

Committed to a Sustainable Future

Bazan Group ESG Report 2019-2021



The Bazan Group will serve as an essential bridge to the future of Israel's transportation energy sector, leading a transformation focused on sustainability and innovation in the fuels and polymers business. 🔥🔥



Committed to a Sustainable Future

Bazan Group - ESG Report 2019-2021

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A MESSAGE FROM THE CHAIRMAN AND THE CEO

Dear readers,

We are proud to present Bazan Group's ESG Report for 2019-2021. This report represents yet another pillar in our vision of serving as an essential bridge to the future of the transportation energy sector in Israel, and leading a transformation focused on sustainability and innovation in the fuels and polymers business. We have considered our vision in depth and formulated it with rigor, and we are now putting it into practice.



Moshe Kaplinsky
Chairman of the
Board of Directors



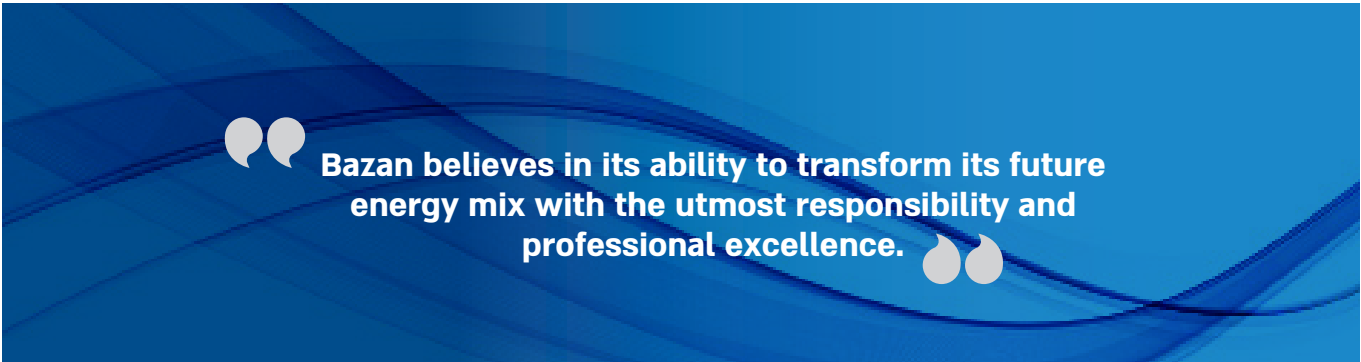
Malachi Alper
CEO

The last two years have brought the West to a crucial crossroads. The Covid-19 pandemic, the energy crisis engendered by the conflict in Ukraine, and global inflation have jointly led to something of a disillusionment, raising the need for a new plan regarding energy, focused on energy continuity. The discourse in Europe is shifting - from a focus on climate change to greater emphasis on delivery capability and energy prices, alongside investment in reducing carbon emissions.

These shifts will have long-term effects in Israel too; thus, a functional energy sector must undergo a responsible transformation, taking energy continuity into consideration. The lesson we should learn from the global developments concerns the importance of planning and the need to carry out changes in a gradual and measured way, with cautious decision-making.

The Bazan Group presents a clear strategy, offering solutions that address the hybrid period of the coming few years. In addition to essential investment in fossil fuel infrastructures, we have presented plans for investment in innovative plastic recycling technologies and long-term investments in the hydrogen sector.

The vision of Bazan is aligned with the Israeli government goal of achieving the goal of net zero emissions by 2050. If we succeed in bringing about this transformation, together – the private sector, including well-established companies such as Bazan as well as innovator start-ups, and the government sector – we can build a true partnership



and create solutions for the future. This is the only possible foundation for building the bridge to tomorrow's energy.

The global energy crisis is an immense challenge, taking place on our watch. Long-lasting business solutions will be those that are sustainable and have positive impacts; to attain our goals, we must invest in these solutions as soon as right now. The Bazan Group has tangible plans to achieve 15% in green polymers by 2025, and 30% by 2030; these plans entail an investment of up to USD 240 million in this field. We will invest up to USD 180 million in improving our mix of products and logistical infrastructures, to ensure the continuity of supply while reducing our carbon footprint. We will invest approximately USD 50 million in the development of blue and green hydrogen and plan to lead the market in hydrogen for transportation and industrial use.

This report represents yet another step towards the implementation of our strategy. We have placed ESG principles at the forefront of our enterprise; these principles will be embedded across our entire operations, with international standards forming the ethical foundation for our business and organizational culture.

We invite you to read the report and use it as an opening for questions, comments, and further insights, so that we can continue the dialogue and improve our performance as we move forward.

Malachi Alper
CEO

Moshe Kaplinsky
Chairman of the Board of Directors

COMMITTED TO ESG PRINCIPLES



Dear Stakeholders,

I am happy to share with you the ESG Report of the Bazan Group for 2019, 2020, and 2021. The report reviews our environmental, social (community), and corporate governance activities.

The ESG Report is being published in conjunction with a significant change at the Bazan Group: the group's commitment to ESG principles is now one of the four pillars of our overarching corporate strategy.

Over the last few months, we have established a unit dedicated to this area. As a member of management, I am proud to lead our ESG work, in collaboration with all units of the Bazan Group. The new unit will initiate and lead long-term improvement processes, work synergize with other units, and maintain a continual dialogue with our stakeholders – our employees, investors, customers, suppliers, and business partners. Clear targets, a well-formed plan, and resource allocation are some of the ways our commitment is being expressed in practice.

Among our specific ESG objectives are: to achieve **30% in green polymers** production by 2030, creating a new life cycle for used plastics manufactured from polymers;

formulate a **climate plan** and reduce carbon emissions in the long term; and improve safety to **lower our incident rate (IR) to 0.5**. We will also continue to invest in adopting the relevant technologies and in promoting the development of **blue and green hydrogen**.

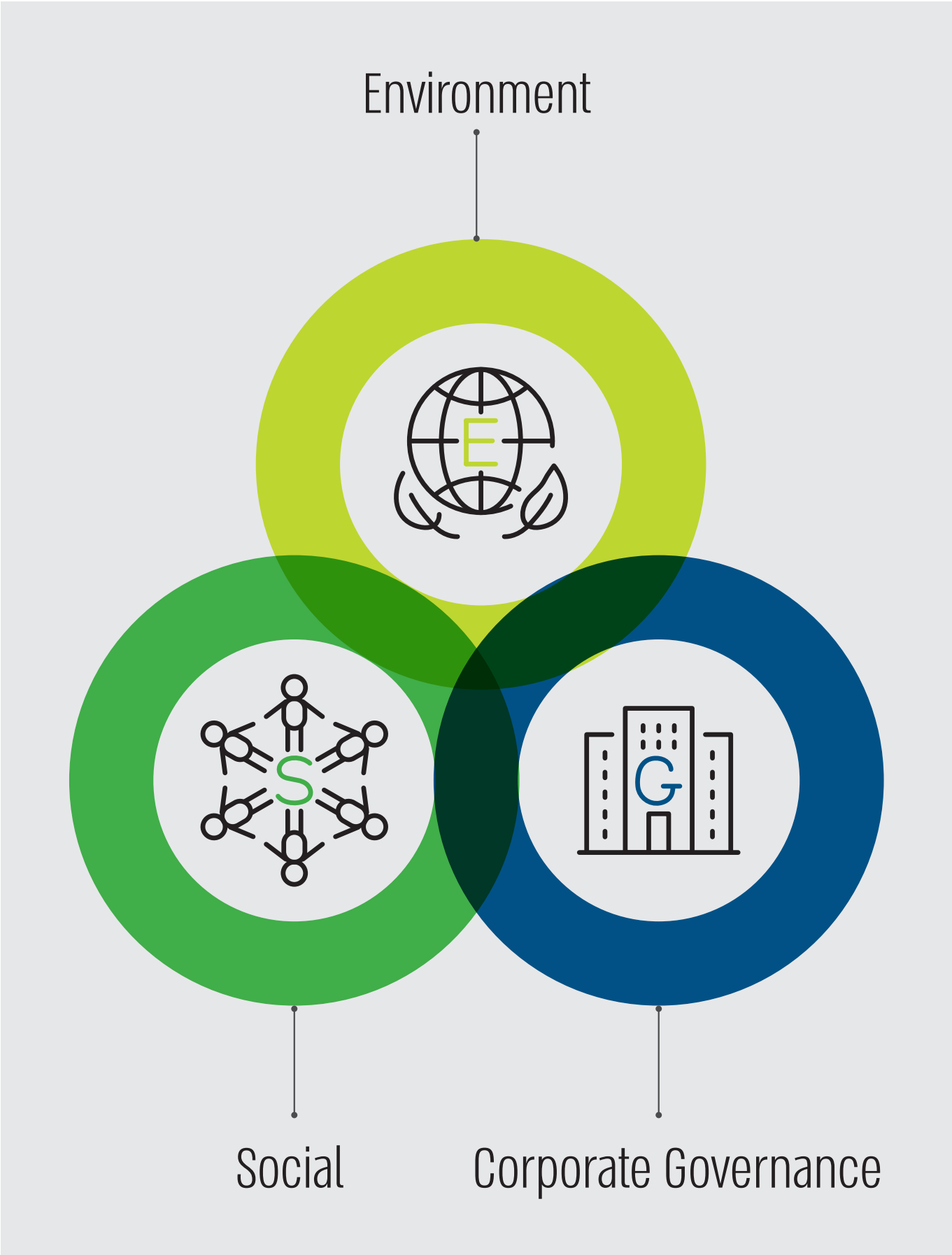
As a manufacturer in the energy industry - which was perceived as a 'masculine' field for many years - we aim to achieve gender equality in our upper echelons. We have therefore set a target of **40% women in senior management** by 2024. At the same time, we will work to enhance commitment to ESG values among our employees and managers, by conducting training programs, boosting engagement, and instilling an organizational culture aligned with these values.

We also intend to focus on **expanding our reporting** on ESG aspects. This effort is already reflected in the current report, which summarizes three years of information in a format consistent with the GRI and SASB global reporting standards, with the aim of delivering an accurate and clear snapshot of the Bazan Group's actions, vision, and commitment to the future. In the coming years, ESG reports will be issued annually.

It is our aim to position Bazan in line with the top tier of global companies in its field; we believe that to succeed, we must all dedicate ourselves to this common cause. You are invited to read the report, and to contact us at BazanESG@bazan.co.il for further dialogue and to continue the important work ahead.

Sincerely,
Hagit Genish Gill
Group Head of ESG

“The Bazan Group has made a commitment to ESG values, as one of the four pillars of its overarching strategy; it is our ambition to position the Group in line with the top tier of global companies in its field.”



Introducing the Bazan Group

*Committed to a
Sustainable Future*

ABOUT THE BAZAN GROUP

Who we are

The Bazan Group is one of Israel's largest energy groups and the principal supplier of fuels and products used in manufacturing, transportation, agriculture, infrastructure, and by households.

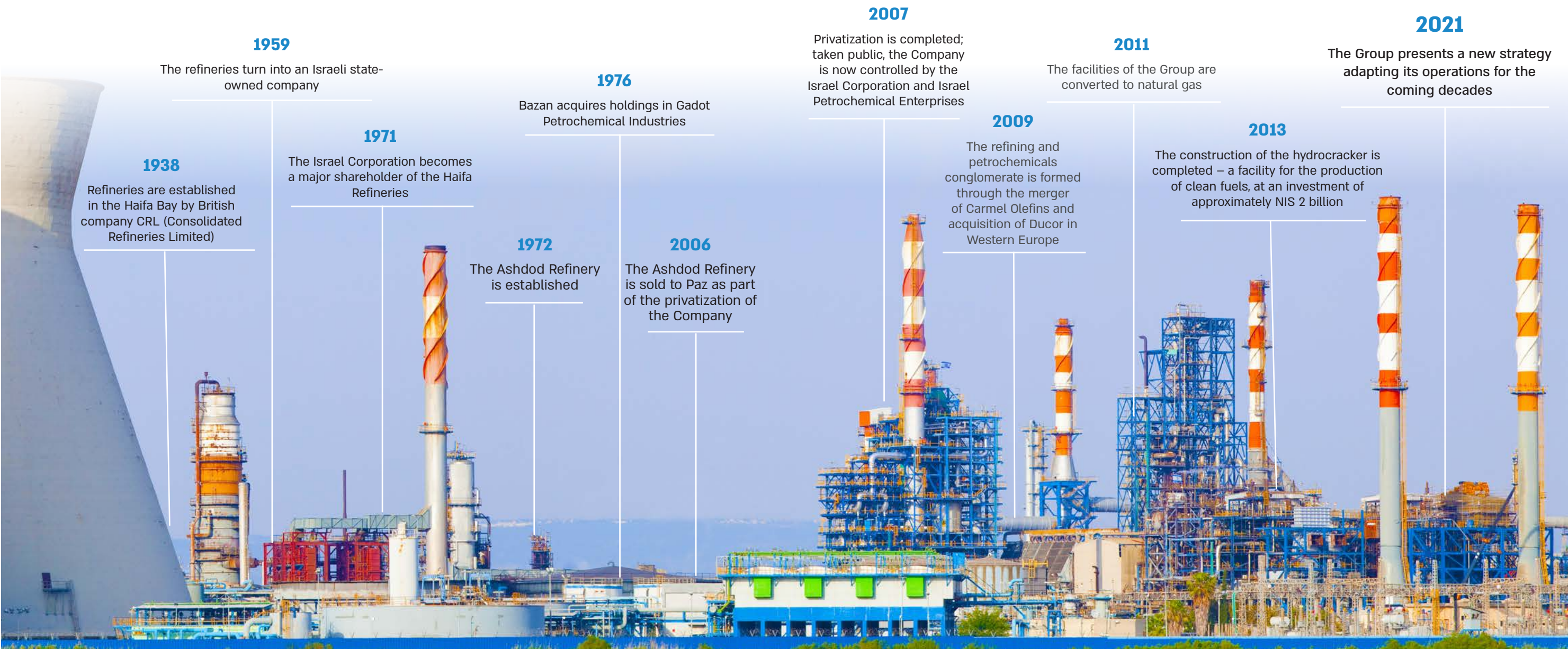
The Company is traded on the Tel Aviv Stock Exchange; as of 2021, it has approximately 1,400 direct employees, from northern Israel and across the country. The Group holds the foremost refining and petrochemicals conglomerate in Israel. In addition to its wide range of petroleum products, the Group is a leader in the production of downstream products, primarily polymers for the plastics industry, as well as

aromatics, which constitute intermediate products for various industries, such as textiles, packaging, pharmaceuticals, and paints.

Over 60% of the Company's products are distributed in the domestic market, with the remainder being exported overseas.

The range of products produced by the Company contributes directly and indirectly to the Israeli economy, creating presence for Blue & White (made in Israel) products around the world.

The Group operates in two geographic areas: at the Company's facilities in Haifa, Israel, and at its Ducor plant in the port city of Rotterdam, The Netherlands.



Over 80 years of leadership



2

Main areas of activity:

Refining

By Oil Refineries Ltd. (Bazan) and Gadiv Petrochemical Industries Ltd. (Gadiv)

Polymers

By Carmel Olefins Ltd. (Carmel Olefins) and Ducor Petrochemicals B.V. (Ducor)



2

Geographic areas: Israel and Europe (The Netherlands)



~1,400

employees as of 2021



Annual refining capacity

10 Million

Tons of petroleum



~14,000

Employees – direct and indirect contribution to employment in Israel*

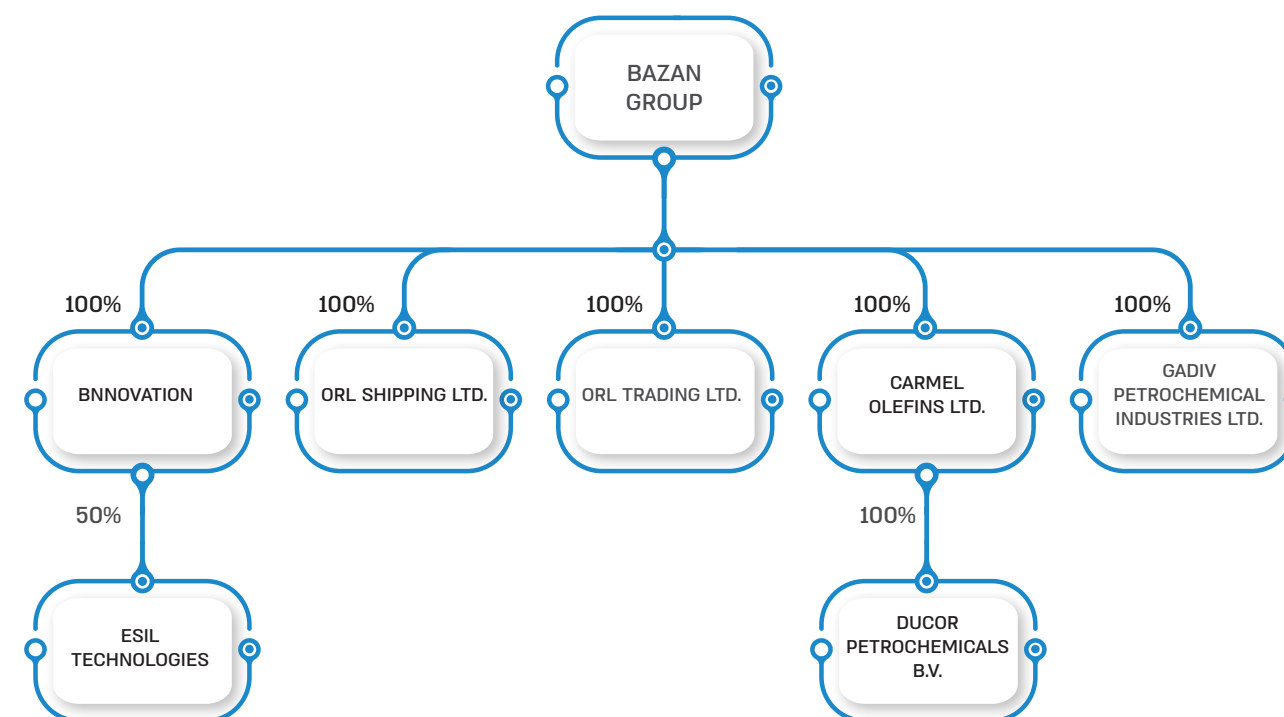


11.1

Nelson Complexity Index score

* According to a report by global consulting firm BDO for 2021.

The Company's holding structure



Exports to dozens of destinations worldwide



NIS 6.4 Billion

The total contribution to Israel's GDP in 2021*

* According to a report by global consulting firm BDO for 2021.

