





WE MINE
COAL
**THAT IS
CHANGING
THE WORLD.**



ENVIRONMENT

JSW for natural environment

use of coal-bed methane
production of hydrogen
ecological materials of the future
rehabilitation of post-mining areas



EDUCATION

JSW Mine of Knowledge

educational programs
awareness raising and shaping habits
related to ecology
environmental protection
healthy lifestyle



CARE

JSW for Kids

educational trips
employee volunteering campaigns
equipment for talented youth
arts workshops
support for orphanages



HEALTH

JSW for health and safety

highest safety standards
concern for health of employees
and region's residents
support for healthcare centres
sports sponsoring: promoting
a healthy lifestyle and fair competition

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**NO ELEMENT
IS AS ESSENTIAL
TO LIFE AS COAL**

”

J. Emsley
Nature’s Building Blocks

**WE CARE ABOUT
WHAT'S MOST IMPORTANT**



EDUCATION



CARE

**WE DELIVER
WHAT IS ESSENTIAL**



**FOR
ENERGY**


**WE MINE
WHAT IS BEST**



COAL



Coal is a **key element in nature**,
one that we mine and process
into coke – an essential commodity
in today's economy,
of strategic importance to Europe.



**FOR
INDUSTRY**



**FOR
STEELMAKING**

We deliver essential ingredients
for innovative development
and production at steelworks,
power plants and industries.

HEALTH



ENVIRONMENT



We are aware of our impact
on our surroundings, we support
local communities and care
for the development of regions
where we operate.

Letter from the CEO

102-14 Dear Readers

102-15

It is my pleasure to present to you yet another Sustainability report on JSW Group's , for 2019. The report contains the most important information on the effects of managing our company in areas that are of the most interest to our stakeholders – improvements in occupational safety, the social, environmental, employee and management areas as well as development and innovations.

This was another year full of challenges and difficult decisions, one in which the Group had to face a deteriorating macroeconomic situation. We entered a phase of a visible macroeconomic slowdown on our key markets, coal and coke. Despite the difficult macro backdrop, the Group generated a positive financial result of PLN 649.6 million. The Group's EBITDA reached PLN 1 939.5 million.

In 2019, the Group produced 14.8 Mt of coal, built 75.1 km of roadways and produced 3.2 Mt of coke.

In 2019, we consistently implemented our Strategy, including the development of our resource base, efficiency improvements and reductions in our negative impact on the natural environment. One of the outcomes of these activities is a new mine named "Jastrzębie-Bzie," which extractable resources estimated



at more than 180 Mt of coal, 95% of which is type 35 coking coal. The Company received a concession for the exploration of hard coal deposit "Chel'm II" within the Lublin Coal Basin. As part of efficiency improvements, the Management Board decided to acquire a majority stake in PBSz S.A., the strategic aim of which is to strengthen JSW in its development plans related to the design, construction, fit out and modernisation of vertical and horizontal mining excavations, which will contribute to a growth in JSW Group's production and value in the future.

We realise that mining activities have a strong impact on the natural environment, which is why we are constantly acting to minimise our negative footprint, to ensure safety for both nature and the residents of local communities. This industry also creates entirely new opportunities for growth and searching for innovative solutions for a new sustainable economy. Last year, we carried out a range of tasks intended to reduce greenhouse gas emissions, improve the energy efficiency of production processes and reduce the energy intensive of machinery and equipment. We also continued a number of research projects. These efforts are consistently bringing us closer to energy self-sufficiency but also to entering entirely new markets related to products that are considered as products of the future. The on-going and planned environmental initiatives constitute an element of a sustainable business model and contribute toward achieving the priorities of the European Green Deal, adopted at the end of last year, especially in terms of implementing low-emission technologies and transitioning towards a circular economy.

We strive to reduce our impact on the natural environment not merely through reclamation and damage removal programs but also through

technological progress and the deployment of innovations. The economic use of methane captured in mines is our flagship undertaking. We are also constantly looking for new innovative solutions in a variety of areas. Last year, the Group produced its first stageloader, designed entirely by our in-house specialists.

The Company purchased a modern longwall complex and a Bolter-Miner, thanks to which mining should be faster, cheaper and, most importantly, safer for miners.

As part of the widely-defined corporate social responsibility, we implemented a number of in-house projects in 2019, addressed mainly to the local communities in municipalities where we operate. These included activities for children such as the JSW Mine of Knowledge and the JSW for Kids program. At the same time, these communities were supported by JSW Foundation, and the Company traditionally provided support for the development of sport in the region.

Given the rising interest in non-financial information, we are following the best practices and standards, emphasising openness and transparency in communication, which are some of the more important elements influencing the efficient and effective functioning of JSW Group. Positive feedback on the publication of the sustainable report constitutes for us an even greater encouragement to continue improving the presentation of the data we publish and to meet the expectations of our stakeholders. I hope that you will find this report of interest once again and that you enjoy reading it.

Respectfully,

President of the Management Board JSW
Włodzimierz Hereźniak

Business model and market

JSW Group on the market

102-2 JSW Group is the European Union's largest producer of high-quality coking coal and one of the major producers of coke for steelmaking.

JSW Group's core business encompasses the production and sale of coking coal as well as the production and sale of coke and coal-derivative products.

The coal mined by JSW Group - mainly coking coal – is used in Central Europe by local steelworks owned by international steel-makers, and by regional utilities.

The high-quality coke produced by JSW Group is also sold on the global market. The main customers for JSW Group's products are in Poland, Austria, Czech Republic, Germany, Slovakia, Italy and India. JSW Group processes approx. 40% of the coking coal it produces at its own coking plants.

Scale of JSW Group's operations		2018	2019
Employment			
Employment at year-end		28268	30629
Production and investments			
Total coal production (Mt):		15.0	14.8
• Coking coal (Mt)		10.3	10.2
• Coal for energy-generation purposes (Mt)		4.7	4.6
Coke production (Mt)		3.6	3.2
Asset investments (PLNm)		1 639.1	2 329.0
Revenue			
Revenue from sales (PLNm)		9 809.5	8 671.8
Gross profit (loss) on sales (PLNm)		2 871.1	1 603.6
Net profit/(loss) (PLNm)		1 760.8	649.6
Balance sheet data			
Balance sheet total (PLNm)		13 762.6	14 926.4
Non-current assets		10 300.7	11 565.1
Current assets		3 461.9	3 361.3
Equity		8 445.4	8 851.5
Liabilities		5 317.2	6 074.9
Capital market			
Capitalisation at year-end (last trading day of the year) (PLNm)		7 897.1	2 510.3

JSW Group is an active participant of the coal sector, supporting initiatives intended to tackle the industry's challenges, expand knowledge and share experiences. We are actively taking part in the Underground Mining School and are one of the initiators of "Mining OK." We have hosted the International Mining Forum (IMF) twice.

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Membership of JSW and members of JSW's management board in organisations

- Critical Raw Materials Alliance (CRM Alliance),
- Miner Family Foundation,
- Polish Mining Chamber of Industry and Commerce,
- Hydrogen Europe Secretariat,
- Institute of Internal Auditors,
- International Project Management Association Polska (IPMA),
- Employers of Poland,
- Polish Association of Listed Companies,
- The Accountants Association in Poland,
- Polish Committee for World Mining Congress,
- Silesian Scholarship Fund,
- Polish Patent Office,
- Association of Water Companies in Cieszyn,



MINING OK

In the spring of 2016, Jastrzębska Spółka Węglowa joined the Group for Shared Social Initiatives MINING OK. Its first meeting was held during the 25th anniversary of the Underground Mining School in Kraków.

Mining OK is a shared project from the Underground Mining School and the AGH Foundation. The Group's intention is to create a space and environment to develop joint initiatives in corporate social responsibility for the mining industry in Poland. The Group's meetings involve exchanging ideas about needs, rules, the future and good practices related to specific areas of CSR, as well as developing joint projects that are effective in business and social terms, intended to implement this philosophy in mining activities.

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Management structure

JSW Group's main line of business is the mining of hard coal, which takes place at distinct organisational units, i.e. the mines. JSW KOKS is responsible for the production of coke at JSW Group. Focusing on the areas of coal mining and coke production and interlinking these two activities within the value chain generates a substantial portion of JSW Group's added value and allows for the further development of the Group's integrated business model.

JSW Group's products are mainly distributed directly by JSW's specialist teams and with the support of JSW SHIPPING Sp. z o.o. (port forwarding and maritime transport agency services). JSW KOKS also generates electricity for internal purposes, with excess electricity sold on the power market. JSW Group also includes other companies that perform support functions, e.g. Baza Transportu Samochodowego Sp. z o.o. ("BTS"), based in Dąbrowa Górnicza (transport and general construction works), CARBOTRANS Sp. z o.o. ("CARBOTRANS"), based in Zabrze (specialising in transporting coal derivatives and raw materials for their production by road), ZREM-BUD sp. z o.o. ("ZREM-BUD"), based in Dąbrowa Górnicza (production of spare parts, systems and devices, steel structures, technological accessories for tools and instruments and the performance of mechanical and electrical repairs, automation services, construction services), Przedsiębiorstwo Gospodarki Wodnej i Rekultywacji SA ("PGWiR"), based in Jastrzębie-Zdrój (provision of water and sewage services and discharge of salted waters, supply of industrial water, land rehabilitation activities, production of salt), JSW Zwałowanie i Rekultywacja Sp. z o.o. ("JSW ZWAŁOWANIE I REKULTYWACJA"), based in Jastrzębie-Zdrój (provision of extractive waste management services and land rehabilitation services), Jastrzębskie Zakłady Remontowe Sp. z o.o. ("JZR"), based in Jastrzębie-Zdrój (services concerning repairs and maintenance of machinery and equipment, service. Production of machines for mining, extractive industry and construction), JZR Dźwigi Sp. z o.o. ("JZR Dźwigi"), based in Jastrzębie-Zdrój (services concerning the production, modernisation, repair, maintenance,

inspections and servicing of near transport equipment), Przedsiębiorstwo Budowy Szybów SA ("PBSz"), based in Tarnowskie Góry (specialist mining services: design and implementation of vertical and horizontal excavations and tunnels, rentals of machinery and equipment, installation, repair and maintenance of machinery for mining, digging and construction), JSW INNOWACJE SA ("JSW INNOWACJE"), based in Katowice (R&D activities for JSW Group, feasibility analyses and project and deployment oversight), HAWK-E Sp. z o.o. ("HAWK-E"), based in Katowice (services concerning the use of unmanned technologies for commercial purposes), Jastrzębska Spółka Kolejowa Sp. z o.o. ("JSK"), based in Jastrzębie-Zdrój (access to railway lines, maintenance of rail infrastructure facilities and equipment, construction and repair of rail systems and rail facilities), JSW LOGISTICS Sp. z o.o. ("JSW LOGISTICS"), based in Katowice (services concerning rail sidings, transport of coal and coke, organisation of cargo transport and technical maintenance and

repairs of rolling stock), JSW IT SYSTEMS Sp. z o.o. ("JSW IT SYSTEMS"), based in Jastrzębie-Zdrój (advisory in the area of computer equipment, activities in the field of software and data processing), Centralne Laboratorium Pomiarowo-Badawcze Sp. z o.o. ("CLPB"), based in Jastrzębie-Zdrój (services consisting of technical research, chemical and chemical and physical analyses of minerals, materials as well as solid, liquid and gaseous products), JSU Sp. z o.o. ("JSU"), based in Jastrzębie-Zdrój (insurance agency and insurance services with regard to claim processing; tourist and hotel activities), JSW Szkolenie i Górnictwo Sp. z o.o. ("JSW SIG"), based in Jastrzębie-Zdrój (supporting activities for mining, changing rooms at JSW mines), JSW OCHRONA Sp. z o.o. ("JSW OCHRONA"), based in Jastrzębie-Zdrój (supporting activities for mining, security and support services concerning building maintenance), and JSW STABILIZACYJNY Fundusz Inwestycyjny Zamknięty ("JSW Stabilizacyjny FIZ"), the sole activity of which is allocating assets raised through non-public offerings to purchase investment certificates into the securities specified in its Articles of Association, cash market instruments and other property rights.

JSW Group's Code is the main document addressing the Group's operations and organisation. Owner-supervision activities exercised as part of JSW Group's management are regulated by JSW Group's Corporate Governance Regulations, implemented in the fourth quarter of 2019 in order to roll out consistent and transparent operating procedures and standards at JSW Group. The Corporate Governance Regulations are intended to increase the effectiveness of Group management, improve the functioning of its companies and implement owner supervision forms and procedures that go beyond the existing laws. Moreover, the competences of the organs of each JSW Group company are regulated by the Polish Commercial Companies Code and that company's articles of association/founding agreement.

JSW Group's Remuneration Policy has been in place since 12 August 2019 and serves as the basis for setting remuneration for members of the organs of JSW's direct and indirect subsidiaries, Office Directors, Office Deputy Directors, JSW Management Board Proxies at the JSW Management Board Office and Directors at entities and their deputies.

In order to streamline JSW Group's management rules, the Management Board undertook a range of activities, including updating the key documents addressing the Group's operations. These changes were intended to adapt to the changing legislation, including regulations pertaining to companies with a State Treasury shareholding.

Since 2017, JSW Group has a Corporate Social Responsibility Team at JSW SA, the role of which is coordinating and monitoring the sustainable development strategy and supporting projects that are aligned with it.

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In February 2020, prior to the publication of this report, JSW's Management Board appointed a CSR Committee, consisting of Management Board members and managers from units responsible for areas considered as key from the viewpoint of corporate social responsibility (including occupational health and safety, environmental protection, climate change, investor relations, HR, compliance, risk management, procurement, innovations).

In addition, representatives of other organisational units and companies as well as experts are invited to the Committee's meetings. Meetings are chaired by a Management Board member. The CSR Team is responsible for the meeting agenda.

The Committee is intended to be a practical platform for communication between the key organisational units, with particular emphasis on supporting interdisciplinary tasks that engage a range of business units. The presence of people from various organisational units makes it possible to effectively work on problems and considerably speed up arrangements and decision-making processes.

CSR

102-2, 102-9,102-10

Business model

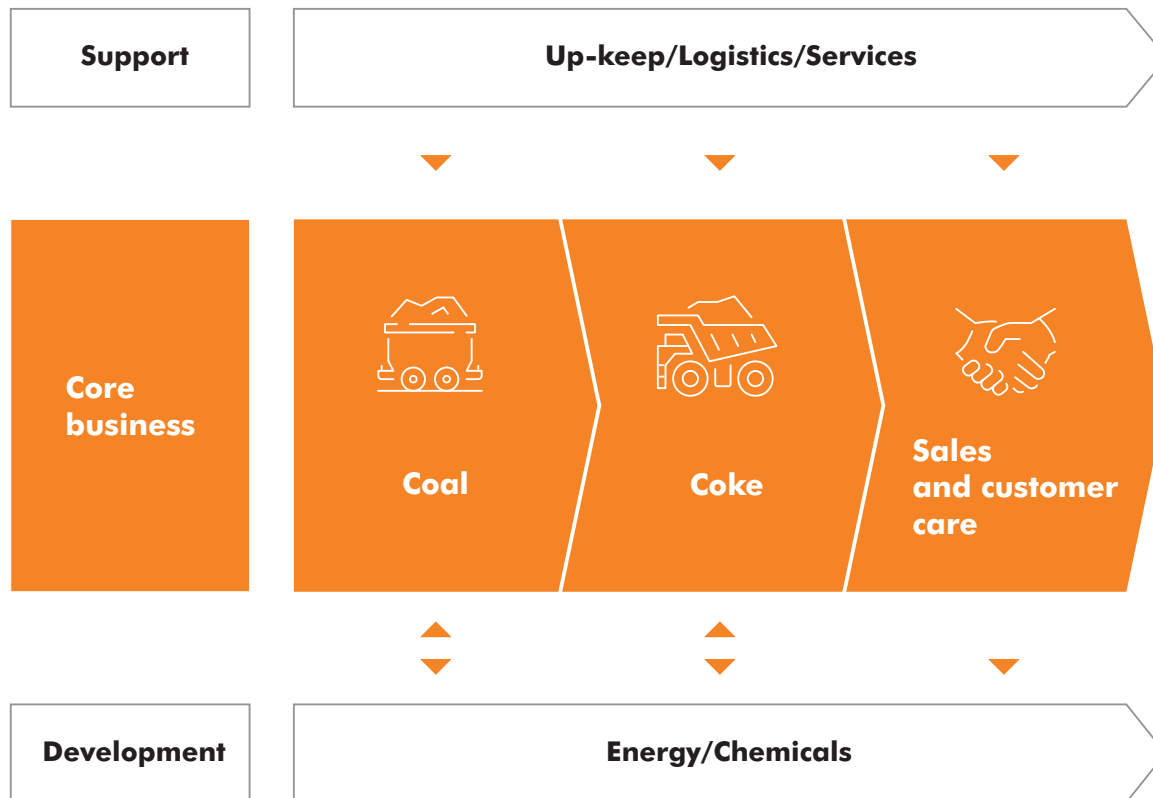
The Group operates in two sectors: coal and coke.



JSW Group is an active participant in the coking coal - coke - steel supply chain, focusing on the mining and processing of coal and selling the Group's products - coal, coke and coal derivatives, including coke oven gas, tar, BTX, ammonium sulphate and liquid sulphur.

JSW Group's business model is aligned with its value chain. A set of operational processes at the Group - centred on the mining and processing of coking coal and selling coal, coke and coal derivatives - is the key element in a chain generating economic value for the Parent - JSW - and for the entire JSW Group. The business model also reflects organisational objectives that ensure effective implementation of JSW Group's strategy, mission and vision.

Operational functions



JSW Group is organised and managed on a segment basis, taking into account the type of goods and the type of production activity. The effective extraction of high-quality coal is the first stage of production in the adopted business model, which leads to the further stages. Some of the extracted coking coal is sold to subsidiary JSW KOKS for the manufacture of coke, coal derivatives and coke oven gas. Coal for energy-generation purposes and coking coal that is not used by JSW KOKS are sold to external customers. The second stage is the production of coke on the basis of coking coal from JSW's mines. The final stage is the sale of JSW Group's products. Each of these stages is influenced by a range of additional technical, market and internal factors.

JSW Group also includes other companies that perform support functions, including IT, research, development and innovations, repair, security, insurance, training and laboratory services. Keeping in mind the new challenges and the accompanying need to adapt the Group to the changing environment, the role of subsidiaries is significantly growing from the viewpoint of building JSW Group's value. Strong impact and interactions between the companies and stakeholders constitute an important element in JSW Group's value creation chain.

Coal

Hard coal mining takes place at JSW's mines. The coal segment, which includes five mines, extracted 14.7 Mt of coal in 2019 (10.2 Mt of coking coal and 4.5 Mt of coal for energy-generation purposes). Delivering the flagship investments in the mining area will increase the share of coking coal in overall coal output to 85% by 2021 from less than 70% currently. JSW expects to reduce the share of coal for energy-generation purposes in total output to approx. 12% by 2030, with an overall coal extraction volume of approx. 18 Mt. Coal for energy-generation purposes - a by-product of coking coal extraction - is largely used to generate electricity and heat. Energy coal is sold to power companies, industrial users and individual customers, with power plants and CHPs accounting for approx. 95%.



Coal output
14.8Mt
in 2019

JSW's mines, which are some of the largest employers in the region, collectively employ more than 22 000 people, and generate nearly 15 Mt of coal per year.

JSW deploys major funding for investments in the mining area in order to provide our customers with coal that meets specific quality parameters and to develop alternative methods for use of this raw material and the products that accompany the production of coal and coke.

Approx. 40% of the coking coal produced by JSW Group is processed by its coking plants into coke.

The coal extracted at our mines features low ash content, low moisture, low sulphur and phosphorous content, as well as high coking ability and plasticity. These parameters mean that our coal is used as the key raw material in manufacturing the highest-quality foundry coke, which features low CO₂ reactivity and high mechanical strength.

The production of coke takes place at standalone, non-integrated coking plants owned by JSW KOKS. The coke segment encompasses three coking plants, with overall output reaching 3.2 Mt of coke in 2019. The coke is produced from type-34 and 35 coals extracted from JSW's mines. Activities in the coke production area are aimed at adapting the level and structure of output at each coking plant to market demand. JSW also produces coal derivatives (tar, BTX, sulphur, ammonium sulphate). The Company expects production to remain at a stable level in the coming years.

Coke, and thus indirectly coking coal, is, aside from iron ore, the main raw material in steelmaking. JSW KOKS's coking plants produce blast-furnace, metallurgical, foundry, industrial and heating coke. The use of each type of coke is mainly determined by requirements of the technological process in which it will be used and the related required parameters: granulation, mechanical strength, abrasion, ballast content: moisture and ash. Coke and therefore also coking coal are, aside from iron ore, the main raw materials in steelmaking.

Coking coal

is a coal with specific quality parameters and characteristics used for the industrial production of coke. Semi-soft (type-34) and hard (type-35) coking coals are produced at JSW Group's mines.

Coke

is a fuel derived in the coking process, which consists of heating up a mixture of special types of coals without access to air at a temperature of approx. 1000°C. During the coking process, volatile matter is driven off in the form of gases, leaving pure coke with high coal content - a high-calorific and slow-burning product.



Coke output
3.2 Mt
in 2019

Sales and customer service

The iron and steel industry is the largest and key customer for coke, where it is mainly used to produce pig iron in a blast-furnace process while finer types are used to produce agglomerates from iron ore that are then used in the production of ferro-alloys. Foundries that use high-quality foundry coke are also in this customer group.

Sales are conducted in two ways:

- by road forwarding and transport - coke and coal derivatives - shipments to customers are performed by subsidiaries JSW Logistics sp. z o.o. and BTS sp. z o.o.
- by maritime forwarding and transport - shipments to customers are performed by storage sites in ports with the intermediation of subsidiary JSW SHIPPING sp. z o.o.

This is why we emphasise market-based negotiations concerning quantity and price terms, care about product quality and respond to every objection or complaint from our customers, flexibly reacting to changes and divergences from ordered volumes in the case of unexpected problems or failures at our customers' plants, and we ensure that deliveries are on time and any logistics problems are solved together.

Customers: energy, steelmaking, industrials

Approx. 40% of the coking coal produced by JSW Group is processed by the Group's coking plants into coke, which aside from iron ore constitutes the key input material for steelmaking. Coal for energy purposes is used mainly to generate electricity and heat. It is sold to power companies, industrial users and individual customers, with power plants and CHPs accounting for approx. 95%.



**JSW's share
in domestic coking
coal output 85%**

**JSW Group's share
in global coke exports
approx. 10%**

Value chain

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JSW Group is at the very beginning of the value creation chain, mining the raw material and further processing it, including the production of coke. Moreover, numerous support functions (e.g. repair services, IT services, training) are largely performed internally by JSW Group companies. Purchases typically concern specialist machinery and equipment as well as essential materials and commodities, including steel elements (e.g. roofbolts), and transport services (rail), fuels, energy and other utilities.

The following companies were the largest suppliers in the coal segment in 2019:

- FAMUR SA
- BECKER-WARKOP Sp. z o.o.
- Huta Łabędy SA
- P.W.DREMEX Sp. z o.o.
- PATENTUS SA
- Arcelor Mittal Poland SA
- MAS Sp. z o.o.
- FTT Wolbrom SA
- Grupa CZH SA
- Zakłady Produkcyjne B-D SA.

The following companies were the largest suppliers to the Group's coking activities:

- RAFAKO Sp. z o.o.
- POLSKA GRUPA GÓRNICZA SA
- GOŁĄB ADAM P.P.U.H. „COMSTAL”
- ENERGA-OBRÓT SA
- Biuro Projektów „KOKSOPROJEKT” Sp. z o.o.
- PRZEDSIĘBIORSTWO REMONTOWO-PRODUKCYJNE „ZK-REM” Sp. z o.o.
- ELEKTROBUDOWA SA
- PRZEDSIĘBIORSTWO USŁUG WODOCIĄGOWYCH HKW Sp. z o.o.
- PCC ROKITA SA, PKP CARGO SA.

JSW buys majority stake in Przedsiębiorstwo Budowy Szybów (PBSz)

The price paid by JSW for the stake was PLN 204 million.

The transaction dates back to July 2018, when the parties agreed on its key terms. On 3 April 2019, JSW's General Meeting agreed to the purchase of a majority stake in PBSz. The General Meeting consent was the final condition for the purchase of PBSz by JSW.

JSW needs PBSz for extending the depth of existing shafts and to intensify roadway development works. JSW mines must deepen eight shafts and drill three entirely new ones. PBSz will also support JSW Group's entities in developing roadways, supplementing the work of external firms. It should be noted that 70km of walkways is developed at JSW's mines annually.

PBSz has unique competences on the Polish market in designing and building shafts. The company successfully delivers complex projects for Polish mining, actively cooperating with JSW Group. PBSz's specialist personnel, with over 1000 employees, will help JSW in pursuing its development strategy.

value creation model



Financial capital	Production (operational) capital	Human capital
These are all sources of financing for operating activities, including mining and coking operations. This is equity from the owners and capital from lenders and bondholders, as well as financial results and other long- and short-term liabilities. With these funds, JSW Group can conduct operating activities and invest in future projects, including financing for its research and development activities.	This capital consists of JSW Group's tangible assets, i.e. the entire mine infrastructure, mechanical coal processing facilities and coking plants. This also includes associated infrastructure for support functions: transport, water and sewage, desalination, energy and IT systems, etc. This is also corporate governance and management systems at each company.	Employees involved in the mining and processing of coal and coke, their competences built upon knowledge and years of experience. Investing in personnel already at the stage of shaping relations with universities and vocational secondary schools. An uncompromising approach to occupational health and safety, respect for the inalienable dignity of people and dialogue with trade unions.

Key figures and cash transfers vs capital:

- Balance sheet total: PLN 14 926.4 million - Equity: PLN 8 851.5 million - Revenue from sales: PLN 8 671.8 million - Net profit PLN 649.6 million	- Non-current assets PLN 11 565.1 million - Expenditures on asset investments: PLN 2 329.0 million - People employed at JSW Group: 30 629	- odsetek menedżerów rekrutujących się z lokalnej społeczności 53,3% - Expenditures on occupational health and safety: PLN 979 726.6 thousand
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Intellectual capital	Social capital	Natural capital
Research and development competences centred around JSW Innowacje, strong R&D infrastructure, including laboratories. A carefully groomed and expanded network of relations with industry firms and the scientific community, targeting cooperation in research and joint innovative projects.	Renewed and tended relations with local communities, especially local authorities, based on trust and openness. Focus on cooperation and implementation of joint tasks, taking into account the impact of JSW's business decisions on local communities. Cooperation with local authorities on investments (e.g. Energy Cluster Zielone Jastrzębie) or education (cooperation with schools from the region)	Impact of mining activities on the landscape, including subsidence processes as well as the rehabilitation and development of land transformed as a result of mining operations (including extractive waste management facilities). Emissions of gases and sewage, including salted waters. Searching for solutions to unlock the potential of mineral commodities, including coal itself as well as associated minerals (e.g. recovery of salt or the economic use of methane and coke oven gas). Increased energy efficiency and lower climate footprint.



- Net book value of intangible assets: PLN 117.3 million - wydatki na obszar związany z badaniami i rozwojem: PLN 65 million - liczba prowadzonych projektów B+R+I 71	- Expenditures on rectifying mining damages in local communities: PLN 101.1 million - Donations for charity purposes: PLN 18.6 million - Taxes and fees: PLN 190.4 million	- Over PLN 223.2 million in expenditures on environmental protection - śląd węglowy 7,92 mln ton CO₂
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Financial capital	Production (operational) capital	Human capital
Stakeholders and forms of dialogue with stakeholders vs equity		
• Strategic cooperation with the State Treasury, a strategic investor, • Dialogue with bondholders, • Daily communication by phone and email with minority shareholders, other capital market participants and lenders, • Participation in capital market initiatives, • High-quality current and periodic reporting.	• On-going dialogue with customers intended to optimise the quality parameters of products and monitoring delivery logistics, • Cooperating and directly exchanging feedback with suppliers and subcontractors intended to improve productivity and occupational safety.	• Return to regular surveys of organisational culture and employee satisfaction, • Occupational health and safety committee works, • Implementation of a code of ethics along with feedback mechanisms, • Cooperation with universities and vocational secondary schools.

Risk management vs capitals

• Commodity price risk • Currency risk - changes in PLN exchange rate vs EUR and USD • Interest rate risk • Credit risk concerning financial receivables • Liquidity risk and working capital management risk	• Operational risk concerning production planning • Risk associated with production capacity, efficiency and productivity • Risk associated with production restrictions and management of mining machine and equipment park • Risk associated with production continuity and management of incidents • Risk associated with acquiring and managing coal resources	• Risk associated with succession and placing key jobs • Risk associated with employee availability, allocation and development of human resources and subcontractor availability • Risk associated with assigning competences and the effectiveness of delegating responsibilities • Work-related accident risk
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Intellectual capital

Social capital

Natural capital

- Agreements on cooperation with a range of universities and domestic and foreign companies,
- Joint research projects.

- Frequent direct meetings with local authority representatives, cooperation on joint special-purpose initiatives,
- Dialogue with trade unions.

- Cooperation with local authorities and residents to counteract mining damages and rectify their effects as well as cooperation on the rehabilitation and development of last transformed as a result of mining activities,
- Cooperation on ecological solutions.

- Risk associated with JSW/JSW Group growth and development strategy through mergers and acquisitions
- Risk associated with identification of strategic objectives
- Risk associated with evaluating potential investments and strategic transactions
- Risk associated with project structure and implementation
- Risk associated with implementing development projects

- Risk associated with trade unions and collective disputes
- Corporate social responsibility risk
- PR, media image, brand and reputation risk

- Risk associated with environmental protection regulations
- Risk associated with particulate matter and gas emissions
- Risk associated with improper handling of hazardous substances and materials
- Risk associated with mining damages on the surface
- Risk associated with the use of alternative energy sources/fuels in the energy industry
- Risk associated with the cost of energy in the long term
- Risk associated with adapting JSW's activities to EU's climate policy
- Risk associated with increasing the share of renewables and other coloured certificates
- Waste and by-product management risk
- Risk associated with threats to the water environment

Strategic approach to sustainable development

Significant factors for JSW Group's development

JSW Group operates in a complex social and economic environment. Extractive operations are carried out in difficult geological and mining conditions, meaning that these activities are fraught with multiple risks.

This business is also influenced by the sales prices of the Group's products, which are subject to swings. Competitors' activities, changes in the Group's financial situation as well as the eventual shape of the coking coal and coke sales markets require us to update our strategic approach to the Group's operations.

Significant factors for JSW Group's development

INTERNAL FACTORS

- costs of producing coal and coke at the Group, having impact on sales profitability,
- quantity and quality of coal extracted and coke produced by the Group,
- investments resulting in improvements in efficiency and effectiveness of coal and coke production,
- level of safety in production processes,
- intensity of natural threats and tectonics of mines,
- extraordinary events that can disrupt production processes,
- breakdowns of machines and mining equipment used in production processes,
- relations with employees and threat of collective disputes,

EXTERNAL FACTORS

- changes in EU's climate policy,
- economic trends in domestic and global economy,
- cyclical nature of industries consuming coal and coke,
- changes in demand and prices for the Group's products,
- situation on the steel market,
- level of imports of products sold by the Group,
- sea freight rates,
- unplanned shut-downs of steel production capacities,
- investments (or their lack) in new steel production capacities,
- level of structural global oversupply of steel production capacities,
- development of new technologies for steel production,
- investments in PCI installations that limit coke consumption in steel production,
- major steelmakers' policy to meet raw materials demand on their own,
- high quality requirements from steel producers,
- dependence of standalone/independent coking plants on deficit of demand for coke from steelworks integrated with coking plants,
- export potential of other producers and coking coal and coke exporters globally and in the EU,
- increase in the share of spot transactions in trading structure,
- differences in costs to extract coking coals and produce coke between the largest producers in the world,
- changes in PLN and other currency exchange rates in relation to EUR and USD,
- changes in monetary, fiscal and tax policy, legal regulations,
- changes in government policy for the mining, coking and steel sectors,
- potential disruptions in rail freight and restrictions in loading and logistics processes,
- extraordinary situations (e.g. epidemic) having impact on global economy and associated reductions in steel output, disruptions in supply of services, materials and equipment and in sales of JSW Group's products,

JSW S.A.'s strategy 2020-2030, encompassing JSW Group subsidiaries, adopted in 2020, is a response to the challenges resulting from a dynamically changing market situation and economic environment, changes in JSW Group's capital structure as well as challenges related to maintaining stable, long-term development in order to fulfil our stakeholders' expectations.

