

# ENVIRONMENTAL MANAGEMENT

NEW ENVIRONMENTAL POLICY OF TMK GROUP

Environmental expenditures totaled

**\$37** million

**11** of the Company's plants confirmed their compliance with ISO 14001:2015

Over **1,800** employees of the Company received environmental trainings and briefings

Volzhsky Pipe Plant and TAGMET named environmental leaders of Russia

Improved environmental performance indicators

**Purpose:**

minimize environmental footprint, preserve and improve the environment in the operating regions in the context of dynamically growing production.

**Governing regulations:**

- Environmental laws
- Environmental policy of the TMK Group [https://www.tmk-group.com/media\\_en/texts/64/Ekologicheskaya\\_politika\\_en.pdf](https://www.tmk-group.com/media_en/texts/64/Ekologicheskaya_politika_en.pdf)
- TMK Group's Environmental Policy Implementation Framework
- ISO 14001:2015 Environmental management systems

**Organization:**

TMK's Technical Director organizes environmental protection activities and

monitors performance against targets. The Chief Environmental Engineer is responsible for day-to-day management, planning and environmental reporting at the Group level. At the facility level, Technical Director/Chief Engineer are responsible for environmental protection. Actual environmental protection activities are carried out by specialized units – environmental services.

**Control:**

TMK's Board of Directors; supervisory bodies.

**In 2019, TMK adopted a new Environmental policy and developed its Implementation Concept.** These documents define our goals, priorities, environmental performance indicators, as well as implementation and monitoring mechanisms.

## ENVIRONMENTAL PRIORITIES

**• green technologies**

In TMK, environmental targets are important considerations in product design and the selection of production technologies, sourcing raw materials and engaging production partners.

