



Climate report

Additional, detailed climate change
information



17 May 2022



The climate agenda and Severstal



Climate change - one of the key challenges facing humanity today. Severstal considers it one of the major factors influencing its business and is actively involved the climate agenda.



The Company **recognises the need to reduce direct and indirect emissions**, including greenhouse gases, in order to contribute to global efforts to achieve the objectives of the Paris Agreement.



The company has developed and continuously updates a long-term climate strategy. It is supported by **investment projects and programmes in the field of energy efficiency, reduction of production's carbon intensity and energy-intensive raw materials consumption**, as well as such new areas for metallurgy as CCUS, hydrogen production technologies, etc.

Company's approach

- The climate agenda is part of the Company's corporate development strategy and is taken into account by the Board of Directors and Management when making strategic decisions and operating management. Management of climate risks and opportunities based on the TCFD recommendations is embedded into corporate management practices;
- Severstal's basic principles and requirements of climate policy are set out in Severstal's Position on Climate Change (2020) and the Climate Memorandum "Achieving a low carbon future together" (2021).

Key achievements in 2021

- Severstal has set a medium-term target to reduce emissions intensity by 10% by 2030 in addition to a target of -3% by 2023;
- Severstal raised CDP's climate rating to B, the best rating among Russian ferrous metals companies;
- Severstal became a member of the ResponsibleSteel - the first among Russian companies.

Further improvement of the completeness and quality of disclosed climate information and establishment of a corporate greenhouse gas emissions management system that meets best standards and practices is one of the company's priorities, **therefore in 2021 Severstal carried out a review involving the identification, assessment and analysis of climate risks for 21 business units located in various geographical locations.**



Leadership in GHG emissions management



"It is important to remember that climate change does not only generate risks, but also but also produce opportunities. New markets are emerging as a demand for more sustainable products and renewable energy sources, such as wind turbines, grows. Severstal is committed to seizing new opportunities and managing climate risks. Climate change issues are controlled at the level of the Board of Directors"

**A. Shevelev,
General Director**

Severstal's steps in climate management:

-  Joining the program Step Up WSA (2019)
-  Disclosure of information in CDP (2019)
-  The Company's position on climate change (2020)
-  Short-term goal on CO₂ emissions reductions until 2023 (2020)
-  KPI for Top Management (2020)
-  Creation of the Center of GHG emissions reductions (2020)
-  Medium-term goal on CO₂ emissions reductions until 2030 (2021)
-  Cooperation with suppliers and buyers (2021)
-  Internal carbon price (2021)
-  Development of "green" products (2021)
-  Climate risks assessment (2021)





Corporate climate risk management

The Board of Directors of PAO Severstal oversees the implementation of strategic issues related to sustainable development and climate change.

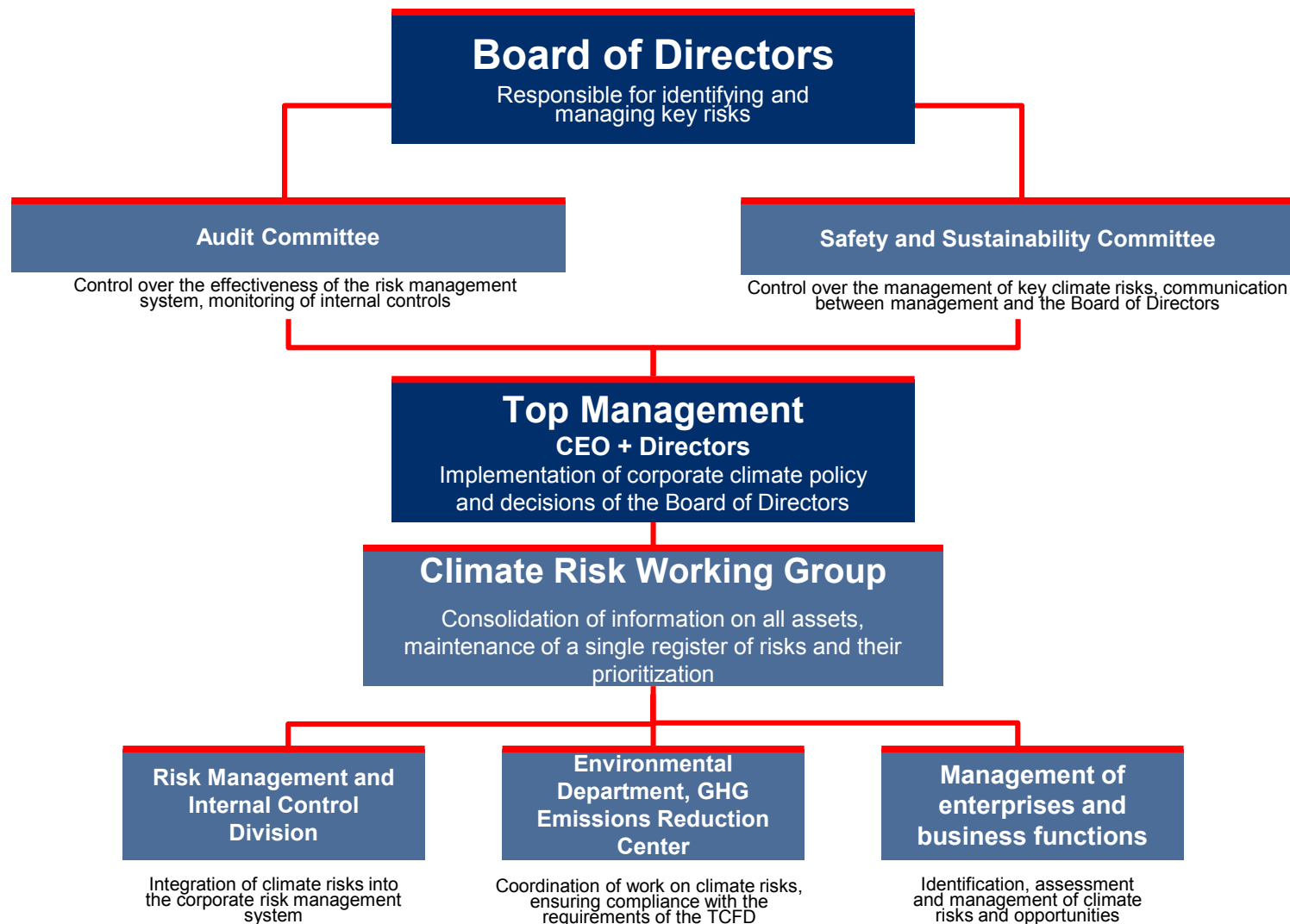
In accordance with the principles of transparency and accountability, Severstal undertakes and sets concrete, measurable and achievable goals, and develops mechanisms for monitoring progress in these areas.

