Environment protection

RUB **19.6** bn spent on environmental protection

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62.4% of total waste reused or recycled

64.3% of water used in recirculating water systems



- Environmental Policy
- Biodiversity Policy
- <u>Regulations on the Health, Safety, and Environment</u> <u>Committee</u>
- Stakeholder Engagement Policy
- Supplier Standards
- Corporate Code of Ethics

Material topics

- Air quality
- Water and wastewater management
- Safe waste management
- Biodiversity
- Environmental compliance and the best available technologies (BAT)



Governance

GRI 3-3, SASB EM-MM-160a.1

En+ Group is committed to preventing and minimising the impact of its production operations on the atmosphere, water, land resources and biodiversity. In its efforts to protect the environment, the Group is governed by the UN Sustainable Development Goals and national legislation requirements, in particular Russian Federal Law No. 7 of 10 January 2002 On Environmental Protection and the following internal documents:

Environmental Policy

- defines the Company's principles and key areas of environmental protection efforts
- includes an obligation for each party to comply with the requirements in contracts

Stakeholder Engagement Policy

• defines the procedure for stakeholder engagement, including on environmental protection matters

Supplier Standards

• establishes environmental protection requirements for suppliers

Corporate Code of Ethics

• imposes a duty on Group enterprises to prevent environmental incidents and comply with applicable laws, among other requirements

Biodiversity Policy

• establishes the Company's key biodiversity conservation principles

Allocation of responsibility for environmental protection

Board of Directors

- Oversees the implementation of the Company's environmental protection policies
- Oversees progress against environmental protection targets

Health, Safety, and Environment Committee

- Manages risks, including environmental risks
- Feeds into the policy development process
- Makes recommendations to the Board
 of Directors
- Oversees the Company's compliance with legal requirements and standards governing environmental protection
- Evaluates the Group's environmental protection performance

Sustainable Development Directorate

- Identifies and assesses the environmental impacts of risks
- Monitors the implementation of measures to manage environmental risks

Environmental protection teams at enterprises

 Provides environmental stewardship at the enterprise level CONSOLIDATED REPORT 2024 -

In the reporting period, En+ Group established an ash and slag waste department to improve the efficiency of bulky waste management.

GRI 2-13

Key performance indicators (KPIs) related to the involvement of waste in circular economy, reclamation of disturbed land, compliance with emission standards, elimination of risks with environmental impacts were set for the Company's management and the Director for Sustainable Development.

The Company has an environmental management system (EMS) certified to ISO 14001:2015 and GOST R ISO 14001-2016 Environmental Management Systems. In the reporting period, CHPs in the Irkutsk Region received certification. The Metals segment's Urals Silicon and Urals Alumina Refinery also completed certification. An audit for recertification of the environmental management system was carried out at the Group's HPPs. Additionally, several internal audits were held at CHPs and HPPs in the reporting period.

In 2024, all contractors' supplementary agreements were updated to include uniform standards for environmental protection, with a special emphasis on safeguarding aquatic biological resources.

Environmental component	Environmental impact	Air protection regulations
Air	Emissions of pollutants from aluminium smelters of the Metals segment and CHPs of the Power segment	 Federal Law On Atmospheric Air Protection Order of the Ministry of Natural Resources and Environment On the Approval of Requirements for Measures to Reduce Emissions of Pollutants into the Air during Adverse Weather Conditions Federal Clean Air Project Presidential Decree on National Development Goals up to 2036 (National Goal "Environmental Well-Being")

GRI 3-3, 14.3.1

Strategy

In order to adhere to the prescribed standards, En+ Group carries out pollutant concentration monitoring using instrumental methods as part of its industrial environmental control (IEC) initiatives. Besides, the Company conducts additional air quality studies in the regions of responsibility to assess the impact of operations on the state of the atmosphere. Some of the Company's enterprises are located in the cities participating in the Clean Air federal project, such as Bratsk, Novokuznetsk and Krasnoyarsk. The goal of the project is to reduce pollutant emissions in cities by 20% by 2026.