BAZAN GROUP – AREAS OF ACTIVITY

The Bazan Group produces petroleum products used in the energy sector and for transportation; polymers used as raw materials in the plastics industry; and aromatics - used as raw materials in the chemical and petrochemical industries.

The Refineries



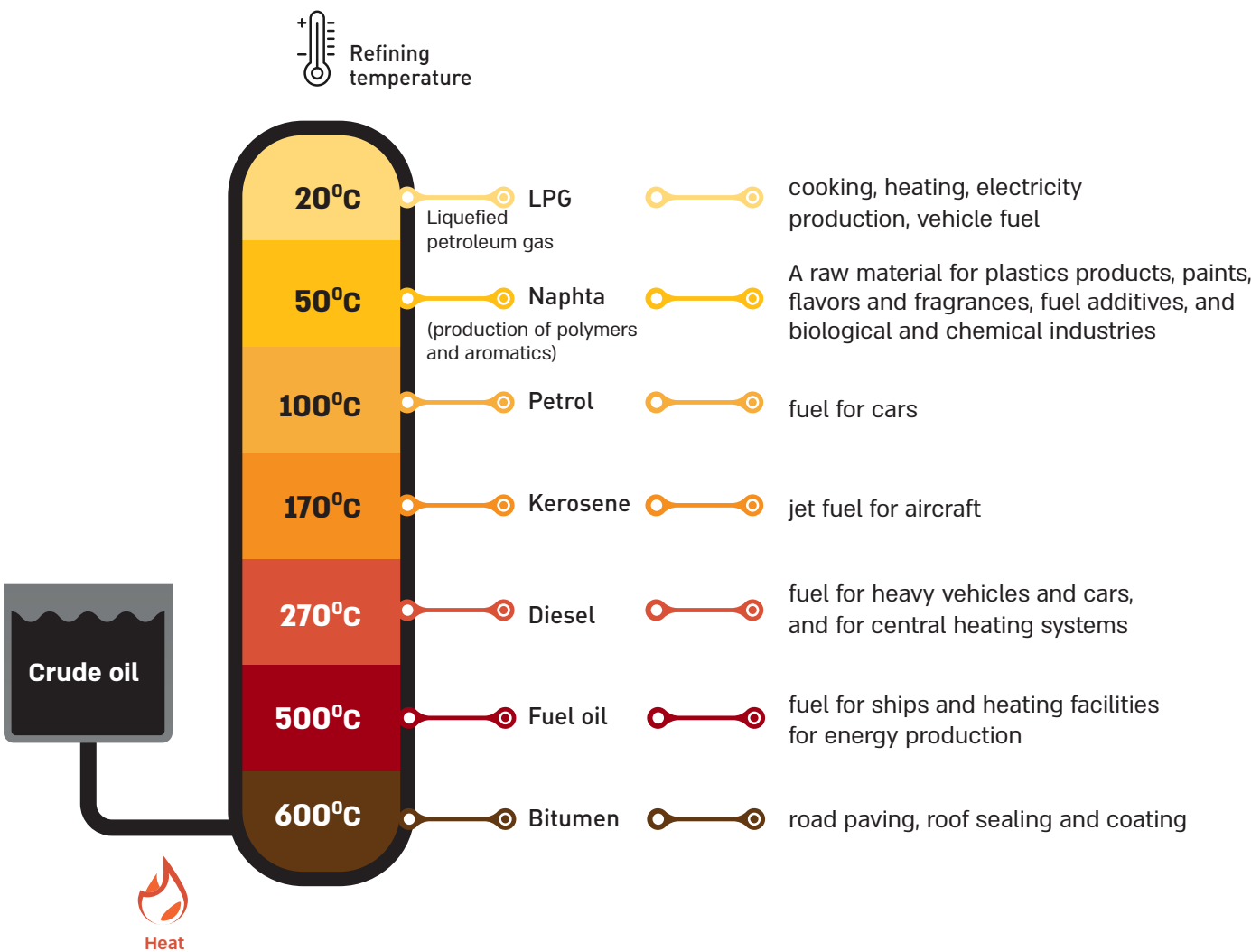
Crude oil reaches the refinery via pipelines or tankers, from various global sources. The core element of the production process is refining, in which the various components of crude oil are separated and transformed into useful products. Refining processes are carried out at high temperatures of approximately 400 °C. The products are differentiated by their respective boiling points.

The unrefined residue remaining at the end of the refining process is used to produce asphalt and fuel oil. The residue

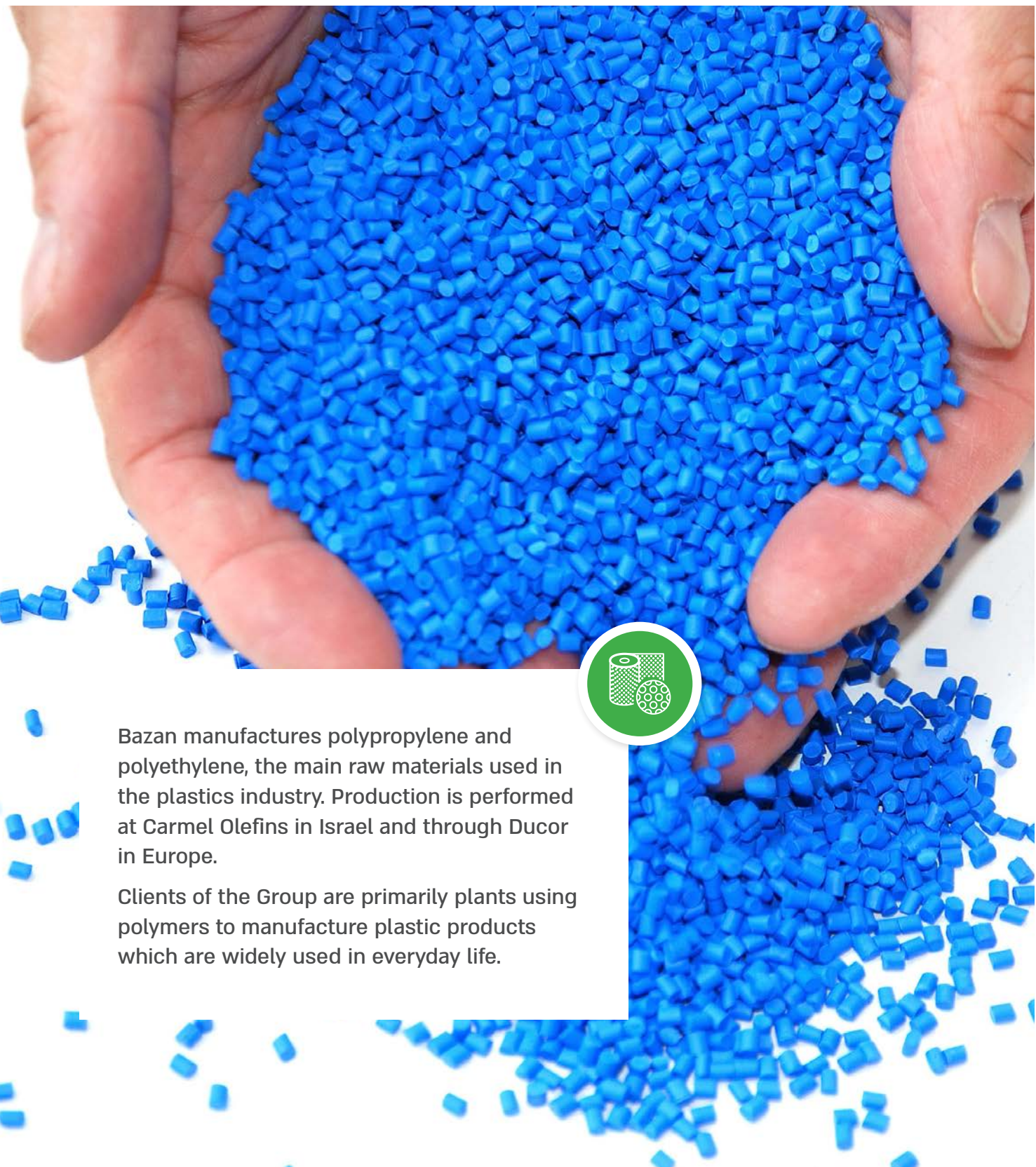
undergoes a visbreaking process aimed at converting the fuel oil into a product that can flow through a pipeline at ambient temperatures. The products undergo finishing-off processes for the purpose of decontamination and cleansing, and to improve product attributes, such as by reducing sulfur content.

In the final stage, the products undergo finishing processes in order to meet the requisite specifications.

Refining outputs



Polymers



Bazan manufactures polypropylene and polyethylene, the main raw materials used in the plastics industry. Production is performed at Carmel Olefins in Israel and through Ducor in Europe.

Clients of the Group are primarily plants using polymers to manufacture plastic products which are widely used in everyday life.

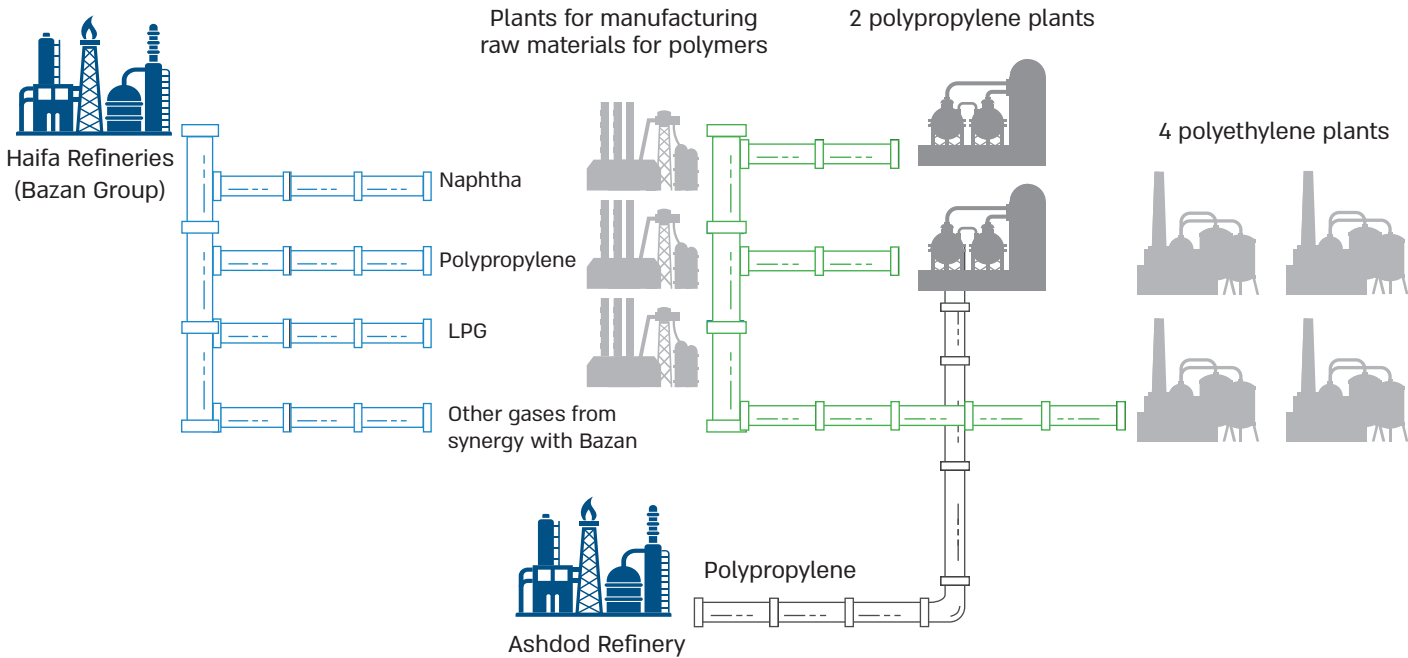
Polymer production

The Carmel Olefins production plants in Israel operate as a single concern and are mutually dependent on the continuous operation of each of the plants and of the plants of the Company and Gadiv.

Carmel Olefins operates three main clusters of plants: the monomer plants cluster (the ethylene cracker facility and the OCU facility, which manufactures propylene); the polypropylene plants cluster ; and the polyethylene plants cluster.

Production processes are carried out at extreme temperatures, from minus 150°C to approximately 900°C. The Carmel Olefins plants are interconnected directly by a pipeline system and receive shared services such as electricity, steam, and water supply, storage, and other services from a central service system, part of which is mutually backed by the Group's service system.

Access to a variety of raw materials



Synergy between facilities as a basis for improved operational and energy efficiency

The Bazan Group operates in the areas of refining, olefin production, and petrochemical industries, in Israel and Europe. The structure of the Group and the concentration of its facilities in a single geographic region confer significant benefits:

1. **The concentration of the plants allows maximal utilization of raw materials, along with reduction of byproducts of the refining and production processes, as the byproducts of one process serve as raw materials for another.** Energy and intermediate

materials used in the work process can also serve the other plants.

2. **The companies work jointly to maximize the added value derived from their collaboration.** For example, production planning is performed by the Optimization Unit; inputs such as natural gas, electricity, and others are purchased jointly; and headquarters provides services to all of the Group companies and integrates their needs with maximum efficiency.

BAZAN GROUP – USES OF REFINING OUTPUTS

Refinery outputs are used in manufacturing, consumer goods, transportation, and agriculture.

Transportation




**Land transportation**
Output: gasoline and diesel fuel
Production: refineries

**Jet fuel**
Output: kerosene
Production: refineries

**Asphalt for roads**
Output: fuels
Production: refineries


**Ship fuel (low-sulfur fuel oil)**
Output: fuel oil
Production: refineries

Manufacturing and Agriculture*



Manufacturing


**Energy and raw materials for manufacturing**
Output: fuel oil and additional products
Production: refineries

**Paints**
Output: paraxylene
Production: Gadiv

**Sealing products**
Output: bitumen
Production: refineries

**Vehicle components**
Output: polymers
Production: Carmel Olefins


**Pipelines**
Output: polymers
Production: Carmel Olefins

**Insulation products**
Output: bitumen
Production: refineries

**Cooling system additives**
Output: aromatics
Production: Gadiv

Agriculture

**Pesticides**
Output: solgad
Production: Gadiv

**Pharmaceuticals**
Output: toluene
Production: Gadiv

**Sheets for agriculture**
Output: polymers
Production: Carmel Olefins

**Pesticides**
Output: orthoxylene
Production: Gadiv

**Shelf-life extending food packaging**
Output: polymers
Production: Carmel Olefins

* The outputs are used as raw materials in agriculture, manufacturing, household products, and consumer goods, with the exception of LPG.

Households*



**Household cooking gas**
Output: liquefied petroleum gas (LPG)
Production: refineries


**Green home systems**
Output: polymers
Production: Carmel Olefins


**Home and garden furniture**
Output: polymers
Production: Carmel Olefins


**Fibers (for carpet production)**
Output: polymers
Production: Carmel Olefins


* The outputs are used as raw materials in agriculture, manufacturing, household products, and consumer goods, with the exception of LPG.


Consumer goods*





**Medical protective equipment**
Output: polymers
Production: Carmel Olefins


**Cosmetics**
Output: aromatics
Production: Gadiv


**Diapers**
Output: polymers
Production: Carmel Olefins

**Toys**
Output: polymers
Production: Carmel Olefins

**Bottles**
Output: polymers
Production: Carmel Olefins

**Toolboxes**
Output: polymers
Production: Carmel Olefins

**Packaging**
Output: fuels
Production: refineries

**Clothing**
Output: polymers
Production: Carmel Olefins

* The outputs are used as raw materials in agriculture, manufacturing, household products, and consumer goods, with the exception of LPG.

BAZAN GROUP'S STRATEGY

Announced in 2021, the strategy of the Bazan Group includes regrouping to prepare for a changing reality - in view of global trends - while promoting sustainability and maintaining the position of the Group as a leader in the energy sector in Israel.

The four pillars of the strategic plan:

The strategic plan includes expansion of the Group's core activities and building infrastructure to gradually adapt to market trends. ESG principles underlie each component of the strategic plan and guide the Company's activity and organizational culture.

The robust economic and business foundation formed by the Group's existing core activities serve as the source for gradual development of, and investment in, new growth drivers, while activities are sustainably adapted to changing market needs.

~\$400 Million
Total monetary investment in the strategic plan, 2022-2030



Fuels and infrastructures

The Bazan Group will continue to conduct refining operations adapted to evolving market needs, with a reduced environmental footprint, and will be a leading player in fuel logistics.

Reinforcing Bazan's leadership in the transportation fuel market in Israel through digitization, embedding advanced technologies in production, innovation, and continued reduction of the environmental impacts of the Group's operations, while continually adapting to market changes, as well as upgrading and expanding advanced logistical infrastructures and trade capabilities in order to ensure the continuity of supply for the Israeli economy.



Green polymers

The Bazan Group will continue to conduct refining operations adapted to the evolving needs of the domestic and global markets, with a reduced environmental footprint, and will be a leading player in fuel logistics.

Solidifying the Group's position in the polymer market; leading the transition to green polymers. Integrating innovation, digitization, and advanced technology into production to reduce Carmel Olefins' carbon footprint, while leveraging Ducor's activity in Western Europe.

The Group has set an ambitious target of 15% in green polymers of its total polymer sales by 2025 and 30% by 2030.



Hydrogen and alternative fuels

The Bazan Group will be a leading player in Israel's hydrogen sector and will operate in the field of alternative fuels.

Leading the nationwide market in hydrogen for transportation and manufacturing in Israel, while reducing the Group's carbon footprint, supplying alternative fuels, and investing in innovation and entrepreneurship in this field.

The Group launched its hydrogen activity in 2022, with investments and collaborations with industry leaders for commercial production and delivery of grey hydrogen for industry and transportation, and laying the ground for the development of the hydrogen market in Israel. We also began to initiate and promote projects for commercial production and supply of blue and green hydrogen.




ESG - Environmental, Social and Corporate Governance

The Bazan Group will lead the transition to a sustainable economy, creating environmental and social value for all of its stakeholders.


The Bazan Group is committed to the implementation of ESG principles and to embedding these principles across all its areas of activity and in its ongoing work. An ESG function was established in the Group, working through organized interfaces with all Group departments.

In 2021, the Board of Directors' Environment and Safety Committee was charged with formulating and implementing an ESG policy.

The Company's commitment to these principles forms the overarching organizational guideline for its operations.



The Bazan Group will serve as an essential bridge to the future of the transportation energy sector in Israel, and lead a transformation focused on sustainability and innovation in the fuel and polymer business.



