management Board since 2016

Born in: 1976

Nationality: Russian Federation

Education

Bachelor in Law, 1998; Master in Law (with distinction), 2000, Peoples' Friendship University of Russia

Experience in the last fi e years

since 2015: First Vice President – Head of Corporate Governance, Asset Management and Legal Affairs at MMC Norilsk Nickel

Stanislav Luchitsky

Independent Director since 2021

Chairman of the Sustainable Development and Climate Change Committee, member of the Strategy Committee, member of the Corporate Governance, Nomination and Remuneration Committee of the Board of Directors

Born in: 1976

Nationality: Russian Federation

Education

Degree in Non-ferrous Metallurgy, Metallurgical Engineer, Norilsk Industrial Institute, 1999

Experience in the last fi e years

since 2021: deputy CEO – head of geology, technology and engineering, member of the management board of STANMIX HOLDING LIMITED

since 2021: deputy CEO – head of geology, technology and engineering, member of the management board of Russdragmet

2020–2021: deputy CEO – project director at Ozernaya Mining Company

2018–2019: CEO of Arctic Palladium

2014–2018: Head of the Chita PMO at MMC Norilsk Nickel

Alexey Germanovich

Independent Director since 2022

Deputy Chairman of the Corporate Governance, Nomination and Remuneration Committee, member of the Audit Committee, member of the Sustainable Development and Climate Change Committee of the Board of Directors

Born in: 1977

Nationality: Russian Federation

Education

Degree in Economics, Manager, Lomonosov Moscow State University, 1998

Degree in Journalism, Lomonosov Moscow State University, 2002

Executive MBA, Cranfield University, UK, 2009

Experience in the last fi e years

since 2008: member of the management board of the St Petersburg University Endowment Fund

2014–2019: member of the board of directors of E.ON Russia (Unipro since 23 June 2016)

2016–2018: member of the board of directors of Aeroflot

2016–2018: member of the board of directors of Ameriabank, Armenia

2018–2019: member of the board of directors of Komercijalna Banka a.d. Beograd, Serbia

Alexandra Zakharova

Non-executive Director since 2022

Member of the Audit Committee, member of the Budget Committee, member of the Sustainable Development and Climate Change Committee of the Board of Directors

Born in: 1973

Nationality: Russian Federation

Education

Degree in Economics and Labour Sociology, Economist, Plekhanov Russian Academy of Economics, 1996

Experience in the last fi e years

since 2020: function director at JSC Russian Aluminium Management

2013–January 2023: Head of project of the Financial Control Service of MMC Norilsk Nickel

Alexey Ivanov

Independent Director since 2022

Chairman of the Audit Committee of the Board of Directors

Born in: 1969

Nationality: Russian Federation

Education

Department of Economic Cybernetics, Faculty of Economics, 1991; postgraduate degree, Department of International Economic Relations, Leningrad State University, 1993

Institute of Chartered Accountants in England and Wales (ACA qualification), 1997

Experience in the last fi e years

since 2021: CEO of Green Energy

since 2020: CEO of Axioma

2010–2020: key account management partner (2016–2020), head of audit services (2013–2016), head of private company services (2010–2013) at PricewaterhouseCoopers, Moscow

Evgeny Shvarts

Independent Director since 2019

Member of the Sustainable Development and Climate Change Committee of the Board of Directors

Born in: 1958

Nationality: Russian Federation

Education

Degree in Zoology and Botany, Biologist, Lomonosov Moscow State University, 1982

Candidate of Geographical Sciences (Biogeography and Soil Geography), Institute of Geography, Academy of Sciences of the Soviet Union, 1987

Doctor of Geographical Sciences (Geoecology), Institute of Geography, Russian Academy of Sciences, 2003

Experience in the last fi e years

since 2021: professor at the Faculty of Geography and Geoinformation Technology, National Research University – Higher School of Economics; head of the Centre for Responsible Environmental Management at the Institute of Geography, Russian Academy of Sciences

since 2020: leading researcher at the Department of Physical Geography and Environmental Management Problems of the Institute of Geography, Russian Academy of Sciences

since 2020: member of the board of directors of UC RUSAL, IPJSC

2007–2019: director for conservation policy at WWF

since 1993: member of the board of the Biodiversity Conservation Centre charitable foundation

Egor Sheibak

Non-executive Director since 2022

Member of the Corporate Governance, Nomination and Remuneration Committee, member of the Budget Committee of the Board of Directors

Born in: 1986

Nationality: Russian Federation

Education

Degree in Public Administration, Manager, Lomonosov Moscow State University, 2008

Experience in the last fi e years

since 2022: deputy chairman of the Committee on Competition Development of RSPP

2013–January 2023: Head of project of the Financial Control Service of MMC Norilsk Nickel

BOARD COMMITTEES

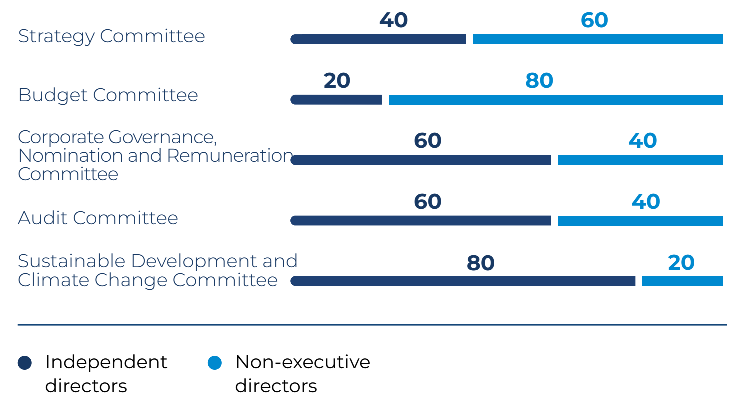
Committees established by Nornickel's Board of Directors are responsible for conducting a preliminary review of critical matters related to the Company's activities and making recommendations for decision making on matters reserved for the Board. To discharge their responsibilities in an effective way, the committees may consult Nornickel's governance bodies and seek opinions from independent external advisors.

From the beginning of the reporting year, the Board of Directors had five committees, each consisting of five members:

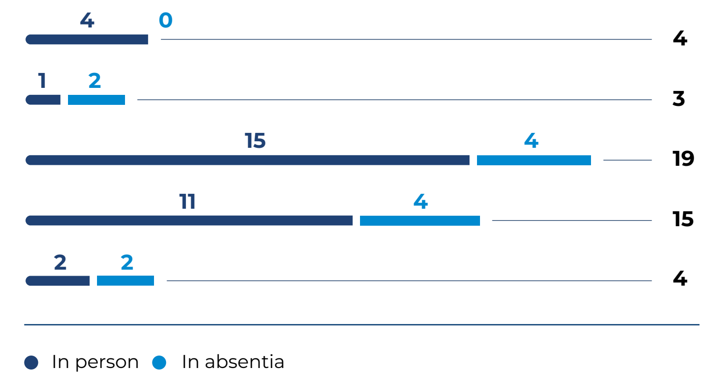
- Strategy Committee;
- Budget Committee;
- Corporate Governance, Nomination and Remuneration Committee;
- Audit Committee;
- Sustainable Development and Climate Change Committee.

Members of all committees are appointed by the Board of Directors.

Status of Board committee directors (%)



Number of Board committee meetings in 2022



STRATEGY COMMITTEE

Committee members at 2022-end

Elena Bezdenezhnykh
Chairwoman

Denis Alexandrov
Independent Director

Alexey Bashkirov

Sergey Batekhin

Stanislav Luchitsky
Independent Director

The Strategy Committee is made up of five directors, two of whom are independent (i.e. the Committee is 40% independent). In 2022, the Committee held four meetings in person.

The Strategy Committee assists the Board of Directors by previewing matters related to:

- building a sustainability strategy
- investment planning and structural changes
- engagement with capital markets.

The Strategy Committee's key areas of focus:

- Supporting Nornickel's Board of Directors in developing, overseeing and adjusting the corporate strategy
- Recommending updates to the strategy.

During the reporting year, the Strategy Committee made recommendations to the Board of Directors and reviewed progress and status updates on Nornickel's major investment projects, including Bystrinsky GOK and the Sulphur Project, as well as the Company's contribution to the implementation of the Comprehensive Plan for the Social and Economic Development of Norilsk to 2035 (including renovation of Norilsk's housing stock). The Committee also discussed reports on the Company's operational performance, Progress Report on the IT Programme and Progress Report on Implementing the Company's Energy Sector Development Strategy. The Committee also reviewed progress updates on the Transport Logistics Strategy, sales performance for 2022–2023 and the project to update the marketing strategy, as well as assessed changes in the competitive environment and the Company's repair service development concept.

BUDGET COMMITTEE

Committee members at 2022-end

Sergey Batekhin
Chairman

Alexey Bashkirov

Sergey Volk
Independent Director

Alexandra Zakharova

Egor Sheibak

Nornickel's current Budget Committee is made up of five directors, one of whom is independent (i.e. the Committee is 20% independent).

In 2022, the Committee held three meetings, including two in absentia.

In 2022, the Budget Committee focused on making recommendations to the Board of Directors to inform decision making on the amount of the Company's 2021 full-year dividend and the dividend record date to be proposed by the Board of Directors, as well as reviewed metal price and FX forecast updates to support the Company's 2023 budgeting. The Budget Committee also approved and recommended that the Board of Directors approve Nornickel's 2023 budget.

CORPORATE GOVERNANCE, NOMINATION AND REMUNERATION COMMITTEE

Committee members at 2022-end

Sergey Volk
Chairman,
Independent Director

Alexey Germanovich
Deputy Chairman,
Independent Director

Sergey Batekhin

Stanislav Luchitsky
Independent Director

Egor Sheibak

The Committee is made up of five directors, three of whom are independent, including the Committee Chairman (i.e. the Committee is 60% independent).

In 2022, the Committee held 19 meetings, including 15 in absentia and 4 in person.

The Corporate Governance, Nomination and Remuneration Committee supports the Board of Directors by:
- evaluating, overseeing and improving Nornickel's corporate governance framework
- ensuring succession planning for Nornickel's Board of Directors and Management Board
- providing incentives, evaluating the performance of Nornickel's Board of Directors, Management Board, President, and Corporate Secretary, and setting relevant remuneration policies
- supervising the development and implementation of Nornickel's information policy.

The Committee made recommendations to the Board of Directors to inform decision making on convening, preparing and holding the Annual and Extraordinary General Meetings of Shareholders, and on matters reserved to the General Meeting of Shareholders (remuneration and reimbursement of expenses of members of the Board of Directors and the Audit Commission, and liability insurance and indemnity for members of the Board of Directors and the Management Board).

The Corporate Governance, Nomination and Remuneration Committee advised the Board of Directors on evaluation of the Board of Directors' performance in 2021, on changes to the Company's Management Board and on the approval of a number of the Company's internal documents. The Committee approved the Company's set of key performance indicators (KPIs) for HSE performance and team KPIs of the Norilsk Nickel Group for 2023. The Committee reviewed the Report on the Consistent Efforts to Improve Employee Engagement at the Company. It also reviewed performance against the 2021 KPI scorecards for the Company's top 10's and top 100's, as well as the Management Board labour relations and motivation system, updates on the Company's charitable policy, sponsorship efforts and other social programmes, the Human Capital Development Programme, and the Company's training system development strategy for 2022–2025. The Committee discussed approaches to developing individual KPIs for 2022 for top 10's. The Committee also reviewed the annual evaluation of the Board of Directors' performance in 2021, which concluded that the Board of Directors and the Corporate Secretary of Nornickel were effective, and assessed the independence of nominees to the Company's Board of Directors.

AUDIT COMMITTEE

Committee members at 2022-end

Alexey Ivanov
Chairman,
Independent Director

Denis Alexandrov

Alexey Germanovich
Independent Director

Sergey Volk
Independent Director

Alexandra Zakharova

The Audit Committee is made up of five directors, three of whom are independent directors, including the Committee Chairman (i.e. the Committee is 60% independent). On average, Committee members have more than 10 years of experience in finance.

In 2022, the Committee held 15 meetings, including 11 in person and 4 in absentia.

The Committee discharges its responsibilities by overseeing:
- financial reporting
- risk management and internal controls
- external and internal audit
- prevention of wrongdoing by Nornickel employees and third parties
- health and safety matters.

The Audit Committee plays an important role in enabling controls and accountability, and has become an effective interface between the Board of Directors, Audit Commission, independent auditor, Internal Audit Department, and management of Nornickel.

During 2022, the Audit Committee prepared for the Board of Directors a number of recommendations for decision making on matters related to the accuracy, completeness and reliability of Nornickel's financial statements, as well as health and safety, and the approval of PJSC MMC NORILSK NICKEL's Internal Control Policy and PJSC MMC NORILSK NICKEL's Internal Audit Policy. The Committee also reviewed the results of audits by the Internal Audit Department and Internal Control Department and discussed the 2021 Sustainability Report. The Committee reviewed reports by the Risk Management Service on the Company's key risks and reports by the Inspection Department for Monitoring Technical, Production and Environmental Risks, as well as the Corporate Risk Appetite Statement for 2022.

In 2022, the Audit Committee of the Board of Directors:
- reviewed the annual audit plan and internal audit development plans
- reviewed bonus-related performance targets (KPI scorecards) of the Internal Audit Department Director
- discussed the results of completed audits, including gaps identified and remedial actions designed by management to improve internal controls and minimise risks.

SUSTAINABLE DEVELOPMENT AND CLIMATE CHANGE COMMITTEE

Committee members at 2022-end

Stanislav Luchitsky
Chairman,
Independent Director

Denis Alexandrov
Independent Director

Alexey Germanovich
Independent Director

Alexandra Zakharova

Evgeny Shvarts
Independent Director

The Committee is made up of five directors, four of whom are independent, including the Committee Chairman (i.e. the Committee is 80% independent). In accordance with its Terms of Reference, the Committee has five members, with an option to increase its membership should the Board of Directors decide to do so.

In 2022, the Committee held four meetings, including two in person and two in absentia.

The Sustainable Development and Climate Change Committee's key functions:

- Integrating sustainability principles, including climate change, into the Company's activities
- Developing and implementing the Sustainable Development and Climate Change Strategy
- Managing risks and internal controls related to sustainable development and climate change
- Preparing the Company's internal reports and disclosures on sustainable development and climate change
- Overseeing the external audit of the Company's reports and activities related to sustainable development and climate change.

In the reporting year, the Committee members discussed a report by Nornickel's management on the Company's sustainability performance, including environmental protection and climate change monitoring, international certification of the Company's activities, compliance with international standards on business conduct, as well as social and corporate governance matters. Particular attention was paid to environmental remediation after the diesel fuel spill, carbon-neutral nickel production, as well as the integration of the International Council of Mining and Metals (ICMM) standards and the Initiative for Responsible Mining Assurance (IRMA) requirements into the Company's operations. The Committee meeting also discussed in detail matters related to supporting indigenous peoples of the Far North and studying the impacts of climate warming on permafrost.

Following the discussion, the Committee deemed it appropriate to publish information about Nornickel's sustainability/ESG performance and future plans on the Company's website on a regular basis. Members of the Board of Directors and Company management recognised environmental and industrial safety matters as their special focus areas and highlighted the need for sustainable results in transforming Nornickel's industrial safety culture.

EXECUTIVE BODIES

The President and the Management Board are Nornickel's executive bodies in charge of day-to-day operations. They ensure:

- implementation of resolutions passed by the Board of Directors and the General Meeting of Shareholders
- implementation of Nornickel's key plans and programmes
- continuous operation of an effective risk management and internal control system (RMICS).

PRESIDENT

The President is Nornickel's sole executive body in charge of day-to-day operations. The President is elected by the General Meeting of Shareholders for an indefinite term and acts as Chairman of the Management Board.

The President reports to the Board of Directors and the General Meeting of Shareholders. Since 2015, this position has been held by Vladimir Potanin (Nornickel's CEO in 2012–2015).

MANAGEMENT BOARD

The Management Board is a collective executive body in charge of Nornickel's day-to-day operations within its scope of authority as set out in the Articles of Association; it ensures the implementation of resolutions passed by the General Meeting of Shareholders and the Board of Directors.

Members of the Management Board are elected by the Board of Directors for an indefinite term. The Board of Directors may at any time terminate the office and contract of any member of the Management Board.

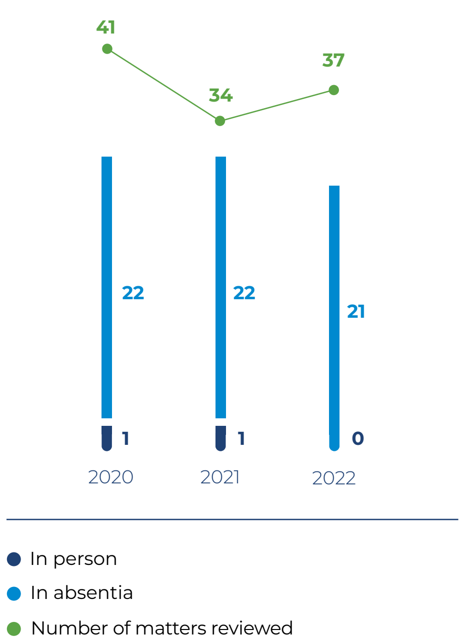
The Management Board had 10 members at the start of 2022, according to the composition approved by the Board of Directors on 28 October 2021. The composition of the Company's Management Board changed twice during the reporting year:

- On 14 April 2022, the Board of Directors resolved to elect Anton Berlin to the Company's Management Board effective 14 April 2022 and to establish an 11-member Management Board as from 14 April 2022
- On 1 June 2022, the Board of Directors resolved to terminate the office of Andrey Bougrov, member of the Company's Management Board, and to establish a 10-member Management Board as from 2 June 2022.

In 2022, the Management Board held 21 meetings (all in absentia).

During 2022, the Management Board decided to change the composition of the Energy and Trans-Baikal Divisions; passed resolutions regarding the Company's branch directors and amendments to their employment contracts; reviewed the Company's capital-raising, guarantee and surety transactions; approved the scope of internal control system self-evaluation for 2022; and reviewed matters related to the progress of the Environmental and Climate Change Strategy.

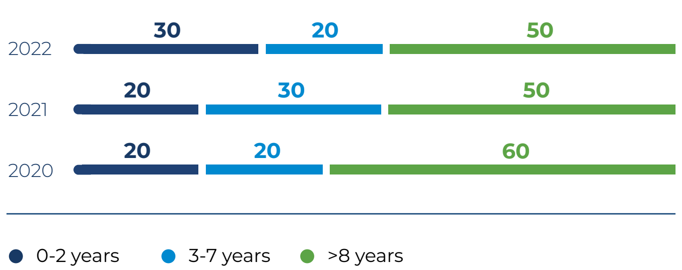
Number of Management Board meetings



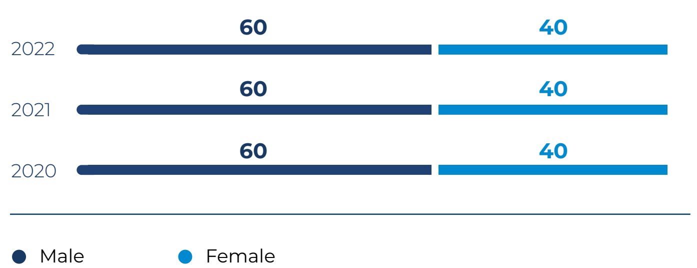
Attendance at meetings in 2022

Name	Tenure on the Management Board (years)	Meetings attended / total number of meetings
Vladimir Potanin	10	21/21
Andrey Bougrov[1] (until 1 June 2022)	10	6/21
Anton Berlin[2](from 14 April 2022)	1	19/21
Sergey Stepanov	2	21/21
Evgeny Fyodorov	2	21/21
Sergey Dubovitsky	5	21/21
Marianna Zakharova	7	21/21
Larisa Zelkova	10	21/21
Elena Savitskaya	9	21/21
Sergey Malyshev	10	21/21
Nina Plastinina	10	21/21

Tenure on the Management Board (%)



Management Board composition by gender (%)



1 Left the Management Board on 1 June 2022 as per the Board of Directors' resolution.
2 Joined the Management Board on 14 April 2022 as per the Board of Directors' resolution.

BIOGRAPHICAL DETAILS OF MEMBERS OF THE MANAGEMENT BOARD [1]

For more detailed biographies of members of the Management Board, please see the website. Biographical details of previous members of the Management Board are available in the 2021 Annual Report.

In the reporting year, Sergey Stepanov and Anton Berlin held shares in MMC Norilsk Nickel (0.002% of the authorised capital each).

Vladimir Potanin

Chairman of the Management Board since 2012

President of the Company since 2015 (CEO in 2012–2015)

Born in: 1961

Nationality: Russian Federation

Education

Degree in International Economics, Moscow State Institute of International Relations (MGIMO University)

Experience in the last fi e years

since 2022: member of the management board of the Russian Ice Hockey Federation

since 2021: member of the board of trustees of the Football Union of Russia

2020–2022: chairman of the board of trustees of the Vladimir Potanin Foundation

since 2020: member of the board of trustees of the ROZA Club for Sport Development and Support

since 2018: member of the board of trustees of the Russian–American Council for Business Cooperation trade association; member of the board of trustees of the Fund for the Conservation and Development of the Solovetsky Archipelago

since 2017: chairman of the supervisory board of the Norilsk Development Agency autonomous non-profit organisation

since 2016: member of the board of the Endowment Fund for Education and Culture, chairman of the board of trustees of the Night Hockey League non-profit amateur hockey foundation

2014–2019: chairman of the board of trustees of the ROZA Club for Sport Development and Support

since 2011: member of the board of trustees of the State Hermitage Museum Endowment Fund non-profit organisation; member of the board of trustees of the Moscow Church Construction Foundation

since 2010: member of the board of trustees of the Russian Geographical Society all-Russian non-governmental organisation

since 2009: deputy chairman of the board of trustees of the Russian International Olympic University

since 2007: member of the board of trustees of Saint Petersburg State University, deputy chairman of the board of trustees of the MGIMO University Endowment Fund

since 2006: deputy chairman of the board of trustees of the MGIMO University Endowment Fund, member of the board of trustees and member of the management board of the Graduate School of Management at Saint Petersburg State University, member of the bureau of the board of the Russian Union of Industrialists and Entrepreneurs (RSPP)

since 2005: member of the board of trustees, member of the board of the Russian Olympians Foundation non-profit charitable organisation

since 2004: chairman, member of the presidium of the National Council on Corporate Governance non-profit partnership

since 2003: chairman of the board of trustees of the State Hermitage Museum

2001-2022: member of the board of trustees of the Solomon R. Guggenheim Foundation (New York)

since 2000: member of the bureau of the board, member of the management board of the RSPP

since 1995: member of the presidium of the International Foundation for the Unity of Orthodox Christian Nations

1 Positions are indicated as at 2022-end.

Anton Berlin

Member of the Management Board since 2022

Born in: 1973

Nationality: Russian Federation

Education

Faculty of Radio Electronic Equipment, Systems Engineer – Administrator of Production, 1996; postgraduate degree, 1999, MATI – Russian State Technological University named after K. E. Tsiolkovsky

Experience in the last fi e years

since 2008: positions at Nornickel: Director of the Marketing Department (2008-2019), Vice President – Head of Sales and Commerce (since 2019)

Sergey Dubovitsky

Member of the Management Board since 2018

Born in: 1978

Nationality: Russian Federation

Education

Public Relations Specialist with Foreign Language Skills, Moscow State Institute of International Relations (MGIMO University)

Experience in the last fi e years

since 2021: member of the boards of directors of MPI Nickel Pty Ltd, Norilsk Nickel Africa Pty Ltd and Norilsk Nickel Mauritius, member of the Executive Committee of Nkomati

since 2013: positions at Nornickel: Director of the Strategic Planning Department (2013–2016), Vice President for Strategic Planning (2016–2019), member of the Management Board (since 2018), Vice President – Head of Strategy and Strategic Projects (2019–2020), Senior Vice President – Head of Strategy and Strategic Projects, Logistics and Procurement (since 2020)

Larisa Zelkova

Member of the Management Board since 2013

Senior Vice President – Head of HR, Social Policy and Public Relations since 2016

Born in: 1969

Nationality: Russian Federation

Education

Journalist, Literature Editor at a Newspaper, Lomonosov Moscow State University, 1991

Experience in the last fi e years

since 2020: chairwoman of the management boards of the Second School centre for community initiatives in the Pechenegsky District and the Monchegorsk Development Agency

since 2019: member of the councils of the endowment funds for the replenishment of the Tretyakov Gallery's collection and development of its small museums at the State Tretyakov Gallery Foundation

since 2017: chairwoman of the management board and member of the supervisory board of the Norilsk Development Agency autonomous non-profit organisation

since 2016: chairwoman of the board of trustees of the Endowment Fund for Education and Culture

2015-2020: member of the board of trustees of the Russian Academy of Education

2015-2022: member of the board of trustees of the Hermitage Foundation UK

since 2014: chairwoman of the board of the Vladimir Potanin Foundation

2011–2020: member of the board of directors of Rosa Khutor Ski Resort Development Company

since 2011: chairwoman of the management board of the State Hermitage Museum Endowment Fund

since 2013: positions at Nornickel: member of the Board of Directors (2011-2013), Deputy CEO of Social Policy and Public Relations (2013-2015), Vice President – Head of HR, Social Policy and Public Relations (2015-2016), Senior Vice President – Head of HR, Social Policy and Public Relations (since 2016)

since 2009: member of the board of trustees of the Pavlovsk Gymnasium private autonomous non-profit organisation

since 2007: member of the presidium of the MGIMO University Endowment Fund

Marianna Zakharova

Member of the Management Board since 2016

Member of the Board of Directors since 2010

Born in: 1976

Nationality: Russian Federation

Education

Bachelor in Law, 1998; Master in Law (with distinction), 2000, Peoples' Friendship University of Russia

Experience in the last fi e years

since 2015: First Vice President – Head of Corporate Governance, Asset Management and Legal Affairs of Nornickel

Sergey Malyshev

Member of the Management Board since 2013

Born in: 1969

Nationality: Russian Federation

Education

Degree in Machines and Devices for the Textile and Light Industries, Mechanical Engineer, Kosygin State University of Russia

Degree in Public and Municipal Administration, Economist, Institute of Advanced Training at the Russian Presidential Academy of National Economy and Public Administration

Finance Academy under the Government of the Russian Federation, Public and Municipal Administration retraining programme, with the State Attestation Commission certifying the right (compliance with qualification requirements) to carry out professional activities related to public and municipal administration

Experience in the last fi e years

since 2013: positions at Nornickel:), Deputy CEO – Head of Economics and Finance (2013–2015), Vice President – Head of Economics and Finance (2015–2016), Senior Vice President – Chief Financial Officer (since 2016)

Nina Plastinina

Member of the Management Board since 2013

Born in: 1961

Nationality: Russian Federation

Education

Degree in Chemical Machine and Fixture Building, Mechanical Engineer, Moscow Chemical Machine Building Institute; postgraduate degree in Economics and Production Management, Bauman Moscow State Technical University

Experience in the last fi e years

since 2013: positions at Nornickel: Director of the Internal Control Department (2013–2015), Vice President – Head of Internal Audit (2015—2016), Vice President – Head of Internal Control and Risk Management (since 2016)

Elena Savitskaya

Member of the Management Board since 2014

Born in: 1972

Nationality: Russian Federation

Education

Degree in Psychology, Psychologist, Psychology Teacher, Moscow Pedagogical State University

Experience in the last fi e years

since 2013: positions at Nornickel: Chief of Staff (2013-2015), Vice President – Chief of Staff (since 2015)

Sergey Stepanov

Member of the Management Board since 2021

Born in: 1977

Nationality: Russian Federation

Education

Lomonosov Moscow State University: 1998: Bachelor in Economics (with distinction)

2000: Master in Economics (with distinction)

Experience in the last fi e years

since 2022: member of the board of directors of Polar Lithium

2020–2021: CEO of VSMPO-AVISMA Corporation

2014–2020: CEO of Raspadskaya

2012–2020: vice president, head of Evraz's Coal Division

since 2021: Senior Vice President – Operational Director of Nornickel

Evgeny Fyodorov

Member of the Management Board since 2021

Born in: 1978

Nationality: Russian Federation

Education

Degree in Economics and Enterprise Management, Economist/Manager, Bauman Moscow State Technical University, 2001

PhD in Economics, Moscow Power Engineering Institute (Technical University), 2003

Experience in the last fi e years

2018–2020: member of the board of directors, Advisor to the CEO of TRUST SM

since 2018: member of the board of directors of Unitile Holding

since 2017: member of the board of directors, Advisor to the CEO of Rosvodokanal Management Company

since 2021: Vice President for Energy of Nornickel

CORPORATE SECRETARY

The role of the Corporate Secretary is to ensure compliance with the procedures for the protection of shareholder rights and legitimate interests, as prescribed by applicable laws and Nornickel's internal documents, and to monitor such compliance. According to the Company's Articles of Association, the Corporate Secretary is appointed by the Board of Directors for a three-year term. The Board of Directors may terminate the office of the Corporate Secretary before the end of the term.

The Corporate Secretary's key functions:

- Involvement in preparing and holding the General Meeting of Shareholders;
- Preparing and holding meetings of the Board of Directors and its committees;
- Contributing to the improvement of Nornickel's corporate governance framework and practice;
- Managing the activities of the Secretariat;
- Other functions in accordance with Nornickel's internal documents.

The Corporate Secretary reports administratively to the President and is accountable to the Board of Directors.

At present, Pavel Platov is Nornickel's Corporate Secretary. In December 2021, the Board of Directors extended Pavel Platov's term as Corporate Secretary by another three years.

Pavel Platov

Corporate Secretary since 2011

Born in: 1975

Nationality: Russian Federation

In the reporting year, he held no shares in MMC Norilsk Nickel and made no transactions with them.

Education

Linguistics University of Nizhny Novgorod

Academy of National Economy under the Government of the Russian Federation

Experience in the last fi e years

since 2017: Corporate Secretary of MMC Norilsk Nickel (2011–2017: Company Secretary)

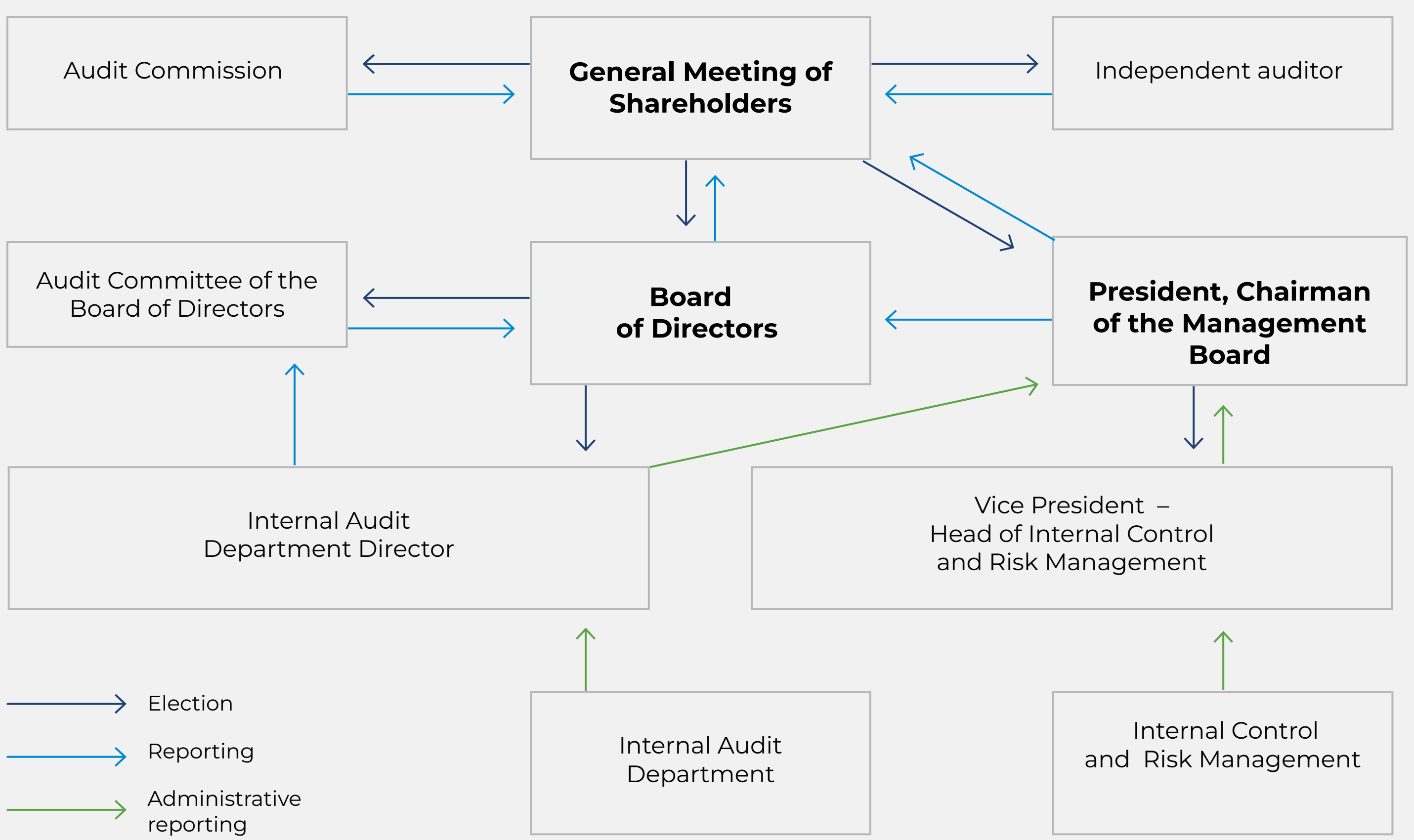
CONTROL SYSTEM

The Company has in place an internal control system covering key business processes and all management levels across the Group. The internal control system integrated into the Company's corporate governance processes is geared towards achieving the goals related to accurate financial reporting and operational efficiency as well as compliance goals.