The strategy sets out development directions for the entire JSW Group, indicating strategic areas of focus. The strategy in particular defines: the Group's mission, vision, strategic objectives, ways to build competitive advantage and strategic assumptions for each area of the Group's operations.

102-16 Mission and vision

JSW Group's mission

is to strengthen its position of leading producer and supplier of coking coal and coke in Europe in a way that ensures growth in the Company's value, whilst taking into account shareholder expectations.

JSW Group's vision

is to be a supplier of a strategic chemical raw material that is essential in steel production, which is the foundation of sustainable development and transition toward a low-emission economy.



Building our Group's value on the basis of ethical principles and in dialogue with stakeholders constitutes an essential element of a long-term management strategy.

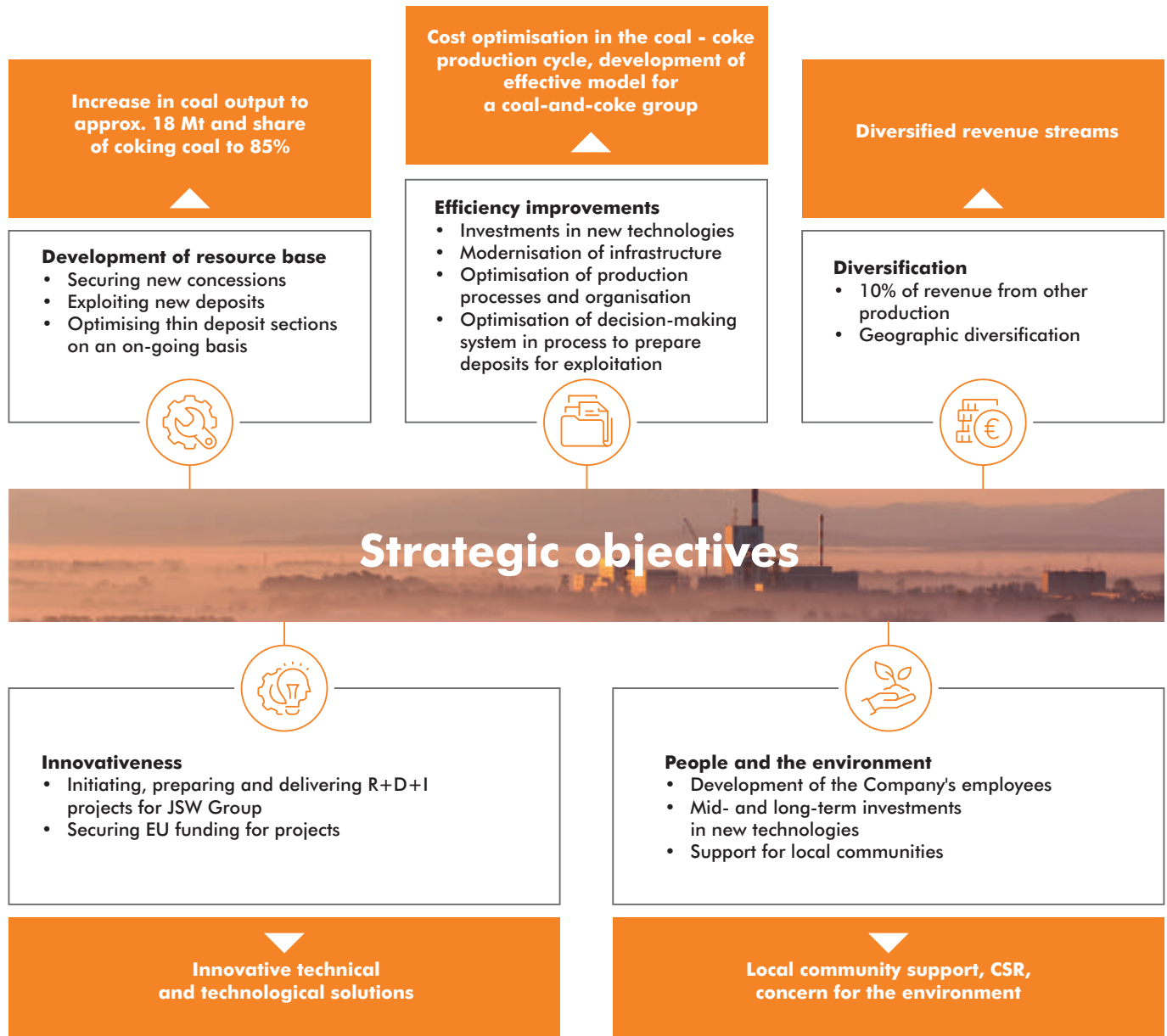
JSW Group is an organisation that is continuously learning, drawing on best practices, striving to be a

socially responsible enterprise and contributing positive values to our relations with the surroundings in which we live and work.

The management approach to these issues is set out in our Sustainable Development Strategy 2017-2020, which is an element of JSW Group's Strategy (see: "Sustainable development strategy").

Strategic objectives

JSW Group's strategy is based on five pillars:



The strategic objectives are defined on the basis of areas in which JSW Group conducts operating and investing activities. Its 2020-2030 strategy introduces another operating area - people and the environment, which is equally as important as the other areas: finance, development, customers and internal processes.

The Company's vision is a reflection of its values, from business values through to environmental aspects.

Revenue
diversification
EBITDA margin

FINANCE

Resource base expansion
Learning organisation
Organisation 4.0

DEVELOPMENT

**INTERNAL
PROCESSES**

CUSTOMERS

85% of revenue
from coke sales

PEOPLE AND ENVIRONMENT

Safe JSW
Stable employer
Green JSW



JSW Group's investment program encompasses investment projects for 2020-2030 worth in total approx. PLN 24.5 billion, with the highest priority given to projects focusing on:

- development of mining activities
- modernisation and optimisation in coke segment
- reaching energy self-sufficiency by developing new generation capacities based on products accompanying coal mining - methane, and coke production - coke oven gas
- improving the Group's profitability and integrating various operating segments
- implementing innovative technologies
- improving efficiency in core business and support functions

The highest priority is given to investment projects that offer the highest rates of return and flagship projects within the core business, which are of key importance to building JSW Group's competitive advantage and leading to the optimisation of operating costs.

JSW plans to spend approx. PLN 20.5 billion on investment expenditures in 2020-2030, which constitutes approx. 84% of the Group's total expenditures.

Subsidiary JSW KOKS expects to spend approx. PLN 2.2 billion on investments. Development investments constitute 35% of JSW Group's planned CAPEX.

Development of mining activities

JSW plans a gradual increase in coal output until 2030, from approx. 14.8 Mt in 2019 to approx. 18 Mt in 2030. The strategy sees an eventual increase in production through investments in the expansion of new mining levels and commencement of mining in the Bzie Dębina area. Within the planned mining output structure, coking coal is expected to rise from approx. 71% in 2019 to over 85% from 2021, with a simultaneous decrease in the production of coal for energy-generation purposes from approx. 29% in 2019 to approx. 12% in 2030.

Over 80 thousand running metres of walkways on average is planned at JSW in 2020-2030. JSW expects productivity per employee to increase from approx. 700 tonnes to approx. 850 tonnes per person by 2030. At the same time, the Strategy sees average employment at the Group increase from approx. 30 thousand positions now to approx. 31 thousand in 2030.



JSW plans to ramp up coal extraction from **14.8 Mt** in 2019 to approx. **18 Mt** in 2030.

Modernisation and optimisation in coke segment

The coke segment constitutes JSW Group's second-largest operating area.

The investment program for the coke segment includes projects in the period 2020-2030 worth in total approx. PLN 2.2 billion, divided as follows:

- investments in the area of coke production
- investments in the area of coal derivatives
- investments in the area of energy
- innovative projects and R&D projects
- other investments

Strengthening our position as Europe's top producer of coke will be possible by achieving strategic objectives, focused on the following areas:

- maximum use of coals produced by JSW Group's mines in the production of coke
- maximum and flexible use of coking plants' production capacities
- optimisation of technological processes
- energy independence
- greater synergies between the mining and coking areas
- product diversification by extending the processing chain

The 2020-2030 strategy sees a sustainable level of coke production and sales, at a stable level of approx. 3.5 Mt. Aside from producing a wide array of coke, the coking segment is responsible for producing and preparing for sale the by-products of the coke production process, i.e. coal derivatives.

Two more longwalls were launched at JSW's mines in December 2019.

The first one is in the Pniówek mine in Pawłowice. The C-4 longwall is exploited at deck 404/2, has a length of 230 metres and a nearly 960-metre roadway. More than 750 000 tonnes of coking coal is to be extracted.

Daily output is expected to reach 3 000 tonnes. The longwall will be exploited from January 2022. Another longwall was put online at Ruch Borynia, an integrated mine, at deck 409/1-2. The B-31 longwall has a length of 210 metres. Its roadway is 760 metres long, and resources exceed 615 000 tonnes of high-quality coal. Daily output is expected to reach 3 000 tonnes. Drilling of the longwall is expected to finish in November 2020.

At JSW's mines, coal is produced at 27 longwalls. Having completed over 10 kilometres of preparatory works more this year, JSW has much work ahead for next year.



For more on the existing strategy and its implementation in 2019, see Integrated Report:
www.jsw.pl/raportroczny-2019/

De-merger of mine Bzie Dębina under construction*

* from 1 January 2020, as a result of organisational changes, the name was changed to KWK Jastrzębie-Bzie.

At the beginning of 2019, a new mine, KWK Bzie-Dębina under construction, was de-merged from JSW's KWK Borynia-Zofiówka-Jastrzębie mine. Additional scheduled works related to accessing and preparing coal deposits in this area for mining were conducted in 2019. Works related to the construction of appropriate surface infrastructure were performed in parallel. The investment is intended to secure access to type-35 coal resources. The resources are estimated at 174 Mt. Coal is eventually expected to be mined from two deposits: "Bzie-Dębina 1-Zachód" and "Bzie-Dębina 2-Zachód." Extractive activities in this area are expected to begin in Q4 2022.

Accessing the vertical deposit "Bzie-Dębina 2-Zachód" is designed based on shaft 1 Bzie, used for air inflow and materials and personnel transport, with a diameter of 8.0 metres and depth of 1164 metres, located in the town of Bzie Zameckie.

A ventilation shaft, 2 Bzie, is expected to be eventually built at the "Bzie-Dębina 1-Zachód" deposit, located in the western section of the deposit in Zebrzydowice.

At the same time, a decision was made to de-merge Ruch Jastrzębie from the organisational structure of KWK Borynia-Zofiówka-Jastrzębie and assign it to KWK Bzie-Dębina under construction, effective from 1 January 2020. As a result of the aforementioned organisational changes, the mine KWK Bzie-Dębina under construction was renamed as KWK Jastrzębie-Bzie.



Modernisation of mechanical coal processing facilities

This project is being implemented at KWK Knurów-Szczygłowie and KWK Budryk and is intended to advance the QUALITY Program. A higher output of coking coal is also envisaged.

The project will deliver expanded, modernised and appropriately equipped mechanical coal processing facilities at KWK Budryk and KWK Knurów-Szczygłowie, which will translate into:

- increase in net coal output,
- increase in coking coal output, mainly type 35,
- increase in the share of coking coal in overall output, eventually to 85%.

The investment is expected to be completed in 2020.



Energy self-sufficiency

In the fourth quarter of 2019, the Management Board of JSW SA adopted a document entitled "JSW Group's Energy Strategy 2020-2030," outlining the key objectives and development directions in the area of energy generation and management at JSW Group.

Aside from being an electricity customer, JSW Group also holds a concession for electricity generation, trade and distribution (JSW KOKS SA). One of JSW Group's strategic objectives is to become a self-sufficient entity energy-wise. This entity within the Group is JSW SA.

The program includes projects such as "Economic use of methane" and "Construction of Radlin CHP," which will use coke oven gas to produce energy and heat. Implementing a range of investments concerning the economic use of methane includes expanding JSW SA's infrastructure for the generation of electric and thermal energy using methane from JSW SA's mines obtained through drainage.

The investments are aimed at:

- prevention in the area of occupational health and safety with regard to the methane hazard - capture,
- an environmental effect in the form of lower emissions into the air,
- obtaining economic benefits by using methane to produce energy.

Sustainable development strategy

JSW Group is entering the final stage of its Sustainable Development Strategy 2017-2020, with 2019 being its second-to-last year. The following aspects were defined during strategy formulation in 2017:

- key areas of responsibility,
- key stakeholder groups.

In-depth interviews were carried out with persons responsible for specific areas. Based on initial strategic assumptions, a brochure was prepared and provided to all participants at the International Mining Forum: "Mine of the future - new problems and solutions," which was held on 28-30 June 2017 and hosted by JSW Group. The Forum's attendees included the representatives of practically all of JSW Group's stakeholder groups, including local and national administration, suppliers, including the largest global suppliers of mining equipment and technologies, key customers, scientific community and competitors.

A thematic session was held: "Sustainable development - MINING OK. Stakeholder relations as one of the foundations of corporate social responsibility," during which the Sustainable Development Strategy 2017-2020 objectives were discussed and a wider context was presented for the activities of JSW Group and other mining and related companies in the area of corporate social responsibility (including the "MINING OK" initiative). Representatives of local government, science, industry and national institutions took part in this dialogue session.

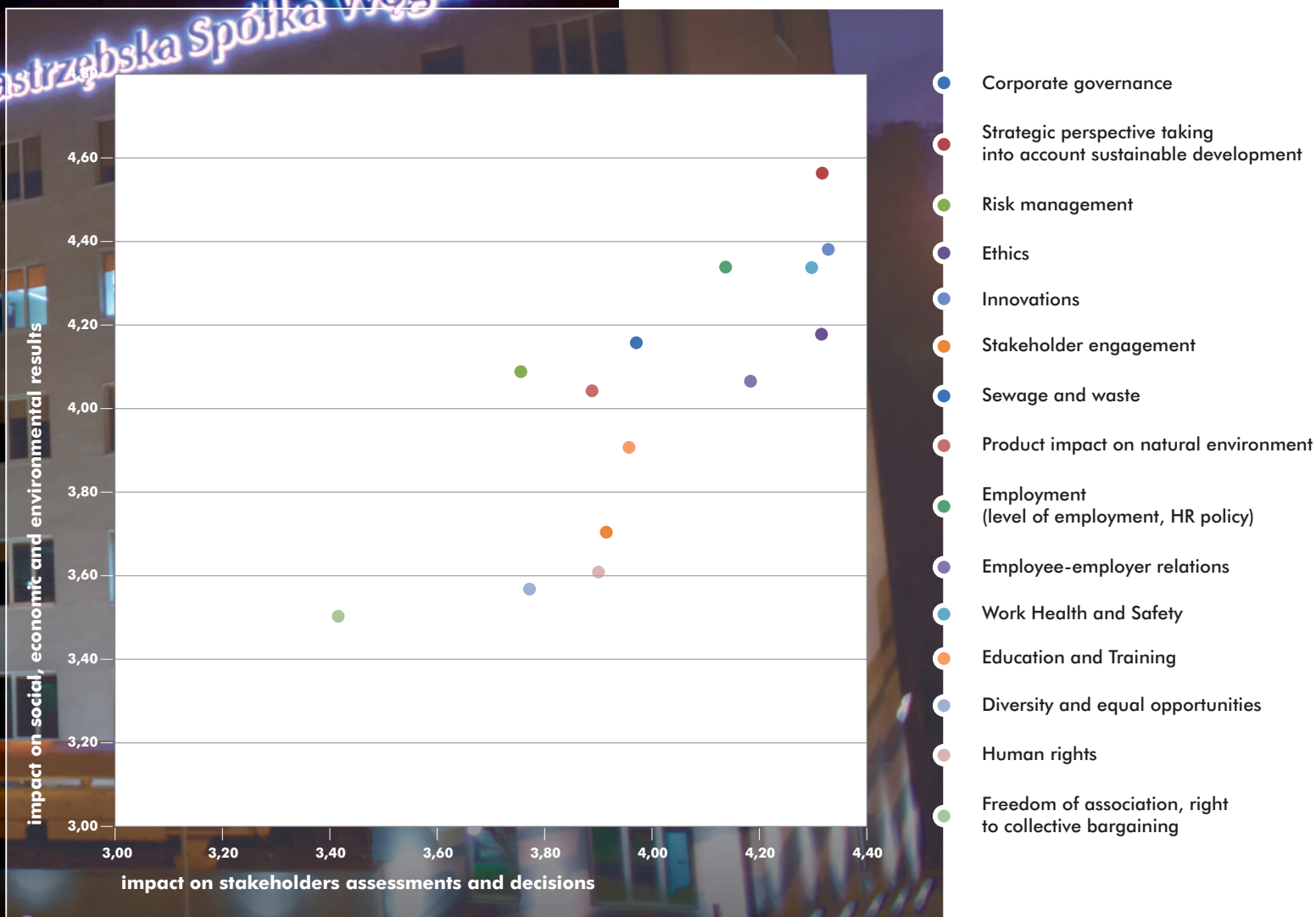
Taking into account the changes taking place at JSW Group and within its surroundings, despite having previously defined the key areas of responsibility, JSW Group decided to review and update its knowledge of:

- their materiality with regard to stakeholder decisions,
- their impact on the company's results (social, environmental and economic).



To this end, at the end of 2019 a range of the Company's stakeholders were asked to complete a validation survey, which would make it possible to re-evaluate and map out the key areas of responsibility. These stakeholders included JSW Group managers, counterparties, capital market participants and, for example, entities related to the local community.

Materiality map for areas of social responsibility





The results emphasise the particular materiality of issues related to responsible management and sustainable development. On the one hand, this means the materiality of innovativeness and incorporating sustainable development aspects in our strategic perspective. On the other hand, this means the significance of corporate governance, ethics and anti-corruption efforts.

The key environmental aspects include energy management, followed by energy-related emissions. Other material aspects include waste and sewage management, which in JSW Group's realities predominately means the management of extractive waste (waste rock) and discharge of mining waters.

Issues related to employment are also of great significance, especially with regard to occupational health and safety management. Relations between the employer and the employees were also considered as important.

The stakeholders of course indicated a range of other aspects, which, although not as important as those above, are still material. At the same time, analysis of the results confirmed the materiality of the key areas of responsibility outlined in the Sustainable Development Strategy 2017-2020. No significant changes were observed that would require the existing responsibility aspects to be updated. At the same time, taking into account the analysis results, certain aspects are given slightly more attention in the report. In a sense, the fact that stakeholders point to issues related to incorporating sustainable development and innovativeness in JSW Group's development strategy is satisfying. On the one hand, this is certainly a result of the changes taking place in the social and economic environment, but on the other hand it shows JSW Group's strong emphasis on these issues in recent years and solid communicating of the need to account for these issues in its business strategy.

Sustainable Development Strategy 2017-2020 in short:

The key that binds not just the entire Sustainable Development Strategy 2017-2020 but also our way of thinking about sustainable development and responsible management is RESPECT. It is multi-dimensional:

- **RESPECT** for the life and health of people working at JSW Group,
- **RESPECT** for non-renewable natural resources which we have the obligation to acquire and consume for economic purposes in an efficient manner to the largest extent possible, without wasting or treating them as a waste product,
- **RESPECT** for the natural environment and the natural and social surroundings, the areas in which JSW operates and its neighbouring areas,
- **RESPECT** for every human being, the employee community and for JSW Group's assets,
- **RESPECT** for our customers, their needs and expectations,
- **RESPECT** for transparency and honesty in operations,
- **RESPECT** for science and scientists with whom as well as with other mining enterprises and related companies JSW Group intends to work with hand in hand on certain very specific research projects.

JSW Group is convinced that it is precisely in innovation and development-oriented actions that answers can be found to a number of the contemporary mining industry's problems, including how to make the industry friendly for the environment and community. Coal is a commodity with applications that are yet to be fully discovered and that offer enormous potential.

In the Strategy, these seven dimensions of respect, stemming from ethical values, took the shape of seven

objectives. Each of these objectives was assigned not only certain measures and targets for the coming years but also specific partial targets and actions, also presented in the light of specific indicators. The strategic objectives also served as the founding blocks of this report by defining its chapters. On the one hand, this makes it possible to optimally address material areas of social responsibility, while on the other hand it offers an opportunity to present an honest and complete view of JSW Group, its on-going activities and plans.

Key objectives in Sustainable Development Strategy 2017-2020

Objective 1: We respect science and make use of innovative solutions in order to develop our business in a more sustainable manner

- 1.1. Initiating projects independently or building partnerships with business (B2B) and the scientific community (B2U) in order to develop projects and technologies intended to find ever better ways to:
 - protect the life and health of people employed in the mining industry (occupational health and safety)
 - reduce the impact of mining operations on the natural environment and surroundings,
 - respect limited resources of coal in order to extract and use them more efficiently and find profitable applications for raw materials obtained as by-products of coal and coke (including methane, coke oven gas, waste rock, mine water and salt).
- 1.2. Acquiring external funds for research in this area in B2B or B2U projects (e.g. from National Research and Development Center – NCBR or National Fund for Environmental Protection and Water Management – NFOŚiGW).

Objective 2: We respect human life and health and refuse to compromise on safety

- 2.1 Zero fatal accidents.
- 2.2 Reducing the number of accidents at work (including accidents involving third party employees).

Objective 3: We respect each and every human being and our community, sharing responsibility for JSW and its assets

- 3.1 Building an organisational culture based on respect for people.

- 3.2 Eliminating instances of discrimination, harassment, employee rights abuses or other unethical behaviour.
- 3.3 Eliminating instances of unequal treatment of men and women within the organisation.

Objective 4: We respect non-renewable resources by using them effectively

- 4.1 Effective use of mined and commercially viable coal deposits.
- 4.2 Effective economic use of methane that exists in coal deposits.
- 4.3 Effective economic use of coke oven gas.
- 4.4 Optimisation of electricity use.
- 4.5 Optimisation of fuel use.
- 4.6 Reduction in carbon footprint and emissions management.

Objective 5: We respect the natural environment, nature in our immediate vicinity and local communities in areas where JSW operates and is a co-citizen and neighbour

- 5.1 Ensuring environmental safety in our immediate vicinity.
- 5.2 Ensuring the safety and quality of life of local community residents.

Objective 6: We respect the needs and expectations of our customers

- 6.1 Coking coal sales volume.
- 6.2 Coke sales volume.

Objective 7: We respect transparency and honesty in management

- 7.1 Presence in RESPECT Index*.

(measurable targets for 2017-2020 are defined for each objective)

* in connection with the RESPECT Index being discontinued by WSE and being replaced by WIG-ESG, JSW's ambition is to be present in the new index.

JSW among leaders in corporate responsibility

JSW's good practices were for the first time included in the annual report "Responsible business in Poland 2018. Good practices." The report was published in Warsaw and featured five of JSW Group's initiatives.

The report "Responsible business in Poland. Good practices" was prepared for the 17th time by the Forum for Responsible Business and contains a summary of last year's CSR activities by Polish companies.

Approach to reporting

This is the third sustainable development report published by JSW Group. Previously, JSW Group published a report for 2017, which was prepared in accordance with GRI Standards, and a report for 2018, in accordance with the Polish Standard for Non-Financial Information (SIN). This document was prepared in accordance with GRI Standards, core option. It covers the calendar year 2019, i.e. the period from 1 January 2019 to 31 December 2019, and in line with the existing reporting rules also includes material events taking place after the balance sheet date but prior to the publication of this report. The report was not subject to additional, external verification by a statutory auditor.

The report covers the entire JSW Group, as consolidated in its financial statements. Due to the minor impact of certain companies on the entire JSW Group, the results of selected social and environmental aspects include limited descriptions for these entities, covering only selected material aspects.

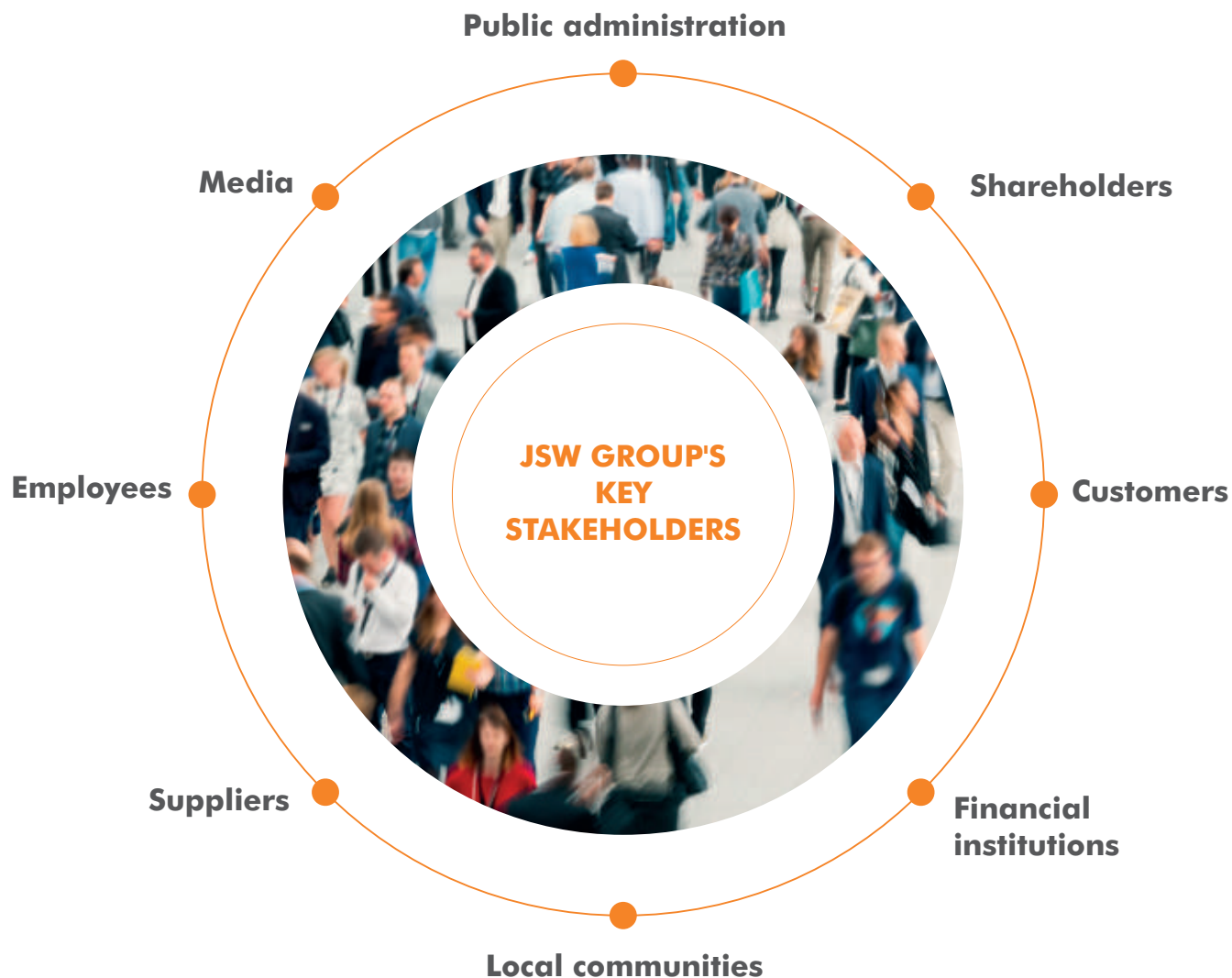
The report content was defined on the basis of the results of a managerial workshop held during work on the CSR Strategy 2017-2020 in February 2017, as well as feedback from stakeholders in a dialogue process initiated during the International Mining Forum (IMF) (June 2017) and the results of a survey concerning significant areas of responsibility, conducted at the turn of 2019/2020 [see: Sustainable development strategy].

102-54
102-56

102-42

102-40 JSW Group's stakeholders

JSW Group's existing stakeholder list, in line with the workshop results from February 2017, includes the following groups:



102-43

Relations with specific stakeholder groups, including the form and frequency of dialogue and discussed subjects, are tailored to the given group. In certain cases, they are regular and formalised. The following should be emphasised:

- Tens of direct, formal meetings between JSW's management and trade union representatives are held every year. Despite difficult issues often being discussed and the on-going re-organisation, these meetings help in explaining differences of opinion and any concerns and in effect in reaching consensus without more drastic forms of expressing displeasure by employees.
- Openness to local government, with whom relations prior to 2017 had been somewhat neglected, according to the Company's management. The current approach is accompanied by a policy of openness to meetings with local authorities and transparency in presenting positive and negative consequences for local communities. The Management Board's ambition is to discuss, in individual meetings with mayors and municipal leaders, the problems, concerns, expectations and shared challenges that accompany JSW Group's activities in their respective localities.
- A return to regular meetings with representatives of institutions and capital markets, which had been somewhat neglected during the 2017 crisis, with an emphasis on the active role of the Company and its Management Board in contacts with existing and potential investors.
- Initiating cooperation and experience exchanges within the industry as part of the Group for Joint Social Initiatives "Mining OK!," including as part of the Underground Mining School, which is a joint project of "Mining OK!" and AGH Foundation.

Notwithstanding the above, the specific nature of contacts with individual groups means that relations with some of them are limited to very narrow issues or are not particularly strong or intensive.



102-44, 102-46, 102-47

As part of work on JSW Group's Sustainable Development Strategy 2017-2020, after initial identification and evaluation of the materiality of each aspect of responsibility, dialogue was conducted with stakeholder representatives. The defined strategy

objectives address the most important, key areas of responsibilities for JSW Group companies. The materiality of key responsibility areas was updated at the turn of 2019/2020. The following areas remain key:

Social or environmental aspect in accordance with updated CSR strategy to 2017	Impact areas and indicators in accordance with GRI	JSW Group
Searching for and using innovations, including in partnership with business and science communities.	- Workplace: Occupational Health and Safety (GRI 403: Occupational Health and Safety) - Environment (GRI 302: Energy, GRI 305: Emissions, GRI 306: Effluents and Waste).	high
Concern for occupational health and safety.	Workplace: Occupational Health and Safety (GRI 403: Occupational Health and Safety)	high
Respect for employees.	Employment (GRI 401: Employment).	high
Respect for and effective use of natural resources.	Environment (GRI 302: Energy, GRI 305: Emissions, GRI 306: Effluents and Waste).	high
Respect for direct natural and social surroundings.	- Environment (GRI 302: Energy, GRI 305: Emissions, GRI 306: Effluents and Waste). - Local community (GRI 413: Local Communities).	high
Customer needs and expectations.	n/a	high
Transparency and honesty in management	Anti-corruption (GRI 205: Anti-corruption).	high

Aside from disclosures corresponding to the above areas, the report includes information corresponding to GRI Standards outside of these areas. In these cases certain aspects are omitted, e.g. management approach.

OBJECTIVE 1

We respect science and make use of innovative solutions in order to develop our business in a more sustainable manner



Objective 1: We respect science and make use of innovative solutions in order to develop our business in a more sustainable manner

103 (302) The stereotype that hard coal as a commodity is ending
103 (306) was perpetuated in the Polish economy for many years.
103 (403) A commodity that has no future, is passé and must be put aside. And that coal mining is an unnecessary burden on the economy and taxpayers. A capital-intensive sector that is a problem rather than an opportunity.

In consequence, no thought was given to the innovative potential of mining, i.e. the potential of research and development. This is why for years it went largely unnoticed, even though there are grounds for claiming that hard coal does not have to be associated with a global problem, rather that in some way it can become an element of a global solution to the problem of global warming.

Developing JSW Group's business requires constant reviewing and evaluating the available technologies and investing in new research directions. This is why in August 2018 the Management Board of JSW SA adopted JSW Group's Research, Development and Innovation (R+D+I) Strategy, which outlines the expected synergies between business objectives and innovations. Dynamic development of technologies and their efficient implementation create an opportunity for consistently improving operational performance and thus also profitability, along with human safety and environmental protection. This is also an opportunity for new products and new markets.

Coal is not just energy, even energy that is increasingly modern and cleaner, but also an essential commodity in producing steel and innovative materials that are the backbone of the future.

Regardless of the stereotypes surrounding coal, today in Poland there is no shortage of examples of innovative thinking and cutting-edge solutions. No-one today needs convincing that there are talented people with open minds in the Polish economy. They are at JSW Group as well, and among the staff of Polish universities, including the technical ones dealing with mining. It is against this backdrop that in 2017 JSW Innowacje was formed, with the intention to focus in it JSW Group's innovation competences and become the Group's research and development hub. A unit that would initiate and pursue projects with real chances of being implemented, contributing to JSW Group's business development.



