

SUSTAINABILITY REPORT

ABOUT NORII SK NICKEL GROUE

HUMAN CAPITA

## **Emergency preparedness and response system for tailing dumps**

Federal Law No. 68-FZ On Protection of the Population and Territories from Natural and Man-made Emergencies dated 21 December 1994

Federal Law No. 117-FZ On Safety of Hydraulic Structures dated 21 July 1997

Rostechnadzor Order No. 497 On Approval of the Form of Regular Inspection Certificate for a Hydraulic Structure dated 4 December 2020

EMERCOM's guidelines for planning actions under the Unified State System for Prevention and Elimination of Emergencies dated 15 March 2021

#### Action plans for emergency prevention and response at class 1 and class 2 tailing dumps

2023

### **Forecast emergency** parameters:

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- emergency boundaries;
- scope of emergency and rescue operations; calculation
- of the sufficiency of resources for emergency response.

#### **Procedures** and responsible persons:

- notification and communication of the threat and occurrence of emergencies;
- accident-free process shutdown;
- · emergency, rescue, and recovery operations;
- management and interaction.

Financial and material provisions for emergency management

Local warning systems across Norilsk Nickel Group's tailing dumps

Briefings with employees on possible emergencies and methods of protection against them

Annual drills, personnel training sessions involving emergency rescue services, preparation for accident-free flood routing

All tailing dumps of the Company and Russian business units of extremely high and high hazard class have local warning systems in place for emergency notification of employees and the public. To keep such systems ready for use, daily technical checks are carried out and at least once a year comprehensive checks are conducted with alarms activated.

There have been no emergencies at tailing dumps of the Company or Russian business units over the past five years.

OCCUPATIONAL HEALTH AND SAFETY

DEVELOPMENT OF LOCAL

CLIMATE CHANGE

RESPONSIBLE BUSINESS

# SOIL PROTECTION AND RESPONSIBLE **MINING**

As a result of field development in the Trans-Baikal Territory, Taimyr and Kola peninsulas<sup>1</sup>, waste disposal, construction and other works, Nornickel produces a negative impact on land resources, which is mitigated by consistent efforts to rehabilitate affected soils.

In accordance with the Russian law, design documents for the development, construction and operation of fields include an environmental impact assessment, a list of measures to prevent and/or reduce possible environmental impacts and ensure the rational use of natural resources throughout the life cycle of the facility.

The Company complies with all applicable regulations for land rehabilitation and other environmental protection initiatives associated with field development and other operations. Upon completion of field development, the Company commits to restore land plots, liquidate mine workings and rehabilitate lands.

## Environmental protection measures taken during the field life cycle

#### **Environmental monitoring**

#### Prospecting Exploration Pilot production Abandonment Shutdown Commercial and production development or enhanced recovery testing<sup>2</sup> of remaining reserves Environmental measures taken: protection of air, subsoil resources, plant and animal species, habitats, water resources, water life, land resources and soil in waste management Mine liquidation and land rehabilitation Environmental Impact Assessment (EIA): review of layout options and technology; environment analysis and environmental impact assessment;

mitigants;

monitoring programmes;

• public discussions with local community.

<sup>&</sup>lt;sup>1</sup> For the full list of fields, please see the Norilsk Nickel Group Profile section.

<sup>&</sup>lt;sup>2</sup> State and public environmental review

### Disturbed and rehabilitated land area in 2023,

# GRI 304-3

Indicator	Total	Including:			
		during mining	during construction	during disposal of solid domestic and industrial waste	during other activities
Total disturbed area, beginning of period	16,905.7	14,169.5	1,192.7	827.6	716.0
Total rehabilitated area <sup>1</sup>	14.5	12.3	2.2	-	0.0
Total disturbed area in the reporting period	297.0	118.0	132.6	46.3	0.0
Total disturbed area, end of period	17,188.2	14,275.2	1,323.1	873.9	716.0

# Completion of the restoration efforts at CHP-3

In June 2023, we conducted on-site inspection of the land plots contaminated by the fuel spill in 2020 and disturbed during clean-up activities.

The high quality of the rehabilitation efforts was confirmed by laboratory tests and independent inspections<sup>2</sup>. The main chemical and physical indicators of soil condition meet quality standards and requirements of the Russian laws. The Company's activities have a positive impact on the processes of selfregeneration of vegetation and soil.

NTEC provided a warranty certificate for the work performed and an acceptance certificate for the rehabilitated land setting out improvement requirements (elimination of defects (if identified) during the warranty period and re-inspection in the absence of snow cover).

In July 2023, an acceptance certificate was drawn up for the remaining 27.44 ha of rehabilitated land. By resolution of the Norilsk Municipal Administration, it was established that the rehabilitation of all land plots contaminated by the diesel fuel spill and disturbed during the clean-up activities on an area of 74.96 ha was completed.

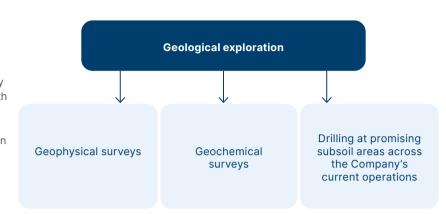
<sup>1</sup> The table does not include data on disturbed and rehabilitated land near CHP-3. In 2023,

# Responsible exploration

To replenish its resource base, Nornickel focuses closely on exploration, including geophysical and geochemical surveys.

Nornickel sees a significant potential for the discovery of new deposits and plans to continue exploration both within and beyond its footprint to unlock it.

