



## ENVIRONMENT

# AN ENDURING PRIORITY

Despite the complexities of the full-scale war, Metinvest upheld its environmental obligations through a comprehensive system designed to provide continuous monitoring and ensure compliance with relevant legislation.

### RESILIENT STEWARDSHIP

During the year, Metinvest spent a total of US\$167 million on environmental initiatives, an increase of 2% year-on-year, reflecting the fact that the performance for 2022 largely excluded numbers related to the suspended operations.

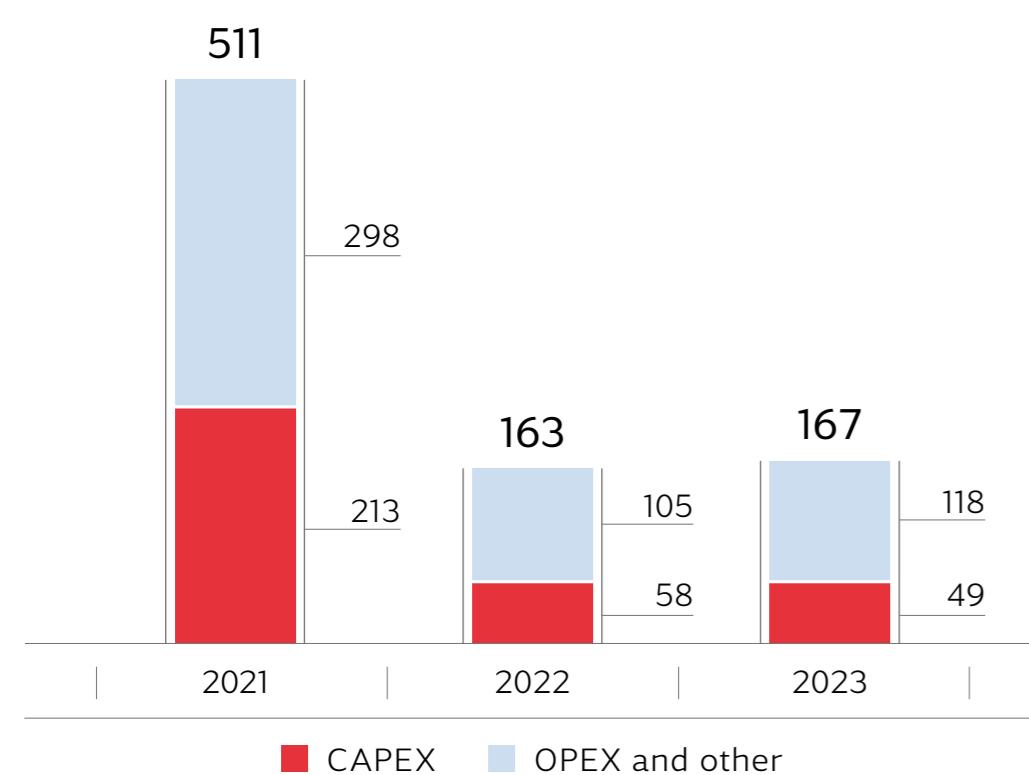
In the reporting period, US\$49 million was directed to capital expenditure, down 16% year-on-year.

The Group also prioritised critical repairs needed to maintain compliance with required environmental metrics.

It should be noted that environmental capital expenditures for assets in Ukraine are calculated based on the country's regulatory requirements and methodology and may differ from the IFRS approach.

### SPENDING ON ENVIRONMENT

US\$167 mn | ^ 2%



<sup>1</sup> Central Iron Ore, Ferriera Valsider, Inhulets Iron Ore, Kamet Steel, Kryvyi Rih Machining and Repair Plant, Metinvest-Promservice, Metinvest Trammetal, Northern Iron Ore, Pokrovske Colliery, Promet Steel, Spartan UK, Sviato-Varvarynska Beneficiation Factory, Unisteel, Zaporizhia Casting and Mechanical Works, Zaporizhia Coke and Zaporizhia Refractories.

### GENERAL APPROACH

Metinvest's core environmental principles are centred on compliance with relevant legal standards and the adoption of best practices. The Policy in the Field of Health, Safety and the Environment guides the Group's approach to managing its ecological footprint.

The Health, Safety and Environmental Committee of the Supervisory Board oversees the environmental management aspects of Metinvest's corporate governance.

In May 2023, the Group's environmental function at the executive level was moved to the Technological Directorate to support the implementation of this agenda. The function ensures compliance with legislative requirements, conducts risk assessments and internal audits, and works on measures aimed at reducing environmental impact, among other priorities. It is also engaged in developing the technological strategy, including research on low-carbon emissions technologies and decarbonisation initiatives.

At each production asset, the senior management team meets quarterly to discuss crucial environmental issues and make decisions on the implementation of associated initiatives

In 2023, Metinvest continued to certify its assets as compliant with international standards.

During the year, Zaporizhia Casting and Mechanical Works became fully integrated into the Group's environmental procedures and received ISO 14001:2015 certification. As of the year-end, 16 of the operating assets<sup>1</sup> held this certification.

Recognising the growing importance to customers of reducing supply chain carbon emissions, in March 2023, Metinvest Trammetal and Ferriera Valsider in Italy obtained Environmental Product Declaration (EPD) certificates issued by the independent assurance provider DNV.