To achieve the target, En+ Group is taking the following actions:

Uses modern gas purification equipment, automatic monitoring systems and mobile emission control stations. In 2024, the 16th gas purification unit was installed at the Novokuznetsk Aluminium Smelter. A total of 24 units are planned to be built, with purification efficiency of over 99.5%, making it possible to remove a larger volume of pollutants from waste gases

Introduces inert, pre-baked anode, and Eco-Soderberg technologies

Introduces anode mass technology with reduced PAH content¹ to decrease benz(a)pyrene emissions into the atmosphere

Modernises gas purification systems of the coal-fired CHP

¹ PAH – polycyclic aromatic hydrocarbons.

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Research of the impact of the Yenisei River air holes on Krasnoyarsk air quality

The Institute of Computational Modelling of the Siberian Branch of the Russian Academy of Sciences analysed the impact of air holes in the Yenisei River on the distribution of suspended particulate matter in the air. The research conducted since 2019 showed that the surface atmosphere of the river water area has lower concentrations of suspended particles than in the city due to their deposition. This phenomenon can also be explained by the mixing of air masses generated over the city and its surroundings within the open environment. Consequently, the steaming of the river does not have a negative impact on the state of the atmosphere of Krasnoyarsk.

Environmental component	Environmental impact	Water protection regulations
Water	Water withdrawal and discharge, including into natural water bodies	 Water Code of the Russian Federation Federal Law On Water Supply and Discharge Sanitary Rules and Regulations (SanPin) Hygienic Requirements for Surface Water Protection Requirements of the Federal Water Resources Agency of the Russian Federation

GRI 3-3, 303-1, 303-2, 14.7.1, 14.7.2, 14.7.3

En+ Group enterprises have standards for the use of water resources, specifically pollutant discharges, developed on the basis of the national legislative requirements. Accredited organisations monitor prioritised pollutants (oil products and suspended particles) in wastewater and reservoirs. To prevent pollutants from entering the water, the Group conducts regular inspections of the serviceability of generating and treatment equipment. The Company operates modern treatment facilities and upgrades them. Some enterprises of the Metals segment operate a closed-loop water recycling system, thus reducing their water withdrawal and discharge. Urals Alumina Refinery continues to implement the system.

En+ Group interacts with stakeholders on these matters, with the Metals segment publishing voluntary responsible water report.

Operations in water-scarce areas

GRI 3-3, 303-1, 303-2, 14.7.2, 14.7.3, SASB IF-EU-140a.3

Some Group enterprises operate in areas characterised by **severe water shortages**¹. To reduce the impact on water resources, the Group is introducing **closedloop water** recycling systems across its production facilities. In 2024, **Armenal** performed activities to advance its system: the measures were taken to improve the rolling section recycling unit.



Environmental component	Environmental impact	Laı
Land	Waste generation: red and nepheline sludge, spent carbon lining, ash and slag waste, overburden rock	•
	Land disturbance as a result of mining processes	

GRI 3-3, 306-1, 306-2, 14.5.1, 14.5.2, 14.5.3, SASB EM-MM-150a.10

The Power segment has an internal Waste Management Standard that establishes the procedure for waste collection, recycling and disposal. The Metals segment aligns its activities with its own Industrial Waste Management Strategy to 2030 establishing a hierarchy of waste management efforts using the Zero Waste to Landfill principle. In the reporting period, the Metals segment additionally developed and approved safe waste management programmes for 2024–2029 and set annual targets.

To minimise the negative impact on land resources, En+ Group implements the following measures:

- 1. The Company monitors compliance of its own waste disposal facilities with the established standards and controls their safety. In 2024, the Company modernised waste storage sites to ensure more efficient and safe disposal of bulky waste from coalfired generation.
- 2. En+ Group implements waste recycling projects to lower the amount of waste sent for disposal and to obtain additional profits. The Company has developed a long-term ash and slag waste management programme to explore promising ways of disposal of such waste. The Metals segment has launched a project to produce raw materials for household chemicals from electrolysis gas purification sludge.

