

ENVIRONMENT

Our approach

One of EVRAZ overriding priorities is to mitigate the potential environmental impacts of its steel and mining operations through best management practices and advanced technology.

This approach aims to help the Group to prevent or control any undesired environmental consequences, as well as to reduce its consumption of energy and natural resources.

Strict environmental legislation governs these operations, requiring EVRAZ to comply with the terms of special environmental permits and licences, which generally entails certain environmental commitments, recruiting qualified personnel, maintaining necessary equipment and environmental monitoring systems, and periodically submitting information to environmental regulators. Non-compliance with any of these requirements could potentially lead to the suspension, amendment, termination or non-renewal of the environmental permits and licences. The Group could also incur significant costs related to eliminating or remedying any such violations.

EVRAZ recognises that its production processes entail certain environmental risks and liabilities and, as such, is focused on preventing or minimising any potential adverse environmental consequences from its operations.

The Group employs a corporate management system that bases environmental procedures on the plan-do-check-act (PDCA) model. EVRAZ has developed it to promote its health, safety and environment (HSE) policy principles and support its environmental strategy implementation, which includes environmental risk assessment, planning, legal compliance management, reporting and other processes.

For all new operations and projects, the Group performs environmental and social impact assessments (ESIAs) that engage with local and regional governments, businesses and community

members in the affected area. EVRAZ uses ESIA to assess the new operations potential direct and indirect impacts on the local community and surrounding environment. As part of the ESIA process, the Group establishes mitigation plans to minimise and manage any potential impact and engages with local communities throughout the project's life to discuss any decisions that may be made.

EVRAZ strictly complies with the registration, evaluation, authorisation and restriction of chemicals (REACH) regulations concerning various substances supplied to or manufactured in the EU (European Economic Area) by the Group's assets. EVRAZ supports the European Community's health and environmental goals as established in the Regulation (EC) No. 1907/2006 of the European Parliament and of the Council, which governs the REACH requirements.

The Group's environmental programme also features training courses and seminars that encourage its specialists in the field to exchange experience.

EVRAZ also employs environmental audits (due diligence) to perform environmental liability and risk assessments of existing sites and assets being acquired.

Throughout its operations, the Group has introduced an environmental management system that it has developed based on the corporate approach and prioritises international certification, which, while not a legal requirement, has led to seven of the Group's sites obtaining ISO 14001 certification, including core operations like EVRAZ NTMK and EVRAZ ZSMK.



For additional information, read the EVRAZ Sustainability Report for 2019, which is to be published in May 2020.

Environmental strategy

The Group's environmental strategy aims to minimise any negative impacts caused by its operations, as well as to make efficient use of natural resources and find optimal industrial waste management solutions. Environmental compliance is an overriding long-term priority.

EVRAZ five-year environmental targets (covering 2018–22) aimed at:

- Decreasing fresh water consumption by 10%
- Recycling 95% of annual non-mining waste
- Maintaining the greenhouse gas intensity ratio below 2 tonnes of carbon dioxide (CO₂) equivalent (tCO₂e) per tonne of steel cast

The Group has committed to implement various environmental protection programmes over 2020–25. As of 31 December 2019, the estimated cost to implement these programmes totalled US\$198.6 million, compared with US\$121 million as of 31 December 2018. The rising environmental commitments is the result of agreements signed with the Russian government regarding the "Clean Air" National Project in June 2019.

In 2019, EVRAZ spent US\$30.3 million on measures to ensure environmental compliance and US\$28.8 million on projects to improve its environmental performance. Non-compliance-related environmental levies and penalties totalled US\$5 million.

There were no significant environmental incidents or material environmental claims involving the Group's assets during the reporting period.

Biodiversity

EVRAZ understands that it has a responsibility to prevent and minimise its potential impact on the environment and biodiversity at all stages of the mining and steelmaking process, including when performing geological surveys, designing facilities, conducting operations and restoring sites that are no longer used.

The Group's long-term goal is to foster a culture among its employees of care and concern for the environment and biodiversity of the areas in which it operates, as well as in how they implement its projects and create a positive dialogue with the local community.

The Group's primary biodiversity efforts include:

- Restoring damaged lands and landscaping
- Restoring water biodiversity
- Implementing social and environmental initiatives

EVRAZ implements long-term projects aimed at compensating for its environmental impact.

- Since 2011, the Abagursky branch of EVRAZ ZSMK has been working to reclaim the old tailings storage No. 2. During 2012–18, the site completed the dehydration and land planning stages of the project. In 2019, the site started the final phase, which entails biological reclamation, including planting 64,830 trees during the year.
- Since 2015, the Rospadskaya mine has been implementing a long-term project to recover land damaged during open-pit mining (138 hectares).
- Work to landscape industrial sites and sanitary protection zones at facilities continued in 2019.

