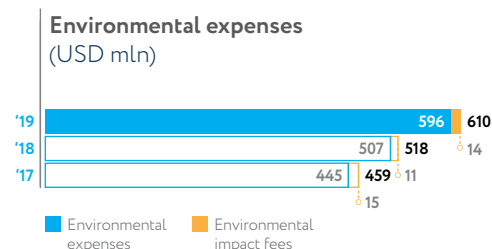


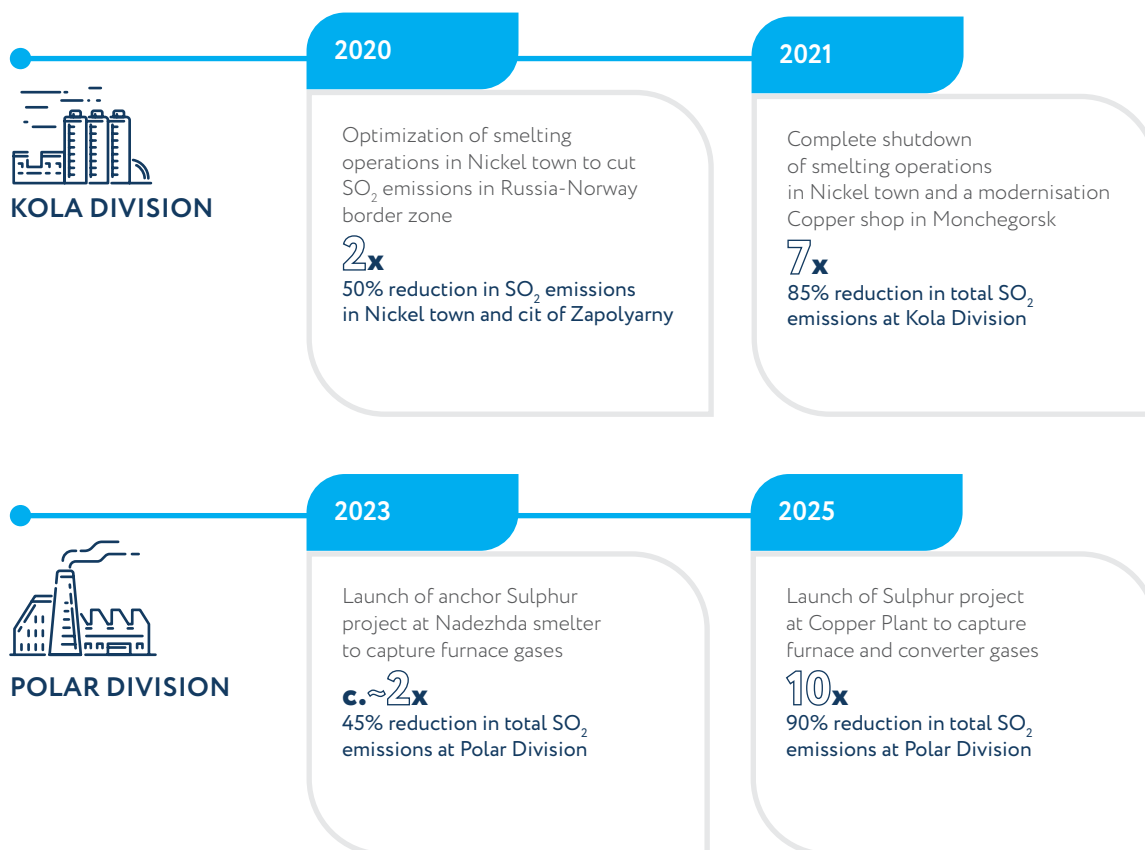
EMISSIONS

High sulphur dioxide emissions from the smelting of sulphide concentrates with high sulphur content are a key environmental issue for the Company. Nornickel’s strategic plan is to transform the Company into an environmentally clean and safe business by implementing the Sulphur Programme at the Polar Division and Kola MMC. In 2020, the Company plans to introduce light unmanned aircraft systems for monitoring environmental conditions on the Kola Peninsula and in the Norilsk Industrial District.



The Sulphur Programme is a major environmental project aimed at gradual reduction of sulphur dioxide emissions in the Norilsk Industrial District and Kola Peninsula.

Sulphur Programme Roadmap



The Sulphur Programme in the Polar Division

is expected to reduce sulphur dioxide emissions in the Norilsk Industrial District by 45% in 2023 and by 90% in 2025.

As part of this programme, Nadezhda Metallurgical Plant is implementing a project to capture the off-gases from flash smelting furnaces and neutralise the resulting sulphuric acid with limestone to produce gypsum. In 2019, the project documentation successfully passed a state environmental review; negotiations commenced for equipment supply contracts; and construction site preparations were completed.

At Copper Plant, a major production process upgrade is scheduled, including capturing sulphur dioxide from sulphur-rich off-gases and shutdown of low-grade gas converter operations, which have a significant effect on air quality in Norilsk during unfavourable weather conditions.

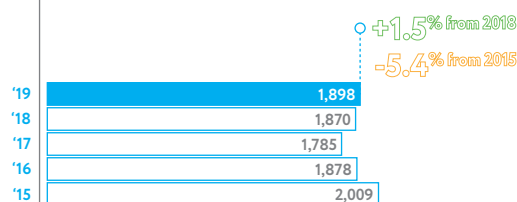
The Sulphur Programme at Kola MMC

provides for shutdown of obsolete production shops in Nickel near the Norwegian border and a modernisation copper shop in Monchegorsk. These measures will completely eliminate sulphur dioxide emissions in the Russia-Norway border area and significantly reduce adverse impact on the environment in Monchegorsk. The Programme is expected to reduce sulphur dioxide emissions from Kola MMC by 50% in 2020 and by 85% in 2021 (from a 2015 baseline).

The total CAPEX for the Sulphur Project is estimated at about USD 3.5 bn.

In 2019, emissions from Nornickel's Russian operations totalled 1,953 kt, up 1.4% y-o-y. The increase was driven by a temporary growth

Sulphur dioxide emissions (kt)



in sulphur dioxide emissions from the Polar Division due to increased production and processing of sulphur-containing feedstock. Despite the increase, emissions did not exceed the Company's set limits. During adverse weather conditions, the Company takes extra measures to control pollutant emissions in residential areas. Production process at metallurgical plants was stopped for this reason 262 times in 2019. Furthermore, Norilsk maintains an automatic toll-free enquiry service line offering forecasts on the impact of metallurgical operations on the city air quality to anyone dialling 420 007. The Company's transport and logistics subsidiaries and units are fully environmentally permitted and compliant with applicable environmental regulations, namely:

- Air pollutant emissions from mobile sources do not exceed the maximum allowable levels
- Marine fuels are purchased from suppliers that have all required documents confirming fuel quality. The quality of fuel is verified by an independent laboratory
- Onboard wastewater treatment plants are subject to annual certification to prevent pollution and contamination of water bodies and marine environment
- Oily water is transferred to specialist contractors at sea ports

Air pollutant emissions across the Group (kt)

Indicator	2017	2018	2019
Sulphur dioxide (SO ₂)	1,785.0	1,869.6	1,898.1
Nitrogen oxide (NO _x)	11.5	11.2	10.3
Particulate matter	14.0	14.5	13.3
Other pollutants	35.3	31.3	30.9
TOTAL	1,845.8	1,926.6	1,952.7