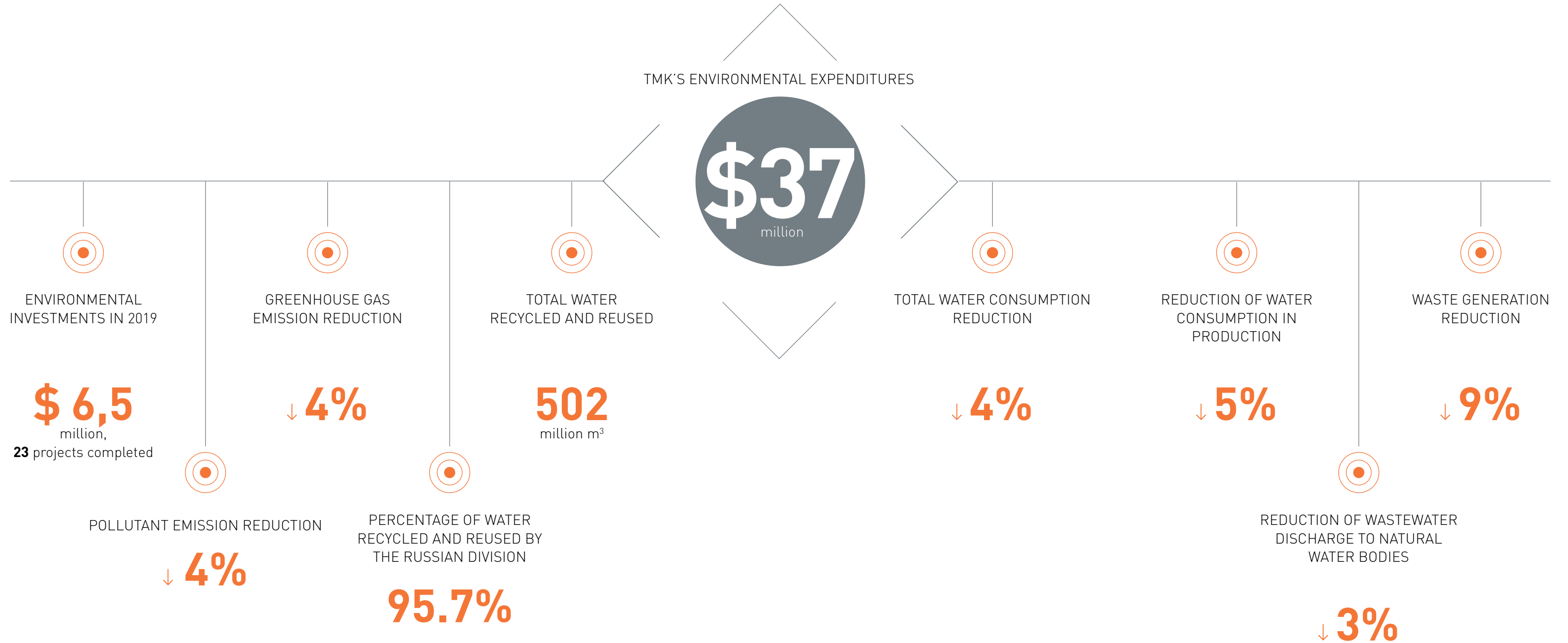
**• green processes**

The technologies and equipment integrated by TMK into its production processes enable the Group, among other things, to reduce its environmental footprint and resource consumption.

**• green products**

TMK is committed to ensuring the environmental safety of its products throughout their lifecycle, including disposal (recycling).

# TMK'S 2019 ENVIRONMENTAL PERFORMANCE HIGHLIGHTS



## ENVIRONMENTAL MANAGEMENT SYSTEMS

The Company continuously improves its environmental management system so that an objective assessment is made of potential environmental risks in the production operations, and the Group can install measures to prevent or minimize their negative impact.

In 2019, eleven of the Company plants passed supervisory audits to confirm the compliance of their certified environmental management system with ISO 14001:2015.

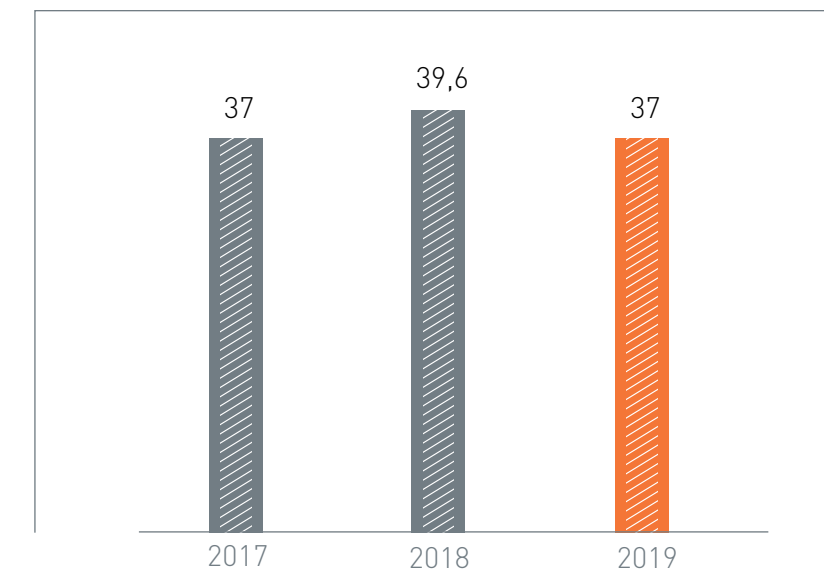


## FINANCING ENVIRONMENTAL PROTECTION ACTIVITIES

TMK invests significantly in environmental protection and stewardship every year, with environmental expenditures in 2019 totaling approximately \$37 million.

ENVIRONMENTAL PROJECTS ARE AN ESSENTIAL COMPONENT OF THE COMPANY'S DEVELOPMENT PROGRAMMES, INCLUDING OUR CURRENT STRATEGIC INVESTMENT PROGRAM.