New challenges for us are mainly related to the European Commission's European Green Deal, which sets out ambitious targets for reaching the EU's climate neutrality. This target requires JSW Group to make courageous, strategic decisions and to incorporate these perspectives in its activities. For a mining company, this is not merely a challenge but also an opportunity to develop sustainably. Innovations in commodity mining and use as well as new solutions will contribute to greater efficiency and flexibility in using the commodity and to limiting the volume of pollution. Cooperation of businesses with other entities, especially research institutes, plays a large role in researching, developing and commercialising successful solutions. Taking this into account, JSW Group is not only tackling the challenges present in today's mining and coking sectors but has gone a step further by setting a long-term objective of becoming a leader in the use of innovative technologies in these industries - not only in Poland but also on a global scale.

The key objective of JSW Group's R+D+I Policy is to improve the productivity, quality, safety and environmental impact of JSW Group's core activity, i.e. the production of coke. The R+D+I Policy also takes into account diversification needs and improvements in JSW Group's image. Through investments in the innovation area, the R+D+I Policy is aimed at stabilising the quality of JSW's products. Implementing the R+D+I Strategy is intended to enhance cooperation between JSW Group entities and allow them to adapt to the needs of innovativeness, especially by focusing their R+D+I activities on commercialisation. The best market practices for JSW Group as regards research, development and innovations are being developed as part of the R+D+I Strategy. Conducting research and innovation work makes it possible to examine modern solutions in the area of mining, coking and environmental protection. The knowledge obtained in this way shapes JSW Group's development and makes it possible to further optimise its production processes. All of these activities are intended to reach the main goal of the R+D+I area, which is long-term enhancement of JSW Group's competitiveness.



One of the assumptions of the R+D+I policy is an appropriate categorisation of projects that are aligned with the policy.
This categorisation is as follows:



Strategic R+D+I Projects, in which case JSW Group companies' investment is estimated at **PLN 5 million** or more.



Innovative R+D+I Projects, in which case JSW Group companies' investment is estimated at between **PLN 0.25 million** and **PLN 5 million**.

Innovative Projects also include projects where JSW Group companies' investment is lower than **PLN 0.25 million**, but where more than one of the Group's companies or business units are involved.



Local R+D+I Projects, the value of which is estimated at below **PLN 0.25 million** and which are implemented by a JSW Group company or business unit.

Project management is carried out in accordance with the Methodology for Managing R+D+I Projects. The methodology covers implementation of R+D+I projects at JSW Group through decision gateways and appropriate reporting for each project.

The Management Board of JSW SA had decided to carry out an audit by an external firm in order to improve the process of managing research and development projects. This audit was intended to assess progress in implementing the R+D+I Strategy and evaluate the Strategy's performance, as well as to identify actions to streamline the process of implementing this strategy, which took place in 2019. Next, JSW aims to continue implementing the R+D+I Strategy and projects in this area, taking into account recommendations in order to take on new challenges that JSW Group is facing.

The total amount of internal funds allocated to R+D activities in 2019 at JSW Group companies reached **PLN 65 017.30 thousand**, of which JSW SA provided **PLN 33 412.80 thousand**.

Coal in 3D

A 3D deposit model is a graphic visualisation of the deposit structure together with disruptions in it, created on the basis of information about the deposit. The basis for creating a 3D deposit model involved adapting the mines' IT infrastructure for teamwork at measurement and geological divisions and production preparation divisions, along with data preparation and verification.

All coal deposits belonging to Jastrzębska Spółka Węglowa's mines were 3D-modelled. A project entitled "Deposit model and production planning at JSW S.A.," completed in November 2019, was aimed at implementing a modern deposit management and production planning system in line with global trends. A system based on two global IT solutions was implemented as part of the project, which significantly modernised the deposit management and design processes at the mines. Similar systems are used by foreign mining groups in Australia or the U.S. So far in Poland, only LW Bogdanka and KGHM's mines use 3D models for production planning. JSW has now joined them.

As a result of project work, a central geological database was developed at JSW's mines, with data from 250 surface wells, 1 440 underground wells, 14 670 walkway profiles, over 24 000 quality samples, 100 major faults and over 150 faults.

The outcome of this project is structural and quality spatial models for deposits within JSW's mines as well as schedules for strategic production. The Company now has a schedule for the construction of 700km of designed walkways and 480 longwalls, including 50 types of roofbolt systems and 25 algorithms for production restrictions. Moreover, 3D deposit models and deposit visualisation make it possible to better understand the variability of mining and geological conditions in mines, while the scheduling software makes it possible to better optimise production at JSW, including by creating various production scenarios at the mines.

Mobile medical point

This project being implemented by JSW Innowacje is intended to design and launch a Mobile Medical Point for use in underground mining excavations. The concept behind the Mobile Medical Point is to provide medical aid underground and increase work comfort for mines by giving them access to on-site medical care.

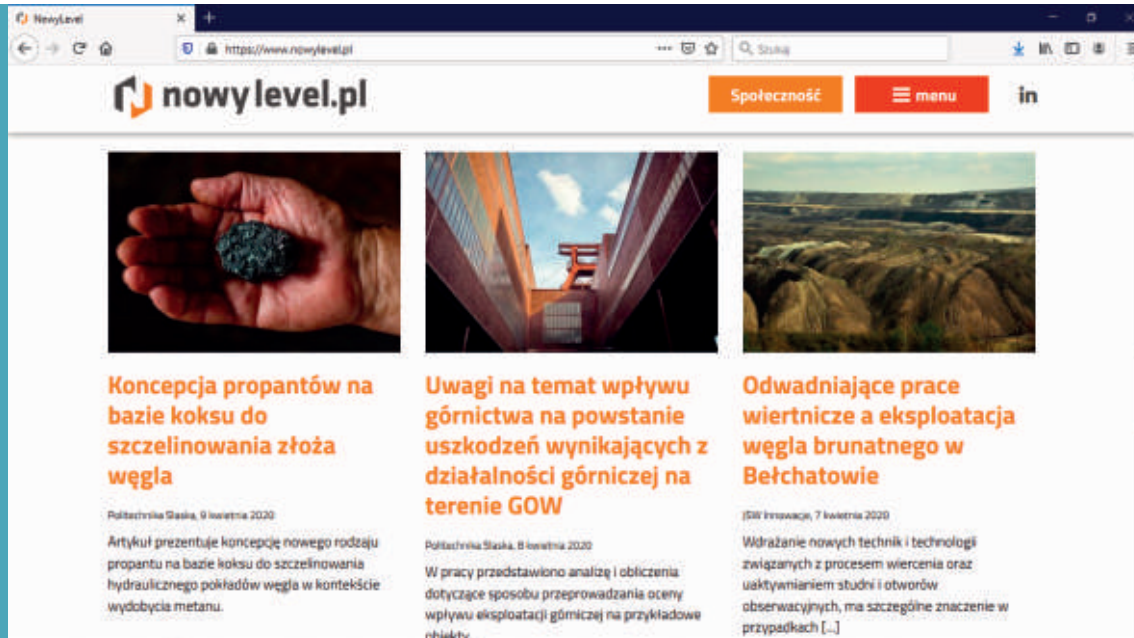
The Mobile Medical Point is designed in the form of a container integrated with a suspended rail and situated on one of the mine levels, with an option to move it quickly between levels to the accident location, and is equipped with essential devices, apparatus and medical products.

Nowy Level website

Nowylevel.pl is an online platform that aims to initiate and stimulate the process of creating an online community so that by exchanging ideas and know-how users would submit project concepts aligned with JSW Group entities' activities. The project is in the post-deployment phase of operationalising the assumptions.

Practical section: Nowylevel.pl is one of the channels for the organisational and process aggregation of initiatives to drive JSW Group's innovativeness. Its aim is to increase the number of submitted initiatives by:

- Stimulating the social area: user interactions and creative exchange of thoughts.
- Expanding the information area: expert know-how database and subject-specific publications.



Nowylevel.pl

In-house projects by CLP-B

In 2019, Centralne Laboratorium Pomiarowo-Badawcze Sp. z o.o. (CLP-B) implemented several flagship innovation projects, the effects of which will be verified in a measurable way in 2020. The first of these projects is entitled "Launch of technological line for automating the process of preparing and analysing mine particulate matter." For the purposes of the line, three mutually operating robots were launched, two of which had a mobile arm, while the third one is a Cartesian robot responsible for handling the control samples warehouse. It should be noted that these activities might considerably reduce the time necessary for mine personnel to receive information on the current status of safety in excavations, thus increasing working safety in the mines. At the same time, promptly sent information about areas that are failing to meet requirements will allow for efficient corrective actions to be taken (spreading of rock dust in excavations), which in effect should substantially reduce downtime and increase productivity indicators.

Another project involves the automation of a process for analysing images from a laboratory microscope for surveying solid fuels. Automating the image analysis process will reduce the time needed for manual analysis and increase the productivity of petrographic surveys. A full deployment of this innovative solution for routine surveys will take place in 2020.

Development of method for manufacturing innovative CRMs – new quality in solid fuel analytics

CLP-B is working on developing methods for producing innovative Certified Reference Materials (CRMs) used in solid fuel (hard coal) inspections and analytics. The outcome of this research and development work is the first of its type product made in Poland that also has a set of unique properties, i.e. values assigned (certified) to five key parameters: sulphur content, ash content, mercury content and two additional metals.

The target customer group includes research laboratories using CRMs and mining operations using CRMs for calibrating analysers, e.g. for ash content in coal. In 2020, matrix CRMs will be rolled out to the market for five basic quality parameters in solid fuels, certificated in accordance with ISO 17034:2016.



Research and development work to design innovative method for profiling solid fuels

This project being implemented by CLP-B is aimed at developing an innovative method for profiling solid fuels (hard coking coals). The outcome will include new solutions in conducting technological processes in the aspect of ensuring appropriate parameters of coke, safety of coking batteries, efficient energy management and repairs management at industrial facilities. The target customer group includes coking coal producers and firms involved in converting it to coke. A classifier for hard coking coals will be developed as part of the project, along with methodology for measuring changes in the volume of feedstock mixtures.

Current challenges for laboratories working with industry

The session "Current challenges for laboratories working with industry" was held on 12 April 2019 at CLP-B and met with considerable interest. A range of important topics were brought up at this meeting of scientists, industry representatives and commercial laboratory professionals. The topics included: BAT requirements for coking, monitoring the quality of fuels, problems in waste analysis and processing, analytics for a new hydrogen fuel, as well as natural hazards in mining and analysis of working environments. The CRMs produced by CLP-B LABTEST were also discussed. One of the session blocks was dedicated to innovations in laboratories, i.e. automation and robotisation, digitalisation and the use of artificial intelligence. The participants were massively interested in this session hosted by CLP-B, which confirmed the need for a wide discussion and exchange of experiences between scientists, lab professionals and the industry.



OBJECTIVE 2

**We respect human
life and health
and refuse
to compromise
on safety**



Objective 2: We respect human life and health and refuse to compromise on safety

103 (403) Extractive operations and other activities related to mechanical processing and the production of coke feature a potentially high risk of work-related accidents. However, a potential hazard does not necessarily have to translate into accidents, provided that this area is consistently managed in a reliable, systematic and efficient manner. This is why occupational health and safety issues at JSW Group are treated with equal importance as production and economic results. When it comes to occupational health and safety management, the objective seems to be obvious, i.e. to limit the number of accidents, including zero fatalities.

The occupational health and safety policy requires certificates to be maintained and a continuous improvement in management systems in this area.

It also requires the management to continually seek and implement technological solutions for work mechanisation and automation, including underground. Solutions that would make it possible to get people out of hazardous areas. This is also a commitment to introduce technical solutions for monitoring equipment operations and the location of employees underground in order to facilitate search and rescue operations.

This is the need to update knowledge of current accidents and near-misses, changing hazards and technical solutions that can increase safety. This is also an attempt to engage employees in improving occupational health and safety management systems,

including by developing solutions that address the specific nature of certain jobs where hazards and accident causes are the most commonly found. The necessity to undertake communication and educational activities aiming to change attitudes and behaviours, including counteracting hazards that result from routine, and to make employees aware of the need to report identified irregularities, hazards and ideas to increase occupational health and safety. This is also a commitment to maintaining a high quality of occupational health and safety training, with particular emphasis on the discussed issues being up to date and practical and on identifying best management practices in the occupational health and safety area at each mine and coking plant, and their promotion. The occupational health and safety policy also requires the management to commit funding for prevention in the area of occupational health and safety.

Similar commitments are reflected in the Sustainable Development Strategy 2017-2020 and are additionally described with measurable indicators.



Bolter Miner 12CM30 - productivity and enhanced safety

Bolter Miner 12CM30 was launched at the Budryk mine in November 2019. This is the first such machine in Polish mining.

The Bolter Miner was purchased by JSW Innowacje, a JSW subsidiary, in 2018 as part of the project "Hydraulic bolting system." The Bolter Miner was produced in the U.S. and arrived in Poland at the beginning of August 2019. The machine was transported to Komatsu's Polish headquarters in Tychy. The machine was then assembled and all trial tests were performed, and the crew that currently operates the machine received training. Next, the machine was again disassembled and transported to the Budryk mine, where it was sent underground. There, in a specially prepared assembly chamber the Bolter Miner was once again assembled and prepared for operations. Next, in November the Bolter Miner began cutting a roadway using a bolting system.

The Bolter Miner is exceptionally efficient. According to the manufacturer, the maximum haulage is 27 tonnes per minute, which reduces costs. Bolting systems are used all over the world, including in Australia, South Africa, Russia and Czech Republic. This technology is much cheaper than pillar systems and equally safe. The cost of preparatory works at JSW's mines constitutes a significant part of coal mining costs therefore the Company is searching for the most efficient solutions. Using a bolting system is intended to reduce the costs of preparing for coal extraction.

403-1

JSW SA has introduced and applies a management system for: quality, environmental protection, occupational health and safety and information security as regards: mining, processing and selling coal in compliance with requirements in the following standards: PN-EN ISO 9001, PN-EN ISO 14001, PN-N-18001 and PN-ISO/IEC 27001. This has been confirmed by independent auditors. The occupational health and safety management system is especially based on consistency in implementing the required tasks, such as: developing and presenting to the crew the occupational health and safety policy and objectives, which are a reflection of the top leadership's commitment, specifying responsibilities and authorisations for employees as regards actions for occupational health and safety, ensuring proper training and motivating employees for safe and healthy work, evaluating occupational risk, developing rules for responding to work-related accidents and implementing corrective and preventive measures related to occupational health and safety, monitoring and auditing the occupational health and safety management system.

Directors' Proxies for Integrated Management Systems are appointed at JSW SA's entities and Coordinators are appointed for specific management systems.

403-3, 403-6, 403-7

Due to the working conditions at JSW's mines, employees are subject to an extended scope of medical preventive examinations. The extended scope of examinations covers mandatory, additional examinations concerning prevention of cardiovascular diseases for own employees and mining services providers at JSW.

Employees are admitted to work in specific jobs on the basis of a medical certificate confirming a lack of contraindications for performing such jobs. All data concerning employee health is stored at an occupational medicine service centre.

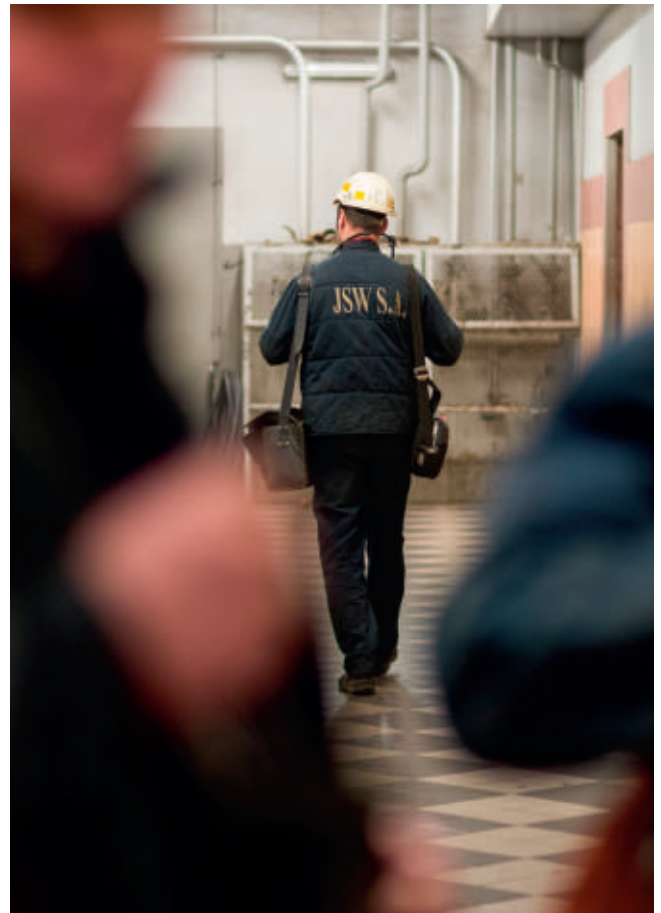
403-8 No exemptions from the requirements of the occupational health and safety management system were intensified at JSW, concerning both employees and service providers.

403-2 Occupational hazards are identified and evaluated directly at JSW SA's entities. This is intended to improve working conditions and protect employee health. Assessments of occupational hazards for specific groups of jobs are performed by a team of employees with essential knowledge in:

- assessing occupational hazards,
- identifying hazards at the jobs being assessed,
- assessing harmful impacts of hazards,
- specifying and selecting preventive measures.

The risk identification process is in accordance with procedure PZB-7.01 "Identification and assessment of occupational hazards" as part of the Integrated Management System.

The systematisation of rules concerning investigations of causes and circumstances of work-related accidents, occupational diseases and near-misses at JSW SA entities is incorporated in procedure PZB-7.02 "Work-related accidents, occupational diseases and near-misses" within the Integrated Management System.



403-4

Activities in the area of occupational health and safety are consulted with employees, who are involved in some of them. Employees participate in developing instructions for the safe performance of work, process of identifying hazards and assessing occupational hazards in the workplace, as well as in consultations regarding solutions intended to ensure safe technological processes.

On a quarterly basis, the Company's entities hold occupational health and safety committees, which are composed of an equal number of the employer's representatives, including occupational health and safety personnel, a doctor providing preventive healthcare for employees, and employee representatives, including a social labour inspector. The committee's aim is to review working conditions, conduct a periodic occupational health and safety assessment and provide feedback on the employer's prevention measures for work-related accidents and occupational diseases, formulating conclusions regarding improvements in working conditions and cooperating with the employer in compliance with occupational health and safety obligations.



The "Foreman's Section and more" is a multiple-award-winning training and information platform at JSW, which is intended to provide employees with various tools and information to raise awareness and enhance knowledge in the area of occupational health and safety and to raise occupational qualifications.

In order to ensure a high level of knowledge, hazard awareness and appropriate professional qualifications as regards occupational health and safety, a training plan on occupational health and safety training as well as training and courses for raising qualifications are available at all JSW entities. A strict correlation between the employees' professional qualifications, the level of employment and workplace safety made it necessary for JSW entities to continue specialist training and courses to supplement the employees' qualifications. This training applied to all employee groups, with a particular emphasis on people employed where natural hazards occur.

403-5

Rescuers in goggles

For several days in August, rescuers from JSW's mines swapped underground walkways for underground walkways. But these ones were in virtual reality.

"We are preparing to fight for a grant from the National Centre for Research and Development," said Aldona Urbanek, head of training and adaptation at JSW Szkolenie i Górnictwo. "We want to create an innovative project based on cutting-edge VR applications. This is why we have invited rescue workers from our mines and we are counting on their experience to help us in creating an innovative application for teamwork training." Rescuers from in-mine rescue stations first have to learn how VR works. "This technique is without a doubt impressive because the world that we go into is exceptionally realistic," said Marek Martaus, a rescuer from the Ruch Borynia mine. "If virtual reality is to educate, count me in because VR has very substantial potential, it re-creates what is under the ground."

According to experts, the use of VR techniques in mining has numerous advantages. They include the ability to practice behaviours in unusual or hazardous situations but under entirely controlled conditions. Virtual reality mainly makes it possible to simulate conditions under the ground and observe the trainees in stress situations. "This will certainly be helpful at work, it's just a matter of getting used to the equipment, although it is not possible to re-create certain conditions, such as temperature or moisture," says Paweł Panowicz, a rescuer from Ruch Borynia. "It seems to me that this technology can be used for training both the beginners and more experienced miners, it's just a matter of software."

403-1, 403-2

Similarly, at other key JSW Group companies the approach to occupational health and safety management is based on management systems concerning quality and continuous improvement. At JSW KOKS, an occupational health and safety management system in accordance with PN-N-18001 is part of the Integrated Management System. The Company has several normative acts and procedures for supervising occupational health and safety in the form of a regulation on occupational health and safety, together with instructions and procedures:

- hazard identification and occupational risk evaluation (RISC SCORE methodology),
- reporting near-misses.



403-6, 403-7

Initiatives intended to prevent hazards to employee life and health and achieve a lasting improvement in occupational health and safety are implemented with the participation of doctors who provide preventive healthcare to employees (while maintaining medical confidentiality and in compliance with the Information security policy). Also worth mentioning are prevention campaigns that were intended to generally improve employee health (vaccinations, gynaecological campaign, HCV tests) and educational campaigns (anti-tobacco).

403-1, 403-2

The situation is similar at PGWiR, where issues related to employees are addressed mainly in the Integrated Management System. The same goes for Jastrzębskie Zakłady Remontowe (JZR), where an occupational health and safety management system in accordance with PN-N-18001:2004 is part of the Integrated Management System. At that company alone, 98 workplace inspections and 15 occupational risk assessments were carried out in 2019 in order to identify work hazards and evaluate occupational risk.

At smaller companies, especially where the operational activities are not associated with as significant occupational health and safety hazards as mining or coking occupational health and safety issues are managed on the basis of appropriate regulations, rules and instructions.



Fire at Ruch Szczygłowice

On Saturday, 26 January 2019, at 4:30 a fire was detected at the mine Knurów-Szczygłowice Ruch Szczygłowice.

The incident occurred in research roadway 16b at deck 407/3, level 850, following work with explosives. In-mine personnel immediately began a rescue operation. Ten workers were in the danger zone. No-one was hurt and everyone safely left the danger zone.

The operation involved isolating the danger zone from the rest of the mine. On Monday at approx. 3am the rescuers finished isolating the excavation, secured with an anti-explosive water plug. 12 hours later, they began re-instating ventilation in the remaining part of the excavation, which took them two days.

The District Mining Authority in Gliwice investigated the causes and circumstances of the incident. A hazard committee was appointed at the mine, with the participation of independent assessors.

Endogenous fire at KWK Knurów-Szczygłowice

On 1 November 2019, an endogenous fire broke out at KWK Knurów-Szczygłowice in a research roadway 850 metres below the ground, caused by the self-ignition of coal. Eight miners were rescued from the danger zone and no-one was hurt. The fire was extinguished on 6 November 2019.

Fire at KWK Pniówek

A fire was discovered at KWK Pniówek on 20 November 2019. The incident occurred at ramp B-1, under construction, in deck 404/4+405/1, level 1000. 52 miners were presented in the danger zone and all of them safely left the zone following a rescue operation. Due to active efforts to extinguish the endogenous fire and a lack of indications of an increased fire hazard, there was no need to establish a fire zone and isolate coal resources.



OBJECTIVE 3

**We respect each
and every human
being and our
community, sharing
responsibility
for JSW Group
and its assets**



Objective 3: We respect each and every human being and our community, sharing responsibility for JSW Group and its assets

103 (401) Every organisation that employs hundreds of people - and JSW at the end of 2019 employed approx. 30 600 people, including 22 400 at Jastrzębska Spółka Węglowa - is exposed to behaviours that may not necessarily be permitted. The risk of having individuals in such a large group who have a very different system of values and very different personal culture must be taken into account. What is a standard for some might be unacceptable to others. Despite the most diligent recruitment procedures, dishonest individuals may be found in such a large group.

When adopting the Sustainable Development Strategy 2017-2020, JSW Group faced the challenge of building a harmonised organisational culture that would not only support innovativeness and a focus on productivity but also attitudes related to respect for the property of companies, third parties and simply other people (including co-workers or subordinates). The need to eliminate all instances of potential discrimination, harassment, violations of employee rights and other unethical conduct is of particular significance.

On top of all this is the specific nature of the Company and its industry, including the following:

employees are recruited often from relatively small communities, which entails an increased risk of ties between employees other than professional relations, which can give rise to conflicts of interest (this entails the threat of nepotism due to the fact that a facility might employ family members and relatives, but also animosity between individuals, etc.),

mining has traditionally been dominated by men and a mentality among many people that marginalises the professional roles of women.

This specific nature might, but does not have to, translate into very concrete risks. Moreover, it may be rationally used in management. For example, the presence of entire families stemming from the recruitment of employees from small communities might, but does not have to, mean nepotism. It can become a factor and a value co-creating a healthy organisational culture. Few professions feature traditions and prestige as strong as those in mining. This is a sort of heritage that continues to be proudly passed on from father to son. It is no coincidence that mining is often referred to as an art rather than simply a profession. Of course at the same time all indications of negative conduct must be condemned. Especially all instances of a lack of respect toward women.



Human rights and non-discrimination

406-1

With regard to human rights and non-discrimination, JSW Group's management approach is based on a profound belief that every person has inalienable dignity that comes with a range of inalienable rights. This personalistic operational philosophy is reflected in the Universal Declaration of Human Rights (adopted and proclaimed by a resolution of the United Nations General Assembly on 10 December 1948) and in other fundamental documents, especially including an International Labor Organization convention. With that in mind, Jastrzębska Spółka Węglowa and its subsidiaries are committed to respecting the human rights specified in the Universal Declaration of Human Rights, with particular emphasis on the fact that all

people are born free and equal in dignity and rights (Art. 1 of the Universal Declaration of Human Rights) and the non-acceptance of distinction or discrimination of any kind and, in consequence, the provision of equal opportunities regardless of race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status (Art. 2 of the Universal Declaration of Human Rights).

Considering the above, Jastrzębska Spółka Węglowa and its subsidiaries feel obligated to exercise particular attention when it comes to the risk of violating any of these rights in the course of JSW Group's operations and within the industry in which JSW Group operates.

It will especially strive to commit suppliers and subcontractors to respect human rights and institute internal mechanisms that are intended to limit this type of threat in relation to employees, local community members and all other stakeholders. It declares a continuous improvement of the existing complaint mechanisms, including the option to anonymously report potential violations or cases of discrimination. It also provides for the monitoring of human rights and non-discrimination as well as the public reporting of impact on human rights, with particular emphasis on cases of violations. It will also strive, in the case of key transactions (e.g. mergers and acquisitions), to apply the due diligence process to human rights and non-discrimination. It declares that it will refrain from foreign expansion in a situation when the legal culture of the target country would create a material risk of human rights violations.



Training for management and employees is conducted at specific JSW Group companies. For example, in 2018 approx. 700 employees at JSW SA were trained in the area of preventing harassment and eliminating incidents of discrimination, human rights violations and unethical conduct. In 2019, JSW Group companies worked together on developing consistent operating standards to implement a compliance system, the elements of which include:

- Updated Code of Ethics for JSW Group,
- Compliance policy,
- Anti-corruption policy,
- JSW Group's policy for hiring relatives and acquaintances,
- JSW Group's policy for giving and receiving gifts,
- Policy for managing conflicts of interest.

[for details see: "Compliance System" and "JSW Group Code of Ethics"]

None of the undesired incidents occurred in a minimal scope to a greater extent.

Number of employee harassment and discrimination cases reported [406-1]

Number of reported incidents	2018	2019
JSW Group		
harassment	2	3*
discrimination	0	0
including JSW		
harassment	1	1*
discrimination	0	0

*The committee's findings eventually did not confirm any of the three harassment cases in 2019.

Employee surveys

A proper diagnosis of the current organisational culture by conducting a cyclical employee satisfaction survey is a key element in implementing the Sustainable Development Strategy 2017-2020. The first survey, although planned for 2018, was completed already in December 2017. The next ones were conducted in December 2018 and 2019. The questionnaires are collected in boxes and are confidential, and the survey results, especially the critical ones, have become a valuable source of knowledge about areas that need improvement and repair. Having analysed the survey, a decision was made to continue activities intended to build a friendly workplace atmosphere, create a document outlining procedures for handling undesired occurrences and continue working on a harmonised collective bargaining agreement.



404-2

Supporting employees in personal development

JSW Group firmly believes that every employee has the right, and even should strive, to develop in accordance with his/her predispositions and abilities. This is why it tries to support its employees in raising professional qualifications, in as far as budget and organisational considerations permit. In practice, this means that employees take part in training sessions or language courses organised by the employer. Detailed rules for accessing opportunities for raising qualifications are described in internal documents such as policies, rules and regulations. In some cases, rules are not formally documented and training needs are identified on an on-going basis.

A formalised assessment of employee competences introduced at JSW helps in selecting the optimal development programs.

In 2019, tens of JSW Group employees attended dedicated Executive MBA studies that were an element of a development program for the Group's management. Dedicated post-graduate studies are also organised in other specialised domains.

Number of training hours [404-1]	2018	2019
Average per employee at JSW	16.80	29.10
Average per employee at JSW Group	8.10	15.00



JSW Group's Project Management Academy

JSW Group's Project Management Academy was launched in June 2019. This is an important element in transitioning toward a project-based organisation. The Project Management Academy aims to advance knowledge, develop competences and exchange good practices. This project covers a large portion of JSW Group's employees. The Academy is also tasked with harmonising rules for implementing projects and investments at JSW Group. The Academy is intended to expand knowledge and development competences. The Academy's motto states that "all process participants must know and understand the existing rules." Training for IPMA level D certification was held as part of the Project Management Academy, with 13 participants. These were employees from Jastrzębska Spółka Węglowa, JSW KOKS, JSW Innowacje and Jastrzębskie Zakłady Remontowe.

These activities are aligned with Resolution 333/IX/2019 adopted by JSW SA's Management Board on 16 May 2019, introducing JSW Group's Program and Project Management Methodology.

VR platform (JSW Szkolenie i Górnictwo)

A modern virtual reality (VR) workshop was launched at JSW SIG on 21 February 2019. The decision to gradually move training into VR was dictated by a range of factors, including the need to generate greater interest and engagement from participants. A lack of interest and engagement on the part of the trainees and a quick loss of focus are becoming a more frequent problem during traditional training. Another problem is the limited opportunity to gain hands-on experience. A 360° movie ("Wirtualno Gruba") was created for the purposes of the VR workshop, with the key objective being to show the underground work environment to future mining-sector employees. The movie was recorded at KWK Pniówek, and its final version was released on 18 September 2019. In the VR room, trainees get a hands-on experience in an application for working with explosives, during which they learn about the virtual environment and can feel as if being at the longwall face and learn about operational procedures for an explosives miner.



Sectoral qualification framework for mining in Poland (JSW Szkolenie i Górnictwo)

In view of the European integration and employee movement, many companies have faced the challenge of ensuring an Integrated Qualifications System that would allow qualifications awarded in different EU member

states to be compared. They have to be compared to the Polish Qualifications Framework and, through it, to the European Qualifications Framework. Sectoral Qualifications Frameworks offer a range of benefits:

1

a clear plan for team building and development by streamlining a set of qualifications that are important from the viewpoint of the sector's stakeholders, i.e. those sought after by employers,

2

a consistent and meaningful way of evaluating employees' potential – possible due to the ease of comparing qualifications and identifying employer needs,

3

credible verification of job candidates' competences and thus more effective recruitment,

4

open doors to cooperation on the European market thanks to the recognisability of qualifications and competence credibility of a firm's human capital,

5

certain planning of an organisation's long-term investments and development paths - through the ability to identify competence gaps on the market and a real impact on changes in education programs,

6

effective response to industry deregulation – the Sectoral Qualifications Framework makes it possible to draft recommendations or standards pertaining to the hiring of people for specific jobs, without the need to develop new regulations.

Such comprehensive activities intended to establish a similar initiative have not been previously undertaken in the mining sector in Poland. There is no harmonised system for adapting vocational competences to the real needs of the mining sector. The main idea in developing sectoral frameworks is for them to be created by the industry for the industry. Aside from JSW SIG and AGH, experts from the following companies/institutions were invited to cooperate: State Mining Institute; KGHM Polska Miedź SA; PGNiG SA; PGE GiEK SA; LW Bogdanka SA; JSW Innowacje SA; JSW KWK Pniówek; State Mining Authority; Association of Open-Pit Mines; vocational schools in Rybnik; Mining Chamber of Industry and Commerce; Ministry of the Environment; Grupa Gumułka.