Responsibility for the adoption of key decisions has been delegated to the relevant functional divisions of the management organisation, and their implementation has been transferred to the lower levels of management in business units.

Severstal's Business System is an important tool for implementing sustainability initiatives. Business System' projects coordinate together financial, social and ecological aspects of the Severstal's activity.

Climate issues, including climate risks and opportunities, are a mandatory topic for each **Board of Directors on a quarterly basis.**

Operational management of climate risks is carried out by the **Company's Senior Management — continuous.**





Employee motivation methods integrated into corporate climate agenda management

Methods to increase engagement in climate change issues



Increasing the Company's Board of Directors and senior management members motivation

- Indicators on reducing greenhouse gas emissions are included in the KPIs of the 11 top managers of Severstal.
- The weight of the target to reduce greenhouse gas emissions for 2021 is set at 5%.
- KPIs on carbon intensity and energy efficiency are established for the: General Director of Severstal Russian Steel Division and resource assets, Director of Health, Safety and Environment, Chief Energy Officer.
- Remuneration is provided for company employees directly engaged in the performance of tasks related to climate and reduction of greenhouse gas emissions.



Training and professional development

- A matrix of climatic competencies for employees has been developed, training programs have been created for each level of knowledge. Training is provided on a regular basis as part of annual professional development..
- Severstal GHG Emissions Reduction Center provides regular training to the Company's employees to improve their qualifications in climate issues, external requirements and internal climate policy.
- Training of external providers is organized to obtain up-to-date knowledge in GHG emissions management and energy efficiency improvement.



Participation in international climate initiatives and ratings

- The company supports climate initiatives: Step up of the World Steel Association, Climate Action 100 +.
- Representatives of Severstal in 2020 took active part in work of expert platforms: The Net-Zero Steel Pathway Methodology Project, consultations on development of the first standard on carbon neutrality of Net-Zero Standard SBTi.
- Severstal is actively involved in the discussion of carbon regulation issues at the: World Steel Association, Russian Steel and Russian Union of Industrialists and Entrepreneurs.
- The smartsteel-site project is implementing the "Cost Reduction Leadership" area (coal consumption is decreasing and natural gas consumption is increasing).



Climate risk identification and assessment process

The company's risk management system is designed to identify, manage and mitigate the risk of failure to achieve its strategic goals. It is formalised and is focused on a systemic approach, with clear segregation of roles, responsibilities and accountability among all actors. Management, managers and employees at all levels are involved in the risk management process. Severstal recognises climate risks as material to the company, seeking to identify and manage physical and transitional climate risks in a timely manner. The risk management strategy is based on the scenario analysis in the **short, medium and long term**.

Process approach to identifying physical climate risks

Process	Target	Risk factor and its implementation				
		Acute			Chronic	
		1	2	3	4	5
Productions Mining Enrichment Tailing dump Transport Metal production Power supply	Buildings and structures					
	Equipment					
	Staff					
	Power supply					
	Internal logistics					

Decrease in efficiency
 Process interruption/shutdown
 Increase in resource intensity

As part of the work on identifying and assessing Severstal's climate risks:

- Consideration of all business units (assets in various geographical locations)
- Analysis of the significance of physical risks using three scenarios (SSP126, SSP245, SSP585)

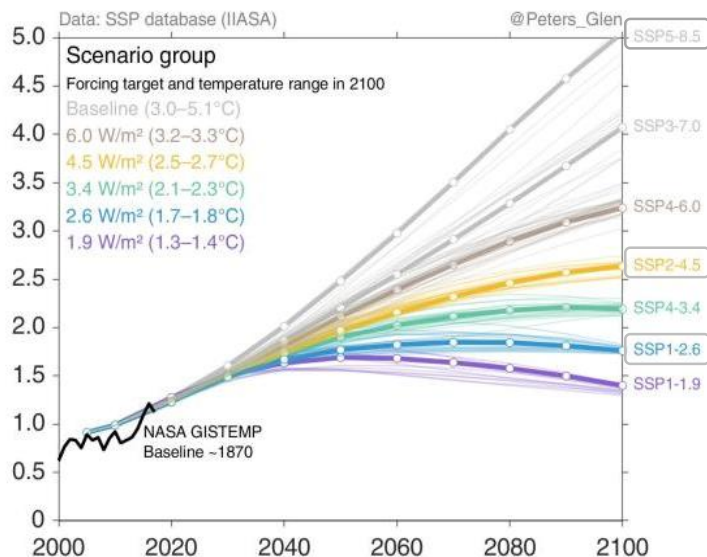
	Acute risk-factors											Chronic risk-factors		
	3	4	5	6	7	8	9	11	12	13	14	16	17	18
Physical risks	20											9	9	
	16	12	6	12	8	20	8			4	8	12	12	4
	16	12	6	12	8	20	8			4	8	12	12	4
	16	12			8	20					8	6		
									4	4				
	8									4				4
	20								10					
			9	9	6	15			6	6		9		

The Company's strategy defines three planning time horizons:





Scenario selection for assessing the climate risks of Severstal facilities



Shared Socioeconomic Pathways (SSPs) are used as boundary conditions for climate modeling.

SSP126, SSP245, SSP585 were selected to model Severstal's climate risks.

SSP 126 – scenario under the Paris Agreement (+1,8°C by 2100)

Mitigation, adaptation problems

- Low need for mitigation and adaptation to climate change

SDG

- Gradual and universal transition to sustainable development.
- Special attention is paid to the state of the environment.
- Commitment to the UN Sustainable Development Goals

Economic development

- Focus on reasonable consumption, low carbon consumption

Other

- Reduce global and domestic disparity.
- Shifting focus from economic growth to human wellbeing
- Widespread investment in education and healthcare.

SSP 245 – interim scenario (+2,8 °C by 2100)

- Average level of problems related to mitigation and adaptation to climate change

- Slow achievement of the SDGs by national and international institutions.
- Ecosystem deterioration.

- Social, economic and technological trends remain unchanged (as is);
- Uneven development of countries, population disparity.
- Gradual reduction in the intensity of use of resources, including energy resources

- Moderate population growth.
- Income disparity remains or is decreasing at a slow pace.
- Vulnerability of the population to social and environmental changes.