TMK's total environmental expenditures, \$ million





THE COMPANY'S ENVIRONMENTAL INVESTMENTS OVER THE LAST FIVE YEARS TOTALED OVER

**\$30**

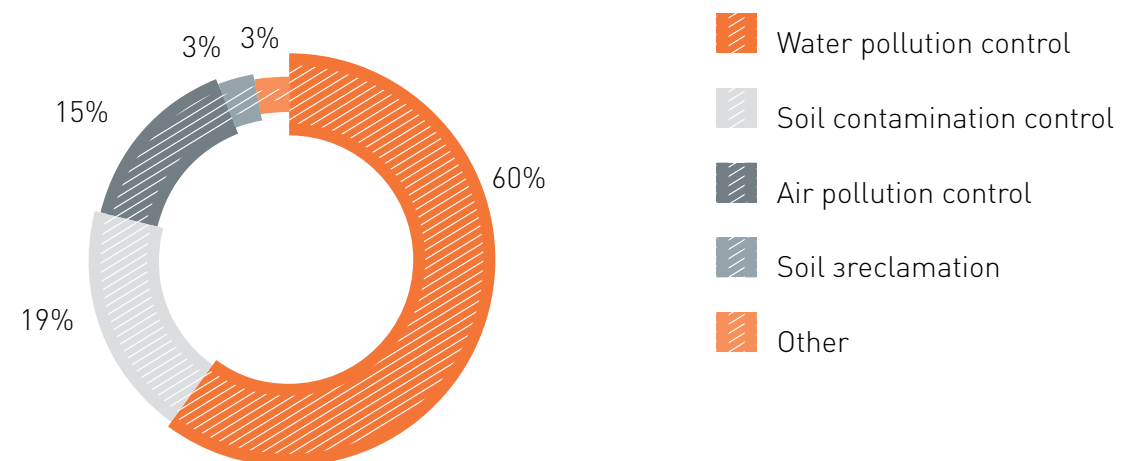
million, including approximately \$6.5 million in 2019

A total of

**23**

capex projects were completed during the year with the main focus on **sustainable water consumption and minimizing impact on water bodies**

TMK's environmental expenditures in 2019



**Key capex projects in 2019**

- SEVERSKY PIPE PLANT:
  - Completed construction of local water reuse treatment facilities for a heat treatment facility, which will help reuse up to 20 million m<sup>3</sup> of treated water
  - Upgrade of the gas treatment unit of Lime Kiln No. 1 is underway
- VOLZHSKY PIPE PLANT:
  - Completed construction of a mechanical draft cooling tower out of prefabricated parts
  - Cell No. 2 of the industrial waste landfill covered; completed construction of cell No. 9 for waste of hazard classes 4 and 5
- SINARSKY PIPE PLANT COMPLETED construction of a cooling tower for reusable water and reduced discharge of solids and petroleum products
- TAGMET completed installation and commissioned dust control and gas cleaning units at the ferro-alloy and lumps preparation facility
- ARTROM upgraded a neutralization station

# KEY ASPECTS OF TMK'S ENVIRONMENTAL ACTIVITIES

## AMBIENT AIR PROTECTION

TMK's facilities comply with the legislation covering air emissions inventory, regulation, and control, as well as operations in adverse weather conditions. Our emissions control activities ensure compliance with the prescribed air emissions limits.

**Focus:**  
continuous air quality improvement in production hosting areas.

**TMK consistently reduces pollutant emissions into the ambient air, with total emissions cut by 22% over the last 5 years. In 2019, total emissions went down by 4% to 10,500 tonnes.**

## AMBIENT AIR PROTECTION TARGETS



Implementation of technologies and measures ensuring compliance of emissions with established limits as well as reduction of gross pollutant emissions into the ambient air