Development of learning programs for additional competences for professions in the mining and drilling industry (JSW Szkolenie i Górnictwo)

The main objective of this project, being implemented in a consortium with the Exploitation Technology Institute in Radom, is to develop, during the period from 1 January 2020 to 31 December 2020, a set of additional vocational skills for seven professions in industry education (mining and drilling industry), along with the definition of teaching and verification criteria as well as teaching programs in cooperation with three employers.

By implementing this project and its main objective, problems related to a limited access and in certain professions a lack of access to teaching materials will be alleviated. The project is also aligned with the following documents: Europa 2020, Initiative for Youth, Human Capital Development Strategy, Mid-Term National Development Strategy.



OBJECTIVE 4

**We respect
non-renewable
resources
by using them
effectively**



Objective 4: We respect non-renewable resources by using them effectively

103 (302) Sustainable development and environmental protections encompass numerous aspects. On the one hand, this is a long-term development strategy, i.e. development of business model and products that takes into account changes in the natural and social environment, including for example climate changes. Planning that will provide an answer to challenges, move away from the "business as usual" philosophy. On the other hand, adaptation to changes, but also treating these changes as challenges and at the same time opportunities.

From a strategic operational management viewpoint, effective management of impact on surroundings is already needed today, i.e. all systems must function properly, leading to environmental safety. At the same time, all of these systems, along with the business model, must evolve towards even more effective solutions, aligned with the sustainable development philosophy.

The key directions of environmental protection activities are specified in the Sustainable Development Strategy 2017-2020, which consists of the two aforementioned categories, defined in two objectives:



maximising the effectiveness of economic use of commodities derived from nature

(coal deposits and other commodities associated with coal mining) (Objective 4: We respect non-renewable resources by using them effectively),



reducing negative impact on natural surroundings and ensuring on-going environmental safety

(Objective 5: We respect the natural environment, nature in our immediate vicinity and local communities in areas where JSW operates).

JSW Group believes that effectiveness is the best measure of responsibility. Natural commodities, which are finite and non-renewable, must be respected and therefore used well and fully. Any imperfections in technology or management should be eliminated. This opens up space for many research projects and for seeking innovative solutions that can help in operating effectively and profitably, whilst protecting the natural surroundings. This is an infinite space for scientific entities to conduct research involving the industry. This is an impulse for us to seek innovative, efficient and cost-effective technologies. This is also an area of potential dialogue: between competitors, with scientists and government administration. The problems and objectives are shared therefore there is room for finding solutions together - with benefit for business competitiveness and for the environment. This also entails successive but very consistent and far-reaching changes that make it possible to adapt business models to the economic consequences of climate change.

JSW Group's Strategy 2020-2030 sets out the main directions for the activities of Jastrzębska Spółka Węglowa SA and its subsidiaries in the field of environmental protection, including carbon footprint and other emissions. JSW and subsidiaries are committed to strategic planning taking into account sustainable development rules, including searching for technological, process and product solutions that will support sustainable development; strive to expand product offerings by incorporating products that help in reducing humans' negative impact on the natural environment (e.g. carbon adsorbents).

JSW's approach to environmental management

JSW undertakes to:

- respect legal requirements and other environmental regulations that are applicable to our economic activities,
- engage in strategic planning that covers searching for technological, process and legal solutions that take into account sustainable development rules and support the fight against climate change,
- actively engage in environmental protection at operational level, activities aimed at respecting natural resources and minimising impact on the environment across all stages of production,
- build environmental awareness among employees, suppliers, customers and other stakeholders,
- effectively use natural resources and the by-products of mining and processing coking coal (e.g. methane, mining water, mining aggregates) at each stage of economic value creation,
- optimise the energy intensity of its operating activities and strive to self-generate energy, based on modern technologies for the economic use of commodities accompanying the mining of coal (e.g. methane from mine drainage) and renewable energy sources (e.g. photovoltaics),
- plan work in a way that reduces the scale of mining damages and undertake timely corrective and compensation activities with regard to the victims,
- rehabilitate and return to use post-industrial areas affected by mining activities,
- cyclically monitor environmental performance at executive level and devise plans and targets concerning the main parameters of emissions within the company's long-term planning, and their regular calculations and measurements (including carbon footprint, emissions into the ground, water, air, etc.),
- take environmental aspects into account in procurement processes and require suppliers and subcontractors to care about the natural environment (clauses in contracts),
- communicate to stakeholders its requirements and results in environmental protection and combating climate change.



Products of the future

203-2 Aside from coking coal and coke, JSW Group is an important producer of coal derivatives that are generated in the coking process. These include coke oven gas, raw coal tar, BTX, sulphur and ammonium sulphate.

JSW Innowacje is constantly searching for new solutions in the area of mining, coking and coal processing and ways and directions for using coking by-products. For this reason, a project entitled "Sale of coal-derivative products" was initiated, along with a project aimed at obtaining pure hydrogen from coke oven gas - "COKE - 2 - H₂." They are intended to deploy technologies for the deep processing of coal-derivative products that would extend JSW Group's product value chain. If the proposed technologies are deployed, the range of products will be extended, which will lead to higher revenue for JSW Group from new operating segments. Preferred technologies for the deep processing of coal-derivative substances will be clean coal technologies that make it possible to produce next-generation materials contributing to a reduction of adverse impact of carbon footprint on the environment.

The main objective of project "COKE - 2 - H₂" is to obtain high-purity hydrogen (99.999% H₂) for use in electromobility. Partners with solid competences and technical and technological potential for implementing technology for separating high-purity hydrogen from coke oven gas at JSW Innowacje were first selected. Based on an analysis of technology suppliers and their customer testimonials, including reference visits, a decision was made to prepare a feasibility study based on the selected technology under Polish conditions.

The study contains an analysis of two production scales (large-scale and pilot installations) and makes it possible to estimate the chances for implementing mature technology for separating hydrogen at JSW Group, indicating opportunities and threats for each variant. Forecasts concerning development of the high-purity hydrogen market (in the chemicals, food, metallurgical industries) as well as electromobility and emergency power sources show that this market will be developing dynamically in the coming years. Based on research and analysis as well as the feasibility study, JSW Innowacje carried out a multi-variant analysis for implementing hydrogen production technology at JSW Group. The results of this work will constitute the basis for a directional decision as to the future of this project at JSW Group. Further implementation of this project in the selected formula (R+D or investment) is planned for the turn of the first and second quarter of 2020.





JSW SA is the EU's largest producer of coking coal, with an annual output of coke reaching approx.

3.2 Mt.

JSW Group's coking plants have production potential for up to

72 000 tonnes
of hydrogen per year.

JSW at Hydrogen Europe

In March 2019, Jastrzębska Spółka Węglowa joined Hydrogen Europe, the European Hydrogen and Fuel Cell Association. This prestigious organisation has over 100 companies, 68 research entities and 13 national associations, which are actively working to develop eco-friendly hydrogen technologies.

Jastrzębska Spółka Węglowa is looking at hydrogen as a fuel of the future, intensively working on innovative technologies that will make it possible to effectively produce this ecological energy source at JSW Group's coking plants. JSW's joining Hydrogen Europe results in deeper cooperation with the largest companies, institutes and associations that are focusing on the industrial use of hydrogen. For JSW Group, this means new opportunities, including access to valuable know-how and the latest technological solutions.

The planned installation will make it possible to produce approx. 8 000 tonnes of hydrogen per year (99.999% H₂ purity), which would be enough for over 900 hydrogen-powered buses or more than 4 000 cars.

The Brussels-based Hydrogen Europe is the leading European association for hydrogen and fuel cells. It currently represents more than 100 industrial companies, 68 research organisations and 13 associations. It is continuously working with the European Commission and the most important national institutions, state authorities, universities, scientific centres to develop fuel cells and hydrogen technologies. The association also includes 3M, Airbus, Alstom, Anglo American, Audi, BMW GROUP, China Energy, General Motors, Toyota.

JSW Innowacje is intensively examining technologies for the deep processing of coal tar, which is a source of numerous by-products. Raw coal tar must be subjected to fractional distillation into soft pitch, oils and phenols in order to separate components that can be further used practically. A further two or three stages of processing are required to obtain market products from tar. This is a very important step in producing advanced carbon materials, which are currently attractive raw materials, e.g. for the hi-tech industry, including carbon fibres and anodes in lithium-ion batteries. As part of JSW Group's project "Sale of coal-derivative products," JSW Innowacje has examined the possibilities for economic use of coal-derivative substances produced by JSW Group's coking plants.

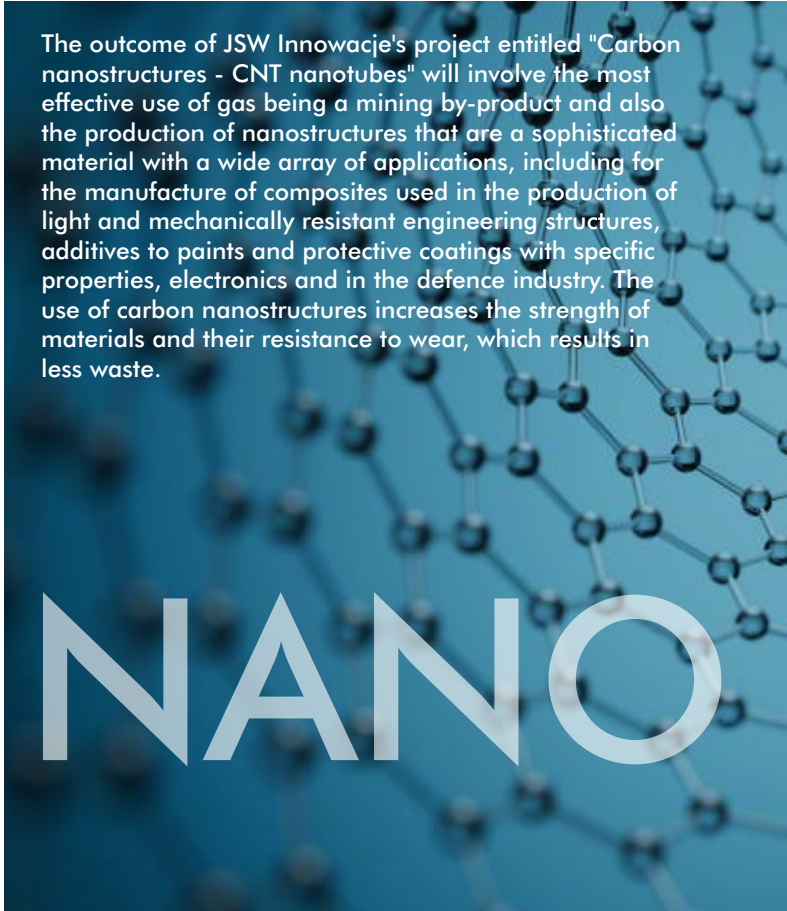
In pursuing this objective, JSW Innowacje developed a conceptual study outlining the possibilities and directions for implementation as well as estimated investment expenditures needed from JSW Group for coal tar deep processing technology.

Innovative projects aim at the deployment of clean carbon technologies, implementation of the circular economy concept and the manufacture of carbon products that have a positive impact on environmental protection. One of the ecological projects involves the construction of a facility for the production of carbon adsorbents made out of coal from JSW SA's mines and the production of coke-based powdery adsorbents made in JSW KOKS SA's coking plants. This project will make it possible to produce advanced carbon materials that are used for environmental protection. Formed carbon adsorbents are used for water and gas treatment in industrial processes, including for the treatment of drinking water or water for the production of beverages. Filters with a carbon insert are increasingly frequently used in households. Coke-based powdery adsorbents

will help in reducing the emission of mercury from flue gas, especially for coal-based power plants and cement manufacturers. As part of JSW Innowacje SA's project "Coke-based powdery adsorbents and coal-based formed adsorbents," industrial tests are under way to assess the effectiveness of coke-based powdery adsorbents on operational technological lines in conventional energy generation based on lignite. The results of research will make it possible to make a directional decision as to the future of this project.

Gas from mine methane drainage, with methane content of approx. 45%, is a good raw material for further chemical synthesis. This gas may be used for example to produce carbon nanostructures. The use of methane through chemical processing is also tied to the concept of circular economy.

The outcome of JSW Innowacje's project entitled "Carbon nanostructures - CNT nanotubes" will involve the most effective use of gas being a mining by-product and also the production of nanostructures that are a sophisticated material with a wide array of applications, including for the manufacture of composites used in the production of light and mechanically resistant engineering structures, additives to paints and protective coatings with specific properties, electronics and in the defence industry. The use of carbon nanostructures increases the strength of materials and their resistance to wear, which results in less waste.



NANO

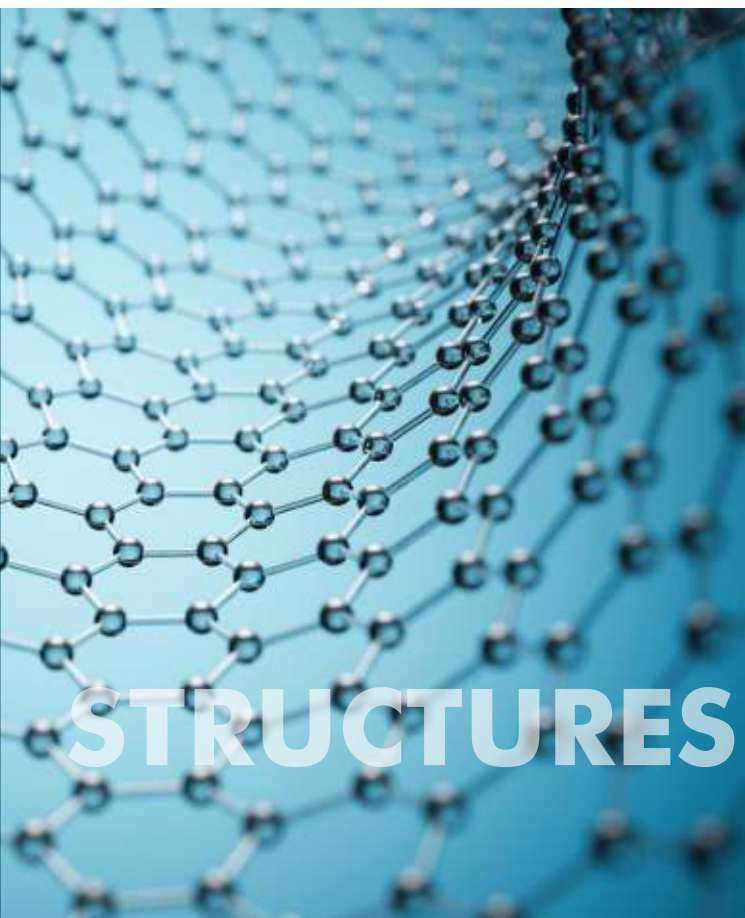
In this project, JSW Innowacje SA is working with foreign partners, including scientific entities, with the aim of developing and implementing technology for the manufacture of carbon nanostructures. As part of the project "Carbon nanostructures - CNT nanotubes" a test installation on a large-lab scale for the production of nanostructures was developed. This industrially scalable research installation is used for process research on the production of CNT with various parameters and quality properties. The results of this research work will constitute the basis for further directional activities related to deploying CNT production at JSW Group.

JSW Innowacje is undertaking activities to establish cooperation with private-sector and public-sector businesses as well as scientific institutions (AGH, Institute for Chemical Processing of Coal, Silesian University of

Technology, etc.). The scope of JSW Innowacje's activities covers the phases of preparations, initiation and implementation of R+D projects and the formation of scientific and industrial consortia to raise financing (from local, EU, environmental funds) for these projects. JSW Innowacje SA is implementing a range of projects co-financed externally.

Cooperation in these projects is established mainly with domestic and foreign universities and research institutions as well as businesses. One of the projects being implemented in an industrial consortium is "Technology for producing densified components of feedstock mixtures for coking chambers with the use of fine-grained coal fractions (DensiCoal)." If successfully implemented, this project will result in a higher productivity of batteries in the feedstock system for coking chambers (as a result of an approx. 7% increase in the density of coal feedstock) and a reduction of raw material costs in coke production. Another project being implemented by a scientific and industrial consortium is "Technology for producing coal feedstock with higher mechanical strength for stamping system coking battery (ImproStamp)."

The key objective of this project is to reduce the moisture of coal mixtures used in the coking process, which will translate into increased production capacities for the coking battery. Another effect of implementing this research project will be a reduction in energy consumption and lower rates of unit heat consumption for fuelling the battery, thus improving the performance of the technological processes of coking. The total value of the two projects is approx. PLN 17 million, including co-financing of approx. PLN 9 million.



Energy efficiency

103 (302)
103 (305)
305-5

JSW Group has been consistently implementing investments for years, reaching for more and more advanced technologies intended to capture methane from underground deposits and use it to generate energy (electric and thermal). This has a two-pronged environmental effect. Methane, which is the dominant component of the commonly used natural gas, is a high-energy fuel, thanks to which JSW Group can self-generate energy or additional revenue (by selling the gas to external entities). At the same time, methane that is emitted into the air is considered to be 28 times more harmful than carbon dioxide. This is why combustion of the gas being freed from geological formations is more beneficial for the environment and climate, even if it is associated with CO₂ emissions.

Similar steps are being taken to address the use of coke oven gas. Just several years ago, excess coke oven gas, which is a by-product of coke production, that was not used in the coking battery itself was treated as waste and combusted in a gas flare. Today, more and more installations use it to generate energy. The entire volume of gas is economically used in modernised installations. Some of the gas, mostly in the winter, is sold to external customers (production of heat for heating purposes). These activities are supported by JSW KOKS SA's Energy Management System, deployed and certified under ISO 50001, which identifies areas within the Company that record significant use of energy to ensure process optimisation and optimal energy efficiency. This systemic approach makes it possible to focus more intensively on searching for new innovative solutions to limit the use and consumption of energy resources wherever possible. In 2019, the Management Board of JSW SA established the Methane Drainage and Energy Management Office, thus linking methane drainage to the economic use of methane. Previously, the methane drainage process was entirely performed by external companies selected in

tenders. In-house structures are currently being developed. Methane drainage units have been set up at every mining facility, employing more than 200 people in total. Operating and servicing methane drainage stations as well as supervising and regulating key pipelines and methane intakes in underground excavations are now performed internally. The main task of these new units is to increase the capture of methane in the drainage system and thus enhance the safety of underground crews and reduce methane emissions into the air. This is of colossal, even critical significance when it comes to possible EU ETS fees that also cover methane.



JSW Group's strategic objective is to reach energy self-sufficiency by 2030.

In 2018, an investment project entitled "Economic use of methane" was launched. The project is scheduled for five years and concerns the Budryk and Knurów-Szczygłowiec mines. The total project value is PLN 322.5 million. 13 generators with total capacity of 48 MWe will be built as part of the project. Methane drainage and energy infrastructure will be expanded in order to complete this project. Investments related to the use of coke oven gas for the generation of electricity are also under-way at JSW KOKS. A 28 MWe power unit is under construction at Koksownia Radlin.

Radlin CHP - heat for Silesia residents

On 25 September 2019, at JSW Group's Radlin coking plant, an agreement was reached ensuring supply of heat for the residents of Radlin and the mine KWK ROW Ruch Marcel. Prime minister Mateusz Morawiecki attended the official signing of the agreement between JSW KOKS SA, PGG SA, PGNiG Termika Energetyka Przemysłowa and the city of Radlin. JSW KOKS begins a project to build a modern heat-and-power plant fuelled by coke oven gas, which will eventually replace EC Marcel, which is owned by PGG and is expected to shut down at the end of 2022.

The Radlin CHP will be a modern unit generating thermal and electric energy in cogeneration, i.e. in the most efficient way, in a single technological process. The Radlin CHP will meet the EU's requirements, especially the BAT conclusions for large combustion plants (BAT LCP). The Radlin CHP will meet the coking plant's energy demand, and excess electricity will be fed into the National Energy System. Heating water will be supplied for the purposes of PGG KWK ROW Ruch Marcel (21 MWt) and the residents of Radlin (16 MWt). The unit will use approx. 180 million cubic metres of coke oven gas per year.

"Coke oven gas was until now an environmental pollutant because it was released into the air. The residents got nothing out of it, just pollution. In a circular economy, we can eliminate small-scale household emissions. This is what the Clean Air Program is about. This is what this green economic transformation is about, going toward a more and more industrialised country - a Poland that will draw on the benefits of technical, technological revolution 4.0," said PM Mateusz Morawiecki.

JSW Group's investments considerably contribute to Silesia's development. Efficient cooperation between the government and local authorities can ensure that they are promptly implemented. The construction of the Radlin CHP is yet another example of good cooperation on multiple levels, with benefits for businesses, the region and its residents.

The new CHP is expected to be built in 29 months in accordance with an agreement signed with RAFAKO SA, the contractor, on 12 June 2019. The construction of this new plant will have a positive impact on the environment and will be aligned with the Clean Air Program. It will increase energy efficiency, while reducing environmental burdens.

Final design works are in progress, and the contractors will soon arrive at the construction site, which was cleared from industrial infrastructure within the coking plant. Putting the Radlin CHP into service will improve the coking plant's energy efficiency and provide network heat supply to Radlin's residents. The new installations will contribute to a reduction of emissions, including GHG emissions. The project to build a cogeneration plant at Koksownia Radlin has been entered in the Program for Silesia, which is one of the key projects in the Strategy for Responsible Development, adopted by the Council of Ministers on 14 February 2017. The agreement proves that effective collaboration between business and local government is possible and beneficial to all interested parties.



The generation of electricity from methane and coke oven gas will eventually meet JSW Group's demand for electricity. Provided that all of these investments are completed on time, the savings on electricity will reach

PLN 807 million
by 2030.

Reducing methane emissions into the air and improving the efficiency of methane drainage are priorities for JSW SA, which is why on 9 January 2020 an agreement was signed with PGNiG SA concerning cooperation on the research project "Geo-Metan II."

The project is intended to obtain methane from deposits prior to mining operations. The successful deployment of this project will considerably increase operational safety and reduce methane emissions into the air already during access and preparatory works.



PGNiG and JSW to work together on Geo-Metan project

PGNiG and JSW signed an agreement on pre-extraction capture of methane from hard coal deposits. Works will be conducted at the hard coal mine Budryk, which is owned by JSW.

As part of the project by PGNiG and JSW, a demonstrator installation will be developed for capturing methane from directional wells drilled from the surface and production tests will be conducted in order to analyse the efficiency of methane flow and the impact of fracking on subsequent coal extraction operations. Works will be conducted this year on the basis of a research project for geological works, approved by the Minister of the Environment.

According to estimates from the Polish Geological Institute - National Research Institute, the Upper Silesian Coal Basin may contain up to 193 billion cubic metres of methane, which is a serious problem for coal mining companies.

Jastrzębska Spółka Węglowa, the project's partner, is a leader in the economic use of methane. "Because lower and lower coal deposits are being exploited, the methane hazard at our mines will continue to increase. Methane is also a valuable energy commodity. We are undertaking a range of activities to ensure our employees' safety, minimise methane emissions into the air and maximally use the gas captured by us for economic purposes," said Włodzimierz Hereźniak, President of the Management Board of Jastrzębska Spółka Węglowa.

Capturing gas from the methane drainage system improves energy efficiency and reduces GHG emissions. "Draining methane from rock mass is one of our strategic technical processes because this is one of the most effective methods for countering the methane hazard. The efficiency of methane drainage at our mines is currently at just over 30%. With pre-extraction drainage, we have an opportunity to increase the quantity of

captured gas," explained Artur Dyczko, Deputy President of JSW's Management Board for Technical and Operational Matters.

Cooperation between JSW and PGNiG is part of the Geo-Metan program, which is aimed at developing methods and techniques for pre-extraction capture of methane from coal seams. The companies signed a letter of intent in January 2018. Signatories also include Tauron Polska Energia SA and Polska Grupa Górnicza SA.

Works will be performed at the Budryk mine. The deposit is located within Ornontowice, Gierałtowiec, Mikołów, Orzesze and Czerwionka-Leszczyny.





Today, methane captured by drainage stations at KWK Pniówek and Ruch Zofiówka is delivered to PGNiG TEP's customers, while methane captured at Ruch Borynia cannot be injected into PGNiG TEP's gas grid due to technological issues and is instead used at Ruch Borynia (cogeneration system, gas boilers). Methane captured by a drainage station at the main location of KWK Budryk is used by ZPC Żory Sp. z o.o., while methane captured by a station at shaft VI Chudów is used by two cogeneration units with capacity of 4 MWe each, owned by KWK Budryk, and a boiler room (one boiler fitted with a two-fuel burner, for oil and gas).



An investment program is **under-way to maximise the economic use of gas from methane drainage** at the mines Budryk and Knurów-Szczygłowie, which will involve the construction of cogeneration units with total capacity of approx. 46 MWe (at the turn of 2019/2020, a 2 MWe cogeneration unit was launched at shaft VI of KWK Budryk).

The Act on energy efficiency of 20 May 2016 introduced a support mechanism for energy efficiency (white certificates, which can be traded). Pursuant to the act, each energy customer in Poland who implements investments resulting in the savings of electric, thermal or gas energy can apply for white certificates. The certificates can be obtained after performing the requisite procedures, i.e. energy efficiency audit and submission of an application to the President of the Energy Regulatory Office, and can then be sold on the power exchange Towarowa Giełda Energii to entities obligated to acquire and redeem them (all sellers of electricity, heat and gas to end-customers in Poland).

In 2018-2019, JSW submitted an application to the President of the Energy Regulatory Office for the following tasks (effect shown in tonnes of oil equivalent):

- Thermal modernisation of drying building at KWK Pniówek - expected effect 145.149 toe,
- Modernisation of external lighting on the surface at mine KWK Borynia-Zofiówka-Jastrzębie - expected effect 67.3 toe,
- Modernisation of external lighting by adapting it for modern LED lighting at KWK Knurów-Szczygłowie - expected effect 73.352 toe,
- System for recovery of energy from process gas at methane drainage station at mine Budryk - shaft VI Chudów, using a 2MW containerised cogeneration system:
 - For electricity - expected effect 1 289.768 toe,
 - For heat - expected effect 4 660.048 toe,
- System for processing waste gas from methane drainage at mine KWK Knurów - Szczygłowie Ruch Knurów, using 3x4MW cogeneration systems
 - For electricity - expected effect 8 244.196 toe,
 - For heat - expected effect 5 637.939 toe.

Applications for white certificates for new investments at KWK Budryk based on methane from mine drainage are currently being drafted:

- Construction of 2x4.0MWe cogeneration system at shaft VI,
- Construction of 2x4.0 +2.0MWe cogeneration system at the main plant.

In 2018, JSW KOKS submitted two applications to the President of the Energy Regulatory Office and one application in 2019 (effect shown in tonnes of oil equivalent):

- Modernisation of EF1 electrostatic precipitator together with modernisation of particulate matter transport installation - expected effect 84.621 toe.

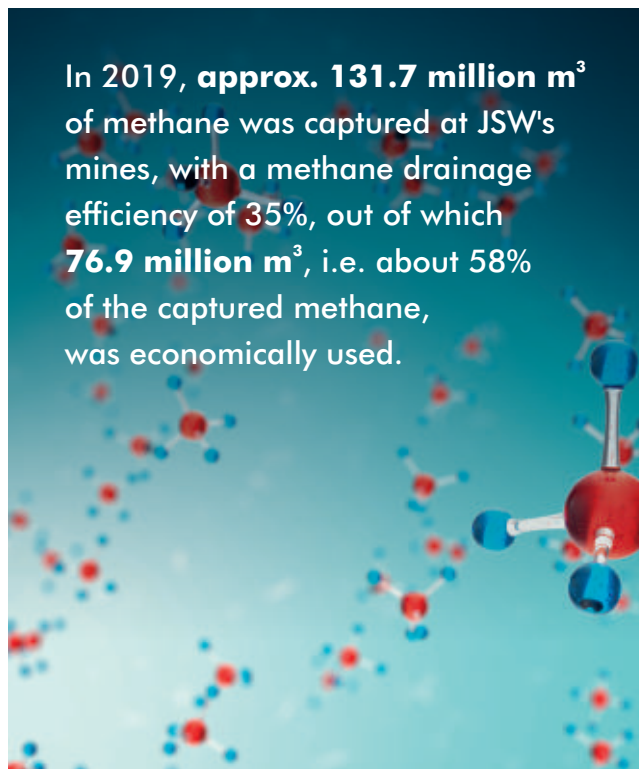
The above tasks related to introducing modern technical solutions and comprehensive modernisation of older installations will improve the particulate matter transport system's operation and reduce demand for energy.

Modern pneumatic transport devices reduce the use of technological air, which is used to transport particulate matter, and will spread demand for technological air for transport purposes over time.

In 2018-2019, PGWiR submitted applications to the President of the Energy Regulatory Office for an undertaking aimed at improving energy efficiency through the re-construction or repair of buildings. Modernisation of sorting and packing building façade through thermal modernisation of walls, partial replacement of façade and replacement of window sills for more energy-efficient ones - expected effect 94.310 toe and 10.580 toe (effect expressed in tonnes of oil equivalent).

Obtaining and selling white certificates partially refunds investment expenditures and thus encourages investment.

JSW Group's growing energy generation capacity is on the one hand directly in line with the concept of sustainable development, although these are still non-renewable fuels. On the other hand, their economic use is more beneficial than a scenario in which methane would not be captured and coke oven gas would be burned out. In the case of methane, its use reduces the environmental effects of its emission and results in energy supplies. In the case of coke oven gas, we are talking about generating energy that previously was wasted. At the same time, the rising share of self-generated energy not only means lower costs but is also a step toward shielding the business model from higher energy costs. Generating energy from previously unused own sources is an example of adapting to the consequences of changes related to climate policy.



In 2019, approx. 131.7 million m³ of methane was captured at JSW's mines, with a methane drainage efficiency of 35%, out of which 76.9 million m³, i.e. about 58% of the captured methane, was economically used.

In the case of coke oven gas, on average 94.8% of the produced commodity was economically used in 2019, of which 28.9% was used in the energy area (generation of electric and thermal energy).

Electricity costs constitute just approx. 5.3% of JSW's total costs and 5.9% of the cost to produce coal. At the same time, JSW SA produced 78 GWh of electricity for its own purposes based on gas from methane drainage at its mines, i.e. covering approx. 7.4% of total consumption. This is perhaps not a lot but if we take into account the fact that in 2019 more than 38% of electricity was purchased from JSW KOKS, the picture starts to look completely different. Another 8% of energy comes from entities to which JSW SA sales methane.

Carbon footprint

103 (305) Greenhouse gas emissions are most frequently associated with the combustion of fossil fuels. Moreover, JSW Group is incorrectly perceived by many as a supplier of raw material to the energy industry. In reality, it mainly extracts and processes coking coal, which is then used in steelmaking, not in energy generation. Additionally, in 2017 the European Commission confirmed the critical raw material status for coking coal by placing it on its list of 27 raw materials that carry the risk of supply shortages and the effects of which for the economy would be greater than in the case of other raw materials. The global production of coking coal is concentrated in several countries, with China and Australia accounting for more than 70%.

Coal for energy-generation purposes that is mined at JSW SA's mines is extracted alongside coking coal.

It is sold to power companies, industrial users and individual customers, with power plants and CHPs accounting for approx. 95%. It is just a supplemental product offering.

Emissions related to the use of coal are not as high for JSW Group as for mines that produce only coal for energy-generation purposes. JSW Group's core activities are aligned with the value chain of steelmaking, not energy generation.

At the same time, the main source of greenhouse gas emissions from JSW Group's operations is methane from mining excavation ventilation systems (approx. 71% of total emissions expressed in CO₂e). This is followed by CO₂ from fuel combustion processes, mainly in the coking segment. Other greenhouse gas emissions and other pollution emitted into the air derive from the

combustion of fuel in boilers, gas engines, combustion engines, surface and underground vehicles, equipment and machinery as well as from the processes of cutting, welding, painting and operating cooling and air conditioning equipment.

In consequence, the key to reducing JSW Group's greenhouse gas emissions is methane, its capture and economic use. [see: "Energy efficiency"]. As a result of using methane to generate electric and thermal energy in high-efficiency cogeneration, methane emissions in 2019 were reduced by approx. 76.9 million m³ (approx. 3% more than in 2018). The construction of additional engines using gas from mine drainage was continued in 2019 at the Budryk and Knurów-Szczygłowice mines, which will lead to a reduction in methane emissions by a total of approx. 1.6 million Mg CO₂e.