The Group strives to engage in a transparent dialogue with all stakeholders to address environmental challenges in the areas where it operates. Stakeholders can report any relevant concerns directly through the Trust Line. In 2023, there were no complaints received regarding environmental protection issues.

Metinvest also uses environmental training across its operations to align employee behaviours with its policies and procedures in place. During the reporting period, courses were conducted at Central Iron Ore, Kamet Steel, Metinvest Sichsteel, Pokrovske Coal, Zaporizhia Casting and Mechanical Works, Zaporizhia Coke and Zaporizhia Refractory.



GHG EMISSIONS DISCLOSURES

Metinvest's GHG emissions are comprised mainly of carbon dioxide (CO2), as well as some volumes of methane (CH4) and nitrous oxide (N2O).

In 2023, Metinvest's Scope 1 CO2 emissions fell by 19% year-on-year to 5.4 million tonnes2, while Scope 2 CO2 emissions dropped by 7% year-on-year to 1.3 million tonnes3. Excluding 2022 figures for suspended operations in Mariupol and Avdiivka, Scope 1 CO2 and Scope 2 CO2 emissions increased by 17% and 12% year-on-year, respectively, due to greater production at Kamet Steel.

At the same time, direct CO2 emissions intensity decreased by 6% year-on-year to 2.30 tonnes of CO2 per tonne of crude steel production4, mainly as a result of the use of a more efficient energy mix in blast furnaces at Kamet Steel in the reporting period.

The main source of Metinvest's methane emissions comes from underground coking coal mining operations. In 2023, the Group's CH4 emissions totalled 80 thousand tonnes, down 22% year-on-year. The change was mainly because of the transfer of some operations at Pokrovske Colliery to other mining sections with less methane-containing coal seams.

CBAM REPORTING

During 2023, Metinvest continued to prepare for the implementation of the EU's Carbon Border Adjustment Mechanism (CBAM). The Group's efforts were focused primarily on setting up and testing internal processes for this reporting system, as well as working to integrate its suppliers and customers into CBAM documentation requirements. Metinvest has already started to report under the transition period of the CBAM, which became effective from October 2023.

ENERGY EFFICIENCY

Metinvest's Operational Directorate oversees energy management and implements energy efficiency programmes at the executive level. Each of the Group's operating production sites has a dedicated division responsible for the usage of energy resources in manufacturing and the implementation of efficiency projects.

Metinvest's energy management systems are designed to be compliant with leading international standards in the field. At the end of 2023, six5 of Metinvest's operating assets held ISO 50001 certification.

In 2023, direct energy consumption decreased by 28% year-on-year to 59,099 terajoules6. Excluding the 2022 figures for Metinvest's assets in Mariupol and Avdiivka, the indicator increased by 10% year-on-year. This was mainly due to expanded production at Kamet Steel and at the Group's iron ore assets.