The system comprises the following control bodies:

- Audit Commission
- Audit Committee of the Board of Directors
- Internal Audit Department
- Internal Control and Risk Management, comprising the Internal Control Department, Financial Control Service, Risk Management Service, and the Centre for Monitoring Technical, Production and Environmental Risks

Internal control structure as of 31 December 2022



AUDIT COMMISSION

The Audit Commission is Nornickel's standing internal control body that monitors its financial and business operations. The five members of the Audit Commission are elected annually at the Annual General Meeting of Shareholders.

Audit Commission's performance

In 2022, the Audit Commission audited Nornickel's business operations for 2021, with the auditors' report presented to the shareholders as part of materials for the Annual General Meeting of Shareholders. Results of the audit of the Company's business operations for 2022 will be reported to the Annual General Meeting of Shareholders in 2023.

The Annual General Meeting of Shareholders on 3 June 2022 elected the Audit Commission as follows: Alexey Dzybalov, Anna Masalova, Georgy Svanidze, Eduard Gornin, Elena Yanevich.

INTERNAL AUDIT

The Company has set up the Internal Audit Department to assist the Board of Directors and executive bodies in better managing the Company and improving its financial and business operations through a systematic and consistent approach to the analysis and evaluation of risk management and internal controls as tools providing reasonable assurance that Nornickel will achieve its goals.

The Internal Audit Department conducts objective and independent audits to assess the effectiveness of the internal control system and risk management system. Based on the audits, the Department prepares reports and proposals for management on improving internal controls, and monitors the development of remedial action plans.

In order to ensure independence and objectivity, the Internal Audit Department functionally reports to the Board of Directors through the Audit Committee and has an administrative reporting line to Nornickel's President. MMC Norilsk Nickel has in place an Internal Audit Policy approved by the Company's Board of Directors in 2022.

In 2022, the Audit Committee:

- reviewed the annual audit plan and internal audit development plans
- reviewed bonus-related performance targets (KPI scorecards) of the Internal Audit Department Director
- discussed the results of completed audits, including gaps identified and corrective actions designed by management to improve internal controls and minimise risks
- reviewed the results of internal audit self-assessment.

The Audit Committee commended the work of the Internal Audit Department in the reporting period.

In 2022, the Internal Audit Department audited the following areas:

- H&S and environmental risk management
- Progress on the Company's major investment projects
- Corporate governance processes
- Control over IT assets and IT projects

During some audits, the Department made use of data analysis tools to process significant data volumes and present them graphically. For some business areas, the Department uses the continuous auditing method.

The Internal Audit Department performed an annual performance evaluation of Nornickel's corporate risk management system (CRMS) and internal control system (ICS) for 2022 and concluded that the Company's CRMS and ICS as a whole operate effectively, but there were some comments. The evaluation results were reviewed at an Audit Committee meeting and a meeting of the Company's Board of Directors.

Based on the recommendations issued during the audits, management developed corrective actions and implemented a total of 270 such actions over 2022. The actions included updating regulatory documents, developing new or amending existing control procedures, communicating them to employees, training employees, and identifying and assessing risks. The Internal Audit Department uses SAP AM, an automated internal audit solution, to continuously monitor the implementation of initiatives developed by management, with the resulting insights on types and number of initiatives regularly reviewed by the Audit Committee.

INTERNAL CONTROL

The Internal Control Department regularly monitors the Company's high-risk business processes – procurement and investment activities, capital construction and corporate insurance transactions, as well as the reliability of the existing systems of accounting for metal-bearing products. The Company also continuously monitors compliance with regulatory requirements to combat the unlawful use of insider information and market manipulation, as well as money laundering, terrorist financing and proliferation financing.

The performance and maturity of internal control system elements are evaluated annually as part of an external financial statement audit and internal control system self-evaluation. Reports containing the internal control system evaluation results are reviewed by Nornickel's management and the Audit Committee of the Board of Directors.

In May 2022, Nornickel rolled out an automated risk management and internal control system based on an SAP GRC solution. The system maintains data on the Company's internal control system, runs procedures to assess its effectiveness and generates reports.

The Financial Control Service audits financial and business operations of Nornickel and its subsidiaries to make updates and recommendations for the President and members of the Board of Directors. The Head of the Financial Control Service is appointed by resolution of the Board of Directors.

CORPORATE TRUST LINE

Nornickel runs the Corporate Trust Line speak-up programme established to respond promptly to reports of non-compliance, wrongdoing or embezzlement, violation of employees' rights, and breach of ethical standards or rules of conduct by employees. Employees, shareholders and other stakeholders can report any actual or potential actions that cause or may cause financial or reputational damage to Nornickel. All reports submitted via the line are registered, assigned a unique number and investigated. The key principles underlying the operation of the Corporate Trust Line include data privacy and guaranteed anonymity for whistleblowers who wish to remain anonymous, as well as timely and unbiased review of all reports. Nornickel will in no circumstances retaliate against an employee who raises a concern via the Corporate Trust Line, meaning that no disciplinary action or sanction will be taken (dismissal, demotion, forfeiture of bonuses, etc.). If pressure on a whistleblower is reported, the Company conducts mandatory investigations of such reports and thoroughly reviews their findings. Whistleblower status is regularly monitored at all levels to identify cases of undue pressure.

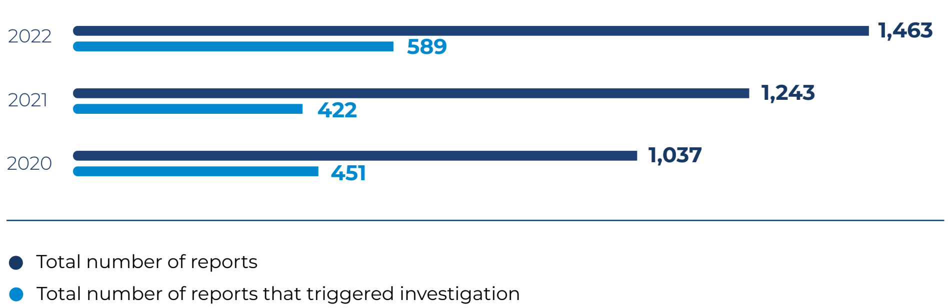
Reporting channels (24/7):

Phone: 8 800 700 1941, 8 800 700 1945

Email: skd@nornik.ru

Reporting form on Nornickel's website: Corporate Trust Line – Nornickel (nornickel.ru)

Report statistics



Over the past three years, the Corporate Trust Line has not received any reports classified as corrupt practices. For more details on report statistics, please see the Sustainability Report.

ANTI-CORRUPTION

The Company is annually included in the Anti-corruption Ranking of Russian Business compiled by the Russian Union of Industrialists and Entrepreneurs. Independent experts assess the anti-corruption management system against the criteria of the international standard ISO 37001:2016 and the provisions of the Anti-corruption Charter. Following a comprehensive independent evaluation carried out for the Anti-corruption Ranking of Russian Business 2022, Nornickel received the top rating, A1, reflecting the particular attention paid by the Company's management to corruption prevention, as well as the effective implementation of relevant measures.

Rating **A1**
Nornickel received the top rating following a comprehensive independent evaluation

Nornickel compiles with anti-corruption laws of the Russian Federation and other countries in which it operates, as well as with any applicable international laws and Nornickel's internal documents. Nornickel openly declares its zero tolerance for corruption in any form or manifestation. Members of Nornickel's Board of Directors / Management Board and senior management role model a zero-tolerance approach to corruption in any form or manifestation at all levels across the organisation.

Facilitation payments and political contributions are strictly prohibited by Nornickel's policy.

Nornickel will not tolerate any retaliation, disciplinary or other action against an employee who reports a concern about suspected bribery or corruption, or refuses to offer a bribe, facilitate bribery, including commercial bribery, or take part in any other corrupt activities.

In line with legal requirements and its voluntary commitments, Nornickel actively implements and improves anti-corruption measures. The Company has established uniform requirements for giving and receiving business gifts applicable to all employees, which are set forth in the Regulations on Business Gifts, with record keeping and tracking in place for entertainment expenses. Regular anti-corruption due diligence of internal documents ensures that they present no potential for corruption.

We perform annual assessment and quarterly monitoring of corruption risks.

Every two years, Nornickel submits to the Russian Union of Industrialists and Entrepreneurs a Declaration of Compliance with the Anti-corruption Charter of the Russian Business to confirm its compliance with anti-corruption requirements.

Nornickel annually publishes statistics on recorded corruption incidents in its Sustainability Report, demonstrating its commitment to openness and transparency to stakeholders.

When recruited, all Company employees familiarise themselves with anti-corruption documents, sign an agreement setting out their anti-corruption responsibilities and take an anti-corruption induction briefing.

Nornickel regularly trains its employees and involves them in implementing anti-corruption programmes. All Company employees take an annual online anti-corruption training course, while all HR Department employees take a course on compliance with anti-corruption laws. As of the end of 2022, 100% of employees were trained to be familiar with the Group's anti-corruption policies and methods. Over the year, the training on statutory requirements and provisions of corporate anti-corruption regulations covered 31 people.

Timely identification and prevention of conflicts of interest are also key to our anti-corruption efforts. The Company has in place an approved standard reporting form to be filled by candidates applying for vacant positions at Nornickel and individuals signing an independent contractor agreement with the Company. The Company set up standing conflict of interest commissions across the organisation to enhance the effectiveness of preventing, identifying and resolving conflicts of interest, as well as to ensure legal compliance and improve corporate culture.

Nornickel maintains the dedicated Anti-corruption section on its website, providing information on its anti-corruption regulations and measures taken to combat and prevent corruption, offer legal education, and promote lawful behaviours among employees.

In order to mitigate potential risks associated with contractor engagement, Nornickel evaluates business standing, integrity and solvency of its potential counterparties. To prevent procurement misconduct and maximise value capture through unbiased selection of best proposals, Nornickel's procurement owner, customer and secretary of a collective procurement body adhere to the following rules:

- Procurement relies on the principle of division of roles;
- Commercial proposals submitted by suppliers are compared using objective and measurable criteria approved prior to sending a relevant request for proposal;
- The selection results and the winning bidder in the material procurement process are approved by the collective procurement body comprised of representatives from various functions of Nornickel;
- A Master Agreement containing an anti-corruption clause is signed with each supplier or updated on an annual basis. The anti-corruption clause outlines the course of action to be taken between the supplier and Nornickel with respect to risks of abuse. Moreover, by signing the Master Agreement, suppliers acknowledge that they have read the Company's Anti-Corruption Policy.

In 2022, to develop and improve its anti-corruption compliance system, the Company:

- approved a unified approach to adopting anti-corruption regulations and controls throughout the Group
- delivered training in the basics of anti-corruption compliance to Group employees responsible for implementing anti-corruption measures
- revised and updated its anti-corruption procedural documents.

The Company is also reviewing its approach to assessing corruption risks related to contractor engagement.

ANTITRUST COMPLIANCE

An antitrust compliance system in place at the Company since 2017 establishes the processes for the timely prevention, identification and elimination of causes and conditions facilitating antitrust violations and ensures compliance of the Company and its corporate entities with applicable laws.

Federal Law No. 135-FZ On Protection of Competition dated 26 July 2006 was amended in 2020 to set requirements for internal antitrust compliance regulations of organisations and establish the right of organisations to submit these regulations to the Federal Antimonopoly Service and obtain its opinion upon confirmation of compliance. The Company was the first in Russia to use the new statutory procedure to obtain a confirmation of the Federal Antimonopoly Service that its antitrust compliance system meets legal requirements, issued on 25 March 2021.

In 2022, the Federal Antimonopoly Service and/or its territorial bodies did not find any antitrust violations by the Company or by Group enterprises; and no administrative action was taken against Group enterprises for such violations.

CORPORATE SECURITY

Nornickel's corporate security system management is based on a set of programmes to ensure economic, corporate and information security.

In March 2022, the Board of Directors approved the Corporate Fraud Policy. It underlies the consistent measures implemented to prevent, identify and combat abuses and manifestations of corporate fraud, as well as signs of corruption. The policy requirements are aligned with the principles of fair and responsible business conduct, as well as with the Company's commitment to improving its corporate culture and ensuring compliance with corporate governance best practice and high ethical standards.

Measures to protect production, transport and energy sector facilities against terrorism and to prevent unlawful interference in their operations are implemented on a scheduled basis.

In 2022, Nornickel conducted a total of 706 trainings, 46 general and 12 tactical and special drills.

The Company collaborates with external contractors to ensure the safety of its facilities, making sure that contractor activities respect human rights, including those of employees of private security organisations. Respect for human rights is incorporated in the regulations of the Corporate Security Unit.

INFORMATION SECURITY

In 2022, the Company's information security strategy was adapted and adjusted as many foreign IT and information security companies withdrew from Russia and new legal requirements were introduced during the year.

In the reporting year, Nornickel established a subsidiary, Nornickel Sfera, to ensure information security across the Group. The company has extensive technical competencies across core information and process security areas and offers a full range of key services to Group enterprises. Going forward, Nornickel Sfera will expand the coverage and range of its services.

Nornickel has developed an import substitution plan covering information security solutions and took extra steps to protect its enterprises' technological infrastructure and mitigate risks.

With some employees still working remotely, the Company is taking extra precautions to ensure the information security of its corporate resources and infrastructure. These include more stringent security requirements for remote computers and devices used in audio and video conferencing; remote work is monitored on a daily basis, with users guides and instructions updated as necessary. The Company has expanded the scope of systems security inspections and audits for compliance with information security requirements to timely identify and eliminate vulnerabilities that can be exploited by attackers.

PROGRAMMES

The Company has in place relevant information security processes, including:

- identification and classification of data assets;
- raising awareness;
- managing access to data assets;
- security analysis;
- risk management;
- information security incident management;
- review of projects' information technology and automated process control systems (APCSs) for compliance with information security requirements.

In 2022, as part of an ongoing process of identifying and classifying data assets, the Company identified key business applications and is actively implementing plans to align them with corporate information security standards by embedding the required solutions and information security tools.

In view of new sanctions risks and the growing number of cyber threats to the technological IT infrastructure, Nornickel has developed approaches to, and plans for, implementing a suite of projects to create systems protecting the Company's technological and operating processes. The Company's priorities have shifted towards establishing a basic level of infrastructure security across its key enterprises and complying with the Russian President's core executive orders on import substitution. The Company maintains a strong focus on complying with information protection requirements in APCS development and upgrade projects.

Nornickel has taken measures to ensure the provision of information protection tools, reviewed the procedure for updating system and application software, and ensured control over the updates.

In line with the plan, the Company has finished rolling out process protection equipment across its key production sites as well as at the gas facility transporting energy resources to the Norilsk Industrial District so as to improve process safety compared to 2020 and 2021.

Industrial automation systems across all production sites have been audited for compliance with internal information security standards, which enables the Company to develop effective plans and take measures to improve information security over the next two years.

IMPORT SUBSTITUTION

Since many foreign suppliers of information security solutions have left the Russian market, as well as to comply with new legal requirements, Nornickel has joined the import substitution process as regards information and communication technologies, including industrial automation systems. The Company selects, tests and rolls out Russian technology solutions in close contact with its industry peers.

CYBER INCIDENT RESPONSE SYSTEM

The Company's Information Security Incident Response Centre uses advanced technical solutions as well as Russian and global best practices in managing cyber defence. Seamless information security processes and procedures have been developed and documented to ensure business continuity in the event of incidents and emergencies. These procedures are tested for relevance at least once a quarter.

To prevent confidential information leaks, the Company has introduced special safeguards to detect unauthorised data retrieval through primary channels, including via email and file exchange platforms. If unauthorised attempts to retrieve confidential information are identified, an internal inspection and investigation procedure is initiated in accordance with the Company's current regulations.

SUSPICIOUS ACTIVITY REPORTING PROCESS

If users detect suspicious content or activities, the Information Security Incident Response Centre is notified accordingly via a corporate communication channel. The Centre assesses the potential disruptive impact on the Company's IT systems and ensures the planning and implementation of measures to prevent and respond to incidents.

The Information Security Incident Response Centre operates across the Company's key regions of operation. Over the year, the Centre's employees processed over 1 thousand incidents, handling over 20 thousand information security events in total.

In 2022, the number of cyber attacks on Russian companies increased significantly. Additional comprehensive efforts were made to mitigate risks, including proactive measures to protect the Company's IT infrastructure.

The Response Centre has always closely cooperated with similar units of private companies and regulators. The Company has maintained its effective partnership with the National Coordination Centre for Computer Incidents, with a relevant cooperation agreement already in its second year.

TRAINING AND COMMUNICATION

The Company is strongly focused on improving employee awareness about information security principles and digital hygiene.

New hires are introduced to corporate information security requirements and have an additional induction briefing. A total of almost 7 thousand new employees were introduced to information security requirements in 2022, and about 5 thousand had additional induction briefings on information security. Annual employee trainings also take account of current trends and newly identified risks and cyber threats. In 2022, 67 scheduled and three unscheduled e-learning courses were delivered, with almost 13.5 thousand Group employees trained in total.

Furthermore, the Company runs regular drills including simulations of phishing attacks and other fraudulent practices that affect users. Following the drills, instructions for employees are updated.

In addition, the Company uses regular dedicated newsletters to improve employee awareness about current information security threats and digital hygiene.

An information security bulletin is prepared for the Company's management on a quarterly basis, detailing measures to protect critical information infrastructure, project activities, cyber risks, anti-phishing efforts, as well as major information security incidents and trends.

CERTIFICATION

In line with international best practices, Nornickel enterprises have in place information security management systems (ISMSs) compliant with ISO/IEC 27001:2022 requirements. In 2022, four of Nornickel's enterprises had the high effectiveness of their information security management processes confirmed:

- Murmansk Transport Division
- Nadezhda Metallurgical Plant (Norilsk Division)
- Copper Plant (Norilsk Division)
- Talnakh Concentrator (Norilsk Division)

Despite the fast-paced external changes, Nornickel's team has succeeded in maintaining continuous compliance with international standards. The certificates obtained are an international information security standard driving a consistent and structured approach and helping identify and mitigate relevant risks. The successful completion of the certification process testifies to the high level of maturity of Nornickel's information security systems and approaches.

The preparedness of the Company's enterprises to respond to new threats and challenges has been praised by an external auditor, who has also confirmed that previously identified issues have been addressed. Employees involved in the operation of the ISMS showed excellent knowledge of information security, and the Company as a whole demonstrated that it can control risks and is prepared for unexpected changes when achieving its goals relating to the security of production processes.

Nornickel's efforts to develop and implement advanced cyber security solutions for industrial assets have been repeatedly acknowledged by the professional community and industry associations.

MANAGEMENT INVOLVEMENT IN INFORMATION SECURITY

Nornickel's Information Security Policy applies to all employees and includes the engagement boundaries and responsibilities of the Board of Directors and the Management Board in this regard. Their responsibilities include, among other things, reviewing information security risks and budgets for relevant programmes and projects. Risks are monitored on a regular basis through dedicated committees and corporate reporting.

PARTNERSHIPS AND BEST PRACTICE SHARING

At the national level, the Information Security in Industry Club, an industry association founded by Nornickel in 2017, has been successfully operating for five years now. Information security managers of major Russian industrial holding companies are involved in its activities. Over the years, the Information Security in Industry Club has become a recognised platform for discussing ongoing security issues dealing with the use of information and communication technologies, and for sharing experience and best practices in protecting industrial information systems.

In international information security, Nornickel cooperates with the Security Council of the Russian Federation and the Ministry of Foreign Affairs of the Russian Federation, contributing to the development and discussion of position papers in this area. The Company also participates in the National Association for International Information Security and cooperates with the International Information Security Research Consortium.

The development and international promotion of precious metal supply chain security is an important aspect of the Company's engagement with its business partners: Nornickel participates in dialogues on this issue on international platforms, including the Security Committee of the International Platinum Group Metals Association. In September 2022, Nornickel also ran a session on cybersecurity at a meeting of the above committee in South Africa held in person for the first time after a long break, where the Company shared its experience of creating a distributed information security management system and highlighted key approaches to maintaining the continuity of IT-driven production processes.

For more details on the information security risk, please see the Key Risks in 2022 section of this Annual Report.

PERSONAL DATA PROTECTION

The Company has developed, implemented and put in practice a set of organisational and technical measures to protect the personal data of different types of owners (including the protection of third parties' personal data) and ensure compliance with Russian laws. Technical protection involves anti-virus protection, leak prevention, monitoring of removable devices, and analysis of security incidents.

INDEPENDENT AUDIT

An independent auditor for Nornickel's financial statements is selected through competitive bidding in accordance with the Company's established procedure. The Audit Committee of the Board of Directors reviews the shortlist and makes a recommendation to the Board of Directors on the proposed auditor to be approved by the Annual General Meeting of Shareholders of MMC Norilsk Nickel.

In 2022, the General Meeting of Shareholders approved Kept as the auditor for RAS and IFRS financial statements for 2022 on the recommendation of the Board of Directors.

REMUNERATION

The Board of Directors directly supervises the remuneration framework at Nornickel. The Corporate Governance, Nomination and Remuneration Committee of the Board of Directors is responsible for:
- developing the Remuneration Policy for Members of the Board of Directors, Members of the Management Board and the President of Nornickel;
- overseeing the implementation and execution of the Policy;
- reviewing the Policy on a regular basis.

Nornickel does not issue loans to members of the Board of Directors and the Management Board but encourages them to invest in Nornickel shares.

Remuneration paid to members of Nornickel's governance bodies in 2022 totalled RUB 4.8 billion (USD 69.7 million).[1]

DIRECTORS' REMUNERATION

The Board of Directors' annual remuneration is set out in the Remuneration Policy. By resolution of the General Meeting of Shareholders, members of the Board of Directors are remunerated for their service on the Board of Directors and reimbursed for expenses incurred by them in performing their duties as Board members. Additional benefits for all Board members include liability insurance and reimbursement of losses incurred in connection with their service on the Board of Directors. The Bank of Russia's Corporate Governance Code recommends that companies pay for their directors' liability insurance to be able to recover potential losses through the insurer. Apart from securing stronger commitment from directors, this insurance coverage encourages competent leaders to join the Board.

Remuneration of the Chairman of the Board of Directors

Remuneration of the Chairman of the Board of Directors differs from the remuneration payable to other non-executive directors, due to the Chairman's enhanced scope of expertise and responsibilities. Subject to a resolution of the General Meeting of Shareholders, the Chairman of the Board of Directors may be entitled to additional remuneration and benefits other than those set out in the Policy. Under the Policy, the annual base remuneration of the Chairman of the Board of Directors is USD 1 million. The Chairman of the Board of Directors is not entitled to any additional remuneration for serving on Board committees.

Remuneration of non-executive directors

All non-executive directors receive equal remuneration. The Policy sets forth the following annual remuneration for non-executive directors:
- Base remuneration of USD 120 thousand for Board membership;
- Additional remuneration of USD 50 thousand for serving on a Board committee;
- Additional remuneration of USD 150 thousand for chairing a Board committee.

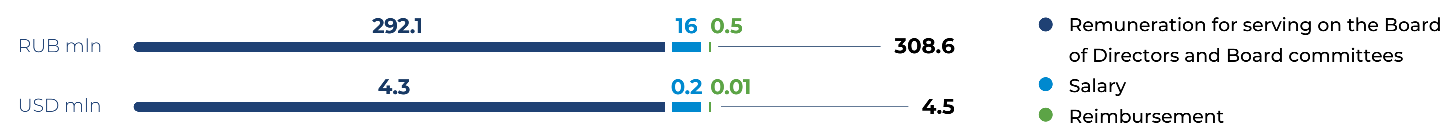
Non-executive directors are not eligible for any forms of short-term or long-term cash incentives, or non-cash remuneration, including shares (or share-based payments), share options (option agreements) or other non-cash rewards or benefits.

Remuneration of executive directors

In line with the approved Policy, executive directors do not receive any additional remuneration for their service on the Board of Directors to avoid any potential conflict of interest.

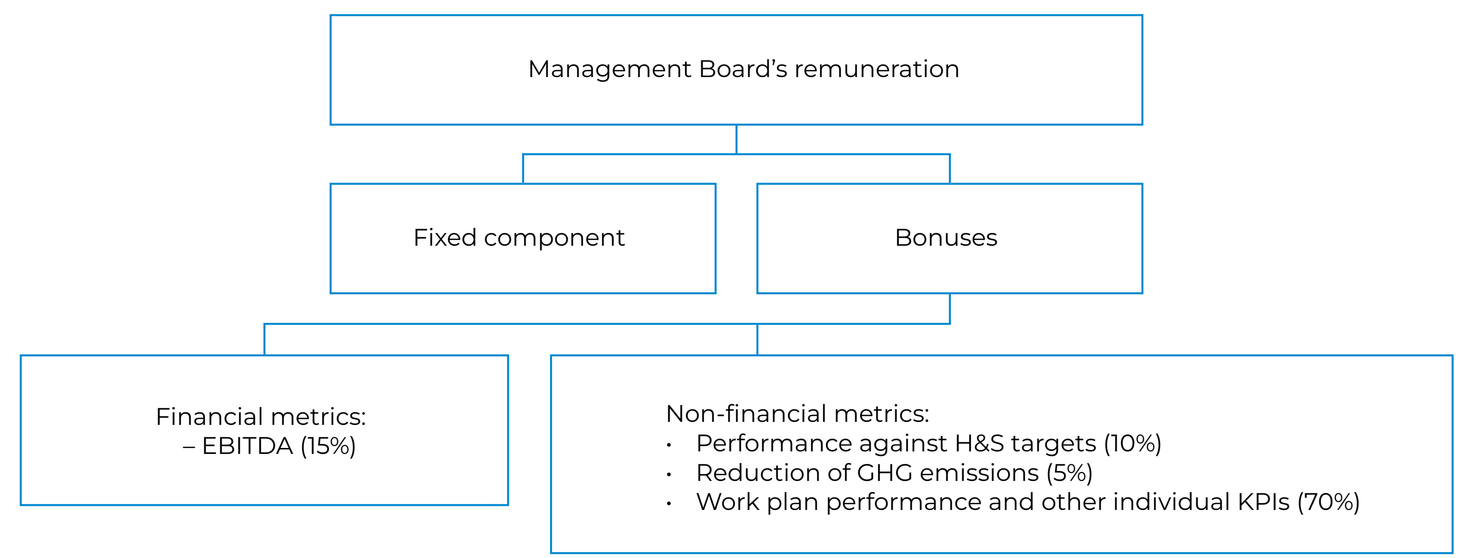
[1] The amount of remuneration paid does not include the remuneration accrued but not yet paid as of 31 December 2022, as well as insurance premiums and voluntary health insurance (VHI) contributions. Adding the amounts above, remuneration of members of Nornickel's governance bodies for 2022 as per the 2022 IFRS statements totalled RUB 5.5 billion (USD 80 million).

Directors' remuneration in 2022



MANAGEMENT BOARD'S REMUNERATION

Management Board's remuneration

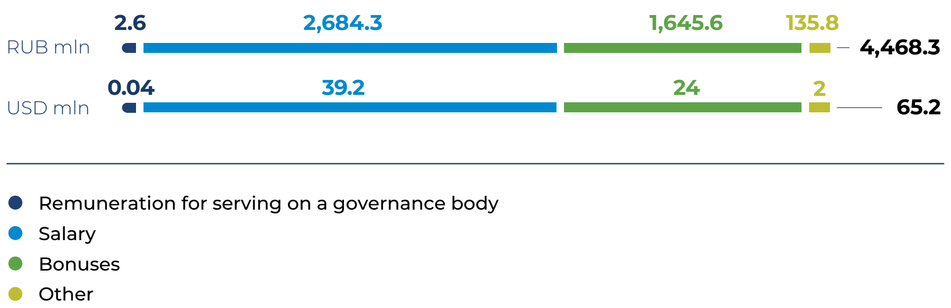


Key performance indicators (KPIs) used to assess senior management's performance are aligned with Nornickel's strategic goals. In line with Nornickel's Articles of Association, the remuneration and reimbursement payable to the President and members of the Management Board are determined by the Board of Directors.

Remuneration payable to senior management is comprised of basic salary and bonuses. Bonuses are linked to Nornickel's performance, including both financial (EBITDA) and non-financial metrics (work-related injury rate, GHG reduction and work plan). The variable component of the remuneration payable to members of the Management Board reflects KPIs, which are annually updated by the Corporate Governance, Nomination and Remuneration Committee of the Board of Directors. The Board of Directors decides whether to pay the President a performance bonus for the reporting year.

In 2022, the GHG Reduction metric was included in senior management's KPIs with a 5% weight (among all KPIs) and a quantitative target.

Management Board's remuneration in 2022



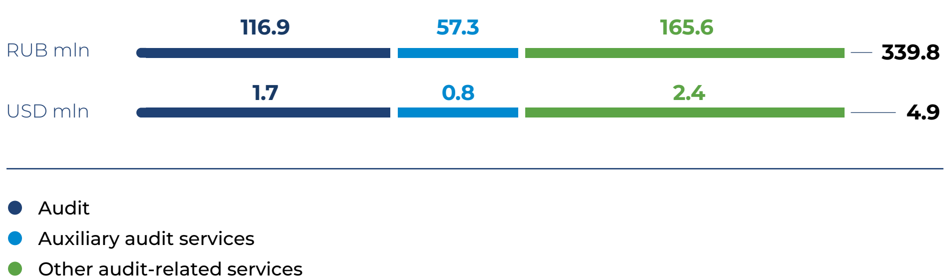
AUDIT COMMISSION'S REMUNERATION

The Annual General Meeting of Shareholders held on 3 June 2022 set total remuneration at RUB 1.8 million per year (before taxes) for each member of Nornickel's Audit Commission who is not an employee of the Company. The above remuneration level is similar to the remuneration rate set for members of the Audit Commission in 2021. Members who are Nornickel employees are not paid remuneration for their work as part of the Audit Commission.

In 2022, the members of the Audit Commission received remuneration for their work in the body in the amount of RUB 7.2 million (USD 105 thousand). No bonuses or other rewards were paid.

AUDITOR'S FEE

Auditor's fee



The fee paid to Kept for its audit, auxiliary audit services, as well as other audit-related services in 2022 totalled RUB 339.8 million (USD 4.9 million), net of VAT, with the share of other audit-related services accounting for 49% of the total. To prevent conflict of interest, Kept has in place a specific policy covering different types of services they provide to auditees, which complies with the requirements of the International Ethics Standards Board for Accountants (IESBA), the Russian Independence Rules for Auditors and Audit Firms, and other applicable standards.

RISK MANAGEMENT SYSTEM

RISK MANAGEMENT

The existing corporate risk management system is integrated into the Company's business processes and enables effective risk-based decisions at various organisational levels to achieve strategic and operational goals.

Nornickel has set the following key risk management objectives:

- Increase the likelihood of achieving the Company's goals;
- Improve resource allocation;
- Boost Nornickel's investment case and shareholder value.

The risk management system is based on the principles and requirements set forth in Russian and international laws, as well as professional standards, including the Corporate Governance Code recommended by the Bank of Russia, GOST R ISO 31000-2019 Risk Management. Principles and Guidelines, COSO Enterprise Risk Management – Integrating with Strategy and Performance, and Recommendations for Public Joint Stock Companies to Organise Risk Management, Internal Controls, Internal Auditing, and the Work of Auditing Committees under Boards of Directors (Supervisory Boards) (Appendix to the Bank of Russia's Letter No. IN-06-28/143 dated 1 October 2020).

To manage production and infrastructure risks, Nornickel develops, approves, updates, and tests business continuity plans to maintain operations and take recovery steps in case of emergency.

Risk management system

Board of Directors

Audit Committee of the Board of Directors

KEY FUNCTIONS

- Approving the Corporate Risk Management Policy
- Supervising the development of the risk management system
- Approving the Corporate Risk Appetite Statement (annually)
- Managing strategic risks on an ongoing basis
- Reviewing and approving the risk management development roadmap and assessing its implementation status (annually)
- Reviewing reports on strategic and key risks (annually/quarterly)
- Assessing risk management performance at Nornickel (annually)

Management Board

Risk Management Committee of the Management Board

KEY FUNCTIONS

- Reviewing strategic risks and reports on key risks
- Reviewing materialised risks and lessons learned
- Reviewing risk appetite metrics
- Making decisions related to key risk management
- Reviewing business continuity plans
- Reviewing the strategy and development plans for the Corporate Risk Management System (CRMS) and Internal Control System (ICS)
- Reviewing the performance of dedicated risk management committees within business verticals

Risk Management Service

KEY FUNCTIONS

- Developing and updating the risk management methodology
- Preparing reports on Nornickel's Top 20 risks (annually)
- Preparing reports on strategic risks (annually)
- Enhancing quantitative risk assessment with simulation modelling tools
- Improving the Company's business continuity management system
- Ensuring employee training in practical approaches to risk management

Risk owners / heads of business units

KEY FUNCTIONS

- Day-to-day risk management within the integrated risk management model, including risk identification, analysis, assessment, and/or prioritisation, as well as development and execution of response plans and mitigation measures
- Risk-based decision making

Internal audit

KEY FUNCTIONS

- Making independent assessments of the effectiveness of risk management, internal controls and corporate governance (annually)

Internal control

KEY FUNCTIONS

- Methodological support and participation in risk assessment of business processes

In 2022, the Company completed the following projects to develop, improve and maintain the maturity of its risk management system:

- Rolled out of a GRC-class system across the Group to automate risk management processes;
- Ran an external follow-up review of key asset risks, including updates and verification;
- Maintained regular activities of dedicated risk management committees;
- Improved integration between risk management and budget planning processes through GRC-based automation tools;
- Ran a quantitative assessment of the cumulative impact of key risks on the Company's 2023 budget, as well as an analysis of the budget sensitivity to key risks, with follow-up risk management measures included in the budget;
- Broke down the Company's risk appetite into lower organisational levels, with relevant metrics, including ESG metrics, monitored via risk management committees;
- Further improved quantitative assessment tools for operational risks;
- Organised comprehensive employee training across divisions in risk management and continuity management;
- Developed a professional competence model defining key roles within the risk management system;
- Ran regular quantitative assessments of investment project risks;
- Ran a self-assessment of the risk management system's maturity to identify areas for improvement;
- Launched a project to assess long-term climate-related risks in line with TCFD[1] requirements.

In line with risk management system improvement plans for 2023 and beyond, the following areas have been prioritised:

- Further automating risk management processes and system functionality;
- Introducing quantitative risk assessment in strategic and operational planning;
- Enhancing the methodology to analyse, assess and manage various categories and types of risks;
- Continuing the assessment of long-term climate-related risks in line with TCFD requirements.