As a result of using methane to generate electric and thermal energy in high-efficiency cogeneration, methane emissions in 2019 were reduced **by approx. 76.9 million m³.**

In the coking segment, implementation of the strategic tasks commenced in 2019 - modernisation of a coking battery at Koksownia Przyjaźń and construction of a power-generation unit at Koksownia Radlin - will maximise the use of coke oven gas, improve energy efficiency and reduce the quantity of CO₂ emissions. Given that JSW KOKS SA participates in the GHG emission allowance trading system for CO₂, JSW Group estimates a considerable increase in costs that it will have to incur in connection with the operation of coking installations, power plants and heat-and-power plants in the fourth settlement period covering 2021-2030. In 2019, JSW Group continued estimating the carbon footprint for the entire organisation (JSW Group) and for the major coal and coke production processes with the use of an IT tool. These calculations take into account the emissions of the following greenhouse gases: CO₂,

methane and hydrofluorocarbons (HFCs). The calculations are prepared in compliance with the GHG Protocol - corporate standard and GHG Protocol - product standard, based on indicators published in the IPCC Fifth Assessment Report in 2014. JSW Group selected the operational control approach to define the organisation boundaries for the purpose of inventorying greenhouse gas emissions. JSW's Management Board decided to publish the organisation's carbon footprint. The carbon footprint of coal and coke products will be made available at the explicit request of JSW Group's counterparties for these products.



Management of extractive by-products

103 (306) In the case of the aforementioned commodities and by-products (methane, coke oven gas), technologies for their economically feasible use are available. Moreover, new technological solutions will lead to an even more efficient methane capture, including recovery from ventilation air. The situation is different mainly in the case of waste rock, which is an associated mineral. It had been perceived for many years as solely waste rather than a commodity. It was used to remove mining damages, regulate river banks and other earth works, as needed. In certain small quantities, rock extracted along with coal is used in road building as an aggregate but its mediocre physical and chemical properties and transport costs mean that this is only economically feasible in the case of investments in the vicinity of the mines and within a limited scope. At the same time, it is a commodity that can be a commercial product. In accordance with the circular economy concept, it would be advisable to maximally use this commodity as a product, for example in engineering or technical construction.

Despite considerable amounts of waste generated, the limited scope for their use, properties and logistics problems mean that at this time it is not possible to make a full use of it. The existing capacities of extractive waste management facilities are limited. The use of rock aggregate was indicated as one of the objectives in the Sustainable Development Strategy 2017-2020. Ultimately, in October 2019 the Management Board of JSW SA adopted JSW SA's Extractive Waste Management Strategy 2030. This is a consistent and comprehensive concept outlining operational directions for the management of extractive waste on the surface. Strategy formulation was preceded by a project implemented in cooperation with AGH, the effects of which were summarised in a report entitled "Promising directions for manufacturing products using mineral waste, rehabilitation, revitalisation and engineering works with

the use of waste." The project involved inventory and research works, among others.

In the case of mining waters from KWK Budryk, which is an exception, they are desalted at a facility in Dębienko (PGWiR SA, a JSW Group company). The production of the Sól Dębienka salt is performed in a process of desalination of the highest-quality brines available at depths of up to 1200m. Moreover, this is salt that spent thousands of years under ground and is free of pollution,



Because of the energy intensity of the process, desalination of mining waters with the use of evaporative technologies and reverse osmosis remains a problematic issue. For ecological reasons, these activities are leading to a desired outcome -

65 000 tonnes of salt

does not get discharged into a river, instead it is sold as wholesome grocery salt. Technological and environmental conditions require the use of a solution that is more expensive than the typical solutions used in mining, also by JSW Group, such as controlled discharge of salted waters to rivers in a way that ensures that the salt content is not a threat to the environment. However, this means that salt as a commodity is wasted.

unlike for example sea salt. Initially, brines are treated in a multi-stage filtration process. Next, the brine is concentrated using reverse osmosis filters (RO installation). Concentrated brine is subjected to an evaporation process, followed by crystallisation and drying (RCC installation). The salt normally has an NaCl content of 99.4%. This technological process allows for desired micro-elements and minerals to be retained in the product. Constant granulation and a low level of moisture eliminate the need to apply anticaking agents. Aside from edible salt, the offering also includes road salt.

As a result of this process, highly salted water pumped from mining areas is not discharged into the Bierawka river, and high-quality evaporated salt is obtained. The use of salt from salted mining water is beneficial for the environment because there is no need to extract a certain volume of rock salt in traditional salt mines (6000 tonnes of salt is produced in Dębieńsko per month, the second-largest production facility for evaporated salt in Poland). It is sold not only in Poland but also in Belgium, Czech Republic, Slovakia and Austria.



The use of salt from salted mine waters means there is no need to extract a certain volume of salt in traditional salt mines,
the operation of which is not neutral to the environment.

Ecological investments in 2019

In 2019, JSW spent PLN 59.5 million on investments in environmental protection. The key tasks in this area include:

- "Construction of 2MW cogeneration unit fuelled by gas from mine methane drainage" - shaft VI KWK Budryk - PLN 8.6 million,
- "Economic use of methane - Ruch Knurów - KWK Knurów-Szczygłowie" - PLN 28.4 million
- "Economic use of methane - Ruch Szczygłowie - KWK Knurów-Szczygłowie" - PLN 18.6 million.

In 2019, JSW KOKS spent PLN 9.8 million on investments in environmental protection. The key tasks in this area include:

- Koksownia Radlin: modernisation of biological sewage treatment plant - PLN 0.6 million,
- Koksownia Radlin: modernisation of coke extinguishing tower - PLN 2.4 million,
- Koksownia Radlin: construction of rainfall reservoir - PLN 0.1 million,

- Koksownia Przyjaźń: construction of air-tight installation for BTX separation - PLN 0.6 million,
- Koksownia Przyjaźń: sound-proofing facilities and equipment - PLN 0.6 million,
- Koksownia Jadwiga: construction of coke oven gas desulphurisation installation - PLN 0.3 million,
- Koksownia Jadwiga: air-tightening of coal derivatives section - PLN 2.8 million,
- Koksownia Jadwiga: modernisation of coke extinguishing tower - PLN 2.5 million.

In 2019, PGWiR spent PLN 7.3 million on investments in environmental protection. The key tasks in this area include:

- modernisation of sorting and bagging buildings' façade at the Desalination Facility - PLN 1.5 million,
- modernisation of working compressor unit S.C.-40 - PLN 2.1 million,
- expansion of Z-17 pumping facility at ul. Dębina in Jastrzębie-Zdrój - PLN 1.1 million.



JSW SA's investments
in environmental protection
in 2019
PLN 59.5 million.

OBJECTIVE 5

We respect the natural environment, nature in our immediate vicinity and local communities in areas where JSW operates.



Objective 5: We respect the natural environment, nature in our immediate vicinity and local communities in areas where JSW operates.

103 (413)



Like all the other companies in the industry, JSW Group has strong ties to the region in which it operates.

Hard coal mining has shaped and continues to shape Silesian culture.

Local traditions and customs are related to it, it sets educational directions at near-by universities and the level of local well-being depends on it. This is why it is so important. This is why mining is perceived as a craft rather than a job. The mining industry is also a key employer and a key payer of taxes and other fees related to concessions and deposit exploitation. The mining industry, as is the case with JSW Group, is often also a sponsor of local sports teams and events of importance to the local community.

Virtual walk through the Chamber of Tradition

JSW Group invites everyone for a virtual visit to the Chamber of Tradition at KWK Knurów. This multimedia walk lets users view the museum's interior without leaving their home. The museum contains documents and photos from the first years of the mine's existence, the inter-war period and contemporary history. Thanks to panoramic photographs, users can walk through a lamp room, marker room, enter the shaft and have a look at the longwall face. This is the first 3D walk created by Jastrzębska Spółka Węglowa. The idea to develop a virtual, interactive version of the Chamber of Tradition at KWK Knurów was born in December 2018 during a meeting of the Foreman's Section Project Team. The aim of this project is to promote mining techniques, culture and tradition and to protect industrial heritage.

The Chamber of Tradition at KWK Knurów was opened on 28 June 1997 - on the day celebrating the mine's patrons - Saints Peter and Paul - thanks to the work of the Mining Engineers and Technicians Association at KWK Knurów. An old castle that in 1912 was re-modelled into a villa for successive heads of the mine and their families was chosen as its site. For many years, the building had served as a residential house and later became the site of a Polish Federation of Engineering Associations club and a library. Most of the exhibits in the Chamber of Tradition concern the history of mining and mining traditions. They also authentically depict the interior of a mining chamber from the beginnings of the 20th century.

413-1, 413-2

Dialogue with local community and authorities

JSW Group's management strive for greater openness in relations with local communities, which includes the idea to initiate cyclical meetings between JSW's Management Board and local government officials in municipalities where JSW operates. These meetings would be aimed at presenting JSW Group's plans for the nearest future in the following areas:

- employment (planned recruitment, employee profiles, cooperation with vocational schools and universities in the region),
- underground work planned for the year, including areas where mining will be taking place and where surface deformations and mining damages may be expected,
- planned work on the surface, including as regards extractive waste management, shaping the landscape / rehabilitating land degraded by mining damages, as well as extractive waste management facilities and their use,
- analysis of mining damages, prevention works, repairs and compensations.

A management approach toward local communities and their heritage involves JSW Group's commitment to open dialogue with local community representatives and to incorporating their opinions in decision-making processes in situations where decisions might have an impact on these communities.

These activities are conducted by designated organisational units. This is why it is possible to maintain a continuous dialogue mechanism between JSW's Management Board and local government units as representatives of their local communities. It also includes a mechanism for reporting, recording and representing complaints.

A good example of putting this philosophy into practice may be the participation of JSW representatives in the works of coordination teams operating under the auspices of the Director of the District Mining Authority in Gliwice. These meetings are held twice a year in the Gierłatowice, Knurów and Mikołów municipalities. Representatives from mines, the District Mining Authority and local government officials attend. The subjects concern current plans regarding exploitation, expected and observed mining damages as well as corrective and preventive actions taken. In 2019, the meetings were held as planned in each town and constituted a good moment for presenting what each of the mines accomplished and what its plans were for the next six months with regard to mining damages. These meetings are also a good moment for resolving certain issues related to the rectification of mining damages caused by mine operations.



Impact of mining activities (mining damages)

413-1 All extractive activities are conducted by JSW SA (all of
413-2 the mines belong to the parent company). Due to the
MM5 specific impact of mining activities on surroundings,
procedures that are of importance from an
environmental standpoint are often also important to the
local community. This is the case with mining damages.
Internal regulations addressing the rectification of
mining damages are of crucial importance. Rectification
projects related to damages to public, local government
or private objects are prepared in accordance with
a procedure specified in Ordinance 38/IX/2017 from the
President of JSW SA's Management Board of
20 December 2017 - Appendix 2 "Regulations for
proceeding with rectification of damages" and Appendix
3 "Regulations for the Committee to Assess Damage
Rectification Projects."

In 2019, JSW SA's Management Board agreed to
commence large tasks related to the rectification of
mining damages at the following facilities (the amounts
are estimated):

- repair of rail flyover at ul. Orla in Krzyżowice - PLN 3.2 million,
- repair of Knurówka stream banks near ul. Wilsona and ul. Niepodległości in Knurów - PLN 5.6 million,
- lift of on-ramps and road flyover on route DW 933 in Jastrzębie-Zdrój - PLN 35.3 million,
- re-construction of culvert on rail line 172 along with re-shaping of section of Ornontowicki stream - PLN 3.4 million,
- construction of water pump facility together with injection pipeline in Gierałtówice - PLN 7.6 million,
- re-construction of ul. Wolności in Jastrzębie-Zdrój - PLN 5.7 million,
- re-construction of bridge over Pszczyńska river near ul. Zwycięstwa in Krzyżowice - PLN 16.4 million.

A synthetic measure of the scale of activities related to mining damages and their rectification includes:

- amount spent on removing the damages,
- number of repair tasks completed..

In 2019, JSW's mines implemented a plan to rectify damages caused by mine operations by performing tasks worth PLN 101.1 million in total (taking into account SRK's liabilities - PLN 3.9 million).

In the public sector, 81 tasks worth PLN 40.5 million were completed, in the local government sector 94 tasks worth PLN 14.8 million and in the private sector 1089 tasks worth PLN 41.9 million. For comparison, in 2018 JSW's mines implemented a plan to rectify damages caused by mine operations by performing tasks worth PLN 75.8 million in public, private and local sectors. In the public sector, 73 tasks worth PLN 26.8 million were completed, in the local government sector 81 tasks worth PLN 14.3 million and in the private sector 883 tasks worth PLN 34.7 million.

JSW's mines have secured

PLN 123.7 million

in funding for damage
rectification in 2020.

Impact on the surrounding natural environment

GMining as an industry, including JSW Group companies, contributes to the degradation of local natural environment, for example by distorting the landscape or emitting pollution. Land is affected by extractive activities being conducted under the ground. This impact may include damages to private property (e.g. damaged buildings) and public property (e.g. damaged roads) but also distortions in hydrological balance (subsidence changes the directions of waterways, may lead to changes in water levels, etc.). Add to this storing waste rock that accompanies coal and is extracted together with it on the surface, noise associated with mining operations and dust and gas emissions, especially in the case of coking plants.

On-going activities intended to minimise adverse impact are the domain of strategic operational management. In contrast to the previous chapter and objective, they are intended to ensure environmental safety today, both for nature and for the residents of local communities. This is why a high degree of compliance with the existing process solutions is required. Just as in other business areas, having an environmental management system is of key significance to proper operations.

Selected JSW Group companies have implemented separate environmental management systems certified under PN-EN ISO 14001:2015. These companies include JSW KOKS SA, JZR Sp. z o.o., PBSz SA, PGWiR SA and JSW SA.

In addition, PGWiR SA has an EMAS environmental management system that complies with requirements stated in Regulation (EC) No 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS) and Commission Regulation (EU) 2017/1505 of 28 August 2017 (EMAS III).

An environmental management system makes it possible to identify and supervise all operating areas having actual or potential impact on the natural environment. Each of the companies that have an environmental management system identifies material environmental aspects that have or might have an impact on the environment due to its operations. Every year, an assessment of environmental impacts is carried out on the basis of objective criteria specified in relevant procedures.

Based on an environmental management system policy, activities are continuously undertaken in order to achieve its objectives, including by defining, monitoring and implementing environmental targets. These targets take into account legal and other requirements associated with the operations of each company, material environmental aspects, identified threats and opportunities, financial and technological capabilities and the expectations of interested parties.

At JSW SA, the environmental management system is part of an integrated quality management system - in compliance with ISO 9001; occupational health and safety in compliance with PN-N - 18001 and information security in compliance with 27001 as regards coal extraction, processing and sale.

In accordance with a declaration from the President of JSW SA's Management Board, included in the Integrated management system policy, as regards the environmental management system it states that "Economic activities conducted by JSW SA are in compliance with legal and other requirements, while the entire coal extraction, processing and sale process is

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Water management

Each of JSW SA's mines performs drainage by pumping out salted mining water into surface reservoirs, where it undergoes mechanical treatment. These processes are conducted on the basis of appropriate water-law permits.

Some of the mining water is used to replenish technological circuits at processing facilities and to produce sealing mixtures applied in underground fire-prevention, along with waste from energy generation processes and post-flotation waste. The remaining portion of mining water must be managed in an environmentally safe way because a high salt content could lead to environmental degradation.

performed in a way that minimises negative impact on the natural environment. Implementing an environmental program and preventing pollution and failures contribute to a continuous improvement in the state of the environment."

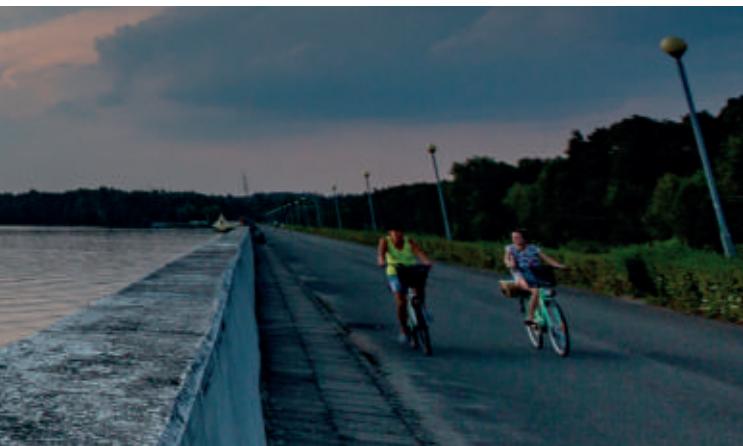
At JSW SA's Entities, periodic assessments of compliance with legal and other requirements are conducted, along with assessment of progress in achieving environmental targets and monitoring material environmental aspects. Legal and other requirements are tied to identified environmental aspects, threats and opportunities, interested parties, and they have persons designated for compliance and supervision.

Unused water from the Borynia-Zofiówka-Jastrzębie (from 1 January 2020 KWK Borynia-Zofiówka and KWK Jastrzębie-Bzie) and Pniówek mines is discharged into Odra river in the town of Olza through a retention and dosage system ("Olza collector") which is owned by PGWiR SA, based in Jastrzębie-Zdrój. The collector is intended to protect rivers and smaller tributaries of the Upper Odra catchment area such as: Ruda, Szotkówka, Jastrzębianka, Ruptawka, Lesznica i Olza and in the Wisła catchment area: Pawłówka and Pszczynka against salt at a distance exceeding 150 km. This makes economic use possible, protects water intakes for communal, industrial and agricultural purposes, e.g. the Łąka industrial water reservoir, an industrial water reservoir at Elektrownia Rybnik, industrial water intake at Olza river.

The functioning of the Olza system limits the volume of water discharged during low flows, even up to a complete stop, in which case the Olza system's retention reservoirs

306-5

are used. Discharging water collected in these retention reservoirs takes place after rainfall and in conditions of strong flows at Odra river. This is why the more frequent and longer-lasting droughts and low water levels in rivers in Poland, related to climate change, can be dangerous for the system.



Salted water is discharged into the river through 51 nozzles located at the bottom throughout the entire width of the Odra riverbed, making it possible to mix the waters on a short section of the river. Inspections of Odra's salt content after discharging mining water are carried out by a monitoring station in Krzyżanowice. Salt content measurements are also performed by PGWiR SA's water and sewage research laboratory. Retention and discharge functions based on precise monitoring help in reducing Odra's maximum salt content by more than 60%.

The retention capacity of the Olza system is approx. 985 000 m³, which is sufficient for two months of collecting salted water during drought.

Mining water from KWK Budryk is de-salted at a facility in Dębieńsko (JSW Group's PGWiR). On this basis, high-quality edible salt and road salt are produced [see: "Management of extractive by-products"]. Unused water from draining the Knurów-Szczygłowie mine is discharged in a controlled manner into surface waters in accordance with conditions specified in the existing laws and the relevant water-law permits.

Although the management of mining water constitutes a key and dominating element of JSW Group's water management strategy, it is not the only element. At all of JSW Group's mines water for drinking and industrial purposes is used, partially derived from own sources and partially purchased from external suppliers. Drinking water is mainly used for social and living purposes and for feeding the underground fire-prevention networks. Industrial water is used at all of the mines for technological and production purposes, i.e. replenishing cooling circuits in compressors, feeding underground fire-prevention pipelines and replenishing water losses in water-and-sludge networks at mechanical coal processing facilities.

Mines also generate sewage. The Knurów-Szczygłowie and Budryk mines discharge human-generated effluents into a sewage treatment plant operated by PGWiR, while the other mines discharge such sewage into urban or municipal sewage systems. In order to save water and minimise negative impact on the environment, water for technological purposes at JSW Group's mines, including for coal enriching processes in processing plants and for cooling compressors, is in closed water-and-sludge circuits. Due to the above, no technological sewage is discharged into the environment. Koksownia Jadwiga and Koksownia Dębieńsko, two coking plants owned by JSW KOKS, have closed water-and-sewage circuits and do not discharge sewage to the outside. All of their human-generated, industrial and rainfall sewage is treated at the in-house sewage treatment plant and is subsequently used for wet cooling of coke.

Waste management

103 (306) From a formal viewpoint, waste rock, i.e. rock extracted along with hard coal, is (extractive) waste [see more: "Management of extractive by-products"]. The so far limited possibilities for this commodity's economic use in, for example, construction mean that a considerable portion of it is stored on the surface in extractive waste management facilities. It is also used in removing mining damages on the surface or in engineering works. A small portion is sold as aggregates or used under the ground to fill in excavations.

The key to success is planning and developing excavations in a way that limits the extraction of waste rock and thus limits waste.

Aside from extractive waste (waste rock), which constitutes the key type of waste, JSW Group every year generates tens of thousands of tonnes of hazardous waste and waste other than extractive and hazardous, which constitute a fraction of all the waste generated at JSW Group's facilities. Hazardous waste mainly includes: waste oils, sludge from biological treatment of industrial sewage, used cleaning materials and batteries. Waste other than extractive and hazardous waste generated at the Group's facilities mainly includes: scrap, rubble, wood, rubber, plastic as well as waste electric and electronic devices.



[more data on environmental impact - see:
"Tables with non-financial information"]

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Impact on areas of high environmental value

JSW Group's facilities are not located within or in the immediate vicinity of areas of special natural value (defined as national parks, nature reserves or Natura 2000 areas).

In one case, the facility is located within a landscape park, i.e. an area that is not considered as environmentally valuable as a national park, nature reserve or Natura 2000.

Numerous areas of special natural or landscape value, covered by various types of protection, are found in the less direct vicinity (from several to over a dozen kilometres from a JSW Group facility), including:

- Nature reserves: Las Dąbrowa (KWK „Knurów-Szczygłowice”), Segień (Koksownia Jadwiga), Dolina Żabnika (Koksownia Przyjaźń) and Góra Chełm (Koksownia Przyjaźń),
- Natura 2000 Special Protection Areas for birds: Dolina Górnej Wisły PLB240001 (KWK „Borynia-Zofiówka-Jastrzębie”, KWK „Pniówek”) and Stawy Wielikąt i Las Tworkowski PLB240003 (Koksownia Radlin),
- Natura 2000 Special Areas of Conservation: Zbiornik Goczałkowicki - Ujście Wisły i Bajerki PLH240039 (KWK „Borynia-Zofiówka-Jastrzębie”, KWK „Pniówek”), Pierściec PLH240022 (KWK „Pniówek”), Podziemia Tarnogórsko - Bytomskie PLH240003



- (Koksownia Jadwiga), Graniczny Meander Odry PLH240013 (Koksownia Radlin), Łąki Dąbrowskie PLH240041 (Koksownia Przyjaźń), Łąki w Sławkowie PLH240043 (Koksownia Przyjaźń), Lipienniki w Dąbrowie Górniczej PLH240037 (Koksownia Przyjaźń), Torfowisko Sosnowiec-Bory PLH240038 (Koksownia Przyjaźń), Pustynia Błędowska PLH120092 (Koksownia Przyjaźń), Ostoja Środkowojurajska PLH240009 (Koksownia Przyjaźń), Pleszczotka PLH120092 (Koksownia Przyjaźń), Armeria PLH120091 (Koksownia Przyjaźń), Łąki w Jaworznie PLH240042 (Koksownia Przyjaźń),
- Landscape parks: Cysterskie Kompozycje Krajobrazowe Rud Wielkich (KWK „Borynia-Zofiówka-Jastrzębie”, KWK „Knurów-Szczygłowice”, KWK „Pniówek”, KWK „Budryk”, Koksownia Radlin), Orlich Gniazd (Koksownia Przyjaźń) as well as Dolinki Krakowskie (Koksownia Przyjaźń),
 - animate and inanimate natural monuments (all JSW Group facilities)..

An environmental impact assessment is carried out for all investments that under the existing laws may potentially have a substantial impact on the natural environment. Experts from various fields (such as ornithology, botany) are involved in these works, identifying potential hazards and recommending solutions to mitigate the effects of a given investment as much as possible.



No environmental losses caused by the companies were recorded in 2019. JSW Group companies also undertake activities related to monitoring the state of the environment as well as preventing and limiting their negative impact.



Compliance with regulations was confirmed in the course of inspections carried out in 2019 by the Inspectorate for Environmental Protection, Mining Authority and independent auditors from an accredited entity as part of the ISO 14001 system. In 2019, JSW Group did not record any major failures with an environmental effect, and no major fines for violating environmental laws were imposed on any JSW Group company.

Cooperation with schools

413-1 Another dimension of JSW Group's cooperation with local communities is the increasingly extensive work with local authorities in the towns and municipalities where its companies operate, with this work focusing on education in mining professions at schools that are managed by local government. From JSW Group's point of view, this is a solution that secures a pipeline of young personnel and thus counteracts the generational gap risk.

This cooperation is intended to raise the quality of education for young people by offering internships and support for various types of educational projects, which results in potential for the Company's development and ensures optimal conditions for JSW Group's effective and efficient operations. Aside from JSW SA, this cooperation is being undertaken by CLP-B, JSK and JSU.

Having signed a range of agreements with schools in 2017, in 2018 JSW SA created a special scholarship program for these schools' students who are receiving education in mining professions.



Modern equipment for schools

Equipment for learning the basics of electronics and electric technologies was given in December 2019 to John Paul II School in Pawłowice. The equipment was purchased by JSW Foundation.

This modern equipment is used by students in classes sponsored by Jastrzębska Spółka Węglowa, for miners and electricians. "This equipment is really easy to use and logical. We use it to take various measurements, including voltage and power, explained Szymon Skażnik, a second-year student at this technical secondary school.

A wide range of equipment was installed at the hands-on vocational learning workshop - from machinery to electronic technology and electronics. "This equipment is used with a broader application because we educate electricians and machinery operators. In the future, we intend to place a greater emphasis on control devices, which are used for teaching electronics, and this is the basis for mining automation," says Stanisław Płaczek, a vocational teacher. He adds that control automation is seeing a broader application in mining - not just on the surface but also in underground excavations.

The equipment is worth PLN 54 thousand, of which PLN 48 thousand was a donation from JSW Foundation. "I am glad that aside from the internships that take place at the mine and on the surface, we as JSW Foundation were able to provide professional equipment for the school. This way, the youth can expand their knowledge and in the future use it at work as electricians. Especially since demand for this profession at the mines is tremendous," says Aleksander Szymura, director of labour at the Pniówek mine and vice-president of JSW Foundation's management board.

So far, JSW Foundation has made 180 donations to various organisations and institutes in 16 towns where Jastrzębska Spółka Węglowa operates.

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Awards for best learners

In June 2019, JSW Group for the first time awarded special scholarships for the best students at schools with a mining profile. Robert Małek, then acting President of JSW's Management Board, and Artur Wojtków, Deputy President of the Management Board for Labour and Social Policy, handed the awards.

Scholarships funded by Jastrzębska Spółka Węglowa were received by 27 students from Jastrzębie-Zdrój, Knurów, Czerwionka-Leszczyny, Ornontowice and Pawłowice. These awards are intended to encourage young people to work at JSW's mines. "We are delighted at this opportunity to meet a group of such talented students, present scholarships to the best ones and support you in your education. I am very happy and I sincerely congratulate you," said Robert Małek.

Special awards were given to the three best students in mining classes from each school that is party to a cooperation agreement. The scholarship amounts were as follows: PLN 1 500, PLN 1 000 and PLN 800.

"Remember that this is a very big accolade. I want to thank the best students and the teachers because it is thanks to you that the students are getting such good results and today we can hand them these awards," summarised Artur Wojtków, Deputy President of the Management Board for Labour and Social Policy.

Irrespective of this, Centralne Laboratorium Pomiarowo-Badawcze (CLP-B) cooperates in this area with the Powiat Centre for Vocational and Statutory Education in Wodzisław Śląski in a project entitled "Innovative teaching as a need of the future.

Sub-activity 11.2.2 "Support for vocational education - RIT" Silesia Voivodship's Regional Operational Program for 2014-2020." CLP-B offers internships to people studying to become a technician/analyst. The company also offers internships for middle school students studying to become a technician/analyst and technician/chemist. It also cooperates with local middle schools by participating in organising internships for schools in Jastrzębie-Zdrój, Żory and Wodzisław Śląski.

CLP-B is an example for scientific and research cooperation with various institutions, as it works with the Natural Science Faculty of the Earth Science Institute at the Silesian University in Katowice. The several-year-long cooperation has resulted in a memorandum for initiating hands-on PhD studies. The collaboration will end with the introduction of a new research method to CLP-B's offering.

The company also works with the Kraków University of Technology - Engineering and Chemical Technology Faculty on supplemental research in areas where CLP-B does not have the required equipment or know-how.

JSW Group also cooperates with the following universities on a long-term basis: 

- **AGH University of Science and Technology**

(letter of intent regarding mining internships for AGH students signed between AGH and JSW SA on 9 December 2016, cooperation agreement between AGH's Mining and Geo-engineering Faculty and JSW SA signed on 19 April 2017 clarifying the scope of the cooperation referred to in the letter of intent, cooperation agreement between AGH's Geology, Geophysics and Environmental Protection Faculty and JSW SA signed on 23 June 2017 clarifying the scope of the cooperation referred to in the letter of intent),

- **Silesian University of Technology**

(letter of intent regarding mining internships for the university's students signed between Silesian University of Technology and JSW SA on 20 December 2016, cooperation agreement between Silesian University of Technology's Mining and Geology Faculty and JSW SA signed on 19 April 2017 clarifying the scope of the cooperation referred to in the letter of intent, cooperation agreement between Silesian University of Technology's Mining and Geology Faculty (Mining Geodesy) and JSW SA signed on 14 July 2017 clarifying the scope of the cooperation referred to in the letter of intent),

- **Polish Academy of Sciences** (agreement executed on 9 May 2017 between the Polish Academy of Sciences' Institute for Mineral Resources Management and JSW - internships for the Academy's employees).

As regards other JSW Group companies, in 2019 CLP-B offered internships to students from the Silesian University of Technology in Katowice, AGH in Kraków and Silesian University of Technology in Gliwice. CLP-B also participates in numerous national and international scientific conferences and publishes scientific papers in collaboration with science centres.

"JSW Innowacje - inspiring the youth"

The project's partners - JSW Innowacje and the Industrial Academy of Development - invited third-year students from the Silesian Technical School in Katowice, focusing on mechatronics, to participate in a pilot program. Projects that are currently being implemented by JSW Innowacje served as the subject-matter basis for teaching and for developing the competences of students as regards energy transition and the development of Industry 4.0 in Poland.

For six months, 28 students under the supervision of specialists from the Industrial Academy of Development had the opportunity to get to know student life by participating in creative thinking workshops at the AGH University of Science and Technology.



Aside from Design Thinking, a key role in the project was performed by the communication and e-learning application *Młody Przemysł*. Systematically solving tasks in it allowed the students to build up competences necessary for their future careers. Interactive teaching methods also became a unique tool for communicating between business and the students, who will in the future work as technical personnel. Thanks to this initiative, space was created for communicating and developing an ideal model for teaching youth in the area of developing modern industry and future workforce. At the end of the first, pilot edition of the project, students were given diplomas and the two best teams received awards funded by JSW Innowacje.

Presentation of modern virtual reality (VR) training platform for students

Aside from organising hands-on classes for secondary-school mining students, JSW Szkolenie i Górnictwo participates in events such as the Jastrzębie Career Week. Its 9th edition was held in 2019, with the main attraction being a Competition City organised at School no. 3 in Jastrzębie-Zdrój. The miner profession was presented to participants not only via 3600 movies but also through a special application, presented by both JSW Szkolenie i Górnictwo and JSW Innowacje.

Strictly specialised miners' tasks as well as the handling of controllers and the entire VR environment proved to be quite a challenge. The students admitted that they are now convinced that proper qualifications are simply not enough and that one must have the right features, skills and knowledge in order to handle working at a mine.

JSW School of Innovation

The JSW School of Innovation includes cyclical meet-ups for students at the Mining and Geoengineering Faculty of AGH, intended to discuss JSW Innowacje's projects. By cooperating with academic centres and presenting to students the potential of the Polish extractive industry, a future highly qualified workforce for Polish mining and for other JSW Group entities is being prepared.

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Development of post-mining areas

Shutting down mining operations, as was the case with KWK Krupiński, which was transferred to SRK SA, means that a vacuum is created. Although all employees from this mine were hired at other JSW mines, the number of

jobs within the municipality declined. Proceeds for the municipal budget also decreased. This is why from a social point of view it is important to economically use land that had previously been used for mining purposes.

Although the concept for the Energy Cluster project is not dedicated solely to such areas, they are an important addressee of this initiative. The project may be an excellent opportunity to develop them. The project aims to create a cluster that will include local government units in areas where JSW Group operates as well as institutions and businesses operating there that are invited to participate. Forming the Cluster will let JSW, as one of the largest players on the coking coal production market, get involved in activities that support local initiatives in environmental protection, energy efficiency, development of renewable energy sources and promoting the Company's existing activities in this field as part of the cluster. The initiative is intended to improve local energy



security by developing dispersed energy, including renewables, while maximising economic effectiveness. As part of this project being implemented by JSW Group, municipalities with identified potential for cooperation within an energy cluster were indicated. A range of meetings were held as part of cooperation with local authorities to discuss potential cooperation areas and review energy assets. These meetings and analyses resulted in an initial outline of the Energy Cluster and constitute the basis for formulating the Energy Cluster's Strategy - a document defining the cluster's formal and legal activities and incorporating analyses that are essential for the proper and long-term operation of the Energy Cluster.