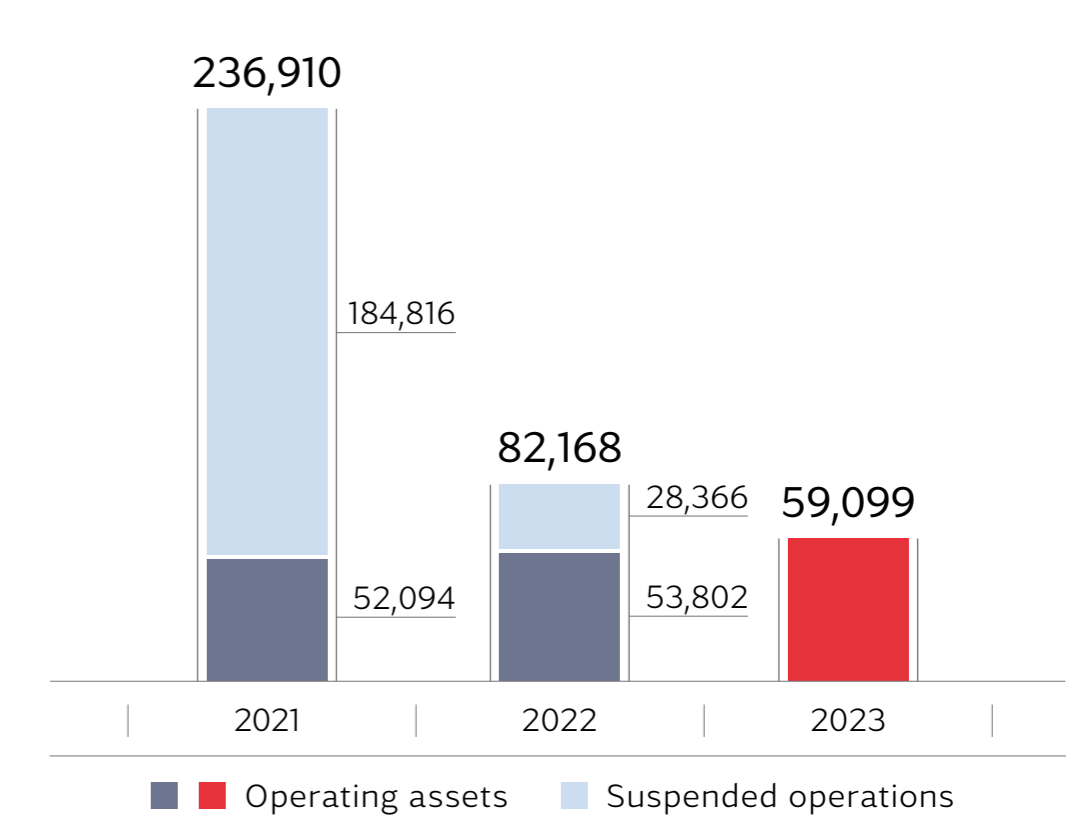
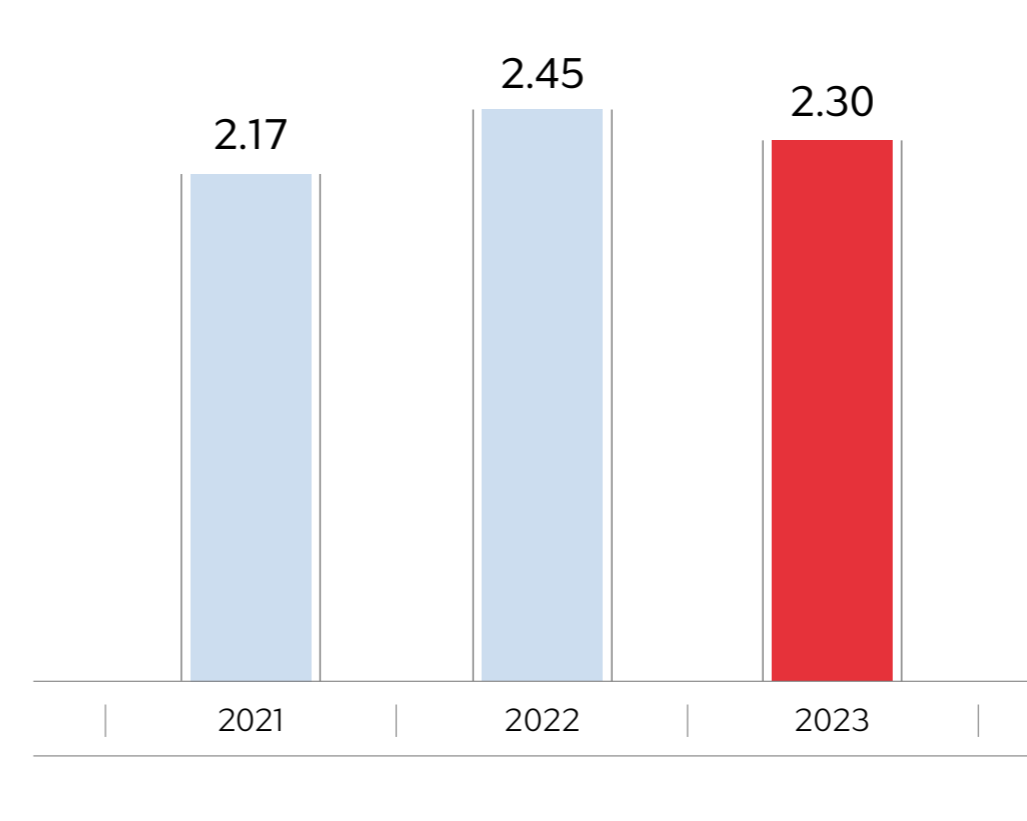
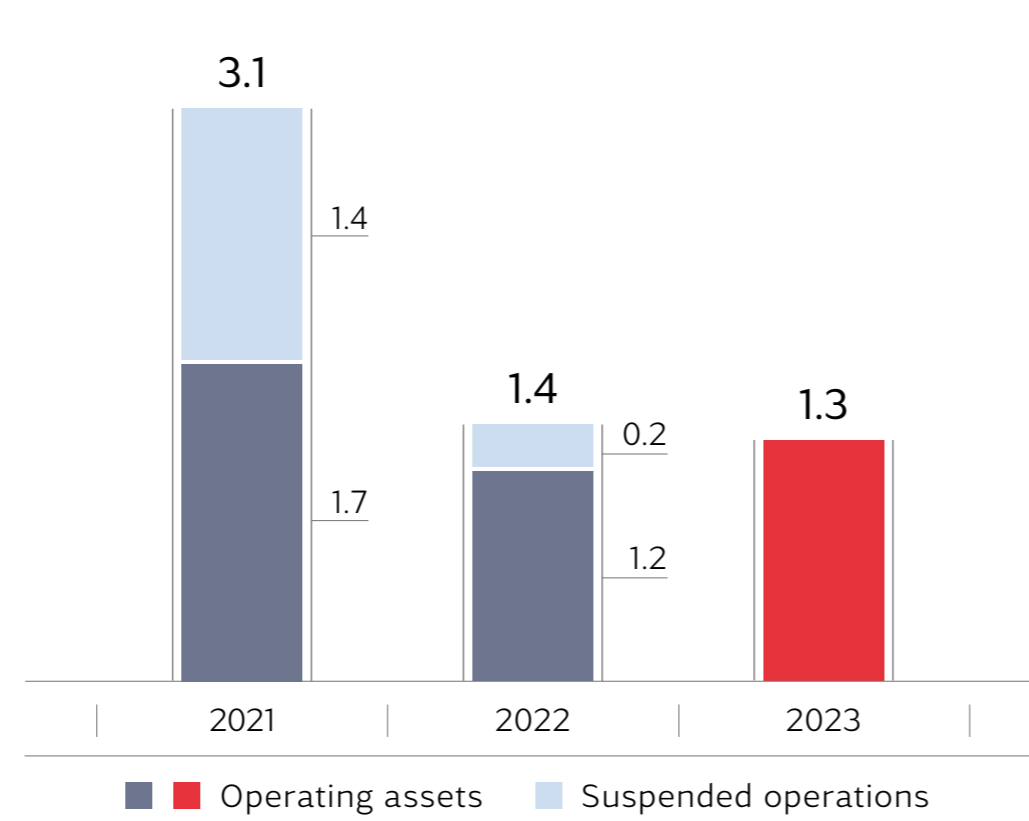
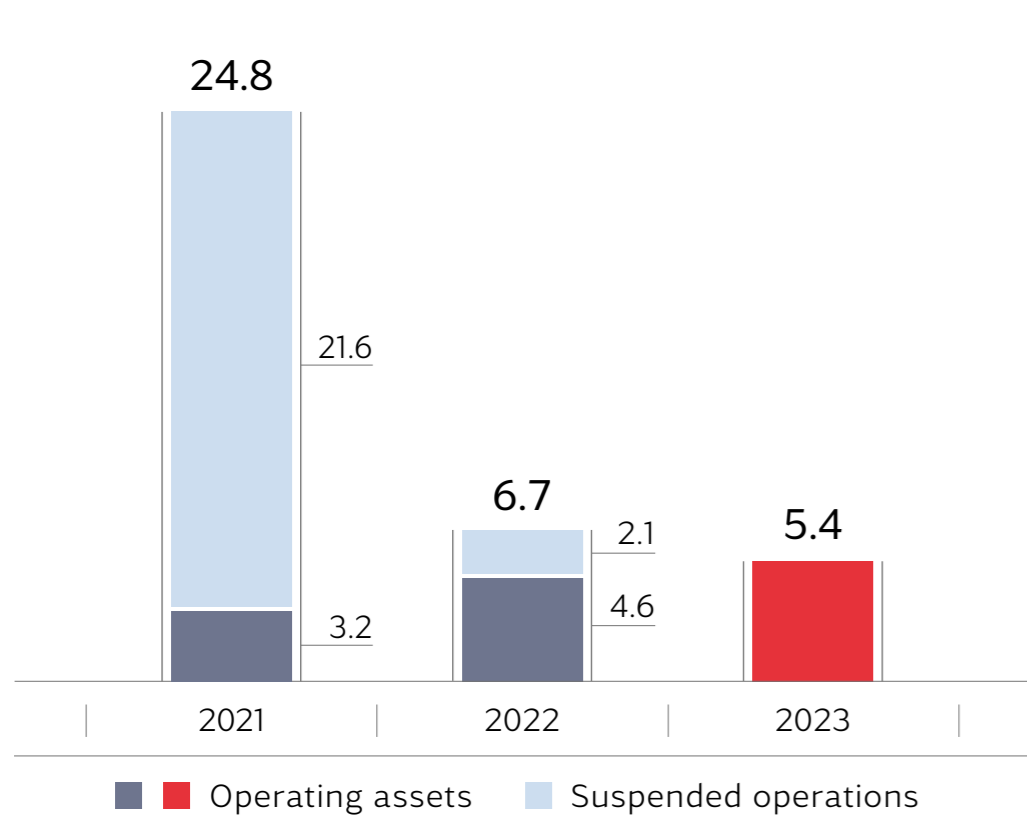