As part of a programme to restore aquatic bioresources, the Group’s enterprises released more than 379,000 juvenile fish into local rivers of Kemerovo region and Sverdlovsk region.

The Group’s environmental initiatives include planting trees in parks and public squares, along town/city streets and in the territory around kindergartens. Young trees brought from mine allotments where the forest is subject to felling are often used for planting as part of the “Second Life for Trees” initiative.

The list of EVRAZ social and environmental initiatives include: “Environmental Saturday” voluntary workdays: cleaning parks, planting trees and putting up birdhouses

- “Second Life for Trees” initiative: replanting young trees from mining allotments where the forest is subject to logging
- “Big Green Games”: environmental competitions among local companies in which teams choose their own areas to clean up
- “Clean Games” environmental quest: teamwork in collecting and sorting garbage in parks
- “Clean Shore” initiative: helping to clear debris from the protected watersheds of the Bolshoy Unzas, Kondoma and Maly Bachat rivers
- “Live Spring” initiative: improving natural springs

Air emissions

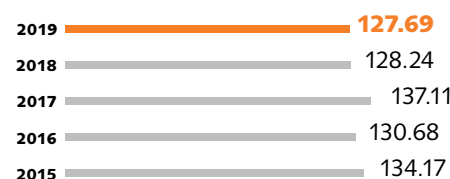
One of EVRAZ foremost environmental priorities is to reduce air emissions. The key air emissions comprise nitrogen oxides (NOx), sulphur oxides (SOx), dust and volatile organic compounds (VOC). In 2019, the key air emissions decreased by 0.4% year-on-year.

The current strategy for reducing air emissions envisages upgrading gas treatment systems, introducing modern technology and eliminating obsolete equipment.

In June 2019, EVRAZ signed agreements with the Russian government to implement the “Clean Air” National Project. According to the agreements reached, the Group will continue to introduce the best available technologies at its metallurgical plants to reduce its environmental impact. In particular, EVRAZ NTMK and EVRAZ ZSMK are implementing projects to switch to a technology that uses final cooling of coke oven gas in closed heat-exchange equipment, which will reduce emissions from coke production. To address sulphur dioxide emissions from iron ore processing at EVRAZ ZSMK, a desulphurisation system will be built at its sinter plant. The reconstruction of blast furnace No. 6 at EVRAZ NTMK will include modern dust and gas treatment plants similar to the equipment used in the plant’s newest blast furnace No. 7.

The Group targets reducing total air emissions during the period of 2017–24 by 22% at EVRAZ ZSMK and by 10% at EVRAZ NTMK.

Key air emissions¹, kt



GHG emissions

EVRAZ operations generate carbon dioxide and other greenhouse gas (GHG) emissions. The Group recognises that mitigating climate change risks is a crucial element in planning for the future welfare of its employees and local communities throughout its global enterprises.

EVRAZ understands the urgency of preventing climate change and supports the global effort to reduce the emission of GHGs into the atmosphere. In compliance with the Companies Act 2006 (Strategic and Directors’ Report) Regulations 2013, the Group measures the full GHG emissions at its facilities and has taken part in the CDP Climate Change Programme since 2011.

A key aspect of EVRAZ strategy is to reduce GHG emissions by consuming fewer energy resources.

The Group has set a five-year target for its Steel segment to keep the GHG intensity ratio below 2 tonnes of crude dioxide (CO₂) equivalent (tCO₂e) per tonne of crude steel cast. In 2019, the intensity

reached the level below the target and amounted to 1.97 tCO₂e/tcs.

EVRAZ measures direct (Scope 1) emissions of all seven “Kyoto” GHGs² and indirect (Scope 2) emissions from the use of electricity and heat. The inventory approach³ was based on the 2006 IPCC Guidelines for National Greenhouse Gas Inventories (IPCC 2006) and the WRI/WBCSD GHG Protocol Corporate Accounting and Reporting Standard. The Group reports data in terms of tCO₂e, calculated using the IPCC 2006 global warming potentials.

EVRAZ has collected GHG emissions data for 2019 and compared them with the 2014–18 levels. The Steel segment continues to generate more than half of the gross GHG emissions from the Group’s operations. Nearly 93% of the Coal segment’s full emissions come from fugitive methane (CH₄) leakage, which is caused by methane ventilation from underground mines and post-mining emissions from coal.

In 2019, the overall GHG emissions from EVRAZ operations increased by around 11.8% (or 4.58 mln. tCO₂e) year-on-year. The Group’s Scope 1 emissions rose by 13.1% and Scope 2 emissions slightly increased by 1.2%.