SSP 585 – the worst possible climate change scenario (+4,4 °C by 2100)

- High level of climate change mitigation, low level of adaptation

- Sustainable development is based on competitive markets, innovations, rapid technological progress and human capital development.

- The main driver of economic and social development is the intensive use of fossil fuel.
- High level of consumption of goods, including energy-intensive ones

- Rapid economic growth.
- Pollution problems are successfully addressed through technology.
- Population decline by the end of the 21st century.

SDG – Sustainable Development Goals



Impact of climate-related risks and opportunities on the Severstal's activity

Spheres of influence	Description of influence
 Products and services	Severstal's clients are increasing requirements to reduce greenhouse gas emissions from steel production; at the same time, Severstal is facilitating the necessary transformation towards the low-carbon development of steel-consuming sectors, for example, green construction and renewable energy sources through the provision of low-carbon products.
 Supply chain/value chain	Severstal's carbon footprint is built along the entire value chain and it is essential to build relationships with suppliers based on climate factors to improve product climate performance. Severstal uses the Climate Memorandum "Together for a Low-Carbon Future" to work with suppliers and clients, plans to standardize climate requirements for suppliers and is ready to respond to similar client requests.
 Investment in R&D	Decarbonization requires large investments in R&D and technology transfer. A significant share of investments in R&D are made in improving the efficiency of existing units and production technologies, as well as in venture technology, including hydrogen technologies for steel production. In future, Severstal's competitive advantage should be expected through earlier mastering of decarbonization technologies and the possibility of their commercialization.
 Production operations	Severstal's coal operations are located in the Arctic zone with three types of permafrost. Severstal has been monitoring the state of the subsoil at the Vorkutskoe, Vorgashorskoe and Yunyaginskoe coal deposits for the past few years, which has allowed Severstal to ensure a safe approach to mining and plan adaptation measures when necessary. On 2 December 2021 Severstal entered into a binding agreement to sell its coking coal assets. The transaction is expected to complete before 31 March 2022.



Severstal's Climate Memorandum

In November 2021, Severstal launched the Climate Memorandum "ACHIEVING A LOW CARBON FUTURE TOGETHER" to support global efforts to prevent climate change.

In this regard, Severstal comes up with a proposal to the business community on cooperation under the Climate Memorandum.

"Severstal pays great attention to climate change, and not only makes efforts to minimize its carbon footprint, but also tries to involve new partners in joint initiatives in this area. I am pleased to attest that the business community has supported our initiative, and that the number of partners is growing and will continue to expand through environmentally responsible companies and organizations that share our concerns about climate change", said General Director of Severstal Aleksandr Shevelev

Partners:



Principles of the Climate Memorandum:

- To integrate the climate agenda into corporate governance practice;
- To assess greenhouse gas emissions and set goals to reduce them;
- To manage climate risks and adapt to climate change;
- To support the development and implementation of low-carbon technologies;
- To establish climate-responsible stakeholder engagement.

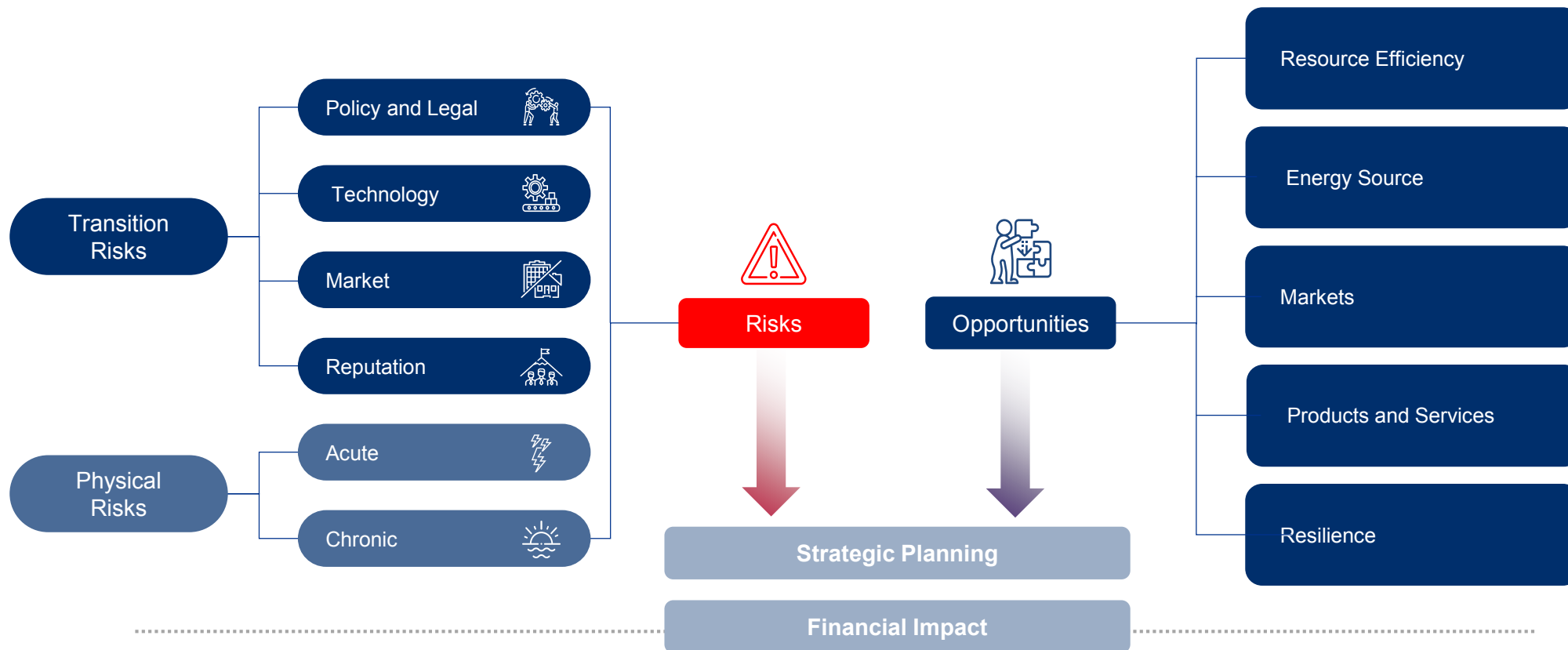
Link to the Climate Memorandum:

https://severstal.com/upload/iblock/0c2/severstal_eco_memorandum_eng_nosign.pdf



Climate-related risks and opportunities categories

Severstal uses the following classification of climate risks and opportunities in line with the TCFD recommendations:



According to TCFD recommendations



Physical climate risks

Physical climate risks - risks related to climate change that may be caused by single events (acute), such as increased severity of extreme weather events (for example, cyclones, droughts, floods, wildfires) or may be related to longer-term (chronic) changes: amounts of rainfall and temperature and increased variability of weather conditions (for example, sea level rise)

Acute

Risks, caused by single events
(extreme weather events)



Heavy
downpour



Very strong
wind



Thunderstorm



Abnormally
hot weather



Strong ice-
rime
deposition



Wildfire

Chronic

Risks, refer to longer-term shifts in climate patterns



Average annual
precipitation increase



Lack of water resources
(drought)



Average annual
temperature rise



Sea level rise

Financial Impact

Physical climate risks can have a direct material impact:

- Lower revenues due to reduced production capacity (e.g. transportation difficulties, supply chain disruptions)
- Lower revenues and higher costs due to the negative impact of the climate on personnel
- Increase in operating costs
- Increase in capital expenditures (e.g. damage to facilities)
- Decrease in demand for the company's products



Transition climate risks

Transition climate risks are risks associated with the transition to a global economy with lower greenhouse gas emissions, including political and legal actions, technological changes, market responses and reputational aspects.

Policy and Legal



International and sectoral decarbonisation initiatives



Climate Change Adaptation Requirements

Technology



Change in demand for the Company's products



Development of low-carbon technologies

Market



Carbon intensity of products



Implementation of non-market regulatory mechanisms

Reputation



Greenhouse gas emissions disclosure



Climate risks disclosure

Financial impact

Transition climate risks may have an indirect material effect:

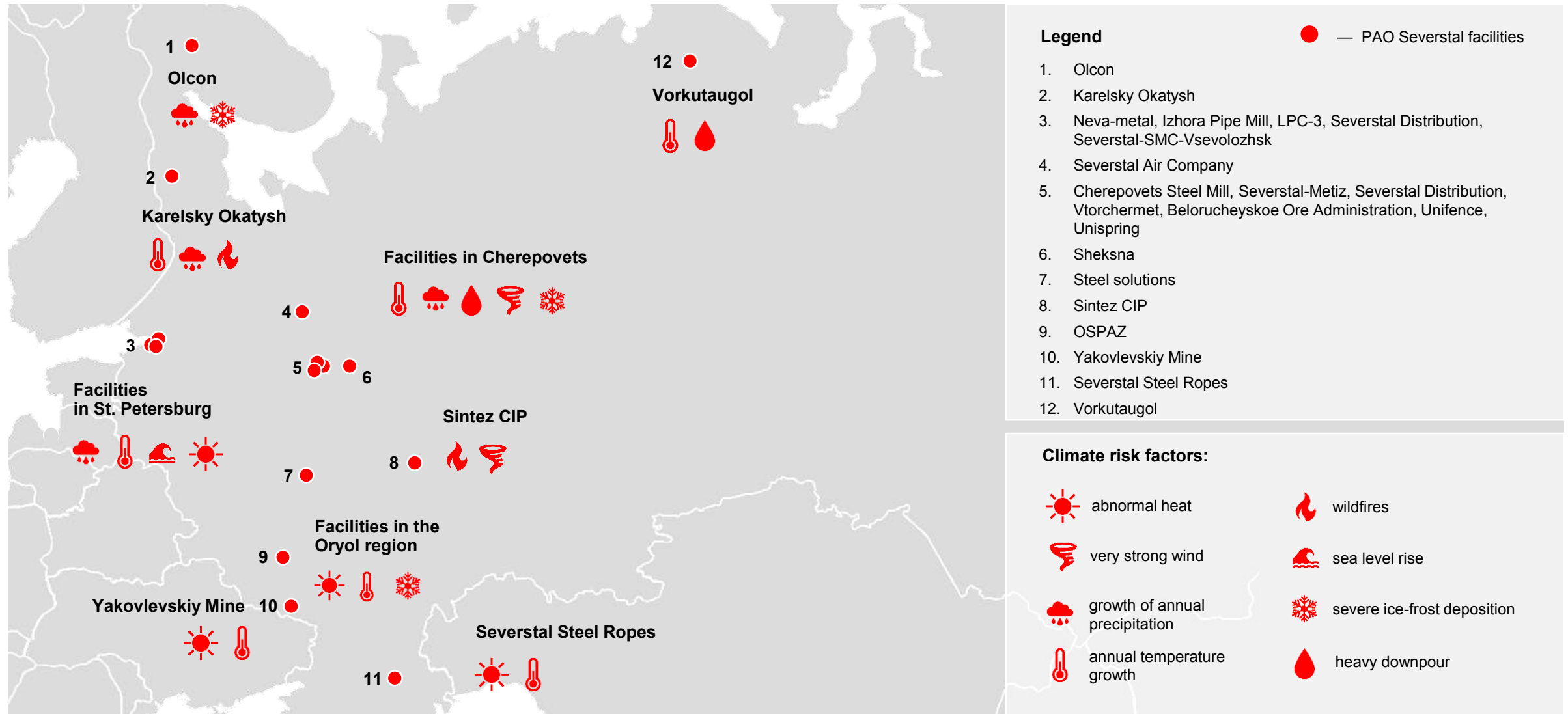
- Additional costs associated with the introduction of carbon regulation and similar mechanisms in other jurisdictions (CBAM)
- Carbon intensive divestments
- Reduced competitiveness of products and lost profits due to insufficient greenhouse gas emissions disclosure
- Loss of sales markets due to reduced carbon intensity of competitors' production
- Lost profit due to the lack of institutional and regulatory framework for climate projects

Social impact

- Reduced investment attractiveness due to insufficient climate risks disclosure
- Lower customer demand for high carbon products
- Negative perception of the company's operations by local communities, leading to a worsening of reputation