JZR Development Program

The JZR Development program is a flagship development project for JZR Sp. z o.o., which offers benefits for the entire JSW Group. The Program's main objective is to expand the scope of JSW's operations to include new products for the mining industry, along with technological advancement. Implementing this program will make it possible to partially change the company's operational profile from a production and overhaul company towards more production. At the same time, implementing the production process within the Suszec Municipality will allow for the land and infrastructure left over after the former mine Krupiński to be industrialised and revitalised.

The following items will be manufactured in the project's first phase: idlers for conveyor belts, main pressure and flow pipelines, route troughs for scraper conveyors. The second phase will see the production of roofbolt support sections, which are a more technologically challenging product.

For the purposes of this new production, the construction of a modern construction hall began in 2019 at the former Krupiński site in the Suszec Municipality. This facility is intended to meet the new technical conditions in 2021 for the energy efficiency of buildings with ecological solutions such as: photovoltaic panels and heat pumps as sources of thermal energy and air-conditioning in selected rooms of the building. These production halls will be equipped with specialised, highly efficient machinery and equipment. The budget for the JZR Development program is estimated at PLN 94.5 million. Construction works are expected to be completed at the end of the third quarter of 2020, with production start-up under phase one beginning immediately thereafter.

Approx. 200 people will be employed in these new production activities, including mainly welders, turners and millers.



Local community engagement

413-1 Last year, JSW Group systematised its activities in the area of local community engagement, clearly defining and emphasising: long-term in-house community programs, corporate philanthropy and sports sponsoring. In-house community programs are managed by the CSR Team. Charitable activities are coordinated by the independent JSW Foundation, founded by JSW. Donations from JSW SA to external entities are handled by the Organisation and Management Office.

Another accomplished ambition, initially declared in the Sustainable Development Strategy 2017-2020, was to focus social efforts, especially charity, in areas where our entities operate.

JSW Foundation's statute states that it engages in useful public and social activity within the following municipalities: Jastrzębie-Zdrój, Mszana, Świerklany, Pawłowice, Suszec, Żory, Czerwionka-Leszczyny, Ornontowice, Knurów, Pilchowice, Gliwice, Gierałtowice, Mikołów, Radlin, Zabrze and Dąbrowa Górnicza. These are municipalities in which JSW Group entities conduct operations.

JSW Group consistently emphasises support for kids and youth, striving to support interesting, innovative and effective solutions in domains such as education, health, ecology, culture and sports, as well as help for those most in need in the region.

Jastrzębska Spółka Węglowa recognised by children

The director of an orphanage in Cieszyn thanked over a dozen people and companies that have been working with the orphanage for years for sensitivity, understanding and help. The "Friend of Kids 2019" medal was received on behalf of our Company by Agnieszka Barzycka, head of JSW's CSR Team, which is involved in campaigns for children. This took place after the year ended, in January 2020. A "Friends of Kids Concert" was held at the Cieszyn Cultural Centre. Aside from solo and group performances, the kids prepared a play and an exhibit of their works.

Kazimiera Habarta, director of the orphanage in Cieszyn, thanked her institution's friends for their selfless help and generosity. Along with Agnieszka Barzycka from JSW SA, medals and diplomas were received by the Cieszyn district leader Mieczysław Szczurek and representatives of the GKS Jastrzębie sports club.

In 2018, JSW Group's expenditures on charity reached **PLN 842 532.20**, compared to **PLN 17 887 800.00** in 2019, of which PLN 16.0 million was provided to JSW Foundation, which constituted **89.45%** of the total amount spent on charity in 2019.

In-house community programs

Notable in-house community programs include JSW Mine of Knowledge (<http://kopalniawiedzyjsw.pl/>) and JSW for Kids, as part of which JSW sponsors three orphanages in Pszczyna, Jastrzębie-Zdrój and Cieszyn.

The lead idea for the JSW Mine of Knowledge program is education, mainly in exact sciences and the widely-defined ecology. Lecturers at the JSW Mine of Knowledge want to stimulate passion in children for learning about the world, experiencing and discovering. This project is intended to develop kids' talents and make equal opportunities in access to modern and interesting forms of extracurricular activities.

In 2019, the following were accomplished at the JSW Mine of Knowledge:

- Interactive exhibitions and workshops (all day long, all participants aged 3-12 and their guardians participated in scientific exhibits and workshops - painting jute bags, creating placards from recycled paper. In addition, the host, JSW, invited residents to an exhibition of more than 20 interactive show-pieces depicting the laws of nature and physics and an exhibit of educational boards),
- Contests for schools to develop an ecological educational campaign (ended with scientific exhibits by the awarded schools),
- Urban Game for the region's residents (task subjects: ground temperature, salvaging food, protecting bees),
- Scientific exhibits and ecological workshops,
- Great Science Picnic at JSW's headquarters (5 000 participants).

The JSW for Kids program is addressed to children in need. JSW sponsors three orphanages - in Jastrzębie-Zdrój, Pszczyna and Cieszyn. Art workshops, educational trips, JSW employees' volunteering campaigns, equipment for talented children are just some of the

activities that Jastrzębska Spółka Węglowa organises for these orphanages. These activities are in line with JSW Group's Sustainable Development Strategy 2017-2020, pursuant to which aid is directed where it is needed the most. On JSW's end, CSR programs are coordinated by the CSR Team.

Thanks to JSW's support, so far over 130 kids from orphanages had the opportunity to go on several trips to various parts of Poland, scientific picnics, workshops and meetings with JSW Group employees. JSW wants to show that it is a company that cares about those in need, engages its employees in useful and socially acceptable initiatives, shares its earnings with the local community by helping those in need, promoting values and being a good and responsible neighbour.



Thanks to the JSW Mine of Knowledge,
JSW's social activities in 2019 had

2320 direct

and **55 538** indirect

beneficiaries.

Group of 40 kids from orphanages in Pszczyna and Cieszyn has great time in Mazury

As part of the JSW for Kids program, Jastrzębska Spółka Węglowa in mid-June invited a group of kids for a four-day trip packed with attractions to the lakeside town of Mikołajki. During the stay in Poland's lake country Mazury, the kids visited a city out of western movies and an Indian village in Mrągowo. They learned about the Wild West, watched a gun duel and took a dance lesson from that era. A visit to the Indian village turned out to be much more interesting for the kids, as they could try archery. Aside from the Wild West-themed attractions, the kids went on a cruise on the largest Polish lake - Śniardwy. For most of the kids, a kayaking trip down the Krutynia river was a new experience. Between the trips, the kids were happy to visit the city beach in Mikołajki, where they swam under the supervision of their caretakers and lifeguards. There was also a bonfire and a disco, along with a journalism workshop for those who were interested. "This was an excellent start of the summer holidays. We did not expect so many attractions. The kids are smiling all the time, which means that they are enjoying themselves here. On their behalf, I want to thank Jastrzębska Spółka Węglowa for inviting us to this trip," said Iwona Spora, director of the orphanage in Pszczyna. Several days after returning from Mikołajki, the kids from Pszczyna dropped by the Company to thank us for the great trip. They met with Artur Dyczko, Deputy

President of the Management Board for Technical and Operational Matters.

In August, JSW took children from an orphanage in Jastrzębie-Zdrój on a similar trip.

First such campaign ever for JSW!

Thousands of surprises for 10 kindergartens. As part of the JSW for Kids campaign, representatives of Jastrzębska Spółka Węglowa visit kindergartens in the region to talk about mining and hand out presents.

The gifts went to children from kindergartens in Mszana and Rybnik. Additional ones will be given out in Świerklany, Zebrzydowice, Knurów and Ornontowice. Meetings with kindergarten pupils also feature an educational component. Kids learn about what coking coal is and what it is used for.

"Our commodity is a special coal. It is not burned in furnaces, rather steel is made of it. A mining sword is made of steel, for example," said in one of the kindergartens Artur Dyczko, deputy president of JSW's management board for strategy and development: "During the mining holiday Barbórka, the most accomplished miners receive such a sword. Remember that mining work is very hard."



Local community investments

JSW Group strives to meet the expectations of local communities, in as far as its budget allows. Three new initiatives in 2019 joined an outdoor gym and a city bike station built in 2018 in Jastrzębie-Zdrój.

The construction of an apiary was financed in 2019 (earth works, essential logging, construction of a shed together with a bathroom, roofing over the beehives for presentation and education purposes, a walkway and an educational path along with small architectural elements, water and sewage connections, electricity and lighting, fencing, green areas with plantings, geodetic inventory and a monitoring installation for the apiary).



Bees - bull's eye!

JSW's apiary is very popular! From September to October 2019, it was visited by close to 300 kids from nearby schools and kindergartens.

Honey from JSW's apiary - this is JSW's new educational project for the youngest audiences. An apiary built at the Ruch Borynia mine is intended to protect these useful insects and to educate. Protecting nature and its resources is a key priority for JSW Group. The project is being implemented by JSW's CSR Team and JSW Innowacje. It encompasses comprehensive educational and practical activities. An apiary was launched in August on land adjacent to the Ruch Borynia mine. Local schools have been participating in an Urban Game in Jastrzębie-Zdrój since 1 October. As part of this project, kids and youth can also write articles devoted to the protection of bees and participate in a thematic contest hosted by National Geographic Kids.

The Urban Game is a competition for school groups in the form of a paper chase. The kids along with a teacher go on the trail and use geographical hints to locate six illustrated boards with tasks. The trail is approx. 3 kilometres long, and checkpoints are hidden in interesting parts of the city. This way, the youth not only learn about bees but also about the neighbourhood's history and geography. The Urban Game starts on 1 October and lasts an entire month. The completed tasks will be evaluated by a jury.

JSW Beehive is very popular!

Nearly 300 kids

from nearby schools and kindergartens have visited it since October 2019.



JSW is financing the purchase of a mobile incubator with an integrated respirator and a system monitoring all life functions for newborns

The Management Board of Jastrzębska Spółka Węglowa provided PLN 150 000 to the children's ICU unit at a hospital in Jastrzębie-Zdrój. The money was spent on an incubator that saves the health and lives of newborns. A ceremony was held with the participation of Stanisław Karczewski, Senate Speaker, and Adam Gawęda, Deputy Minister of Energy.

The money from Jastrzębska Spółka Węglowa is for the purchase of a mobile incubator with an integrated respirator and a system monitoring all life functions for newborns. This equipment will feature infusion pumps for delivering medicines from the moment a baby is born in the delivery room and during transport to the children's ICU unit. "I wish to thank Jastrzębska Spółka Węglowa's Management Board. We have been working together for a long time, and I can always count on your help. This is priceless, we would not make it without you. We can improve our skills and knowledge but we have financial constraints, and thanks to you we can provide medical services on a European level," said Józef Danek, a doctor managing the children's ICU unit at hospital WSS 2 in Jastrzębie-Zdrój. During the 25-year existence of the ICU, doctors have helped 4 000 small patients in life-threatening situations. Modern equipment will help to save the lives of newborns - especially premature infants - from the first minute they are alive.

”

"I want to very much thank Jastrzębska Spółka Węglowa for this initiative and support. Every bit of support for the healthcare system is valuable and needed"

*said **Stanisław Karczewski**, Senate Speaker, expressing his appreciation for the work of doctors and nurses and the dynamic development of medicine.*



JSW

Backpacks from JSW

Just days from now, a new school year will begin. On this occasion, the Management Board of Jastrzębska Spółka Węglowa decided to surprise kids from orphanages.

As part of its program JSW for Kids, the Company purchased nearly a hundred colourful backpacks for children from orphanages in Jastrzębie-Zdrój, Pszczyna and Cieszyn. The gifts were handed to children by Włodzimierz Hereźniak, President of JSW's Management Board, as well as Artur Wojtków, Deputy President of JSW's Management Board for Labour and Social Policy, and Artur Dyczko, Deputy President of JSW's Management Board for Strategy and Development. "Helping kids in need is our duty. The backpacks we gave to these kids are just a small token, but one that brought a smile to their faces. We are happy along with them," said Włodzimierz Hereźniak, JSW's CEO.

As part of the JSW for Kids project, Jastrzębska Spółka Węglowa has for many months been supporting kids from orphanages in Jastrzębie-Zdrój, Pszczyna and Cieszyn, organising holiday, recreational and educational trips. As part of JSW for Kids and JSW Mine of Knowledge, Jastrzębska Spółka Węglowa will continue activities related to educating kids and youth and helping those in need in line with the rule that a kid's smile is the most important thing.

Playgrounds and bicycles for our youngest friends

Swings, slides and springboards - this equipment was delivered to orphanages cooperating with Jastrzębska Spółka Węglowa. Kids from Pszczyna and Cieszyn received brand new playgrounds, while kids from Jastrzębie will receive bicycles from JSW after the summer holiday. The three sites received gifts worth more than PLN 30 000 in total from our company.

The kids in Cieszyn and Pszczyna did not have working slides, sandboxes and swings. "Dreams come true, thanks to Jastrzębska Spółka Węglowa we have a great playground," said Iwona Spora, director of the orphanage in Pszczyna. "Our sponsor bought for us a double metal swing, a stork's nest, an obstacle course and a spring swing. All of this equipment has already been tried out by the kids. There is no end to the fun!" Because the orphanage in Jastrzębie-Zdrój already had a working playground, it will receive bicycles from us. Each of the gifts from JSW is worth approx. PLN 10 000. These campaigns are aligned with our company's CSR efforts. JSW for Kids is a project that has for many months been bringing a smile to kids' faces, along with unforgettable emotions.



JSW Foundation's activities

In accordance with its statute, JSW Foundation makes donations in four areas:

- culture and tradition,
- leisure and recreation,
- science and education,
- health and safety.

In 2019, JSW's Management Board on four occasions examined applications for donations to organisations and institutions. 180 donations were awarded, worth in total nearly PLN 6 million. Four meetings were also held - workshops with the recipients, with more than 220 participants. These included representatives of local government, educational institutions, social care units, parishes, sports clubs, scouts, organisations supporting people with disabilities, public health units and voluntary and state fire-fighters.

At the same time, JSW Foundation has initiated in-house projects addressed to the region's residents.

JSW Foundation's first project was the Mobile Laudato Si Embassy. There are 42 parishes within JSW Foundation's geographical reach. The Mobile Laudato Si Embassy visited 34 locations. This ecological initiative reached the following deaneries in the Silesian voivodship: Pawłowice, Jastrzębie, Jastrzębie-Górne, Knurów, Orzesze and Suszec. The Mobile Laudato Si Embassy was also present at: JSW's Great Picnic, March for Life and Family in Jastrzębie-Zdrój and Knurów Days. Taking into account the fact that the initiative attracted a great deal of interest, with an estimated 10 000 participants, it considerably raises the profile of the



More information on the Foundation's activities in 2019 can be found in its report: www.fundacjajsw.pl

Mobile Laudato Si Embassy project and therefore promotes within our region's community information on the formation of JSW Foundation by Jastrzębska Spółka Węglowa. JSW Foundation spend almost PLN 20 000.00 on this initiative.

JSW Foundation's second project is the campaign "Prostate cancer prevention and early detection for JSW SA employees over 50" inaugurated in 2019 and expected to finish by the end of May 2020, involving free examinations for employees, financed by JSW Foundation. The program has so far covered 200 employees, including personnel from KWK Pniówek, KWK Budryk and KWK Knurów-Szczygłowice. The campaign, which is currently treated as a pilot, is being received with great social interest, and additional groups would like to be incorporated: retired miners, employees of KWK Zofiówka, JSW Ochrona and JSW KOKS.

JSW Foundation's third project, which began in 2019 and will be evaluated this year, is the Professor Bolesław Krupiński Chamber of Remembrance at the Main Mining Institute in Katowice. The project's main assumptions concern upgrading, modernising and enhancing the Professor Krupiński Chamber of Remembrance. An educational path integrated with lighting is being built. Exhibits will be illuminated, and a voice-over will read the story of Professor Krupiński's life. Broadcast of an archive interview with Professor Krupiński is also planned.

Another project by JSW Foundation consists of a series of educational campaigns in the region's kindergartens. As part of this project, JSW Foundation plans to purchase teaching materials for kindergartens in the region.

JSW Foundation's latest project is a campaign to donate used computer equipment received for free from JSW IT Systems as a donation from JSW Foundation to educational entities in the region in which JSW Foundation focuses its activities. 14 entities received nearly 200 pieces of various computer equipment, from monitors, through complete computer systems, to printers. The campaign to donate used computer equipment does not generate any costs for JSW Foundation.

Support for sports

JSW Group has been supporting professional and amateur sports for many years. On the one hand, as the largest employer in the region and one of the largest listed companies in Poland, JSW feels responsible for supporting areas that promote not only the JSW brand but also the wider region. Professional and amateur sports, which aid in a healthy and active lifestyle.

JSW Group is focusing on areas that have for years been the most closely aligned with the company or industry and are generating the strongest positive feelings among fans, which is why a decision on sponsoring sports such as volleyball, hockey and football was made. All of them are based on teamwork, shared success and dedication to teamwork.

Along with the sponsored sport clubs (KS Jastrzębski Węgiel, JKH GKS Jastrzębie, GKS 1962 Jastrzębie, GKS Pniówek 74), JSW is also involved in promoting sports among children and youth. This is a matter of long-term thinking, directly derived from the business field. Just as in business, supporting mining-profile classes and schools counteracts the generational gap and makes room for stable operations in the coming years, while investing in kids and youth teams will ensure a talent pipeline for professional clubs.



In 2019, JSW SA's expenditures
on promotional activities reached
PLN 18 405 869.81
and **PLN 23 256 278.29**
in 2018.

Volleyball

Volleyball

JSW Group has for years been supporting KS Jastrzębski Węgiel and is the club's name sponsor, contributing to the promotion of the sport, city, Poland and its own brand. Volleyball is a great passion for many of the Company's employees. JSW Group also supports the Jastrzębski Węgiel Academy of Talents. This program lets young volleyball players fulfil their dreams, at the same time promoting upbringing through sports and objectively enforcing sport competition and fair play rules.

Jastrzębski Węgiel Academy of Talents

Jastrzębski Węgiel is investing heavily in youth. With JSW's support, the club has been successfully implementing since the 2012/2013 season a youth volleyball project - Jastrzębski Węgiel Academy of Talents. Over the past seven years, the Academy's pupils have won over 40 medals at voivodship and national level. The Academy's main objective is to train future club players, Poland's representatives and Olympic medal winners. After several years in Żory, in 2019 the Academy returned to Jastrzębie-Zdrój. It is based in a sports hall in Szeroka, ul. Reja 10, together with a dorm room.

The Academy of Talents is a gigantic project. Training takes place on many levels: from grade 6 of primary school to final grades in mid-school. Moreover, boys from grades 4 and 5 of primary school receive training in mini volleyball.

In 2016, the Jerzy Kukuczka Academy of Physical Education in Katowice became a patron for the Jastrzębski Węgiel Academy of Talents. The Academy trains volleyball talent from all over Poland under the supervision of excellent coaches and specialists in working with children. Approx. 100 boys from around the country currently attend the Academy. The sports-people not only train here but also live and study. Young players participate in various volleyball leagues as part of this project. Sometimes the Academy trains with Jastrzębski Węgiel's professional team, giving young volleyball players an opportunity to get inspired by Jastrzębie's biggest stars.

JSW's Academy of Talents was established on the basis of a shared vision by JSW SA and the volleyball club Jastrzębski Węgiel, providing for a modern development of sports in the region. JSW SA's social engagement contributes to promoting the Jastrzębie-based club as a sports entity with a long-term volleyball tradition, investing in the region's sports in the future and at the same time being aligned with JSW's activities for the region and local community.

Hockey

JSW Group has for years been working with the title-winning hockey club Jastrzębski Klub Hokejowy GKS Jastrzębie. Suffice it to say that the club in the 2018/2019 and 2019/2020 seasons won the Championship of Poland.

But the club is more than just the first team. It also trains children and youth. Teams participate in regular national and regional league competitions. In addition, young players participate in friendly hockey tournaments. Each year, the club's youth wins a range of medals at Polish Championships and the Polish Winter Olympics.



Football

The history of the football club GKS Jastrzębie, although not filled with spectacular successes, features a great deal of ups and downs, tears of despair and joy. The mining-themed GKS Jastrzębie has become a phenomenon of cultural identity for multiple generations of football fans. For thousands of residents, GKS Jastrzębie is not just a pretext for memories but also a way of life.

GKS often joins the JSW for Kids campaign, which is directed to children from orphanages. JSW and GKS received the "Friend of Kids 2019" medal for sensitivity, understanding and helping pupils at an orphanage in Cieszyn. GKS is also involved in fantastic campaigns for kids with disabilities. In April - to raise autism awareness

- children escorting the players wore blue shirts with the word AUTISM written on them.

JSW Group also supports the third-league team GKS Pniówek. The club's origins date back to 1974. This is the same year that the hard coal mine Pniówek was formed. However, some say that the team had been founded two years earlier, and the mine launch simply strengthened football in Pawłowice. For many years, GKS played in class A and B competitions. The Pawłowice-based club advanced to third league only in the 2008/2009 season.



More on the sports supported by JSW:
www.kopalniawiedzyjsw.pl



Subsidiaries' involvement

Aside from group-wide initiatives, i.e. those being implemented by JSW or through JSW Foundation on behalf of all JSW Group companies, smaller activities coordinated directly by subsidiaries are worth mentioning. These are not always typical community projects but they are activities with considerable social value. Moreover, they are often conducted by a specific company due to its key competences, which are even more valuable than funding.

An initiative being implemented for several years by Centralne Laboratorium Pomiarowo-Badawcze (CLP-B) is a flagship activity in this space, with direct beneficiaries of very many Polish towns, often located far away from Silesia. Aiming to improve the quality of air in Poland, the company trains urban and municipal guards to properly collect combustion waste samples during inspections.

Training is also offered on the changing legal conditions for the combustion of solid fuels. The training sessions contain a practical part and are conducted by qualified personnel with years of hands-on experience. The company is also often a contractor for quality surveys of samples collected during fuel inspections. The same company has helped organisations such as the Polish Association of Retirees and People with Disabilities, volleyball fan club JASTRZĘBIE, K.S. GKS 1962 Jastrzębie SA, Foundation POMOCNA DŁOŃ, Foundation AVALON - Direct Help for People with Disabilities.

The largest JSW Group company aside from JSW, JSW KOKS, has been focusing on supporting local communities in line with JSW Group's philosophy. In 2019, it joined JSW Group's efforts in helping people with disabilities, supporting local community initiatives and purchases of equipment for sports clubs.

The company also supported campaigns organised by foundations and parishes the aim of which was to prepare food packages for those in need, including for the homeless, poor and those socially excluded for other reasons. It helped to purchase teaching and therapeutic equipment meant to enhance educational and revitalisation activities. This equipment today helps in the personal, communication and social development of children. The company also became involved in the purchase of a ceramic furnace for the arts club Pinokio at primary school 42 in Zabrze. The company also supported a campaign intended to support the purchase of emergency equipment for GPR Jastrzębie JS1325 - Underground Emergency Services. It contributed to the purchase of a leg prosthetic for a pupil at one foundation. It also participated in the campaign "Promoting reading to pre-school and early-school kids," organised in Dąbrowa Górnicza to popularise reading books among the youngest. In 2019, three charity campaigns were conducted within JSW KOKS's grounds. The first one was intended to support women with children in a difficult situation - sweets and toys, educational games, school items and cosmetics were collected among employees. Another campaign involved collecting sweets and school items that were then given to children from orphanages.

A food drive and collection of products for animal shelters were also conducted in parallel to the aforementioned campaigns. In 2019, work with the sports community continued with the intention of supporting young talents (Górnik Zabrze Football Academy) and local clubs (e.g. Górnik Radlin Volleyball Club, City Sports Club Czerwionka, LKS Tęcza Będów, UKS Przemysław Okradzionów). JSW KOKS also provided continuous support to employee sports teams in several disciplines (football tournaments, inter-company volleyball and bowling contests and skiing competitions).

Jastrzębskie Zakłady Remontowe (JZR) continued supporting selected neighbouring organisations that work for the local community. These included: Bethlehem Medical and Care Facility for Children, Priest E. Dudkiewicz SAC Hospice, Jastrzębski Table Tennis Club, Mining Families Foundation and Voivodship Specialist Hospital 2 in Jastrzębie-Zdrój.

The relatively small Jastrzębska Spółka Ubezpieczeniowa (JSU) also strived to support cultural and social events within its limited budget. In 2019, it provided support to the Student Sports Club Pionier in Jastrzębie-Zdrój, Recreational and Sports Club Morsy.pl in Jastrzębie-Zdrój, City Association for Promoting Physical Culture in Jastrzębie-Zdrój (indoor football tournament), Student Sports Club Orzeł Moszczenica in Jastrzębie-Zdrój (football tournament), Municipality of Żory (table tennis tournament). It also provided support for the Foundation for Medical Prevention Support in Gliwice, Mining Families Foundation in Katowice, the Mother of Social Justice and Love Parish in Jastrzębie-Zdrój and the Mining Rescuers Trade Union at KWK Budryk. In 2019, JSU also sponsored the clubs KS Jastrzębski Węgiel and JKH Jastrzębie.

JSW Innowacje, together with JSW, initiated the project "Save bees - they can live among us." Similar to the apiaries being set up in cities, bee-keeping was launched in post-industrial areas, namely land adjacent to the active mine Ruch Borynia in Jastrzębie-Zdrój. These activities are aligned with land rehabilitation efforts and their better economic use, and reference activities that used to be typical for these regions, i.e. the residents of these areas used to work in bee-keeping. This activity also has educational value thanks to the project "Bees" launched as part of the JSW Mine of Knowledge.

JSW Innowacje also engages in the working team for innovations in sustainable development and CSR at the

Ministry of Investments and Development, preparing nationwide workshops for representatives of small and mid-sized enterprises. After a pilot implementation in 2020, the company will be able to make practical contributions to these training sessions being organised by the Regional Chamber of Commerce, by sharing good practices. The Cooperation and Promotion Division also participates in the works of a stakeholder group for the STRATEGY CCUS project, which is being implemented as part of the HORYZONT 2020 program, intended to support the development of low-emission energy and industry.



OBJECTIVE 6

**We respect
the needs
and expectations
of our customers**



Objective 6: We respect the needs and expectations of our customers

No-one needs convincing about the role of good, lasting and trust-based relations with customers in business development and how crucial quality management is. In the case of an industry as specific as mining and coking, these aspects are of an even greater importance. Physical and chemical parameters of the mined coal mainly depend on the deposit, where nature has the most to say. Some of the parameters are to a certain extent shaped in the coal enrichment process, where the main product quality indicator is customer expectations.

The role of JSW Group's mines is to conduct coal mining and enriching in a way that best meets customer expectations and at the same time allows for an effective use of the deposit.

Coke is produced from a special coal mixture that takes into account the quality of specific feedstock coals and the quality expectations with regard to the final product - coke. Coking plants are capable of creating feedstock mixtures taking into account the costs of specific coals, their availability and quality. They purchase the coals from a variety of sources, and JSW has to compete with local and overseas suppliers.

In addition, the product itself (coal, coke) is delivered by rail as often as possible, and the weight of this commodity means that a certain geographic advantage begins to play an important role (although on the other hand, JSW's coke is shipped even as far as India). The transport of over a dozen millions of tonnes per year is a challenge in itself for the company's logistics personnel and the carriers. Importantly, JSW Group has turned this into an advantage by being able to deliver the commodity to near-by steelworks in relatively small quantities but frequently. Customers very much appreciate just in time deliveries. This is how JSW Group

obtains a considerable advantage over overseas suppliers, the products of which are transported in large quantities by ship and supply is more difficult in terms of planning delivery dates and committing capital. With a view toward improving quality and listening to customers, a regular dialogue with them is of key significance for JSW. This involves direct meetings, video or teleconferences with key customers for coal and coke to discuss not just issues such as product quality, delivery deadlines or overall cooperation but also issues related to development perspectives and plans for the nearest future. This is also a space for identifying possibilities and areas for improving cooperation. A relatively small number of large corporate customers, which is typical for this type of business, lets us build truly close, partnership-based relations. Based on conclusions from this dialogue with customers, regular reviews are conducted in order to improve complaint procedures and commodity quality inspection processes. The process of delivery is monitored and analysed in terms of timeliness.

The work of sales-force units is subject to annual evaluation by business partners in the form of a questionnaire, along with an external customer satisfaction survey, in line with the Company's ISO 9001-compliant Integrated Quality Management System. The results of this survey make it possible to introduce relevant modifications in order to strive for further improvements in customer service.

Taking into account the need to maintain reliability and the highest standards, including ethics norms, sales contracts include clauses based on recommendations from well-known international organisations.

They allow maintaining conformance with international contracts standards, including respect for the rule of equality among contract parties, application of fair practices in economic trade, fair trade of goods and rules for social coexistence.

For example, contractual clauses refer to:

- Incoterms® (International Chamber of Commerce), based in Paris (ICC's publications on foreign and domestic trade are considered as standards throughout the world),
- United Nations Convention of 11 April 1980 on the International Sale of Goods (Vienna Convention), which is helpful in drafting sales contracts (with foreign partners, especially in clarifying the parties' rights and obligations).
- JSW Group's Code of Ethics (an ethics clause drafted by JSW in order to notify a trading partner of the existing code of ethics and the operating rules contained therein).

Management quality

Having and maintaining certified management systems is a prerequisite for operating on the market.

JSW's management systems in compliance with PN-EN ISO 9001, PN-EN ISO 14001, PN-N 18001 and PN-ISO/IEC 27001 as regards the extracting, processing and selling of coal are certified by renowned entities, and this policy will be continued in the coming years. The other JSW Group companies also aim at maintaining their certified management systems.



The Group's other companies have implemented and certified management systems depending on their line of business.

For example, JSW KOKS, a key JSW Group company, is a pioneer in implementing and a leader in applying modern management methods in line with national and international standards for the coking industry and beyond.

As the first coking company and one of several firms in the country, it has five certificates compliant with ISO 9001:2015 (Quality Management System), ISO 14001:2015 (Environmental Management System), ISO/IEC 27001:2013 (Information Security Management System), ISO 50001:2011(E) (Energy Management System) and PN-N-18001:2004 (Occupational Health and Safety Management System). Works are currently under-way on implementing ISO 45001:2018, which has replaced the Polish management model in the area of occupational health and safety, and on implementing an updated ISO 50001:2018 Energy Management System.

The scope of the management systems is the production and sale of coke, raw tar, raw BTX, coke oven gas, sulphur, ammonium sulphate, electric energy and water steam. They confirm the commitment to minimising adverse impact on the natural environment, enhancing energy efficiency, continuously developing modern technologies that allow processes to be performed in safe and ergonomic conditions as well as to maintaining the confidentiality, integrity and availability of information. Above all, they confirm that production activities are conducted in line with the highest global standards in quality as well as the requirements and expectations of customers. In the case of coking products, this means international customers. The main customers are located in Poland, Germany, Austria, Czech Republic, Slovakia, Italy and India. PGWiR has management systems certified under ISO

9001:2015, ISO 14001:2004 and PN-N-18001:2015, encompassing the abstraction, treatment and supply of industrial water, along with physical and chemical sampling; waste treatment and discharge, including salted mining waters, along with physical and chemical sampling; drainage of contained areas; rehabilitation of land transformed as a result of mining activities. PGWiR's Water and Sewage Research Laboratory has obtained a certificate from the Polish Accreditation Centre as regards compliance with PN-EN ISO/IEC 17025:2018-01.

Similarly, JZR has an Integrated Management System compliant with requirements of the following standards: ISO 9001:2015 (Quality Management System); ISO 14001:2015 (Environmental Management System); PN-N 18001: 2004 (Occupational Health and Safety Management System), ISO 50001: 2011 (Energy Management System), PN-EN ISO 3834-2:2005 (Quality Management System for Welding).

The quality management systems implemented and maintained at CLP-B ensure the highest quality of service, compliant with standards and in line with the following certificates: PN-EN ISO/IEC 17025:2018-02, as confirmed through accreditation certificate AB 300 issued by the Polish Accreditation Centre for laboratory activities; PN-EN ISO/IEC 17020:2012, as confirmed through accreditation certificate AK 017 issued by the Polish Accreditation Centre for inspection-related activities; PN-EN ISO/IEC 17043:2011, as confirmed through accreditation certificate PT 003 issued by the Polish Accreditation Centre for organising survey processes; PN-EN ISO 17034:2017-03, as confirmed through accreditation certificate RM 001 issued by the Polish Accreditation Centre for the manufacture of reference materials. Its quality management system is certified under PN-EN ISO 9001:2015-10.