¹ The assessment was performed using the <u>Aqueduct Water Risk Atlas</u>.

and protection regulations

Land Code of the Russian Federation Federal Law On Industrial and Consumption Waste

SASB EM-MM-160a.2

3. To mitigate the negative impact on land resources effectively, En+ Group applies technologies that prevent the generation of acid waste.

GRI 14.6.1, SASB EM-MM-540a.2, EM-MM-540a.3

- 4. The Group ensures safe functioning of its hydraulic structures (HS) and has emergency response plans in place. No emergencies or significant sludge spills were recorded in 2024.
- 5. The Company strives to minimise the area of disturbed land and, after the completion of open-pit mining, performs land reclamation in accordance with the approved plans, including using ash and slag waste. The Company also implements reclamation measures for contaminated land and waste disposal facilities.
- 6. En+ Group also performs reforestation activities.

Green Office

En+ Group continues to implement the Green Office initiative, which aims to create a comfortable workspace with minimal environmental impact. In particular, separate waste collection has been organised in the offices. To reduce the volume of household waste, the Company has abandoned the use of disposable plastic dishes, and is adopting practices aimed at conserving water and energy. In 2024, a separate waste collection system was implemented across the offices of the Power segment in Irkutsk, as well as across the Angara HPP cascade, Krasnoyarsk HPP and CHPs. To promote the practice, the Company developed lectures about the Green Office for employees for the corporate portal.



Environmental component	Environmental impact	Biodiversity conservation regulations
Biodiversity	Distortion of the landscape's natural state and a shrinkage of green areas, impact on the water regime of aquatic ecosystems during the power generation activities at HPPs	 Federal Law dated On Ratification of the Convention on Biological Diversity The Kunming-Montreal Global Biodiversity Framework TNFD¹ guidance International Finance Corporation's Performance Standard 6 Biodiversity Conservation and Sustainable Management of Living Natural Resources Hydropower Sustainability Standard

GRI 101-2, 14.4.3

En+ Group develops corporate biodiversity conservation programmes for its production sites taking into account the requirements of various international standards and initiatives, including the Kunming-Montreal Global Biodiversity Framework. Within the Power segment, such a document is in place for Irkutsk, Bratsk and Ust-Ilimsk HPPs and reservoirs.

The goal of the programme is to prevent or mitigate the negative impact of Angara HPPs and reservoirs on biodiversity and participate in maintaining stable condition of the cascade in the long term.

Map of potential biodiversity impact areas of Irkutsk, Bratsk and Ust-Ilimsk HPPs



physical risks to water resources, or those that are crucial for providing ecosystem services to indigenous peoples, local communities, and other stakeholders

¹ Taskforce on Nature-related Financial Disclosures.

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GRI 101-4, 101-5, 101-6, 101-7, 14.4.4, 14.4.5

During the development of the programme, experts identified areas of direct and indirect impact of the facilities on biodiversity and drafted a map of the impact areas. Angara HPPs do not operate in environmentally vulnerable² areas. The nearest protected area (Pribaikalsky National Park) is located at a distance of 43 km.

² Environmentally vulnerable areas are those with rich biodiversity, strong ecosystem integrity, significant degradation of ecosystem health, high

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En+ Group entered into an agreement with the Institute of Geography of the Siberian Branch of the Russian Academy of Sciences on field verification of the biodiversity conservation programme. Due to the large area covered by the programme (8.5 million hectares), the work will be divided into two stages. In the reporting period, studies were performed in the areas of the Irkutsk and Bratsk reservoirs and adjacent territories. Further verification for Ust-Ilimsk HPP is scheduled for 2025.

The Power segment has devised a Biodiversity Conservation Action Plan for three HPPs, with the first stage covering 2023–2025. The plan contains a list of planned activities and indicator species (plants, animals), which will be monitored and supported by specialists. En+ Group strives to increase the cumulative positive effect of measures to preserve biodiversity and combat climate change.

For instance, the Company has developed a climate change adaptation programme for the Angara HPP cascade, which will positively affect biodiversity.