KEY STRATEGIC RISKS

The Company's strategic risks were updated in 2022. Nornickel sees the following groups of risks as its key risks: lower demand for the Company's products, lower productivity and disruptions of operations, as well as the mismatch between Nornickel's financial position and its growing strategic development needs.

INSURANCE

Insurance is an essential tool used to manage risks while protecting the property interests of Nornickel and its shareholders against any unforeseen losses related to operations, including due to external effects.

Nornickel has centralised its insurance function to ensure the consistent implementation of its uniform insurance policy and standards. The Company annually approves a comprehensive programme that defines key parameters by insurance type, key business area and project. Nornickel has implemented a corporate insurance programme that covers assets, equipment failures and business interruptions across the Group as well as enterprises in the core production chain, all on the same terms. The directors' and officers' liability, freight, construction and installation, vehicle, and other types of liability insurance programmes of the Company are also centralised and promote continuity.

Nornickel underwrites insurance contracts by major Russian insurers.

Nornickel applies industry best practice and leverages insurance market trends to negotiate the best insurance and insured risk management terms.

[1] Task Force on Climate-related Financial Disclosures.

CLIMATE RISKS

The Company's corporate risk management system takes into account climate risk factors. The Company reviews relevant risks on a quarterly basis.

Nornickel considers both physical risks associated with lasting climate changes and extreme weather, and transition risks arising from changes in the market, regulatory, technology, and political environment during the low-carbon transition.

Implementing a TCFD compliance roadmap helps embedding climate risk management approaches in the Company's business processes.

The analysis of physical risks relies on public scenarios of the Intergovernmental Panel on Climate Change (SSP 1-2.6, SSP 2-4.5, SSP 5-8.5) localised for all regions of the Company's operation. To analyse transition risks we rely on our own scenarios for global economy and climate change until 2050.

As part of permafrost thawing risk management, the Company further develops its building and structure monitoring system for continuous automated monitoring of permafrost foundation soil temperature and foundation deformations. The monitoring system is developed by the Buildings and Structures Monitoring Centre of the Norilsk Division, which is responsible for technical supervision and permafrost monitoring and serves as a centre of excellence in engineering geology.

Permafrost thawing (physical climate change risk)

Loss of bearing capacity by pile foundation beds may lead to deformation and collapse of buildings and structures.

Key risk factors

- Climate change, average annual temperature increases over the last 15 to 20 years
- Increased depth of seasonal permafrost thawing

Effect on Nornickel's development objective and strategy

- Efficient delivery of finished products (metals) in line with the production programme
- Social responsibility: comfort and safety of people living in Nornickel's regions of operation

Risk assessment

Effect on objectives: **medium**
Source of risk: **external**
Year-on-year change in risk: **stable**

Key mitigants

To manage this risk, Nornickel:

- performs regular monitoring of soil condition under the foundations of buildings and structures
- performs geodetic monitoring of the movement of buildings
- uses satellite technology to monitor Nornickel's assets and further analyse the data
- regularly monitors the condition of Nornickel's buildings and structures and subsequently processes the results to check for potential risks of Earth surface displacements
- regularly monitors the condition of Nornickel's buildings and structures by scaling the information and diagnostics system (in particular, by deploying automated observation points to monitor the key factors that affect the safe operation of buildings and structures)
- monitors soil temperature in buildings' foundations
- takes corrective and adaptive actions to ensure that buildings and structures are technically operational.

Lack of water resources (physical climate change risk)

Water shortages in storage reservoirs of Nornickel's hydropower facilities may result in failure to achieve required water pressures at HPP turbines, leading to lower power output and to drinking water shortages in Norilsk.

Key risk factors

Extreme weather events (droughts) caused by climate change

Effect on Nornickel's development objective and strategy

- Social responsibility: comfort and safety of people living in Nornickel's regions of operation
- Lower share of renewables in the Company's energy mix

Risk assessment

Effect on objectives: **medium**
Source of risk: **external**
Year-on-year change in risk: **stable**

Key mitigants

To manage this risk, Nornickel:

- implements a closed water circuit to reduce water withdrawal from external sources
- carries out regular hydrological observations to forecast water levels in rivers and other water bodies
- cooperates with the Federal Service for Hydrometeorology and Environmental Monitoring (Rosgidromet) on setting up permanent hydrological and meteorological monitoring stations in order to improve the accuracy of water level forecasts for major rivers across Nornickel's regions of operation
- dredges the Norilskaya River and prepares its production facilities for reducing their energy consumption in case of risk occurrence
- refurbished one of its two hydropower plants to increase power output through improving the hydropower units' performance.

MAP OF NORNICKEL'S MATERIAL RISKS WITH YEAR-ON-YEAR CHANGES IN 2022

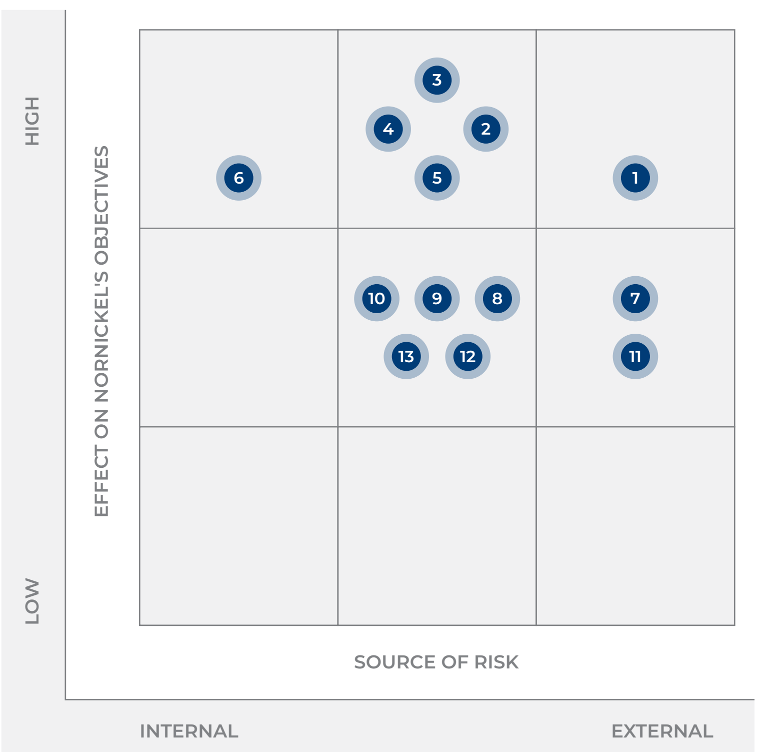
A high-level map of Nornickel's material risks leverages global best practices in risk management. The risk map ranks material risks by effect on the Group's objectives and by source.

Changes in risk status in 2022 reflect changes in the external environment. Over the year, the Company faced multiple external factors, which triggered a reassessment of impacts from external risk factors.

In 2022, Kola MMC lost equipment (a risk that had been identified earlier) after a fire started at the extraction facility of the nickel tankhouse's cobalt section.

Response measures included restoring the cobalt metal production chain and also preventing such incidents, including upgrades (repairs) of fire protection systems.

RISK MAP



RISK

- ● 1 Price risk
- ▲ 2 Market risk
- ▲ 3 Financial risks
- ▲ 4 Technical and production risk
- ▲ 5 Investment risks
- ● 6 H&S risks
- ● 7 Permafrost thawing
- ● 8 Compliance risk
- ▲ 9 Information security risks
- ● 10 Environmental risks
- ● 11 Lack of water resources
- ● 12 Social risk
- ● 13 Supply chain risks

Risk:
effect of uncertainty on objectives (ISO/GOST R 31000).

Risk source:
element which alone or in combination has the potential to give rise to risk (ISO/GOST R 31000). The assessment takes into account the predominance of external or internal factors.

The Effect on Nornickel's Objectives scale shows the relative impact of risks on the Company's goals.

Comparing with the previous year:

- ▲ Risk increased year-on-year
- ● Risk has not changed year-on-year
- ▼ Risk decreased year-on-year

KEY RISKS

Nornickel's risks are all inherent to its strategic and operational development and business continuity goals. Key risks have a varying degree of effect on Nornickel's objectives.

PRICE RISK

Potential decrease in sales revenues due to lower prices for Nornickel metals is subject to actual or potential changes in demand and supply in certain metals markets, global macroeconomic trends and the financial community's appetite for speculative/investment transactions in the commodity markets.

Key risk factors

- Lower demand for metals produced by Nornickel
- A slowdown in the global economy in general and in the economies consuming Nornickel metals in particular
- Supply and demand imbalance in metals markets

Effect on Nornickel's development objective and strategy

Enhancing Nornickel's leadership in the nickel and palladium markets

Risk assessment

Effect on objectives: **medium**
Source of risk: **external**
Year-on-year change in risk: **stable**

Key mitigants

Nornickel is consciously accepting the existing price risk for now. To manage this risk, Nornickel:

- continuously monitors and forecasts supply and demand dynamics for key metals;
- secures feedstock supplies for key consumers through long-term contracts to supply metals in fixed volumes;
- as a member of the Nickel Institute and the International Platinum Group Metals Association, works with other nickel and PGM producers to maintain and expand the demand for these metals.

Should the risk materialise, Nornickel will consider cutting capital expenditures (revising the investment programme for projects that do not have a material effect on Nornickel's development strategy) as part of the budgeting process.

Lower competitiveness of Nornickel products in the market may result in their lower liquidity, discounts to the market price and a decrease in Nornickel's income.

Key risk factors

- Foreign regulators imposing new foreign trade restrictions that impact the Company's activities
- Competition from producers of cheaper nickel
- More aggressive transport electrification programmes
- Replacement of metals produced by the Company with alternative materials
- Stricter market requirements on product quality and ESG compliance

Effect on Nornickel's development objective and strategy

Enhancing Nornickel's leadership in the nickel and palladium markets

Risk assessment

Effect on objectives: **high**
Source of risk: **mixed**
Year-on-year change in risk: **increased**

Key mitigants

To manage this risk, Nornickel:

- monitors and analyses changes in market demands for product quality and ESG compliance
- stimulates the demand for its key metals
- monitors evolution of vehicles by engine types
- searches for new applications and uses for palladium
- diversifies its metal product sales across industries and geographies
- improves and diversifies its product range
- cooperates with industry institutions to maintain access to relevant sales markets for its metals
- cooperates with Russian ministries and agencies to prevent/mitigate negative impacts of local or international regulation
- implements an ESG roadmap
- seeks partnership opportunities with key producers of cathodes for lithium-ion batteries
- maintains strategic partnerships with car makers based on guarantees of long-term palladium supplies.

FINANCIAL RISKS

This group includes FX, interest rate and liquidity risks, as well as other risks related to the financial security of the Company's operations and investments.

Key risk factors

- Increased debt financing costs
- Deteriorating market conditions
- Sharp rouble exchange rate fluctuations
- Inability to raise debt financing due to deterioration in financial markets
- Lack of access to key segments of global financial markets (debt and derivatives), limited access to the foreign currency debt market
- Unexpected major expenses
- Counterparty credit risk
- Restrictions imposed by foreign regulators that affect Nornickel's operations, its key business partners and infrastructure partners

Effect on Nornickel's development objective and strategy

- A debt portfolio with a well-balanced profile in terms of maturity, currency composition and sources of financing
- Maintaining a strong investment case

Risk assessment

Effect on objectives: **high**
Source of risk: **mixed**
Year-on-year change in risk: **increased**

Key mitigants

To manage this risk, Nornickel:

- maintains a balanced debt portfolio
- raises additional rouble-denominated debt to prevent a liquidity shortfall
- holds liquidity reserves on the Group's balance sheet to ensure payments on time
- monitors its account balances and existing cash gaps, as well as the availability of liquidity reserves on its balance sheet
- uses various hedging instruments
- regularly evaluates key potential risk events through scenario modelling and develops prevention and response plans
- constantly seeks new potential partners among borrowing and financial institutions, expanding and diversifying its financial infrastructure
- uses different financial models for various purposes, expands the array of financial risk assessment tools (stress testing and reverse stress testing of all financial risks and risk factors considering their combinations, interrelations and changes over time).

TECHNICAL AND PRODUCTION RISKS

Technical, production or natural phenomena which, once materialised, could have a negative impact on the implementation of the production programme and cause equipment breakdown or result in the need to compensate damage to third parties.

Key risk factors

- Harsh natural and climatic conditions, including low temperatures, storm winds and snow load
- Unscheduled stoppages of core equipment caused by fixed assets' wear and tear
- Release of explosive gases and flooding of mines
- Collapse of buildings or structures
- Infrastructure breakdowns

Effect on Nornickel's development objective and strategy

Effective delivery of finished products (metals) in line with the production programme

Risk assessment

Effect on objectives: **high**
Source of risk: **mixed**
Year-on-year change in risk: **increased**

Key mitigants

To manage this risk, Nornickel:

- ensures proper and safe operation of its assets in line with the requirements of technical documentation, as well as technical rules and regulations as prescribed by local laws across Nornickel's geographic footprint
- develops ranking criteria and criticality assessment for the Norilsk Nickel Group's key industrial assets
- implements an automated system for managing reliability, effectiveness and production asset risks
- ensures timely replacement of fixed assets to consistently achieve production safety targets
- continuously monitors the ongoing condition of Nornickel's buildings and structures via an information system for conducting geotechnical surveys
- uses satellite technology to monitor Nornickel's assets and further analyse the data
- implements automated systems to control equipment process flows, uses state-of-the-art engineering controls
- improves its maintenance and repair system
- trains and educates its employees both locally on site and centrally through its corporate training centres
- systematically identifies, assesses and monitors technical and production risks, implements a programme of organisational and technical measures to mitigate relevant risks
- continuously monitors the industrial asset management system
- ensures risk review by collective bodies at all management levels of the Company
- develops the technical and production risk management system, including by engaging independent experts to assess the system's performance and completeness of risk data
- develops and tests business continuity plans which set out a sequence of actions to be taken by Nornickel's personnel and internal contractors in case of technical and production risks causing maximum damage. These plans ensure that Nornickel resumes its production operations as soon as possible after any disruption
- engages, on an annual basis, independent surveyors to analyse Nornickel's exposure to disruptions in the production chain and make assessments of related risks.

INVESTMENT RISKS

Risk related to time and budget overruns, and performance targets of Nornickel's major investment projects.

Key risk factors

- Changes in forecasts of ore volumes, grades and properties resulting from follow-up exploration
- Changes in investment project timelines
- Further changes to budgets of investment projects
- Amendments to project performance targets in the course of implementation

Effect on Nornickel's development objective and strategy

- Strategic goal: growth driven by Tier 1 assets
- Developing the mining, concentration and metallurgical assets
- Developing the mineral resource base and upgrading core production processes at Nornickel's Tier 1 assets

Risk assessment

Effect on objectives: **high**
Source of risk: **mixed**
Year-on-year change in risk: **increased**

Key mitigants

To manage this risk, Nornickel:

- carries out proactive exploration and updates project performance targets and the mining plan (a long-term production plan) based on the progress of its major investment projects developing the mineral resource base
- conducts resource, geomechanical and hydrogeological modelling
- holds external expert audits of geological data
- develops an in-house geological and mining information system
- models mining options in geological and mining information systems
- as part of the project assurance process, conducts internal (cross-functional) audits of major investment projects at each stage in their life cycle
- improves incentives to drive project delivery and build skills and capabilities (including staff certification, identification of improvement areas and provision of tailored training)
- improves project delivery standards, develops project management tools
- promotes the use of pilot units across all technically challenging and unique processing stages
- redesigns projects and substitutes supply routes to source materials/services from friendly countries, taking into account sanctions
- supports the growth of NN Development as a dedicated corporate function with integrated responsibility for major construction projects
- implements a transformation programme for Gipronickel Institute to improve the quality and reduce the timelines of R&D, survey and engineering activities
- enhances project management competencies of project teams and ensures best practice sharing through its Project Forum held on a regular basis.

HEALTH AND SAFETY RISKS

Failure to comply with Nornickel's health and safety (H&S) rules may result in threats to health and life or temporary suspension of operations, or cause property damage.

Key risk factors

- Suboptimal methods of work organisation
- Disruptions in technological processes
- Exposure to hazards

Effect on Nornickel's development objective and strategy

Health and safety

Risk assessment

Effect on objectives: **high**
Source of risk: **internal**
Year-on-year change in risk: **stable**

Key mitigants

Pursuant to the Occupational Health and Safety Policy approved by the Board of Directors, Nornickel:

- continuously monitors compliance with H&S requirements
- improves the working conditions for its employees and contractors deployed at Nornickel's production facilities, including by implementing new technologies and labour-saving solutions, and enhancing industrial safety at production facilities
- provides employees with certified state-of-the-art personal protective equipment
- improves the system of stationary gas analysers, provides employees with portable gas analysers
- carries out preventive and therapeutic interventions and enforces hygiene protocols to reduce the potential impact of work-related hazards
- regularly trains, briefs employees on health and safety, assesses their health and safety performance and conducts corporate workshops, including by deploying special simulator units
- enhances methodological support for H&S functions, including through the development and implementation of corporate standards
- improves the risk assessment and management framework across Group enterprises as part of the Risk Control project
- reviews the competencies of line managers across Nornickel enterprises, develops H&S training programmes and arranges relevant trainings
- holds H&S competitions
- communicates the circumstances and causes of accidents to all Nornickel employees, conducts ad hoc safety briefings
- introduces frameworks to manage technical, technological, organisational, and HR changes.

COMPLIANCE RISKS

The risk of legal liability and/or legal sanctions, significant financial losses, suspension of production, revocation/suspension of a licence, loss of reputation, or other adverse effects arising from Nornickel's non-compliance with the applicable laws, regulations, instructions, rules, standards, or codes of conduct.

Key risk factors

- Discrepancies in rules and regulations
- Considerable powers and a high degree of discretion exercised by supervision agencies

Effect on Nornickel's development objective and strategy

Compliance by Nornickel and Russian entities of the Norilsk Nickel Group with the applicable laws, regulatory requirements, corporate standards, and business codes

Risk assessment

Effect on objectives: **medium**
Source of risk: **mixed**
Year-on-year change in risk: **stable**

Key mitigants

To manage this risk, Nornickel:

- ensures the development and update of procedural documents on anti-corruption and on combatting the unlawful use of insider information and market manipulation
- ensures its compliance with the applicable laws
- protects its interests during regulatory inspections and administrative proceedings
- uses trial and post-trial remedies to protect its interests
- ensures that agreements signed by Nornickel contain clauses safeguarding its interests
- implements conflict of interest management, anti-corruption, anti-money laundering, counter terrorist financing, and counter proliferation financing initiatives
- takes actions to prevent unlawful use of insider information and market manipulation
- ensures timely and reliable information disclosures as required by the applicable Russian and international laws
- has its employees take insider information management and anti-corruption training courses
- ensures that all employees receive anti-corruption induction briefing
- ensures that the Corporate Trust Line receives and handles reports of corruption, fraud, embezzlement, or other wrongdoing, either planned or committed
- ensures evaluation of anti-corruption controls at the Norilsk Nickel Group.

INFORMATION SECURITY RISKS

This group includes risks such as potential cybercrimes, an unauthorised transfer, modification or destruction of data assets, disruption or reduced efficiency of Nornickel's IT services, business, technological, and production processes.

Key risk factors

- Growing external threats
- Unfair competition
- Rapid development of Nornickel's IT infrastructure and automation of technological and business processes
- Unlawful acts by employees and/or third parties
- Shift to work from home and hiring remote employees outside Nornickel's regions of operation

Effect on Nornickel's development objective and strategy

Mitigation of the information security risk and risk of cyberattacks on Nornickel's information systems and automated process control systems

Risk assessment

Effect on objectives: **medium**
Source of risk: **mixed**
Year-on-year change in risk: **increased**

Key mitigants

To manage this risk, Nornickel:

- ensures compliance with applicable Russian laws and regulations with respect to the protection of personal data, insider information, trade secrets, and critical information infrastructure
- implements MMC Norilsk Nickel's Information Security Policy
- categorises data assets and makes information security risk assessments
- embeds and monitors compliance with corporate information security standards within information systems and automated process control systems
- raises information security awareness among employees
- substitutes imported data protection tools whose functionality was restricted due to sanctions
- uses technical means to ensure information security of assets and manage access to data assets
- ensures information security of automated process control systems
- monitors threats to information security and the use of technical protection means, including vulnerability analysis, penetration testing, cryptographic protection of communication channels, controlled access to removable media, protection from confidential data leaks, and mobile device management
- develops information security regulations
- sets up and certifies the Company's information security management system
- implements measures to ensure safe remote access.

ENVIRONMENTAL RISKS

This risk group includes events that result in environmental pollution, are not provided for in approved technological processes and Russian laws, and affect the achievement of the Company's environmental goals.

Key risk factors

- Failure to comply with the requirements of environmental laws when operating the Company's facilities
- Poor internal management and control
- Delay in implementing environmental programmes and measures
- Natural and climate phenomena

Effect on Nornickel's development objective and strategy

Compliance of business with the applicable laws, regulations, corporate standards, and business codes

Risk assessment

Effect on objectives: **medium**
Source of risk: **mixed**
Year-on-year change in risk: **stable**

Key mitigants

To manage these risks, Nornickel:

- develops, implements and improves environmentally sustainable business processes and introduces advanced practices and approaches
- has in place an incentive system and promotes environmental competences of its employees
- implements its corporate Environmental and Climate Change Strategy
- implements environmental initiatives at the Company and Russian entities of the Norilsk Nickel Group
- oversees environmental compliance and the implementation of environmental programmes and measures.

SOCIAL RISK

Tensions may escalate among the workforce due to the deterioration of social and economic conditions in Nornickel's regions of operation.

Key risk factors

- Headcount / staff composition optimisation projects
- Rejection of Nornickel's values by individual employees and/or third parties
- Limited ability to perform annual wage indexation
- Dissemination of false and inaccurate information about Nornickel's plans and operations among the Group's employees
- Reallocation of funds originally intended for social programmes and charity

Effect on Nornickel's development objective and strategy

Social responsibility:

- Partnering with regional and local authorities to develop a social infrastructure that supports a safe and comfortable living environment for local communities
- Facilitating the employees' professional and cultural development and building up talent pools across Nornickel's regions of operation
- Implementing long-term charity programmes and projects

Risk assessment

Effect on objectives: **medium**
Source of risk: **mixed**
Year-on-year change in risk: **stable**

Key mitigants

To manage this risk, Nornickel:

- strictly adheres to the terms and conditions of collective bargaining agreements between the Group companies and their employees (the Group has signed a total of 23 collective bargaining agreements)
- interacts with regional authorities, municipalities and civil society institutions
- fulfils its social obligations under public-private partnership agreements
- implements corporate social responsibility programmes and the World of New Opportunities charity programme aimed at supporting and promoting regional civil initiatives, including by indigenous peoples of Taimyr and the Plant of Goodness employee volunteering programme
- implements infrastructure projects to support the accelerated development of the service economy and improved living standards across Nornickel's regions of operation through the Norilsk Development Agency, the Second School centre for community initiatives in the Pechengsky District and the Monchegorsk Development Agency
- implements regular sociological monitoring across its operations
- surveys Norilsk residents on living standards, employment, migration trends, and general social sentiment to identify major issues
- implements social projects and programmes aimed at supporting employees and their families, as well as Nornickel's former employees
- maintains dialogues with stakeholders and conducts questionnaire surveys when preparing the Group's public sustainability reports
- provides a range of social support measures to redundant staff under Kola MMC's social programmes and develops the Social and Economic Development Strategy of the Pechengsky District.

SUPPLY CHAIN RISKS

Supply chain interruption/disruption within the existing transport and logistics system.

Key risk factors

- Challenging natural and climatic conditions in the regions of operation
- Limitations of the transport and logistics system
- Growing inflation, FX rates, pricing pressure from suppliers, poor planning, and other factors
- Breach of contracts by contractors

Effect on Nornickel's development objective and strategy

Effective delivery of finished products in line with the production programme
Timely supply of products to consumers

Risk assessment

Effect on objectives: **medium**
Source of risk: **mixed**
Year-on-year change in risk: **stable**

Key mitigants

To manage this risk, Nornickel:

- actively engages Russian manufacturers to expand competition
- uses long-term agreements / contracts / price lists with fixed optimal prices for materials, equipment and spare parts on terms that are most beneficial for the Company
- drafts lists of critical manufacturers of equipment and materials, works to prevent supply disruptions and monitors suppliers' performance
- implements its Logistics Infrastructure Development Programme.

SHAREHOLDER INFORMATION

Nornickel maintains an active dialogue with a wide universe of investors.

The Company holds regular conference calls and meetings with investors, participates in investment conferences and organises site visits to the Company's production facilities.

SHARE CAPITAL

At the end of 2022, Nornickel's authorised capital consisted of 152,863,397 ordinary shares with a par value of RUB 1 each. The Articles of Association do not provide for the issuance of preferred shares. All shares in the Company are voting shares, with each voting share counted as one vote.

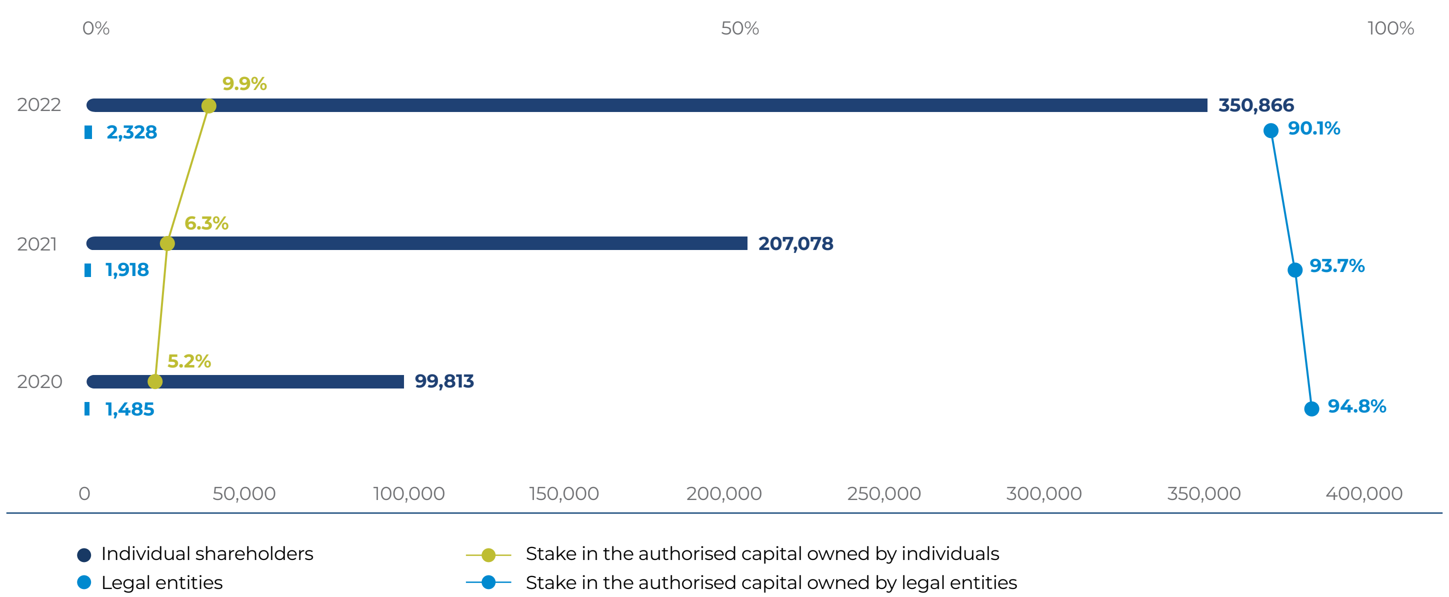
In the reporting year, following the decision of the General Meeting of Shareholders, the Company's authorised capital was reduced to RUB 152,863,397 by cancelling 791,227 ordinary shares in the Company repurchased earlier through a share buyback in June 2021. Stakes of major shareholders were changed accordingly to reflect the said changes in the authorised capital.

Shareholding structure as of calendar year-end (%)

Shareholder	2020	2021	2022
Interros	34.60	35.95	37.00
EN+ GROUP IPJSC	27.82	26.25	26.39
Treasury shares	–	0.51	–
Other shareholders (including free float)	37.58	37.29	36.61
Total shares	158,245,476	153,654,624	152,863,397

The current shareholding structure is available at the Company website.

Nornickel shareholders and their stakes[1]



[1] Data as of the dates of the Annual General Meetings of Shareholders. Stakes in the authorised capital.

Shareholder rights

All shareholders enjoy equal rights and treatment in their relations with Nornickel. Shareholders can exercise their rights as prescribed by the federal laws On Joint Stock Companies and On the Securities Market, as well as other regulations of the Russian Federation that do not limit their right to attend general meetings of shareholders depending on their location or residence.

SHARES

Nornickel shares have been traded in the Russian stock market since 2001. Since 2014, the shares are included on the First Level quotation list of the Moscow Exchange (ticker: GMKN).

Nornickel's market capitalisation at year-end 2022

USD 33 billion,

or

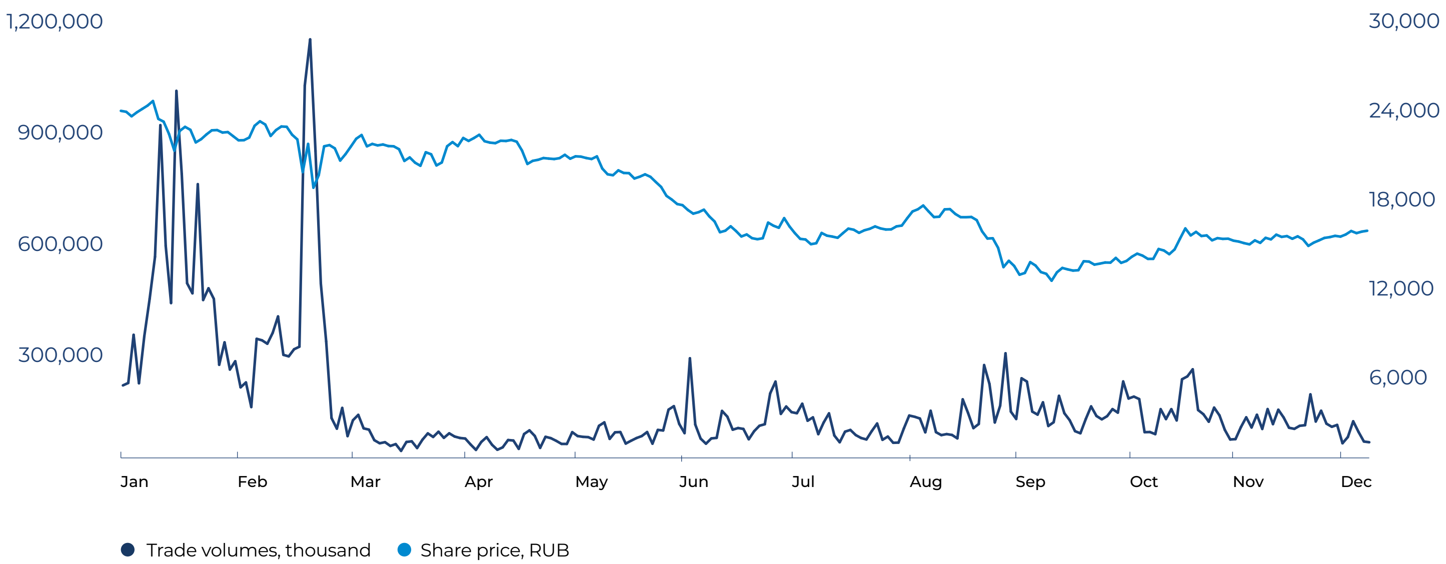
RUB 2,339 billion

Securities	
Shares (ordinary)	ADRs (10 ADRs = 1 share)
Registered number	
1-01-40155-F	N/A
Registration date	
2001	2001
ISIN	
RU0007288411	US55315J1025
Ticker	
GMKN	MNOD, NILSY
Registrar/depository	
Registrar IRC – R.O.S.T.	Depository: The Bank of New York Mellon Custodian: Raiffeisenbank

About the registrar

IRC – R.O.S.T. is the Company's registrar. Shareholders, including those owning shares via nominee holders, can participate in general meetings via e-ballots by using the Shareholder's Personal Account service developed by the registrar. The access procedure for the Shareholder's Personal Account is detailed on the registrar's website. Shareholders can also use the Shareholder.online mobile app.

Nornickel share price and trade volumes on the Moscow Exchange in 2022

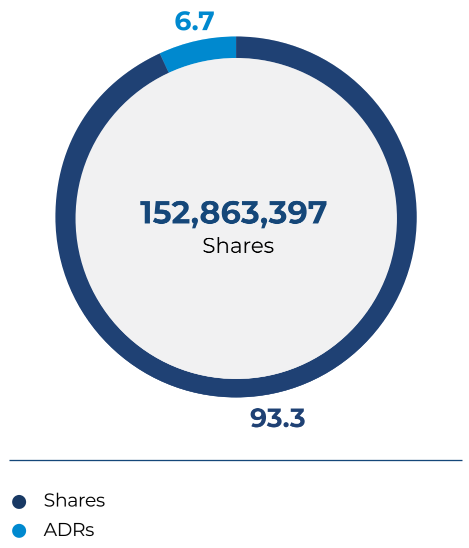


Source: Company calculations based on closing prices on the Moscow Exchange

low	high	average traded price	year-end price
RUB 11,932	RUB 24,040	RUB 17,501	RUB 15,300

AMERICAN DEPOSITARY RECEIPTS

Share and ADR split as of 31 December 2022 (%)



Until March 2022, Nornickel American depositary receipts (ADRs) traded on the US OTC market, as well as on the London, Berlin and Frankfurt exchanges (OTC sections) under the MNOD and NILSY tickers, with 10 ADRs representing 1 share. The Bank of New York Mellon acted as the depository for the Company's ADR programme, with Raiffeisenbank providing custody services. From March 2022, international exchanges suspended trading in depositary receipts of Russian issuers.

On 27 April 2022, amendments to the Federal Law On Joint Stock Companies and certain legislative acts of the Russian Federation came into effect, requiring Russian issuers to terminate their ADR programmes. The Company applied for and obtained a one-year permit to continue trading its ADRs outside of Russia until 28 April 2023.