The Bazan Group's vision

Implementation of the strategic plan

	<div>1</div> <div>Fuels and infrastructures</div>	<div>2</div> <div>Green polymers</div>	<div>3</div> <div>Hydrogen and alternative fuels</div>	<div>4</div> <div>ESG – Environmental, social, and corporate governance</div>
Investment in 2022-2030	\$110M-\$180M	\$170M-\$240M	Up to \$50M	
Objectives	<ul style="list-style-type: none">A diverse product range adapted to evolving market needsAdvanced logistical infrastructures and trade capabilities, to ensure the continuity of supply to the Israeli marketImplementation of advanced technologies in production	<ul style="list-style-type: none">Strengthening leadership in the polymer market in Israel, while delivering a range of products and solutions tailored to customersLeading the transformation in recycling of plastics and polymers with a lower carbon footprint in Israel, and expanding these activities in Western Europe through Ducor	<ul style="list-style-type: none">Leading the market in hydrogen for transportation and industry in IsraelA major supplier of alternative fuels in IsraelLeading innovation and entrepreneurship in the local business and professional environmentDevelopments in the market and regulation.	
Implementation method	<ul style="list-style-type: none">Improving core activity performance while reducing carbon footprintEnhancing distribution and storage capabilities	<ul style="list-style-type: none">One Stop Shop in Israel's polymer marketInvestments, mergers, and acquisitions	<ul style="list-style-type: none">Production, marketing, and distribution of grey, blue, and green hydrogen	
Execution	<ul style="list-style-type: none">Engagement with technology companies specializing in big data analysis and AI solutions for forecasting production malfunctionsExamining the production of green diesel fuel from used cooking oil at the Group's facilitiesPlanned infrastructure projects:<ul style="list-style-type: none">Upgrade of the existing distribution terminal and expansion of distribution capabilities at other sites through collaborationsIncreasing capacity for containerization of crude oil and distillatesUpgrade of logistical infrastructures to ensure energy continuity	<ul style="list-style-type: none">Examination of collaborations to expand the product range and improve the value proposition for customersSigning a memorandum of understanding with Veridis for a collaboration to build a plastic waste sorting, washing, and crushing plant, to ensure a source of plastic waste for mechanical recycling operations in 2022Acquisition of VPM, which specializes in recycling post-industrial plastic scrapSigning an agreement to purchase recycled thermoplastic material with a negative carbon footprint from UBQ; in combination with Carmel Olefins products, a substance with reduced carbon footprint is derivedInvestment in Melodea, a biopolymer company, and signing a commercial agreement for joint product development and distributionDevelopment of recycled products aligned with customer needs	<ul style="list-style-type: none">Preparation of infrastructure for compression and transport of grey hydrogen, to be sold for transportationPromotion of the construction of the first hydrogen fuel filling station in the second half of 2022, in collaboration with SonolAs this report was being prepared, construction of a carbon-dioxide adsorption facility at Bazan is under considerationSigning an agreement with H2Pro to build a pilot facility for the production of green hydrogen for transportation at the Bazan compoundWorking with the Standards Institution of Israel to formulate a standard for hydrogen in transportationReceipt of grants from the Ministry of Energy for the purchase of hydrogen-fueled heavy vehicles, such as trucks and busesWin of a Ministry of Energy grant for a pioneering project to build infrastructure for marketing of hydrogen in transportation	

The Bazan Group will lead the transition to a sustainable economy, creating environmental and social value for stakeholders

OUR IMPACT

ESG - Key Figures



90%

Reduction of benzene emissions in 2016-2021



37%

Of water consumed by the organization was sourced from wastewater in 2021



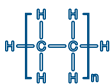
75%

Decrease in the number of work accidents from 2017 to 2021



27%

Women in senior management in 2021



30%

Green polymer production by 2030



13%

Decrease in total water consumption from 2016 to 2021



IR (Incident Rate) = 0.78
In 2021

The Bazan Group is working to promote the United Nations' Sustainable Development Goals (SDGs)

Main SDGs we supported in the reported years:



5

GENDER EQUALITY

Gender Equality

Act to ensure gender equality in the business sector and in the community

The Bazan Group takes pride in the significant presence of women in its senior management ranks, and in the representation of women across all of its departments and in the various managerial roles, including in the areas of manufacturing, innovation, and R&D. As of 2021, 3 of 11 members of management at Bazan are women.

The Company has set a goal of 40% representation of women in senior management by 2024.

6

CLEAN WATER AND SANITATION

Clean Water and Sanitation

Ensure availability and sustainable management of water and sanitation

One of the most significant changes of recent years has been the transition to massive use of reclaimed water, reducing the usage of potable water. The water savings achieved allow a greater quantity of water to be allocated for use in the Israeli economy.

The Group attribute great importance to the treatment of industrial effluents. Most effluents generated in the course of production are treated at a wastewater treatment plant, and further treated at an industrial wastewater reclamation plant. From 2016 to 2021, Bazan reduced its usage of potable water by approximately 44%.

7

AFFORDABLE AND CLEAN ENERGY

Affordable and Clean Energy

Promote the availability of sustainable energy sources

Hydrogen is considered a clean energy source with significant potential as a replacement for polluting energy sources in the long term, particularly in the area of transportation fuels. Encouraging the use of hydrogen-based energy and developing hydrogen-based solutions are key objectives of the Group for the coming years.

To implement its strategy, the Company invests in advancing new technologies to find solutions for making hydrogen a readily-available, accessible energy source for a variety of needs, with an emphasis on its uses in transportation.

9

INDUSTRY, INNOVATION AND INFRASTRUCTURE

Decent Work and Economic Growth

The Group operates according to a code of ethics aimed at ensuring fairness in business and adherence to ethical principles. The Company is a significant employer in northern Israel; its overall contribution to the Israeli economy in 2021 is estimated at approximately NIS 6.4 billion.

8

DECENT WORK AND ECONOMIC GROWTH

Industry, Innovation, and Infrastructure

Build resilient infrastructure, promote inclusive industrialization, and foster innovation

Reinforcing the leadership of Bazan in the transportation fuel market in Israel, as part of its strategy, through digitization, embedding advanced technologies in production, innovation, and continued reduction of the environmental impacts of the Group's operations, while continually adapting to market changes, as well as upgrading and expanding advanced logistical infrastructures and trade capabilities in order to ensure the continuity of supply for the Israeli economy.

12

RESPONSIBLE CONSUMPTION AND PRODUCTION

Responsible Consumption and Production

Manage business systems with responsibility towards natural resources

The Group is committed to being part of the comprehensive solution to the problem of waste, with an emphasis on plastic waste in Israel. Extensive resources are devoted to research and development in this field, including the production of polymers with a lower environmental impact, through the R&D Unit at Carmel Olefins.

The Group has set a target of 15% green polymers of its total polymer sales by 2025 and 30% by 2030.

13

CLIMATE ACTION

Climate Change

Take action to combat climate change and its impacts. The Bazan Group will formulate a long-term climate plan, including targets for the reduction of greenhouse-gas emissions. Actions will be taken to reduce emissions by 25,000 tons by the end of 2024.











The Group invests in the development of technologies for the reduction of greenhouse-gas emissions. In its Environmental Sustainability Innovation Lab (ESIL), the Company invests in start-up companies in this field (see details in the Environment section).

Mapping stakeholders

We value ongoing communication and dialogue with you – our stakeholders and the partners to our journey.

This communication helps us gain a deeper understanding of the needs and expectations relevant to our daily work. In the coming years, we will implement a formalized plan for the management of ongoing stakeholder relations, as an integral part of our activity.



Stakeholder group	Communication channels	Frequency
Customers	We conduct dialogue with our customers as part of our marketing and trade activities; we are diligent about responding to customer inquiries, including through satisfaction surveys.	 
Employees	Open dialogue with our employees is key, as reflected in our open-door policy for employees, employee representation, round-table meetings, and organizational portal, among other means.	 
Investors and financing	Entities We maintain close communications with our investors and with lenders and financing entities.	
Community	We share information about our ongoing activities; information is also made accessible through our website.	
Suppliers	We maintain dialogue with a long list of suppliers and subcontractors, through the purchasing and engagement mechanisms in our supply chain, among other means. A supplier survey on ESG issues was performed in 2021.	 
Regulators	As a company subject to regulatory directives, we hold dialogue with government ministries and relevant regulators through the Group's management and through the Company's functions responsible for overseeing environmental protection, occupational safety and health, and security.	
Emergency responders	We maintain dialogue with the various emergency and security entities	



In addition to the foregoing, resources are invested in conducting continuous communication and conveying information to the community and local population. These efforts include:

Environmental hotline

The hotline, established in 2018, allows the general public to contact the Company in the event of an environmental incident and provides insight into the Group's environmental impacts.

Fence-top monitoring station

Beginning January 1, 2022, data are collected using monitoring devices placed on the fence of the Bazan compound, and posted on a dedicated publicly accessible website. This is one of the ways in which Bazan delivers on its commitment to full transparency towards the public. The data transmitted by the station can also be viewed on the Group's website.

Releasing information on exceptional events

In addition to responding to general questions from the public, the Bazan Group provides information in real time regarding exceptional events, if any. This information is released through the Group's Facebook page, reports to local media, and notifications to municipal contact centers, among other means, in addition to posts on the [Group's website](#).

Material topics reviewed in the report


The material topics presented in this report are based on the international guidelines drawn from the GRI directives. The report covers all of the disclosures categorized as core disclosures, and describes additional indicators that reflect material topics, as derived from the materiality analysis performed by the Bazan Group.

The list of material topics was compiled based on an analysis of global trends in the refining and petrochemical sectors as well as lateral research drawing from ESG rating agencies, international investors, international standards, and leading companies in the energy industry.


	Topic	Details
Environment	Air quality and emissions	Air quality in the environment of the Company's operations is one of the most important components in caring for community residents' health. Significant emphasis is placed on emissions of pollutants such as suspended particulate matter (SPM), nitrogen oxides (NOx), sulfur oxides (SOx), non-methane volatile organic compounds (NMVOCs), benzene (C6H6), and heavy metals.
	Circular economy and waste	Transforming waste from a nuisance into a resource and instilling circular economy models have become important elements of the Company's environmental strategy, in Israel and globally. This effort includes promoting the proper use of resources, efficient production processes, and sustainable consumption throughout the supply chain, as well as maximum utilization and exhaustion of primary and secondary raw materials.
	Innovation for sustainable solutions	Use of innovative methods and promotion of innovative solutions, technologies, and products, including based on hydrogen, green polymers, renewable energies, and sustainable materials, reflecting the Company's investment in environmental issues.
	Impacts on water and effluents	Due to the extensive use of water in the energy sector and in view of the shortage of this resource, companies are measured in terms of water and effluent management, impact on water sources, and compliance with laws and regulations.
	Greenhouse-gas emission management and energy efficiency	This issue has become a critical global priority. Companies are measured largely according to their efforts in this area and the extent to which they mobilize to fight climate change and its effects.
Social	Workplace safety and hygiene	Employees are the most important asset of the Company. The Company's responsibility towards its employees entails the obligation to protect their physical and mental safety, as an essential value guiding our conduct.
	Human capital	The development of human capital is a core value in the business strategy of the organization. Acting on this value promotes employee satisfaction and employees' motivation to grow and succeed, which create a stable long-term foundation for business success.
	Economic and social impact	Corporations are expected to contribute to community resilience and conduct community outreach in the communities within which they operate.
	Responsible supply chain	Corporate responsibility and sustainability principles are embedded in the supply chain, as an expression of the organization's overarching concept of social and environmental responsibility. The organization is measured on various criteria in this area, with an emphasis on ethical, environmental, and safety aspects included in its purchasing policy.
Governance	Business ethics	The code of business conduct, ethical business methods, and implementation of a compliance and enforcement policy are indications of responsible business conduct and of the Company's approach to caring for the environment, society, and economy.
	Diversity in management	Examination of gender representation in senior management at the Company.
	Compliance with regulation and transparency	Transparency, compliance, and enforcement of regulations and legislation, coupled with best practices, are the basics expected of the organization in reference to its appropriate, lawful conduct.

Status of targets from the 2017-2018 report

Environmental protection

Topic	Target	Target year	2021 status
Benzene reduction	Reduce benzene emissions by 66% relative to the volume of emissions in 2018, from 2.2 tons to 0.75 tons	2024	Achieved – emissions reduced by 82% compared to 2018, to 0.4 tons, one of the lowest rates in the world
			


Employee safety

Topic	Target	Target year	2021 status
Quantity of work accidents, as measured by the incident rate (IR) – work accidents per 200,000 hours of work	IR lower than 1	2024	Achieved – IR 0.78
			

Ethics and supply chain

Topic	Target	Target year	2021 status
Ethics appendix for suppliers	Have all suppliers sign an ethics appendi	2022	Not achieved
			

Innovation

Topic	Target	Target year	2021 status
Promote intra-organizational ventures and external start-ups	Two intra-organizational ventures and three start-up companies in the area of sustainability each year	2024	Achieved
			



Targets set in 2021




Circular economy

Topic	Target	Target year
Green polymer production	 Produce at least 15% in green polymers* by 2025 and 30% by 2030	2030


Climate Change

Topic	Target	Target year
Greenhouse-gas emissions	 Formulate a long-term climate plan	2023
	 Take action to reduce emissions by 25,000 tons	2024

Employee safety

Topic	Target	Target year
Number of work accidents , as measured by the incident rate (IR) – work accidents per 200,000 hours of work	 0.5 IR	2025

Diversity

Topic	Target	Target year
Women in senior management	 40% women in senior management	2024

The Environment

Topic	Target	Target year
Pollutant emissions	 Maintaining the Company's position in the 15th percentile based on the European reference document (BREF**)	2025

Ethics and supply chain

Topic	Target	Target year
Ethics appendix for suppliers	 Implementing an ethics appendix in the process of contracting material supplier	2023

* Green polymers – recycled, biodegradable, and from renewable sources.

** [Refining of Mineral Oil and Gas BREF](#)

Committed to the environment

Committed to a Sustainable Future

Target: 30% recycled and biodegradable polymers by 2030

Target: Formulate a climate and GHG emissions reduction plan

Achieved a double-digit cut in pollutant emissions

Increased use of wastewater while reducing the use of potable water

We have increased the volume of waste removed for treatment, leading to less waste transferred to landfills



The Bazan Group sees the protection of the environment and responsible environmental conduct as essential values, and therefore invests extensive resources in monitoring, improvement, and optimization processes. Within the promotion of its strategy, the Company develops and advances innovative approaches in the areas of environmental protection and sustainability, and invests in the circular economy, recycled polymer production, hydrogen, and advanced environmental protection technologies.

In recent years, we have effected a transformation in reducing pollutants, with an emphasis on air pollutants, as well as in cutting back on the use of potable water and treating effluents.

REDUCTION OF GHG EMISSIONS

The Group operates advanced systems to reduce pollutant emissions at its production facilities, and a sophisticated monitoring system surrounding its plants. The system is aimed to ensure that there are no deviations from the threshold values, comply with permit requirements and stringent standards, and provide real time alerts regarding any malfunctions. The system provides the Company with a basis for continual improvement in reducing air emissions.

Air quality is monitored using several indicators, based on the concentration of various substances in the air, primarily the following:


- Non-methane volatile organic compounds (NMVOCs)
- Sulfur oxides (SOx)
- Benzene (C₆H₆)
- Nitrogen oxides (NOx)
- Suspended particulate matter (SPM).



Reduction of GHG emissions

A comparison to the data in the [BREF](#) (Refining of Mineral Oil and Gas)* issued by the European Union in 2015 indicates that Bazan is in the 15th percentile of companies, and is one of the least polluting refineries in comparison to Europe.

The Group has set a goal for the coming few years of maintaining its standing as one of the least polluting refineries in Europe.



As shown below, quantities of the principal pollutants were **reduced at double-digit rates** from 2016 to 2021

The Environmental Emissions Registry Report of the Ministry of Environmental Protection for 2018 reveals that emissions of nitrogen oxides at refineries in Israel are similar to the average level in Europe, emissions of sulfur oxides are low compared with emissions in Europe, and emissions of NMVOCs and benzene in Israel are among the lowest of the countries examined. This trend has been maintained, based on a comparison of emissions from refineries in Israel to those of refineries in Europe, adjusted according to the quantity of crude oil refined and the complexity of the refining process (the Nelson Complexity Index), according to an analysis performed for the Group in 2019 by the global firm Royal HaskoningDHV.

Bazan – among **the least polluting** refineries compared with Europe




Reduction of benzene (C₆H₆) emissions

Benzene arrives at the Bazan refineries as a part of crude oil, and is also generated by various production processes, including in the continuous catalytic reformer, the naphtha cracker for ethylene production, and the Gadiv facilities.

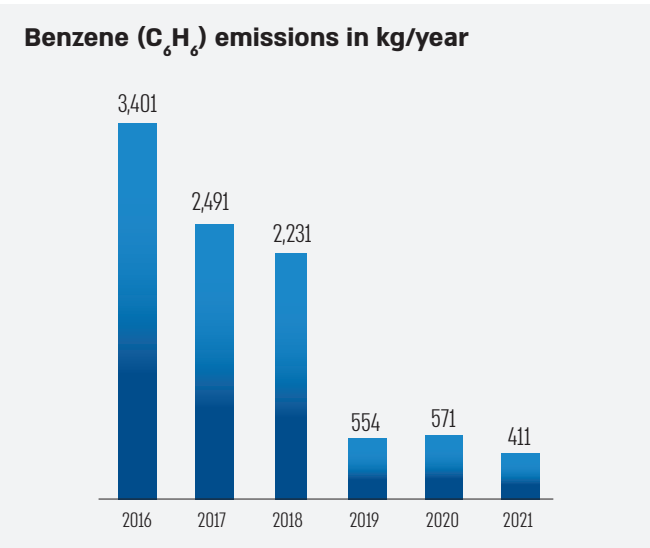
This organic compound is a basic and important ingredient in manufacturing processes of pharmaceuticals, plastics, synthetic fibers, cleaning detergents, and pesticides. Exposure to a high concentration of the substance may affect human health.

Bazan has set a key target of reducing benzene emissions in its production process. In the report it issued in 2018, the Company set a target of reducing benzene emissions from approximately 2,200 kg to approximately 750 kg by 2024.

In practice, **this target has already been achieved, in 2019; emissions in 2021 were still lower, at 411 kg, a decrease of approximately 90% relative to the benzene emissions documented in 2016, which reached 3,400 kg.** This accomplishment stems from continuous, intensive measures taken by the Company, grounded in its deep commitment to responsible environmental conduct.