GRI 101-2, 14.4.3

The Metals segment has also completed work on corporate programmes to conserve biodiversity and maintain ecosystem services for Timan Bauxite, Urals Alumina Refinery and Irkutsk Aluminium Smelter (IrkAZ). The Company has developed a system of metrics and indicators that makes it possible to assess both the state of biodiversity of territories and the effectiveness of measures taken to preserve it.

Educational events

We involve local communities in biodiversity conservation activities. In 2024, the Company produced a comic book <u>'The Steppe Rat</u> <u>Snake, The Mongolian Toad and their</u> <u>adventures'</u> with interesting facts about these animals in order to highlight their benefits to the ecosystem, as well as reflect the importance of conservation measures for valuable species.

Community fish protection

The Company supports community fishery inspectors by providing them with the necessary outfit, equipment and labour remuneration. The inspectors are responsible for patrolling the waters of the Bratsk, Irkutsk and Krasnoyarsk water reservoirs to prevent poaching and other fishing violations. The project has helped to:

- Detect 570 administrative offences in the field of fishing and conservation of aquatic biological resources
- Detect 13 crimes in the field of fishing and conservation of aquatic biological resources
- Seize 724.9 kg of fish from poachers
- Remove 13.2 km of illegal fishing nets from water bodies
- Take 953 preventive measures

Artificial spawning grounds in the Bratsk reservoir

The Bratsk reservoir is home to various fish species that lay eggs on last year's vegetation (pike, perch and others). However, the reservoir is poor in aquatic plants, so in 2024 the Group installed 400 artificial spawning grounds to create suitable spawning conditions for fish. They are bundles of coniferous tree branches with a weight and a float. Locations for spawning are chosen at depths that provide optimal conditions for the growth of eggs. 13



The sixth Baikal monitoring expedition

In 2024, a sixth scientific expedition to monitor the state of Lake Baikal took place. The study was conducted in the southern and central parts of the Baikal water area and the Selenga River with a catchment area. Experts studied the condition of Baikal endemics¹ and took water samples to assess the content of pollutants, including microplastics.

The monitoring results were presented to the Academic Council of the Faculty of Biology of Moscow State University, as well as the extended meeting of the Scientific Council of the Russian Academy of Sciences (RAS) and the Scientific Council of the Siberian Branch of the Russian Academy of Sciences on Lake Baikal problems. The scientific community gave a positive assessment of the monitoring results, and the RAS sent recommendations to relevant state authorities.

In 2024, the project **won** the XXII National Environmental Prize named after V.I. Vernadsky in the Science for Sustainable Development category.

Risk management

GRI 3-3

En+ Group annually assesses environmental risks as part of the overall risk management system. In 2024, the Company adopted a methodology for assessing the environmental impact of risks. In 2024, the Power segment revised its Strategic Plan for Environmental Risk Management replacing it with a Management Plan for Risks with Environmental Impacts, which includes risk management measures and their deadlines.

GRI 101-2, 14.4.3

When assessing risks to biodiversity and ecosystem services, the Company takes into account the location of enterprises and the specifics of their production processes. If significant risks are identified, En+ Group holds consultations with scientists and industry experts, sets biodiversity conservation targets, and develops risk mitigation action plans taking into account the hierarchy of mitigation activities.



During the development of corporate biodiversity conservation programmes, the Metals segment also conducted a preliminary risk assessment. The procedure for assessing risks to biodiversity and priority ecosystem services consists of the following stages:

• Identification of impact factors

- Assessment of physical risks (including potential risks) associated with impact factors
- Assessment of transition risks (including potential risks) associated with impact factors
- Overall assessment of corporate risks
- Creation of a risk register

Based on the results of the assessment, the risks were recognised as predominantly insignificant, but for some aspects, such as land use for mining, it was proposed

Metrics and targets

GRI 3-3, 101-1, 14.4.2

En+ Group has set the following targets for environmental protection and biodiversity conservation.