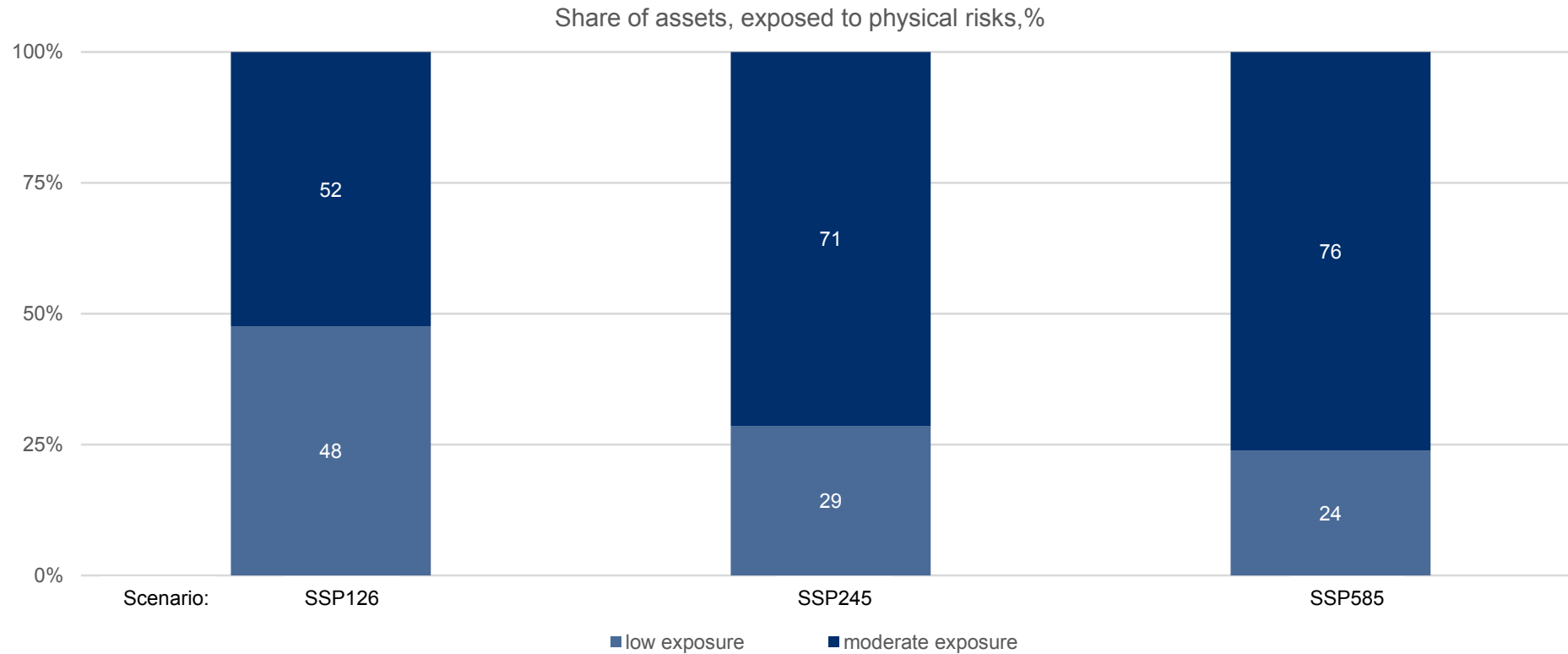
Most significant climate risk factors for Severstal facilities





Physical risks assessment

Ranking of the company's assets exposure to physical risks based on scenario analysis



Low exposure – less than 6 risk factors identified for this business unit

Moderate exposure – 7 or more risk factors identified for a given business unit



Assessment of physical climate risks identified for Severstal assets

Risk category, description	Risks' affect on Severstal assets	Time horizon	Relevance within scenarios used for analysis			Financial impact 	Mitigation measures
			SSP126	SSP245	SSP585		
Physical risks							
Acute: Squall, strong wind	Damage to buildings and structures, infrastructure, including power lines	Short-term, Medium-term	●	●●	●●	▲	Increasing the wind stability of structures, backup of power supply
Acute: Long rains	Increased workload on infrastructure, roads, tailings	Short-term, Medium-term	●	●●	●●	▲	Increasing the wind stability of structures, monitoring and timely repairs
Acute: severe ice-frost deposition	Deterioration of transportation conditions, load on power lines	Short-term, Medium-term	○	●	●	▲	Reserve of raw materials and fuel reserves, monitoring and timely repairs
Chronic: Average annual temperature rise	Smelting of permafrost, damage to buildings and infrastructure	Long-term	○	●	●●	▲▲	Measures to monitor the buildings and structures in the Arctic zone
Chronic: Increase in average annual temperature and increase in precipitation combined with acute climate risks	Main regions of iron ore and coking coal production for the global steel market will be significantly more exposed to the physical aspects of climate change	Medium-term, Long-term	○	●	●●	▲▲	The implementation of adaptation measures at Severstal assets will make it possible to maintain the reliability of production and sustainable development of the company

▲▲▲ - more than \$100 million, ▲▲ - \$20-100 million, ▲ - less than \$20 million

●● - high significance of risk/opportunity, ● - medium significance of risk/opportunity, ○ - risk/opportunity insignificant



Assessment of transition climate risks identified for Severstal assets

Risk category, description	Risks' affect on Severstal assets	Time horizon	Relevance within scenarios used for analysis			Financial impact	Mitigation measures
			SSP126	SSP245	SSP585		
Transition risks							
Policy and Legal: Carbon boarder adjustment mechanism (CBAM)	Additional financial burden on products exported to the EU, including costs on the preparation and verification of mandatory carbon reporting	Medium-term	● ●	●	●	▲ ▲	Reduce GHG emissions to EU producers level
Technological: Low carbon technology implementation costs	Need to implement low-carbon production technologies to decarbonize production	Short-term, Medium-term	●	○	○	▲ ▲ ▲	Introduction of commercially available low-carbon technologies to increase competitiveness
Policy and Legal: Introduction of national carbon regulation	Additional costs associated with the introduction of limits on GHG emissions and target carbon intensity indicators, including costs on the preparation and verification of national carbon reporting	Medium-term, Long-term	●	●	○	▲ ▲	GHG emissions reduction to meet established carbon intensity indicators
Reputational: Climate reporting disclosures	Reduced investment appeal and competitiveness of products due to insufficient disclosure of information on climate risks	Short-term, Medium-term	●	●	○	▲	Compliance of the Company's corporate reporting with best industry practices, standards and recommendations, including TCFD
Market: Loss of markets for carbon-intensive products	Customer demand for low carbon products, particularly in EU countries, will push more carbon-intensive products out of the market	Medium-term, Long-term	●	○	○	▲	Reduce GHG emissions to EU producers, produce green products for export