In line with Russian laws, the Company completed an automatic forced conversion of ADRs into Company shares in 2022. The automatic conversion provided for converting the ADRs, the rights to which were recorded with Russian depositories, without any conversion applications from ADR holders. The forced conversion covered those ADRs, the right to which were recorded with foreign organisations and whose holders were unable to convert the ADRs into Company shares by themselves due to sanctions. Such ADR holders were entitled from 14 July to 10 November 2022 to apply to the Russian custodian of the shares represented by the ADRs (Raiffeisenbank), attaching documents confirming ownership of ADRs and other documents. After the deadline for accepting forced conversion applications passed, Raiffeisenbank opened nominee accounts for eligible applicants and credited the respective number of the underlying Company shares to these accounts.

For more details on share price performance, see the Company website.

DIVIDEND POLICY

The Company's Regulations on the Dividend Policy approved by the Board of Directors seek to ensure the transparency of the mechanism for determining the amount of dividend and the dividend payment procedure.

Upon the Board's recommendations, the General Meeting of Shareholders determines the dividend amount and record date, which, as per Russian laws, is to be set within 10–20 days of the General Meeting of Shareholders.

Dividends to a nominee holder are paid within 10 business days, while dividends to persons listed on the shareholder register are paid through the registrar, IRC – R.O.S.T., within 25 business days after the record date.

Any person who has not received the declared dividend because their address or banking details were not available to the Company or the registrar as required, or due to any other delays on the part of the creditor, may request payment of unpaid dividend within three years from the date of the resolution to pay the dividend. Beyond this period, any declared but unclaimed dividends are recovered as part of the undistributed profit of the Company, and there will be no obligation to pay them.

In 2022, the Company paid dividends subject to current regulatory restrictions:

- Shareholders who are customers of foreign nominee holders and ADR holders: dividends were paid directly to security holders; the payment was made if information to identify the security holder and other information required to make the payment was available
- Certain categories of foreign shareholders: dividends were paid to type "C" accounts opened with Russian credit institutions

Report on dividend paid[1]

	Total dividends, USD mln	Total dividends, RUB mln
Total for 2021	**6,196**	**410,917**
FY [2]	3,146	178,075
9M	3,050	232,842
Total for 2020	**3,532**	**259,893**
FY	2,198	161,603
9M	1,334	98,290
Total for 2019	**5,011**	**323,482**
FY	1,264	88,166
9M	1,567	95,430
6M	2,180	139,886

[1] Earlier dividend history is available at our website. Dividends are paid out to shareholders within three years from the respective dividend resolution date. Beyond this period, any unclaimed dividends are recovered as part of the undistributed profit of the Company, and there will be no obligation to pay them. The dividend payouts are shown as at 31 December 2022 according to IFRS statements.

[2] Including RUB 32.3 billion, or USD 0.5 billion, in dividend payments to ADR holders, transferred to the depository (NSD) and returned to the Company due to the restrictions imposed by the President's Executive Order No. 95 dated 5 March 2022 and the Resolution of the Bank of Russia's Board of Directors dated 10 June 2022.

Dividends in 2022

On 28 April 2023, the Company's Board of Directors recommended that the Annual General Meeting of Shareholders not to pay dividends for the financial year 2022. The resolution will be passed at the Annual General Meeting of Shareholders on 6 June 2023.

SECURITIES TAXATION

Income from securities is taxable pursuant to the applicable laws of the Russian Federation.

Under international double taxation treaties, non-Russian tax residents may claim a reduced rate of withholding tax or relief from tax in Russia. To claim these benefits, non-residents need to submit the following confirmations to their Russian tax agent paying the income:

- A confirmation of permanent residence in a state with which the Russian Federation has a double taxation treaty (tax residency certificate);
- A confirmation of the actual right to receive income;
- A confirmation that they meet other conditions set forth in the applicable treaty.

If such confirmations are not provided by the date of income payment, the tax shall be withheld at the standard rates.

Taxation of income from securities

Shareholder	From transactions (%)	Interest (%)	Dividend (%)
INDIVIDUALS			
Residents	13/15[1,2]	13/15[2]	13/15[2]
Non-residents	30[1]	30	15
LEGAL ENTITIES			
Residents	20[1]	20	13[3]
Non-residents	20[4]	20	15

DIVIDEND TAX FORMULA FOR RUSSIAN RESIDENTS[5]

$AT = P \times TR \times (D_1 - D_2)$, where

- AT – amount of tax to be withheld
- P – proportion of the dividend amount payable to one recipient to the total dividend amount to be distributed
- TR – tax rate stipulated by the Russian Tax Code
- D_1 – dividend amount to be distributed among all recipients
- D_2 – dividend amount[5] received by Nornickel, provided that previously this amount was not included in the taxable income

[1] Or 0%, if by the selling date the Company shares have been held for more than five years and the requirements for the share of real estate in the Company's assets as outlined in Clause 2, Article 284.2 of the Russian Tax Code have been met. The terms and conditions of applying the 0% rate to international holding companies are set forth in Article 284.7 of the Russian Tax Code. Pursuant to Subclause 1, Clause 1, Article 219.1 of the Russian Tax Code, individuals who are Russian tax residents are eligible for investment tax deductions in the amount of the profits from sales of the Company shares, which have been owned by the taxpayer for over three years.

[2] Pursuant to Clause 1 of Article 224 of the Russian Tax Code, a tax rate of 15% applies to income over RUB 5 million for the reporting period.

[3] Or 0%, if as of the date of the dividend resolution a Russian entity has been owning 50% (or more) of shares (15% or more if the owner is an international holding company) in Nornickel's authorised capital for 365 days (or more).

[4] If the income is classified as income of a foreign entity from sources in Russia in accordance with Clause 1, Article 309 of the Russian Tax Code.

[5] Excluding the dividend amount eligible for a zero tax rate pursuant to Subclauses 1–1.1, Clause 3, Article 284 of the Russian Tax Code.

BONDS AND DEBT MANAGEMENT

Nornickel maintains a conservative approach to managing its debt. As of 31 December 2022, its net debt / 12M EBITDA stood at 1.1x. To raise new debt, the Company considers both public instruments and bank loans, striving to balance both in its debt portfolio. When choosing debt financing sources, the Company pays particular attention to the debt currency and loan parameters.

In October, the Company placed a RUB 25 billion exchange-traded bond with a 9.75% coupon and a put option exercisable in 3 years, named by Cbonds as the Best Primary Offering of a Metals Company. In December, the Company placed two bond issues in Chinese yuans, a 3-year CNY 4 billion bond and a 3.5-year CNY 5 billion bond with coupon rates of 3.95% and LPR 1Y[1] + 0.1%, respectively, and a put option exercisable in 3 years. The bond with a variable LPR-based coupon rate was the first placement of its kind in the Russian market.

During 2022, the Company redeemed two eurobonds: the USD 500 million eurobond in March, exercising a call option one month before maturity to optimise finance costs, and the USD 1 billion eurobond, redeemed on time in October.

The Company closely monitors changes in the external regulatory environment to enable timely responses, while prioritising strict compliance with the terms of debt instruments and promptly aligning loan documents with applicable laws. The Company meets all payment schedules on time, fully servicing its debt as planned. In addition, the Company timely renews permits from the Russian Government required to make payments of principal and interest in foreign currencies to foreign creditors.

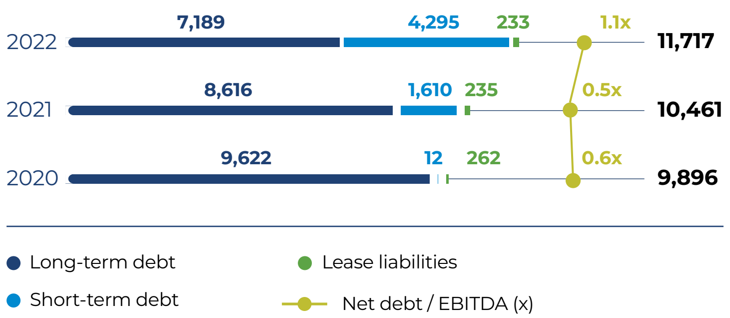
In September, holders of all of the Company's five eurobonds (USD 3.75 billion in total) approved amendments to transaction documents, including split payments to Russian and foreign investors, a simplified redemption mechanism and appointment of a new trustee. This complex deal was the largest of its kind among Russian issuers in terms of the number and total amount of issues involved at once. It also ensured full compliance of offering documents with Russian laws and enabled the Company to mitigate the default risks while continuing payments to foreign depositories through a paying agent.

Following the amendments to offering documents in September and October 2022, the Company split interest payments on all of its eurobonds (separate payments to holders whose rights are recorded by Russian depositories ("Russian holders") and holders whose rights are recorded by foreign institutions ("foreign holders")). The scheduled redemption of the eurobond in October also involved split payments. Russian holders received their first payments since February 2022, when funds of the National Settlement Depository (NSD) were frozen. The Company was also notified that international clearing systems made payments on all of the Company's eurobonds to at least some foreign holders, which makes the Company the first Russian issuer to achieve such a result with split payments.

In November 2022, the Expert RA national rating agency confirmed the Company's highest investment-grade credit rating "ruAAA". International rating agencies withdrew and no longer issue credit ratings on Russian companies due to sanctions imposed on Russia.

[1] The Loan Prime Rate 1Y (one-year loan prime rate) is available at https://iftp.chinamoney.com.cn/english/bmklpr/.

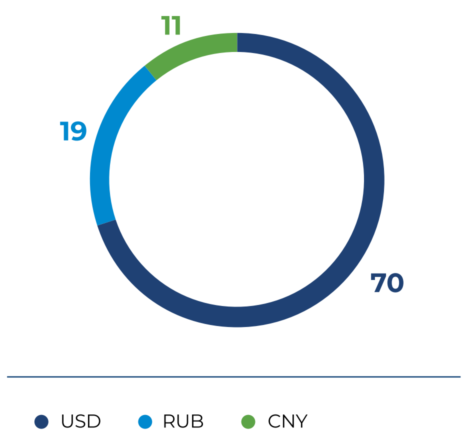
Debt profile (USD mln



As of 31 December 2022, the Company's total debt was USD 11.7 billion, up 12% year-on-year. The increase was mainly due to drawdowns from standby facilities for refinancing purposes amid rising external challenges.

As of the end of 2022, Nornickel had eight bond issues outstanding: four eurobond issues for a total of USD 2.75 billion and four replacement bonds – two for a total of RUB 50 billion and two for a total of CNY 9 billion.

Debt currency mix at the end of 2022 (%)



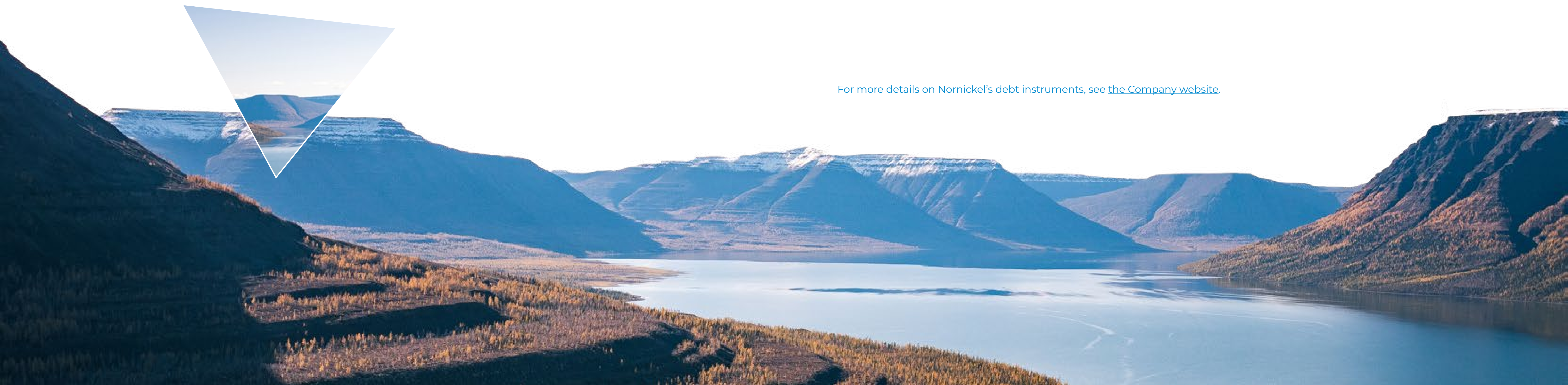
Outstanding eurobonds

Instrument	Eurobond 2023 (LPN)	Eurobond 2024 (LPN)	Eurobond 2025 (LPN)	Eurobond 2026 (LPN)
Issuer				MMC Finance D.A.C.
Offering date	11.04.2017	28.10.2019	11.09.2020	27.10.2021
Maturity date	11.04.2023	28.10.2024	11.09.2025	27.10.2026
Issue size, USD mln	1,000	750	500	500
Coupon rate (%)	4.10	3.375	2.55	2.80
Coupon dates	11 October / 11 April	28 October / 28 April	11 September / 11 March	27 October / 27 April

Outstanding replacement bonds

Instrument	Exchange-traded bond, BO-001P-01	Exchange-traded bond, BO-001P-02	Exchange-traded bond, BO-001P-05-CNY	Exchange-traded bond, BO-001P-06-CNY
Issuer				MMC Norilsk Nickel
ISIN	RU000A100VQ6	RU000A105A61	RU000A105ML5	RU000A105NL3
Offering date	01.10.2019	11.10.2022	19.12.2022	22.12.2022
Maturity date	24.09.2024	05.10.2027 (put option expiring 14.10.2025)	15.12.2025	18.06.2026 (put option expiring 25.12.2025)
Issue size	RUB 25 bn	RUB 25 bn	CNY 4 bn	CNY 5 bn
Coupon rate (%)	7.20	9.75	3.95	LPR 1Y+ 0,1
Coupon frequency			Every 182 days starting from the offering date	Every 91 days starting from the offering date

For more details on Nornickel's debt instruments, see the Company website.



SHAREHOLDER RELATIONS

Nornickel maintains an active dialogue with a wide universe of Russian and international investors and security analysts. The Company holds regular conference calls and meetings with investors, participates in investment conferences and organises site visits to the Company's production facilities. Nornickel also holds an annual Capital Markets Day where its senior management discusses strategic development.

In 2022, the Company remained committed to global best practice for disclosure, using an array of disclosure tools, including press releases, presentations, annual and sustainability reports, corporate action notices, as well as interactive tools. Nornickel provides parallel disclosure both in Russian and in English. Materials for investors are available in the Investors section of the Company website.

In 2022, Nornickel jump-started its retail investor strategy:

- setting up and developing its account on Tinkoff's Pulse to provide timely updates on Nornickel's corporate events, available to all users of Tinkoff Investments brokerage accounts
- participating in Dialogues with Retail Investors
- participating in the Smart-Lab conference for private investors
- updating the investor section on the Company website.

In 2022, in line with its retail investor strategy, Nornickel's team held online conferences for clients of major Russian brokers and took part in the annual conference organised by Smart-Lab, Russia's largest investment community that brings together private investors and traders. As part of its efforts to enhance communication with retail investors, Nornickel runs a blog on the SMART LAB, Pulse and Profit platforms where it posts the most important Company news along with financial and operating results and answers questions from market participants.

In the reporting period, the number of Nornickel retail investors increased by 82% to 388 thousand, with their share in its shareholding structure up almost 50% year-on-year to 10% of the total authorised capital. The Company plans to increase the share of retail investors to 25% in the long term, including through its employee incentive programme.

NORNICKEL HELD MORE THAN 100 MEETINGS AND CALLS WITH INVESTORS IN 2022

ADDITIONAL INFORMATION

CONSOLIDATED FINANCIAL STATEMENTS

FOR THE YEARS ENDED 31 DECEMBER 2022, 2021 AND 2020

STATEMENT OF MANAGEMENT'S RESPONSIBILITIES FOR THE PREPARATION AND APPROVAL OF THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEARS ENDED 31 DECEMBER 2022, 2021 AND 2020

The following statement, which should be read in conjunction with the auditors' responsibility stated in the independent auditors' report set out on pages 2-5, is made with a view to distinguishing the respective responsibilities of management and those of the auditors in relation to the consolidated financial statements of Public Joint Stock Company "Mining and Metallurgical Company "Norilsk Nickel" and its subsidiaries (the "Group").

Management of the Group is responsible for the preparation of the consolidated financial statements that present fairly in all material respects the consolidated financial position of the Group at 31 D ecember 2022, 2021 and 2020 and its consolidated financial performance, comprehensive income, consolidated cash flows and changes in equity for the years ended 31 December 2022, 2021 and 2020, in accordance with International Financial Reporting Standards ("IFRS").

In preparing the consolidated financial statements, management is responsible for:

- selecting suitable accounting principles and applying them consistently;
- making judgements and estimates that are reasonable and prudent;
- stating whether International Financial Reporting Standards have been followed, subject to any material departures disclosed and explained in the Notes to the consolidated financial statements; and
- preparing the consolidated financial statements on a going concern basis, unless it is inappropriate to presume that the Group will continue in business for the foreseeable future.

Management, within its competencies, is also responsible for:

- designing, implementing and maintaining an effective system of internal controls throughout the Group;
- maintaining statutory accounting records in compliance with local legislation and accounting standards in the respective jurisdictions in which the Group operates;
- taking steps to safeguard the assets of the Group; and
- detecting and preventing fraud and other irregularities.

The consolidated financial statements for the years ended 31 December 2022, 2021 and 2020 were approved by:

President

V.O. Potanin

Senior Vice President –
Chief Financial Officer

S.G. Malyshev

Moscow, Russia
10 February 2023

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INDEPENDENT AUDITORS' REPORT

TO THE SHAREHOLDERS AND BOARD OF DIRECTORS OF PJSC "MINING AND METALLURGICAL COMPANY "NORILSK NICKEL"

Opinion

We have audited the consolidated financial statements of PJSC "Mining and Metallurgical Company "Norilsk Nickel" (the "Company") and its subsidiaries (the "Group"), which comprise the consolidated statements of financial position as at 31 December 2022, 2021 and 2020, the consolidated income statements, the consolidated statements of comprehensive income, changes in equity and cash flows for the years ended 31 December 2022, 2021 and 2020, and notes, comprising significant accounting policies and other explanatory information.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as at 31 December 2022, 2021 and 2020, and its consolidated financial performance and its consolidated cash flows for the years ended 31 December 2022, 2021 and 2020 in accordance with International Financial Reporting Standards (IFRS).

Basis for Opinion

We conducted our audit in accordance with International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Group in accordance with the independence requirements that are relevant to our audit of the consolidated financial statements in the Russian Federation and with the International Ethics Standards Board for Accountants International Code of Ethics for Professional Accountants (including International Independence Standards) (IESBA Code), and we have fulfilled our other ethical responsibilities in accordance with the requirements in the Russian Federation and the IESBA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Disclosures on the impact of the economic situation on the Group's operations

Please refer to tne Notes 34, 35 in the consolidated financial statements.

The key audit matter	How the matter was addressed in our audit
Starting from 2022 the United States of America, the European Union and some other countries had toughen up restrictive measures against the Russian government, major financial institutions, certain other legal entities and individuals in Russia, resulting in significant capital markets volatility, supply and distribution interruptions, and limited availability of debt financing. The Group made a comprehensive disclosure on the impact of economic and geopolitical environment on the Group's current and future operations which we consider to be a key audit matter.	Our audit procedures included the following: Our audit procedures included the following: • We obtained and critically reviewed the management's assessment of the impact of the economic and geopolitical situation on the Group's operations; • We reviewed the assessment of revenue, production and capital expenditures levels budgeted for the next financial year; • We assessed the Group's analysis of sensitivity to the major market, financial and regulatory risks, such as currency risks, interest rate risks and risks associated with the availability of external financing; • We analysed the disclosure of credit risk, including the Group's assessment of dependency from major customers and credit risk concentration. We compared the information on credit ratings of the banks to external sources; • We analysed the disclosure of liquidity risk including maturity profile and respective cash flows. We considered the overall adequacy and appropriateness of the disclosures related to the analysis of the impact of the economic situation on the Group's current and future operations in the consolidated financial statements.

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Other Information

Management is responsible for the other information. The other information comprises the Financial Overview (MD&A) (but does not include the consolidated financial statements and our auditors' report thereon), which we obtained prior to the date of this auditors' report, and the information included in other sections of Annual Report for 2022, which is expected to be made available to us after that date.

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial Statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

If, based on the work we have performed on the other information that we have obtained prior to the date of this auditors' report, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of Management and Those Charged with Governance for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with IFRS, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's financial reporting process.

Auditors' Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, actions taken to eliminate threats or safeguards applied.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditors' report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partner on the audit resulting in this independent auditors' report is:

Natalia Velichko

Principal registration number of the entry in the Register of Auditors and Audit Organizations No. 21906109427 acts on behalf of the audit organization based on the power of attorney No.375/22 as of 1 July 2022

JSC "Kept"

Principal registration number of the entry in the Register of Auditors and Audit Organizations No. 12006020351

Moscow, Russia
10 February 2023

Audited entity: PJSC "Mining and Metallurgical Company "Norilsk Nickel"

Independent auditor: JSC "Kept"

Registration number in the Unified State Register of Legal Entities No. 1028400000298.

CONSOLIDATED INCOME STATEMENT FOR THE YEARS ENDED 31 DECEMBER 2022, 2021 AND 2020

US Dollars million		For the year ended 31 December		
	Notes	2022	2021	2020
Revenue				
Metal sales	7	16,073	17,103	14,977
Other sales		803	749	568
Total revenue		**16,876**	**17,852**	**15,545**
Cost of metal sales	8	(6,108)	(5,057)	(4,500)
Cost of other sales		(816)	(746)	(564)
Gross profi		**9,952**	**12,049**	**10,481**
General and administrative expenses	9	(1,353)	(989)	(869)
Selling and distribution expenses	10	(250)	(191)	(167)
Impairment of non-financial assets, net	15	(90)	(48)	(308)
Other operating expenses, net	11, 26, 27	(678)	(1,285)	(2,737)
Operating profi		**7,581**	**9,536**	**6,400**
Foreign exchange gain/(loss), net		251	(53)	(1,034)
Finance costs, net	12	(493)	(279)	(879)
(Loss)/gain from disposal of subsidiaries and foreign joint operations	21	(110)	29	19
Income from investments	13	150	52	73
Profit be ore tax		**7,379**	**9,285**	**4,579**
Income tax expense	14	(1,525)	(2,311)	(945)
Profit or the year		**5,854**	**6,974**	**3,634**
Attributable to:				
Shareholders of the parent company		5,458	6,512	3,385
Non-controlling interests	23	396	462	249
		5,854	**6,974**	**3,634**
Earnings per share				
Basic and diluted earnings per share attributable to shareholders of the parent company (US Dollars per share)	22	35.7	41.9	21.4

The accompanying notes on pages 9 - 97 form an integral part of the consolidated financial statements

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME FOR THE YEARS ENDED 31 DECEMBER 2022, 2021 AND 2020

US Dollars million	For the year ended 31 December		
	2022	2021	2020
Profit or the year	**5,854**	**6,974**	**3,634**
Other comprehensive income/(loss)			
Items that are or may be reclassified to profit or loss in subsequent periods:			
Reclassification of translation reserve for disposed foreign operations to profit or loss (Note 21)	–	20	(10)
Effect of translation of foreign operations and other reserves	29	(2)	1
Other comprehensive income/(loss) that are or may be reclassified to profit or loss in subsequent periods, net	**29**	**18**	**(9)**
Items not to be reclassified to profit or loss			
in subsequent periods:			
Effect of translation to presentation currency	891	80	(690)
Other comprehensive income/(loss) not to be reclassified to profit or loss in subsequent periods, net	**891**	**80**	**(690)**
Other comprehensive income/(loss) for the year, net of tax	**920**	**98**	**(699)**
Total comprehensive income for the year, net of tax	**6,774**	**7,072**	**2,935**
Attributable to:			
Shareholders of the parent company	6,332	6,618	2,763
Non-controlling interests	442	454	172
	6,774	**7,072**	**2,935**

The accompanying notes on pages 8 - 96 form an integral part of the consolidated financial statements

CONSOLIDATED STATEMENT OF FINANCIAL POSITION AT 31 DECEMBER 2022, 2021 AND 2020

US Dollars million	Notes	At 31 December		
		2022	2021	2020
Assets				
Non-current assets				
Property, plant and equipment	15	16,264	12,699	10,762
Intangible assets		302	265	222
Other financial assets	16	121	89	81
Deferred tax assets	14	340	167	755
Other non-current assets	18	365	345	327
		17,392	**13,565**	**12,147**
Current assets				
Inventories	18	4,945	3,026	2,192
Trade and other receivables	19	846	468	537
Advances paid and prepaid expenses		192	111	79
Other financial assets	16	40	43	58
Income tax receivable		17	203	7
Other taxes receivable	17	477	412	444
Cash and cash equivalents	20	1,882	5,547	5,191
Other current assets		4	60	51
		8,403	**9,870**	**8,559**
Total assets		**25,795**	**23,435**	**20,706**
Equity and liabilities				
Capital and reserves				
Share capital	22	6	6	6
Share premium		1,212	1,218	1,254
Treasury shares	22	–	(305)	–
Translation and other reserves		(4,541)	(5,415)	(5,521)
Retained earnings	**31**	**10,448**	**8,184**	**8,290**
Equity attributable to shareholders of the parent company		**7,125**	**3,688**	**4,029**
Non-controlling interests	23	1,442	1,100	646
		8,567	**4,788**	**4,675**
Non-current liabilities				
Loans and borrowings	24	7,189	8,616	9,622
Lease liabilities	25	190	178	203
Provisions	26	916	894	560
Social liabilities	27	613	633	84
Trade and other long-term payables		56	55	32
Derivative financial instruments	30	67	72	52
Deferred tax liabilities	14	415	73	43
Other non-current liabilities	29	93	43	23
		9,539	**10,564**	**10,619**
Current liabilities				
Loans and borrowings	24	4,295	1,610	12
Lease liabilities	25	43	57	59
Trade and other payables	28	1,381	2,224	1,427
Dividends payable	31	496	3,146	47
Employee benefit obligations	29	585	417	401
Provisions	26	180	146	2,162
Social liabilities	27	201	158	96
Derivative financial instruments	30	–	15	93
Income tax payable		169	41	358
Other taxes payable	17	339	269	329
Other current liabilities	36	–	–	428
		7,689	**8,083**	**5,412**
Total liabilities		**17,228**	**18,647**	**16,031**
Total equity and liabilities		**25,795**	**23,435**	**20,706**

The accompanying notes on pages 8 - 96 form an integral part of the consolidated financial statements

CONSOLIDATED STATEMENT OF CASH FLOWS FOR THE YEARS ENDED 31 DECEMBER 2022, 2021 AND 2020

US Dollars million	For the year ended 31 December		
	2022	2021	2020
Operating activities			
Profit before tax	**7,379**	**9,285**	**4,579**
Adjustments for:			
Depreciation and amortisation	1,026	928	943
Impairment of non-financial assets, net (Note 15)	90	48	308
Loss on disposal of property, plant and equipment	70	35	19
Loss/(gain) from disposals of subsidiaries and foreign joint operations (Note 21)	110	(29)	(19)
Change in provisions and allowances (Notes 26, 27)	236	896	2,477
Finance costs and income from investments, net (Notes 12, 13)	343	227	806
Foreign exchange (gain)/loss, net	(251)	53	1,034
Other	(106)	36	107
	8,897	**11,479**	**10,254**
Movements in working capital:			
Inventories	(1,693)	(796)	(119)
Trade and other receivables	(347)	38	(161)
Advances paid and prepaid expenses	(60)	(30)	(32)
Other taxes receivable	(121)	31	125
Employee benefit obligations	129	34	20
Trade and other payables	(1,096)	669	(239)
Provisions	(160)	(2,145)	(186)
Other taxes payable	164	(27)	(70)
Cash generated from operations	**5,713**	**9,253**	**9,592**
Income tax paid	(1,127)	(2,211)	(1,304)
Net cash generated from operating activities	**4,586**	**7,042**	**8,288**
Investing activities			
Purchase of property, plant and equipment	(4,227)	(2,683)	(1,686)
Purchase of share in associates	(29)	(21)	(14)
Purchase of intangible assets	(71)	(81)	(74)
Loans issued	–	(6)	(3)
Proceeds from repayment of loans issued	22	43	36
Net change in deposits placed (Note 16)	34	(35)	(4)
Proceeds from disposal of property, plant and equipment	11	12	2
Net cash (outflow)/inflow from disposal of subsidiaries and foreign joint operations (Note 21)	(46)	49	28
Interest and other investment income received	157	84	67
Net cash used in investing activities	**(4,149)**	**(2,638)**	**(1,648)**

The accompanying notes on pages 7 - 96 form an integral part of the consolidated financial statements

	For the year ended 31 December		
	2022	2021	2020
Financing activities			
Proceeds from loans and borrowings (Note 35)	9,104	1,000	2,903
Repayments of loans and borrowings (Note 35)	(7,775)	(415)	(2,552)
Payments of lease liabilities (Note 35)	(50)	(55)	(46)
Dividends paid (Note 31)	(6,196)	(2,198)	(4,165)
Dividends paid to non-controlling interest	(73)	–	–
Receipt of dividends not remitted to ADR holders (Note 31)	544	–	–
(Payments)/proceeds on exchange of flows under cross-currency interest rate swaps, net	(19)	4	38
Interest paid	(599)	(315)	(510)
Acquisition of own shares from shareholders (Note 22)	–	(2,068)	–
Net cash used in financing activities	**(5,064)**	**(4,047)**	**(4,332)**
Net change in cash and cash equivalents	**(4,627)**	**357**	**2,308**
Cash and cash equivalents at the beginning of the year (Note 20)	**5,547**	**5,191**	**2,784**
Effects of foreign exchange differences on balances of cash and cash equivalents	962	(1)	99
Cash and cash equivalents at the end of the year (Note 20)	**1,882**	**5,547**	**5,191**

The accompanying notes on pages 7 - 96 form an integral part of the consolidated financial statements

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY FOR THE YEARS ENDED 31 DECEMBER 2022, 2021 AND 2020

US Dollars million	Equity attributable to shareholders of the parent company				Equity attributable to shareholders of the parent company				
	Notes	Share capital	Share premium	Treasury shares	Translation and other reserves	Retained earnings	Total	Non-controlling interests	Total
Balance at 1 January 2020		**6**	**1,254**	**–**	**(4,899)**	**7,452**	**3,813**	**474**	**4,287**
Profit for the year		–	–	–	–	3,385	3,385	249	3,634
Other comprehensive loss		–	–	–	(622)	–	(622)	(77)	(699)
Total comprehensive income for the year		**–**	**–**	**–**	**(622)**	**3,385**	**2,763**	**172**	**2,935**
Dividends	31	–	–	–	–	(2,547)	(2,547)	–	(2,547)
Balance at 31 December 2020		**6**	**1,254**	**–**	**(5,521)**	**8,290**	**4,029**	**646**	**4,675**
Profit for the year		–	–	–	–	6,512	6,512	462	6,974
Other comprehensive income/(loss)		–	–	–	106	–	106	(8)	98
Total comprehensive income for the year		**–**	**–**	**–**	**106**	**6,512**	**6,618**	**454**	**7,072**
Dividends	31	–	–	–	–	(5,374)	(5,374)	–	(5,374)
Other effects related to transactions with non-controlling interest owners		–	–	–	–	490	490	–	490
Acquisition of own shares from shareholders	22	–	–	(2,075)	–	–	(2,075)	–	(2,075)
Cancellation of ordinary shares from treasury stock		–	(36)	1,770	–	(1,734)	–	–	–
Balance at 31 December 2021		**6**	**1,218**	**(305)**	**(5,415)**	**8,184**	**3,688**	**1,100**	**4,788**
Profit for the year		–	–	–	–	5,458	5,458	396	5,854
Other comprehensive income		–	–	–	874	–	874	46	920
Total comprehensive income for the year		**–**	**–**	**–**	**874**	**5,458**	**6,332**	**442**	**6,774**
Dividends	31	–	–	–	–	(2,895)	(2,895)	(100)	(2,995)
Cancellation of ordinary shares from treasury stock	22	–	(6)	305	–	(299)	–	–	–
Balance at 31 December 2022		**6**	**1,212**	**–**	**(4,541)**	**10,448**	**7,125**	**1,442**	**8,567**

The accompanying notes on pages 7 - 96 form an integral part of the consolidated financial statements

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEARS ENDED 31 DECEMBER 2022, 2021 AND 2020

US Dollars million

1. GENERAL INFORMATION

Organisation and principal business activities

Public Joint Stock Company "Mining and Metallurgical Company "Norilsk Nickel" (the "Company" or PJSC "MMC "Norilsk Nickel") was incorporated in the Russian Federation on 4 July 1997. The principal activities of the Company and its subsidiaries (the "Group") are exploration, extraction, refining of ore and nonmetallic minerals and sale of base and precious metals produced from ore. Further details regarding the nature of the business and structure of the Group are presented in Note 37.

Major production facilities of the Group are located on Russia's Taimyr and Kola Peninsulas and in the Zabaikalsky Territory, and in Finland

2. BASIS OF PREPARATION

Statement of compliance

The consolidated financial statements of the Group have been prepared in accordance with International Financial Reporting Standards ("IFRS").

The entities of the Group maintain their accounting records in accordance with the laws, accounting and reporting regulations of the jurisdictions in which they are incorporated and registered. Accounting principles in certain jurisdictions may differ significantly from those generally accepted under IFRS. Financial statements of such entities have been adjusted to ensure that the consolidated financial statements are presented in accordance with IFRS.

The Group issues a separate set of IFRS consolidated financial statements to comply with the requirements of the Russian Federal Law No 208-FZ On consolidated financial statements ("208-FZ") which was adopted on 27 July 2010.

Basis of measurement

The consolidated financial statements of the Group are prepared on the historical cost basis, except for mark-to-market valuation of certain classes of financial instruments, in accordance with IFRS 9 Financial Instruments.