Benzene emissions cut back by approximately **90%** from 2016 to 2021



Measures taken to reduce benzene emissions

Switching to equipment components with higher impermeability (zero emission or high integrity)

- Proactive replacement of equipment components for leak detection and repair (LDAR), including conversion of pumps to double seals
- Proactive replacement of controller valves
- Detection of diffuse emissions

Activity pertaining to storage containers

- Installation of means of reducing emissions into the air from storage containers, such as secondary and tertiary seals, guide pillar seals, and sealing devices for container roof legs
- Installation of domes for storage containers with an external floating roof, to reduce the effect of hydrocarbon drift due to wind
- Upgrade of container draining systems to closed systems

Addition of secondary environmental systems to treat emissions

- Operation of vapor combustion unit (VCU) systems, a system to treat air flows contaminated by hydrocarbons, followed by a subsequent catalytic thermal oxidizer (CTO) system to treat organic substance emissions, in order to treat benzene emissions from the storage containers, including emissions from the effluent treatment system at Gadiv
- Operation of a CTO system to treat emissions from storage containers at Carmel Olefins

Additional measures

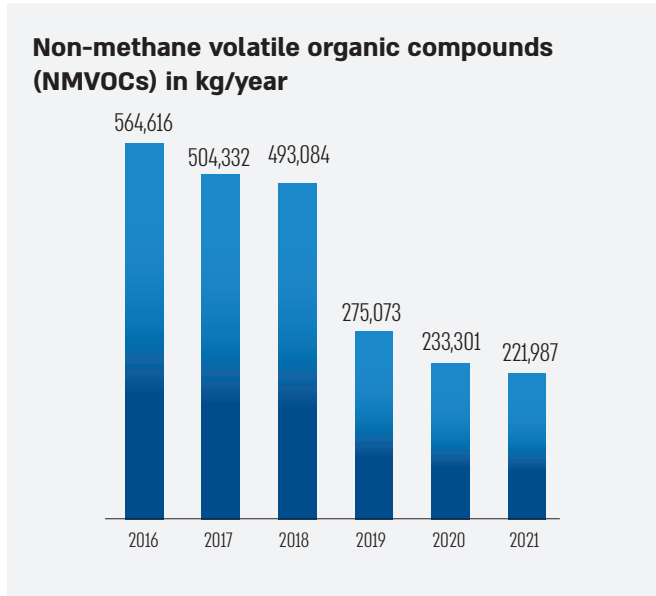
- Operational changes to reduce the quantity of stored Pygas – a mixture of gases, half of which is benzene, generated in the production process at Carmel Olefins. As part of the synergy between the plants (see Chapter 1), the mixture is sent to Gadiv to be used as feedstock, while the benzene is separated and sold as a product, with the remaining components reused for fuels.

* The reference document of the European Union, which is used as a guide for the environmental regulation required to address emissions into the environment.

Non-methane volatile organic compounds (NMVOCs)

A decrease of more than **60%** from 2016 to 2021

More than half a million components are present at the Company's plants, regularly monitored by an expert team using dedicated equipment to detect and immediately repair minute leaks.



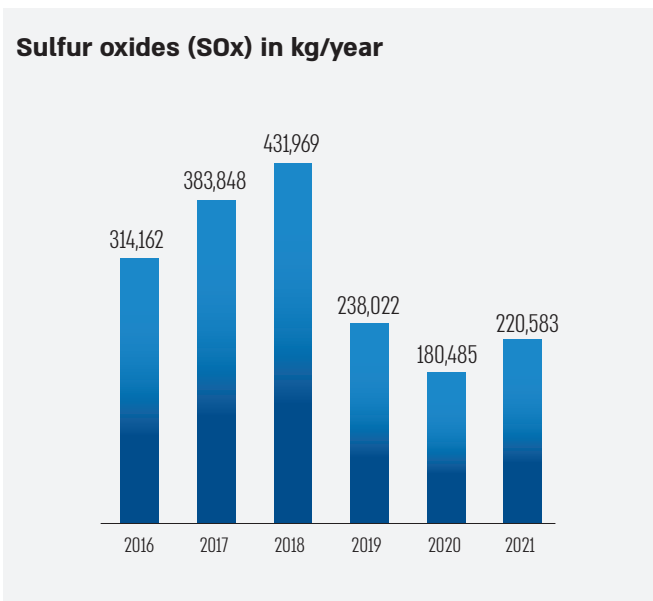
Actions that contributed to the decrease in emissions of NMVOCs include:

- Stringent control over the execution of leak detection and repair (LDAR) plans for equipment components
- Rapid repair of detected leaks
- Reduction of detected leaks
- Installation of means of addressing air emissions from storage containers (seals, socks, guide pillar seal, and more)
- Installation of a coal bitumen treatment system, as an interim stage prior to the operation of a regenerative thermal oxidizer (RTO) system to treat organic substances through slow, controlled oxidation, which will replace the coal filter and is expected to become operational in the second half of 2022.

Sulfur oxides (SOx)

A **30%** decrease from 2016 to 2021

As of 2020, Bazan has produced fuel oil compliant with the IMO 2020 standard; as a result, the sulfur concentration has been reduced from 3.5% to 0.5%. The fuel oil is primarily used as fuel for ships. SOx emissions into the air result from burning of the fuel oil by the vessels' engines. The reduced sulfur concentration in the fuel allows sulfur oxide emissions to be reduced by approximately 85%, in relative terms.

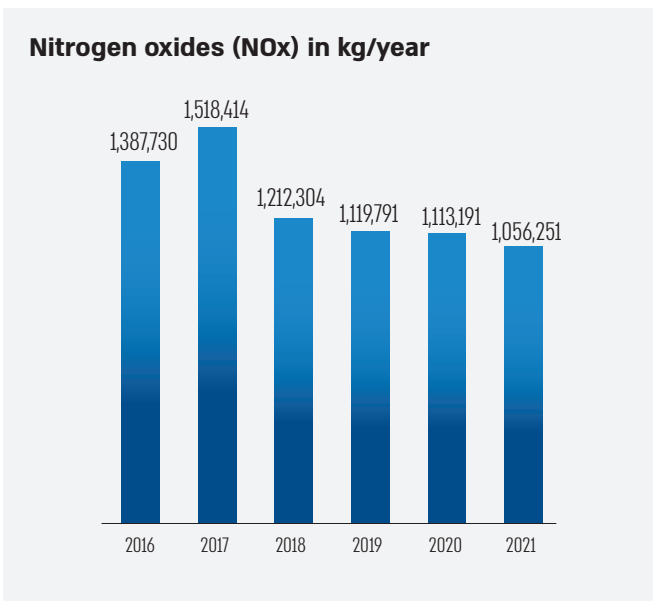


Nitrogen oxides (NOx)

A **24%** decrease from 2016 to 2021

This reduction resulted from the following measures:

1. Replacement of burner systems with ultra-low NOx burners
2. Establishment of a dedicated team to calibrate burners, in order to maintain combustion conditions that reduce emissions



A closer look: The fence-top monitoring system at the plants

A fence-top UV-DOAS system continuously monitors the concentration of BTEX (benzene, toluene, ethylbenzene, and xylene) in the air, in four different zones: the northeastern face of the container farm fence, the northwestern face of the Gadiv plant fence, the southwestern face along the ecology area, and the additional area along the northwestern fence.

The benzene detection system used at Bazan is the **first in the world** to be certified under the ISO 17025 standard

The system is designed to provide maximum precision in monitoring emissions into the air, and allow real-time response. Its main advantage is its location in close proximity to the plants. The system operates 24 hours a day; all of its data are available to the public in real time, with full transparency.

For further information regarding the monitoring system and its capabilities, visit our [website](#).



ENERGY AND CLIMATE

Mobilizing to fight climate change

One of our main goals is to formulate a long-term climate plan, which will include targets for the reduction of greenhouse-gas emissions.

Actions will be taken to reduce emissions by 25,000 tons CO₂e by the end of 2024.

As a key player in the Israeli economy, Bazan has the ability to contribute to the attainment of national objectives, becoming part of the solution. This is reflected in the Group's strategy, approved in the second half of 2021.

Emission levels are examined based on a division into **Scope 1**, direct emissions of greenhouse gases as a result of the activity of the Company, and **Scope 2**, indirect emissions of greenhouse gases caused by energy consumption.

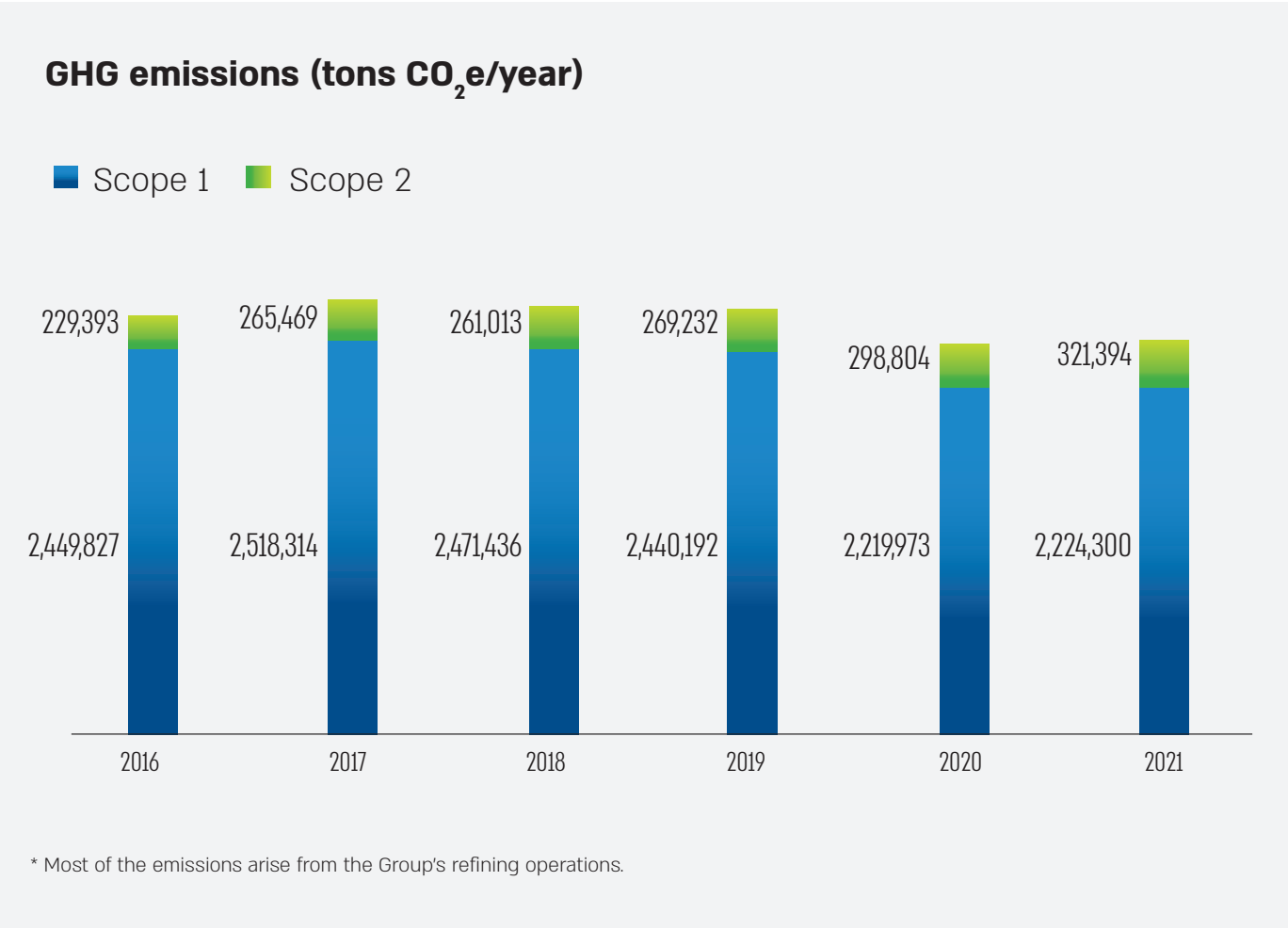
About the calculation methodology

The calculation methodology has been improved in the last two years through transition from a method based on specific emission coefficients, or other coefficients, to a more accurate calculation method based on measurement of the chemical composition of gases. The Company monitors and analyzes the quantity of emissions on a daily basis.

As part of our adherence to transparency as a guiding value in our everyday conduct, data are submitted annually to the voluntary greenhouse-gas emissions reporting mechanism of the Ministry of Environmental Protection.

For more information, see: www.sviva.gov.il

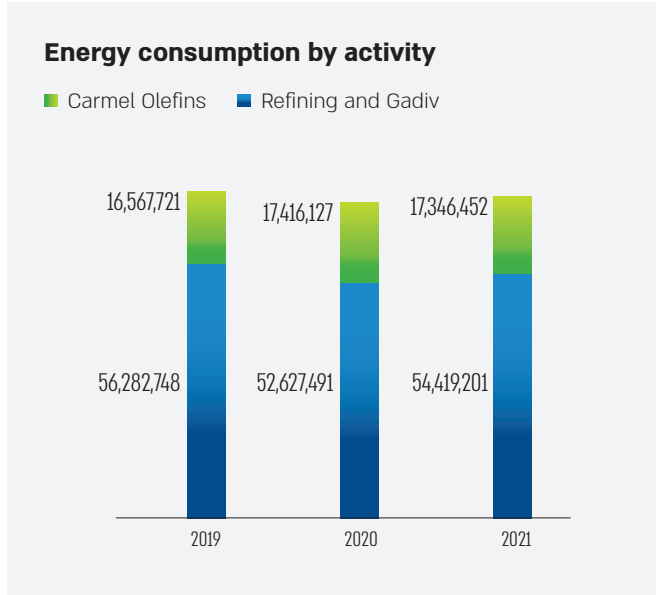
Data are submitted annually to the voluntary greenhouse-gas emissions reporting mechanism of the Ministry of Environmental Protection.



Energy consumption

The reduction of energy consumption and transition to cleaner energy sources have multiple advantages for the Company, the community, and the Israeli economy as a whole. The Group promotes an advanced energy management policy, which has led to a significant reduction in the consumption of energy from polluting sources in recent years. The Group has set significant targets for the reduction of energy consumption, including examination of its performance using the Solomon methodology, which allows comparative analysis of performance relative to other refineries around the world.

Energy management policy based on ISO 50001



The energy management system encompasses all of the activities of the plants. The following are some of the notable processes underway in this area:



■ **Fuels:** Increased use of natural gas for combustion; maximization of hydrogen obtained from process gases rather than natural gas



■ **Steam:** Maximum production of steam through cogeneration at the power plant and from residual heat tanks



■ **Water:** Maximum use of reclaimed water for cooling towers and water from an industrial wastewater reclamation facility; use of wellwater and water from the Revivim plant rather than water from the Mekorot water company



■ **Electricity:** Contract with a supplier to purchase electricity generated using natural gas, rather than from more polluting fuels



■ **Demand management:** In view of the decrease in the demand for fuel during the Covid-19 period, the Company adapted and changed its production volume

These measures led to a decrease in the energy intensity of refining operations. In 2018, in collaboration with the global consulting firm Solomon, the Company measured its Energy Intensity Index (EII, a global measure of energy efficiency in refining) at approximately 98. This constitutes a marked decrease from the EII score of 112 in 2008, reflecting a consistent trend of improving energy efficiency at the organization over the last decade.

No measurement was performed in 2020, due to the Covid-19 outbreak. The Company plans to participate in the index again in 2022, with data to be released in 2023-2024.

Energy efficiency

The steam production process consumes significant amounts of energy. A daily optimization process is therefore performed to determine the financial precedence for production between steam consumers and electricity consumers within the Company. This process involves the various facilities and business units – fuels, polyolefins, and aromatics.

Transition to natural gas

In 2011, the Bazan Group replaced fuel oil - which is considered a pollutant, with natural gas, as a combustion material; since April 2013, it has consumed natural gas at the full quantity required to manufacture its products. The use of natural gas at the facilities of the Company leads to savings on energy expenses, improves operational efficiency, and significantly reduces air pollutant emissions, in comparison to the fuels used by the Group's plants in the past.

To mitigate environmental impacts, the use of natural gas is maximized at the Group's facilities. During periods of natural-gas shortages, liquefied petroleum gas (LPG) is used.



INNOVATION AND TECHNOLOGICAL SOLUTIONS

The Bazan Group is committed to investment in innovation, including finding alternative solutions for its core products or ones to improve its current core activities, provide value to the Group, and contribute to the protection of natural resources and the environment.

The innovation function at the Bazan Group:

1. BLAB



Bnovation - a platform for direct collaboration between the Group and start-up companies, entrepreneurs, and researchers, was founded in 2019. Bnovation supports the creation of a business environment that promotes, develops, and accelerates innovative solutions in the areas of traditional energies and renewable energy, using an open innovation model.

The program focuses on areas such as clean energy, energy storage, environmental technologies, fuel substitutes, process digitization (big data, machine learning, and artificial intelligence) from an industrial perspective, cyber applications in manufacturing, hydrogen, sustainable plastic, biopolymers, and plastic recycling. Over the last two years, pilot projects and feasibility tests have been conducted at Bazan with start-up companies for the identification of anomalies, preventive maintenance, optimization of production, monitoring and control, and more.

For further information about the program, see [the Bnovation website](#).

2. ESIL



The Bazan Group has partnered with EDF Renewables, of the French energy group EDF, and the British chemicals corporation Johnson Matthey to found the Environmental Sustainability Innovation Lab (ESIL). ESIL invests in start-up companies in the areas of the environment, sustainability, and clean energy, with sponsorship from the Israel Innovation Authority and the Ministry of Environmental Protection. In addition to direct financial investment, ESIL offers start-ups the opportunity to run pilot projects at a range of sites around the world, benefit from close professional mentoring by experts, and connect with potential customers in various countries.

For further information about the program, see the [ESIL website](#).

3. Intra-organizational innovation



- In 2021, the **CO₂omorrow Hackathon** was held, in collaboration with the academic community and the energy sector, to identify creative, groundbreaking ideas for transforming CO₂ into a resource.
- An **intra-organizational innovation contest** was held in 2020, with over 100 employees of the Company participating. Of the initiatives generated at the contest, ten have already been put into practice.
- Pioneering activities to promote hydrogen use:**
Promoting the use of hydrogen as a clean energy source is highlighted as one of the key goals of the Group in the strategy it published in 2021. We believe that the use of hydrogen in transportation and industry can be transformational, and would significantly lower the use of polluting energy sources. The Company invests in the promotion of new technologies in order to find solutions for making hydrogen a readily available, accessible energy source for a variety of needs, with emphasis on its uses in transportation.



