

Biodiversity conservation

COOPERATION WITH NATURE RESERVES



The Putoransky State Nature Reserve (Taimyr Peninsula)

The Putoransky State Nature Reserve (Taimyr Peninsula) was included on the UNESCO world heritage list in 2010. Boasting a total area of over 1,887,000 ha, it is home to 13 plant, 12 bird and 1 animal species listed on the Krasnoyarsk Territory's, Russia's and international Red Data Books. The reserve is part of the Joint Directorate of Taimyr Nature Reserves established in 2012, which includes the Putoransky, Taimyrsky and Big Arctic reserves, as well as the Purinsky and Severozemelsky natural protected areas. In 2016, the Joint Directorate of Taimyr Nature Reserves continued implementing three projects selected under Norilsk Nickel's World of New Opportunities charitable programme to support socially important initiatives. In the reporting year, the Company allocated approximately USD 100,000 to finance these projects, namely:

- Save the Bighorn Together (support for research and protection of this endangered species of the Putorana Plateau);
- Hatanga Crafts Festival (a space for demonstration, experience sharing and transfer of northern craftsmen's know-how in order to revive the indigenous peoples' forgotten crafts); and
- Environmental Camp (a summer field camp set up in the protected area of the Putoransky Nature Reserve).

In 2016, the Joint Directorate of Taimyr Nature Reserves also received the requested additional funds of approximately USD 36,000 used for the targeted purchase of various equipment.

The Company provides systemic support to nature reserves located in relative proximity to its production sites.



The Pasvik Nature Reserve (Kola Peninsula)

The Pasvik Nature Reserve is featured as one of the Wetlands for the Shadow List of Ramsar Sites (the Ramsar Convention) under the name of Fjarvann – Schaannings Field Base. It covers a total area of over 14,000 ha and is home to rare species listed on the international and Russia's Red Data Books. Since 2006, as part of the contract signed with Kola MMC, the Pasvik Nature Reserve has been carrying out an ecological assessment of the natural environment in the area of Pechenganickel Plant (Zapolyarny, Nickel and their suburbs, including the Pasvik State Nature Reserve), and developing a long-term environmental monitoring programme.



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The Lapland State Nature Biosphere Reserve (Kola Peninsula)

The Lapland State Nature Biosphere Reserve is one of the largest protected areas in Europe covering over 278,000 ha. Since 2002, the Lapland Biosphere Reserve has been engaged in developing measures to reclaim disturbed natural environment in the areas affected by permanent air emissions from Severonickel Plant, and monitor areas adjacent to Monchegorsk site and the Lapland Biosphere Reserve, under the contracts signed with Kola MMC. The data obtained during a scientific research provided a basis for the subsequent contractual work to reclaim disturbed lands, and bring about sanitary and fire protection improvements in the forest areas. In 2016, the Company allocated approximately USD 130,000 to finance the projects of the Kola Peninsula nature reserves.

BIODIVERSITY RECOVERY

Norilsk Nickel's Polar Division is working on a project to breed valuable fish species and release them into natural water bodies. In 2016, it implemented a number of initiatives to compensate for the damage to water bodies of the Yenisei River caused by sand production at the Seredysh Island deposit in the 2015 summer navigation period. 14,917 Siberian sturgeon fingerlings grown at the Company's modern year-round fish breeding unit with recirculating aquaculture systems were released into the Yenisei River.

LAND RECLAMATION AND LANDSCAPING

The Company regularly allocates funds for landscaping in the municipalities of operation. Since 2003, Kola MMC, upon recommendation from the nature reserves, has rehabilitated 100 ha of area in Monchegorsk, Zapolyarny towns and Nickel settlement. For the past 12 years, Kola MMC has had approximately one million trees and bushes planted, including a pilot project to restore damaged land adjacent to the company's site together with the Kola Science Centre of the Russian Academy of Sciences. As part of the citywide programme for landscaping and restoration of urban landscapes and the surroundings of the city of Dudinka implemented in cooperation with the Dudinka municipal authorities, 2016 also saw the clean-up and improvement of external territories and areas adjacent to roads, as well as measures to protect water bodies and protected water zones, and tourist camping improvements.