3. CHANGES IN ACCOUNTING POLICIES

The accounting policies applied in the preparation of the consolidated financial statements for the year ended 31 December 2022 are generally consistent with those applied in the preparation of the Group's consolidated financial statements as at and for the years ended 31 December 2021 and 2020.

Adoption of new and revised standards and interpretations during the year ended 31 December 2022

Adoption of amendments to the following Standards did not have material impact on the accounting policies, financial position or financial results of the Group:

- IFRS 9 Financial Instruments (amended);
- IFRS 1 First-time Adoption of International Financial Reporting Standards (amended);
- IFRS 3 Business combinations (amended);
- IFRS 16 Leases (amended);
- IAS 16 Property, plant and equipment (amended);
- IAS 37 Provisions, contingent liabilities and contingent assets (amended).

Adoption of new and revised standards and interpretations during the year ended 31 December 2021

Adoption of amendments to the following Standards did not have material impact on the accounting policies, financial position or financial results of the Group:

Amendments related to interest rate benchmark reform:

- IFRS 4 Insurance Contracts (amended);
- IFRS 7 Financial Instruments: Disclosures (amended);
- IFRS 9 Financial Instruments (amended);
- IFRS 16 Leases (amended);
- IAS 39 Financial Instruments: Recognition and Measurement (amended).

Other amendments:

- IFRS 16 Leases (amended).

Adoption of new and revised standards and interpretations during the year ended 31 December 2020

Adoption of amendments to the following Standards did not have material impact on the accounting policies, financial position or financial results of the Group:

- IFRS 3 Business combinations (amended);
- IFRS 7 Financial Instruments: Disclosures (amended);
- IFRS 9 Financial Instruments (amended);
- IFRS 16 Leases (amended);
- IAS 1 Presentation of Financial Statements (amended);
- IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors (amended);
- IAS 39 Financial Instruments: Recognition and Measurement (amended);
- Revised Conceptual Framework for Financial Reporting.

Standards and interpretations issued but not yet effective

The Group did not early adopt any standard, interpretation or amendment that had been issued but was not yet effective.

Standards and Interpretations	Effective for annual periods beginning on or after
IFRS 9 Financial Instruments (amended)	1 January 2023
IFRS 17 Insurance Contracts (amended)	1 January 2023
IAS 1 Presentation of financial statements (amended) (Disclosure of accounting policy)	1 January 2023
IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors (amended)	1 January 2023
IAS 12 Income Taxes (amended)	1 January 2023
IFRS 16 Leases (amended)	1 January 2024
IAS 1 Presentation of financial statements (amended) (Classification of liabilities as current or non-current, non-current liabilities with covenants)	1 January 2024

Management of the Group plans to adopt all of the above standards and interpretations in the Group's consolidated financial statements for the respective periods. These standards are not expected to have a material impact on the Group in the future reporting periods and on foreseeable future transactions.

Reclassification

At 31 December 2022 management reassessed classification of certain cost items in cost of other sales and selling and distribution expenses. Information for the years ended 31 December 20 21 and 31 December 2020 was recla ssified to conform with the current period presentation and the effect of the reclassification is immaterial.

The presentation of metal sales by segments was changed (Note 6).

4. SIGNIFICANT ACCOUNTING POLICIES

Basis of consolidation

SUBSIDIARIES

The consolidated financial statements incorporate financial statements of the Company and its subsidiaries, from the date that control effectively commenced until the date that control effectively ceased. Control is achieved where the Company is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity.

Non-controlling interests in net assets (excluding goodwill) of the consolidated subsidiaries are identified separately from the equity of the shareholders of the Company therein. Non-controlling interests include interests at the date of the original business combination and a share of changes in net assets since the date of the business combination. Total comprehensive income must be attributed to the shareholders of the Company and to the non-controlling interests even if this results in the non-controlling interests having a deficit balance.

Non-controlling interests may be initially measured either at fair value or at the proportionate share of non-controlling interests in the recognised amounts of the acquiree's identifiable net assets. The choice of measurement basis can be made on a transaction-by-transaction basis.

All intra-group balances, transactions and any unrealised profits or losses arising from intra-group transactions are eliminated in full on consolidation.

Changes in the Group's ownership interest in a subsidiary that do not result in the loss of control are accounted for within equity.

When the Group loses control of a subsidiary it derecognises the assets and liabilities and related equity components of the former subsidiary. Any resulting gain or loss is recognised in the consolidated income statement. Any interest retained in the former subsidiary is measured at its fair value as at the date of losing the control.

Functional and presentation currency

The individual financial statements of each Group entity are presented in its functional currency.

The Russian rouble ("RUB") is the functional currency of the Company, all of its subsidiaries located in the Russian Federation, and all foreign subsidiaries of the Group, except for the below subsidiaries operating with a significant degree of autonomy. The functional currency of Norilsk Nickel Harjavalta Oy is US Dollar in 2020-2022, and the functional currency of Norilsk Nickel Africa Proprietary Limited and Nkomati Nickel Mine was South African Rand in 2020 and 2021.

The presentation currency of the Group's consolidated financial statements is US Dollar ("USD"). Using USD as a presentation currency is a common practice among global mining companies. The Group also issues consolidated financial statements which use RUB as the presentation currency to comply with Federal Law 208-FZ.

Components of the consolidated statement of financial position, consolidated income statement, consolidated statement of cash flows and consolidated statement of changes in equity are translated into presentation currency using the following applicable exchange rates:

Component of consolidated statements	Applicable exchange rates
Assets and liabilities	Period-end rate
Income, expenses, and cash flows	Date of underlying transaction or average approximating exchange rates prevailing at the dates of the transactions
Equity	Historical rates

All exchange differences resulting from translation of the consolidated income statement and consolidated statement of financial position components are recognised as a separate component in other comprehensive income/loss.

The exchange rates of certain currencies to the Russian Rouble used in the preparation of the consolidated financial statements are as follows:

	At 31 December 2022	At 31 December 2021	At 31 December 2020
US Dollar/RUB	70.34	74.29	73.88
Euro/RUB	75.65	84.07	90.79
Chinese Yuan/RUB	9.89	11.65	11.31

Revenue recognition

METAL SALES REVENUE

Revenue from metal sales is recognised at a point of time when control over the asset is transferred to the customer and represents the invoiced value of all metal products shipped to customers, net of value added tax (if any).

Revenue from contracts that are entered into and continue to meet the Group's expected sale requirements designated for that purpose at their inception and are expected to be settled by physical delivery of the goods, is recognised in the consolidated financial statements as and when the goods are delivered. A gain or loss on forward contracts expected to be settled by physical delivery or on a net basis is recognised in revenue and disclosed separately from revenue from contracts with customers.

As a practical expedient, the Group does not adjust the promised amount of consideration for the effects of a significant financing component, if the expected period between when the Group transfers promised goods or a service to a customer and the customer pays for those goods or services is one year or less.

Certain contracts are provisionally priced so that price is not settled until a predetermined future date, as of which the delivery price is settled based on the market price (contracts with quotation period). Revenue from such transactions is initially recognised at the market price at the date of sale. Price adjustments under provisionally priced contracts are recognised in revenue.

OTHER REVENUE

Revenue from contracts with customers on sale of goods (other than metals) is recognised at a point of time when control over the asset is transferred to a customer in accordance with the shipping terms specified in the sales agreements.

Revenue from service contracts is recognised over the time when the services are rendered.

Leases

At the inception of a contract, the Group assesses whether such contract or its components constitute a lease. The Group recognises a right-of-use asset and a corresponding lease liability, if a lease contract transfers to the lessee the right to control the use of the identified asset for a period of time in exchange for a consideration, except for current leases with the term of 12 months or less. The Group recognises lease payments associated with current leases as an expense on a straight-line basis over the lease term. Land plot lease payments are treated as variable lease payments, if they are linked to the cadastral value and changes in the latter do not depend on market rental rates. The Group recognises such variable lease payments as an expense in the period when the event that triggers those payments occurs.

Right-of-use assets are initially recognised at cost that comprises when applicable:

- the initial amount of the lease liability;
- any lease payments made at or before the lease commencement date;
- any initial direct costs incurred by the lessee;
- an estimate of costs to be incurred by the lessee for retirement of the underlying asset and restoration of the site where it is located.

Right-of-use assets are subsequently measured at initial cost less any accumulated depreciation and any accumulated impairment losses, adjusted for any remeasurement of the lease liability. Right-of-use assets are depreciated on a straight-line basis over their estimated economic useful life or over the term of the lease, whichever is shorter. Right-of-use assets are presented in property, plant and equipment in the consolidated statement of financial position.

Lease liabilities (refer to Note 25) are initially measured at the present value of the lease payments that are not paid at the commencement date and subsequently remeasured to reflect changes in lease payments. The lease payments are discounted using interest rate implicit in the lease (if that rate can be readily determined) or using Group incremental borrowing rate at the commencement date determined based on lease term and currency of the lease payments.

Employee benefits

Remuneration to employees in respect of services rendered during a reporting period is recognised as an expense in that period. Deferred costs under subsidised housing programmes for employees are recognised as other non-current assets and amortised over a certain period of employee participation in the programme (two to ten years). Long-term employee benefit obligations are discounted to present value.

DEFINED CONTRIBUTION PLANS

The Group contributes to the following major defined contribution plans:

- Pension Fund of the Russian Federation;
- Mutual accumulated pension plan.

The only obligation of the Group with respect to these and other defined contribution plans is to make specified contributions during the period in which they arise. Such contributions are recognised in the consolidated income statement when employees have rendered respective services.

Income tax expense

Income tax expense represents the sum of the current and deferred tax.

Income tax is recognised as an expense or income in the consolidated income statement unless it relates to other items recognised directly in other comprehensive income, in which case the tax is also recognised in the consolidated statement of comprehensive income. Where current or deferred tax arises from the initial accounting for a business combination, the tax effect is included in the accounting for the business combination.

CURRENT TAX

Current tax is based on taxable profit for the year. Taxable profit differs from profit before tax as reported in the consolidated income statement because it excludes items of income or expense that are taxable or deductible in other years and excludes items that are not taxable or deductible.

DEFERRED TAX

Deferred tax is recognised in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. As a general rule, deferred tax liabilities are recognised for all taxable temporary differences, and deferred tax assets are recognised for all deductible temporary differences to the extent that it is probable that taxable profits will be available against which those deductible temporary differences can be utilised. Deferred tax assets and liabilities are not recognised in the consolidated financial statements, if temporary differences arise from the initial recognition of goodwill or from the initial recognition of assets and liabilities other than in a business combination, which, at the time of the transaction, affects neither taxable profit nor accounting profit and do not give rise to equal taxable and deductible temporary differences.

Deferred tax liabilities are recognised for taxable temporary differences associated with investments in subsidiaries, joint ventures, associates and interests in joint operations, unless the Group is able to control the reversal of the temporary difference, and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax assets arising from deductible temporary differences associated with such investments and interests are only recognised to the extent that it is probable that there will be sufficient taxable profits against which to utilise the benefits of the temporary differences and they are expected to reverse in the foreseeable future.

The carrying amount of deferred tax assets is reviewed at each reporting date and adjusted to the extent that it is probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered.

The measurement of deferred tax assets and liabilities reflects the tax consequences of the manner in which the Group expects at the reporting date to recover or settle the carrying amount of its assets and liabilities. Deferred tax assets and liabilities are offset when there is a legally enforceable right to set off current tax assets against current tax liabilities and when they relate to income taxes levied by the same tax authority.

Property, plant and equipment

MINING ASSETS

Mine development costs are capitalised and comprise expenditures directly related to:

- acquiring mining and exploration licences;
- developing new mines;
- estimating revised content of minerals in the existing ore bodies currently developed;
- expanding mine capacity.

Mine development costs include directly attributable finance costs capitalised during mine development.

Mine development costs are transferred to mining assets and start to be depreciated when a mine reaches commercial production quantities.

Mining assets are recognised at cost less accumulated depreciation and impairment losses. Mining assets include cost of acquiring and developing mining properties, pre-production expenditure, mine infrastructure, property, plant and equipment that process extracted ore, subsoil use rights, mining and exploration licenses, finance costs eligible for capitalisation and discounted value of future decommissioning costs.

Carrying value of mining assets is depreciated over the lesser of their individual economic useful life on a straight-line basis, or the remaining life of mine. Life of mine is estimated based on the Group production plans. Average useful lives vary from 1 to 47 years.

EXPLORATION EXPENDITURE

Exploration expenditure, including geophysical, topographical, geological and similar types of expenditure made under evaluation, exploration and mining licences, is capitalised and amortised over the life of mine from the moment the commercial viability of the project is proved. Otherwise, it is expensed in the period in which it is incurred.

Exploration expenditure written-off before the start of mine development is not subsequently capitalised, even if mine commercial use subsequently occurs.

NON-MINING ASSETS

Non-mining assets include metallurgical processing plants, buildings, infrastructure, machinery and equipment, and other non-mining assets. Such assets are measured at cost less accumulated depreciation and impairment losses. Non-mining assets include property, plant and equipment used both in operations directly and to provide social services in the regions where the Group operates.

Non-mining assets are depreciated on a straight-line basis over their economic useful life.

Depreciation charge is calculated over the following economic useful life:

- buildings, facilities and infrastructure 2 to 50 years
- machinery, equipment and transport 2 to 32 years
- other non-mining assets 1 to 20 years

CAPITAL CONSTRUCTION-IN-PROGRESS

Capital construction-in-progress comprises costs directly related to the construction of mining and non-mining assets, including:

- advances given for the purchase of property, plant and equipment and materials acquired for the construction of buildings, processing plants, infrastructure, machinery and equipment;
- irrevocable letters of credit opened for future fixed assets deliveries and secured by deposits placed with banks;
- directly attributable finance costs capitalised during construction.

Depreciation of these assets begins when they become available for use and are in the location and condition necessary for them to be capable of operating in the manner intended by management.

CAPITALISATION OF FINANCE COST

Finance costs directly attributable to the acquisition, construction or production of qualifying assets, which are assets that necessarily take a substantial period of time to get ready for their intended use or sale, are added to the cost of those assets, until the assets are ready for their intended use or sale.

Investment income earned on the temporary investment of specific borrowings pending their expenditure on qualifying assets is deducted from the borrowing costs eligible for capitalisation.

Intangible assets, excluding goodwill

Intangible assets are recognised at cost less accumulated amortisation and impairment losses. Intangible assets mainly include patents, licences and software.

Amortisation of patents, licences and software is charged on a straight-line basis over their useful life, which vary from 1 to 12 years.

Impairment of non-current assets, excluding goodwill

At each reporting date, the Group analyses the triggers of impairment of its non-current assets to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss (if any).

Recoverable amount is the higher of fair value less costs to sell or value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset or cash-generating unit. Where the fair value less costs of disposal of individual assets is higher than their carrying amount the Group does not estimates its value in use. If the recoverable amount of an asset (or cash-generating unit) is estimated to be less than its carrying amount, the carrying amount of the asset (or cash-generating unit) is reduced to its recoverable amount. An impairment loss is recognised in the consolidated income statement immediately.

Where an impairment loss is subsequently reversed, the carrying amount of the asset (or cash-generating unit) is increased to the revised estimate of its recoverable amount but only to the extent that the increased carrying amount does not exceed the original carrying amount that would have been determined had no impairment loss been recognised in prior periods. A reversal of an impairment loss is recognised in the consolidated income statement immediately.

Inventories

REFINED METALS

The Group's main jointly produced metals include nickel, copper, palladium, platinum; by-products include cobalt, gold, rhodium, silver, and other metals. Main products are measured at the lower of cost of production or net realisable value. The cost of production of main products is determined as total production cost allocated to each joint product by reference to their relative sales value. The cost of production includes export customs duties (if applicable) incurred before a point of time when control over the asset is transferred to a customer. By-products are initially measured at net realisable value, based on current market prices. Net realisable value estimates take into consideration fluctuations of price or cost directly relating to events after the reporting date, to the extent that such events confirm conditions existing at the end of the reporting period.

WORK-IN-PROCESS

Work in process includes all costs incurred in the ordinary course of business for producing each product including direct material and labour costs, allocation of production overheads, depreciation, amortisation and other costs, given its stage of completion, less allowance for adjustment to net realisable value. Changes in the amount of allowance are recognised in Cost of metal sales in the consolidated income statement.

MATERIALS AND SUPPLIES

Materials and supplies are measured at cost less allowance for obsolete and slow-moving items.

Financial assets

Financial assets are recognised when the Group becomes party to contractual provisions of the instrument and are initially measured at fair value, plus directly attributable transaction costs, except for those financial assets measured at fair value through profit or loss, which are initially measured at fair value.

Financial assets are classified into the following categories:

- financial assets measured at amortised cost;
- financial assets measured at fair value through other comprehensive income;
- financial assets measured at fair value through profit or loss.

The classification of financial assets depends on the Group's business model for managing the financial assets and the contractual cash flow characteristics of the financial asset and is determined at the time of initial recognition.

EFFECTIVE INTEREST METHOD

The effective interest method is used for calculating the amortised cost of a financial asset and for allocating interest income over the period. The effective interest rate is the rate that exactly discounts estimated future cash receipts (including directly attributable transaction costs and other premiums or discounts) through the expected life of the financial asset, or, where appropriate, a shorter period.

Income is recognised on an effective interest rate basis for debt instruments other than those financial assets measured at fair value through profit or loss or fair value through other comprehensive income.

FINANCIAL ASSETS MEASURED AT AMORTISED COST

A financial asset is measured at amortised cost if it meets both of the following conditions and is not designated at fair value through profit or loss:

- it is held within a business model whose objective is to hold assets to collect contractual cash flows;
- the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

The Group generally classifies cash and cash equivalents, trade and other receivables (excluding trade receivables measured at fair value through profit and loss under provisionally priced contracts), loans issued and bank deposits as financial assets measured at amortised cost.

FINANCIAL ASSETS MEASURED AT FAIR VALUE THROUGH OTHER COMPREHENSIVE INCOME

A debt instrument is measured at fair value through other comprehensive income if it meets both of the following conditions and is not designated at fair value though profit or loss:

- it is held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets;
- the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

At initial recognition, the Group may make an irrevocable decision to present in other comprehensive income subsequent changes in the fair value of an investment in an equity instrument that is not held for trading. Such decisions are made on an instrument-by-instrument basis.

FINANCIAL ASSETS MEASURED AT FAIR VALUE THROUGH PROFIT OR LOSS

All financial assets not classified as measured at amortised cost or at fair value through other comprehensive income are classified as financial assets measured at fair value through profit or loss.

Trade receivables under provisionally priced contracts and derivative financial assets are measured at fair value through profit or loss. Trade receivables under provisionally priced contracts are remeasured at each reporting date using the forward market price for the period till the price settlement date outlined in the contract.

IMPAIRMENT OF FINANCIAL ASSETS

The Group recognises an allowance for expected credit losses on a financial asset measured at amortised cost using either of the following methods:

Lifetime expected credit losses	Trade and other receivables Financial assets other than trade and other receivables for which credit risk has increased significantly since initial recognition
12-months expected credit losses since the reporting date	Financial assets other than trade and other receivables at initial recognition Financial assets other than trade and other receivables for which credit risk has not increased significantly since initial recognition

When determining whether the credit risk of the financial asset has increased significantly since initial recognition and when estimating expected credit losses, the Group considers reliable and supportable information, including both quantitative and qualitative information and analysis based on the Group's historical experience and forward-looking information.

The Group applies the simplified approach to measuring expected credit losses under IFRS 9 Financial Instruments, which uses a lifetime expected loss allowance for trade receivables. The Group assumes that expected credit loss for all trade and other receivables which are overdue for more than 365 days is equal to their carrying amount. To measure the expected credit losses, trade and other receivables that are overdue for less than 365 days are grouped based on the length of the overdue period to which respective expected loss rates are applied. The expected loss rates are based on the historical credit loss experience, adjusted to reflect current and forward-looking information on the ability of the customers to settle the receivables.

When trade and other receivables are considered uncollectable, they are written off against the respective loss allowance. Changes in the amount of allowance are recognised in the consolidated income statement.

DERECOGNITION OF FINANCIAL ASSETS

The Group derecognises a financial asset only when the contractual rights to the cash flows from the asset expire, or if it transfers the financial asset and substantially all the risks and rewards of ownership of the asset to another entity. If the Group neither transfers nor retains substantially all the risks and rewards of ownership and continues to control the transferred asset, the Group recognises its retained interest in the asset and associated liability for the amounts it may have to pay. If the Group retains substantially all the risks and rewards of ownership of a transferred financial asset, the Group continues to recognise the financial asset and also recognises a collateralised borrowing for the proceeds received.

Financial liabilities

The Group classifies financial liabilities into loans and borrowings, trade and other payables. Such financial liabilities are recognised initially at fair value less any directly attributable transaction costs. Subsequent to initial recognition, the financial liabilities are measured at amortised cost using the effective interest method. Derivative financial liabilities are measured at fair value through profit or loss.

EFFECTIVE INTEREST METHOD

The effective interest method is used for calculating the amortised cost of a financial liability and for allocating interest expense over the period. The effective interest rate is the rate that exactly discounts estimated future cash outflows through the expected life of the financial liability, or where appropriate, a shorter period.

DERECOGNITION OF FINANCIAL LIABILITIES

The Group derecognises financial liabilities when, and only when liabilities are discharged, cancelled or expired.

Cash and cash equivalents

Cash and cash equivalents comprise cash balances, cash deposits in banks, brokers and other financial institutions and highly liquid investments with original maturities of three months or less and on demand deposits, which are readily convertible to known amounts of cash and are subject to an insignificant risk of changes in value.

Provisions

Provisions are recognised when the Group has a legal or constructive obligation as a result of past events for which it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation, and the amount of the obligation can be reliably estimated. If, in the course of discharging an obligation, the Group recognises property, plant and equipment, then this settlement does not result in an outflow of the Group's resources and, therefore, no provision is recognised.

Provisions may be recognised in respect of the Group social, environmental, asset decommissioning or other obligations, and are presented in these consolidated financial statements accordingly. In particular, the Group's social provisions are presented together with other liabilities related to its social expenditure as a separate item Social Liabilities in the consolidated statement of financial position.

The amount recognised as a provision is the best estimate of the expenditure required to settle the present obligation at the reporting date, taking into account the risks and uncertainties surrounding the obligation. Where a provision is measured using the future cash flows, its carrying amount is the present value of those cash flows.

DECOMMISSIONING OBLIGATIONS AND ENVIRONMENTAL PROVISIONS

Decommissioning obligations include direct asset decommissioning costs as well as related land restoration costs.

Future decommissioning costs and related obligations, discounted to present value, are recognised when the legal or constructive obligation in relation to such costs arises and the future costs can be reliably estimated. These costs are capitalised as part of the initial cost of the related asset and are depreciated over the useful life of the asset. The unwinding of discount on decommissioning obligations is recognised Finance cost, net in the consolidated income statement. Decommissioning obligations are periodically remeasured for changes in applicable laws, regulations, expected closure dates, inflation and discount rates.

Environmental provisions may include expenditure for remediation of the damage to the environment, including land and water bodies clean-up and rehabilitation costs, restoration of biological resources, settlement of legal claims and environmental damages, fines and penalties imposed by government authorities in respect of the environmental incidents.

5. CRITICAL ACCOUNTING JUDGEMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTY

When preparing the consolidated financial statements, the Group's management necessarily makes estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the reporting date, and the amounts of income and expenses for the reporting period. Estimates and assumptions require management judgement based on historical experience, current and expected economic conditions, and any other available information. Actual results may differ from such estimates. Key estimates and assumptions made by the Group's management are disclosed below or elsewhere in the notes to the consolidated financial statements if applicable.

The most significant areas requiring the use of management estimates and assumptions are as follows:

- useful economic life of property, plant and equipment;
- impairment of non-financial assets;
- decommissioning obligations and environmental provisions;
- income taxes.

Useful economic life of property, plant and equipment

The factors that may affect estimates of the useful economic life of mining assets include the following:

- changes in proven and probable ore reserves;
- the grade of ore reserves changing significantly over time;
- differences between actual commodity prices and commodity price assumptions used in the estimation and classification of ore reserves;
- unforeseen operational issues at mine sites;
- changes in capital, operating, mining, processing and decommissioning costs, discount rates and foreign exchange rates that could possibly adversely affect the economic viability of ore reserves.

The useful economic life of non-mining property, plant and equipment is reviewed by the management periodically, based on the current condition of the assets and the estimated period during which they will continue to bring economic benefits to the Group.

Impairment of non-financial assets

At the end of each reporting period, the Group reviews the carrying amounts of its tangible and intangible non-financial assets for an indication that these assets may be impaired or that a previously recognised impairment loss may have decreased in full or in part. For the purpose of the impairment test, the assets that do not generate independent cash flows are allocated to an appropriate cash-generating unit. Management applies judgement in allocating assets that do not generate independent cash flows to appropriate cash-generating units, and in estimating the timing and amounts of the underlying cash flows. Subsequent changes to the assets allocation to cash generating units or the timing and amounts of cash flows may affect the recoverable amount of the respective assets.

Decommissioning obligations and environmental provisions

The Group's mining and exploration activities are subject to various environmental laws and regulations. The Group estimates decommissioning obligations and environmental provisions based on the management's understanding of the current legal requirements in the various jurisdictions in which it operates, terms of licence agreements and internally generated engineering estimates. Decommissioning obligations and environmental provisions are measured at present value using inflation and discounts rates at the date of respective cash outflows.

Environmental provisions are recognised based on the best estimate of the consideration required to settle the environmental obligation at the reporting date, taking into account risks and uncertainties surrounding the present obligation, including probable compensations under civil lawsuits and costs to be incurred under corresponding environmental programmes. Where it is possible to determine a reliable timing of the environmental obligations, estimates are based on the discounted value of cash flows required to settle those obligations, otherwise the management uses the best estimate of the future cash outflows related to the environmental obligations.

Actual costs incurred in future periods may differ materially from the amounts of the provisions. Additionally, future changes to environmental laws and regulations, life of mine estimates, discount rates, court decisions and government actions may affect the carrying amount of these provisions.

Income taxes

The Group is subject to income taxes in numerous jurisdictions. Significant judgement is required in determining provisions for income taxes paid in various jurisdictions due to the complexity of legal frameworks. There are many transactions and calculations for which the ultimate tax determination is uncertain. The Group recognises provisions for taxes arising from tax audits based on estimates of whether additional taxes will be due. Where, following the tax disputes, the final tax amount differs from the amounts that were initially recognised, such differences are recognised in the consolidated financial statements for the period when such determination is made.

The carrying amount of deferred tax assets is reviewed at each reporting date and adjusted to the extent that it is probable that sufficient taxable income will be available to enable full or partial utilisation of the deferred tax asset.

Various factors are considered when assessing the probability of the future utilisation of deferred tax assets, including past operating results, the Group's operational plan, expiration of tax losses carried forward, and tax planning strategies. If actual results differ from these estimates or if these estimates are to be adjusted in future periods, the financial position and financial results of the Group may be affected.

6. SEGMENTS

Reporting segments are based on internal reports on components of the Group that are regularly reviewed by the Management Board.

Management has determined the following reporting segments:

- GMK Group segment includes main mining, processing and metallurgy operations as well as transport services, energy, repair and maintenance services located on Taimyr Peninsula. GMK Group metal sales to external customers include metal volumes produced from semi-products purchased from the South Cluster and GRK Bystrinskoye segments. Intersegment revenue from metal sales includes primarily sale of semi-products to the KGMK Group segment for further processing. Metal sales to external customers include an approximately equal portion of base and precious metals sales in 2022, while in 2020 and 2021 the share of base metals sales did not exceed 45%. GMK Group's intersegment other sales include revenue from metal processing services provided to other segments. GMK Group's other sales to external customers primarily include revenue from energy and utilities services provided on Taimyr Peninsula;
- South Cluster segment includes certain ore mining and processing operations located on Taimyr Peninsula. Intersegment revenue from metal sales includes sale of semi-products to GMK Group for further processing. The South Cluster segment revenue from other sales includes intersegment ore processing services under tolling arrangements provided to the GMK Group segment;
- KGMK Group segment includes ore mining and processing operations, metallurgy operations, energy, and exploration activities located on Kola Peninsula. KGMK Group's metal sales to external customers include metal produced from semi-products purchased from the GMK Group segment. Intersegment revenue from metal sales includes sale of semi-products to GMK Group and NN Harjavalta for further processing. Metal sales to external customers include an approximately equal portion of base and precious metals sales in 2022, while in 2020 and 2021 the share of base metals sales did not exceed 40%. KGMK Group's revenue from other sales includes intersegment metal processing services provided to other segments and energy and utilities services provided to external customers on Kola Peninsula;
- NN Harjavalta segment includes refinery operations located in Finland. NN Harjavalta's metal sales to external customers primarily include base metal produced from semi-products purchased from GMK Group segment and KGMK Group segment.
- GRK Bystrinskoye segment includes ore mining and processing operations located in the Zabaikalsky Territory of the Russian Federation. Metal sales to external customers include an approximately equal portion of base and other metals sales;
- Other mining segment primarily included a 50% interest of the Group in metal mining and processing joint operations of Nkomati Nickel Mine ("Nkomati"), which was disposed of during the year ended 31 December 2021, and also includes certain other mining and exploration activities located in Russia and abroad. In 2021 and 2020 the Other mining segment's sales primarily included 50% share of the Group in the sales of metal semi-products produced by Nkomati;
- Other non-metallurgical segment includes resale of third-party refined metal products, other trading operations, transport services, supply chain management, energy and utility, research and other activities located in Russia and abroad. Metal sales to external customers include mainly base metals sales in 2022 and precious metals sales in 2020, and approximately equal portion of base and precious metals sales in 2021. In 2021 and 2020 the Other non-metallurgical segment also included resale of 50% of metal semi-products produced by Nkomati. Other sales of the Other non-metallurgical segment primarily included revenue from passenger and freight air transportation services and fuel sales.

Corporate activities of the Group do not represent a reporting segment, include primarily the headquarters' general and administrative expenses and treasury operations of the Group and are presented as Unallocated.

The amounts in respect of reportable segments in the disclosure below are stated before intersegment eliminations, excluding:

- balances of intercompany loans and borrowings and interest accruals;
- balances of intercompany investments;
- accrual of intercompany dividends.

Amounts are measured on the same basis as those in the consolidated financial statements.

The following tables present revenue, measure of segment profit or loss (EBITDA) and other segment information from continuing operations regarding the Group's reportable segments for the years ended 31 December 2022, 20 21 and 2020, respectively.

For the year ended31 December 2022	GMK Group	South cluster	KGMK Group	NN Harjavalta	GRK Bystrinskoye	Other mining	Other non-metallurgical	Eliminations	Total
Revenue from external customers									
Metal sales	5,213	–	7,556	1,741	1,160	–	403	–	16,073
Other sales	246	5	32	18	1	–	501	–	803
Intersegment revenue									
Metal sales	6,405	728	2,862	603	135	–	3	(10,736)	–
Other sales	378	239	1	1	29	1	651	(1,300)	–
Total revenue	**12,242**	**972**	**10,451**	**2,363**	**1,325**	**1**	**1,558**	**(12,036)**	**16,876**
Segment EBITDA	4,316	450	3,915	157	934	(11)	9	(9)	9,761
Unallocated									(1,064)
Consolidated EBITDA									**8,697**
Depreciation and amortisation									(1,026)
Impairment of non-financial assets, net									(90)
Finance costs, net									(493)
Foreign exchange gain, net									251
Income from investments and loss from disposal of subsidiaries									40
Profit be ore tax									**7,379**

	GMK Group	South cluster	KGMK Group	NN Harjavalta	GRK Bystrinskoye	Other mining	Other non-metallurgical	Unallocated	Total
Other material cash and non-cash items purchase of property, plant and equipment and intangible assets	3,307	298	350	22	72	10	239	–	4,298
Depreciation and amortisation	741	57	23	24	148	–	33	–	1,026
Impairment of non-financial assets/(reversal of impairment)	72	4	2	–	(1)	4	9	–	90
Change in provisions and allowances	198	–	13	–	2	3	1	19	236

For the year ended 31 December 2021	GMK Group	South cluster	KGMK Group	NN Harjavalta	GRK Bystrinskoye	Other mining	Other non-metallurgical	Eliminations	Total
Revenue from external customers									
Metal sales	6,480	–	7,687	1,106	1,200	28	602	–	17,103
Other sales	188	1	26	7	3	–	524	–	749
Intersegment revenue									
Metal sales	4,852	618	2,179	380	109	–	–	(8,138)	–
Other sales	316	148	1	–	34	–	407	(906)	–
Total revenue	**11,836**	**767**	**9,893**	**1,493**	**1,346**	**28**	**1,533**	**(9,044)**	**17,852**
Segment EBITDA	5,456	397	3,758	59	1,076	(16)	11	716	11,457
Unallocated									(945)
Consolidated EBITDA									**10,512**
Depreciation and amortisation									(928)
Impairment of non-financial assets, net									(48)
Finance costs, net									(279)
Foreign exchange loss, net									(53)
Income from investments and loss from disposal of subsidiaries and foreign joint operation									81
Profit be ore tax									**9,285**

	GMK Group	South cluster	KGMK Group	NN Harjavalta	GRK Bystrinskoye	Other mining	Other non-metallurgical	Unallocated	Total
Other material cash and non-cash items purchase of property, plant and equipment and intangible assets	2,002	304	205	26	62	12	153	–	2,764
Depreciation and amortisation	622	30	84	12	122	1	57	–	928
Impairment of non-financial assets/(reversal of impairment)	(101)	–	137	–	2	–	10	–	48
Change in provisions and allowances	760	6	19	–	1	–	–	110	896

For the year ended 31 December 2020	GMK Group	South cluster	KGMK Group	NN Harjavalta	GRK Bystrinskoye	Other mining	Other non-metallurgical	Eliminations	Total
Revenue to external customers									
Metal sales	5,427	–	6,897	949	897	129	678	–	14,977
Other sales	156	–	27	5	3	8	369	–	568
Intersegment revenue									
Metal sales	6,907	532	2,001	354	98	–	–	(9,892)	–
Other sales	210	162	1	–	6	–	340	(719)	–
Total revenue	**12,700**	**694**	**8,926**	**1,308**	**1,004**	**137**	**1,387**	**(10,611)**	**15,545**
Segment EBITDA	6,171	407	1,757	70	717	(14)	31	(556)	8,583
Unallocated									(932)
Consolidated EBITDA									**7,651**
Depreciation and amortisation									(943)
Impairment of non-financial assets, net									(308)
Finance costs, net									(879)
Foreign exchange loss, net									(1,034)
Income from investments and loss from disposal of subsidiaries									92
Profit be ore tax									**4,579**

	GMK Group	South cluster	KGMK Group	NN Harjavalta	GRK Bystrinskoye	Other mining	Other non-metallurgical	Unallocated	Total
Other material cash and non-cash items purchase of property, plant and equipment and intangible assets	1,275	114	155	17	98	2	99	–	1,760
Depreciation and amortisation	596	28	152	32	110	1	24	–	943
Impairment of non-financial assets, net	43	–	264	–	1	–	–	–	308
Change in provisions and allowances	2,362	–	(14)	–	–	22	1	106	2,477

The following tables present assets and liabilities of the Group's reportable segments at 31 December 2022, 2021 and 2020, respectively.