Targets	Status	Progress made in 2024
Ensure compliance of the Metals segment enterprises' air emissions with regulatory requirements (cut above-limit air emissions by 100%) by 2027	On track	The Metals segment continues to upgrade its production sites and implement measures under the Clean Air federal project
Provide a significant reduction in emissions of pollutants per tonne of aluminium, including a 25% decrease in total fluorides	On track	The Metals segment managed to reduce intensity of emissions by 6.8% (including total fluorides by 27.4%)
Retrofit ash collectors at Novo-Irkutsk CHP, Ust-Ilimsk CHP, and CHP-6	On track	CHP-6 installed three electric filters for more efficient gas treatment. Pre-commissioning and commissioning of automatic emission control systems is underway and is scheduled for completion in 2025
Bring a share of water recycling in the production of alumina, aluminium, and finished products to 100% by 2027	On track	Armenal implemented measures to improve the recycling unit of the rolling department, the transition to a closed recycling water supply system continues at the Ural Aluminum Plant
Eliminate the discharge of untreated wastewater generated by the Power segment by 2030	On track	The Group is developing design documentation for local treatment facilities at Bratsk and Ust-Ilimsk HPPs, and continues to modernise treatment facilities of Irkutsk HPP. In 2024, the Company built a complex of treatment facilities for a coal company



that they were considered to be other than insignificant. The Company develops measures to manage such risks. 116 CONSOLIDATED REPORT 2024 -

Targets	Status	Progress made in 2024
Ensure a gradual reduction of at least 10% in the intensity of waste generation which is neither recyclable nor reusable, measured per tonne of metal, and safe disposal of 100% of such waste by 2030 in the Metals segment	On track	The volume of waste generated by the Metals segment has been reduced by 9.8% compared to 2021. Ensured safe disposal of waste that cannot be disposed
Put back to economic use or utilise at least 15% of alumina production waste and at least 95% of aluminium and silicon production waste by 2035	On track	The Metals segment recycled 7.7% of generated red/nefeline sludge, 78.8% of spent coal lining and 96.2% of aluminium slag
Implement large-scale projects related to the use of ash and slag waste	On track	In 2024, a bypass road was built in Usolye- Sibirskoye utilising materials derived from the recycling of ash and slag produced by CHPs of the Irkutsk Region. At the same time, the Group, together with research organisations, participated in the construction of experimental road structures using ash and slag mixtures. Ash and slag waste is successfully used to produce construction materials (concrete, aerated concrete, cement). In 2024, En+ Group sent 315,000 tonnes of ash for these purposes (+14% vs. 2023)
Develop biodiversity conservation programmes and action plans for pilot facilities (three operating facilities in each segment) by 2024	Achieved	The programmes and action plans are in place for Angara HPPs and Timan Bauxite, UAZ and IrkAZ
Develop biodiversity conservation programmes and action plans for En+ Group's facilities with identified biodiversity risks by 2030	On track	Species conservation measures are being implemented (artificial spawning grounds, community fish protection, etc.)

GRI 2-27, SASB EM-MM-140a.2, IF-EU-140a.2, EM-MM-150a.9

There were no incidents in the reporting period that could lead to significant¹ environmental damage. The Company took into account the alerts and notices received from Supervisory authorities and developed corrective action plans.

RUB 19.6 billion was spent on environmental measures in the reporting period, with the majority of funds allocated to air protection. The cost structure did not change significantly compared to the previous year.





Atmospheric emission intensity indicators⁴



- ² Subtotals may not add up to the total due to rounding.
- ³ PCB polychlorinated biphenyls.
- ⁴ To track the results of measures to reduce the negative impact on environmental components, the Company calculates specific emission indicators tied to the volume of aluminium produced (for the Metals segment) and the volume of thermal and electrical energy produced (for the Power segment). The denominator values are indicated in the appendices and are common to all specific environmental indicators of the segments in the Climate and Environmental Protection section.



The total payments for the negative environmental impact were RUB 814.8 million, a 23.9 decrease year-on-year.

GRI 305-7, 14.3.2, SASB EM-MM-120a.1, IF-EU-120a.1

In the reporting period, gross air pollutant emissions, excluding greenhouse gases, equalled 708.1 kt, 2.4% more than the 2023 indicator due to increase in CHP generation in 3% year-on-year. Carbon dioxide (67.4%) accounted for the majority of emissions of the Metals segment, while sulphur oxides (58.9%) was the primary source of the Power segment's emissions.