▲ ▲ ▲ - more than \$100 million, ▲ ▲ - \$20-100 million, ▲ - less than \$20 million

● ● - high significance of risk/opportunity, ● - medium significance of risk/opportunity, ○ - risk/opportunity insignificant

GHG – Greenhouse gas



Assessment of climate opportunities identified for Severstal assets

Opportunity	Description	Time horizon	Relevance within scenarios used for analysis			Financial impact	Measures to realize the opportunity
			SSP126	SSP245	SSP585		
Opportunities for transition period							
Increasing investment appeal	Increased investment appeal and profits related to changing strategic priorities of consumers and increasing demand for low-carbon products	Short-term, Medium-term	●	●	○	▲ ▲	Compliance of the corporate GHG emissions management system with international standards and the Company's climate rating improvements
Green finance	Issue of green bonds and possibility of green financing (increase in capital availability)	Short-term, Medium-term	●	●	○	▲	Preparation of climate projects, issue of Eurobonds, credit lines with sustainable development indicators
Government support	Use of investment support tools and state subsidies, when implementing large-scale technological re-equipment projects	Short-term, Medium-term	●	○	○	▲ ▲	Implementation of major investment projects on decarbonization, compliance with the requirements necessary to receive state support
Technological re-equipment	The implementation of decarbonization measures is connected with the upgrade of equipment and the introduction of the latest technologies.	Medium-term, Long-term	●	●	○	▲ ▲ ▲	Development of the Company's decarbonization strategy until 2030 and till 2050-2060
Operational excellence	Reduction of operating costs on fuel and energy resources as a result of decarbonization measures	Short-term, Medium-term	●	●	○	▲ ▲	Implementation of measures to increase energy efficiency and resource saving, increase productivity

▲▲▲ - more than \$100 million, ▲▲ - \$20-100 million, ▲ - less than \$20 million

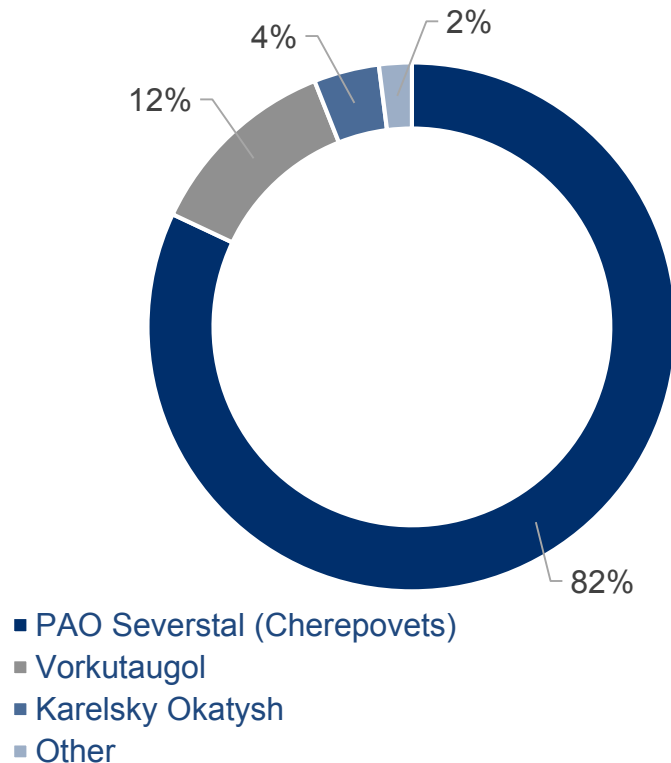
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GHG – Greenhouse gas

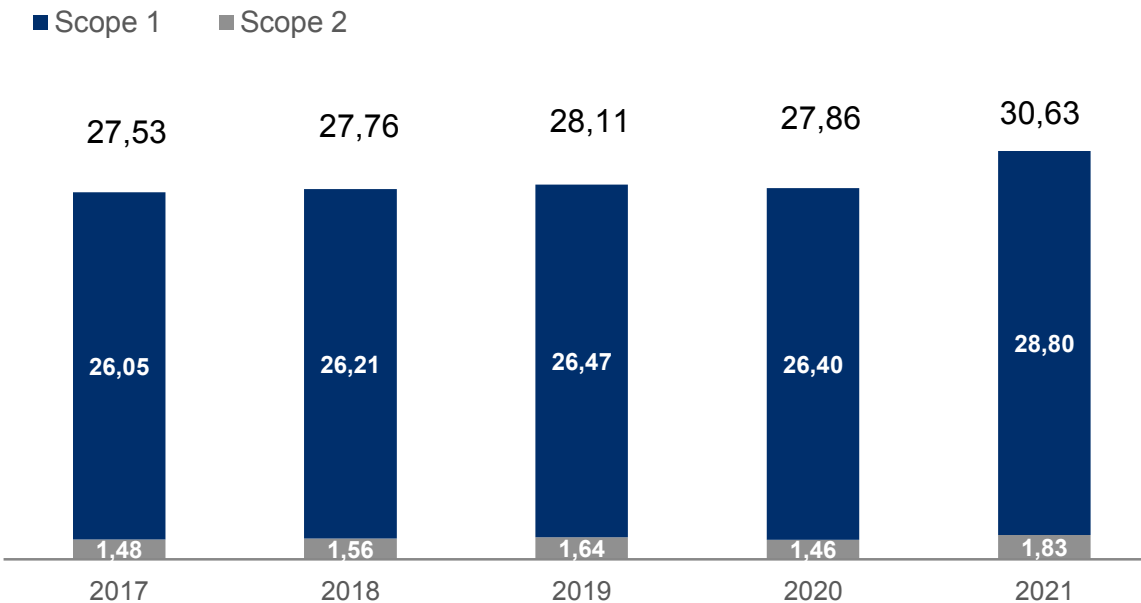


Greenhouse gas disclosure

GHG emissions by facilities



Direct and indirect greenhouse gas emissions (scopes 1, 2), million tonnes of CO₂-eq. *