At 31 December 2022	GMK Group	South cluster	KGMK Group	NN Harjavalta	GRK Bystrinskoye	Other mining	Other non-metallurgical	Eliminations	Total
Intersegment assets	1,345	143	2,287	597	133	–	103	(4,608)	–
Segment assets	15,446	1,117	4,364	643	1,546	55	1,796	(1,240)	23,727
Total segment assets	**16,791**	**1,260**	**6,651**	**1,240**	**1,679**	**55**	**1,899**	**(5,848)**	**23,727**
Unallocated									2,068
Total assets									**25,795**
Intersegment liabilities	503	25	715	799	4	1	2,561	(4,608)	–
Segment liabilities	3,606	352	493	73	161	65	322	–	5,072
Total segment liabilities	**4,109**	**377**	**1,208**	**872**	**165**	**66**	**2,883**	**(4,608)**	**5,072**
Unallocated									12,156
Total liabilities									**17,228**

At 31 December 2021	GMK Group	South cluster	KGMK Group	NN Harjavalta	GRK Bystrinskoye	Other mining	Other non-metallurgical	Eliminations	Total
Intersegment assets	804	60	635	188	39	–	60	(1,786)	–
Segment assets	11,605	827	3,111	731	1,508	98	1,266	(1,445)	17,701
Total segment assets	**12,409**	**887**	**3,746**	**919**	**1,547**	**98**	**1,326**	**(3,231)**	**17,701**
Unallocated									5,734
Total assets									**23,435**
Intersegment liabilities	205	32	739	508	7	1	294	(1,786)	–
Segment liabilities	2,676	250	578	64	135	72	1,319	–	5,094
Total segment liabilities	**2,881**	**282**	**1,317**	**572**	**142**	**73**	**1,613**	**(1,786)**	**5,094**
Unallocated									13,553
Total liabilities									**18,647**

At 31 December 2020	GMK Group	South cluster	KGMK Group	NN Harjavalta	GRK Bystrinskoye	Other mining	Other non-metallurgical	Eliminations	Total
Intersegment assets	2,848	162	720	165	109	14	45	(4,063)	–
Segment assets	10,150	412	3,440	480	1,526	49	1,150	(2,020)	15,187
Total segment assets	**12,998**	**574**	**4,160**	**645**	**1,635**	**63**	**1,195**	**(6,083)**	**15,187**
Unallocated									5,519
Total assets									**20,706**
Intersegment liabilities	350	24	2,645	266	8	–	770	(4,063)	–
Segment liabilities	3,794	129	322	84	107	79	1,139	–	5,654
Total segment liabilities	**4,144**	**153**	**2,967**	**350**	**115**	**79**	**1,909**	**(4,063)**	**5,654**
Unallocated									10,377
Total liabilities									**16,031**

7. METAL SALES

The Group's metal sales to external customers are detailed below (based on external customers' locations):

	For the year ended 31 December		
	2022	2021	2020
Europe	7,522	9,036	6,755
Asia	4,966	4,688	5,266
North and South America	2,335	2,647	2,400
Russian Federation and CIS	1,250	732	556
	16,073	**17,103**	**14,977**

Revenue from metal sales for the year ended 31 December 2022 included net loss of USD (64) million in respect of forward contracts measured at fair value that are expected to be settled by physical delivery or on a net basis (for the year ended 31 December 2021: net loss in the amount of USD (41) million and for the year ended 31 December 2020: net loss in the amount of USD (104) million).

For the year ended 31 December 2022 metal revenue included net gain of USD35 million from price adjustments in respect of certain provisionally priced contracts, primarily for sale of nickel (for the year ended 31 December 2021 primarily for sale of rhodium and other metals: net gain in the amount of USD25 million and for the year ended 31 December 2020 primarily for sale of palladium: net gain in the amount of USD38 million).

8. COST OF METAL SALES

	For the year ended 31 December		
	2022	2021	2020
Cash operating costs			
Labour	2,123	1,406	1,307
Mineral extraction tax and other levies	1,192	627	248
Materials and supplies	1,069	715	731
Third party services	784	410	276
Purchases of refined metals for resale	437	581	482
Transportation expenses	275	130	90
Fuel	166	122	109
Electricity and heat energy	136	118	151
Purchases of raw materials and semi-products	33	95	298
Export custom duties	–	442	–
Other costs	326	228	194
Total cash operating costs	**6,541**	**4,874**	**3,886**
Depreciation and amortisation	1,015	843	845
Increase in metal inventories	(1,448)	(660)	(231)
Total	**6,108**	**5,057**	**4,500**

9. GENERAL AND ADMINISTRATIVE EXPENSES

	For the year ended 31 December		
	2022	2021	2020
Staff costs	833	577	529
Third party services	230	191	142
Depreciation and amortisation	107	83	67
Taxes other than mineral extraction tax and income tax	94	76	69
Transportation expenses	9	18	18
Other	80	44	44
Total	**1,353**	**989**	**869**

10. SELLING AND DISTRIBUTION EXPENSES

	For the year ended 31 December		
	2022	2021	2020
Transportation expenses	100	81	72
Marketing expenses	52	48	44
Staff costs	33	23	19
Other	65	39	32
Total	**250**	**191**	**167**

11. OTHER OPERATING EXPENSES, NET

	For the year ended 31 December		
	2022	2021	2020
Social expenses (Note 27)	407	1,048	505
Environmental provisions (Note 26)	93	176	2,242
Loss on disposal of property, plant and equipment	70	35	19
Change in other provisions and liabilities	43	(3)	24
Expenses on industrial incidents response	35	69	–
Change in provision on production facilities shut down (Note 26)	14	(3)	(10)
Change in decommissioning obligations (Note 26)	12	(5)	2
Other, net	4	(32)	(45)
Total	**678**	**1,285**	**2,737**

12. FINANCE COSTS, NET

	For the year ended 31 December		
	2022	2021	2020
Interest expense, net of amounts capitalised	330	225	364
Unwinding of discount on provisions and payables	185	59	61
Loss/(gain) from currency conversion operations	111	(24)	(8)
Fair value loss/(gain) on the cross-currency interest rate swap contracts	18	(68)	182
Interest expense on lease liabilities	16	15	12
Changes in fair value of other non-current and other current liabilities	–	66	262
Income received as a result of early debt repayment	(172)	–	–
Other, net	5	6	6
Total	**493**	**279**	**879**

13. INCOME FROM INVESTMENTS

	For the year ended 31 December		
	2022	2021	2020
Interest income on bank deposits	133	51	43
Other, net	17	1	30
Total	**150**	**52**	**73**

14. INCOME TAX EXPENSE

	For the year ended 31 December		
	2022	2021	2020
Current income tax expense	1,306	1,695	1,685
Deferred tax expense/(benefit)	219	616	(740)
Total income tax expense	**1,525**	**2,311**	**945**

A reconciliation of theoretic income tax, calculated at the statutory rate in the Russian Federation, the location of major production assets of the Group, to the amount of actual income tax expense recognised in the consolidated income statement is as follows:

	For the year ended 31 December		
	2022	2021	2020
Profit before tax	7,379	9,285	4,579
Income tax at statutory rate of 20%	1,476	1,857	916
Changes in unrecognised deferred tax assets	36	15	14
Non-deductible social expenses	67	177	93
Effect of different tax rates of subsidiaries	(13)	(45)	(38)
Income tax provision related to the compensation of environmental damages	–	460	–
Tax effect of other reserves and liabilities	40	–	–
Tax effect of other permanent differences	(81)	(153)	(40)
Total income tax expense	**1,525**	**2,311**	**945**

In 2022 tax effect of other permanent differences was mainly represented by an income tax rate credit applicable to a Group's subsidiary and was partially offset, in approximately equal parts, by unrecognized losses of Group`s foreign subsidiaries and unrecognised expenses for the disposal of investments in the total amount of USD100 million (in 2020 and 2021: was represented mainly by the income tax rate credit applicable to a Group's subsidiary).

The corporate income tax rates in other countries where the Group has a taxable presence vary from 0% to 30%.

DEFERRED TAX BALANCES

	At 31 December 2021	Recognised in income statement	Recognised in other comprehensive income	Disposed on disposal of subsidiaries	Effect of translation to presentation currency	At 31 December 2022
Property, plant and equipment, right-of use assets	490	110	–	(15)	8	593
Inventories	(174)	15	–	–	(44)	(203)
Trade and other receivables	3	(28)	–	–	21	(4)
Decommissioning obligations	(115)	16	–	–	(2)	(101)
Environmental provisions	(6)	5	–	–	(2)	(3)
Other provisions	(89)	30	–	–	1	(58)
Loans and borrowings, trade and other payables, lease liabilities	(145)	58	–	21	(51)	(117)
Other assets	15	8	–	–	1	24
Other liabilities	33	24	7	(5)	–	59
Tax loss carry-forwards	(106)	(19)	–	(1)	11	(115)
Net deferred tax (assets)/liabilities	**(94)**	**219**	**7**	**–**	**(57)**	**75**

	At 31 December 2020	Recognised in income statement	Recognised in other comprehensive income	Effect of translation to presentation currency	At 31 December 2021
Property, plant and equipment, right-of use assets	389	104	–	(3)	490
Inventories	(448)	285	–	(11)	(174)
Trade and other receivables	6	(3)	–	–	3
Decommissioning obligations	(94)	(22)	–	1	(115)
Environmental provisions	(416)	407	–	3	(6)
Other provisions	(51)	(38)	–	–	(89)
Loans and borrowings, trade and other payables, lease liabilities	(117)	(37)	–	9	(145)
Other assets	21	6	–	(12)	15
Other liabilities	21	11	2	(1)	33
Tax loss carry-forwards	(23)	(97)	–	14	(106)
Net deferred tax (assets)/ liabilities	**(712)**	**616**	**2**	**–**	**(94)**

	At 1 January 2020	Recognised in income statement	Recognised in other comprehensive income	Effect of translation to presentation currency	At 31 December 2020
Property, plant and equipment, right-of use assets	492	(9)	–	(94)	389
Inventories	(279)	(258)	–	89	(448)
Trade and other receivables	(10)	16	–	–	6
Decommissioning obligations	(113)	7	–	12	(94)
Environmental reserves	–	(439)	–	23	(416)
Other provisions	–	(50)	–	(1)	(51)
Loans and borrowings, trade and other payables, lease liabilities	(153)	1	–	35	(117)
Other assets	22	(5)	–	4	21
Other liabilities	36	(6)	–	(9)	21
Tax loss carry-forwards	(33)	3	–	7	(23)
Net deferred tax (assets)/ liabilities	**(38)**	**(740)**	**–**	**66**	**(712)**

Accounting for foreign exchange differences for tax purposes due to changes in legislation is presented in Note 34.

Certain deferred tax assets and liabilities have been offset to the extent they relate to taxes levied on the Group's entities which entered into the tax consolidation group in 2020 and 2021. Deferred tax assets and liabilities are presented on a gross basis in 2022 due to the cancellation of the agreement on the consolidated group of taxpayers from 1 January 2023. Deferred tax balances presented in the consolidated statement of financial position were as follows:

	At 31 December		
	2022	2021	2020
Deferred tax liabilities	415	73	43
Deferred tax assets	(340)	(167)	(755)
Net deferred tax liabilities/(assets)	**75**	**(94)**	**(712)**

UNRECOGNISED DEFERRED TAX ASSETS

Deferred tax assets have not been recognised as follows:

	At 31 December		
	2022	2021	2020
Deductible temporary differences	150	194	218
Tax loss carry-forwards	124	201	182
Total	**274**	**395**	**400**

Deferred tax assets have not been recognised in respect of these items because it is not probable that future taxable profit will be available against which the Group can utilise the benefits therefrom.

At 31 December 2020 and 31 December 2 021 a deferred tax asset of USD136 million and USD135 million, respectively, relating to tax losses of prior years on disposal of shares of OJSC "Third Generation Company of the Wholesale Electricity Market", was not recognised as it had occurred before the Company joined the tax consolidation group.

Deferred tax assets have not been recognised in respect of these items because it is not probable that future taxable profit will be available against which the Group can utilise the benefits therefrom.

At 31 December 2020 and 31 December 2021 a deferred tax asset of USD136 million and USD135 million, respectively, relating to tax losses of prior years on disposal of shares of OJSC "Third Generation Company of the Wholesale Electricity Market", was not recognised as it had occurred before the Company joined the tax consolidation group.

Taking into account the termination of the institution of the tax consolidation group from 1 January 2023 and the amount of tax losses potentially recoverable before 1 January 2025, the Group asseses this unrecognised deferred tax asset at USD38 million at 31 December 2022. The remaining part of the deferred tax asset in the amount of USD105 million is currently assesed by the Group as non-recoverable, taking into account the features of determining the result of the disposal of shares of OJSC "Third Generation Company of the Wholesale Electricity Market" in the Company's tax accounting and the procedure for recognizing tax losses on completed transactions with securities that arose before 31 December 2014.

At 31 December 2022 unrecognised deferred tax assets in the amount of USD86 million related to other tax loss carry-forwards may be recognised without expiry due to specific rules stated by art. 283 "Carry-Forward Of Losses" of the Tax code of the Russian Federation (31 December 2021: USD66 million and 31 December 2020: USD222 million).

At 31 December 2022, the Group did not recognise a deferred tax liability in respect of taxable temporary differences of USD6,611 million (31 December 2021: USD3,499 million and 31 December 2020: USD2,031 million) associated with investments in subsidiaries, because management believes that it is in a position to control the timing of reversal of such differences and does not expect its reversal in foreseeable future.

15. PROPERTY, PLANT AND EQUIPMENT

		Non-mining assets and right-of-use assets				
	Mining assets and mine development cost	Buildings, facilities and infrastructure	Machinery, equipment and transport	Other	Capital construction-in-progress	Total
Cost						
Balance at 1 January 2020	**9,976**	**3,560**	**4,106**	**295**	**1,560**	**19,497**
Additions	943	–	–	–	942	1,885
Transfers	–	192	361	21	(574)	–
Change in decommissioning provision	42	2	–	–	–	44
Additions of right-of-use assets and remeasurement of the lease liability	–	(9)	69	5	–	65
Disposed on disposal of subsidiary (Note 21)	(68)	–	–	–	–	(68)
Acquired on acquisition of subsidiaries	–	25	1	–	–	26
Disposals	(32)	(25)	(29)	(2)	(12)	(100)
Other	(31)	10	20	(1)	(9)	(11)
Effect of translation to presentation currency	(1,557)	(567)	(645)	(46)	(244)	(3,059)
Balance at 31 December 2020	**9,273**	**3,188**	**3,883**	**272**	**1,663**	**18,279**
Additions	1,237	–	–	–	1,750	2,987
Transfers	–	302	465	26	(793)	–
Change in decommissioning provision	134	21	–	–	–	155
Additions of right-of-use assets and remeasurement of the lease liability	–	7	18	8	–	33
Disposals	(68)	(55)	(107)	(51)	(17)	(298)
Other	(3)	(6)	(2)	(1)	–	(12)
Effect of translation to presentation currency	(82)	(21)	(22)	(2)	(21)	(148)
Balance at 31 December 2021	**10,491**	**3,436**	**4,235**	**252**	**2,582**	**20,996**
Additions	1,703	–	–	–	2,756	4,459
Transfers	–	437	787	160	(1,384)	–
Change in decommissioning provision	(34)	(27)	–	–	–	(61)
Additions of right-of-use assets and remeasurement of the lease liability	–	125	27	15	–	167
Disposals	(87)	(79)	(179)	(11)	(22)	(378)

		Non-mining assets and right-of-use assets				
Other	21	4	16	(28)	(13)	–
Effect of translation to presentation currency	410	140	135	6	129	820
Balance at 31 December 2022	**12,504**	**4,036**	**5,021**	**394**	**4,048**	**26,003**

		Non-mining assets and right-of-use assets				
	Mining assets and mine development cost	Buildings, facilities and infrastructure	Machinery, equipment and transport	Other	Capital construction-in-progress	Total
Accumulated depreciation and impairment						
Balance at 1 January 2020	**(3,159)**	**(1,760)**	**(2,286)**	**(139)**	**(160)**	**(7,504)**
Charge for the year	(466)	(175)	(338)	(24)	–	(1,003)
Disposals	27	18	25	1	9	80
Impairment loss, net	(247)	(41)	(18)	–	(2)	(308)
Disposed on disposal of subsidiary (Note 21)	50	–	–	–	–	50
Other	28	(9)	(10)	–	–	9
Effect of translation to presentation currency	463	289	359	23	25	1,159
Balance at 31 December 2020	**(3,304)**	**(1,678)**	**(2,268)**	**(139)**	**(128)**	**(7,517)**
Charge for the year	(479)	(179)	(357)	(24)	–	(1,039)
Disposals	57	51	89	32	5	234
Impairment loss, net	(123)	75	13	(2)	(11)	(48)
Other	3	4	1	2	–	10
Effect of translation to presentation currency	40	8	12	1	2	63
Balance at 31 December 2021	**(3,806)**	**(1,719)**	**(2,510)**	**(130)**	**(132)**	**(8,297)**
Charge for the year	(582)	(183)	(424)	(48)	–	(1,237)
Disposals	77	65	91	7	9	249
Impairment loss, net	(50)	(17)	(12)	2	(13)	(90)
Other	(2)	(2)	(5)	7	–	(2)
Effect of translation to presentation currency	(172)	(93)	(91)	(4)	(2)	(362)
Balance at 31 December 2022	**(4,535)**	**(1,949)**	**(2,951)**	**(166)**	**(138)**	**(9,739)**
Carrying value						
At 31 December 2020	**5,969**	**1,510**	**1,615**	**133**	**1,535**	**10,762**
At 31 December 2021	**6,685**	**1,717**	**1,725**	**122**	**2,450**	**12,699**
At 31 December 2022	**7,969**	**2,087**	**2,070**	**228**	**3,910**	**16,264**

Capitalised borrowing costs for the year ended 31 December 2022 amounted to USD 277 million (for the year ended 31 December 2021: USD95 million and for the year ended 31 December 2020: USD118 million). The capitalisation rate used to determine the amount of borrowing costs was 5.05% per annum for the year ended 31 December 2022 (for the year ended 31 December 2021: 3.12% and for the year ended 31 December 2020: 4.10%).

At 31 December 2022 mining assets and mine development cost included USD3,738 million of mining assets under development (31 December 2021: USD2,560 million and 31 December 2020: USD2,593 million).

At 31 December 2022 non-mining assets included USD39 million of investment property (31 December 2021: USD38 million and 31 December 2020: USD39 million).

Impairment

As at 31 December 2022, the Group performed an impairment analysis of assets and found no assets subject to economic impairment, except for the ore mining and processing assets of KGMK, described below.

In 2020 a federal law set a 3.5 times increase of mineral extraction tax on the types of ores mined by the Group. The Group assessed this change in the tax legislation as an indicator for impairment of one of the cash-generating units within JSC "Kolskaya GMK": KGMK ore mining and processing operations.

The recoverable amount of the cash-generating unit was determined based on value in use calculations. As a result of the impairment test the carrying value of KGMK ore mining and processing production assets in the amount of USD264 million were fully impaired as at 31 December 2020. At 31 D ecember 2022 and 31 Decembe r 2021 the Group concluded that the recoverable amount didn't change and recognised further impairment in respect of additions to property, plant and equipment in the cash-generating unit. The impairment loss in the amount of USD2 million was recognised within impairment of non-financial assets in the consolidated income statement for the year ended 31 December 2022 (31 December 2021: USD137 million and 31 December 2020: USD264 million).

The most significant estimates and assumptions used in determination of value in use are as follows:

- Future cash flows were projected based on budgeted amounts, taking into account actual results for the previous years. Forecasts were assessed up to 2047. Measurements were performed based on discounted cash flows expected to be generated by a separate cash-generating unit;
- Management used adjusted commodities price forecasts for copper-nickel concentrate price forecast. Prices adjustments were made based on current contract terms;
- Production information was primarily based on internal production reports available at the date of impairment test and management's assumptions regarding future production levels;
- Inflation indices and foreign currency trends are in general consistent with external sources of information. Inflation used was projected within 2.5-6.9% (31 December 2021: 3.0-4.6% and 31 December 2020: 3.6-4.5%), exchange rates USD/RUB were within the range of 76.68-89.79 (31 December 2021: 72.23-84.76 and 31 D ecember 2020: 72.02-84.76);
- A pre-tax nominal discount rate of 19.1% (31 December 2021: 12.2% and 31 December 2020: 13.7%) was calculated based on weighted average cost of capital and reflects management's estimates of the risks specific to the cash-generating unit.

Since 2021 the Group developed and partially implemented optimization plans in order to increase KGMK ore mining and processing operations' cash flows and mitigate the negative impact of higher mineral extraction tax.

During the year ended 31 December 2022 the Group recognised additional impairment losses in the amount of USD88 million in respect of specific individual assets (for the year ended 31 December 2021: USD26 million and for the year ended 31 December 2020: USD3 million).

The Group didn't identify any indicators of impairment in respect to other cash generating units (CGUs) as at 31 December 2022.

In 2015 the Group recognised the gas extraction assets as a separate cash-generating unit, with its value in use determined using a discounted cash flow model at each subsequent reporting date. As a result of the performed assessment of the value in use, an impairment loss of USD41 million was recognised in the consolidated income statement for the year ended 31 December 2020.

During the year ended 31 December 2021 due to change in circumstances and changes in the operating environment the Group reviewed the aggregation of assets into a separate cash-generating unit. As a result, the gas extraction assets were included in a cash-generating unit, which includes operations of the core production assets in Norilsk. The Group did not identify indicators of impairment in respect of the above cash-generating unit and reversed the previously recognised impairment losses from the gas extraction assets, net of respective accumulated depreciation that would have been accrued had no impairment been recognised, included in reversal of impairment of non-financial assets, in the consolidated income statement in the amount of USD115 million.

Right-of-use assets

	Buildings, facilities and infrastructure	Machinery, equipment and transport	Other	Total
Balance at 1 January 2020	**139**	**66**	**7**	**212**
Additions of right-of-use assets and remeasurement of the lease liability	(9)	69	5	65
Acquired on acquisition of subsidiaries	25	–	–	25
Depreciation	(20)	(12)	(3)	(35)
Effect of translation to presentation currency	(20)	(12)	(1)	(33)
Balance at 31 December 2020	**115**	**111**	**8**	**234**
Additions of right-of-use assets and remeasurement of the lease liability	7	18	8	33
Depreciation	(30)	(21)	(2)	(53)
Balance at 31 December 2021	**92**	**108**	**14**	**214**
Additions of right-of-use assets and remeasurement of the lease liability	125	27	15	167
Disposals (Note 21)	(4)	(69)	(3)	(76)
Depreciation	(34)	(8)	(4)	(46)
Effect of translation to presentation currency	(9)	(22)	(2)	(33)
Balance at 31 December 2022	**170**	**36**	**20**	**226**

16. OTHER FINANCIAL ASSETS

	At 31 December		
	2022	2021	2020
Non-current			
Loans issued and other receivables	90	58	56
Bank deposits	11	12	11
Investments in associates	8	17	14
Other	12	2	–
Total non-current	**121**	**89**	**81**

	At 31 December		
Current			
Derivative financial instruments at fair value through other comprehensive income	30	8	1
Loans issued	10	1	57
Deposits	–	34	–
Total current	**40**	**43**	**58**

17. OTHER TAXES

	At 31 December		
	2022	**2021**	**2020**
Taxes receivable			
Value added tax recoverable	584	410	434
Advance payments of other taxes	10	9	17
	594	**419**	**451**
Less: impairment of value added tax recoverable	(8)	(7)	(7)
Offset of taxes receivable and taxes payable paid on a net basis	(109)	–	–
Other taxes receivable	**477**	**412**	**444**
Taxes payable			
Social security contributions	135	51	48
Value added tax	112	75	199
Mineral extraction tax	78	50	15
Property tax	18	19	12
Other	105	74	55
Offset of taxes receivable and taxes payable paid on a net basis	(109)	–	–
Other taxes payable	**339**	**269**	**329**

18. INVENTORIES

	At 31 December		
	2022	**2021**	**2020**
Refined metals and other metal products	1,967	767	547
Work-in-process and semi-products	1,870	1,572	1,159
Less: allowance to net realisable value for finished goods and work-in-process	(81)	(78)	(84)
Total metal inventories	**3,756**	**2,261**	**1,622**
Materials and supplies	1,257	823	644
Less: allowance for obsolete and slow-moving items	(68)	(58)	(74)
Materials and supplies, net	**1,189**	**765**	**570**
Inventories	**4,945**	**3,026**	**2,192**

At 31 December 2022 a part of the metal semi-product stock in the amount of USD163 million net of impairment in the amount of USD92 million was presented in other non-current assets in line with the Group's production plans (31 December 2021: USD121 million net of impairment of USD69 million and 31 December 2020: USD73 million net of impairment of USD57 million).

19. TRADE AND OTHER RECEIVABLES

	At 31 December		
	2022	**2021**	**2020**
Trade receivables	675	345	411
Other receivables	250	171	150
Receivables from the registrar on transfer of dividends to shareholders (Note 31)	–	–	32
	925	**516**	**593**
Less: allowance for expected credit losses	(79)	(48)	(56)
Trade and other receivables, net	**846**	**468**	**537**

In 2022, 2021 and 2020, the average credit period on metal sales varied from 0 to 30 days. Trade receivables are generally non-interest bearing.

At 31 December 2022 trade and other receivables include USD563 million of accounts receivable measured at fair value through profit or loss, Level 2 of fair value hierarchy (31 December 2021: USD248 million and 31 December 2020: USD339 million). At the reporting date the fair value is measured using the forward market price corresponding to the quotation period specified in the contract.

At 31 December 2022, 2021 and 2020 t here were no material trade accounts receivable which were overdue or individually determined to be impaired.

The average credit period on sales of other products and services for the year ended 31 December 2022 was 39 days (for the year ended 31 December 2021: 42 days and for the year ended 31 December 2020: 37 days). No interest was charged on these receivables.

Included in the Group's other receivables at 31 December 2022 were debtors with a carrying value of USD65 million (31 December 2021: USD109 million and 31 December 2020: USD83 million) that were past due but not impaired. Management of the Group believes that these amounts are recoverable in full.

The Group did not hold any collateral for accounts receivable balances.

Ageing of other receivables past due but not impaired was as follows:

	At 31 December		
	2022	2021	2020
Less than 180 days	54	97	75
180-365 days	11	12	8
	65	**109**	**83**

Movement in the allowance for expected credit losses was as follows:

	At 31 December		
	2022	2021	2020
Balance at the beginning of the year	**48**	**56**	**66**
Change in allowance	22	2	3
Accounts receivable written-off	(2)	(10)	(2)
Effect of translation to presentation currency	11	–	(11)
Balance at the end of the year	**79**	**48**	**56**

During the year ended 31 December 2022, the Group recognised an impairment of receivables under certain contracts with foreign equipment suppliers for the total amount of USD35 million, for which the probability of recovery is low despite the presence of collateral due to the failure of both suppliers and guarantors to meet their obligations.

If pre-trial recovery of compensation of the receivables is not possible, the Group plans to go to court.

20. CASH AND CASH EQUIVALENTS

	At 31 December		
	2022	2021	2020
Current accounts			
· RUB	266	249	41
· USD	591	1,691	3,744
· CNY	209	14	64
· other	70	41	56
Bank deposits			
· RUB	74	2,402	39
· USD	584	1,132	1,237
· CNY	57	5	2
· other	–	–	6
Other cash and cash equivalents			
· RUB	3	6	–
· USD	28	7	–
· other	–	–	2
Total	**1,882**	**5,547**	**5,191**

Bank deposits

Interest rate on USD-denominated deposits held in banks at 31 Decemb er 2022 was in the range from 1.00% to 3.00% (31 December 2021: 0.05% to 0.88% and 31 December 2020: 0.15% to 0.41%) per annum. Interest rate on RUB-denominated deposits held in banks at 31 December 2022 was 7.30% (31 December 2021: from 7.20% to 9.12% and 31 December 2020: 3.75%) per annum. Interest rate on CNY-denominated deposits held in banks at 31 December 2022 was from 0.4% to 2.20% (31 December 2021: 2.40% and 31 December 2020: 3.80%) per annum.

21. DISPOSAL OF SUBSIDIARIES AND FOREIGN JOINT OPERATIONS

On 25 March 2022, the Group sold its interest in the subsidiary JSC "Nordstar" engaged in transportation services for a consideration of RUB1 million (USD0.02 million) resulting in a net cash outflow from disposal of the subsidiary recognised in the consolidated statement of cash flows in the line Net cash (outflow)/inflow from disposal of subsidiaries. Loss on disposal in the amount of USD110 million was recognised in the consolidated income statement for the year ended 31 December 2022.

With regard to suspended production of the joint operations of Nkomati, the Group reclassified the foreign currency translation reserve of foreign operations to the profit or loss for the year ended 31 December 2021 in the amount of USD20 million.

In October 2021, the Group received cash consideration in the amount of USD51 million and incurred associated costs in the amount of USD2 million under the settlement agreement in relation to the cancelled sale of Nkomati. The amount was presented in Disposal of foreign joint operations in the consolidated income statement and consolidated statement of cash flows.

In September 2020, the Group sold a number of assets in Australia, including Honeymoon Well nickel project, held by the Group subsidiary MPI Nickel Pty Ltd for a consideration of USD29 million (AUD 40 million). Net cash inflow from the disposal of the subsidiary in the amount of USD28 million was recognised in the consolidated statement of cash flows, net of costs to sell in the amount of USD1 million. Gain on disposal in the amount of USD19 million was recognised in the consolidated income statement.

22. SHARE CAPITAL

Authorised and issued ordinary shares

At 31 December 2022 and 20 21 the number of the Group's authorized and issued shares taking into account cancellation amounts to 152,863,397 and 153,654,624 respectiv ely. At 31 December 2020 the number of the Group's authorised and issued ordinary shares was 158,245,476.

On 11 August 2022, the extraordinary General meeting of shareholders of the Company decided to reduce the Company's share capital by cancelling 791,227 ordinary shares. The state registration of the amendments to the Company's Charter related to the reduction of the Company's share capital was carried out on 17 October 2022. The cancellation of treasury shares was recognised in the consolidated statement of changes in equity for the year ended 31 December 2022.

On 27 April 2021, the Board of Directors of the Company decided to acquire the Company's own outstanding shares. The Company completed acquisition of 5,382,079 ordinary shares on 29 June 2021 and presented the purchase of treasury shares in the consolidated statement of changes in equity in the amount of USD2,075 million (RUB149,630 million). Cash consideration was fully paid and recognised in the consolidated statement of cash flows in the amount of USD2,068 million (RUB149,630 million) at the USD/RUB exchange rates effective on payment dates.

On 19 August 2021, the extraordinary General meeting of shareholders of the Company decided to reduce the Company's share capital by cancelling 4,590,852 ordinary shares. The state registration of the amendments to the Company's Charter related to the reduction of the Company's share capital was carried out on 14 October 2021. The cancellation of treasury shares was recognised in the consolidated statement of changes in equity for the year ended 31 December 2021.

Earnings per share

	For the year ended 31 December		
	2022	2021	2020
Basic and diluted earnings per share (US Dollars per share):	**35.7**	**41.9**	**21.4**

The earnings and weighted average number of outstanding shares used in the calculation of basic and diluted earnings per share are as follows:

	For the year ended 31 December		
	2022	2021	2020
Profit or the period attributable to shareholders of the parent company	**5,458**	**6,512**	**3,385**

Weighted average number of shares outstanding

	For the year ended 31 December		
	2022	2021	2020
Shares outstanding at 1 January	152,863,397	158,245,476	158,245,476
June 2021: acquisition of own shares from shareholders	–	(5,382,079)	–
Shares outstanding at 31 December	**152,863,397**	**152,863,397**	**158,245,476**
Weighted average number of outstanding shares used in the calculation of basic and diluted earnings per share	**152,863,397**	**155,502,830**	**158,245,476**

23. NON-CONTROLLING INTEREST

At 31 December 2022, 2021 and 2020 a ggregate financial information relating to the subsidiary, LLC "GRK "Bystrinskoye", that has material non-controlling interest, before any intra-group eliminations, is presented below:

	At 31 December		
	2022	2021	2020
Non-current assets	1,268	1,254	1,298
Current assets	1,774	1,061	762
Non-current liabilities	(88)	(66)	(718)
Current liabilities	(86)	(65)	(67)
Net assets	**2,868**	**2,184**	**1,275**
Net assets attributable to non-controlling interest	**1,434**	**1,093**	**656**

	For the year ended 31 December		
	2022	2021	2020
Net profit for the year	793	924	497
Other comprehensive income/(loss) for the year	90	(15)	(147)
Total comprehensive income for the year	**883**	**909**	**350**
Profit attributable to non-controlling interest	396	462	248
Other comprehensive income/(loss) attributable to non-controlling interest	**45**	**(7)**	**(73)**

	For the year ended 31 December		
	2022	2021	2020
Cash flows from operating activities	783	1,083	619
Cash flows used in investing activities	(650)	(407)	(413)
Cash flows used in financing activities	(177)	(675)	(215)
Net (decrease)/increase in cash and cash equivalents	**(44)**	**1**	**(9)**

24. LOANS AND BORROWINGS

	Currency	Fixed or floating interest rate	Average nominal % rate during the year ended 31 December			Maturity	At 31 December		
			2022	2021	2020		2022	2021	2020
Unsecured loans	USD	floating	3.17%	1.53%	1.99%	2023-2028	5,055	5,624	5,319
	EUR	floating	0.99%	0.85%	0.85%	2023-2028	19	24	30
	RUB	floating	12.83%	–	–	2023-2025	1,692	–	–
Secured loans	RUB	fixed	–	9.75%	9.75%	2022	–	4	8
Total loans							**6,766**	**5,652**	**5,357**
Bonds	USD	fixed	3.38%	4.20%	4.39%	2023-2026	2,743	4,238	3,736
	CNY	floating	3.75%	–	–	2025	703	–	–
	CNY	fixed	3.95%	–	–	2025	562	–	–
	RUB	fixed	8.48%	7.20%	8.85%	2024-2025	710	336	541
Total bonds							**4,718**	**4,574**	**4,277**
Total loans and borrowings							**11,484**	**10,226**	**9,634**
Less: current portion due within twelve months and presented as current loans and borrowings							(4,295)	(1,610)	(12)
Non-current loans and borrowings							**7,189**	**8,616**	**9,622**

The Group is obliged to comply with a number of restrictive financial and other covenants, including maintaining certain financial ratios and restrictions on pledging and disposal of certain assets.