Reduction of GHG emissions through improved energy efficiency initiatives

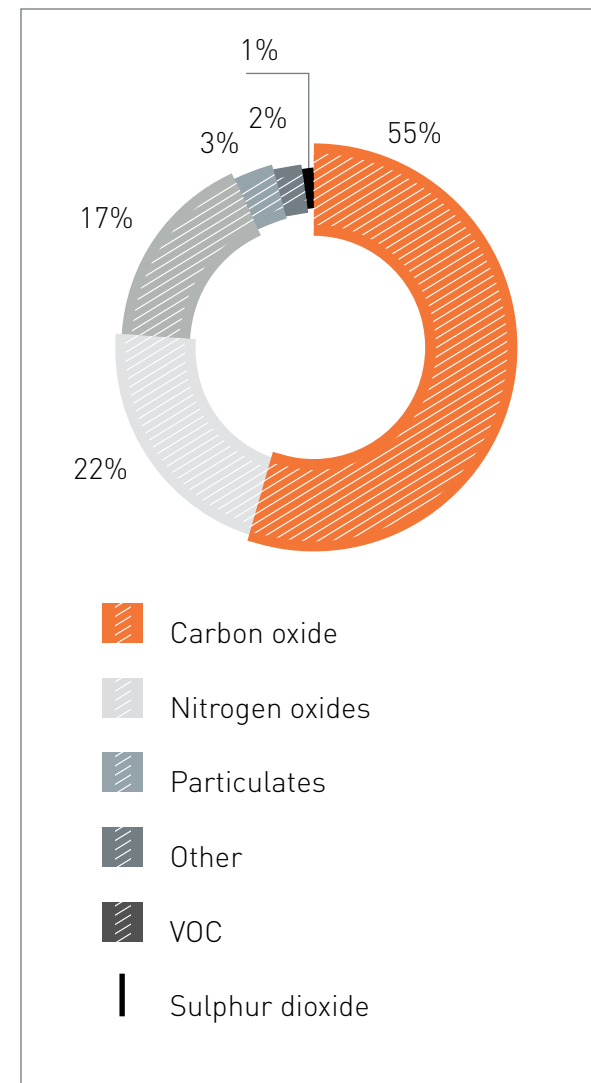


Effective operation of gas treatment equipment



Development and improvement of ambient air impact monitoring

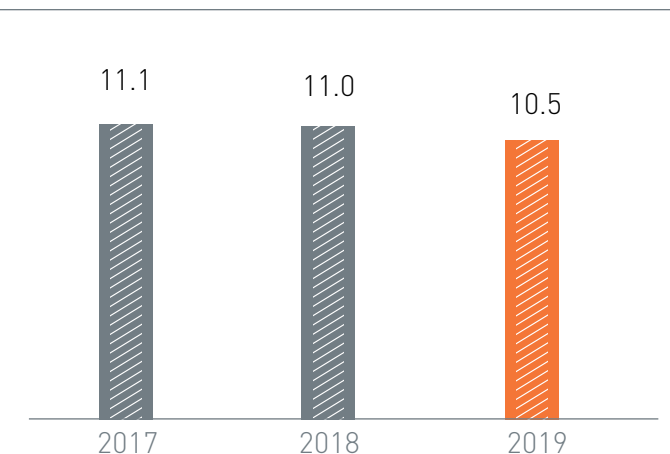
## Emission pollutants



Carbon oxide from fuel combustion in production processes accounts for the largest part of emissions (55%). In the reporting period, the Company complied with emission standards without any emergency or peak emissions.

In order to reduce pollutant emissions into the ambient air, the Company took measures to improve gas cleaning performance, control emissions in adverse weather conditions, as well as contain, redirect, and clean dust and gas flows. TMK's air pollution control expenditures totaled \$4 million in 2019.

## Total pollutant emissions by TMK, thousand tonnes





# CLIMATE RESPONSIBILITY

**Focus:**

support Russian and international initiatives to prevent climate change.

TMK considers carbon footprint when defining its development strategy, with the carbon agenda incorporated into risk management and business processes.

GHG emissions are calculated on an annual basis. GHG emissions in the Russian division are calculated in accordance with the Methodology Recommendations and Guidelines for Quantitative Determination of Greenhouse Gas Emissions from Organizations Conducting Economic and Other Activities in the Russian Federation approved by Order No. 300 of the Ministry of Natural Resources and Environment of

the Russian Federation dated June 30, 2015.

The European division entities comply with local carbon laws and submit GHG emission verification reports and monitoring plans to supervisory bodies in due time.

TMK is implementing a **Programme to Improve Energy Efficiency and Fuel and Energy Saving**, optimizing operations and improving process solutions. As a result, total tonnes of GHG emissions decreased by 4% year-on-year in 2019. **Direct GHG emissions totaled 1.296 mln tonnes of CO<sub>2</sub> equivalent.**



# PROTECTION AND SUSTAINABLE USE OF WATER

**Focus:**

reduce water consumption and negative impact on water bodies.

Subject to permits, TMK's facilities abstract water from surface and underground sources to supply water for production, general and drinking, and process use, and public needs.

**Water reuse or recycling is a mandatory requirement for commissioning any of TMK's new, upgraded or revamped facilities.**