Looking ahead

Investment in innovative solutions in the energy sector

Bazan is working to formulate advanced solutions in the area of energy management, as a means of promoting energy efficiency and optimal utilization of existing energy. Through **ESIL**, the Group has invested in **Brightmerge**, creator of a platform for data-driven decision-making to optimize and verify the financial performance, sustainability, and reliability of network-connected, multi-generator, multi-consumer microgrid systems. The platform substantially reduces the time and cost needed to identify the financial results, carbon outcomes, and optimal reliability of projects, allowing higher returns on investments in clean energy microgrids.

The Group also seeks to provide solutions for operational and maintenance challenges in the process of generating energy from renewable sources. The Group has invested, through **ESIL**, in **Soltrex Automation**, which is developing a robotic platform to operate and maintain solar farms, thereby increasing the efficiency and capacity of the sites and reducing the overall cost of electricity production. The platform can provide the sites with a series of operational and maintenance solutions, including panel cleaning, improvement of preventive maintenance, and more.



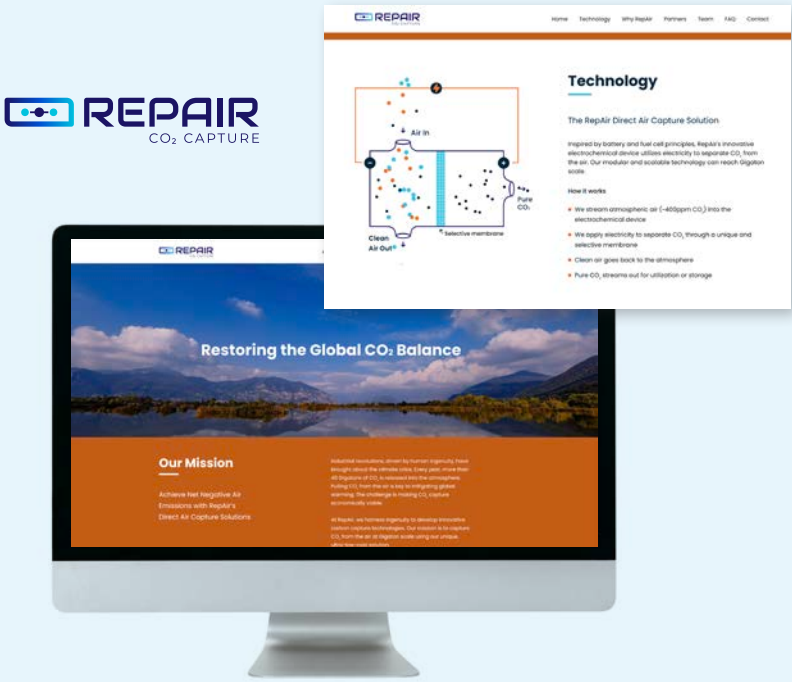


Looking ahead

Investment in technologies to reduce greenhouse-gas emissions

The Bazan Group is taking proactive measures to fight climate change , including through investment in new technologies designed to reduce greenhouse-gas emissions. Through ESIL, the Group has invested in the start-up company **RepAir**, which is developing modular technology for capturing carbon dioxide from the air using a method that can be scaled up at low cost.

The RepAir electrochemical cell operates at ambient temperature and uses only electrical energy for the CO₂ separation process, significantly lowering the required energy cost compared with current solutions.





Intra-organizational initiatives and collaborations

- **Hydrogen transport compression system** – In late 2020, Bazan won a Ministry of Energy tender to set up a system of equipment to market hydrogen for transportation. Hydrogen-fueled vehicles have a clear environmental advantage over those fueled by gasoline or natural gas, thanks to the electrochemical process in which electricity is generated and stored in the battery powering the vehicle. The only byproduct of these engines is a small quantity of water droplets released into the air.
- **Bazan has the capability to produce 10 tons of hydrogen per hour.** The hourly production quantity varies according to the composition of the raw materials; average production generates 8 tons per hour, so that the Company effectively has the ability to supply surpluses to the market. The system would enable the Company to develop pioneering capabilities to produce, compress, and transport hydrogen at a quality level aligned with Israel's transportation needs. This would provide a solution enabling the import of hydrogen-fueled vehicles to Israel to promote clean transportation.
- **Establishment of the first hydrogen fueling station in Israel** – The Bazan Group, Sonol – one of Israel's leading fuel products distributors, and the auto importer Colmobil have signed the first collaboration agreement in this field in Israel - with Bazan to produce hydrogen, Sonol to build fueling stations, and Colmobil to supply trucks, manufactured by Hyundai. As of 2022, the facility is under construction.
- **Hydrogen laboratory** – The Group has established the first hydrogen laboratory in Israel, with the capability to test various parameters to determine hydrogen quality. Certification for the laboratory is currently in progress.
- **Hydrogen-based transportation** – In November 2021, Bazan won another call for proposals of the Ministry of Energy, through which it obtained financing to purchase hydrogen-fueled vehicles including trucks, buses, and forklifts. The Company purchased some of the vehicles in 2022.



Looking ahead

Pioneering activity to promote the use of hydrogen

Hydrogen is considered a clean energy source with significant potential to replace polluting sources, particularly in the area of transportation fuels. Encouraging the use of hydrogen-based energy and developing hydrogen-based solutions are therefore key objectives in the strategy published by the Bazan Group in 2021.

Within the implementation of this strategy, **the Company invests in the promotion of new technologies to help make hydrogen a readily available, accessible energy source for a variety of needs, with emphasis on transportation.** A notable example is the collaboration with H2Pro.

Bazan intends to invest a total of up to USD 50 million in this field by 2030.

For further information regarding future investments by the Company, see the review of its corporate strategy in [Chapter 1](#).

Investments in external companies

Bazan has invested in **Hydrox**, a developer of a unique chemical process for hydrogen storage, aimed at overcoming one of the main obstacles to the massive development of this field – the ability to transport and store hydrogen efficiently and cost-effectively.

In 2020, the Bazan Group announced its investment in **H2Pro**, developer of innovative technology for the production of green hydrogen through electrolysis – separation of water into hydrogen and oxygen without the emission of greenhouse gases, with 30% higher energy efficiency than other methods. In addition to investment, the Bazan Group has commercial agreements with the Company regarding collaboration in the area of green hydrogen.

Bazan is pursuing the construction of the first hydrogen fueling station in Israel, in collaboration with Sonol and Colmobil

WATER AND EFFLUENT TREATMENT

Water is a highly valuable resource, both globally and locally. Protecting this resource involves reducing consumption - particularly that of potable water, as well as better treatment and reclamation of significant quantities of water.

Water is primarily consumed at the Company's plants to cool the facilities in which heat-generating reactions occur. The purpose is to ensure continuity of the energy supply during the production process. Water is also used in the pretreatment of crude oil, and to separate salts from minerals.

In recent years, Bazan has implemented a significant process of transition to massive use of reclaimed wastewater, reducing the usage of potable water (water from the grid). The savings make more water available for use by the Israeli economy.

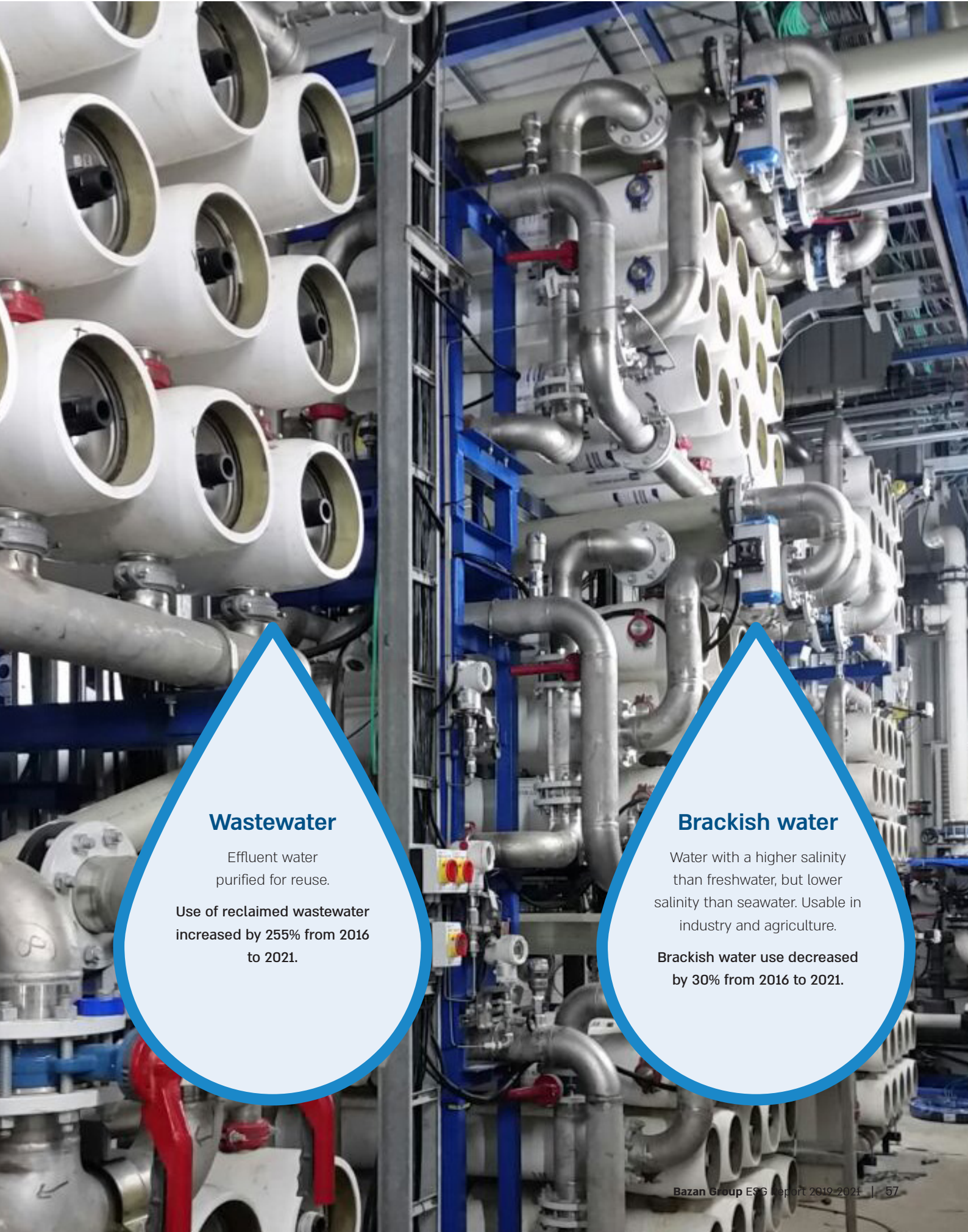
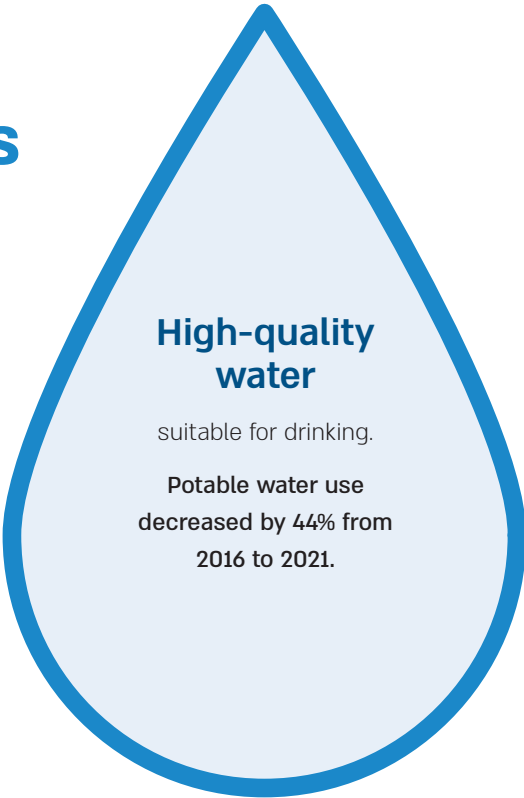
The Group attributes great importance to the treatment of industrial effluents. Most effluents generated in the course of production operations are treated at a wastewater treatment plant, and further treated at an industrial wastewater reclamation plant. Other effluents are continuously monitored for brine quality and subsequently discharged into the Kishon River.

Reducing consumption and changing water composition



The Group's water sources

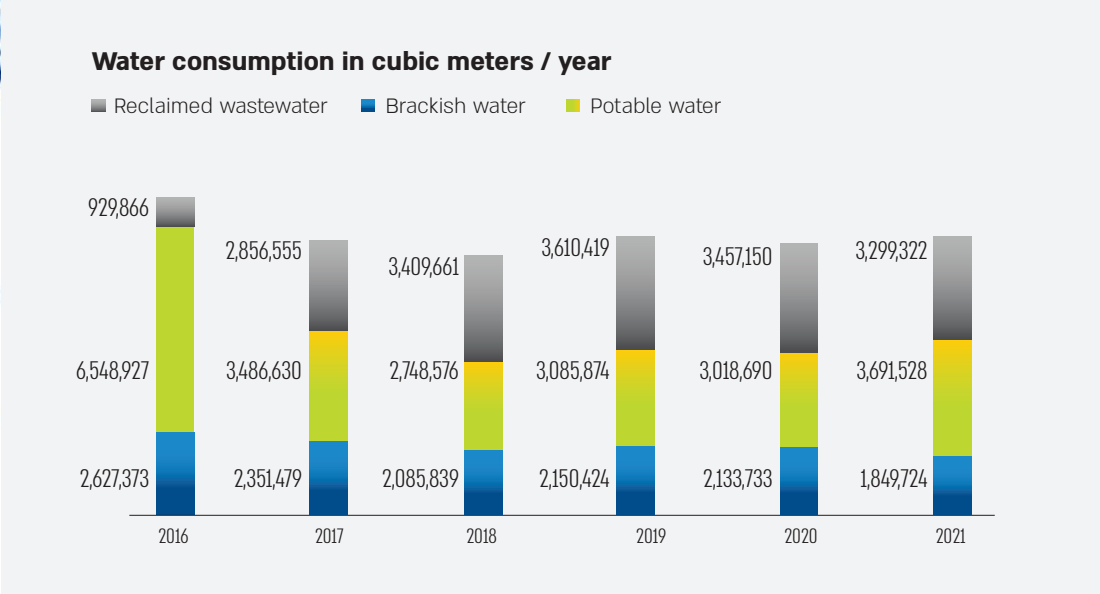
Source	Uses
Mei Carmel (Mekorot)	Feeding water for the RO facility (a reverse osmosis facility that takes in water and emits highly clean water used to produce steam) is used by the Fuels Unit, and for cooling towers, fire safety, drinking water, and sanitation at all of the business units.
Brackish water wells	Feeding water for the RO facility at the power plant in the Fuels Unit
Wastewater reclamation facility	Feeding water for steam production, feeding water for the RO facility at the Fuels Unit, and an option for supplemental water for feeding towers for the Fuels Unit and Carmel Olefins
Revivim plant (fertilizers)	Feeding water for steam production, primarily used by Carmel Olefins – water from brackish wells treated by Revivim and purchased by Bazan



37% of the water consumed by the organization is sourced from wastewater

Water consumption reduced through reclamation of industrial wastewater

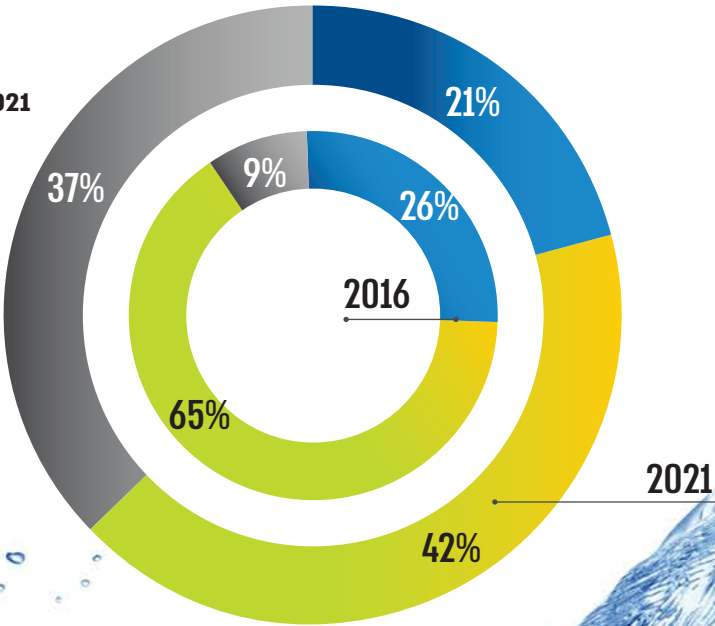
Industrial wastewater reclamation has two main benefits: first, the quality of the concentrate water in the reclamation facility is improved to a level suitable for discharging, leading to a lower load of nitrates in the river. Second, most of the quantity of wastewater generated at Bazan and Carmel Olefins as excellent-quality process water is reclaimed, saving consumption of millions of cubic meters in potable water each year.



Water consumption composition, 2016-2021

- Reclaimed wastewater
- Brackish water
- Potable water

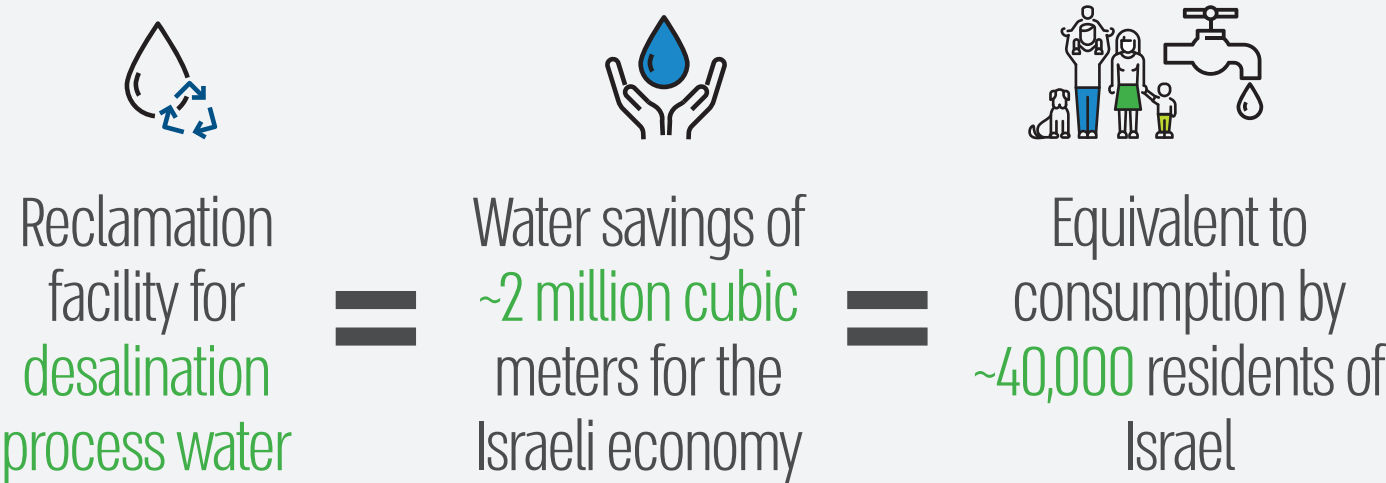
The significant increase in the use of wastewater contributed to a double-digit percentage decrease in the use of potable water



Wastewater reclamation facility

An industrial wastewater reclamation facility has been built to treat effluents from the refineries and Carmel Olefins and reclaim water for reuse. Located at Bazan's premises, the facility is one of the most advanced of its kind; in 2018, it won the Green Chemistry Industry award from the Israel Chemical Society.