At 31 December 2022, loans were not secured by property, plant and equipment (31 December 2021 and 31 December 2020: USD8 million).

25. LEASE LIABILITIES

Lease liabilities	Currency	Average borrowing rate during the year ended 31 December, %			Maturity	At 31 December		
		2022	2021	2020		2022	2021	2020
	RUB	9.52%	7.23%	7.37%	2023-2071	210	113	126
	USD	2.81%	4.10%	4.07%	2024-2032	12	107	114
	EUR	6.88%	6.31%	6.20%	2023-2050	11	15	20
	other	–	–	2.06%		–	–	2
Total lease liabilities						**233**	**235**	**262**
Less: current lease liabilities						(43)	(57)	(59)
Non-current lease liabilities						**190**	**178**	**203**

At 31 December 2022 lease liabilities with original maturity in excess of 15 years amounted to USD67 million (31 December 2021: USD13 million and 31 December 2020: USD12 million).

26. PROVISIONS

	Decommissioning	Environmental	Tax	Other	Total
Balance at 1 January 2020	**662**	**–**	**4**	**19**	**685**
Accruals	26	2,136	1	17	2,180
Utilization	(16)	(48)	–	(9)	(73)
Change in estimates	17	106	–	(6)	117
Unwinding of discount	32	–	–	–	32
Effect of translation to presentation currency	(106)	(113)	–	–	(219)
Balance at 31 December 2020	**615**	**2,081**	**5**	**21**	**2,722**
Accruals	146	–	2	11	159
Utilisation	(24)	(1,984)	(1)	(20)	(2,029)
Change in estimates	1	176	(1)	(3)	173
Unwinding of discount	39	–	–	–	39
Effect of translation to presentation currency	(9)	(14)	(1)	–	(24)
Balance at 31 December 2021	**768**	**259**	**4**	**9**	**1,040**
Accruals	–	–	7	8	15
Utilisation	(32)	(18)	(4)	(4)	(58)
Change in estimate	(36)	93	(4)	(7)	46
Unwinding of discount	73	29	–	–	102
Effect of translation to presentation currency	(37)	(13)	1	–	(49)
Balance at 31 December 2022	**736**	**350**	**4**	**6**	**1,096**
including the current portion:					
At 31 December 2020	**66**	**2,072**	**5**	**19**	**2,162**
At 31 December 2021	**86**	**48**	**4**	**8**	**146**
At 31 December 2022	**146**	**24**	**4**	**6**	**180**

SIGNIFICANT EVENT – FUEL SPILL IN NORILSK

On 29 May 2020, an incident occurred at the site of heat and power plant No. 3 (HPP-3) in the Kayerkan neighbourhood of Norilsk: diesel fuel storage reservoir was damaged through sudden failure of support posts, which resulted in approximately 21.2 kt of diesel fuel leakage. According to the Group's assessment, the incident was caused by defects in design and construction, as well as by unusually hot weather, which led to the thawing of permafrost resulting in sinking of support posts.

The incident resulted in the contamination of nearby water bodies and land in the area of leakage, as well as damage to biological resources. The main stage of clean-up works following the incident was completed in 2020.

On 10 September 2020 Yenisei interregional administration of the Federal Environment Supervision Agency (Rosprirodnadzor) filed a lawsuit to the Arbitration Court of the Krasnoyarsk Territory against Joint Stock Company Norilsk-Taimyr Energy Company (JSC "NTEK") claiming compensation of damages to water bodies and soil caused by diesel fuel spill at HPP-3 in Norilsk in the amount of RUB147.78 billion (USD1,943 million at RUB/USD exchange rate at the date of filing).

On 10 March 2021, in accordance with the court decision on the lawsuit filed by Rosprirodnadzor, the Group paid RUB146.177 billion (USD1,968 million) in compensation of damages to water bodies and soil.

In 2021, expenditure for the compensation was deducted against taxable profits. On 3 December 2021, the Group received a decision of the off-site tax audit for the consolidated taxpayers group for the first half of 2021 that invalidated income tax deduction of the damages compensation. Taking into consideration all the facts and circumstances and based on an assessment of the probability of economic benefits outflows, the Group recognised an income tax provision in the amount of USD402 million offset against income tax prepayments at 31 December 2021. The Group's appeal filed in the first quarter of 2022 was not satisfied. The provision was utilised during the first quarter of 2022.

In April 2021, the Company's subsidiary, JSC"NTEK", signed a three-party agreement with the Ministry of Environment Protection and Natural Resources of the Krasnoyarsk Territory and the Siberian Federal University in order to develop, approve and implement a set of measures to remediate the damage caused by the oil spill to the wildlife and broader environment of the Krasnoyarsk Territory.

On 29 July 2021, Yenisei territorial administration of the Federal Agency for Fishery (Rosrybolovstvo) filed a lawsuit for compensation of damages to aquatic bioresources for the total amount of RUB58.65 billion (USD810 million). Subsequently, on 15 April 2022 the amount of claims was increased by the Federal Agency for Fishery to RUB58.96 billion (USD725 million).

On 3 September 2021, during the court hearing, the parties agreed to proceed with the dispute settlement by negotiating an amicable agreement, which would include compensation in kind of the damage caused to aquatic life by constructing fish breeding plants, artificially reproducing the affected fish species and releasing the fry into the water bodies.

On 22 July 2022, the court approved the amicable agreement between the parties. In accordance with the agreement, JSC"NTEK" will fully compensate the damage to aquatic bioresources in kind by releasing the fry of different fish species (sturgeon, muksun, broad whitefish, whitefish and nelma) to the water bodies of the Norilskaya-Pyasino lake and river system affected by the incident in 2033–2050.
Before 2033, JSC "NTEK" plans an annual early release of the Siberian sturgeon fry to the Yenisey River starting 2023.

In addition, to ensure scientific support of recovery measures JSC"NTEK" will finance a research to be conducted in 2023–2051 by Russian Federal Research Institute of Fisheries and Oceanography (VNIRO) to assess the condition and habitat of water bioresources.

The key assumptions for determining the amount of liabilities under the amicable agreement inherently contain a high degree of uncertainty, primarily due to the following: fishery research results, the cost of construction and operation of the fish breeding infrastructure, operating expenses related to the measures to be performed at the Norilskaya-Pyasino lake and river system, the future fry purchase prices, the possibility of achieving a stable recovery and reproduction of water bioresources, macroeconomic assumptions (including applicable inflation rates and risk-free rates), and the material effect of the discount factor for longer terms.

On 2 December 2022, the Russian Supreme Court received a cassation appeal from the Prosecutor General's Office against judgements of lower instance courts that upheld and confirmed the legitimacy of an amicable agreement between the Federal Agency for Fishery (Rosrybolovstvo), JSC NTEC and Russian Federal Research Institute of Fisheries and Oceanography (VNIRO) in a lawsuit initiated by Rosrybolovstvo seeking to recover RUB58.96 billion (USD838 million) in compensation for the damage to aquatic biological resources as a result of the HPP-3 incident in Norilsk. On 30 January 2023, a judge of the Supreme Court ruled to reject the submission of the cassation appeal of the Prosecutor General's Office for a court hearing by the Judicial Chamber for Economic Disputes of the Supreme Court. On 6 February 2023, the Prosecutor General's Office filed a complaint against the ruling of the Supreme Court to reject the submission of the cassation appeal of the Prosecutor General's Office to a court hearing by the Judicial Chamber for Economic Disputes. As at the date of approval of these consolidated financial statements, the Group is assessing the prospects of complaint consideration by the Supreme Court.

In the year ended 31 December 2022, the Group incurred clean-up and remediation expenditures amounting to USD16 million (for the year ended 31 December 2021: USD16 million). The Group continues with the rehabilitation measures and post-incident environmental monitoring.

At 31 December 2022, 2021 and 2 020, the total discounted amount of the provision in relation to the diesel fuel spill at HPP-3 in Norilsk was recognised in the environmental provisions in the consolidated statement of financial position.

The amount of the provision is subject to a high degree of uncertainty and will be adjusted in the future reporting periods as new facts and circumstances arise, including the review of the cost forecast for environmental remediation, changes in macroeconomic indicators, and other factors. However, to the best of its knowledge and in accordance with the requirements of law, the Group does not expect new significant claims to be filed with respect to the HPP-3 fuel spill in future periods.

Key assumptions used in the estimation of decommissioning obligations and environmental provisions were as follows:

	At 31 December		
	2022	2021	2020
Discount rates Russian entities	7.2% – 11.1%	8.2% – 8.7%	4,2% – 7%
Expected closure date of mines	up to 2125	up to 2054	up to 2057
Expected inflation over the period from 2023 to 2042	2.7% – 6.9%	2.8% – 4.9%	2,8% – 4,1%
Expected inflation over the period from 2043 onwards	2.4% – 2.7%	2.5% – 2.8%	2.5% – 2.8%

Settlement of long-term provisions (at present value) is planned as follows:

	At 31 December		
	2022	2021	2020
Due in years 2 – 5	412	317	228
Due in years 6 – 10	230	231	88
Due in years 11 – 15	134	86	62
Due in years 16 – 20	23	66	82
Due thereafter	117	194	100
Total	**916**	**894**	**560**

27. SOCIAL LIABILITIES AND CONTINGENT SOCIAL COMITTMENTS

Social liabilities of the Group include social provisions and payables relating to social commitments of the Group.

The table below represents changes in social liabilities of the Group for the years ended 31 December 2022, 20 21 and 2020.

	Social liabilities	Incl. Comprehensive plan provision
Balance at 1 January 2020	**89**	**–**
Accruals of provision and payables	494	13
Utilisation and payment	(403)	–
Change in estimates	11	–
Unwinding of discount	5	–
Effect of translation to presentation currency	(16)	–
Balance at 31 December 2020	**180**	**13**
Accruals of provision and payables	1,079	517
Utilisation and payment	(448)	(12)
Change in estimates	(31)	(3)
Unwinding of discount	18	4
Effect of translation to presentation currency	(7)	(1)
Balance at 31 December 2021	**791**	**518**
Accruals of provision and payables	475	–
Utilisation and payment	(454)	(23)
Change in estimate	(68)	(14)
Unwinding of discount	78	50
Effect of translation to presentation currency	(8)	(2)
Balance at 31 December 2022	**814**	**529**
including the current portion:		
At 31 December 2020	**96**	**13**
At 31 December 2021	**158**	**48**
At 31 December 2022	**201**	**100**

	At 31 December		
	2022	2021	2020
Due in years 2 – 5	320	296	66
Due in years 6 – 10	213	216	11
Due in years 11 – 15	77	117	3
Due in years 16 – 20	2	2	2
Due thereafter	1	2	2
Total	**613**	**633**	**84**

Carrying value of social provisions is determined based on the discounted cash flows required to settle the present obligation. The discount rate was between 7.2% and 10.5% at 31 December 2022 (31 December 2021: 8.2% to 8.7%; 31 December 2020: 4.3% to 5.6%).

In 2017–2022, the Group entered into several agreements with the governments of the regions where it operates, namely the Zabaikalsky Territory, the Krasnoyarsk Territory and the Murmansk Region. These agreements imply the Group's financial commitments in respect of the social and economic development of the regions, including the construction of social infrastructure facilities.

At 31 December 2022 the provision recognised with respect to the above-mentioned agreements in Social liabilities in the consolidated statement of financial position amounted to USD67 million (31 December 2021: USD115 million and 31 December 2020: USD61 million).

COMPREHENSIVE SOCIAL AND ECONOMIC DEVELOPMENT PLAN FOR NORILSK

In February 2021, the Group entered into a four-party agreement with the Ministry for the Development of the Russian Far East and Arctic, the Krasnoyarsk Territory Government, and the Norilsk Municipality to implement comprehensive social and economic development programmes in Norilsk. In December 2021, the Government of the Russian Federation approved the Comprehensive Social and Economic Development Plan for Norilsk (the "Comprehensive Plan"), which includes a schedule of mutual financial commitments of the Government of the Russian Federation, the Krasnoyarsk Territory Government, and the Group for the social and economic development of the city up to 2035. The Comprehensive Plan covers housing renovation, the overhaul and modernisation of the city's engineering and utilities infrastructure, construction, repair, reconstruction and development of social infrastructure facilities and resettlement of Norilsk and Dudinka citizens to areas with more favourable living conditions. In addition, the Comprehensive Plan provides for the preparation and subsequent update of the Norilsk development strategy setting the city as a core hub for Taimyr development, designing the concept of regional tourism development and implementation of support programmes for small and medium-sized businesses in Norilsk. The financial commitments of the Company for 2021–2035 amount to RUB81.3 billion (USD1,094 million at the USD exchange rate at 31 December 2021).

In line with the Group's accounting policy (Note 4), in respect of the part of its obligations under the four-party agreement and the Comprehensive Plan amounting to RUB69.3 billion, the Group recognised a provision in its consolidated income statement for the year ended 31 December 2021 at the present value of cash outflows in the amount of RUB37.9 billion (USD514 million).

The remaining RUB12 billion (USD162 million) in financial commitments under the Comprehensive plan are recognised in the consolidated statement of financial position as part of property, plant and equipment once the expenditure is incurred.

At 31 December 2022, the Group recognised USD2 million under the Comprehensive Plan within property, plant and equipment in its consolidated statement of financial position.

In case of any changes to the nature, timing or amount of financing of particular measures stipulated by the Comprehensive Plan during its implementation, the Group will update the amount of social provisions in its consolidated financial statements accordingly.

Apart from the financing committed under the four-party partnership agreement and the Comprehensive Plan, in 2021 the Company announced an additional financing programme for the social and economic development of Norilsk for RUB150 billion (USD2,019 million). As of the date the consolidated financial statements are authorised for issue, the schedule, amounts and terms of financing of the programme's individual activities, as well as the mechanism for their implementation, have not been approved. The implementation of the programme is subject to the Company's verification procedures and corporate approval, which have not been received as of the date these consolidated financial statements were authorised for issue.

In the year ended 31 December 2022, the Group also accrued USD121 million (for the year ended 31 December 2021: USD127 million; for the year ended 31 December 2020: USD198 million) of social provisions under various social programmes and contributions other than those referred to above.

28. TRADE AND OTHER PAYABLES

	At 31 December		
	2022	2021	2020
Financial liabilities			
Trade payables	614	416	267
Payables for acquisition of property, plant and equipment	546	417	242
Other creditors	171	397	116
Total fina cial liabilities	**1,331**	**1,230**	**625**
Non-financial liabilities			
Advances received on contracts with customers	50	994	802
Total non-fina cial liabilities	**50**	**994**	**802**
Total	**1,381**	**2,224**	**1,427**

The maturity analysis for the Group's financial liabilities that shows the remaining contractual maturities was as follows:

	At 31 December		
	2022	2021	2020
Due within 1 month	950	854	322
Due from 1 to 3 months	340	312	246
Due from 3 to 12 months	41	64	57
Total	**1,331**	**1,230**	**625**

29. EMPLOYEE BENEFIT OBLIGATIONS

	At 31 December		
	2022	2021	2020
Provision for annual leave	341	238	218
Wages, salaries and bonuses	302	190	178
Other	36	31	27
Total obligations	**679**	**459**	**423**
Less: non-current obligations	(94)	(42)	(22)
Current obligations	**585**	**417**	**401**

Defined contribution plans

Amounts recognised in the consolidated income statement in respect of defined contribution plans were as follows:

	For the year ended 31 December		
	2022	2021	2020
Pension Fund of the Russian Federation	454	325	283
Mutual accumulated pension plan	8	6	6
Other	3	5	5
Total	**465**	**336**	**294**

30. DERIVATIVE FINANCIAL INSTRUMENTS (CROSS-CURRENCY INTEREST RATE SWAPS)

At 31 December 2022 the fair value of the cross-currency interest rate swap contracts was presented in non-current liabilities in the amount of USD67 million (31 December 2021: non-current liabilities in the amount of USD72 million and 31 December 2020: non-current and current liabilities in the amount of USD52 million and 84 million respectively).

The fair value of cross-currency interest rate swap contracts (Level 2 of fair value hierarchy) is calculated as the present value of future cash flows discounted at the interest rates applicable to the currencies of the corresponding cash flows and available at the reporting date. The fair value is subject to a credit risk adjustment that reflects the credit risk of the Group and of the other party and is calculated based on credit spreads derived from current tradable financial instruments (Note 36).

31. DIVIDENDS

Dividends declared and paid in Russian roubles were translated to US dollars using prevailing RUB/USD rates at the declaration date and payment date, respectively, as presented in the table below.

Dividends for the period	Declaration period	Dividends declared			Dividends paid		Receipt of dividends not remitted to ADR holders
		Per share RUB	Per share USD	Total USD million	Payment period	Total USD million	Total USD million
Annual 2021	June 2022	1,166.22	18.94	2,895	June 2022	3,146	544
9 months 2021	December 2021	1,523.17	20.81	3,181	January 2022	3,050	–
Annual 2020	May 2021	1,021.22	13.86	2,193	June 2021	2,198	–
9 months 2020	December 2020	623.35	8.50	1,346	December 2020	1,334	–
Annual 2019	May 2020	557.20	7.59	1,201	June 2020	1,264	–
9 months 2019	December 2019	604.09	9.66	1,529	January 2020	1,567	–

At 31 December 2022 dividends payable for 2021 not remitted to American Depositary Receipt (ADR) holders following the restrictions of Presidential Decree of 5 March 2022 No. 95 and the decision of the Board of Directors of the Central Bank of 10 June 2022 and dividends payable to minority shareholders of the Group's companies in the total amount of USD496 million are recognized within dividends payable in the consolidated statement of financial position. Dividends not received by ADR holders were transferred to NPO JSC "The National Settlement Depository" and subsequently returned to the Group and remain on demand by the holders.

At 31 December 2022 dividends paid by the Company to the shareholders registrar but not transferred to shareholders bank accounts amounted to USD0.3 million and were recognised in trade and other receivables (at 31 December 2021: USD0.3 million and at 31 December 2020: USD32 million).

32. RELATED PARTIES TRANSACTIONS AND OUTSTANDING BALANCES

Related parties include major shareholders and entities under their ownership and control; associates, joint ventures and joint operation; and key management personnel. The Group defines major shareholders as shareholders, which have significant influence over the Group activities. The Company and its subsidiaries, in the ordinary course of their business, enter into various sale, purchase and service transactions with related parties. Transactions between the Company and its subsidiaries, which are related parties of the Company, have been eliminated on consolidation and are not disclosed in this note. Transactions and outstanding balances are included in the disclosure starting the date the counterparty has become a related party.

Details of transactions between the Group and other related parties are disclosed below.

	Entities under ownership and control of the Group's major shareholders			Associates, joint ventures and joint operation		
	For the year ended 31 December 2022	For the year ended 31 December 2021	For the year ended 31 December 2020	For the year ended 31 December 2022	For the year ended 31 December 2021	For the year ended 31 December 2020
Transactions with related parties						
Loans and borrowings received	1,025	–	–	–	–	–
Loans and borrowings repaid	800	–	–	–	–	–
Purchase of assets and services and other operating expenses	116	103	92	36	66	120
Fair value gain on the cross-currency						
interest rate swap contracts	41	–	–	–	–	–
Interest expense accrued	10	–	–	–	–	–
Interest expense repaid	10	–	–	–	–	–
Interest income accrued	4	–	–	–	–	–
Interest received	4	–	–	–	–	–
Sales of goods and services and other income	1	–	–	12	–	–

	Entities under ownership and control of the Group's major shareholders				Associates, joint ventures and joint operation	
	At 31 December 2022	At 31 Decembe 2021	At 31 December 2020	At 31 December 2022	At 31 December 2021	At 31 December 2020
Outstanding balances with related parties						
Cash and cash equivalents	258	–	–	–	–	–
Loans and borrowings	225	–	–	–	–	–
Accounts payable and lease liabilities	26	13	19	–	5	15
Derivatives (liabilities)	21	–	–	–	–	–
Accounts receivable	–	1	–	1	10	7

At 31 December 2022 the Group received guarantees in respect of advances to its suppliers from a related party amounted to 42 million USD.

During the year ended 31 December 2021, the Company acquired own shares from the entities under ownership and control of the Group's major shareholders for a consideration of USD1,421 million (Note 22).

During the year ended 31 December 2020, the Group acquired from a related party an entity, which holds the right-of-use assets and lease liabilities in the amount of USD25 million.

Transactions with related parties are made on terms equivalent to those that prevail in arm's length transactions.

Compensation of key management personnel

Key management personnel of the Group consists of members of the Management Board and the Board of Directors. For the year ended 31 December 2022 remuneration of key management personnel of the Group included salary and performance bonuses amounted to USD80 million (for the year ended 31 December 2021: USD91 million and for the year ended 31 December 2020: USD78 million).

33. COMMITMENTS

Capital commitments

At 31 December 2022, contractual capital commitments amounted to USD2,299 million (31 December 2021: USD3,338 million and 31 December 2020: USD2,021 million).

Leases

The Group is a party to a number of lease contracts with variable lease payments that do not depend on an index or market rental rates, and hence are not recognised as lease liabilities. At 31 December 2022 total future non-discounted variable lease payments under such contracts with the maturity up to 2071 amounted to USD358 million (31 December 2021: USD322 million and 31 December 2020: USD316 million).

At 31 December 2022 there were no future non-discounted lease payments for leased items not transferred to the Group as a lessee and not recognised as lease liabilities (31 December 2021: USD36 million and 31 December 2020: none).

34. CONTINGENCIES

By their nature, contingencies will only be resolved when one or more future events occur or fail to occur. The assessment of such contingencies inherently involves the exercise of significant judgement and estimates of the outcome of future events.

Legal contingent liabilities

The Group has a number of legal contingent liabilities with the probability of outflow of economic benefits being assessed by the management of Group as possible, including matters arising from claims and disputes of a civil law and public law nature. At 31 December 2022 these liabilities amounted to USD14 million (31 December 2021: USD3 million and 31 December 2020: USD7 million).

Tax contingencies in the Russian Federation

The Russian Federation currently has a number of laws related to various taxes imposed by both federal and regional governmental authorities. Applicable taxes include value-added (VAT), income tax, mandatory social security contributions to non-budget funds, mineral extraction tax and other levies. Tax returns, together with other legal compliance areas (for example, customs and currency control matters), are subject to review and investigation by government authorities, which are authorised by law to impose severe fines, penalties and interest charges. Generally, tax returns remain open and subject to inspection for a period of three years following the fiscal year.

While the management of the Group believes that it has recognised adequate provisions for tax liabilities based on its interpretation of current and previous legislation, the risk remains that the tax authorities in the Russian Federation could take a different view with regard to interpretive issues. This uncertainty may expose the Group to additional taxation, fines and penalties.

In March 2022, amendments to Russian tax legislation were adopted. According to them, foreign exchange gains are accounted for tax purposes in the reporting period, when the underlying asset or liability is repaid. Starting from 1 January 2023, the same tax accounting will apply to foreign exchange losses. In December 2022 amendments to Russian tax legislation were adopted, providing early implementation of new tax accounting for foreign exchange losses for the year ended 31 December 2022. The Group used this option.

In accordance with Article 3 of Federal Law No. 302-FZ dated 3 August 2018, a duration of the agreement to establish a consolidated taxpayers group (CTG), expires on 1 January 2023. In this regard, all entities of the Group that were previously part of the CTG will calculate and pay income tax independently, starting from 1 January 2023.

On 1 January 2023, amendments to the Tax code of the Russian Federation were adopted. According to them, the Group pays taxes in a single tax payment (STP) to a single tax account. At 31 December 2022, the total balance of payments to the budget included all taxes receivables and payables (net of especially separate amounts), therefore this information will be presented on a net basis in the consolidated statement of financial position.

Transfer pricing legislation enacted in the Russian Federation starting 1 January 2012 provides for major modifications making local transfer pricing rules closer to the OECD guidelines, but creating additional uncertainties as regards the actual application of tax legislation.

The impact of any additional taxation in relation to transfer pricing may be material to the financial statements of the Group. Yet, the probability of such additional taxation cannot be reliably assessed.

The transfer pricing rules provide for an obligation for the taxpayers to prepare transfer pricing documentation with respect to controlled transactions and stipulate the principles and mechanisms for accruing additional taxes and interest in case prices in the controlled transactions differ from the market level.

Current Russian transfer pricing legislation requires businesses to conduct transfer pricing analysis for the majority of cross-border and major domestic inter-company transactions. Starting 2019, transfer pricing control, as a general rule, is applied to domestic transactions only if both criteria are met: the parties apply different income tax rates, and the annual turnover of transactions between them exceeds RUB1 billion (USD16 million at RUB/USD rate at 31 December 2022).

In addition to performing transfer pricing audits, Russian tax authorities may also review prices used in intra-group transactions. They may impose additional taxes if they conclude that taxpayers have received unjustified tax benefits as a result of those transactions.

Russian tax authorities continue to exchange transfer pricing as well as other tax related information with tax authorities of other countries. This information may be used by the tax authorities to identify transactions for additional in-depth analysis.

Environmental matters

The Group is subject to extensive federal, regional and local environmental controls and regulations in the countries where it operates. The Group's operations result in air and water pollutant emissions, as well as generation and disposal of production waste.

The Group periodically evaluates its environmental provisions pursuant to the environmental legislation in the countries where it operates. Such provisions are recognised in the consolidated financial statements as and when obligating events occur.

The management of the Group believes that there are no material obligations for environmental damage other than those recognised in these consolidated financial statements. However, potential liabilities, which may arise due to changes in environmental laws and regulations, cannot be reliably estimated but may be material. The Group is unable to predict the timing or extent to which environmental laws and regulations may change. Such change, if it takes place, may require that the Group modernise its technological processes to meet more stringent statutory requirements.

Russian Federation risk

The Group's operations are primarily located in the Russian Federation. Consequently, the Group is influenced by the economic and financial markets of the Russian Federation, which display the characteristics of an emerging market. The legal, tax and regulatory frameworks continue to develop, which poses a risk of their varying interpretations and frequent change. This, together with other legal and fiscal impediments, creates additional challenges for entities operating in the Russian Federation.

Starting 2014, the United States of America, the European Union and some other countries have imposed and gradually expanded restrictive economic measures against a number of Russian individuals and legal entities. Starting February 2022, the above countries have been imposing additional stringent restrictive measures against the Russian Government, large financial institutions and other legal entities and individuals in Russia. In addition, restrictions were imposed on exports and imports of certain goods and business-relevant services, including accounting, auditing, tax and management consulting and certain legal and IT consulting services, as well as aviation and maritime transportation sectors. In light of the imposed restrictive measures, a number of large international companies from the USA, the European Union and some other countries ceased, materially reduced or suspended their activities in the Russian Federation and business relationships with Russian citizens and legal entities. Moreover, there is a risk that further restrictive measures and similar types of pressure will be imposed. In response, the Russian Government has implemented a set of economic measures in order to secure and stabilise the Russian economy, as well as retaliatory restrictive measures, currency control measures, a number of key interest rate changes and other special economic measures.

The imposition and further tightening of the restrictive measures has led to an increased economic uncertainty, including the lowering of liquidity and high volatility in the equity markets, volatility of the Russian rouble exchange rates and key interest rate, a reduction in both local and foreign direct investment inflows, procedural difficulties in currency payments for Russian issuers and significant limitations in the availability of debt financing. In addition, many Russian companies are practically devoid of access to international stock and debt capital markets, thus having to look for alternative ways to raise financing and growing more dependent on the state support. The Russian economy is in the process of adaptation, involving the substitution of export markets that become unavailable, replacement of procurement and technology import markets, as well as changes in the logistics and production chains.

On 28 February 2022, the stock market of the Moscow Exchange discontinued trading in shares and corporate bonds. Trading in shares and corporate bonds on the Moscow Exchange was resumed in late March 2022, while restrictions continue to apply to a number of securities transactions made by non-residents of Russia. On 3 March 2022, the London Stock Exchange suspended trading in depositary receipts issued for the Company's ordinary shares; trading has not been resumed as of the date of approval of these consolidated financial statements. In accordance with Federal Law No. 114-FZ On Amendments to the Federal Law On Joint-Stock Companies and Certain Legislative Acts of the Russian Federation automatic and a forced conversion of depositary receipts into the Company's shares was implemented. Depositary receipts the rights to which are recorded by Russian depositories were converted automatically. Depositary receipts the rights to which are recorded by foreign depositaries could be converted based on an application until 10 November 2022. Before the end of the reporting period as a part of the forced conversion, the Company's shares were credited to the applicants that submitted the required documents. At 31 December 2022, the total percentage o Company shares remaining on depo accounts of depository programs corresponded to 6.7% of share capital of the Company.

On 28 April 2023, the permit for circulation of the Company depositary receipts outside Russia lapses. From that day forward any Company shares accounted for on depo accounts of depository programs will not be vested with voting rights for holders, will not be counted when votes are tallied and no dividends will be accrued on them.

On 21 July 2022 and on 26 July 2022 t he European Union and Great Britain respectively, introduced a ban against the import of gold of Russian origin on top of other restrictive measures.

On 16 December 2022, the European Union, among other restrictive measures, introduced a ban on investments in the mining industry in Russia and also banned the supply of various equipment, including industrial. At the same time in accordance with the European Union ruling these restrictive measures do not apply to mining and production of palladium, nickel, copper, cobalt, rhodium and iron ore.

On 29 June 2022, the United Kingdom imposed personal restrictions against the Potanin V. O. These restrictions are mandatory within the UK and for all British citizens and legal entities registered in the UK. According to the advice of an external legal counsel and the management's assessment, these restrictions do not expand to the Group and its subsidiaries. On 15 December 2022, the US Department of the Treasury's Office of Foreign Assets Control (OFAC) updated Specially Designated Nationals and Blocked Persons List (SDN List) to include Potanin V. O. SDN list also included legal entities associated with one of the major shareholders.

OFAC also explicitly stated that the restrictive measures do not apply to the Company. However, in the current geopolitical circumstances, as each counterparty doing business with the Group independently decides on the application of its own internal restrictions on interaction with Russian legal entities, the management has to assume that some counterparties might reconsider their trade, financial or other operations with the Group.

The longer-term effects of potential additional restrictive measures are difficult to determine. Still, they may have a significant impact on the Group`s business.

Supply and distribution channels reconfiguration

In 2022, a number of suppliers fully withdrew from the Russian market, while others suspended deliveries of goods and services to Russian legal entities. As a result, procurement from these suppliers has become unavailable to the Group. Although the Group has started transition to alternative suppliers, full replacement of suppliers who left the Russian market may take a considerable time and involves additional costs and rescheduling of certain investment projects and capital commitments. Due to the need to replace some of the components, the Group is actively looking for alternative suppliers and substituting imports in order to fulfill the production program for 2023. The Group is also in the process of reconfiguring its distribution channels, which led to extended sales logistics chains and alongside with restrictive measures and time-consuming processes of reengineering the Company`s customer base and sales markets significantly increased finished goods inventories. The Group's management expects that the stocks of finished goods accumulated in 2022 will be significantly reduced in 2023 in line with the Group's sales plans for 2023.

Impact of the COVID-19 outbreak on the Group's operations

On 11 March 2020, the World Health Organization declared the COVID-1 9 outbreak a pandemic. The spread of COVID-19 led to lockdowns and business disruption in many countries, which, together with other factors, led to an increased volatility in financial markets, including commodity markets, and general economic uncertainty. The wave-like pattern of the spread of the COVID-19 infection continues to create uncertainty in business.

The Group operates primarily in mining, refining of ore and sales of base and precious metals, which have not been significantly impacted by the outbreak of COVID-19.

Based on the analysis of possible outcomes and their consequences for the economic environment and operations of the Group, the Group's management has developed and implemented a number of measures to ensure normal operating activities.

For the year ended 31 December 2022, the Group spent USD22 million in cash net of VAT (for the year ended 31 December 2021: USD66 million and for the year ended 31 December 2020: USD157 million) to prevent and combat the spread of COVID-19. Expenses in the amount of USD37 million were recognised in the consolidated income statement for the year ended 31 December 2022 (for the year ended 31 December 2021: USD67 million and for the year ended 31 December 2020: USD123 million). These expenses are presented in the following line items:

Line items of the consolidated income statement		For the year ended 31 December		
		2022	2021	2020
Cost of metal sales	Labour	1	10	45
	Materials and supplies	7	4	5
	Other costs	4	6	5
Cost of other sales	Labour and other costs	3	6	11
General and administrative expenses	Staff costs and other costs	4	11	8
Other operating expenses	Social expenses	18	30	49

The part of the amount paid for the year ended 31 December 2022 included capital expenditures of USD1 million (for the year ended 31 December 2021: USD3 million and for the year ended 31 December 2020: USD12 million). The change in inventory balances and prepayments for future supplies amounted to USD (16) million (for the year ended 31 December 2021: USD (2) million and for the year ended 31 December 2020: USD22 million).

