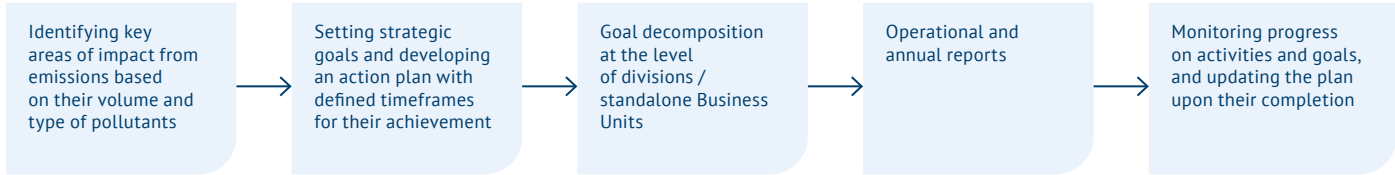


Air

GRI 413-2 GRI 14.10.3

Nornickel’s approach to air protection



MMC Norilsk Nickel's operations emit over 60 air pollutants, with sulphur dioxide accounting for 97% of their total volume. One of Nornickel's [2031 Environmental and Climate Change Strategy](#) priorities is to cut sulphur dioxide emissions.

In line with the [Environmental Policy](#), MMC Norilsk Nickel and its Business Units undertake to implement strategic environmental projects and initiatives

to reduce emissions. Our major effort in this area in terms of scale and funding is the Sulphur Project, a landmark initiative under the Clean Air federal project (the Ecological Well-Being national project).

Sulphur Project

The technology of Nornickel's flagship environmental project to capture and recover sulphur dioxide (SO₂) comprises converting off-gases of metallurgical operations into sulphuric acid and then neutralising it to produce gypsum. The resulting gypsum pulp from the neutralisation process is stored in a dedicated gypsum storage facility.

Comprehensive testing of the first process line was started at Nadezhda Metallurgical Plant in autumn 2023, with the line gradually ramped up to full capacity during 2024.

In 2024, construction of the principal and infrastructure facilities continued, various pieces of process equipment were installed, and pre-commissioning and comprehensive testing were

conducted. A second sulphuric acid production line was commissioned to increase sulphur dioxide recovery through the recovery of off-gases from the plant's second flash smelting furnace.

At the sulphuric acid production section, construction work was carried out on the third sulphuric acid production line. Its subsequent launch will enable continuous sulphuric acid production across the full circuit, ensuring the project's sulphur dioxide recovery targets are met while also allowing for timely equipment maintenance.

A more than 99% recovery rate was achieved, a figure confirmed by government agencies during control and oversight inspections. An increase in sulphur dioxide recovery by up to two times is projected for 2025.

Total investment in the comprehensive project at Nadezhda Metallurgical Plant is projected to reach RUB 250 billion upon full completion.

The first results of the Sulphur Project at Nadezhda Metallurgical Plant led to a record annual reduction in sulphur dioxide emissions in 2024.

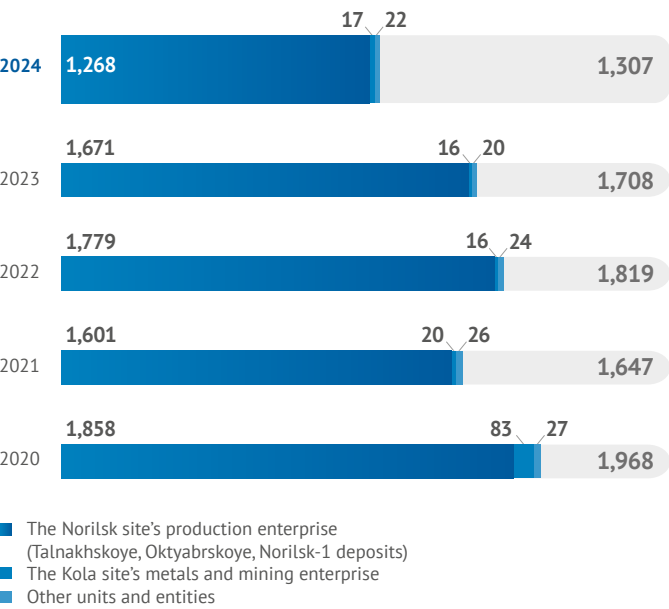
Upgrades of assets

In order to reduce air pollution, the Kola site's metals and mining enterprise continued to implement a number of activities in 2024 as part of the project to upgrade the system for dust removal from gases generated by the local refining shop. The Company replaced electrostatic precipitators for treating off-gases from fluidised bed furnaces, installed advanced heat-exchange