Desalination process water reclamation facility – The facility led to savings of two million cubic meters of water for the Israeli economy (equivalent to consumption by 40 thousand residents).



Effluent treatment system

Effluents at the refineries contain oils (hydrocarbons), solids, salts, and additional substances that require thorough treatment. These substances can be divided into two types:

- **Process effluents** – The use of water or steam in production processes leads to the formation of mixtures of water and hydrocarbons derived from crude oil and products thereof.
- **Oil-free brines** – Concentrate water originating with the process of preparing salt-free water for the production of steam, which is used to generate heat in production processes and in electricity production for self-consumption.

Effluent treatment at the refineries encompasses multiple facilities, including separators, physicochemical treatment, intensive biological treatment, sand filtration, and ultra-filtration (desalination). These facilities form a chain of

treatments for the effluents, bringing them to the standard approved for discharge by the Ministry of Environmental Protection.

Runoff water initiative

In 2018-2020, surface runoff areas were separated from areas where precipitation runoff accumulates that are not operational areas, so that there is no concern about the runoff discharged directly into the environment, such as areas of office buildings and roads. The separation makes it possible to allow surface runoff to flow directly into the Bazan effluent treatment system, thereby **reducing the potential for pollution of clean runoff and lowering the hydraulic load treated in the effluent treatment system.**

Protecting water quality in the Kishon River

TOC (Total organic carbon) and mineral oil discharged into the river has decreased significantly in recent years, thanks to a broad effort to improve efficiency in the area of industrial effluents, which are regularly transferred to effluent treatment facilities, other than in exceptional cases.

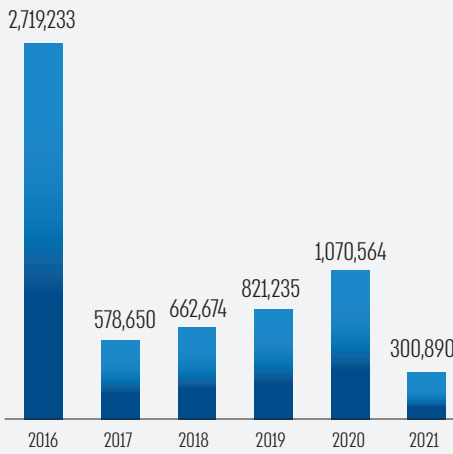
Wastewater removed from the plant facility meets the quality standard that permits it to be discharged into the river, according to a permit from the Ministry of Environmental Protection. In the removal of concentrate water from the desalination stage (treated wastewater), all of the parameters required to be monitored continuously pursuant to the permit are monitored online. The values established are consistent with the Public Health Regulations and the Inbar Standard for discharging into the river. Bazan thereby converts industrial effluents into a resource that is reused in the production process, significantly reducing its environmental impact on the sea and river.

Monitoring of effluent discharges indicates that from 2016 to 2021, discharging of mineral oil into the river decreased, falling below the threshold values set by the Ministry of Environmental Protection (less than 500 kg). This was achieved largely through the use of the wastewater reclamation facility, which increased the reuse of mineral oil by 74%.

A similar trend was observed with regard to TOC piped into the Kishon River. Although the volume of reclamation using the wastewater reclamation facility remained similar in 2016-2021, discharging of these effluents into the Kishon River decreased by 93%. Total discharges into the river were reduced by approximately 90% during this period.



Discharges into the river in kg/year



WASTE TREATMENT AND PROMOTION OF A CIRCULAR ECONOMY

Treatment of waste generated by production processes

The Bazan Group has set a goal of maximum reduction of waste generated in the production process, instead reusing and recycling as much of the waste as possible. To this end, the Company invests great effort in instilling advanced circular economy perspectives and finding a range of technological solutions for the reuse of waste.

Hazardous waste generated and waste of all kinds designated for disposal have decreased consistently over recent years:

Non-hazardous waste

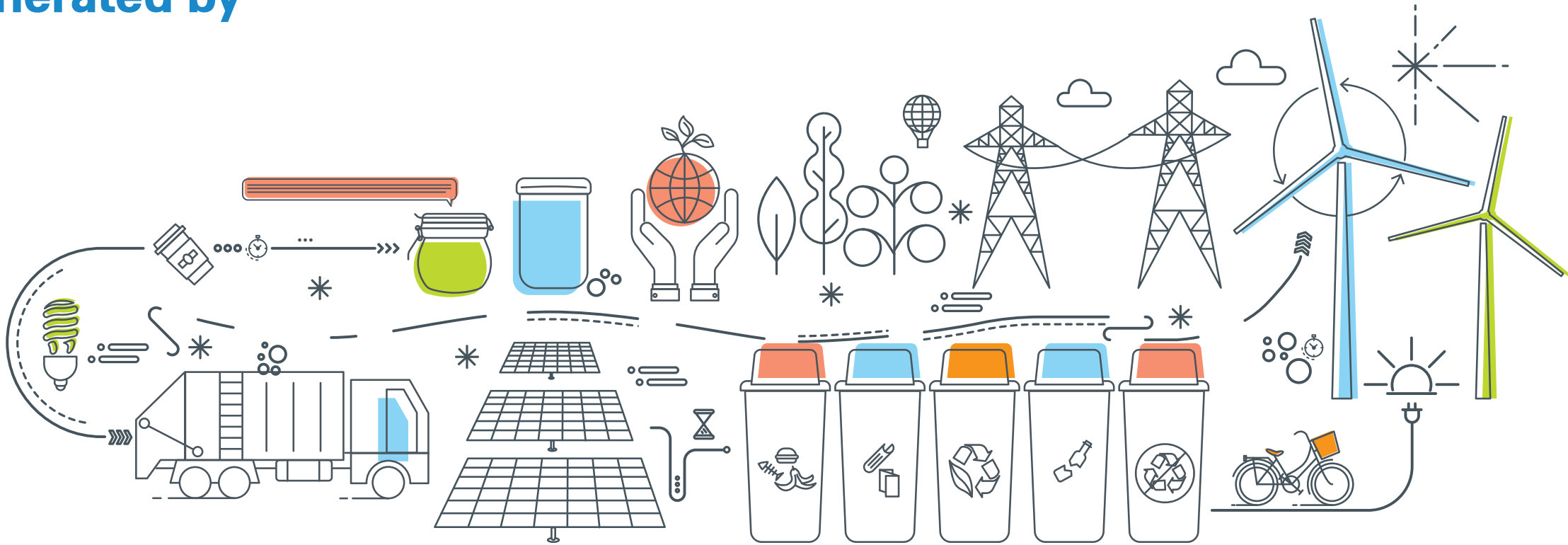
We have significantly improved our methods of treating non-hazardous waste in recent years, while the percentage of this type of waste rose between 2016 and 2021.

We transitioned from sending waste to landfills – to waste separation on the premises of the plant. Types of waste separated include metals, construction waste, and more.

While in 2016 approximately half of the waste was sent to landfills, in 2021 92% of the waste is treated on site and only the remainder was sent to landfills.

Moreover, despite an increase in waste generated, the quantity of waste designated for disposal has decreased by approximately 60%.

A **421%** leap in hazardous waste was transferred for recycling in 2016-2021



Hazardous waste

We invest extensively in treating hazardous waste and, in fact, a dramatic improvement is evident in this area.

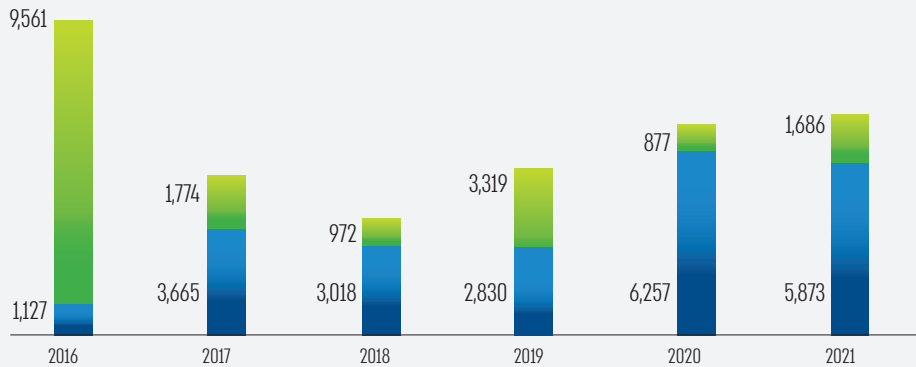
Hazardous waste derives, among other sources, from hazardous chemicals, biological sludge (effluents), oil sludge (refining), catalyst removal, activated charcoal, and contaminated soil.

In 2021, the quantity of hazardous waste transferred for treatment leapt by 421% in comparison to 2016, while hazardous waste designated for landfills decreased by 82%.

This change is also evident in the overall volume of hazardous waste, which contracted by approximately 30%. The composition of the waste indicates that in 2021, 78% of waste was recycled, versus only 11% in 2016.

Hazardous waste in tons/year

Landfilled Treated



Circular economy in the supply chain

Plastic waste presents significant environmental challenges.

As a major company in the Israeli economy, Bazan is committed to being part of the comprehensive solution to the problem of waste, with an emphasis on plastic waste. Extensive resources are devoted to research and development in this field, including the production of polymers with a lower environmental impact, through the R&D Unit at Carmel Olefins.

100% of Carmel Olefins' products are recyclable

Research and development in the polymer industry

The R&D Department at Carmel Olefins consists of 15 researchers, engineers, and technicians, focused on the development of processes and technologies for the production of advanced products using sophisticated laboratory equipment. The great importance of the department to the plant is demonstrated by the fact that most of the polypropylene products made by the Company were developed by the department. The R&D Department is also responsible for 10 patents, in various stages of registration, pertaining to unique polymer compositions with added value.

Innovation at Carmel Olefins can be divided into three areas: customers, developers, and aggregators, in the form of a consortium of companies and academic institutions, under the auspices of the Israel Innovation Authority. We collaborate with strategic clients in the domestic and international markets.



Looking ahead

Investments in recycled and biodegradable polymers

The strategy released by the Group in the second half of 2021 is focused on the circular economy and ESG principles for the mid- and long term.

The planned investments in the polymer segment will help the Bazan Group meet the ambitious strategic targets it has set for the production of at least 15% of its polymers using green sources by 2025, and 30% by 2030.

The Company has announced investments of USD 170-240 million in green (recycled and biodegradable) polymers by 2030.

Investment in the polymer segment will focus on three growth drivers: stronger leadership of the polymer market in Israel, growth in plastic recycling, and innovation in biopolymers.

Two initial outgrowths of these investments are the agreements with **UBQ** and **Melodea**.

Through **UBQ**, recycled waste will be integrated into polypropylene products with reduced carbon footprint, designated for the plastics industry in Israel and Europe.

Under the second agreement, Bazan has invested approximately USD 4 million in the Israeli company **Melodea**, located in the town of Arad, which has developed a coating material for packaging made using cellulose nanocrystals (CNC) with unique biopolymer properties. The material is designed to replace or be combined with similar products based on petroleum, as well as aluminum coatings used in flexible packaging, such as for laundry detergent powder and pet food, thus replacing non-recyclable or nonbiodegradable materials.

Investment in the polymer segment will focus on three growth drivers:

1 Expanding the polymers market in Israel

2 Growth in plastic recycling

3 Innovation in biopolymers





A closer look:

Promoting large-scale plastic recycling

To achieve the goal of 15% recycled plastic by 2025, Bazan took several steps in 2021 that continued into 2022 and will be discussed in greater detail in future reports.

Bazan has acquired **VPM**, a recycled plastics manufacturer specializing in recycling of post-industrial plastic scrap, at a volume of 12 thousand tons per year. The company supplies approximately 15 types of recycled plastics, according to customers' requirements, sold to manufacturers in Israel and overseas.

Bazan is promoting a collaboration with **Veridis** for the establishment of a plastic recycling plant in 2023. A facility to sort, wash, and crush plastics derived from household waste will operate at the plant, processing at least 10,000 tons of waste per year.

The Group is considering a collaboration with the **Environmental Services Company (ESC)** to build a chemical recycling plant, based on innovative technology for reclaiming plastic as a raw material for reprocessing at Bazan facilities.

Aggregator activities

As stated in this report, we believe in collaborations and knowledge sharing to promote improvements, both in the field of environmental protection and in general.

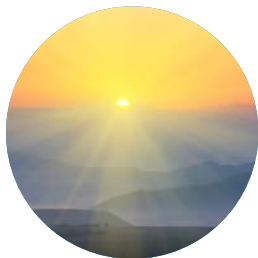


The European Union's Horizon 2020 program:



Nano Pack

Developing antimicrobial food packaging designed to extend the shelf life of food and reduce the use of preservatives.

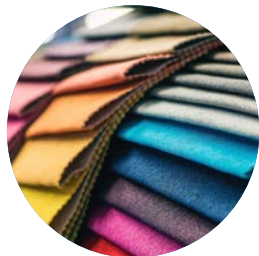


GEOCOND

Improving the efficiency of geothermal systems using plastics capable of storing thermal energy.



Israel Innovation Authority aggregators:



SNOW

Developing an innovative polymer composition to allow manufacturing of exceptionally soft nonwoven fabrics for hygienic applications, while maintaining high performance.



SMART

Developing protective technologies using active coating layers to cope with threats such as viruses, pests, and fungi in agriculture.



CIRCLE

Developing solutions to two challenges in plastic recycling: First, treating multilayer plastic sheet scraps, which are difficult to recycle due to their heterogeneous composition; and second, increasing the quantity of recycled material in plastic products while maintaining or improving final plastic quality.

Committed to social and economic development

Committed to a Sustainable Future

Direct contribution of the Bazan Group to the Israeli economy in 2021 – approximately NIS 2.6 billion

Target: 40% women in senior management by 2024

Safety – a 75% decrease in the number of work accidents from 2017 to 2021

Target: Incident rate (IR) 0.5 by 2025



DRIVING ISRAEL'S ECONOMY AND ENERGY INDUSTRY FORWARD

Economic and social impact

The Bazan Group is traded on the Tel Aviv Stock Exchange and routinely reports on its financial, economic, and operational performance. The reports are available on the Group's website, in Hebrew and English.

The Group is a key player in the energy sector in Israel and in the Israeli economy in general; it is considered a major employer in northern Israel.

A report by global consulting firm BDO for 2021 estimated the contribution of the Bazan Group to the Israeli economy and described the Group's direct and indirect economic impacts in 2020-2021. Main findings of the report:

■ Contribution to GDP:

The overall contribution of Bazan to the Israeli economy in 2021 is estimated at approximately NIS 6.4 billion, or approximately 0.42% of Israel's GDP. Its direct contribution is estimated at approximately NIS 2.6 billion, up 16% from 2019.

In terms of direct contribution, the Group accounts for approximately 1.6% of the industrial product in Israel, approximately 16% of the industrial product in the district of Haifa, and approximately 45% of the industrial product in the city of Haifa.

■ Contribution to employment:

Bazan has approximately 1,400 direct employees; its overall (direct and indirect) contribution is estimated at approximately 14,000 employees, mostly in northern Israel.



Contribution to employment

~1,400

Employed directly

~14,000

Employed directly and indirectly

Bazan accounts for

~1.6%

of the industrial product in Israel

and **~45%**


of the industrial product in the city of Haifa



Increasing our positive impact through collaborations


We believe that collaborations are an important basis for the promotion of the ESG approach and for the achievement of the UN's SDGs. Expansion of our spheres of influence enables us to create power multipliers, to the benefit of these goals, and generate a more substantial positive impact on our immediate surroundings and the broader environment in which we operate.

We are proud of our collaborations with various organizations and our shared work to promote these goals.



המכון הישראלי
לאנרגיה ולסביבה

The Israel Institute of Energy and Environment




WOMEN IN ENERGY

The Women in Energy community



מעלה
maala

Maala



הזירה
הסביבתית

The Environmental Arena – Clean Transportation Forum and Circular Economy Innovation Forum



מכון היצוא

Israel Export Institute




EnergyCom.IL

The Israel Energy Community – energy.com




IGNITE
THE
SPARK

Ignite the Spark energy start-up community



אילת
אילת
אנרגיה מתחדשת

Eilat-Eilat Renewable Energy



הטכניון
מכון טכנולוגי
לישראל

Technion Israel Institute of Technology



אוניברסיטת
בר-אילן
Bar-Ilan University

Bar Ilan University Energy Institute

Contribution to community resilience

Direct encounter and dialogue with the community are significant components of our day-to-day activities and business operations. Creating long-term strategic collaborations and harnessing the knowledge and capabilities of our people ultimately generate value for the community around us.



Our guiding principles:

Local community outreach

We aspire to engage with the local community, particularly in areas where we can meaningfully contribute: promoting education; creating opportunities for disadvantaged population groups; and sharing knowledge about sustainability, the environment, and the industry.

Encouraging education and excellence – promoting industrial professions and scientific and technological education

We act on the awareness that developing a productive community and increasing the accessibility of professional knowledge can benefit industry in Israel for many years to come. We are involved in programs to encourage scientific and technological education and studies of professions that support industry. In recent years, the Group has provided mentoring to students at professional schools and granted scholarships to students in the fields of science and technology. Students at professional schools received mentoring, and scholarships were granted to students of science and technology.

Employee volunteering and engagement

The Group supports volunteering and community engagement by its employees. We encourage individual initiatives as well as coordinated efforts organized in cooperation with Bazan. Special emphasis is placed on volunteering with disadvantaged populations within the communities in proximity to the Group's facilities. Among other programs, employee volunteering is compensated through an hour-per-hour system, in which the employer contributes an additional hour for every hour volunteered by the employee.





Some of the volunteering initiatives in which we have taken an active part:

A password for every student

A non-profit educational and social program aimed at reducing social inequalities by providing access to digital means and creating equal opportunities for children to realize their inherent abilities and talents.