The major contribution came from coal mining (3.26 mln. tCO₂e) as a result of higher volumes of underground mining (2.81 mln. tonnes of coal) and due to factors which are beyond our control such as increase of methane content in deeper coal seams being developed. Moreover, we had to intensify preliminary methane drainage (by 27% vs 2018) in order to improve safety conditions for employees at some mines. With this in mind, we are developing a project on utilisation of methane emitted from mines after drainage to decrease our full carbon emissions in 2020 and further.

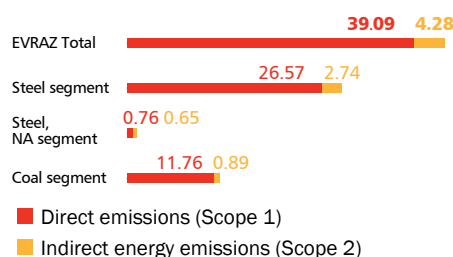
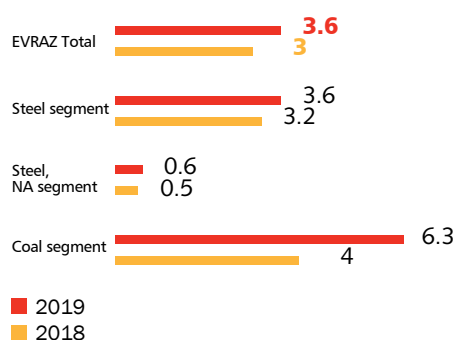
Emissions of CO₂ grew by 4.20% (or 1.13 million tCO₂e) as a result of higher steel production at main steelmaking mills in Russia (+ 6% of crude steel cast). Although absolute emissions in Steel sector increased by 4%, the specific intensity ratio decreased due to more efficient operation of Blast Furnace shop at EVRAZ ZSMK in 2019 and exclusion of EVRAZ DMZ (cease of operations in Ukraine) as from Q1 2018.

In addition to the specific intensity ratio in the Steel segment EVRAZ also reports an intensity ratio relating its annual Scope 1 and 2 GHG emissions to consolidated revenue for the Group. This ratio increased due to lower revenue in 2019 on the background of overall GHG emissions growth.

¹ Air emissions calculation perimeter differs from the calculation perimeter of GHG emissions.

² Carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFC) and perfluorocarbons (PFC), sulphur hexafluoride (SF₆) and nitrogen trifluoride (NF₃)

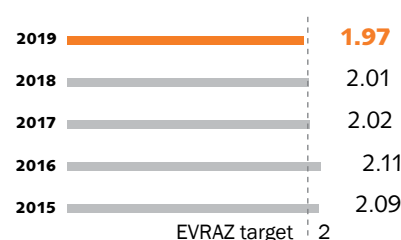
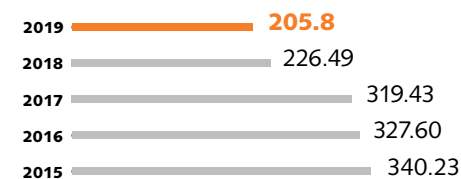
³ The inventory of emissions includes all entities that EVRAZ controls. Entities that were disposed of during the year were included for the period they were part of the Group. Only entities that were deemed immaterial for consolidated emissions based on their operational indicators were omitted. Direct CO₂ emissions from operations were calculated using the carbon balance method for carbon flows within production facilities, including fuel use. Emissions of other GHGs were calculated based on measured volumes, inventory changes or IPCC2006 factors and models (including for post-mining coal methane emissions) where direct measurement data were not available. Indirect emissions were estimated using emission factors specifically developed for the country or region, if available, or otherwise factors provided by UK Defra.

**EVRAZ GHG emissions
in 2019, million tCO₂e****GHG emissions per revenue, kg CO₂e/US\$****Water consumption
and discharge**

EVRAZ aims to efficiently use water resources and prevent any negative water quality impacts through environmental incidents.

In 2019, almost 77% of the Group's total water intake came from surface sources, including rivers, lakes and reservoirs, 3% percentage points year-on-year.

During the reporting period, the ongoing programmes to improve the water management

**Specific Scope 1 and 2 GHG emissions
from Steel segment (incl. NA),**tCO₂e per tonne of crude steel cast¹**Fresh water intake for production
purposes², million cubic metres**

at EVRAZ operations continued to deliver environmental benefits. In 2019, the Group consumed 205.8 million cubic metres. That is 20.7 million cubic metres less fresh water than in 2018, for a year-on-year reduction of 9.2%. Almost 15.1 million cubic metres have been excluded out of the balance due to the exclusion of assets in 2018–2019, including 14.5 million cubic metres of water intake of Ukrainian assets reported in the first quarter of 2018.