OVERALL IMPACT OF RISKS AND UNCERTAINTIES ON THE GROUP'S FINANCIAL POSITION AND FINANCIAL RESULTS

These consolidated financial statements provide the management's point of view on the current business environment in the Russian Federation impacting the Group's operations and financial position. The Group's management is making every effort to mitigate the risks associated with the economic restrictions imposed and COVID-19 pandemic and based on the assessment of the current situation doesn`t expect a significant adverse impact on the financial position and financial results of the Group for at least 12 months after 31 December 2022. The actual impact of the future business environment may differ from the management's assessment.

The management will continue to monitor the situation closely and implement necessary measures to respond to possible adverse events as they occur.

35. FINANCIAL RISK MANAGEMENT

Capital risk management

The Group manages its capital in order to safeguard the Group's ability to continue as a going concern and to maximise the return to shareholders through the optimisation of debt (long and short-term borrowings) and equity (share capital and retained earnings) structure.

Management of the Group regularly reviews its level of leverage calculated as the ratio of Net Debt to EBITDA to ensure that it is in line with the Group's financial policy aimed at preserving investment grade credit ratings.

At 31 December 2022, 2021 and 2020 t he Company maintains credit ratings from Russian rating agency Expert RA at RUAAA investment grade level.

Financial risk factors and risk management structure

In the normal course of its operations, the Group is exposed to a variety of financial risks: market risk (including interest rate and currency risk), credit risk and liquidity risk. The Group has an explicit risk management structure aligned with internal control and analysis procedures that enable it to assess, evaluate and monitor the Group's exposure to financial risks, including their change due to the current economic situation and imposition of restrictive economic measures.

INTEREST RATE RISK

Interest rate risk relates to changes in interest rates that could adversely impact the financial results of the Group. The Group's interest rate risk arises from loans and borrowings with floating interest rates.

In order to mitigate and manage the risk, the Group carries out arrangements to maintain the balanced structure of debt portfolio which includes loans and borrowings with fixed and floating interest rates. The Group also considers this risk factor together with changes in the macroeconomic environment, particularly economic growth and increase in commodity prices, which is normally associated with higher base rates.

During the year ended 31 December 2022, the Central Bank changed its key interest rate several times following restrictive measures imposed by the USA, the EU and other countries and changes in key macroeconomic parameters, such as inflation rate and rouble exchange rate. The key interest rate was increased to 20% in the end of February, followed by a gradual decrease to 7.5% by the end of December. There were no significant fluctuations during 2021 and 2020.

At 31 December 2022, the amount of loans and borrowings of the Group with the rate linked to the key interest rate of the Central Bank of the Russian Federation is 15% of the total amount of loans and borrowings (see Note 24). The negative impact of the temporary increase in the key interest rate and the strengthening of the rouble starting the second quarter of the current year on the amount of the Group's interest expenses was not significant.

Management believes that the Group's exposure to the interest rate risk is acceptable.

A fundamental reform of major interest rate benchmarks is being actively implemented globally, including the replacement of some interbank offered rates (IBORs) with alternative nearly risk-free rates (referred to as 'IBOR reform'). The Group monitors market developments and manages transition to alternative rates. The Group's unsecured US dollar-denominated floating rate loans use USD LIBOR1M rates, which according to current plans will cease to be published after 30 June 2023. The Group signed amendments to certain loan agreements to replace LIBOR rate with the alternative rate – Term Secured Overnight Financing Rate (Term SOFR) not later than USD LIBOR publication stop date and intends to switch the remaining loan agreements with floating interest rates to the alternative rates during 2023, not later than LIBOR rates publication stop date.

CURRENCY RISK

Currency risk relates to changes in the fair value or future cash flows of a financial instrument denominated in foreign currency because of changes in exchange rates.

The major part of the Group's revenues and related trade accounts receivable are denominated in US dollars, while expenditure is primarily denominated in Russian roubles and therefore the Group is exposed to fluctuations of the USD exchange rate. Currency risk arising from other currencies is assessed by management of the Group as immaterial.

Restrictive measures imposed by the USA, the EU and some other countries with respect to the Central Bank of the Russian Federation and Russia's international reserves as well as the counter-measures of the Russian government and the Central Bank relating to capital flows controls and currency control led to an increased volatility of the rouble exchange rate. During the year ended 31 December 2022, the RUB/USD exchange rate ranged from 51.16 roubles for 1 US Dollar to 120.38 roubles for 1 US Dollar. Taking into account the exchange rates at 31 D ecember 2022, 2021 and 2020, the Group preserves its financial stability.

The currency risk is managed by analysis of currency position, efficiency control of currency exchange operations and the best possible matching of cash inflows and cash outflows denominated in the same currency, although the restrictive measures and Russia's respective counter-measures limit the efficiency and availability of the above mentioned instruments of the Group currency risk management.

If necessary, the Group uses derivative financial instruments primarily cross-currency interest rate swaps to reduce exposure to currency risk by balancing revenue cash flows denominated in US dollars and liabilities denominated in Russian roubles.

The carrying amount of cross-currency interest rate swaps is presented in Note 30. At 31 December 2022, 2021 and 2020, the carrying amounts of monetary assets and liabilities, excluding cross-currency interest rate swaps, denominated in foreign currencies other than functional currencies of the individual Group entities were as follows:

	At 31 December 2022			At 31 December 2021			At 31 December 2020		
	USD	CNY	Other currencies	USD	CNY	Other currencies	USD	CNY	Other currencies
Cash and cash equivalents	1,169	266	70	2,811	18	41	4,940	66	63
Trade and other receivables	1,425	–	134	792	–	35	638	–	15
Other assets	22	–	53	55	–	20	32	–	12
Total assets	**2,616**	**266**	**257**	**3,658**	**18**	**96**	**5,610**	**66**	**90**
Trade and other payables	761	3	63	353	–	122	277	–	106
Loans and borrowings	7,798	1,265	20	9,862	–	24	9,055	–	30
Lease liabilities	12	–	11	107	–	15	114	–	22
Other liabilities	7	–	8	23	–	–	16	–	2
Total liabilities	**8,578**	**1,268**	**102**	**10,345**	**–**	**161**	**9,462**	**–**	**160**

Given that the Group exposure to the currency risk for the USD- and CNY-denominated monetary liabilities is offset by the revenue from metal sales denominated in USD, as well as the high correlation of the CNY and the USD, management believes that the Group's exposure to the currency risk is at an acceptable level.

THE SENSITIVITY ANALYSIS OF INTEREST RATE AND CURRENCY RISKS

	Increase/(decrease) of profit be ore tax for the year ended 31 December		
	2022	2021	2020
Interest rate risk			
1 p.p. USD rate increase impact	(45)	(35)	(34)
1 p.p. RUB rate increase impact	(17)	(8)	(18)
1 p.p. CNY rate increase impact	(7)	–	–
Currency risk			
USD20% strengthening against RUB	(1,261)	(1,421)	(1,034)
CNY 20% strengthening against RUB	(200)	4	13

The sensitivity analysis is prepared including cross-currency interest rate swap effects and assuming that the amount of loans and borrowings at floating rates outstanding at the reporting date was outstanding for the whole reporting period.

CREDIT RISK

Credit risk means that a debtor will default on its contractual obligations as they fall due resulting in a financial loss to the Group. Credit risk arises from cash and cash equivalents, bank deposits, uncollateralised trade and other receivables, as well as loans issued.

The Group mitigates the credit risk through its allocation to a large number of counterparties and respective credit limits approval based on counterparties' financial position analysis and uses, if possible, trade financing and insurance instruments, bank guarantees and documentary forms of settlement.

To analyse counterparty solvency, the Group uses information from credit rating agencies about the counterparty's assigned credit ratings and projections for its changes; should such information be lacking, financial stability and overall creditworthiness is assessed by calculating financial indicators and analysing the counterparty's financial statements for several reporting periods.

The outstanding balances of five financial institutions and five largest customers are presented below. At 31 December 2022 credit rating of Russian banks according to the national scale Expert RA was not lower than RUAAA and of international banks on the international Fitch scale was not lower than A (at 31 December 2021: was not lower than BB+ on the Fitch scale and at 31 December 2020: was not lower than BB+ on the Fitch scale).

	Outstanding balance at 31 December		
Cash and cash equivalents	2022	2021	2020
Bank A	510	1,548	2,512
Bank B	366	902	800
Bank C	258	572	712
Bank D	204	541	170
Bank E	88	405	160
Other	456	1,579	837
Total	**1,882**	**5,547**	**5,191**

	Outstanding balance at 31 December		
Trade and other receivables			
Customer A	163	149	108
Customer B	160	24	32
Customer C	47	19	26
Customer D	38	18	21
Customer E	34	13	21
Other	404	245	329
Total	**846**	**468**	**537**

Management of the Group believes that the credit risk associated with cash and cash equivalents and trade and other receivables is at an acceptable level due to the high credit rating of the banks where these cash and cash equivalents are placed, as well as the implementation of measures to manage the credit risk associated with counterparties the Group interacts with.

The revision of the set of working capital management instruments and other changes in terms of financing of the Group's transactions with its customers led to a longer cash collection cycle and an increase in the accounts receivable. At 31 December 2022, the Group does not expect a significant increase in expected credit losses on receivables and other financial assets.

The Group is not economically dependent on a limited number of customers because the majority of its products are metals traded on the global commodity markets.

Information on sales to the Group's customers is presented below:

	For the year ended 31 December 2022		For the year ended 31 December 2021		For the year ended 31 December 2020	
	Revenue USD million	%	Revenue USD million	%	Revenue USD million	%
Largest customer	1,950	12	3,431	19	2,541	16
Next 9 largest customers	5,861	35	6,169	35	5,596	36
Total 10 largest customers	**7,811**	**47**	**9,600**	**54**	**8,137**	**52**
Remaining customers	9,065	53	8,252	46	7,408	48
Total	**16,876**	**100**	**17,852**	**100**	**15,545**	**100**

The following table provides information about the exposure to credit risk for financial assets:

	Note	At 31 December 2022	2021	2020
Cash and cash equivalents	20	1,882	5,547	5,191
Derivative financial instruments (assets)	16	42	10	1
Loans and other long-term receivables	16	100	59	113
Trade and other receivables (excluding trade receivables measured at fair value through profit and loss)	19	283	220	198
Cover for irrevocable letters of credit	15	–	–	14
Bank deposits not included in cash and cash equivalents	16	11	46	11

LIQUIDITY RISK

Liquidity risk is the risk that the Group will not be able to settle all liabilities as they fall due.

The Group's centralised treasury regularly monitors forecasted and actual cash flows and analyses the repayment schedules to take timely and appropriate measures in order to minimise potential adverse effects, including through liquidity management and proactive loan portfolio management aimed at minimising the amount of short-term debt and maintaining the weighted average term of the loan portfolio at an acceptable level.

Current liquidity management involves detailed budgeting procedures, as well as analysis and structuring of a daily payment position for a 30-day period. The payment position is calculated separately for each currency and bank account. In addition to the continuous analysis of the payment position, at least three times a month the Group updates its rolling cash flow forecast model with a horizon of up to 12 months.

The Group manages liquidity risk by creating a reserve of liquid funds and maintaining a portfolio of committed credit facilities and overdrafts from a number of banks at a level sufficient to cover possible revenue fluctuations taking into account market risks.

In particular, the Group had available committed credit facilities and overdrafts to finance its day-to-day liquidity requirements of USD2,788 million at 31 December 2022 (31 December 2021: USD3,500 million and 31 December 2020: USD3,313 million).

The Group continues its activities on the expansion of credit limits capacity and diversification of its portfolio of committed and treasury credit lines from the biggest Russian banks. The Group considers all available options for raising financing on the Russian market and holds negotiations with international financial institutions as part of proactive debt portfolio management in order to optimise the average duration of the debt portfolio and avoid excess concentration of debt payments.

In accordance with the granted government licence on foreign currency payments of debt and interest to foreign creditors, the Group continues to service its debt in compliance with the terms of respective loan or bonds facilities, including timing and currency of payments.

In September 2022, the consent of the holders of all 5 Eurobond issues of the Group was obtained to amend the transaction documentation, according to which the Company received the right to make payments to holders of Eurobonds in Russian depositories, bypassing a foreign paying agent, which allowed to (a) ensure compliance with the requirements of Russian legislation and (b) continue payments to foreign depositories through a payment agent.

The following table shows the maturity profile of the Group's borrowings, lease liabilities and derivative instruments (maturity profiles for trade and other payables are presented in Note 28) based on contractual undiscounted payments, including interest

At 31 December 2022	Total	Due in the first year	Due in the second year	Due in the third year	Due in the fourth year	Due in the fifth ear	Due there-after
Fixed rate bank loans and borrowings							
Principal	4,022	1,000	1,105	1,417	500	–	–
Interest	387	155	134	84	14	–	–
	4,409	**1,155**	**1,239**	**1,501**	**514**	**–**	**–**
Floating rate bank loans and borrowings							
Principal	7,488	3,303	2,084	1,675	414	7	5
Interest	480	240	147	80	13	–	–
	7,968	**3,543**	**2,231**	**1,755**	**427**	**7**	**5**
Lease liabilities							
Lease liabilities	**522**	**63**	**54**	**34**	**23**	**21**	**327**
Cross-currency interest rate swap							
Payable	375	11	364	–	–	–	–
Receivable	(368)	(23)	(345)	–	–	–	–
	7	**(12)**	**19**	**–**	**–**	**–**	**–**
Total	**12,906**	**4,749**	**3,543**	**3,290**	**964**	**28**	**332**

At 31 December 2021	Total	Due in the first year	Due in the second year	Due in the third year	Due in the fourth year	Due in the fifth year	Due there-after
Fixed rate bank loans and borrowings							
Principal	4,591	1,504	1,000	1,087	500	500	–
Interest	**407**	**193**	**97**	**76**	**27**	**14**	**–**
	4,998	**1,697**	**1,097**	**1,163**	**527**	**514**	**–**
Floating rate bank loans and borrowings							
Principal	5,676	107	2,166	2,100	614	676	13
Interest	221	88	71	40	14	8	–
	5,897	**195**	**2,237**	**2,140**	**628**	**684**	**13**

At 31 December 2021	Total	Due in the first year	Due in the second year	Due in the third year	Due in the fourth year	Due in the fifth year	Due there-after
Lease liabilities							
Lease liabilities	**279**	**65**	**50**	**45**	**31**	**20**	**68**
Cross-currency interest rate swap							
Payable	426	12	12	402	–	–	–
Receivable	(409)	(24)	(24)	(361)	–	–	–
	17	**(12)**	**(12)**	**41**	**–**	**–**	**–**
Total	**11,191**	**1,945**	**3,372**	**3,389**	**1,186**	**1,218**	**81**

At 31 December 2020	Total	Due in the first year	Due in the second year	Due in the third year	Due in the fourth year	Due in the fifth year	Due there-after
Fixed rate bank loans and borrowings							
Principal	4,299	4	1,504	1,000	1,088	500	203
Interest	656	213	203	106	86	36	12
	4,955	**217**	**1,707**	**1,106**	**1,174**	**536**	**215**
Floating rate bank loans and borrowings							
Principal	5,387	7	345	2,558	2,055	400	22
Interest	312	105	103	74	29	1	–
	5,699	**112**	**448**	**2,632**	**2,084**	**401**	**22**
Lease liabilities							
Lease liabilities	**288**	**61**	**61**	**48**	**41**	**26**	**51**
Cross-currency interest rate swap							
Payable	1,364	938	12	12	402	–	–
Receivable	(1,305)	(893)	(24)	(24)	(364)	–	–
	59	**45**	**(12)**	**(12)**	**38**	**–**	**–**
Total	**11,001**	**435**	**2,204**	**3,774**	**3,337**	**963**	**288**

Reconciliation of changes in liabilities and cash flows from financing activities:

	Loans and borrowings	Lease liabilities	Derivatives fina cial instruments (liabilities)	Total
Balance at 1 January 2020	**9,620**	**224**	**(101)**	**9,743**
Proceeds from loans and borrowings	2,903	–	–	2,903
Repayments of loans and borrowings	(2,552)	–	–	(2,552)
Payments of lease liabilities	–	(46)	–	(46)
Proceeds on exchange of flows under cross-currency interest rate swaps	–	–	38	38
Changes from financing cash fl ws	**351**	**(46)**	**38**	**343**
Other non-cash changes:				
Recognition of lease liabilities	–	90	–	90
Changes in fair value of the cross-currency interest rate swap	–	–	182	182
Effect of changes in foreign exchange rates	(321)	(6)	17	(310)
Borrowing costs and amortisation of loans at effective interest rate	(16)	–	–	(16)
Balance at 31 December 2020	**9,634**	**262**	**136**	**10,032**
Proceeds from loans and borrowings	1,000	–	–	1,000
Repayments of loans and borrowings	(415)	–	–	(415)
Payments of lease liabilities	–	(55)	–	(55)
Proceeds on exchange of flows under cross-currency interest rate swaps	–	–	4	4
Changes from financing cash fl ws	**585**	**(55)**	**4**	**534**
Other non-cash changes:				
Recognition of lease liabilities	–	37	–	37
Changes in fair value of the cross-currency interest rate swap	–	–	(68)	(68)
Effect of changes in foreign exchange rates	(4)	(9)	–	(13)
Borrowing costs and amortisation of loans at effective interest rate	11	–	–	11
Balance at 31 December 2021	**10,226**	**235**	**72**	**10,533**
Proceeds from loans and borrowings	9,104	–	–	9,104
Repayments of loans and borrowings	(7,775)	–	–	(7,775)
Payments of lease liabilities	–	(50)	–	(50)

	Loans and borrowings	Lease liabilities	Derivatives fina cial instruments (liabilities)	Total
Payments on exchange of flows under cross-currency interest rate swaps	–	–	(19)	(19)
Changes from financing cash fl ws	**1,329**	**(50)**	**(19)**	**1,260**
Other non-cash changes:				
Recognition of lease liabilities	–	169	–	169
Changes in fair value of the cross-currency interest rate swap	–	–	18	18
Effect of changes in foreign exchange rates	153	(17)	(4)	132
Changes arising from disposal of subsidiaries	–	(96)	–	(96)
Borrowing costs and amortisation of loans at effective interest rate	(224)	–	–	(224)
Other	–	(8)	–	(8)
Balance at 31 December 2022	**11,484**	**233**	**67**	**11,784**

Interest payable on loans and borrowings and lease liabilities (Note 25) arising from financing activities is short-term and is paid within 12 months from the date of accrual.

36. FAIR VALUE OF FINANCIAL INSTRUMENTS

Financial instruments that are measured at fair value subsequent to initial recognition, are grouped into Levels 1 to 3 of fair value hierarchy based on the degree to which their fair value is observable as follows:

- Level 1 fair value measurements are those derived from quoted prices (unadjusted) in active markets for identical assets or liabilities;
- Level 2 fair value measurements are those derived from inputs other than quoted prices included within Level 1 that are observable for the assets or liabilities, either directly or indirectly;
- Level 3 fair value measurements are those derived from valuation techniques that include inputs for the assets or liabilities that are not based on observable market data.

The management believes that the carrying value of financial instruments such as cash and cash equivalents (Note 20), other financial assets (Note 16), trade and other receivables except for trade and other receivables at fair value through profit or loss (Note 19), trade and other payables (Note 28) and lease liabilities (Note 25) either approximates to their fair value or may not significantly differ from it. The fair value of trade and other receivables at fair value through profit or loss, as well as the level of the fair value hierarchy and the method of measuring are disclosed in Note 19.

At 31 December 2020 other current liabilities measured at fair value through profit or loss included a liability on the execution of a put option held by owners of 13.3% non-controlling interest in the share capital in LLC "GRK "Bystrinskoye" in the amount of USD428 million.

Since the non-controllling interest owners did not exercise their right under the put option before its expiry date of 31 December 2021, the Group derecognised the liability on the execution of the put option as at 31 December 2021. The Group presented derecognition of the liability directly in the consolidated statement of changes in equity as Other effects related to transactions with non-controlling interest owners in the amount of USD490 million, which was its fair value at 31 December 2021 immediately before derecognition. The fair value of the liability at all applicable dates was determined based on the discounted cash flows of LLC "GRK "Bystrinskoye" less its net debt taking into account the amount of working capital at the reporting date and with the relevant discount reflecting the non-controlling ownership interest. The fair value estimate is within Level 3 of fair value hierarchy. The most significant estimates and assumptions used in determination of the fair value were as follows:

- Future cash flows were forecast up to 2044 based on budgeted amounts, taking into account actual results for the previous years as well as capital expenditure budgets;
- Prices for metal concentrates and iron ore were estimated by the Group's management using consensus forecasts for commodity prices;
- Metals concentrate (copper and iron ore concentrate) production and sales forecast was based on production reports available at the reporting date and the life of mine plan taking into account the current production capacity and current estimates of metal content in ore reserves;
- The inflation and exchange rate forecasts were based on Oxford Economics data consistent with a consensus forecast of investment banks. Forecast for exchange rate was made based on expected RUB and USD inflation indices;
- An after-tax nominal RUB discount rate of 13.9% at 31 December 2021 (31 December 2020: 13.8%) was estimated by reference to the weighted average cost of capital and the management's estimates of the risks specific to the asset.

Change in the fair value of the liability on the execution of the put option for 2021 till the date of derecognition amounted to USD66 million included in the financial costs of the consolidated income statement (31 December 2020: USD262 million). The estimation of fair value of the liability on the execution of the put option was sensitive to changes in the number of key assumptions. The sensitivity analysis at 31 December 20 20 is disclosed in the table below:

	Change of parameters			
Increase in fair value of the liability on the execution of the put option	Decrease in discount rate by 1 p.p.	Weakening of RUB/USD exchange rate by 10%	Increase of copper price by 10%	Increase of gold price by 10%
At 31 December 2020	25	70	37	36

The information below presents financial instruments not measured at fair value, including loans and borrowings (Note 24), trade and other long-term payables (Note 28).

	At 31 December 2022		At 31 December 2021		At 31 December 2020	
	Carrying value	Fair value Level 1	Carrying value	Fair value Level 1	Carrying value	Fair value Level 1
Fixed rate bonds	4,156	3,323	4,574	4,639	4,277	4,512
Total bonds	**4,156**	**3,323**	**4,574**	**4,639**	**4,277**	**4,512**
	Carrying value	Fair value Level 2	Carrying value	Fair value Level 2	Carrying value	Fair value Level 2
Floating rate loans	6,766	6,535	5,648	5,439	5,349	5,309
Fixed rate loans	–	–	4	4	8	8
Fixed rate bonds	562	562	–	–	–	–
Total loans	**7,328**	**7,097**	**5,652**	**5,443**	**5,357**	**5,317**
	Carrying value	Fair value Level 2	Carrying value	Fair value Level 2	Carrying value	Fair value Level 2
Trade and other long-term payables	56	56	55	55	32	32
Total trade and other long-term payables	**56**	**56**	**55**	**55**	**32**	**32**

The fair value of financial liabilities presented in the table above is determined as follows:

- the fair value of corporate bonds (Level 1 of fair value hierarchy) was determined as their market price at the reporting dates;
- the fair value of floating rate and fixed rate loans and borrowings and corporate bonds (Level 2 of fair value hierarchy) at 31 December 2 022, 2021 and 2020 was determin ed as the present value of future cash flows (principal and interest), discounted at the market interest rates, which are determined as of the reporting date based on the currency of a loan, its expected maturity and credit risks attributable to the Group;
- the fair value of trade and other long-term payables at 31 Decembe r 2022, 2021 and 2020 was determi ned as the present value of future cash flows, discounted at the best management estimate of market interest rates.

37. INVESTMENTS IN SIGNIFICANT SUBSIDIARIES

Subsidiaries by operating segments	Country	Nature of business	Effective % held		
			31 December 2022	31 December 2021	31 December 2020
GMK Group					
JSC “Norilsky Kombinat”	Russian Federation	Rental of property	100	100	100
JSC “Norilskgazprom”	Russian Federation	Gas extraction	100	100	100
JSC “Norilsktransgaz”	Russian Federation	Gas transportation	100	100	100
JSC “NTEK”	Russian Federation	Electricity production and distribution	100	100	100
LLC “ZSC”	Russian Federation	Construction	100	100	100
LLC “Norilsknickelremont”	Russian Federation	Repairs	100	100	100
LLC “Norilskyi obespechivaushyi complex”	Russian Federation	Production of spare parts	100	100	100
South Cluster					
LLC “Medvezhyi ruchey”	Russian Federation	Ore mining and processing	100	100	100
KGMK Group					
JSC “Kolskaya GMK”	Russian Federation	Mining and metallurgy	100	100	100
LLC “Pechengastroy”	Russian Federation	Repairs	100	100	100
Norilsk Nickel Harjavalta					
Norilsk Nickel Harjavalta OY	Finland	Metallurgy	100	100	100
GRK Bystrinskoye					
LLC “GRK “Bystrinskoye”	Russian Federation	Ore mining and processing	50.01	50.01	50.01
LLC “Vostokgeologiya”	Russian Federation	Geological works and construction	100	100	100
Other non-metallurgical					
Metal Trade Overseas A.G.	Switzerland	Distribution	100	100	100
Norilsk Nickel (Asia) Limited	Hong Kong	Distribution	100	100	100
Norilsk Nickel Metal Trade (Shanghai)	China	Distribution	100	100	100
Norilsk Nickel USA, Inc.	USA	Distribution	100	100	100
LLC “Institut Gypronickel”	Russian Federation	Research	100	100	100
JSC “TTK”	Russian Federation	Supplier of fuel	100	100	100
JSC “ERP”	Russian Federation	River shipping operations	100	100	100
LLC “Aeroport Norilsk”	Russian Federation	Airport	100	100	100
JSC “AK “NordStar”	Russian Federation	Air company	-	100	100

Joint operations by operating segments	Country	Nature of business	Effective % held		
			31 December 2022	31 December 2021	31 December 2020
Other mining					
Nkomati Nickel Mine	Republic of South Africa	Ore mining and processing	50	50	50

GLOSSARY

Anode. Crude metal (nickel or copper) obtained from anode smelting and fed for electrolytic refining (electrolysis) whereby it is dissolved.

Refi ement. The process of extracting high purity precious metals through their separation and removal of impurities.

Rich ores. Ores with high sulphide content (over 70%) and the following metal grades: 2–5% for nickel, 2–25% for copper, and 5–100 g/t for platinum group metals.

Probable ore reserves. Estimated based on the economically mineable part of indicated and, in some circumstances, measured mineral resources, including possible dilution and losses during mining operations.

Disseminated ores. Ores containing 5% to 30% sulphides, with the following metal grades: 0.2–1.5% for nickel, 0.3–2% for copper, and 2–10 g/t for platinum group metals.

Leaching. Selective dissolution of one or several components of the processed solid material in organic solvents or water solutions of inorganic substances. Kinds of leaching: acid leaching (leaching with acids as reagents), chlorine leaching.

Proven ore reserves. Estimated based on the economically mineable part of measured mineral resources, including possible dilution and losses during mining operations.

Metal extraction. The ratio between the quantity of a component extracted from the source material and its quantity in the source material (as a percentage or a fraction).

Cathode. Pure metal (nickel or copper) obtained as a result of electrolytic refining of anodes.

Cake. Solid residue from filtering pulp during leaching of ores, concentrates or metallurgical intermediates, and purification of processing solutions.

Conversion. Oxidation process to turn matte into converter matte (in smelting copper-nickel concentrates) or blister copper (in smelting copper concentrates) and remove slag (carbon, sulphur, iron and other impurities).

Concentrate. A product of ore concentration with a high grade of the extracted mineral, which gives its name to the concentrate (copper, nickel, etc.).

Cuprous ores. Ores containing 20% to 70% sulphides, with the following metal grades: 0.2–2.5% for nickel, 1.0–15.0% for copper, 5–50 g/t for platinum group metals.

Roasting. Heating ore to high temperatures to trigger chemical changes that enable subsequent metal recovery processes.

Concentration. Artificial improvement of metallurgical feedstock mineral grades by removal of a major portion of waste rock not containing any valuable minerals.

Oxide. A compound of a chemical element with oxygen.

Tailings pit. A complex of hydraulic structures used to receive and store mineral waste / tailings.

Vanyukov furnace. An autogenous smelter for processing concentrates, where smelting is performed in a bath of slag and matte, with intensive injection of air-oxygen mixture. The heat from oxidation reactions is actively used in the process.

Flash smelter. An autogenous smelter for processing dry concentrates, where the smelted substance is finely ground feedstock mixed with a gaseous oxidiser (air, oxygen), which holds melted metal particles suspended. The heat from oxidation reactions is actively used in the process.

Pyrrhotite concentrate. By-product of copper-nickel ore concentration.

Smelting. Pyrometallurgical process carried out at temperatures that ensure complete melting of the processed material.

Sublevel caving. An underground mining method in which ore blocks are developed from top to bottom via sublevels, and ore is extracted by blasting or causing sublevels to cave in. The voids formed after extraction get filled with fractured rock.

Pulp. A mixture of finely ground rock with water or a water solution.

Ore. Natural minerals containing metals or their compounds in economically valuable amounts and forms.

Mine. A mining location for extraction of ores.

Thickening. Separation of liquid (water) and solid particles in dispersion systems (pulp, suspension, colloid) based on natural gravity settling of solid particles in settlers and thickeners, or centrifugal settling of solid particles in hydrocyclones.

Metal grade. The ratio between the weight of metal in the dry material and the total dry weight of the material expressed as a percentage or grammes per tonne (g/t).

Sulphides. Compounds of metals and sulphur.

Drying. Removal of moisture from concentrates performed in designated drying furnaces (to a moisture level below 9%).

Tolling agreement. An agreement to process foreign feedstock with subsequent shipping of finished product. The feedstock and end product are exempt from customs duties.

Converter matte. A metallurgical intermediate produced as a result of matte conversion. Depending on the chemical composition, the following types of converter matte are distinguished: copper, nickel and copper-nickel.

Filtration. The process of reducing the moisture level of the pulp by forcing it through a porous medium.

Flotation. A concentration process where specific mineral particles suspended within the pulp attach to air bubbles. Poorly wettable mineral particles attach to the air bubbles and rise through the suspension to the top of the pulp, producing foam, while well wettable mineral particles do not attach to the bubbles and remain in the pulp. This is how the minerals are separated.

Tailings. Waste materials left over after concentration processes and containing mostly waste rock with a minor amount of valuable minerals.

Ore mixture. A mixture of materials in certain proportions needed to achieve the required chemical composition of the end product.

Slag. Melted or solid substance with a varying composition that covers the surface of a liquid product during metallurgical processes (resulting from ore mixture melting, melted intermediate processing and metal refining) and includes waste rock, fluxes, fuel ash, metal sulphides and oxides, and products of interaction between the processed materials and lining of melting units.

Sludge. Powder product containing precious metals settling during electrolysis of copper and other metals.

Matte. Intermediate product in the form of an alloy of sulphides of iron and non-ferrous metals with a varying chemical composition. Matte is the main product accumulating precious metals and metal impurities the feedstock contains.

Electrolysis. A series of electrochemical reduction-oxidation reactions at electrodes immersed in an electrolyte as a result of passing of an electric current from an external source.

Electrowinning. Electrodeposition of metal from ores that have been put in solution. Ore or concentrate is leached with agents that dissolve metal-containing minerals or the entire material, so that the metal is deposited on the cathode. The electrolyte is typically reused in the process. The end product is high-purity metal cathode.

Measurement units

Length	
1 km	0.6214 mi
1 m	3.2808 ft
1 cm	0.3937 in
1 mi	1.609344 km
1 foot	0.3048 m
1 in	2.54 cm

Area	
1 sq m	10.7639 sq ft
1 sq km	0.3861 sq mi
1	2.4710 acres
1 sq ft	0.09290304 sq m
1 sq m	2.589988 sq km
1 acre	0.4046873 ha

Weight	
1 kg	2.2046 lb
1 metric tonne	1,000 kg
1 short tonne	907.18 kg
1 troy ounce	31.1035 g
1 lb	0.4535924 kg
1 g	0.03215075 oz t

Currency exchange rates in 2020–2022

Index	2020	2021	2022
Average rate Russian Rouble / US Dollar	72.15	73.65	68.55
Average effective rate Russian Rouble / US Dollar (for CAPEX)	73.15	73.42	66.96

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Disclaimer

The information herein relies on the data available to MMC Norilsk Nickel as at the date of this Annual Report.

After this Annual Report was prepared, the Company's operations, forecasts and descriptions of the «current situation», and the report content may have been affected by external or other factors, including the escalation of the geopolitical conflict in Ukraine, sanctions imposed by the United States of America, the European Union, the United Kingdom and other nations against the Russian Federation, Russian individuals and legal entities, Russian Federation's response to sanctions, economic and other measures introduced to maintain the economic and financial stability of the Russian Federation, the COVID-19 pandemic and other factors beyond the Company's control. In particular, the United States, the European Union, the United Kingdom, and other nations have imposed export controls against the Russian Federation that restrict, among other things, supply of industrial equipment to the Russian Federation. These export controls may have a negative impact on the manufacturing capabilities of MMC Norilsk Nickel, should it be unable to purchase and deliver equipment to the Russian Federation.

The Annual Report discloses the Company's short-, medium-, and long-term goals and plans. All plans and intentions outlined in this Annual Report are provisional and subject, among other things, to a number of economic, political and legal factors, including the factors mentioned above, beyond Nornickel's control.

Forward-looking statements are subject to risks and uncertainties as they refer to events and depend on circumstances that may or may not occur in the future. Forward-looking statements are not guarantees of the Company's future operational and financial performance, and actual results of the Company's operations, its financial position, liquidity, prospects, growth, strategy, and the development of the industry in which MMC Norilsk Nickel operates may differ materially from those expressed or implied by the forward-looking statements contained in this annual report. MMC Norilsk Nickel hereby disclaims any liability for any loss resulting from the use of this annual report, and assumes no obligation to update any forward-looking statements contained herein.

Information about market share and other statements regarding the industry in which MMC Norilsk Nickel operates, as well as the Company's position relative to its competitors is based on publicly available information published by other metals and mining companies or obtained from trade and business organisations and associations. Such data and statements have not been independently verified, and the financial and operating performance metrics of MMC Norilsk Nickel's competitors used to assess and compare positions may have been calculated differently from the method used by MMC Norilsk Nickel.

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