In the program, a customized digital management and learning platform is provided to each child, accessible at any place and time, from any end device.

The Group has participated in this program for the past seven years. The importance of this initiative grew significantly during the period of the Covid-19 pandemic. In the first four days of remote learning in the Israeli educational system, more than 3 million visits to the platform were recorded. Approximately 220 schools have registered for the platform.



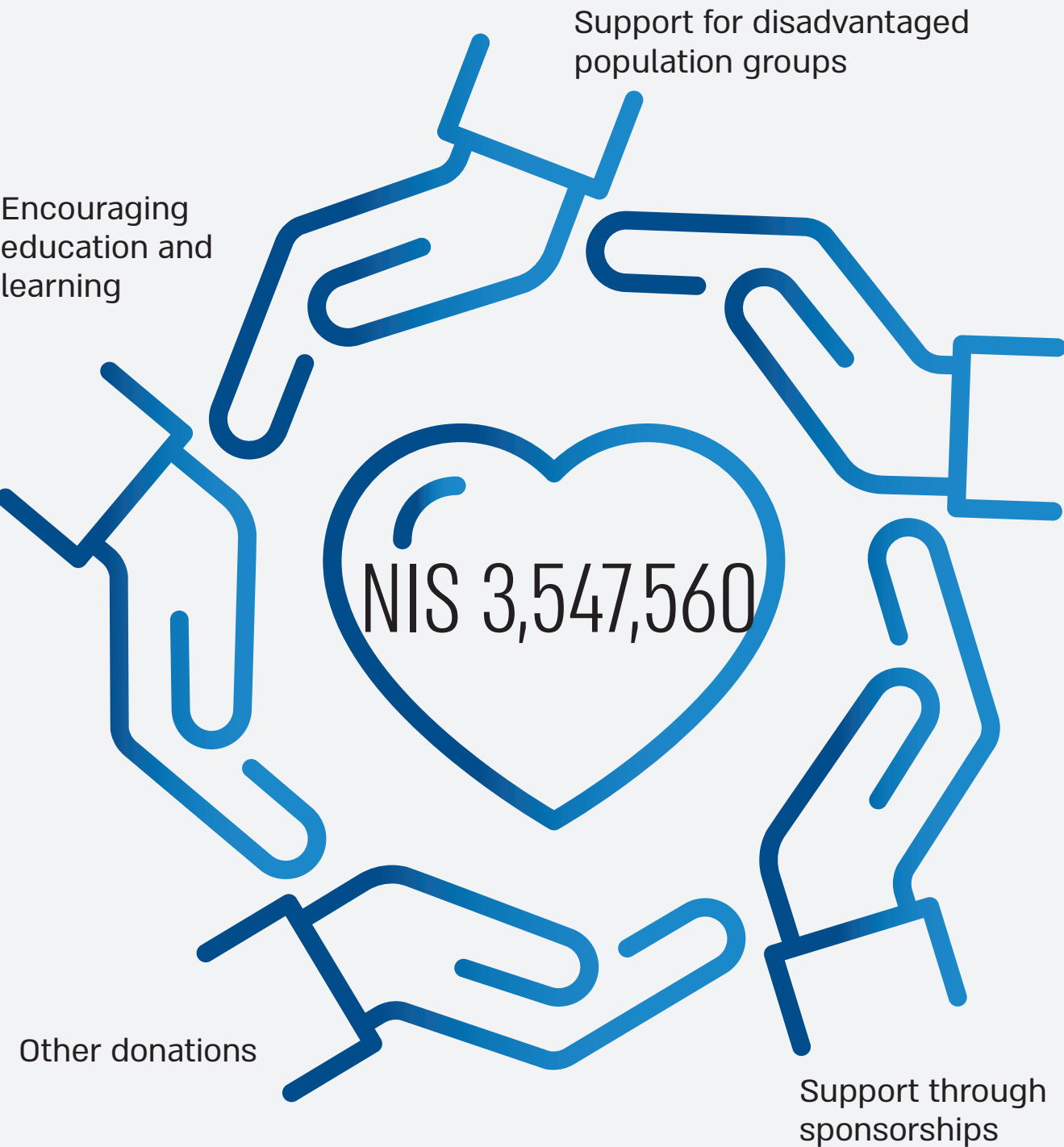
Bringing Israelis home during the Covid-19 pandemic

Joining a national effort to bring Israelis home from South America in the early days of the pandemic - the Group collaborated with El Al Israel Airlines as air travel was being shut down and it became increasingly difficult to find flights to Israel.

Strengthening hospitals during the pandemic

Bazan donated portable respirators to Rambam and Bnai Zion Rothschild Hospitals to support the healthcare system during the first months of the Covid-19 pandemic.

Monetary donations, 2019-2021



HUMAN CAPITAL

Human resources are the most important factor in the immediate and long-term success of the Company. We invest extensively in improving working conditions, employee well-being, education and professional training, as well as in personal empowerment. This approach takes the form of the freedom to balance work with family life and leisure activities, as well as a diverse workforce and more.



Job security during the Covid-19 pandemic

The past two years, in the shadow of the pandemic, were a true test of the resilience of our human capital. Despite the many constraints weighing on the economy as a whole, the Company ensured continuous employment for all of its employees.

100% of the Company's employees worked continuously during the Covid-19 pandemic

Employees were asked to work remotely and/or in pods, so as to enable continuous employment, in compliance with the directives of the Ministry of Health, with adaptation of working conditions to the circumstances. The Company's actions during this long period reflect its organizational resilience and cohesive social structure, which helped us all navigate the time of the pandemic as well as possible.

Caring for the employees of the Group

The Group's commitment to its employees over time is reflected, inter alia, in its investment in employees beyond their professional activities, including the creation of a healthy, safe, and respectful work environment. The Company is committed to supporting its employees, from the moment they are hired until they retire, as well as after their retirement.

Human resource development

The Organizational Development Unit, which reports to the VP of Human Resources, leads activities including training for new employees, building employee instruction and certification programs, formulating executive development programs, and more.

Guidance and mentoring are provided to mid-level managers by senior executives at the rank of division head and VP.

Employee evaluation processes are conducted annually. All employees of the Company (100%) participated in this process.



Representation of women at Bazan

The Bazan Group takes pride in the significant representation of women across its management ranks, in its various departments, and in managerial roles, including in the areas of manufacturing, innovation, R&D, and more. As of 2021, three of 11 members of senior management at Bazan are women.

The Group ensures that women are included in various roles and promotes actions supporting this approach, from education to mentoring and guidance within the organization and promotion within the Group.

There was one woman on the board of directors of the Group out of 11 directors in 2019, and two women, out of 11 directors, in 2021.

27% women in senior management as of 2021

The Company has set a goal of **40%** women in senior management by 2024



The Bazan Group performed a comparative analysis of average pay levels in the organization in 2021, in accordance with the Equal Pay Law. In the report, employees were divided into 14 categories by generation and sector. In six of the 14 categories, there was a positive pay gap in favor of women; the largest

gap was 25%. On the other hand, the largest pay gap in favor of men was just 9%, and resulted from differences in the duration of employment.

The gaps in pay are influenced by factors such as professional seniority and experience, satisfaction and attainment of objectives, duration of employment at the

Company, and more, and are not affected by gender differences.

Further information is available in the [Equal Pay Law Report](#) on our website.

Employment agreements and pay levels

88% of employees are employed under collective agreements

The majority of the employees of the Group are employed with optimal terms, under special collective agreements signed by the Group companies with employee representative organizations through employee unions. Some employees are employed under personal employment contracts. All employees of the Group - whether they are employed under a collective or personal agreement - are entitled to benefits, including pension insurance. As of 2021, 88% of employees are employed under the terms of the special collective agreements, while the rest are under personal contracts.

Collective agreements

The Group companies are party to special collective agreements regulating the employment terms of most of their employees. Wage agreements were signed with employee representative organizations in 2012. In late 2021, collective labor agreements were signed that are in effect until the end of 2024.

Personal contracts

Most employees at the rank of department manager or higher are employed under personal employment contracts. The personal employment contracts include pension and insurance coverage as well as social and other benefits.

Continuing to care for employees after retirement

Bazan employees who reach retirement age are entitled to a preparatory course for retirees, with the participation of the Histadrut General Federation of Labor. The course consists of in-person sessions with retirement specialists, a pension advisor, and a National Insurance representative, as well as leisure activities and an educational tour.

The Company remains in contact with its retirees through a retiree club, enrichment lectures, and other activities to maintain a sense of community.



Employee training and cultivation of professional skills

The training system at the Company offers employees multiple opportunities to develop their professional knowledge and skills. The Training Department also provides a set of tutorials adapted to each role within the Company.

Internal training

- **In-person training in three main areas** – Training mandated by law – such as annual safety instruction by safety personnel; certification training, and license refresher programs; professional training to improve employees’ skills, such as reading schematics and feasibility analysis of capital investments; and executive development and soft skills, including courses on management, teamwork, time management, etc.
- **Practical training on site at the plants** – On-the-job training (OJT).

- **E-learning** – Tutorials on instilling and practicing safety principles, appropriate workplace conduct and prevention of sexual harassment, environmental protection, emergency situations, and more. All employees of the Group undergo the tutorials each year.

External training

Professional training by external parties, such as certification for crane operators and electricians. External training is also conducted on safety topics, to maintain qualifications and employees’ awareness of these issues.

Survey conducted to design the instruction and training plan

Each year, managers across the organization are asked to determine and report which subjects they would like their employees to train in over the following year. Managers in the Group indicate subjects in which further specialization is needed (for example, operating pneumatic equipment). Based on this survey, the Training Unit schedules additional professional training for the employees of the Group, through internal and external courses.

In general, the Company endeavors to maintain equality between men and women in training hours. However, in 2021 the volume of training for women decreased, due to a change in the composition of training as a result of the Covid-19 pandemic and a focus on professional training.

Identifying capabilities and developing skills

Extensive resources are invested in imparting skills and capabilities aligned with the needs of employees and the organization. This policy includes providing means of identifying capabilities and developing skills, as well as options for professional mobility within the organization. In this way, employees attain self-fulfillment, while the organization benefits from high employee satisfaction due to stronger intra-organizational mobility.

157 employees transitioned to new roles within the Company in 2019-2021

Employee development for management positions

Bazan implements a development process for managers from various management ranks, using a range of methods, including courses; mentoring (individual coaching) by senior executives in the Group; individual meetings with organizational consultants; individual professional guidance, when starting a position and on the job; and, in appropriate cases - team development activities.

Further, the Company enables employees and managers to obtain higher education at the top academic institutions in Israel, and finances their tuition. In 2019, 19 employees and managers were enrolled in advanced degree programs with financing from Bazan; 15 employees were enrolled in such programs in 2020, and 27 employees were enrolled in 2021.



SAFETY AND HEALTH

Strictly maintaining a safe and healthy work environment is a top priority for the Group. To ensure such an environment, protective and cautionary measures designated for industrial production in general and the areas of activity of the Bazan Group in particular are applied. Bazan works in accordance with the requirements of the law in all matters pertaining to employees' health, including contractor employees; employees undergo periodic examinations, as prescribed by law. Employees' health is protected, beyond the requirements of the law, during the construction of new facilities and in ongoing operations.

etc.) and reactive activities (incident investigations) to identify risks.

The Company has safety committees operating on two main levels: the official safety committee of the Group - headed by the VP of Safety, the Environment, and Security - which convenes at least 8 times annually; and the safety management committees of the various business units, headed by the Head of Operations of the unit, which also convene approximately eight times a year.

We endeavor to create a culture of responsible and safe work, raising awareness and reinforcing the commitment of employees and managers to this goal. The Company revamps its approach to safety every year through an updated safety management plan, parts of which are presented in this report.

The organizational infrastructure of Bazan also includes an organization-wide safety function. This function is involved in planning everyday work, integrating safety into project execution, and conducting proactive activities (tours, tests,

Indicators and targets for the protection of employee safety

A series of indicators and targets has been established for all parts of the organization to ensure that employees' safety is optimally maintained.

The following table demonstrates the dramatic change at the Company with respect to employee safety in recent years. From 2017 to 2021, the number of work accidents* decreased by 75%, and the rate of accidents (IR**) decreased by 68%. There were no fatal accidents in 2019-2021.

Revised target for 2025

IR = 0.5



2021:

IR = 0.78

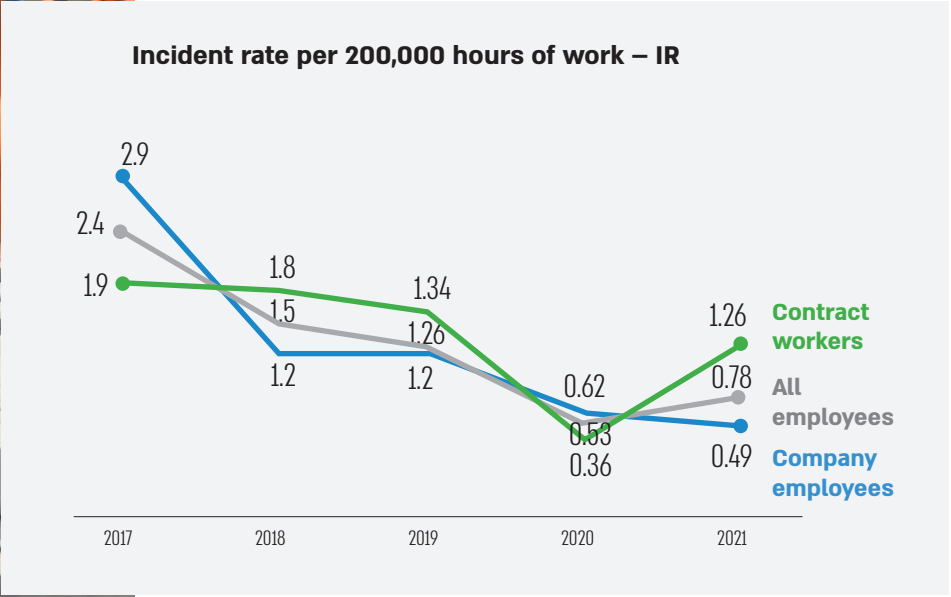
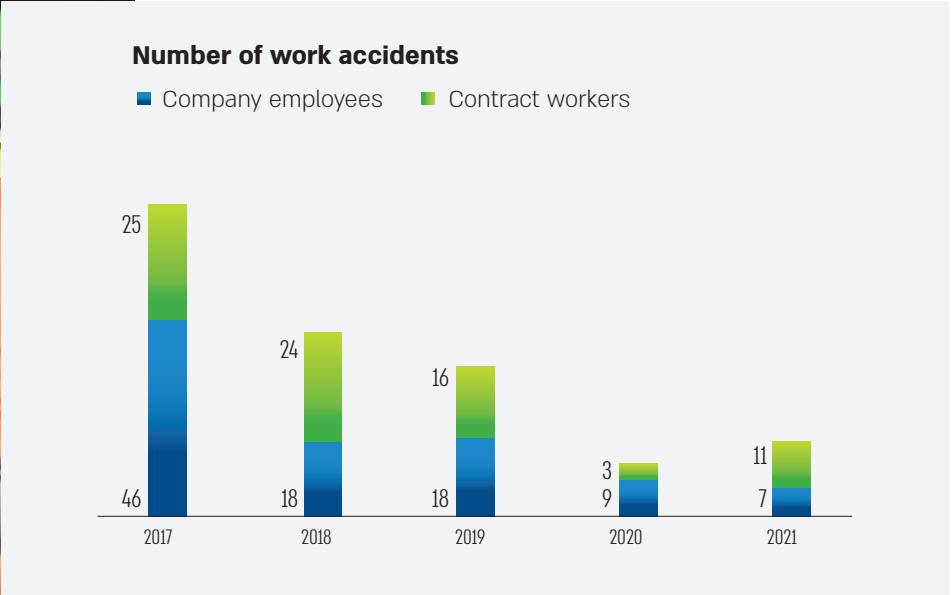
Down 48% from 2018

* The number of accidents, the average incident rate of work accidents (IR), and the severity rate of work absences (SR) are reported according to the guidelines of the Occupational Safety and Health Administration (OSHA) in the United States.

** Weighted number of accidents per 200,000 hours of work.



75% decrease in the number of work accidents from 2017 to 2021



Reporting and investigating safety incidents

The safety incident reporting and investigation function spans the range from employees' personal safety to the workspace as a whole. The work of this function includes investigations and study reports, which are posted on the Company's portal and are accessible to all employees.

One effective way of instilling a culture of safety at the organization is cultivating dialogue and intra-organizational communication on this subject, combined with a frequently updated system of internal reports, including procedures for reporting, investigating, and learning from incidents. Employees can report to the function if they encounter a situation that may cause a safety incident, whether it be a behavioral failure by a human or a near-miss event that reveals unsafe components of the work environment.

Incident investigation indicators and targets

Proactive indicators and targets for safety activities and taking advantage of opportunities (leading indicators):

Indicator	Execution status
Annual safety plan execution percentage	100%
Enforcement check plan execution percentage (internal checks and enforcement checks)	100%
Occupational safety and health training plan - execution percentage	100%
Annual Group traffic accident reduction plan - execution percentage	100%
Exceptional event study reports	ecution of all three reports for each cluster

Safety risk management at the organization

The safety management plan at Bazan emphasizes the management of risks at the organization, including risk identification, assessment, and control. The plan establishes methods and means for the identification of risk factors; a risk matrix and boundaries of risk acceptable in the workplace; and rules for determining the function in the organization responsible for the risk and for applying controls.

An annual risk-management plan has also been formulated, including a procedure and schedule for applying controls, and specifying methods for monitoring risk mitigation.

Professional expertise in safety

One of the key goals of the Group in the area of safety is to proactively prevent malfunctions. Extensive investment in employee training and in the implementation of advanced safety measures has led to a significant decrease in work accidents among both the employees of the Company and contract workers.

Excellence in Safety Award: technology in the service of safety

Bazan is developing a digital safety management system for its employees, adapted to smartphones, to make information continuously and readily accessible. Data are recorded and uploaded to a dedicated organizational portal.

System capabilities

- **Ongoing incident monitoring** – Every employee can report incidents in real time, as they occur.
- **Preventive actions** – High-resolution monitoring of preventive actions in the field. The system examines whether the required tests were performed at the recommended time, whether previous recommendations were implemented, and whether implementation was performed on schedule.

The system was presented at a safety conference of the Israel Safety Forum, and won the Excellence in Safety Award in memory of Yehuda Arad in 2017.



Safety officer course

A 10-month safety officer course is held each year. The course is run by an external institution, with 25 employees and managers attending each session, gaining an in-depth perspective on safety and a safety officer certificate.