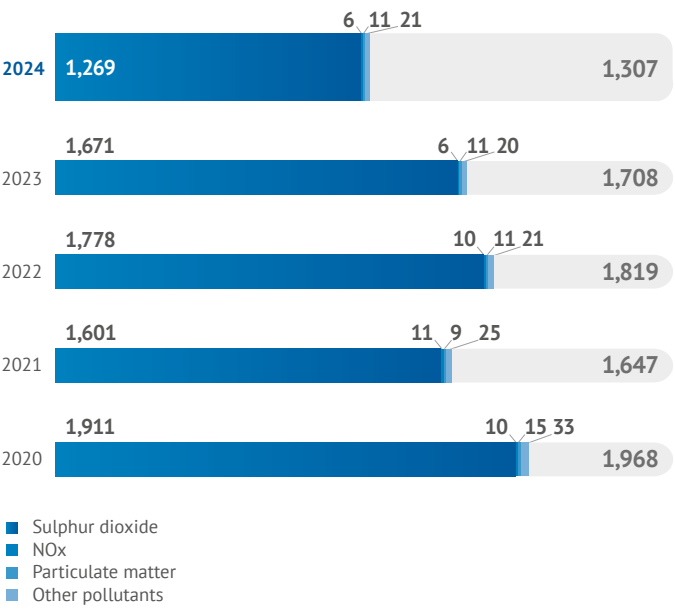
equipment, and revamped the sulphuric acid section. The installation of state-of-the-art equipment will enhance the dust removal from off-gases generated by the refining shop's fluidised bed furnaces before the gases are directed to the sulphuric acid section. This will improve gas recovery and the quality of the resulting sulphuric acid, thereby reducing emissions of sulphur compounds.

GRI 305-7 / SASB EM-MM-120a.1 / MED-19 GRI 14.3.2

Air emissions by pollutant (kt)



Air pollutant emissions (kt)



In 2024, the Group's total emissions amounted to 1.3 mln t, down 23.5% y-o-y.

This significant decline was driven by the launch of two process lines under the Sulphur Project for comprehensive testing, which boosted the sulphur dioxide recovery rate at Nadezhda Metallurgical Plant to 99.1%.

Importantly, the Company achieved this record reduction in emissions while maintaining output close to 2023 levels.



Use of ozone-depleting substances

Nornickel neither produces nor uses ozone-depleting substances (ODS) in its products, except for extremely limited amounts with the following applications:

- A chemical agent for laboratory-based chemical analysis
- Filling and topping up compressors in air conditioning units, industrial air conditioners, and carbonated water machines, using refrigerant as a cooling agent for medium- and low-temperature refrigerating equipment

The Company reports on the use of such substances to the Russian Ministry of Natural Resources and Environment as required.

There were no ODS emissions in 2024.

6 sources

at Nadezhda Metallurgical Plant

1 source

at Copper Plant

16

environmental
monitoring
stations

were installed
in the Norilsk Industrial
District to set up
the system

Environmental monitoring programme: an automated emissions control system and compact atmospheric air quality monitoring stations

The programme targets two areas: mandatory government emissions control and voluntary urban air quality monitoring.

Compliance with legal requirements is ensured through the implementation of an automated emissions control systems at enterprises, which transmit data to regulatory authorities every 20 minutes on a continuous basis. An automated emissions control system is already used at Nadezhda Metallurgical Plant, with another system piloted at Copper Plant. In 2025, the Company plans to use these control systems to track the reduction in sulphur dioxide emissions as a result of the Sulphur Project at Nadezhda Metallurgical Plant.