GRI 303-3, 14.7.4, SASB EM-MM-140a.1, IF-EU-140a.1

In 2024, En+ Group totally withdrew 1,062.0 million m³, which is 2.6% more water than in 2023 due to increase in output at the Group's CHPs by 3% year-onyear. In 2024, the majority of water was withdrawn from surface water bodies. Due to the nature of the production processes, the Power segment withdraws most of the water (85.0%). Fresh water withdrawal was 1,032.9 million m³, up 2.6% vs. 2023. Sea water is only used by the Metals segment for equipment cooling processes. The share of water withdrawal in regions with water shortages was 1.1% for the Metals segment. These indicator did not change year-on-year.

GRI 303-5, 14.7.6, SASB EM-MM-140a.1, IF-EU-140a.1

The Company consumed 727.2 million m³ of water in the reporting period. This represents a 2.4% increase year-on-year. The Power segment consumed most of the water (87.6%). The share of water used in recirculating water systems was 64.3%.

GRI 303-4, 14.7.5

In the reporting period, En+ Group discharged 664.9 million m³ of water, up 12.3% vs. 2023. The Power segment discharged the largest volume of water (93.5%). 641.9 million m³ of fresh water were discharged, up 13.6% year-on-year. The Power segment accounted for 96.9% in fresh water discharge.

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Water-related intensity metrics



Intensity of total water discharge



In 2024, En+ Group generated 157.9 mt of waste, down 29.8% year-on-year due to reduction of waste generation in the coal business. The Power segment generated the majority of waste (70.0%). The Company's waste is mostly non-hazardous¹ (99.6%).

GRI 306-3, 306-4, 14.5.4, 14.5.5, 14.5.6, 306-5, SASB EM-MM-150a.8, SASB IF-EU-150a.1



Power segment, mn m³/bn kWh

4.66

'23

Intensity of total water withdrawal

GRI 306-4, 14.5.5, SASB EM-MM-150a.8

Intensity of total water discharge

7.45

5.13

'24

In 2024, the Group utilised² 98.5 mt of waste (62.4%

of all waste), down 5.6% year-on-year. The majority

of waste was utilised by the Power segment (96.6%

of total waste disposed of all utilised waste).

7.45

7.05

4.37

'22

¹ The Company classifies Class I–III waste (according to the classification of the Russian legislation) as hazardous and Class IV–V waste as non-hazardous.

² En+ Group recycles and reuses waste, including sending it to specialised organisations for such purposes.

Waste intensity metrics



GRI 14.8.6

As of the beginning of the reporting period, the area of disturbed but not yet reclaimed land of the Company amounted to 24,200 ha; as of the end of the period it was 24,500 ha. In 2024, 511 ha of land was disturbed (a year-on-year increase of due to 31.0). The Company managed to rehabilitate 175 ha, which is 50.2% less than in the previous year. In the reporting period,

Plans for 2025 and the medium term

- To monitor the implementation of measures to manage risks with environmental impact.
- To continue installing in-house designed gas purification facilities at aluminium smelters.
- To continue to work towards achieving the goals of the Clean Air federal project.
- To continue installing in-house designed gas purification facilities at aluminium smelters.
- To continue construction of treatment facilities at Irkutsk HPP and put them into operation.
- To continue converting to a closed-loop water recycling system.

Power segment, mt/bn kWh

of waste generated



Group employees planted 250,000 tree seedlings in the Kirenskoye forest area. The plantings will be taken care of over the next three years. In total, the Company planted trees on an area of 64 ha.

- To carry on with implementing initiatives to involve waste in business turnover.
- To rehabilitate at least 79.9 ha of land of the Power segment.
- To continue field verification of the Angara HPPs Biodiversity Conservation Programme.
- To extend the practice of installing artificial spawning grounds to the Irkutsk and Krasnoyarsk reservoirs.
- To conduct field studies for the Krasnoyarsk HPP Biodiversity Conservation Programme.
- To continue scientific environmental monitoring of Lake Baikal.