OBJECTIVE 7

**We respect
transparency
and honesty
in management**



Objective 7: We respect transparency and honesty in management

Compliance system

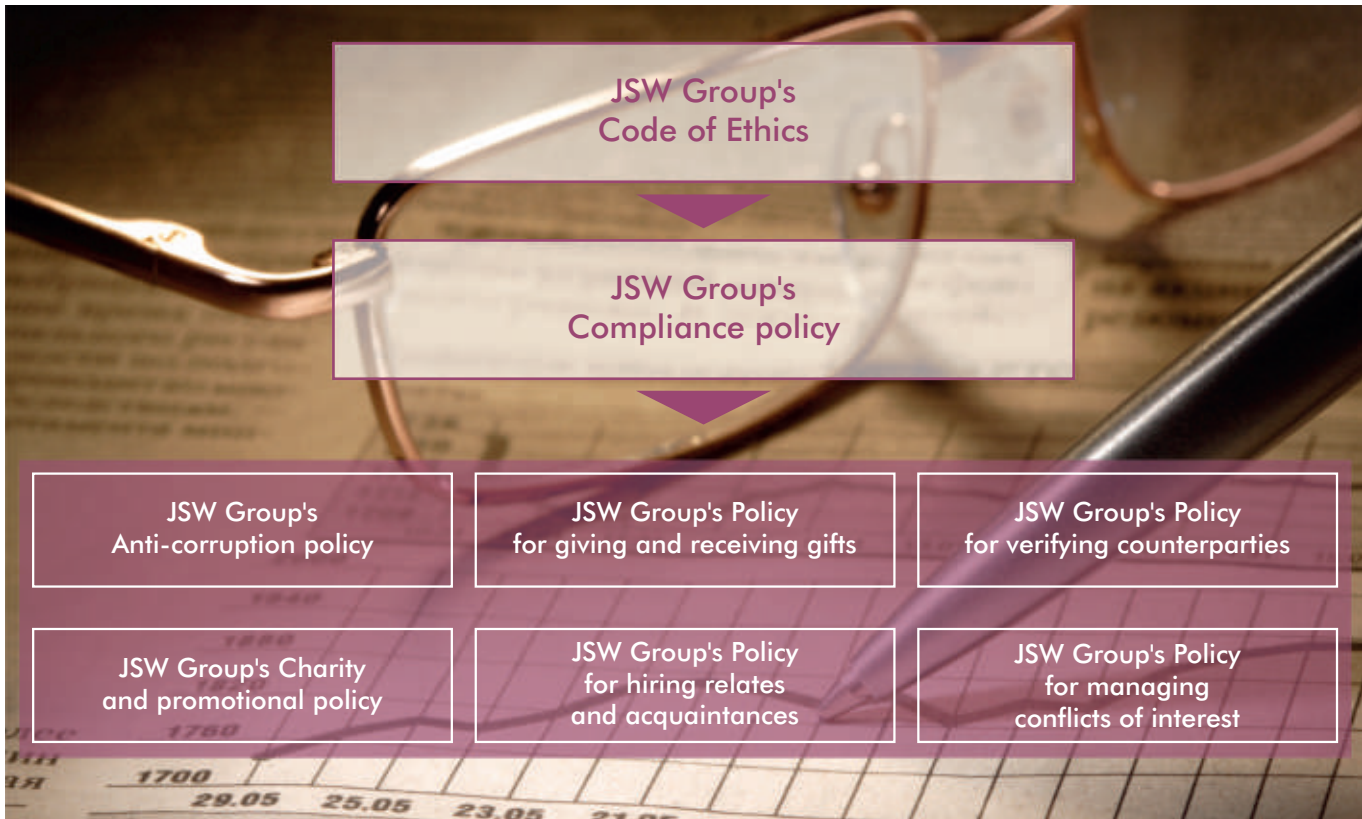
JSW Group strives to apply the highest standards and good practices in transparency and corporate governance. It is also aware of the need for continuous improvement across its existing solutions, which will contribute to an effective and efficient functioning of the Compliance System. The existence of policies, procedures and tools for managing compliance, including ethics, is in line with the widely-defined enterprise risk management. Aside from the obvious moral obligation, this enhances our credibility among business partners and investors.



Taking this into account, at the turn of November and December 2019, JSW Group adopted a range of formal document that together make up the Compliance System, i.e.:

- JSW Group's compliance policy,
- JSW Group's anti-corruption policy,
- JSW Group's counterparty verification policy
- JSW Group's policy for hiring relatives and acquaintances,
- JSW Group's policy for managing conflicts of interest,
- JSW Group's procedure for reporting irregularities.

JSW Group's target compliance system consists of a range of intertwined documents that address specific areas. Their mutual dependencies are depicted on the following diagram:



The aforementioned regulations address the basic rules and principles for an effective Compliance System. The following should be emphasised:



Charity and promotional policy, which contains information on the terms and rules for promotional and charitable activities by the companies. It indicates the rules to follow in order to avoid accusations of fraud, corruption or preferential treatment.

Policy for verifying counterparties, which sets out what activities should be undertaken prior to a decision on establishing cooperation with a counterparty. It also sets out the basic requirements for companies verifying their counterparties, including the scope of verification and rules for proceeding in the case of justified doubts with regard to a counterparty.

Procedure for reporting irregularities, which introduces consistent rules for reporting potential irregularities at JSW Group. The objective of this Procedure is to introduce consistent rules for reporting irregularities regardless of their nature. Thanks to the procedure, irregularities can be reported around-the-clock and anonymously, with a guarantee of protection against any potential repressions.

Policy for giving and receiving gifts, which contains detailed information on whether and under what circumstances a gift may be accepted or given in connection with work for JSW Group. It also contains information on the permitted limits of gift values and on marketing and promotional materials. The document also features forms for giving and receiving gifts. The policy sets out rules for giving and receiving gifts, including representation expenses for third parties, that eliminate unethical conduct, especially conduct that could be associated with corruption.

Procedure for conducting explanatory proceedings, which sets out rules for instigating and conducting explanatory proceedings. The document indicates the fundamental rules in each phase of a proceeding, aimed at explaining all of the circumstances of a report. The procedure for carrying out explanatory proceedings will be developed individually by each company, taking into account their specific nature, especially with regard to internal organisational structures and the availability of resources.

JSW Group's Code of Ethics

102-16 JSW Group strives to be a responsible leader, including in the area of corporate accountability, respect for human rights, environmental protection and combating corruption and abuses both inside JSW Group and within its business environment. Responsibility for achieving this objective lies with all JSW Group employees, regardless of job or tenure. This means that strict requirements apply to the management, all employees, as well as customers, suppliers, subcontractors and third parties that cooperate with JSW Group.

This is why JSW Group's Code of Ethics, updated at the end of 2019, is addressed to all employees and persons cooperating with JSW Group, regardless of the form, duration or subject of such cooperation. The values and standards contained therein can also be invoked by third persons, with no working relation to JSW Group. This especially applies in situations where the actions of JSW Group or its representatives would cause objections on ethical or legal grounds.

The Code of Ethics is intended to indicate the most important rules and standards of conduct that is acceptable and approved by JSW Group, and to provide information on how to act in circumstances under which a given decision or situation may raise ethical dilemmas. The document contains the key element of JSW Group's ethics policy, non-discrimination policy and anti-corruption policy. It also shows how to report violations and irregularities or failures to abide by obligations mandated by the law, threats to occupational health and safety, the health of customers and third parties, unfair competition practices, as well as attempts to conceal any of the above. JSW Group's Code of Ethics states that, regardless of position, all employees, co-workers and partners have the

right to respect, dignity and the protection and privacy of personal and family life. At JSW Group there is no acceptance for discriminating against, judging and ridiculing other people, especially because of their gender, race, disability, nationality, ethnic origin, sexual orientation, age, creed, political and world-view beliefs, property situation and social status, cultural differences, political association or membership or marital status. All forms of discrimination, intimidation, harassment or sexual harassment of co-workers are not acceptable and will be unequivocally condemned and combated.

The code was also developed in order to provide information to interested parties, e.g. employees, on how to deal with concerns and where to seek help and appropriate guidelines. If they have concerns, they can contact their superior. There is also a Compliance Unit available, as well as Compliance Coordinators at all JSW entities and JSW Group companies. It is also possible to obtain advice from experts in human resources, CSR, occupational health and safety or law, subject to their availability at a given company.

The Code of Ethics is one of the elements of an extensive system of internal regulations that together make up JSW Group's Compliance System. JSW Group's values are further detailed in the Compliance policy, Anti-corruption policy, Policy for managing conflicts of interest, Charity and promotional policy, Policy for hiring relatives and acquaintances, Policy for giving and receiving gifts and Policy for verifying counterparties.

At the same time, as mandated by the President of the Management Board, JSW applies a standard ethics clause in agreements.



All parties interested in more detailed information, including information on JSW Group's values, should refer to the source document - JSW Group's Code of Ethics, available at: <https://www.jsw.pl/o-nas/compliance/kodeks-etyki-gk-jsw/>

103(205), 205-1

Corruption prevention

At JSW Group, there is no tolerance for any sort of actions that would breach the existing laws in any area of operations. This lack of acceptance applies in particular to all forms of corruption, regardless of whether it takes place in the public or private sector and whether it brings or could bring benefits to JSW Group, its counterparties or business partners.



The Anti-corruption policy, adopted by the Management Board of JSW SA in 2019, is intended to ensure that activities are conducted in compliance with the law, especially provisions relating to corruption prevention, and that the environment in which the Companies operate is free of any sort of criminal activity.



<http://www.jsw.pl/o-nas/compliance/polityka-antykorupcyjna-gk-jsw/>

The policy sets out rules and employees' obligations with regard to countering corruption and constitutes an unequivocal condemnation of corruption, which is defined in JSW Group's internal regulations. Mechanisms have also been put in place intended to reduce the risk of any such abuses occurring, which is achieved by identifying operating areas at a higher risk of corruption and by defining alerts that can signal a higher risk of inappropriate conduct. These organisational solutions also include a dedicated phone line for reporting confirmed or potential irregularities. This document as well as the entire Compliance System are in effect at all JSW entities and subsidiaries (in this sense, 100% of subsidiaries are included in activities aimed at combating the risk of corruption).

In parallel, a dedicated educational and promotional campaign was designed in order to build trust, especially among employees and co-workers, and to support an ethical culture, promote proper standards of conduct and promote this channel for reporting irregularities. To this end, a training package was prepared, which will be addressed to select groups of people at JSW Group companies. This training is profiled, with content corresponding to specific organisational levels. In accordance with a schedule devised in December 2019, the basic training program is to cover 337 people, including the management boards and key executives at JSW Group companies.

205-2



Information security

An information security system is in place at JSW and a number of JSW Group companies, intended to effectively reduce business risk and ensure the continuity of business processes, taking into account the weight of information resources and the obligation to ensure appropriate protection of information. Information security is an important element of a company's organisational security, with information becoming a strategic factor in operations, requiring protection against uncontrolled disclosure, modification or loss. Disrupting the information security level may lead to concrete financial losses or disruptions in the Company's operations or unmeasurable losses such as damage to its good name, image or position.

The PN-ISO/IEC 27001 standard was implemented in order to apply protection mechanisms that are adequate to business needs, define rules for handling information, estimate risk based on existing threats and specify acceptable risk levels, which ensures a fully comprehensive approach to the issue of information security, covering aspects that go beyond ICT, extending to the security of personal data, physical, technological, organisational and legal security, rights to intellectual property protection, as well as protection of trade secrets. To underscore the weight of information resources, a Framework Information Security Policy was developed for JSW Group and a Policy for Personal Data Security at JSW Group entities.

418-1 JSW Group is unaware of any complaints in 2019 related to breaches of customer privacy or loss of customer data.

JSW implements Electronic Document Workflow

Cheaper, faster, safer - these are words that reflect the main benefits of deploying an Electronic Document Workflow system at Jastrzębska Spółka Węglowa. But there are other benefits.

The new system eliminates a number of defects inherent in a classic paper-based workflow. It will ensure an effective, precise, secure and better organised flow of information, which means time and money savings for the Company. "Introducing the Electronic Document Workflow system is an important logistics and organisational challenge but it is a priority for us because we have to really control the main decision-making processes and reduce the time needed to prepare essential documents, including for tender purposes, from the moment a decision is made to go forward with an investment," said Artur Dyczko, Deputy President of the Management Board for Technical and Operational Matters.

The Electronic Document Workflow will reduce the time associated with document workflow and make it possible to make decisions more quickly, which is very important, for example in procurement. The new system has one more significant benefit - ecological. It will eliminate thousands of sheets of paper from every-day use and will constitute the basis for eliminating paper-based documents altogether in the future. This is also one of the largest IT initiatives being implemented at Jastrzębska Spółka Węglowa.

To emphasise the importance of IT resources, JSW Group's framework information security policy and JSW Group's personal data safety policy have been put in place.

Employer-employees dialogue

For an organisation as large as JSW Group, it would be difficult to operate without a systemic approach to dialogue with employees. The Company's management strives for open and constructive discussion with trade unions.

The quality of dialogue with trade unions can be confirmed by JSW SA's title of Employee-Friendly Employer, which is awarded by trade union NSZZ Solidarność to employers excelling at applying good practices in respecting labour laws, especially through employment stability, observance of occupational health and safety rules and the right to organise in trade unions.

A framework for cooperation between the Management Board and the trade unions is set out in the Act on trade unions and the Act on resolving collective disputes. From a formal viewpoint, JSW's cooperation with trade unions is regulated by "Rules for mutual cooperation between JSW's Management Board and trade unions," adopted on 14 November 2019.

As of 31 December 2019, there were 64 trade unions at JSW SA and 132 at JSW Group. Owing to the fact that an employee can be a member of several unions, the total number of trade union members exceeds the total number of JSW Group employees, reaching 37 202 members, which means a rate of unionisation at JSW Group of 121.5% (at JSW SA the number of trade union members, as per trade union declarations, was 32 648, giving a rate of unionisation of 145.5%).

Despite effectively terminating collective labour agreements effective from 1 January 2010, because of provisions in individual employment contracts and the Agreement of 5 May 2011, rules from five collective labour agreements, Rules for remunerating employees at JSW Management Board Office and the Agreement of 20 December 2004 concerning KWK Knurów-Szczygłowice employees are still in effect at JSW SA.

The following internal labour regulations are currently in place at JSW SA:

- Collective Labour Agreement KWK Borynia
- Collective Labour Agreement KWK Budryk
- Collective Labour Agreement KWK Pniówek
- Collective Labour Agreement KWK Zofiówka
- Collective Labour Agreement Material Logistics Entity
- Regulations for remunerating employees at the Management Board Office, JSW SA,
- Agreement of 20 December 2004 executed by the Management Board of Kompania Węglowa SA,
- In the case of all employees hired after 15 February 2012, "new employment contracts," unilaterally implemented by the Management Board of JSW SA through Resolution 736/VII/12 of 27 November 2012, are in effect.



102-43**Platform for dialogue:
Auxiliary Steering Committee at JSW SA**

Pursuant to point 6 of the "Program for hard coal mining in Poland," adopted by the Council of Ministers, each mining company should have an Auxiliary Steering Committee supporting the activities of the Mining Steering Committee and monitoring implementation of the Program for hard coal mining in Poland.

Through resolution 463/IX/2018 of 21 June 2018, the Management Board of JSW SA appointed JSW SA's Auxiliary Steering Committee to support the Mining Steering Committee at the relevant ministry. JSW SA's Auxiliary Steering Committee focuses on Jastrzębska Spółka Węglowa's strategic activities. Conclusions from the committee's work are not binding, rather constituting opinions or suggestions. Discussed within the Auxiliary Steering Committee are: mine results, JSW Group's strategic investments, current technical data, ownership changes, status of storage heaps, etc.

JSW SA's Auxiliary Steering Committee held eight meetings in the period from its formation to the end of 2019.

Respect for the rule of law

Starting in October 2019, information pertaining to new legal regulations and changes in existing laws that affect JSW Group and JSW is prepared on a monthly basis.

206-1

As of the date on which this report was prepared, one court case concerning anti-competitive behaviour and breaches of anti-monopoly laws was in progress. This is a case brought by Jastrzębska Spółka Węglowa SA and instigated in December 2019. The case concerns compensation from Minova Ekochem SA, A.Weber Sp. z o.o. and DSI Schaum Chemie Sp. z o.o. for JSW SA for price collusion on the mining chemicals market in 2005-2011. The case is valued at approx. PLN 118.7 million. JSW SA is being represented by the General Counsel to the Republic of Poland.

419-1

At the same time, JSW SA is unaware of any incompliance on its part with laws or regulations concerning the issues described in disclosure 419-1 (Lack of compliance with law or regulations in social and economic area).

Tables with non-financial information



Tables with non-financial information

102-8 405-1 Ia. Employment at year-end, by type of contract, form of employment, age and gender

Item	Women	2018 Men	Total	Women	2019 Men	Total
JSW Group						
by type of contract						
Employment contract with indefinite term	2884	23267	26151	3153	24687	27840
Employment contract with definite term	315	1065	1380	412	1840	2252
Employment contract for a trial term	71	666	737	111	426	537
Total	3270	24998	28268	3676	26953	30629
by form of employment						
full-time	3249	24973	28222	3653	26916	30569
part-time	21	25	46	23	37	60
Total	3270	24998	28268	3676	26953	30629
by age						
age under 30	280	4283	4563	337	4471	4808
age 30-50	1740	17341	19081	1919	18670	20589
age over 50	1250	3374	4624	1420	3812	5232
Total	3270	24998	28268	3676	26953	30629
including JSW SA						
by type of contract						
Employment contract with indefinite term	1974	19572	21546	2118	20264	22382
Employment contract with definite term	24	46	70	22	29	51
Employment contract for a trial term	0	0	0	0	0	0
Total	1998	19618	21616	2140	20293	22433
by form of employment						
full-time	1991	19611	21602	2133	20285	22418
part-time	7	7	14	7	8	15
Total	1998	19618	21616	2140	20293	22433
by age						
age under 30	130	3098	3228	164	3005	3169
age 30-50	1055	14872	15927	1074	15564	16638
age over 50	813	1648	2461	902	1724	2626
Total	1998	19618	21616	2140	20293	22433

Ib. Employment by type of contract and work location

102-8

Region	2018			2019		
	Silesian voivodship	Other	Total	Silesian voivodship	Other	Total
JSW Group						
Employment contract with indefinite term	26057	94	26151	27496	344	27840
Employment contract with definite term	1342	38	1380	2076	176	2252
Employment contract for a trial term	722	15	737	519	18	537
Total	28121	147	28268	30091	538	30629
including JSW SA						
Employment contract with indefinite term	21535	11	21546	22372	10	22382
Employment contract with definite term	68	2	70	50	1	51
Employment contract for a trial term	0	0	0	0	0	0
Total	21603	13	21616	22422	11	22433

(note: the "other" category includes persons employed in other voivodships (e.g. office in Warsaw) as well as 37 people employed abroad).

II. Percentage of management hired from local community (understood as residents of the municipalities or poviats where JSW Group's facilities are located)

202-2

	2018	2019
JSW Group	52.21%	55.33%
including JSW	60.71%	59.68%

(directors and deputy directors are classified as management)

401-1 IIIa. New hires
(without transfers between JSW Group companies / within JSW SA)

	Women	2018 Men	Total	Women	2019 Men	Total
JSW Group						
age under 30	186	1609	1795	109	979	1088
age 30-50	289	542	831	297	797	1094
age over 50	80	167	247	111	315	426
Total	555	2318	2873	517	2091	2608
Silesian voivodship	525	2287	2812	499	1949	2448
other voivodship	30	31	61	18	142	160
% share of new employees to total employees	1.96	8.20	10.16	1.69	6.83	8.51
including JSW SA						
age under 30	18	41	59	12	29	41
age 30-50	46	27	73	36	17	53
age over 50	2	12	14	3	4	7
Total	66	80	146	51	50	101
Silesian voivodship	64	77	141	50	50	100
other voivodship	2	3	5	1	0	1
% share of new employees to total employees	0.31	0.37	0.68	0.23	0.22	0.45

IIIb. Departures (without transfers between JSW Group companies / within JSW SA)

401-1

	Women	2018 Men	Total	Women	2019 Men	Total
JSW Group						
age under 30	21	123	144	23	233	256
age 30-50	42	489	531	60	518	578
age over 50	110	277	387	100	336	436
Total	173	889	1062	183	1087	1270
Silesian voivodship	156	877	1033	164	945	1109
other voivodship	17	12	29	19	142	161
% share of departures in total employment	0.61%	3.14%	3.76%	0.60%	3.55%	4.15%

including JSW SA						
age under 30	3	27	30	1	29	30
age 30-50	7	384	391	7	280	287
age over 50	38	143	181	30	138	168
Total	48	554	602	38	447	485
Silesian voivodship	47	553	600	37	445	482
other voivodship	1	1	2	1	2	3
% share of departures in total employment	0.22%	2.56%	2.78%	0.17%	1.99%	2.16%

IVa. Number of employees who took parental leave

401-3

	Women	2018 Men	Total	Women	2019 Men	Total
JSW Group	74	40	114	89	61	150
including JSW	42	16	58	52	6	58

IVb. Number of employees returning to work after parental leave ended

401-3

	Women	2018 Men	Total	Women	2019 Men	Total
JSW Group	48	31	79	40	54	94
including JSW	27	11	38	27	6	33

IVc. Retention rate of employees who took parental leave (percentage of returns to work after parental leave)

401-3

	Women	2018 Men	Total	Women	2019 Men	Total
JSW Group	64.86	77.50	69.30	44.94	88.52	62.67
including JSW	64.29	68.75	65.52	51.92	100.00	56.90

405-1 V. Diversity of governance bodies

	Women	2018 Men	Total	Women	2019 Men	Total
JSW Group						
Management Boards	10	33	43	10	39	49
age under 30	0	0	0	0	0	0
age 30-50	4	21	25	6	21	27
age over 50	6	12	18	4	18	22
including foreigners	0	0	0	0	0	0
Supervisory Boards	17	60	77	23	66	89
age under 30	0	2	2	0	1	1
age 30-50	10	27	37	12	31	43
age over 50	7	31	38	11	34	45
including foreigners	0	0	0	0	0	0
JSW SA						
Management Board	1	5	6	0	5	5
age under 30	0	0	0	0	0	0
age 30-50	0	3	3	0	3	3
age over 50	1	2	3	0	2	2
including foreigners	0	0	0	0	0	0
Supervisory Board	1	9	10	3	8	11
age under 30	0	0	0	0	0	0
age 30-50	0	5	5	1	4	5
age over 50	1	4	5	2	4	6
including foreigners	0	0	0	0	0	0

	Women	Men	age under 30	age 30-50	age over 50	foreigners
JSW Group						
2019						
President of the Management Board	5	15	0	9	10	0
Deputy President of the Management Board	4	23	0	17	11	0
Member of the Management Board for Economic Matters	1	0	0	0	1	0
Member of the Management Board for Production and Technology	0	1	0	1	0	0
2018						
President of the Management Board	3	13	0	7	9	0
Deputy President of the Management Board	6	19	0	18	7	0
Member of the Management Board for Economic Matters	1	0	0	0	1	0
Member of the Management Board for Production and Technology	0	1	0	1	0	0
including JSW						
2019						
President of the Management Board	0	1	0	0	1	0
Deputy President of the Management Board	0	4	0	3	1	0
	0	0	0	0	0	0
	0	0	0	0	0	0
2018						
President of the Management Board	0	1	0	1	0	0
Deputy President of the Management Board	1	4	0	3	2	0

VI. Work-related accidents and occupational diseases

403-9

403-10

	2018	2019
JSW Group		
total work-related accidents involving employees	404	412*
light work-related accidents involving employees	397	405
major work-related accidents involving employees	0	4
fatalities among employees	7	3
Accident frequency rate (accident at work per 1000 employees)	14.3	13.5
total work-related accidents involving service providers:	86	109
light work-related accidents involving service providers:	84	107
major work-related accidents involving service providers:	2	2
fatalities involving service providers:	0	0
Number of identified occupational disease cases	46 (pneumoconiosis)	51 (pneumoconiosis)
including JSW SA		
total work-related accidents involving employees	310	310
light work-related accidents involving employees	303	304
major work-related accidents involving employees	0	3
fatalities among employees	7	3
Accident frequency rate (accident at work per 1000 employees)	14.3	13.8
total work-related accidents involving service providers:	77	108
light work-related accidents involving service providers:	75	106
major work-related accidents involving service providers:	2	2
fatalities involving service providers:	0	0
LTIFR for JSW SA	7.42	7.54
Number of identified occupational disease cases	43 (pneumoconiosis)	51 (pneumoconiosis)

* - PBSz data for the period 1.7-31.12.2019

VIIa. Fuel consumption (JSW Group)

ITEM	2018	2019	CHANGE 2018=100
Motor gasoline (litre)	175 150.4	209 632.7	119.7
Diesel fuel (ON) (litre)	7 906 184.3	8 764 585.3	110.9
LPG (litre)	57 794.3	49 369.9	85.4
Methane from mine drainage (m ³)	18 732 816.0	20 460 602.0	109.2
Coke oven gas (m ³)	1 327 904 234.0	1 197 775 911.0	90.2
Heating oil (Mg)	57.4	2 709.5	4 720.4
Hard coal (for energy purposes) (Mg)	109.1	105.5	96.7
Waste gas fuel (excess gas) (GJ)	125 723.0	105 138.0	83.6
Natural gas (m ³)	83 977.0	622 008.2	740.7

302-1

VIIb. Use of energy sources at JSW

	unit of measure	2018	2019
Electricity	GWh	1 026.7	1 056.7
including self-generated	GWh	70.7	78.0
Heat	TJ	769.2	818.2
including self-generated	TJ	78.3	74.2
Total energy consumption	GJ	5 073.3	5 230.8
Energy intensity index	MJ/Mg	338	354

302-1

302-3

The use of electric and thermal energy by the new central air conditioning system at Ruch Zofiówka was included in figures for 2019.

VIII. Water consumption (JSW Group) (million m³)

consumption = purchase + self-generated - sales

303-5
303-8

[million m ³]	2018	2019	CHANGE 2018=100
Abstraction of water:	19.95	20.14	101.0
Surface water	9.20	9.27	100.8
Drinking water	0.0011	0.002	181.8
Industrial water	9.20	9.26	100.7
Groundwater	3.38	3.79	112.1
Drinking water	3.38	3.79	112.1
Industrial water	0	0	0
Purchase of water	7.37	7.08	96.1
Drinking water	2.64	2.18	82.6
Industrial water	4.7	4.9	104.3
Discharge of rainwater and meltwater	0.22	0.64	290.9
into surface water	0.148	0.180	121.6
into ground	0.066	0.117	177.3
to third parties	0.008	0.344	4 300.0
Recovered water	4.15	4.22	101.7
Total water consumption:	21.62	22.22	102.8
Drinking water	5.76	5.74	99.7
Industrial and recovered water	15.86	16.48	103.9
Water consumption per unit of revenue (millions m³/PLNm	0.0022	0.0026	

IXa. Sewage management (JSW Group) (million m³)

[million m ³]	2018	2019	CHANGE 2018=100
Total volume of sewage, including:	23.1	23.8	103.0
Generated	16.9	17.8	105.3
Collected from the outside	6.2	6.0	96.8
Sewage management, including:	23.1	23.8	103.0
Internally managed	3.2	3.7	115.6
Discharged into water or ground	18.8	19.0	101.1
Transferred to another entity	1.15	1.11	96.5
Significant substances contained in sewage [Mg], including:	258 772.9	236 981.2	91.6
Chemical oxygen demand (COD)	271.8	251.4	92.5
Biochemical oxygen demand (BOD) ₅	10.7	11.3	105.6
Total nitrogen	88.0	113.3	128.8
Suspension	272.0	787.0	289.3
Chloride	249 294.6	226 974.2	91.0
Sulphates	8 713.3	8 728.7	100.2
Total organic carbon (TOC)	122.5	115.3	94.1
Sewage generated per unit of revenue (millions m³/PLNm)	0.0024	0.0027	

303-4
306-1

IXb. Salted mining waters (JSW) (million m³)

ITEM	2018	2019	CHANGE 2018=100
Managed	1.3	1.7	130.8
Discharged to environment	3.7	3.8	102.7
Discharged to desalination facility	2.3	2.4	104.3
Discharged to Olza collector	4.8	4.9	102.1
Total	12.1	12.8	105.8

303-4
306-1

X. Greenhouse gas emissions - organisation's carbon footprint (JSW Group)

305-1
305-2
305-4

Carbon footprint - organisation JSW Group		Direct emissions (Scope 1)			Indirect emissions (Scope 2)	Total emissions (Scope 1+2)	
						Emissions per product unit (coal + coke)	Emissions per PLN 1 million in revenue
YEAR	Mt CO ₂ e	CO ₂	CH ₄	HFCs		million Mg/ million Mg	million Mg/ million PLN
2017	8.14	1.06	6.03	0.01	1.04	0.458	0.000917
2018	8.22	1.10	6.05	0.02	1.05	0.447	0.000838
2019	7.92	1.05	5.63	0.02	1.22	0.443	0.000914

XI. Emissions of other substances (JSW Group) (Mg)

305-7

[Mg]	2018	2019	CHANGE 2018=100
Mass of other substances emitted into the air, including:	7 935.8	6 763.8	85.2
SO _x	1 772.6	1 600.3	90.3
NO _x	2 851.0	2 479.7	87.0
CO	2 870.5	2 312.1	80.5
Total particulate matter	441.7	371.7	84.2
Emissions of other substances per unit of revenue Mg/PLNm	0.81	0.78	

XII. Extractive waste management (JSW) (million Mg)

306-2
MM3

[million Mg]	2018	2019	CHANGE 2018=100
Generation of extractive waste, including:	10.8	12.1	112.0
- shaft stone (01 01 02)	0.1	0.1	100.0
- stone from mechanical coal processing facilities (01 04 12)	10.0	11.2	112.0
- flotation tailings (01 04 81)	0.7	0.8	114.3
Extractive waste management on surface	9.9	11.2	113.1
Management of aggregates on surface	0.74	0.76	102.7
Extractive waste management under ground	0.116	0.086	74.1
Management of aggregates under ground	0.002	0.002	100.0

XIII. Volume of waste (JSW Group) (million Mg)

[million Mg]	2018	2019	CHANGE 2018=100	306-2 MM3
Total quantity of hazardous waste generated	0.0074	0.0127	171.6	
Total quantity of waste other than hazardous	10.81	12.19	112.8	
Hazardous waste collected by other entities	0.0018	0.0016	88.9	
Waste other than hazardous collected by other entities	0.195	0.134	68.7	
Waste generation per unit of revenue (millions Mg/PLNm)	0.0011	0.0014		

XIV. Expenditures on environmental protection (JSW Group) (PLNm)

ITEM	2018*	2019*	CHANGE 2018=100
Fees for use of the environment	4.1	3.5	85.4
Fees for water services	15.7	14.5	92.4
Protection of water against salination	23.6	26.9	114.0
Rectification of mining damages	75.8	101.1	133.4
Investments in environmental protection	44.5	76.6	172.1
Rehabilitation	1.0	0.6	60.0
Total	164.7	223.2	135.5
Per unit of revenue (PLNm/PLNm)	0.017	0.026	

XV. Expenditures on rectification of mining damages (JSW) (PLNm)

MM5

	2018	2019	CHANGE 2018=100
Public sector	26.8	40.5	151.1
Private sector	34.7	41.9	120.7
Local government sector	14.3	14.8	103.5

XVI. Number of tasks concerning rectification of mining damages (JSW)

	2018	2019	CHANGE 2018=100
Public sector	73	81	111.0
Private sector	883	1 089	123.3
Local government sector	81	94	116.0