In 2024, Nornickel launched the first integrated real-time air quality monitoring system for urban communities¹ in the Arctic Circle. The air quality index is calculated based on the extent to which permissible concentration limits are exceeded for four major pollutants. Current air quality indicators of the Norilsk Urban District are available on Norilsk’s official website.

In addition to observations, the Company forecasts pollution levels, which is especially important during periods of adverse weather conditions, when the accumulation of pollutants in the atmosphere is particularly active. Specialised systems using artificial intelligence analyse air flow patterns and predict the trajectory of emission plumes in advance. To reduce the risk of air pollution, Nornickel may scale back production ahead of adverse weather conditions.

“

Nornickel consistently meets all commitments made by the Company under the Clean Air federal project, using the most advanced methods and best available technologies. This is a powerful example of how honouring our commitments can drive positive change. The launch of the air quality monitoring system in Norilsk became a symbol of the Company’s responsibility not only to the government, but also to the region, the city’s residents, and employees.

Norilsk residents are the primary beneficiaries of the system, which was originally designed with them in mind. Any Norilsk resident can access reliable information about the city’s air quality at any time. In doing so, the Company – being a backbone enterprise for Norilsk – demonstrates its commitment to transparency.

Alexander Popov,
Senior Vice President – Chief Operating Officer,
Head of Polar Division

¹ Norilsk, Kayerkan District, Talnakh.

Stakeholder engagement on air protection

Nornickel is a member of TC-457 Air Quality and TC-409 Environmental Protection technical standardisation committees. We review draft national standards in air protection and technical specifications for gas analysers.

The Company’s representatives sit on the working groups of the Committee for the Environment and Nature Management of a nationwide organisation

representing the interests of the business community and the Public Council of the Russian Ministry of Natural Resources and Environment.

During 2024, the Company engaged with the Project Management Office of the Clean Air federal project, VNII Ecology, the Federal Service for Supervision of Natural Resources, and the Federal Service for Hydrometeorology and Environmental Monitoring.

Water

Protection of water bodies

GRI 303-1, 303-2, 303-3, 303-4, 303-5 / UNCTAD B.1.1, B.1.2, B.1.3 / SASB EM-MM-140a.2

GRI 14.7.2, 14.7.3, 14.7.4, 14.7.5, 14.7.6

81%

of all water used
by the Company in 2024
was recycled and reused

Under the [2031 Environmental and Climate Change Strategy](#) and the [Position Statement on Water Stewardship](#), the Company is committed to reduce its impact on water bodies. Nornickel is committed to the sustainable use of water resources, adhering to national laws and leading industry standards, while actively engaging with stakeholders on water management matters.

For a list of Nornickel’s key water management principles, please see [Nornickel’s 2023 Sustainability Report](#).



No major impact of Nornickel’s operations on water bodies was identified; water withdrawal was within the pre-approved limits in 2024



Nornickel does not operate in areas with water stress²; accordingly, no water stress is reported across the Company’s footprint³



Sufficient volumes of water were supplied to Group enterprises and local communities

The Company withdraws water for production needs and discharges wastewater strictly in line with the pre-approved limits. Nornickel uses water from surface and underground sources for utility, drinking, and production needs, and also recycles and reuses it⁴. To promote water stewardship and reduce fresh water withdrawal, Nornickel operates a closed-loop water system.

Nornickel routinely monitors the quality of its wastewater to ensure compliance with regulatory requirements. Wastewater quality is assessed in accredited laboratories at legally mandated intervals. Wastewater discharges have no major impact on biodiversity of water bodies and related habitats.

All of the Company’s programmes include measures to ensure that concentrations of substances in wastewater meet regulatory requirements. Domestic sewage discharge points are equipped with biological or physicochemical treatment facilities bringing water released into water bodies in line with the applicable water quality standards.

Some production and mine wastewater is sent for reuse in industrial processes (to the concentrator as well as to sulphuric acid neutralisation under the Sulphur Project).

² According to the World Resources Institute (WRI)’s Aqueduct Water Risk Atlas.

³ The methodology to identify water-scarce areas is based on the data of the Aqueduct project of the World Resources Institute and climate zoning of the Russian Federation.

⁴ The Company does not withdraw water from protected areas or bodies included in the Ramsar Convention on Wetlands of International Importance.