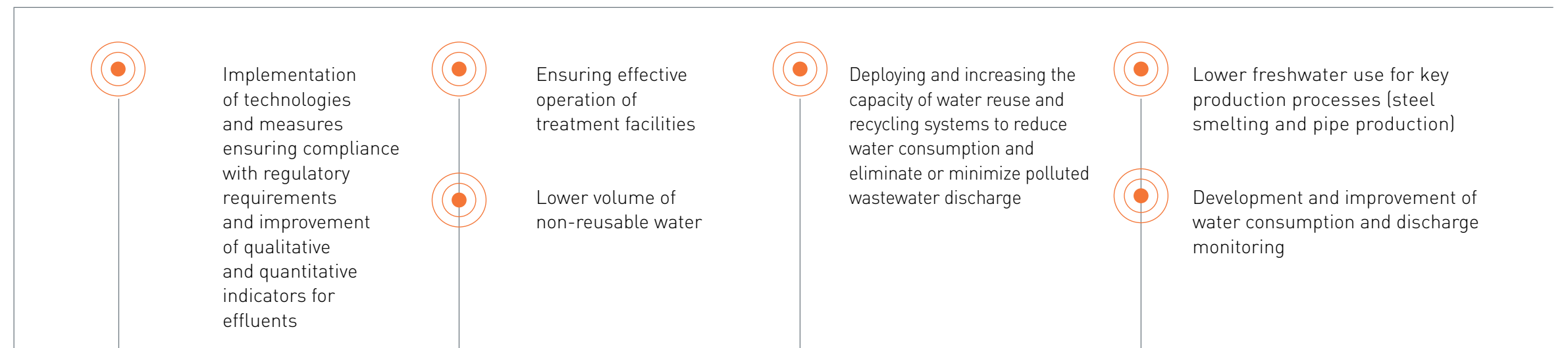
In 2019, the volume of recycled or reused water totaled 502 million m<sup>3</sup>. **Percentage of water recycled and reused by TMK's Russian plants stood at 95.7%.** The high percentage of reused and recycled water reduces water withdrawal and wastewater discharge.

Percentage of water recycled and reused by TMK's Russian plants stood at

# 95.7%



## TARGETS FOR THE PROTECTION OF WATER BODIES AND THE SUSTAINABLE USE OF WATER





Key initiatives implemented in 2019 to mitigate impact on water bodies: building and upgrading treatment facilities; organizational measures to prevent spills, leaks, and unsustainable use of water; enhancing water recycling and reuse systems. **TMK spent \$17.8 million on sustainable water use and water pollution control in 2019.**

Progress vs. 2018:

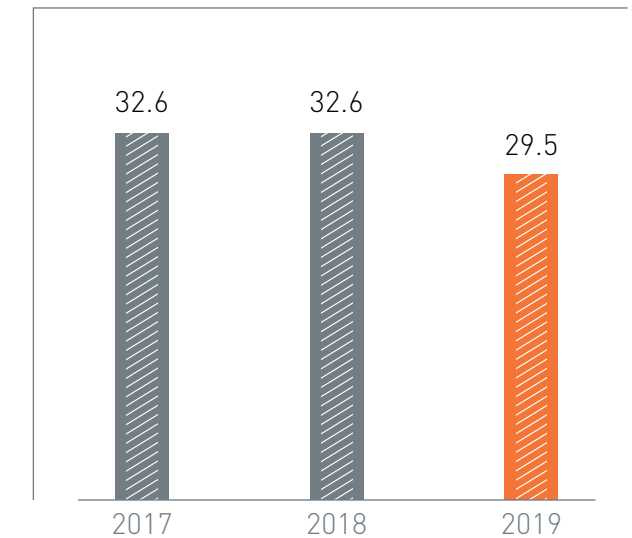
- 4% decrease in total water consumption
- 5% reduction in water consumption in production
- 3% reduction in wastewater discharge to natural water bodies

The success of our sustainable water use efforts is demonstrated by the positive changes in TMK Group's water consumption.