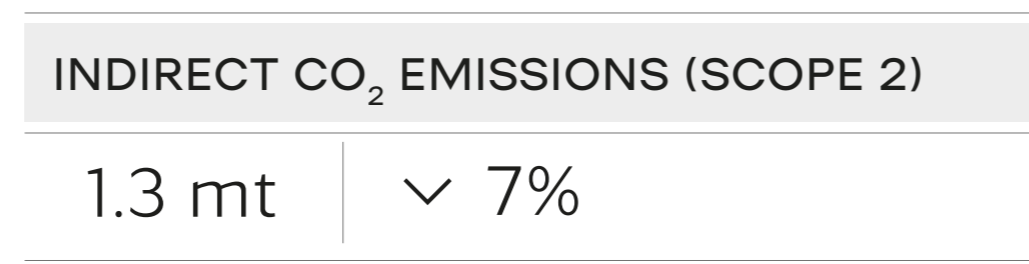
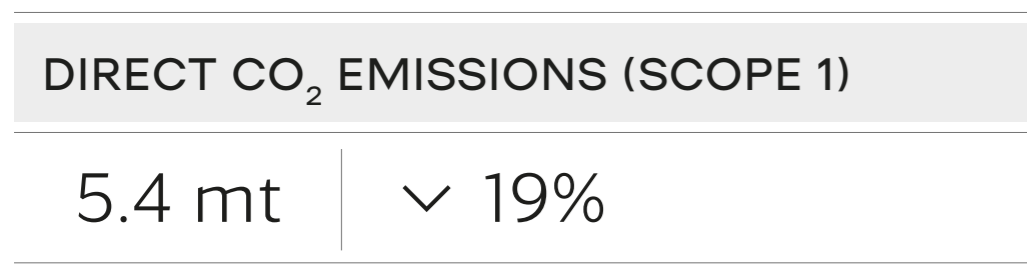
Overall, Metinvest's spending on energy efficiency initiatives in 2023 amounted to US\$7 million, down 19% year-on-year.