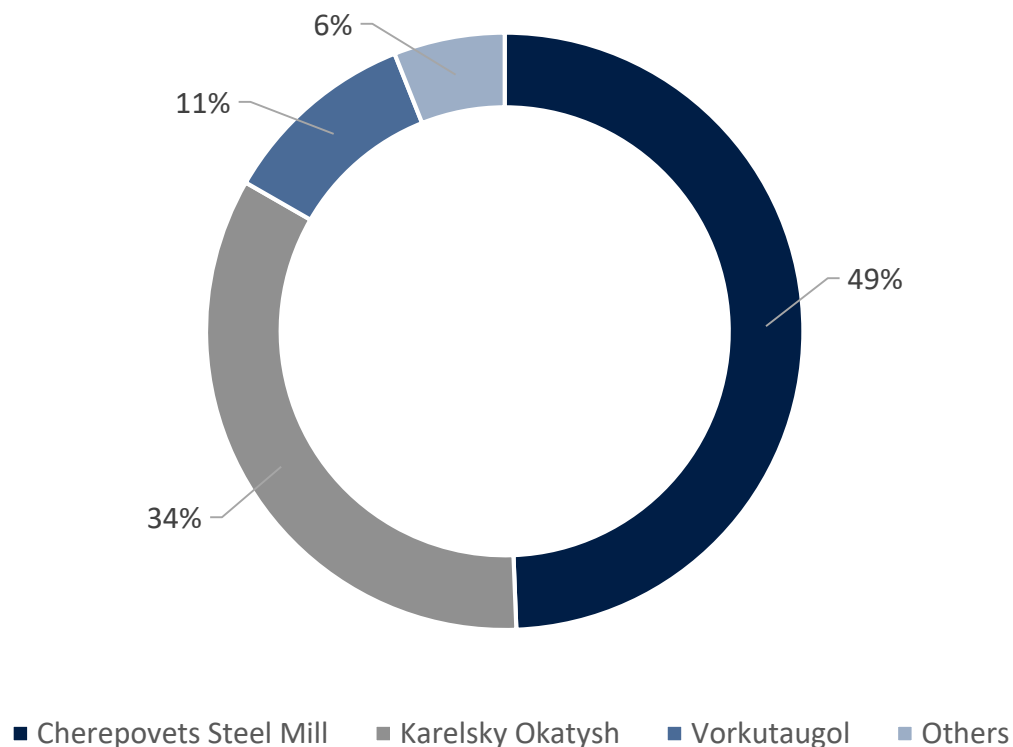
GHG emissions are monitored in accordance with:

- Corporate Carbon Reporting Standard (GHG Protocol Corporate Standard);
- Guidance for determining GHG Protocol Scope 2 Emissions, (GHG Protocol Scope 2 Guidance);
- Standard for reporting greenhouse gas emissions by supply chain (GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard).



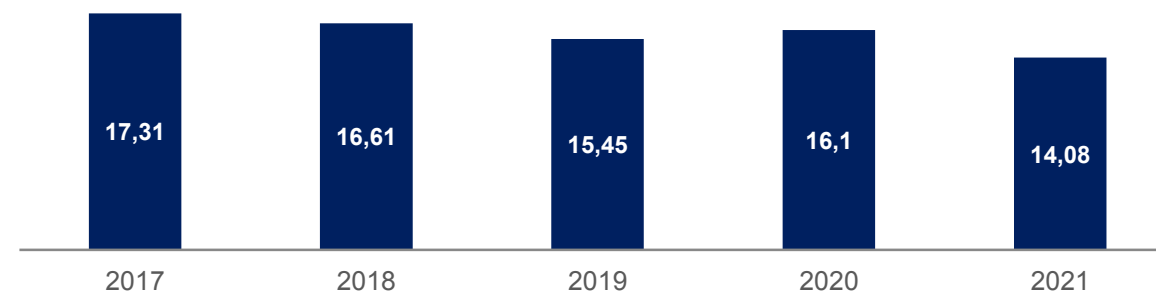
Scope 3 greenhouse gas disclosure

Indirect non-energy greenhouse gas emissions (Scope 3) by facilities in 2021, mln t CO₂-eq.

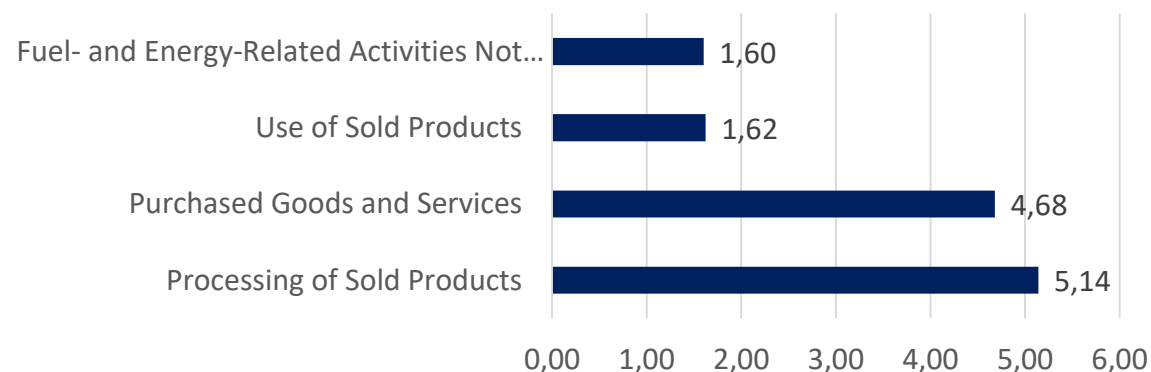


Cherepovets Steel Mill, Karelsky Okatysh and Vorkutaugol account for 94% of Scope 3 emissions.

Indirect non-energy greenhouse gas emissions (Scope 3) of Severstal Group, mln t CO₂-eq.*



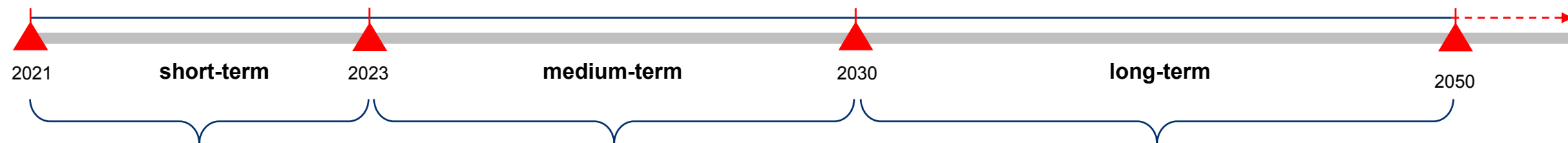
Scope 3 categories, mln t CO₂-eq.