The Group's five-year target is to decrease fresh water consumption by 10% compared with the baseline of 2016 (231 million cubic metres). In 2019 the Group has re-estimated the baseline, taking into account asset exclusion, and set updated target 207 million cubic metres.

While water pumped from mines (dewatering) is not included in the fresh water consumption target, pumped water is partly used for technological needs. In 2019, EVRAZ pumped out and used 21.2 million cubic metres of mine water, compared with 17.36 million cubic metres a year earlier.

Waste management

Mining and steelmaking operations generate significant amounts of waste, including the surplus rock, spent ore and tailings left over after processing ore and concentrates. EVRAZ aims to reduce the amount of waste that it produces, re-use natural resources where possible and dispose of waste in a manner that minimises the environmental impact and maximises operational and financial efficiency.

In line with the Group's strategy to reduce waste storage volumes and enhance waste disposal, it regularly reviews opportunities to recycle and re-use waste at its operations.

The main waste by-product that gets recycled is metallurgical slag, which includes materials that previously had been disposed of in dumps. Processing this waste has allowed EVRAZ to maintain a recycling rate of more than 100%. Most of the old slag in these dumps has been processed over the past few years, which is the primary reason why the recycling rate is forecast to decline going forward. The management has decided to continue its

EVRAZ GHG emissions, million tCO₂e

	2015	2016	2017	2018	2019
Direct (Scope 1)	36.87	35.81	36.68	34.56	39.09
Consisting of:					
CO ₂	29.13	28.76	28.35	26.86	27.99
CH ₄	7.67	6.99	8.26	7.64	11.04
N ₂ O	0.07	0.07	0.06	0.06	0.06
PFC and HFC	0.0002	0.0001	0.00003	0.00009	0.00002
SF ₆	—	—	—	—	—
NF ₃	—	—	—	—	—
Indirect (Scope 2)	6.17	5.02	4.97	4.23	4.28
Total GHG emissions	43.04	40.83	41.65	38.79	43.38

¹ Calculation perimeter includes the following subsidiaries: EVRAZ NTMK, EVRAZ ZSMK, EVRAZ Calgary, EVRAZ Camrose, EVRAZ Portland, EVRAZ Red Deer, EVRAZ Regina, EVRAZ Pueblo.

² Calculation perimeter includes the following subsidiaries: EVRAZ NTMK, EVRAZ KGOK, EVRAZ ZSMK, Evrazruda, RaspadskayaCoal Company, EVRAZ Caspian Steel, EVRAZ Palini e Bertoli, EVRAZ Vanady Tula, EVRAZ Nikom, EVRAZ Calgary, EVRAZ Camrose, EVRAZ Portland, EVRAZ Red Deer, EVRAZ Regina.



waste minimisation efforts and set a target to reuse or recycle at least 95% of waste.

In 2019, the Group's steel mills generated 8.45 million tonnes of metallurgical waste and by-products, including slag, sludge, scale and others, and recycled or re-used 8.88 million tonnes of material. Overall, EVRAZ recycled or re-used 105.1% of non-mining waste and by-products in 2019, compared with 111.3% a year earlier.

The Group's strategy for dealing with non-hazardous mining wastes, such as depleted rock, tailings and overburden, is to use them where possible for land rehabilitation and the construction of dams or roads. In 2019, 38% or 75.47 million tonnes of such waste material were re-used, compared with 26.7% or 62.05 million tonnes in 2018.

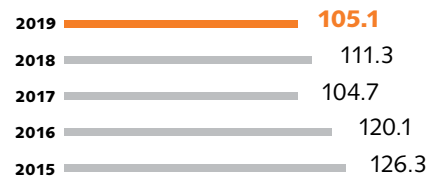
All non-recyclable waste is stored in facilities that are designed to prevent any harmful substances contained in the waste from

escaping into the environment. The Group's largest tailings dams are owned by EVRAZ ZSMK and EVRAZ KGOK. Safety at such facilities is monitored extremely closely and all necessary steps have been taken to mitigate any danger as far as possible.

Tailings storage facilities disclosure

EVRAZ has a dam safety management system in accordance with the current legislative procedures that cover all stages of life cycle: design, construction, operation and asset retirement. All dams have safety zones where no residential houses and civilian infrastructure is allowed. The processes and procedures are controlled by operations and audited by the HSE personnel of the sites, the regulator's inspectors and the Group's internal industrial safety auditors. Measures to improve the effectiveness of controls have been implemented consistently. The internal industrial safety auditors at EVRAZ performed an operational audit of all active tailings storage facilities (TSFs) during 2019.

Waste recycling rate, %



To build greater levels of trust with all stakeholders, the Group discloses detailed information about its TSFs at the following link:

<https://www.evraz.com/en/sustainability/tailings-storage-facilities/>



Waste management strategy