During the reporting period, the Group's energy management efforts included:

- ensuring energy security and preventing emergencies
- enhancing continuity of production in case of power outages and shortages
- introducing manoeuvrable energy generation to supply critical infrastructure
- optimising energy costs during production downtime
- implementing energy-saving programmes
- increasing in-house electricity generation
- using biofuel to replace natural gas.

In 2023, the Group also maintained its practice of engaging contractors to implement turn-key energy-savings projects. This included substituting natural gas with crushed sunflower husks as biofuels in the pellet production process. This reduced natural gas consumption at the respective units of Central Iron Ore and Northern Iron Ore by approximately 40-45%.

2 For more details, please see page 87.  
 3 Scope 2 CO2 emissions were calculated using the location-based method. As Metinvest generally purchases electricity from traders, this approach reflects the average emissions intensity of power grids through which energy consumption occurs, primarily using grid-average emission factor data.  
 4 The calculation is based on Scope 1 stationary and mobile CO2 emissions of Metinvest's steelmakers. The indicator for 2022 includes data from the Group's Mariupol steelmakers for January 2022 only. The indicator for 2023 is represented by Kamet Steel only. Uniquely, those material flows directly used in steelmaking processes were taken into account, while volumes of merchant pig iron were not included.  
 5 Central Iron Ore, Inhulets Iron Ore, Kamet Steel (coking facilities), Zaporizhia Casting and Mechanical Works, Zaporizhia Coke and Zaporizhia Refractories.  
 6 For more details, please see page 88.





**AIR EMISSIONS**

Metinvest monitors air emissions at its operational facilities continuously, in alignment with relevant legal requirements pertaining to pollutant limits specified in the permits. The Group’s air emissions consist predominantly of carbon monoxide (CO), dust, sulphur oxides (SO<sub>2</sub>) and nitrogen oxides (NO<sub>2</sub>), of which CO emissions make up the largest share.

In 2023, Metinvest focused on critical repairs to keep dust and gaseous emissions below permitted levels. Several environmental initiatives and technology upgrades were implemented to reduce air emissions at certain assets. These included overhauling coke oven batteries and making efficiency improvements at Kamet Steel, as well as reducing emissions from blasting and stabilising dry tailings’ surfaces at Inhulets Iron Ore.

During the reporting period, Metinvest’s air emissions rose by 8% year-on-year to 86 thousand tonnes, mainly because of increased production volumes at Kamet Steel. Excluding the 2022 numbers for the suspended operations in Mariupol and Avdiivka, the increase stood at 12%.

**WATER MANAGEMENT**

Metinvest works to identify, prevent and mitigate any potential impacts its operations may have on water resources. It closely monitors the water resources withdrawn and used by its operating assets to ensure compliance with environmental regulations. The Group also upgrades its laboratories to maintain the precision of its measurements. Reflecting these efforts, Metinvest recycled and reused 91% of water consumed from all sources in 2023, in line with 2022 results.

The Group’s production assets use water primarily for cooling machinery and cleaning flue gases. The BOF production method also uses water to clean gas generated from steel production, after which the cleaned water is reused in the process. Metinvest’s iron ore mining operations recycle water, combining it with ground ore to separate valuable elements from waste, known as ‘tails’, which are then transferred to tailings storage facilities.

In June 2023, Russian occupying forces intentionally destroyed the dam of the Kakhovska Hydroelectric Power Plant on the Dnipro River.

This led to extensive flooding and damage to communities in Kherson region. It also caused a critical drop in the water level at the Kakhovska reservoir, which supplied water to Kryvyi Rih. However, this has not directly impacted the operations of the Group’s assets in the city.

In 2023, the Group’s water intake volume totalled 121 million cubic metres, up 5% year-on-year. The water consumption volume rose by 7% year-on-year to 108 million cubic metres. Meanwhile, the water discharge volume was 82 million cubic metres, up 6% year-on-year. The growth was primarily caused by the recovery of production volumes at Kamet Steel.

**WASTE MANAGEMENT**

Responsible handling of waste is a core element of Metinvest’s environmental approach. The industrial waste produced during manufacturing processes includes overburden and tailings from the extraction and enrichment of ore, coal mining and processing wastes, chemical by-products from the production of coke, along with slag and sludge containing iron from the production of hot metal and steel.