In 2023, the Company implemented eleven exploration projects, including seven projects involving field geological exploration with environmental impact (two projects in the Norilsk Industrial District, four projects in the Trans-Baikal Territory, and one project in the Murmansk Region).



#### **Exploration areas of Norilsk Nickel Group in 2023**



rehabilitation was confined to the Krasnoyarsk Territory. <sup>2</sup> Trofimuk Institute of Petroleum Geology and Geophysics of the Siberian Branch of the Russian Academy of Sciences and Institute of Soil Science and Agrochemistry of the Siberian Branch of the Russian Academy of Sciences.

 $<sup>^{\</sup>scriptscriptstyle 3}$  Licence to use subsoil for the exploration and production of mineral resources was received in 2023 by Polar Lithium, a joint venture of MMC Norilsk Nickel and a partner

<sup>&</sup>lt;sup>4</sup> Field geological exploration under the project is completed, with only desktop studies of the obtained data carried out in 2023.



SUSTAINABILITY REPORT 2023

The Group's exploration activities are subject to:

- various regulations of the Russian Federation covering subsoil use, environmental protection, occupational health, industrial and fire safety;
- · internal assessments of environmental protection obligations based on the requirements of applicable laws in various jurisdictions, terms of licence agreements and internal engineering estimates as interpreted by the Company's management.

As Nornickel seeks to keep ecosystem intact, it avoids exploration at protected natural areas and world heritage sites, and ensures no negative impact on the traditional industries, cultural heritage, interests and traditional lifestyles of indigenous peoples.

# **Environmental monitoring**

Each project assesses the environmental setting at the time of starting and completing the exploration. The purpose of the environmental setting assessment is to obtain and record reliable indicators characterising the natural background of the environment prior to the commencement of geological exploration. Such assessment includes analysis of available geological, geochemical, hydrogeological, hydrometeorological and environmental information, identification of disturbed lands by means of analysing aerospace images and ground routes, sampling of environmental components (soil, surface water, bottom deposits, vegetation cover, background radiation), creating sites to monitor dangerous exogenous geological processes.

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The results of the above studies serve as the jump-off point for assessing the environmental impact of geological exploration. Geological exploration is accompanied by annual environmental monitoring, including monitoring of the pollution of surface water, snow cover, environmental components and development of dangerous exogenous geological processes. Based on the monitoring, we make a conclusion on the extent of environmental impact of geological exploration (if any).

In addition, Nornickel monitors environmental quality during geological exploration, which helps make informed management decisions to preserve habitats and ensure environmental safety of traditional trades.

Alongside the monitoring, we implement a set of measures to protect subsurface, soil, vegetation, and water bodies. Upon completion of drilling operations, disturbed land is subject to rehabilitation, including:

- liquidation of drilling sites;
- neutralisation of soil contaminated with fuel and lubricants:
- land levelling;
- bringing sites to a condition suitable for further use according to their intended purpose.

OCCUPATIONAL HEALTH AND SAFETY CLIMATE CHANGE RESPONSIBLE BUSINESS CONDUCT

#### **Environmental impact of exploration activities**

Activity	Preparatory works: <ul><li>drilling site layout;</li></ul>	Well drilling	Well abandonment and mothballing	
	<ul> <li>equipment transportation and storage;</li> </ul>			
	<ul> <li>construction of storage facilities for chemicals, fuel and lubricants.</li> </ul>			
Source of impact	<ul> <li>Road transport</li> <li>Exhaust gases of motor vehicles, construction and road machinery</li> <li>Excavated soil</li> <li>Materials for site construction and preparation of drilling mud and cement slurries</li> </ul>	Mud mixing unit     Drilling waste circulating system     Chemicals used for drilling and plugging     Waste products (mud spills, slime)     Domestic wastewater     Solid domestic waste     Crossflows inside the annulus and damaged casing string	<ul> <li>Leaks in casing, casing pipes, wellhead equipment</li> <li>Mineralised water</li> </ul>	
Types of impact	<ul> <li>Physical disturbance of the fertile soil layer, natural landscapes, thermal abuse, degradation of topsoil layers.</li> <li>Biotic disturbance, changes in the flora and fauna habitats</li> </ul>	<ul> <li>Ecosystem disturbance and changes in habitats of certain plant and animal species</li> <li>Machinery-generated noise</li> </ul>	Ecosystem disturbance and changes in habitats of certain plant and animal species	
Object of impact	<ul> <li>Fertile soil layer on drilling equipment sites, routes of linear facilities</li> <li>Flora and fauna, atmospheric air, soil, ground, surface water, landscape</li> </ul>	<ul> <li>Flora and fauna, soils, subsoil, surface and underground water, air</li> <li>Animal and human habitats</li> </ul>	Flora and fauna, soils, surface and underground water, air, animal and human habitats	
Environmental activities	<ul> <li>Compliance with land allotment standards</li> <li>Land rehabilitation</li> <li>Construction of trays and platforms at machinery parking lots</li> <li>Soil protection measures</li> <li>Fire safety measures</li> </ul>	Compliance with the requirements for the completeness of the study and use of subsoil Planning protective measures based on the results of hydrological, geotechnical and environmental monitoring Well plugging	<ul> <li>Plug and abandonment operations</li> <li>Rehabilitation</li> </ul>	

Adverse environmental impact of exploration activities in the course of the above projects was found to be insignificant according to the observations made, which testifies to the effectiveness of our environmental protection measures.