XVII. Distance of areas of high natural value from JSW Group's facilities

304-1

JSW Group Entity	Form of environmental protection	Name	Distance (within up to 15km)
Borynia	Nature reserve	-	-
	Landscape park	Rudy Landscape Park	7.47
		Rudy Landscape Park	8.05
	National park	-	-
	NATURA 2000	Dolina Górnej Wisły PLB240001	13.74
		Zbiornik Goczałkowicki - Ujście Wisły i Bajerki PLH240039	14.43
Zofiówka	Nature reserve	-	-
	Landscape park	Rudy Landscape Park	8.72
		Rudy Landscape Park	10.93
	National park	-	-
	NATURA 2000	Dolina Górnej Wisły PLB240001	10.19
		Zbiornik Goczałkowicki - Ujście Wisły i Bajerki PLH240039	11.85
Jastrzębie	Nature reserve	-	-
	Landscape park	Rudy Landscape Park	12.31
		Rudy Landscape Park	12.80
	National park	-	-
	NATURA 2000	Dolina Górnej Wisły PLB240001	12.96
Pniówek	Nature reserve	-	-
	Landscape park	Rudy Landscape Park	5.84
		Rudy Landscape Park	8.75
	National park	-	-
	NATURA 2000	Dolina Górnej Wisły PLB240001	7.51
		Zbiornik Goczałkowicki - Ujście Wisły i Bajerki PLH240039	8.08
		Pierściec PLH240022	12.70
Budryk	Nature reserve	-	-
	Landscape park	Rudy Landscape Park	11.82
		Rudy Landscape Park	3.96
	National park	-	-
	Nature park	Nature Park Potok Leśny together with tributaries	0.62
		Nature Park Potok Od Solarni together with tributaries	0.66
		Nature Park Potok Ornontowicki together with tributaries	0.96
		Nature Park Potok Łąkowy together with tributaries	1.39
		Nature Park Potok Z Bujakowa together with tributaries	1.77
Centralne Składowisko Odpadów Górniczych	Nature reserve	-	-
	Landscape park	Rudy Landscape Park	8.69
		Rudy Landscape Park	1.90
	National park	-	-

Knurów	Nature reserve	Las Dąbrowa - buffer zone	11.52
		Las Dąbrowa	11.88
	Landscape park	Rudy Landscape Park	5.05
		Rudy Landscape Park	3.02
	National park	-	-
Szczygłowie	Nature reserve	Las Dąbrowa - buffer zone	12.64
		Las Dąbrowa	13.20
	Landscape park	Rudy Landscape Park	4.50
		Rudy Landscape Park	within the area
	National park	-	-
Jadwiga	Nature reserve	Segiet - buffer zone	7.68
		Segiet	7.88
	Landscape park	-	-
	National park	-	-
	NATURA 2000	Podziemia Tarnogórsko-Bytomskie PLH240003	5.47
Radlin	Nature reserve	-	-
	Landscape park	Rudy Landscape Park	4.87
		Rudy Landscape Park	8.29
	National park	-	-
	NATURA 2000	Stawy Wielikąt i Las Tworkowski PLB240003	11.44
		Graniczny Meander Odry PLH240013	14.70
Przyjaźń	Nature reserve	Dolina Żabnika - buffer zone	13.02
		Dolina Żabnika	13.16
		Góra Chełm	13.52
	Landscape park	Orlich Gniazd - buffer zone	2.24
		Orlich Gniazd	7.97
		Kraków Valleys Landscape Park	13.49
		Kraków Valleys Landscape Park - buffer zone	14.8
	NATURA 2000	Łąki Dąbrowskie PLH240041	3.47
		Łąki w Sławkowie PLH240043	3.98
		Lipienniki w Dąbrowie Górniczej PLH240037	8.12
		Torfowisko Sosnowiec-Bory PLH240038	8.41
		Pustynia Błędowska PLH120014	8.54
		Ostoja Środkowojurajska PLH240009	9.49
		Pleszczotka PLH120092	10.95
		Armeria PLH120091	12.11
		Łąki w Jaworznie PLH240042	14.65

XVIII. Characteristic of areas of high natural value located near JSW Group's facilities

304-1

Protected area	Type of JSW Group location	Surface area	Characteristic of species present in the area
Natura 2000 – Dolina Górnej Wisły PLB240001	KWK „Borynia-Zofiówka-Jastrzębie” KWK „Pniówek”	Natura 2000 – 24740.2 ha	This area is one of the most important breeding and migration sites for over 160 bird species, which constitutes over 70% of the domestic population of breeding birds. The site consists of the lake Jezioro Goczałkowskie and nearby fish ponds established more than 600 years ago. There are at least 29 bird species from Annex I to the Birds Directive and Annex II to the Habitats Directive, and 8 species in the Polish Redbook, such as: great crested grebe, purple heron, little bittern, great bittern, lesser grey shrike, whiskered tern, black-crowned night heron, Mediterranean gull, black tern, common tern. This is an internationally-recognised bird site. The fish ponds also feature threatened water plants such as: water chestnut and fringed water lily.
Natura 2000 – Stawy Wielikąt i Las Tworkowski PLB240003	Koksownia Radlin	Natura 2000 – 914.5 ha	This area encompasses a complex of over a dozen old fish ponds with an overall surface area of approx. 400ha, situated in the Odra valley, with adjacent meadows, pastures and fields and the Las Tworkowski forest. The pond shores feature common reed, while the levees feature old deciduous trees. The site is home to more than 20 bird species from Annex I to the Birds Directive and other valuable and threatened bird species, including: white-tailed eagle, western marsh harrier, white and black stork, great egret, black woodpecker, middle spotted woodpecker, grey-headed woodpecker, whooper swan.
Natura 2000 – Zbiornik Goczałkowicki – Ujście Wisły i Bajerki PLH240039	KWK „Borynia-Zofiówka-Jastrzębie” KWK „Pniówek”	Natura 2000 – 1650.3 ha	The site encompasses the south-western section of lake Jezioro Goczałkowickie along with the Wisła and Bajerka estuaries. This area features riparian forest sections, willow shrubs, wet forests and reed and meadow sections. The area is an important site for water and water-and-land species listed in Annex II to the Habitats Directive and Annex I to the Birds Directive, including: European weatherfish, European fire-bellied toad, Northern crested newt, Eurasian otter, Western marsh harrier. Other aspects of high natural value within this area include rare phytocoenoses in Poland with lots of floating fern and common frogbit, along with plenty of water-and-mud birds.
Natura 2000 – Pierściec PLH240022	KWK „Pniówek”	Natura 2000 – 1702.1 ha	This area includes a breeding colony for lesser horseshoe bat at an old mill in Pierściec and a feeding area for this specie. The lesser horseshoe bat is a bat listed in Annex II of the Habitats Directive.
Natura 2000 – Podziemia Tarnogórsko-Bytomskie PLH240003	Koksownia Jadwiga	Natura 2000 – 3490.8 ha	This area includes underground excavations left over after heavy metal ore mining and is the second-largest bat winter site in Poland, numbering at least over a dozen thousand bats. Eight species of bat have been identified, including one - greater mouse-eared bat - found in Annex I of the Habitats Directive.

Protected area	Type of JSW Group location	Surface area	Characteristic of species present in the area
Natura 2000 – Graniczny Meander Odry PLH240013	Koksownia Radlin	Natura 2000 – 156.6 ha	This area covers a naturally meandering section of the Odra valley together with fragments of valuable river shore sites (riparian forest, willow shrubs, reed, wet meadows). Six types of habitats from Annex I of the Habitats Directive. There are two species of invertebrates from Annex II of the Habitats Directive, including the priority specie of beetle - hermit beetle - and other rare and threatened invertebrates.
Natura 2000 – Łąki Dąbrowskie PLH240041	Koksownia Przyjaźń	Natura 2000 – 384.8 ha	This area is very important in terms of retaining and protecting this habitat in the region. Wet meadows still cover a rather large area (approx. 50ha), featuring high diversity and constituting a habitat for multiple valuable species, including protected and endangered species. Purple moor-grass meadows and accompanying herb vegetation constitute a major habitat for scarce large blue and dusky large blue (Annex II of Habitats Directive).
Natura 2000 – Łąki w Sławkowie PLH240043	Koksownia Przyjaźń	Natura 2000 – 51 ha	This area contains exceptionally valuable plant communities in terms of both fauna and flora. There is a mosaic of meadow habitats (purple moor-grass meadows and fresh meadows) and wetland habitats, with very rich flora. This includes: Siberian iris, globeflower, marsh gentian, marsh helleborine, white adder's mouth, adder's-tongue, gladiolus imbricatus, bogbean, meadow restharrow, tofieldia. Eight species of butterfly have been identified here. Species listed in Annex II of the Habitats Directive are noteworthy: short-tailed blue and silver-studded blue.
Natura 2000 – Lipienniki w Dąbrowie Górniczej PLH240037	Koksownia Przyjaźń	Natura 2000 – 296.5 ha	An area with diverse habitats, in particular: bogs, wet meadows, reed, riparian forests, regular forests and coniferous swamps. Numerous valuable and rare plant species are found here, including post-glacial relict species. Poland's second-largest population of fen orchid (specie listed in Annex II of the Habitats Directive).
Natura 2000 – Torfowisko Sosnowiec-Bory PLH240038	Koksownia Przyjaźń	Natura 2000 – 2 ha	This area features low and transition bogs with a range of rare and protected vascular plant species as well as species characteristic of high bogs. A large population of fen orchid (specie listed in Annex II of the Habitats Directive) is found here.
Natura 2000 – Pustynia Błędowska PLH120092	Koksownia Przyjaźń	Natura 2000 – 1963.9 ha	This ecosystem is unique in Europe. This is the largest inland area of sand in central Europe with interesting forms typical of desert landscapes (dunes). There are four types of habitats with European significance, mainly xeric sand calcareous grasslands and inland dunes with open corynephorus and agrostis grasslands. There are also 12 bird species listed in Annex I of the Birds Directive, including European honey buzzard, European nightjar, black woodpecker and common kingfisher.

Protected area	Type of JSW Group location	Surface area	Characteristic of species present in the area
Natura 2000 – Ostoja Środkowo-jurajska PLH240009	Koksownia Przyjaźń	Natura 2000 – 5767.6 ha	This area is of significance as a valuable grouping of diverse and unique habitats - a total of 16 types of habitat from Annex I of the Habitats Directive have been identified. Among the vast forests, noteworthy are Dentario enneaphylli-Fagetum and Acer pseudoplatanus L. sections, located in the north-eastern boundaries. This is also an important habitat for rare plant and animal species (eight species from Annex II of the Habitats Directive). Numerous species of bat spend winters in the caves, such as lesser horseshoe bat, pond bat, brown long-eared bat. There is also the richest substitute section of endemic Cochlearia polonica.
Natura 2000 – Pleszczołka PLH120092	Koksownia Przyjaźń	Natura 2000 – 4.9 ha	Post-mining areas where 90% of the surface is taken up by calamine grasslands (a habitat listed in Annex I to the Habitats Directive), very rare in the country.
Natura 2000 – Armeria PLH120091	Koksownia Przyjaźń	Natura 2000 – 7.4 ha	Post-mining areas featuring calamine grasslands (a habitat listed in Annex I to the Habitats Directive).
Natura 2000 – Łąki w Jaworznie PLH240042	Koksownia Przyjaźń	Natura 2000 – 36.5 ha	This area contains exceptionally valuable plant communities in terms of both fauna and flora. Wet meadows are a habitat for protected, threatened and locally rare vascular plant species. These include: gladiolus imbricatus, Siberian iris, marsh gentian, fen orchid (listed in Annex II of the Habitats Directive). The meadows are home to 15 species of butterfly, including two blue species (Annex II of the Habitats Directive).
Las Dąbrowa nature reserve	KWK „Knurów-Szczygłowiec”	reserve - 76.6 ha buffer - 232.5 ha	The reserve's objective is to retain multi-species Carpinion betuli and riparian forests, along with a wealth of fauna and flora species, for scientific, natural, teaching and landscape purposes.
Segiet nature reserve	Koksownia Jadwiga	reserve - 24.5ha buffer - 81.3ha	The reserve's objective is to retain sections of a primeval beech forest, along with a wealth of fauna and flora species, for scientific, teaching and landscape purposes.
Dolina Żabnika nature reserve	Koksownia Przyjaźń	reserve - 48ha buffer - 214ha	The reserve's protection objective is to retain water biocoenosis and low and transition bogs with protected and rare species for scientific, teaching and landscape purposes.

Protected area	Type of JSW Group location	Surface area	Characteristic of species present in the area
Góra Chełm nature reserve	Koksownia Przyjaźń	reserve - 23.5 ha	The reserve's protection objective is to retain primeval beech forest sections on a limestone hill near the edge of Kraków-Częstochowa Upland for scientific and teaching purposes.
Rudy Landscape Park	KWK „Borynia-Zofiówka-Jastrzębie” KWK „Knurów-Szczygłowie” KWK „Pniówek” KWK „Budryk” Koksownia Radlin	landscape park - 49387 ha buffer - 14010 ha	The purpose for establishing this park, covering forests, rivers and ponds, farming land and buildings, is to retain and protect natural, natural and cultural, cultural and recreational qualities and values.
Eagles' Nests Landscape Park	Koksownia Przyjaźń	landscape park - 60807.2 ha buffer - 58751.9 ha	The Park's objective is to protect natural, historic, cultural and landscape values, including characteristic elements of inanimate nature, protect the natural diversity of fauna and flora, retain natural and semi-natural plant sections, with particular emphasis on xerothermic, bog vegetation and wet meadows, as well as to retain ecological corridors.
Kraków Valleys Landscape Park	Koksownia Przyjaźń	landscape park - 620686.1 ha buffer - 13017 ha	The Park's objective is to protect natural, historic, cultural and landscape values, including characteristic elements of inanimate nature, protect the natural diversity of fauna and flora, retain natural and semi-natural plant sections, with particular emphasis on xerothermic, bog vegetation and wet meadows, as well as to retain ecological corridors.

Confirmed incidents of corruption reported to authorities and ended with final ruling

205-3

	2018	2019
JSW Group	0	0
including JSW	0	0

102-55 Wskaźniki GRI

GRI Standards	GRI Guidelines	Area under ISO 26000	SDG	Commentary / description	Page
General disclosures (GRI 102: 2016)					
102-1	Name of the organisation	–	–	JSW Group, Jastrzębska Spółka Węglowa SA ("JSW SA," "JSW")	–
102-2	Brands, products and/or services	–	–	[JSW Group on the market]	4, 8
102-3	Location of the organisation's headquarters	–	–	Jastrzębie-Zdrój, Poland	–
102-4	Number of countries where the organisation operates, and the names of countries where it has significant operations and/or that are relevant to the topics covered in the report.	–	–	JSW Group and its companies conduct operating activities (extraction, processing of coal, production of coke) in Poland. Sales are mostly in Poland but also in foreign markets, with significant customers in: Austria, Italy, Czech Republic, Slovakia, Germany, India.	–
102-5	Nature of ownership and legal form	–	–	Spółka Akcyjna (joint-stock company), listed on Warsaw Stock Exchange	–
102-6	Markets served, including geographic locations, sectors served, types of customers and beneficiaries	–	–	Europe is the main sales market for the coke produced by the Group, but it is also sold to India. Coal-derivative products such as BTX and tar have long-term customers on the European market, while sulphur and ammonium sulphate are sold on the domestic market. Coke oven gas surpluses are sold to customers directly by the coking plants.	–
102-7	Scale of the organisation	–	–	[JSW Group on the market]	4
102-8	Total number of own employees and employees supervised by the company, by gender and by employment contract	6.4.	–	[Tables with non-financial information]	120, 121
102-9	Value chain description	6.4.3.	–	[JSW Group on the market]	8, 13
102-10	Significant changes during the reporting period concerning the size, structure, ownership form or value chain	–	–	[Business model], [Value chain]	8
102-11	Explanation whether and how the organisation applies the precautionary principle	6.2.	–	If there are doubts over whether a given situation may constitute a hazard, it is treated as constituting a hazard until this is unequivocally resolved. This may happen especially in the case of natural / geological hazards.	–

GRI Standards	GRI Guidelines	Area under ISO 26000	SDG	Commentary / description	Page
102-12	List of externally-developed economic, environmental and social charters, principles, or other initiatives to which the organisation subscribes, or which it endorses.	6.2.	–	[JSW Group on the market]	5
102-13	Membership of associations (such as industry associations) and/or national or international organisations	6.2.	–	[JSW Group on the market]	5
102-14	Statement from the most senior decision-maker of the organization (such as CEO, chair, or equivalent senior position) about the relevance of sustainability to the organisation and its strategy for addressing sustainability	6.2.	–	[CEO's letter]	2
102-15	Description of key impacts, risks and opportunities	6.2.	–	[CEO's letter], [Value creation model]	2, 14
102-16	Values, principles, standards, and norms of behaviour and ethics	6.2.	16	[Business strategy directions] [Objective 3: We respect each and every human being and our community, sharing responsibility for JSW and its assets]: [Human rights and combating discrimination] [Objective 7: We respect transparency and honesty in management]: [JSW Group's Code of Ethics]	19, 54, 114
102-18	Governance structure of the organization, including committees of the highest governance body, responsible for specific tasks such as strategy formulation or organisational oversight	6.2.	16	[Management structure]	7
102-40	List of stakeholders engaged by the organisation	–	–	[Approach to reporting]	32

GRI Standards	GRI Guidelines	Area under ISO 26000	SDG	Commentary / description	Page
102-41	Percentage of total employees covered by collective bargaining agreements	–	8	[Objective 7: We respect transparency and honesty in management]: [Employer-employees dialogue]	117
102-42	Basis for identifying and selecting stakeholders with whom the organisation engages	–	–	[Sustainable development strategy] [Approach to reporting]	26, 31
102-43	Approach to stakeholder engagement, including frequency of engagement by type and by stakeholder group	–	–	[Approach to reporting] [Objective 7: We respect transparency and fairness in management]: [Employer-employees dialogue]	33, 118
102-44	Key topics and concerns that have been raised through stakeholder engagement and how the organisation has responded to those key topics and concerns, including through its reporting	–	–	[Approach to reporting]	34
102-45	List of all entities included in the organisation's consolidated financial statements	–	–	The report encompasses all entities included in the consolidated financial statements, with application of the materiality rule, i.e. focusing on activities that are material from the viewpoint of their impact on JSW Group. This is why in the case of entities performing support functions at JSW Group (e.g. training, IT, transport services), information about them is limited or not singled out in descriptions of comprehensive processes. Nonetheless, material figures pertaining to these companies are included in the report (e.g. employment, financial results). Some of the figures, e.g. concerning environmental impact, are limited to companies with material impact.	–
102-46	Process for defining the report content	–	–	[Approach to reporting]	34
102-47	Material topics of social and environmental impact identified	–	–	[Approach to reporting]	34
102-48	Effect of any restatements of information given in previous reports, and the reasons for such restatements and their impact (e.g. mergers or acquisitions, change of base year/period, nature of business, measurement methods)	–	–	no restatements	–

GRI Standards	GRI Guidelines	Area under ISO 26000	SDG	Commentary / description	Page
102-49	Significant changes from previous reporting periods concerning the scope, reach or measurement methods applied in the report	–	–	The previous report was prepared in accordance with the standard SIN.	–
102-50	Reporting period (e.g. financial/calendar year)	–	–	1.01.2019–31.12.2019	–
102-51	Date of the most recent previous report (if published)	–	–	08.2019 (integrated report with non-financial section prepared in accordance with SIN)	–
102-52	Reporting cycle (annual, biennial, etc.)	–	–	annual	–
102-53	Contact person	–	–	Agnieszka Barzycka Head of CSR Team tel.: +48 32 756 4412 abarzycka@jsw.pl	–
102-54	Compliance with GRI Standards	–	–	[Approach to reporting]	31
102-55	CSR Index	–	–	[GRI Standards]	138
102-56	Policy and current practice with regard to seeking external assurance for the report	7.5.3	–	[Approach to reporting]	31
Market presence (GRI 202: 2016)					
202-2	Proportion of senior management hired from the local community	6.8 6.8.5	8	[Tables with non-financial information]	121
Indirect Economic Impacts (GRI 203: 2016)					
203-1	Infrastructure investments and services supported	6.8 6.8.6	8, 9, 11	[Objective 5: We respect the natural environment, nature in our immediate vicinity and local communities in areas where JSW operates]: [Development of post-mining areas]	90
203-2	Significant indirect economic impacts	6.5.3 6.5.4 6.5.5	9	[Objective 4: We respect non-renewable resources by using them effectively]: [Products of the future]	62

GRI Standards	GRI Guidelines	Area under ISO 26000	SDG	Commentary / description	Page
Anti-corruption (GRI 205: 2016)					
103-1 (205)	Nature of the significant area	6.6 6.6.3	–		
103-2 (205)	Management approach (DMA)	6.6 6.6.3	–	[Objective 7: We respect transparency and honesty in management]: [Corruption prevention]	115
103-3 (205)	Measurement and evaluation	6.6 6.6.3	–		
205-1	Operations assessed for risks related to corruption	6.6 6.6.3	–		
205-2	Communication and training about anti-corruption policies and procedures	6.6 6.6.3	–	[Objective 7: We respect transparency and honesty in management]: [Corruption prevention]	115
205-3	Confirmed incidents of corruption and actions taken	6.6 6.6.5	–	[Tables with non-financial information]	137
Anti-competitive behaviour (GRI 206: 2016)					
206-1	Legal actions for anti-competitive behaviour, anti-trust, and monopoly practices	6.4. 6.4.6	8	[Objective 7: We respect transparency and honesty in management]: [Respect for the rules of law]	118
Natural environment: energy (GRI 302: 2016)					
103-1 (302)	Nature of the significant area	–	–		
103-2 (302)	Management approach (DMA)	–	–	[Objective 1. We respect science and make use of innovative solutions in order to develop our business in a more sustainable manner]	36, 60, 66
103-3 (302)	Measurement and evaluation	–	–	[Objective 4: We respect non-renewable resources by using them effectively]	
302-1	Direct and indirect energy consumption by primary energy source	6.5. 6.5.4	7, 8, 12, 13	[Tables with non-financial information]	127
302-3	Energy efficiency	6.5. 6.5.4.	7, 8, 12, 13	[Tables with non-financial information]	127

GRI Standards	GRI Guidelines	Area under ISO 26000	SDG	Commentary / description	Page
Natural environment: biodiversity (GRI 304: 2016)					
103-1 (304)	Nature of the significant area	6.5 6.5.6	14, 15	[Objective 5: We respect the natural environment, nature in our immediate vicinity and local communities in areas where JSW operates]: [Impact on areas of high environmental value]	84
103-2 (304)	Management approach (DMA)	6.5 6.5.6	14, 15		
103-3 (304)	Measurement and evaluation	6.5 6.5.6	14, 15		
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	6.5 6.5.6	14, 15	[Tables with non-financial information]	132
304-2	Significant impacts of activities, products, and services on biodiversity	6.5 6.5.6	14, 15	[Objective 5: We respect the natural environment, nature in our immediate vicinity and local communities in areas where JSW operates]: [Impact on areas of high environmental value]	84
Natural environment: emissions (GRI 305: 2016)					
103-1 (305)	Nature of the significant area	6.5 6.5.5.	13	[Objective 4: We respect non-renewable resources by using them effectively]: [Energy efficiency], [Carbon footprint]	60, 66
103-2 (305)	Management approach (DMA)	6.5 6.5.5.	13		
103-3 (305)	Measurement and evaluation	6.5 6.5.5.	13		
305-1	Direct (Scope 1) GHG emissions	6.5 6.5.5.	13	[Tables with non-financial information]	130
305-2	Energy indirect (Scope 2) GHG emissions	6.5 6.5.5.	13	[Tables with non-financial information]	130
305-4	GHG emissions intensity	6.5 6.5.5.	13	[Tables with non-financial information]	130
305-5	Reduction of GHG emissions	6.5 6.5.5	13	[Objective 4: We respect non-renewable resources by using them effectively]: [Energy efficiency]	66
305-7	Nitrogen oxides (NOX), sulphur oxides (SOX), and other significant air emissions	6.5 6.5.5.	13	[Tables with non-financial information]	130

GRI Standards	GRI Guidelines	Area under ISO 26000	SDG	Commentary / description	Page
Natural environment: Effluents and Waste (GRI 306: 2016)					
103-1 (306)	Nature of the significant area	6.5. 6.5.3.	6, 14	[Objective 1: We respect science and make use of innovative solutions in order to develop our business in a more sustainable manner]	7, 82, 84
103-2 (306)	Management approach (DMA)	6.5. 6.5.3.	6, 14	[Objective 4: We respect non-renewable resources by using them effectively]: [Management of extractive by-products]	
103-3 (306)	Measurement and evaluation	6.5. 6.5.3.	6, 14	[Objective 5: We respect the natural environment, nature in our immediate vicinity and local communities in areas where JSW operates]: [Water management], [Waste management]	
306-1	Total volume of planned and unplanned water discharges by quality and destination	6.5. 6.5.3.	6, 14	[Tables with non-financial information]	129
306-2	Total weight of waste by type of waste and by disposal method	6.5. 6.5.3.	6, 14	[Tables with non-financial information]	130, 131
306-3	Significant spills	6.5. 6.5.3.	6, 14	[Objective 5: We respect the natural environment, nature in our immediate vicinity and local communities in areas where JSW operates]: [Impact on the surrounding natural environment]	85
306-4	Transport of hazardous waste	6.5. 6.5.3.	6, 14	In the transport of hazardous waste (ADR), standards and methodologies compliant with the requirements listed in ADR are applied.	–
306-5	Water bodies affected by water discharges and/or run-off	6.5. 6.5.3.	6, 14	[Objective 5: We respect the natural environment, nature in our immediate vicinity and local communities in areas where JSW operates]: [Impact on the surrounding natural environment]	83
Natural environment: Environmental Compliance (GRI 307: 2016)					
307-1	Non-compliance with environmental laws and regulations	6.5	6, 7, 13, 14, 15	[Objective 5: We respect the natural environment, nature in our immediate vicinity and local communities in areas where JSW operates]: [Impact on the surrounding natural environment]	85
Human resources: Employment (GRI 401)					
103-1 (401)	Nature of the significant area	6.4. 6.4.3.	5, 8		–
103-2 (401)	Management approach (DMA)	6.4. 6.4.3.	5, 8	[Objective 3: We respect each and every human being and our community, sharing responsibility for JSW and its assets]	–
103-3 (401)	Measurement and evaluation	6.4. 6.4.3.	5, 8		–

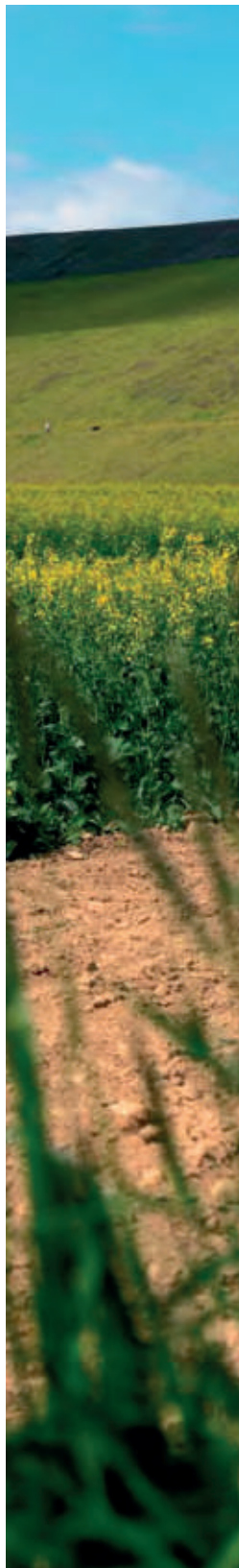
GRI Standards	GRI Guidelines	Area under ISO 26000	SDG	Commentary / description	Page
401-1	Total number and rate of new employee hires during the reporting period, by age group, gender and region	6.4. 6.4.3.	5, 8	[Tables with non-financial information]	122, 123
401-3	Total number of employees that returned to work in the reporting period after parental leave ended, by gender	6.4. 6.4.3.	5, 8	[Tables with non-financial information]	123
Human resources: Labor/Management Relations (GRI 402: 2016)					
402-1	Minimum notice periods regarding operational changes	6.4 6.4.3	8	Notice periods are compliant with the Labour Code.	–
Workplace: Occupational Health and Safety (GRI 403:2018)					
103-1 (403)	Nature of the significant area	6.4. 6.4.6.	8	[Objective 1. We respect science and make use of innovative solutions in order to develop our business in a more sustainable manner] [Objective 2: We respect human life and health and refuse to compromise on safety]	36, 44
103-2 (403)	Management approach (DMA)	6.4. 6.4.6.	8		
103-3 (403)	Measurement and evaluation	6.4. 6.4.6.	8		
403-1	Occupational health and safety management system	6.4. 6.4.6.	8	[Objective 2: We respect human life and health and refuse to compromise on safety]	45, 48, 49
403-2	Hazard identification, risk assessment, and incident investigation	6.4. 6.4.6.	8	[Objective 2: We respect human life and health and refuse to compromise on safety]	46, 48, 49
403-3	Occupational health services	6.4. 6.4.6.	3, 8	[Objective 2: We respect human life and health and refuse to compromise on safety]	46
403-4	Worker participation, consultation, and communication on occupational health and safety	6.4. 6.4.6	8	[Objective 2: We respect human life and health and refuse to compromise on safety]	47
403-5	Worker training on occupational health and safety	6.4. 6.4.6.	8	[Objective 2: We respect human life and health and refuse to compromise on safety]	47

GRI Standards	GRI Guidelines	Area under ISO 26000	SDG	Commentary / description	Page
403-6	Promotion of worker health	6.4. 6.4.6.	3, 8		46, 49
403-7	Prevention and mitigation of occupational health and safety impacts directly linked	6.4. 6.4.6.	8		46, 49
403-8	Workers covered by an occupational health and safety management system	6.4. 6.4.6.	8	[Objective 2: We respect human life and health and refuse to compromise on safety]	46
403-9	Work-related injuries	6.4. 6.4.6.	3, 8	[Tables with non-financial information]	126
403-10	Work-related ill health	6.4. 6.4.6.	3, 8	[Tables with non-financial information]	126
Human resources: training and development (GRI 404: 2016)					
404-1	Average hours of training per year per employee	6.4 6.4.7	4	[Objective 3: We respect each and every human being and our community, sharing responsibility for JSW and its assets]: [Supporting employees in personal development]	55
404-2	Programs for upgrading employee skills and transition assistance programs	6.4 6.4.7	4	[Objective 3: We respect each and every human being and our community, sharing responsibility for JSW and its assets]: [Supporting employees in personal development]	55
Human resources: Diversity and Equal Opportunity (GRI 405: 2016)					
405-1	Diversity of governance bodies and employees	6.3 6.3.7	5	[Tables with non-financial information]	120, 124, 125
Zasoby ludzkie: Niedyskryminowanie (GRI 406: 2016)					
406-1	Incidents of discrimination and corrective actions taken	6.3 6.3.7	5	[Human rights and combating discrimination]	53, 54
Society: Local Communities (GRI 413: 2016)					
103-1 (413)	Nature of the significant area	–	–	[Objective 5: We respect the natural environment, nature in our immediate vicinity and local communities in areas where JSW operates]	78
103-2 (413)	Management approach (DMA)	–	–		–
103-3 (413)	Measurement and evaluation	–	–		–

GRI Standards	GRI Guidelines	Area under ISO 26000	SDG	Commentary / description	Page
413-1	Nature, scale and effectiveness of programs and practices in evaluating and managing impact of the organisation's activities on local communities, including impact of entering the market, conducting and ending activities	6.3.9. 6.8. 6.8.5. 6.8.7. 6.6.7.	–	[Objective 5: We respect the natural environment, nature in our immediate vicinity and local communities in areas where JSW operates]: [Dialogue with local communities and authorities], [Impact of mining activities (mining damages)], [Cooperation with schools], [Development of post-mining areas], [Community engagement]	79, 80, 86, 90, 92
413-2	Operations with significant actual and potential negative impacts on local communities	1, 2	–	[Objective 5: We respect the natural environment, nature in our immediate vicinity and local communities in areas where JSW operates]: [Dialogue with local communities and authorities], [Impact of mining activities (mining damages)], [Development of post-mining areas],	79, 80, 90
Society: Customer Privacy (GRI 418: 2016)					
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	–	–	[Objective 7: We respect transparency and honesty in management]: [Respect for the rules of law]	116
Society: Socioeconomic Compliance (GRI 419: 2016)					
419-1	Non-compliance with laws and regulations in the social and economic area			[Objective 7: We respect transparency and honesty in management]: [Respect for the rules of law]	118
Industry disclosures					
MM3	Total weight of waste rock	–	3, 6, 12	[Tables with non-financial information]	130, 131
MM4	Number of strikes lasting more than one week	–	8	0 (no strikes)	–
MM5	Compensation for local communities suffering damages due to mining activities	–	1, 2	[Impact of mining activities (mining damages)]	80, 131
MM10	Development of exit strategy from given area	–	–	[Development of post-mining areas]	90

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