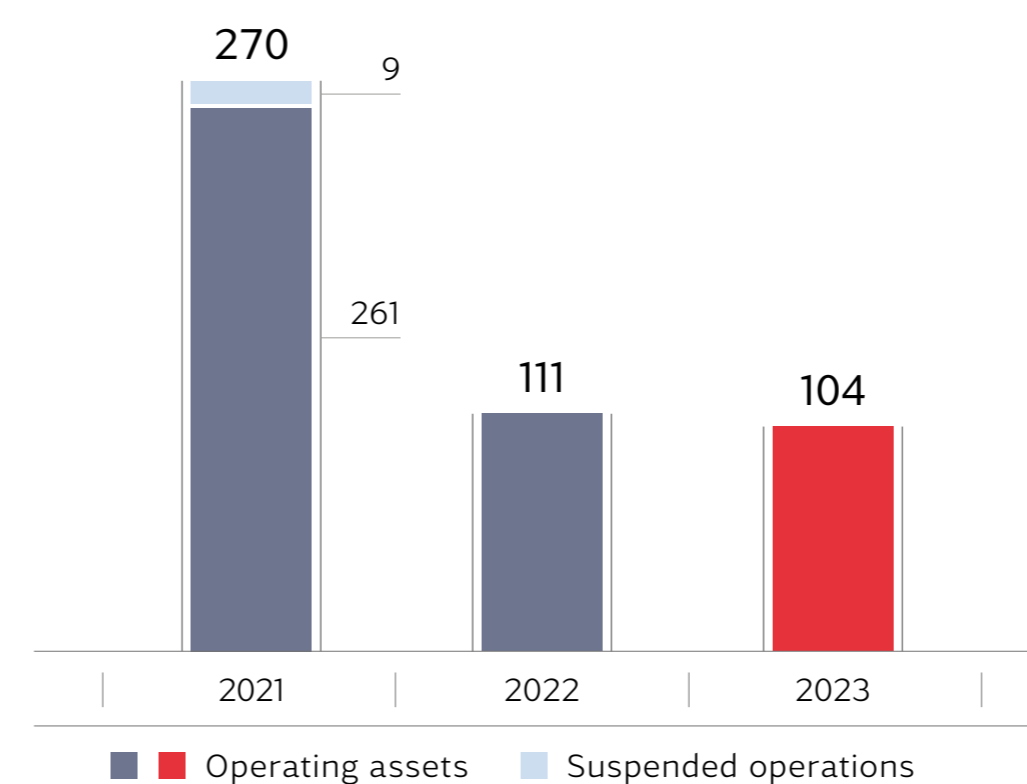
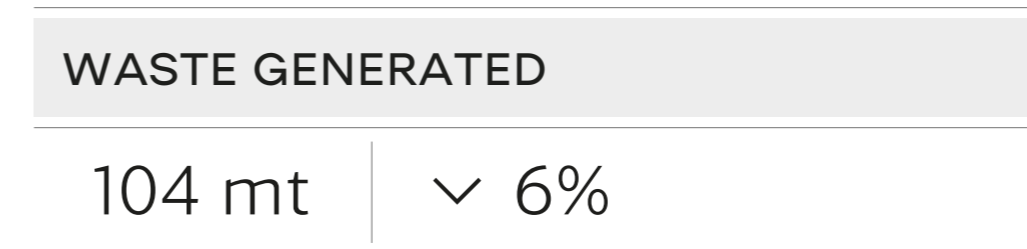
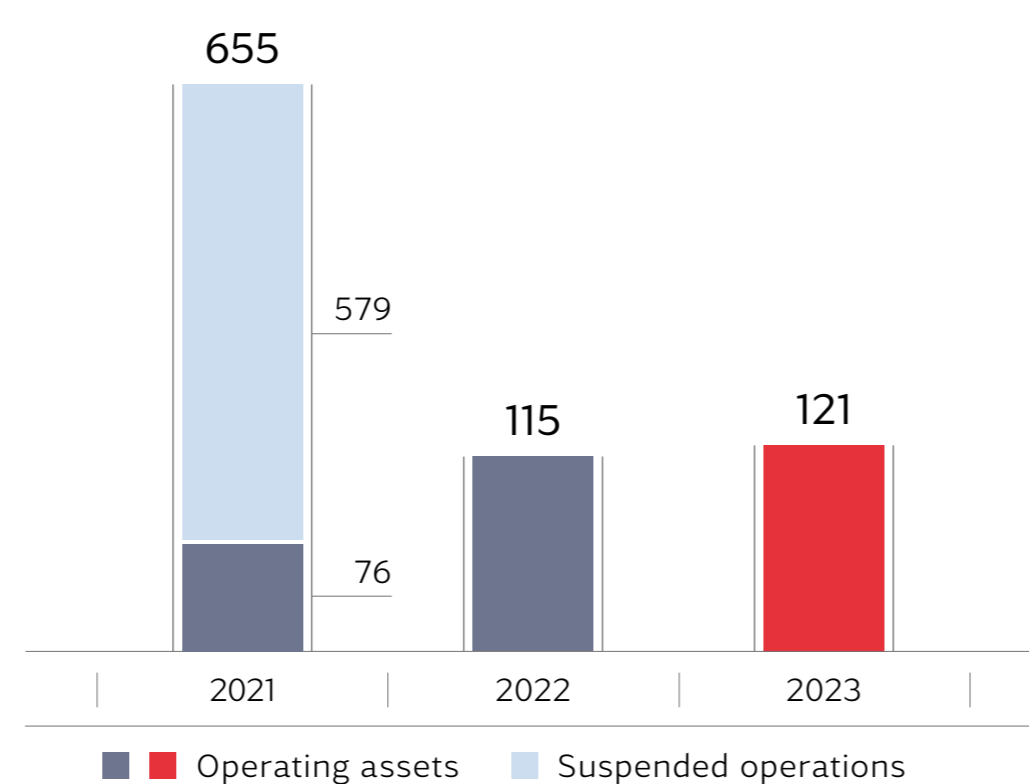
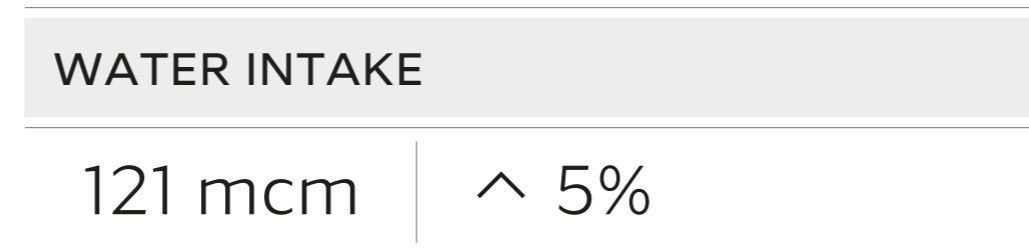
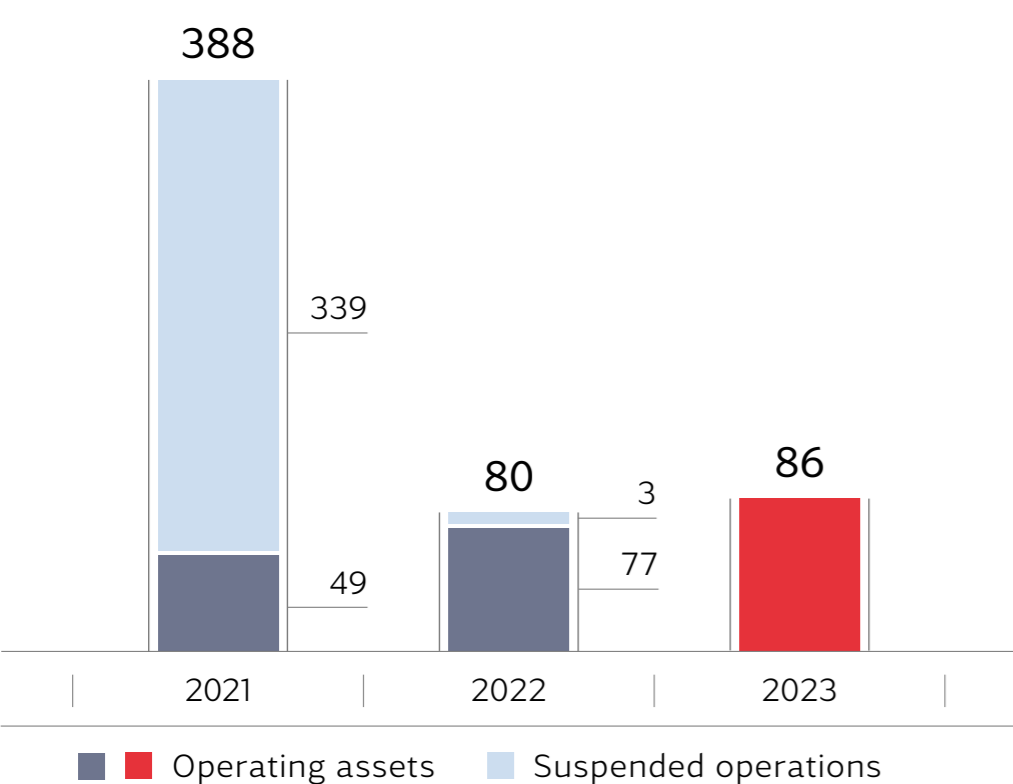
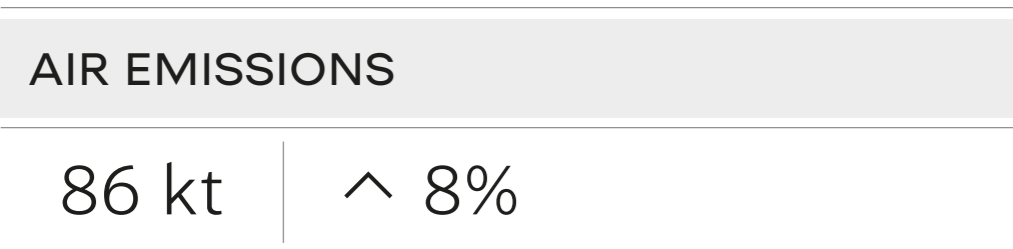
The Group strives to reuse and recycle waste, including by applying crushed rock in road maintenance and construction, commercialising by-products such as coal tar pitch and naphthalene, and replacing raw iron ore materials with scrap metal.