Other environmental developments in 2016 included the Ecological Marathon launched by the Company in Norilsk as part of its Plant of Goodness corporate volunteer programme. Total related Norilsk Nickel's expenditure over the past year exceeded USD 7,000. As part of the Ecological Marathon, the Company had approximately 35 cubic meters of fertile soil brought to the sports stadium, 5 kg of perennial grass seeds sown, 75 seedlings of willow shrubbery planted, and 10 bird feeders made. Over 5 kg of batteries were collected at the reception point for used batteries.

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An action plan, including watering, winter insulation, fertilisation and spring crown formation, was developed for the volunteer teams to take care of the seedlings jointly with the staff of the Arctic Agriculture and Ecology Research Institute. These and other initiatives will be implemented as part of the Ecological Marathon in 2017.

In 2016, Monchegorsk hosted Let's Do It, a large-format environmental festival focused on the clean-up of the Lumbolka Lake shore and the city park territory. It was part of Norilsk Nickel's Plant of Goodness corporate volunteer programme.

Energy efficiency

The Norilsk Nickel Group's major production assets are located beyond the Arctic Circle with air temperature below the freezing point during eight months of the year. It is therefore critical for the Group to ensure reliable and high-quality power supply to its enterprises, as well as to the infrastructure facilities and population in the regions where it operates.

In 2016, Norilskgazprom implemented a number of organisational arrangements and upgrades of its key power equipment as part of the Energy Saving and Energy Efficiency Programme, which enabled the saving of 25 mln cubic meters of natural gas.

The Company also uses electric power generated from renewable energy sources at NTEK's Ust-Khantayskaya and Kureyskaya HPPs (installed capacity of 441 MW and 600 MW, respectively).

In 2016, the share of renewable energy stood at 25% for the Norilsk Nickel Group and 38% for its Polar Division.

In 2017–2020, the Company will continue to renovate and upgrade the main power equipment and transmission devices along with waste water treatment systems.

Energy consumption by PJSC "MMC "NORILSK NICKEL" ¹

Type of energy resource	2016	
	Consumption in volume terms	Consumption, thousand RUB
Heat power, Gcal	5,587,849	4,594,881
Electric power, thousand kWh	5,158,974	5,259,718
Motor fuel, t	344	17,797
Diesel fuel, t	58,671	2,657,599
Heating oil, t	40,479	582,489
Natural gas, thousand cubic meters	545,712	1,363,718
Coal, t	0	0
Aviation fuel, t	115	5,008

Energy consumption by Norilsk Nickel Group ¹

Type of energy resource	2014		2015		2016	
	Consumption in volume terms	Consumption, thousand RUB	Consumption in volume terms	Consumption, thousand RUB	Consumption in volume terms	Consumption, thousand RUB
Heat power, Gcal	8,800,391	6,972,592	8,523,826	6,856,778	8,970,953	7,542,227
Electric power, thousand kWh	10,357,673	11,751,583	10,314,243	12,886,849	9,558,443	12,947,152
Motor fuel, t	2,473	90,177	2,543	90,760	2,636	114,547
Diesel fuel, t	134,478	4,358,366	132,696	4,693,653	134,436	5,172,394
Heating oil, t	249,146	2,955,766	245,237	2,422,476	256,905	2,262,086
Natural gas, thousand cubic meters	3,772,668	8,374,359	3,225,467	7,619,982	3,357,366	8,386,866
Coal, tonnes	171,347	262,397	161,945	254,454	94,746	222,096
Aviation fuel, t	80,580	2,560,469	76,767	2,432,656	96,621	2,910,683

¹ No others types of energy resources were used besides those specified in the table.