Top 4 categories account for 93% of Scope 3 emissions of Severstal.



GHG reduction targets

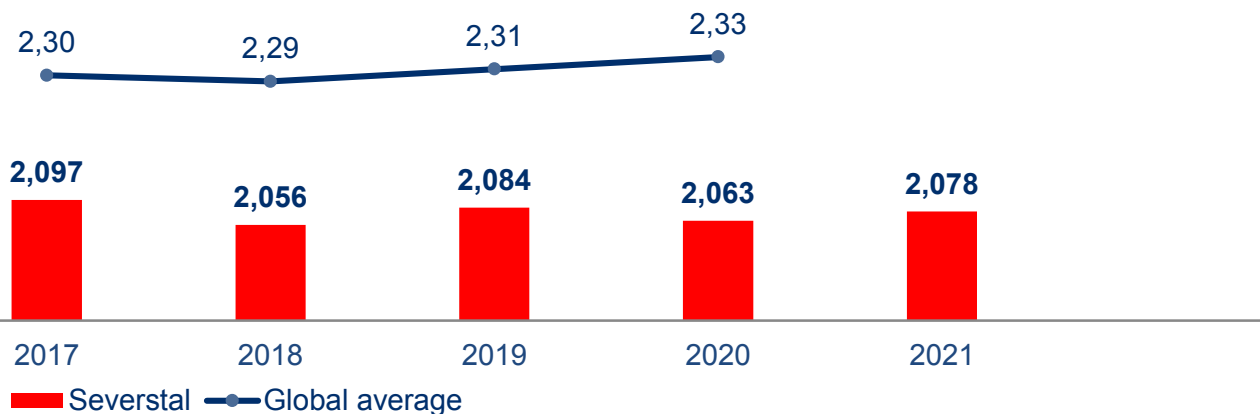


Reduction of greenhouse gas emissions intensity (by one tonne of crude steel)
3% by the end of 2023 compared with the base year 2020
—**3,0 %**

Reduction of greenhouse gas emissions intensity (by one tonne of crude steel)
10% by the end of 2030 compared with the base year 2020
—**10,0 %**

Long-term goal in development
(it is planned to submit the concept of a long-term goal in 2022)

Carbon intensity, t CO₂/t of crude steel*



Severstal is one of the **TOP 25% of steel producers** in the world in terms of CO₂ intensity (according to Worldsteel Association data for integrated plants).

By 2030, the Company plans to enter the **TOP 15% of steel producers** in terms of CO₂ intensity.



Annex

Principles of the Severstal's Climate Memorandum

"Achieving a low carbon future together"



1 To integrate the climate agenda into corporate governance practices	We recognize the need for the business community to participate in solving current climate issues, working to solve them and taking them into consideration in all aspects of our corporate activities.	We provide additional incentives to encourage the Company's top management and employees to successfully implement the company's climate policy and achieve the established climate goals	We understand the importance of climate education, and accordingly we ensure employees across all levels have the appropriate training and access to educational climate-related projects
2 To assess GHG emissions and set goals to reduce them	We estimate greenhouse gas emissions across the entire value chain of our products, verify and disclose data on our greenhouse gas emissions.	We set corporate targets to reduce GHG emissions for the short, medium and long term	We implement roadmaps towards achieving our climate goals and disclose information on our progress towards achieving the goals.
3 To manage climate risks and adapt to climate change	We assess physical and transitional climate risks and opportunities, implement risk management measures and take advantage of opportunities.	We recognize that adaptation is a key component of our response to climate change in order to protect our communities and the economy, and we develop and implement action plans to adapt our assets accordingly.	We pay special attention to responsible business practices in regions vulnerable to climate change, and ensuring their sustainable development
4 To manage climate risks and adapt to climate change	We support collaboration between business, science and government for the development and implementation of low-carbon technologies, we advocate the commercial availability of low-carbon technologies and the elimination of unfair competition in this area.	We implement projects focused on reducing greenhouse gas emissions and increasing their absorption, and we develop new types of low-carbon products and services that reduce greenhouse gas emissions during their manufacturing and use.	We consider the "carbon price" in our investment decisions, support the concept of "green" financing and use "green" financing tools when implementing climate projects.
5 To establish climate-responsible stakeholder engagement	We engage with government agencies and industry associations on the national carbon regulation and implementation of the provisions of international climate agreements, actively participate in climate initiatives and support cross-border collaboration to combat climate change.	We establish relations with our suppliers and customers taking into account the principles of this Climate Memorandum, we oppose unfair competition and the discrimination of goods on climatic grounds, as well as the introduction of unjustified carbon taxes and administrative barriers to free trade.	We engage with all stakeholders, including non-governmental organizations, public associations and local communities on combating climate change, adapting to climate change and implementing climate projects based on the principles of openness and respecting mutual interests

Compliance with TCFD recommendations



Governance: Disclose the organisation's governance around climate-related risks and opportunities.

a) Describe the Board's oversight of climate-related risks and opportunities.

Annual report, p. 29, 63; Climate report, p. 4;
Sustainability report, p. 62-63, 136-137

b) Describe management's role in assessing and managing climate-related risks and opportunities.

Sustainability report, p. 136-137;
Climate report, p. 4

Strategy: Disclose the actual and potential impacts of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning, where such information is material.

a) Describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long term.

Sustainability report, p. 137;
Climate report, p. 6, 10, 13

b) Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning.

Sustainability report, p. 138-139;
Climate report, p. 8, 11-12

c) Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.

Sustainability report, p. 138-140;
Climate report, p. 6-7, 15-17

Risk management: Disclose how the organisation identifies, assesses, and manages climate-related risks.

a) Describe the organisation's processes for identifying and assessing climate-related risks.

Sustainability report, p. 138;
Climate report, p. 6, 14-17

b) Describe the organisation's processes for managing climate-related risks.

Sustainability report, p. 138-140;
Climate report, p. 14-17

c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management.

Sustainability report, p. 62-63, 136;
Climate report, p. 4

Metrics and targets: Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.

a) Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process.

Annual report, p. 31; Sustainability report,
p. 133, 144; Climate report, p. 14-17, 20

b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3, greenhouse gas (GHG) emissions, and the related risks.

Annual report, p. 31; Sustainability report,
p. 142-144, 193-194; Climate report, p. 18-19

c) Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets.

Annual report, p. 31; Sustainability report,
p. 133, 144; Climate report, p. 20