In 2023, scrap metal accounted for 22% of overall consumption for steel production, up eight percentage points year-on-year.

Metinvest designates specific areas for waste management, such as repositories at steel production sites for slag and sludge, and facilities at iron ore assets for storing tailings. These storage facilities are typically located in areas with low seismic activity and minimal risk of heavy rainfall. The Group rigorously performs internal reviews of the stability of its tailings dams and designates staff to regularly inspect them, while also monitoring the volume of waste and disposal methods and assessing potential environmental impacts. Annual external evaluations of the storage sites of its iron ore assets are also carried out by Ukrainian governmental bodies and an independent expert organisation. This approach ensures adherence to tailings management requirements and long-term safety initiatives, including monitoring dam loading and cleaning drainage systems. During the year, efforts were undertaken to strengthen the dams by increasing their height, as well as to clean the drainage systems.

In 2023, the industrial waste generated from Metinvest’s production totalled 104 million tonnes, down 6% year-on-year. The reduction in waste was primarily due to the lower output of iron ore at Central Iron Ore. Nearly 100% of the overall volume of waste was non-hazardous, primarily overburden and tailings from iron ore production. The total volume of waste recycled in 2023 was 20 million tonnes, accounting for 19% of waste generated.

For more information about key environmental data, please see Annex 2.





## BIODIVERSITY

The Group's assets do not operate in protected natural areas or areas of high biodiversity value, nor do they impact the habitats of species found on the International Union for Conservation of Nature (IUCN) Red List or national conservation lists.

Metinvest is committed to rehabilitating land affected by its mining activities, employing strategies to conserve natural landscapes, minimise the amount of disturbed land and restore sites to their original condition.

In 2023, Metinvest's assets continued to implement greening measures to reduce dust at dumps and tailings facilities. For example, its iron ore assets continued to plant trees in their sanitary protection zones to maintain air quality.

Inhulets Iron Ore also undertook numerous efforts to support the Vizyrka nature preserve, which was created on previously mined land.

In addition, as a response to the destruction of the Kakhovska Hydroelectric Power Plant, the Zaporizhstal JV worked with local NGOs to organise ecological clean-up campaigns, removing 15 tonnes of rubbish from over 15 hectares of the river's riparian zones with the help of over 200 volunteers.

In the US, United Coal reclaimed 145 acres (around 59 hectares) of mined land and planted 115,400 trees during the reporting period. Among other initiatives, it also conducted studies to determine the presence of various threatened and endangered species. It then developed and implemented protection and enhancement plans for each species. These documents are reviewed by US state and federal agencies and include time of year restrictions on certain practices such as tree cutting or pond removal when species are known to nest in trees or reproduce in the streams. In addition, whole effluent toxicity tests were performed to determine the toxic effect on aquatic organisms. The tests measure the impact on specific organisms' ability to survive, grow and reproduce.

## RECLAMATION

As part of its environmental stewardship agenda, Metinvest takes a consistent approach to the reclamation of land used in mining operations.

According to Ukraine's Mineral Resources Code, Land Code, Mining Law and Land Protection Law, along with other relevant Ukrainian and US legislation and regulations, the Group is responsible for the restoration and rehabilitation of soil when decommissioning non-hazardous waste storage sites and mining operations. This duty is reinforced by the subsoil use licences granted by governmental bodies.

After the completion of mining operations, Metinvest is obliged to introduce recultivating measures that have received relevant prior approvals. While remaining consistent with its obligations, the Group takes a diverse and flexible approach to reclamation.

In Ukraine, the process begins with the greening of dumps and tailings for the purpose of dust suppression and ends with the complete reclamation of abandoned quarries. Carrying this out in a closed mining system necessarily involves the introduction of a drainage system from the mine shafts, the cleaning of mine waters and their discharge into the local water network.

In the US, United Coal's efforts in this area are also guided by detailed plans approved alongside relevant regulatory permits. The process involves three distinct phases: initial site stabilisation, the establishment of vegetation over two growing seasons, and the final removal of infrastructure or its preservation at the request of the landowner.

The Group employs both in-house and contractor teams to execute its reclamation plans. Regular inspections by the relevant authorities guarantee compliance and raise the need for any adjustments in a timely manner, consistent with Metinvest's approach to the environment.

## A STRATEGIC STEP TOWARDS GREEN STEEL PRODUCTION



In 2023, Metinvest, in partnership with Danieli, a global leader in metallurgical technological solutions with Italian roots, initiated Project Adria. This represents a significant stride towards establishing a green steel production facility in Italy.

The venture was inaugurated by a memorandum of understanding signed with the Italian government and local authorities in January 2024, after the reporting period. The document outlined a collective ambition to revitalise a steelmaking site in Piombino.

Backed by investments exceeding EUR2 billion, the initiative aims to produce 2.7 million tonnes of low-carbon-emission hot-rolled products annually. Cutting-edge proven technology will feature two electric arc furnaces, a casting-rolling complex and a steel service center. The project is estimated to create around 1,000 jobs.

The decision to locate the project in Piombino was driven by a range of strategic benefits, including its status as a site of national interest and proximity to end customers. The location also offers efficient delivery and cost advantages thanks to its access to major transport networks and a deep-water seaport. Aligned with Italy's sustainable development and climate goals, the project will deliver significant environmental, economic and technological advancements.

The plant is positioned to meet the strong demand in Italy, the EU's largest HRC importer, by offering a broad mix of steel grades. It will incorporate advanced green steelmaking technologies into a highly efficient, full-cycle process to achieve low production costs. Strong sponsorship and well-mitigated risks, backed by the technologies of Danieli and the combined expertise of the partners, further reinforce the project's viability.

Overall, Project Adria is a critical milestone for the Group, signifying a broader shift towards green steel manufacturing practices. This aligns with the growing global demand for products with a reduced carbon footprint. Importantly, the initiative also has inherent synergies with Metinvest's vast magnetite ore reserves in Ukraine.

As of this report's publication date, comprehensive technical, environmental and economic studies are being conducted. These aim to ensure the project's long-term success and proper fit within the Group's business model. Financial structuring also remains a priority. Discussions are being held with governmental bodies, financial institutions and commercial banks to secure the project's viability.