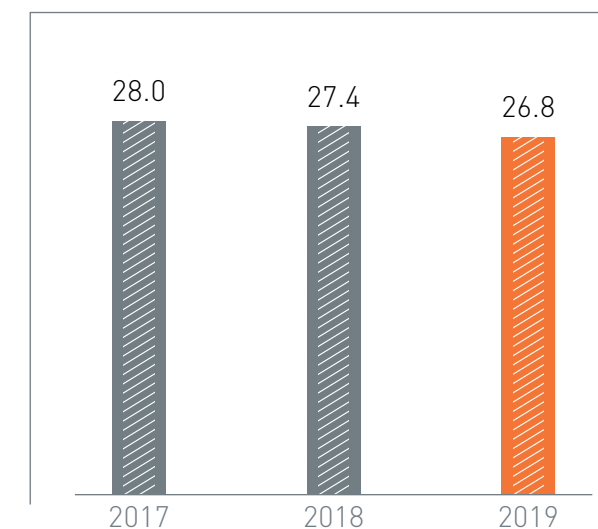


**4%**  
decrease in total water consumption

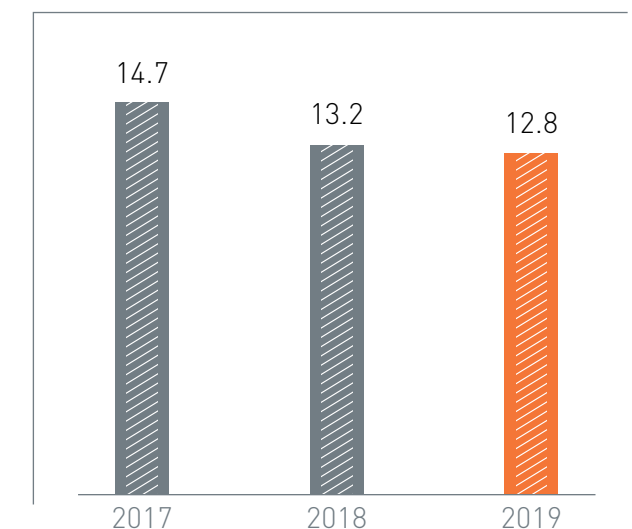
TMK's total water consumption, million m<sup>3</sup>



TMK's total wastewater, million m<sup>3</sup>



TMK's water discharge into surface water bodies, million m<sup>3</sup>





# WASTE MANAGEMENT

**Focus:** prevent land contamination by reducing waste generation and minimizing waste disposal into the environment.

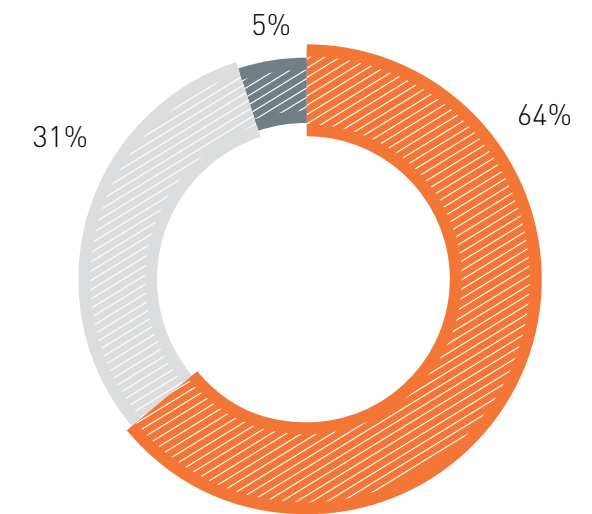
TMK's environmental programmes aimed at increasing waste recycling and reducing waste landfilling achieved good results: **93% of total waste generated by production processes** (621,000 tonnes in 2019) **are used, treated, or processed.**

Key results of TMK's consistent environmental activities in 2019:

- Total waste decreased by 9%
- Internal waste processing increased by 4%
- 64% of total waste treated and used internally and 5% disposed of at our own designated facilities – an excellent waste management performance
- 31% of total waste turned over to licensed specialist contractors

Waste is managed in accordance with approved instructions and corporate standards. Our waste disposal and temporary storage sites are subject to industrial environmental monitoring. **In 2019, we spent \$6.4 million on efforts to minimize the impacts of our waste on the environment,** including approximately \$1 million on land protection (disturbed land rehabilitation, etc.).

Waste disposal methods in 2019



- Treated and used internally
- Transferred to specialist contractors
- Disposed of at our own facilities

## WASTE MANAGEMENT TARGETS



Effective industrial waste collection and disposal management



Implementation of methods and technologies for waste processing and disposal; use of waste as raw material in own production process and production in other industries



Waste recycling wherever possible and economically feasible

# ENVIRONMENTAL AND INDUSTRIAL MONITORING

**Focus:**  
continuous monitoring  
of environmental  
impacts.

Our plants are continuously monitoring the areas affected by their production facilities for environmental impact, leveraging a high-performance industrial environmental monitoring system. All of the Russian division's plants have certified chemical laboratories equipped with all necessary state-of-the-art equipment. In accordance with accreditation requirements, our laboratories participate in interlaboratory comparisons for experimental confirmation of their proficiency.

**Monitoring targets:**

- Non-fugitive emissions
- Ambient air quality on the buffer zone boundary
- Physical impact levels (noise pollution)
- Surface, ground and wastewater quality
- Soil condition