In addition, a safety trustee course for employees is conducted every year. In contrast to previous years, during the Covid-19 pandemic the Group had to suspend professional safety courses and studies held overseas, to protect employees' health.



A closer look: Safety climate

The safety climate is a measure of the tendency of a group of employees to prefer a safe course of action over a less safe one. This indicator measures expected behavior, examining the extent to which employees tend towards unsafe behavior. The statistical test allows continual monitoring, and findings can be used to improve the safety culture.

Bazan invests extensive resources in cultivating a high safety climate at its plants, with the aim of reducing accidents and safety incidents and creating a safer work environment. A survey led by the Faculty of Industrial Engineering and Management at the Technion (Israeli Institute of Technology) in 2013 measured the quality of the safety climate at the Group's plants; subsequent to the survey, a pilot program was introduced in 2016, aimed at improvement in this area.

In 2020, a comprehensive safety climate survey was conducted across all of the operational units of Bazan, and results of the survey were presented to the managers. As of 2022, another round of measurement is in progress, within the process of improving the safety climate at the Company.

Compliance with strict safety and health standards

- **Occupational Health and Safety Management Standard, IS 2018 (ISO 45001)** – The standard sets forth requirements for a safety management system integrated with overall management activities.
- **Quality Management Standard, IS 2015 (ISO 9001)** – The standard sets forth requirements for a quality management system integrated with overall management activities.

Since 2017, the Company has been awarded the Platinum Mark of the Standards Institution of Israel, which is granted to organizations that are committed to quality and excellence and hold five or more Quality Marks. The marks attest to the compliance of process and product management systems with international standards.



A closer look: Preparedness for stress scenarios



Fire preparedness

Preparation for stress scenarios is an integral part of the routine work of the Bazan Group.

Extensive financial and human resources are allocated to this matter.

The fire preparedness system emphasizes preventive action, including through the following measures:

- Rigorously maintaining the mechanical integrity of operational systems;
- Implementing protective systems, including dedicated fire extinguishment systems, and operating a fire station open 7 days a week, staffed by firefighters, employed by the Company, who are skilled at extinguishing industrial fires;
- Rigorously maintaining high preparedness of Group employees through comprehensive training, among other means. 200 Bazan employees participated in a course dedicated to fire incidents in the petrochemical industry at a school specializing in this area in Texas, U.S.

EMPLOYEE HEALTH

Employee health is addressed on two levels:

1. Health

- **Supplying means of protection against safety and health hazards.**
- **Monitoring employee health:**
 - Periodic medical examinations to check the condition of employees' health and the level of their exposure to hazardous substances.
 - Environmental tests to examine the concentration of pollutants in the air in work areas.
- **Monitoring noise damage in the work environment** through periodic tests as well as conducting hearing tests for employees.

The Group employs a full-time personal safety manager.

2. Human capital

The Group promotes employee health through the following means, among others:

- **On-site occupational health clinic at the plant:** A licensed occupational health clinic operates on the premises of the plant, with professional staff providing medical services to all employees. The responsibilities of the medical staff include raising awareness of health among the employees.
- **Entitlement to examinations:** The employees of the Company are entitled to medical screening tests under their employment agreements.
- **Comprehensive health insurance:** The Group insures its employees under medical and dental insurance policies, and offers them the option to insure their family members at discounted rates.
- **Staying in shape, even on site:** The Group operates a fitness center for its employees.



Committed to sound governance

Committed to a Sustainable Future

The Group's code of ethics was updated in 2021

A risk mitigation plan and KRIs were formulated in 2021

The Group's ESG Department was established in 2022



Committed to sound governance

Adherence to transparency and to compliance with the provisions of the law is a principle of the utmost importance to the Group in all of its endeavors. Environmental laws and directives in Israel are considered advanced and stringent in international terms; Bazan routinely invests extensive resources in order to rigorously comply with these laws and directives.



COMPLIANCE, ETHICS, AND ANTI-CORRUPTION

Compliance with the law and transparency

Ethics and rules of proper conduct are the bedrock of our activity, forming our borders and compass.

Any employee may contact the enforcement supervisor or the Legal Bureau, openly or anonymously, to report or consult on these issues. The enforcement plans contain explicit instructions on how to handle complaints, as well as regarding deviations from procedures and the protection of complainants. The Company also has a formalized procedure for decision-making regarding ways of handling anonymous complaints, while ensuring that complainants are protected against damage to their reputation.

Details of exceptional cases can be found in the Company's financial statements, available on our [website](#).

The Group has a legal function and enforcement officers in several areas, who continually update and implement enforcement plans in designated fields:

- Securities and corporate law
- Antitrust
- Prevention of Sexual Harassment
- Environmental protection and safety
- Enforcement of trade restrictions

Code of Ethics

The code of ethics of the Bazan Group was first released in 2012; it has since been updated, in 2018 and again in 2021. The code, which refers to employees of the Company as well as contract workers, sets forth the values, principles, standards, and behavioral norms of the Group, and provides tools for appropriate decision-making.

The code is grounded in the four core values of the Bazan Group:



it addresses all stakeholders of the Company.

The core values are reflected in the sections comprising the code of ethics:

The Group's Customers

Bazan's success relies on the delivery of quality products to its customers and on its fair conduct towards them. The Group is committed to customer satisfaction, achieved by learning about customers' needs and striving to find adapted solutions, with an emphasis on a service mindset.

The Group's Employees

The partnership between Bazan and its employees is a key element of its success. This partnership is based on long-term mutual commitment, promoting shared goals. The Group provides its employees with a healthy, safe, respectful work environment, enabling every employee to grow, and to contribute to and benefit from the Group.

The Group's suppliers and service providers

Good business results depend, among other factors, on the quality of services and materials procured by the Group from its suppliers, which makes them business partners that are essential to its success. We believe in long-term collaborations that include understanding the needs of our suppliers and service providers, coordination of expectations, and full transparency.

An ethics appendix will become part of the engagement process with material suppliers by the end of 2023, as part of our adherence to transparency in the reporting process.

Environment and community

It is crucial for the Company to function as a good corporate citizen of the community. We make efforts to be attentive to the community and engage with it where we can exert a positive social and community impact, immediately and in the long term.

Proper organizational conduct

We are committed to business conduct based on compliance with the law, transparency, and fairness, while promoting the goals of the Group and maximizing its profits. All employees of the Group are committed to these principles, as well as to teamwork and cooperation with the various stakeholders.

The code of ethics and instilling the code

The Group has a number of mechanisms for consultation and reporting on ethics complaints. The ethics supervisor can be contacted anonymously through the Company's portal or by mail, email, or telephone. A formalized procedure for processing such complaints establishes the processes and actions to be applied when a complaint is filed, while ensuring that the reputation of the subjects of the complaint is not tarnished unnecessarily.

Complainants who communicate non-anonymously receive a detailed response to their message, and after the matter has

been examined, they receive a report on the conclusions drawn and the subsequent actions taken.

Number of complaints received in the reported years:

2019	1 complaint
2020	1 complaint
2021	3 complaints

In addition, the Company's employees and managers consult with the ethics officer on various issues from time to time.

A summary of the code of ethics is available to the public on the Company's website.

Prevention of sexual harassment

In early 2018, the bylaws on the prevention of sexual harassment were updated in accordance with the phrasing of the law and the regulations derived therefrom. Harassment and sexual harassment are on the list of severe disciplinary offenses noted in the collective labor agreement. Every two years, Bazan employees participate in mandatory training using an up-to-date tutorial; newly hired employees also complete the tutorial and receive information regarding the law from the Human Resources Department.

The updated bylaws for the prevention of sexual harassment are posted on every bulletin board in the Group, including contact information for sexual harassment prevention supervisors. Anonymous messages can be sent through the Company's portal or by mail, email, or telephone, or in person in a meeting with the sexual harassment prevention supervisor.

Complaints and how they were addressed in the reported years:

2019	1 complaint
2020	1 complaint
2021	2 complaints

All of the complaints were handled through an individual meeting with the sexual harassment supervisor, with further actions taken according to the circumstances.

Anti-corruption and antitrust

An anti-corruption procedure in the spirit of the Company's principles constitutes yet another element of its code of ethics. The procedure concerns the prevention of corruption and bribery in the Company's activity with stakeholders, primarily customers and suppliers.

In 2019-2021, no legal proceedings were taken against the Company in the area of antitrust or competition law.

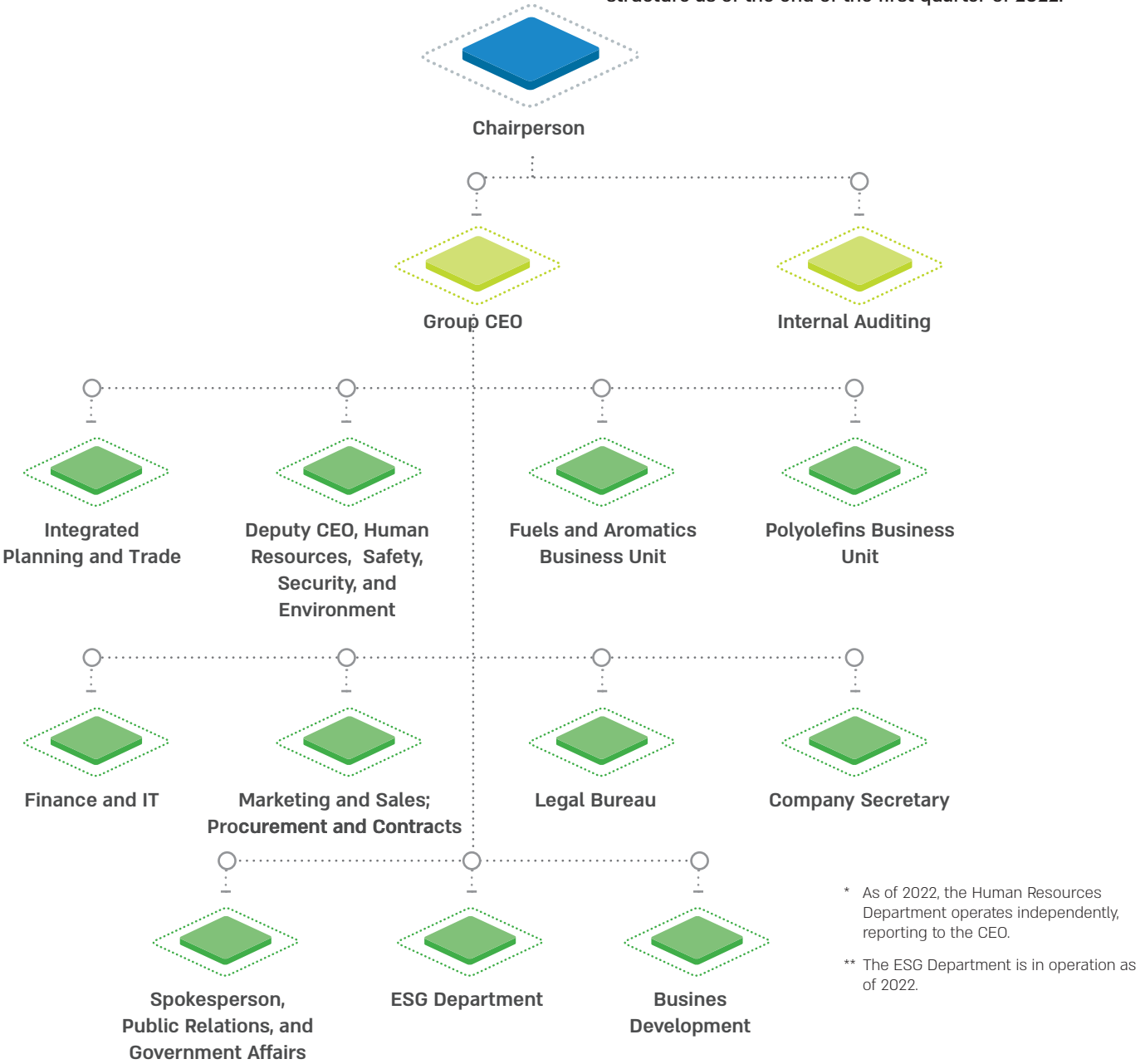
CORPORATE GOVERNANCE

The Bazan Group is committed to proper corporate governance, which includes ethical conduct, responsibility, and transparency towards shareholders and stakeholders. Bazan operates in accordance with the law and the rules of sound corporate governance, through formalized procedures that, among others, guide the work of the Board of Directors and its committees, the process of identifying and approving interested-party transactions, and the process of appointment and approval of officer compensation. These rules delineate the relationships between the Company, management, the Board of Directors, shareholders, and stakeholders.

In the last quarter of 2021, the Company adopted a document that establishes the goals, duties, and work methods of the various committees of the Board of Directors, and an enrichment program to expand the knowledge of the Board members on various subjects relevant to the activity of the Company.

An ESG Department, which reports to the CEO of the Company, was established at Bazan in early 2022, as part of the promotion of its strategy - in which environmental, social, and corporate governance principles are a key pillar.

The following diagram describes the organizational structure as of the end of the first quarter of 2022:



The procedures of the Company include adherence to reporting duties pursuant to securities laws aimed at ensuring transparency towards all stakeholders, and an enforcement plan designed to ensure rigorous compliance with the requirements of the law and with internal procedures.

Board of Directors of the Group

The Board of Directors approves the policies of the Company in all areas of its activity, including all environmental, social, and ethical matters.

Further, all corporate governance topics are addressed by the Board of Directors, in recognition of their importance to the sound conduct of the Group. Among other means, this is achieved through an internal enforcement system in the area of securities and corporate law, which includes regular reports to the Audit Committee (twice a year) and the Board of Directors (once a year), training, and investigation of violations. External directors are appointed and operate pursuant to the Companies Law, 1999.

As of the end of 2021, there were two women on the Board of Directors, out of 11 members.

For further information regarding the composition of the Board of Directors, see the [financial statements](#) of the Company for 2021.

The Board of Directors convenes at least once each quarter, and usually on a monthly basis. Beyond that, meetings of the various committees are held from time to time, including the balance sheet and audit committee. Once a year, the Board of Directors holds a meeting without management to discuss aspects such as the functioning of the Board of Directors itself. All material topics are reported regularly in a monthly report submitted by the CEO to the directors, which also covers regulatory aspects. The Board of Directors also receives regular reports on key matters in the activity of the Company during the course of its meetings. Each quarter, within the discussion of the financial statements, the main units of the Company present their activities, via the relevant VPs.

Policy on appointments to the Board of Directors and upholding integrity

The appointment of directors is discussed directly by the Board of Directors; in the case of external and independent directors, this follows appropriate discussion by the Audit Committee, in accordance with the law. In the discussion, the aspects stipulated in the enforcement procedures are considered, including the director's qualifications and availability, and conflicts of interest are examined.

Advancement of ESG issues in the Board of Directors

The strategy adopted by the Board of Directors in July 2021 positions ESG principles as one of the 4 key pillars of the activity of the Company for the long term.

As part of the plan's implementation, in the second half of 2021 the purview of the Environment and Safety Committee were expanded to include ESG topics. This committee convenes at least twice a year and monitors the areas under its purview. The committee's meeting minutes are submitted for perusal by the Board of Directors and its resolutions require Board approval. Routine updates on ESG topics are submitted to the Board of Directors every few weeks. Formalized training on ESG issues was provided to the Board of Directors in 2021.

The Board of Directors of the Company routinely supervises the financial, social, and environmental performance of Bazan, including relevant risks and opportunities. The Board of Directors examines and monitors risk management at the Company, and receives regular updates on this subject from the risk management steering committee.

As of 2022, the Environment and Safety Committee's purview also includes ESG issues, and its name was changed accordingly to the Environment, Safety, and ESG Committee. The committee discusses ESG topics at least twice annually.

Meeting minutes are submitted for perusal by the Board of Directors, and resolutions require Board approval.

Risk Management

About the risk management process at the Group

Risk management at Bazan forms a significant element in strengthening corporate governance and implementing advanced management and control tools. The Group's management has adopted a policy in this area based on an international model (ERM COSO) and implemented a formalized process to manage the risks to which it is exposed. This includes procedures that establish the areas of responsibility and authority of various functions and create mechanisms for identifying, controlling, and monitoring risks. In implementing this process, the Group works continually to strengthen the commitment of its managers and employees to risk management and make it an integral part of its business operations. The aim, among others, is to improve the performance of its various units, achieving the strategic and business goals of the Group, and maintaining an effective corporate governance policy.

This area is managed by the VP of Finance at the Group, who works in collaboration with other members of management, the CEO, and representatives thereof to map, identify, and prioritize risks to the Group, formulate plans to address the risks, and monitor risk development.

Reports and monitoring of the development of risks and the actions taken to mitigate them are submitted to the risk management steering committee headed by the CEO, the Board of Directors' Audit Committee, and the Board of Directors. This is done at the frequency prescribed by the risk management forum of the Group.

Bazan has formulated an ordered process for validating and updating its risk map when new risks relevant to the Group's activity are identified. Furthermore, a comprehensive risk survey is conducted every few years, with the assistance of a professional consultant specializing in this field.

In 2020, the Group completed a risk survey approved by the Board of Directors' audit committee. **In 2021, a risk mitigation plan and KRIs were formulated with respect to all of the key risks to which the Group is exposed.** The principal risks identified include changes in regulation, failure to realize the strategic plan, and ESG risks, including in the areas of the climate and environment, cybersecurity, financing, and liquidity. An ESG risk assessment is currently in progress; findings will be integrated into the overall risk plan upon completion.

Fairness in business

Fairness in business Customer service for product shipping providers

Customer wait times, the availability of materials, and the methods of inspection of customers' road tankers are important elements in Bazan's routine activity. Alongside diligently addressing customer queries, a customer satisfaction survey is conducted annually, as required by the ISO standard to which the Group has committed. The findings of the survey, with the customer complaint survey and driver satisfaction survey, are analyzed and conveyed to the relevant parties to be addressed.

Supplier survey

In 2021, Bazan launched a comprehensive effort to gain understanding of its suppliers' expectations in the areas of ESG. Suppliers in the areas of goods, services, and contracting were surveyed. 63 of the largest and foremost suppliers of the Company participated in the survey.

The Company will take the survey findings into consideration in formulating future policies for the advancement of ESG topics in cooperation with its suppliers.



The Committee of Sponsoring Organizations of the Treadway Commission ¹

Appendix

Committed to a Sustainable Future



About the Report

This report describes the activity of the Bazan Group in the areas of environment, society and community, and corporate governance in 2019, 2020, and 2021. The first report issued by the Company, in 2018, covers 2017 through 2018.

This report covers the performance of the Group, in Israel, in the reported years.

In some data tables, percentages may not calculate to 100% or exact totals, due to rounding effects.

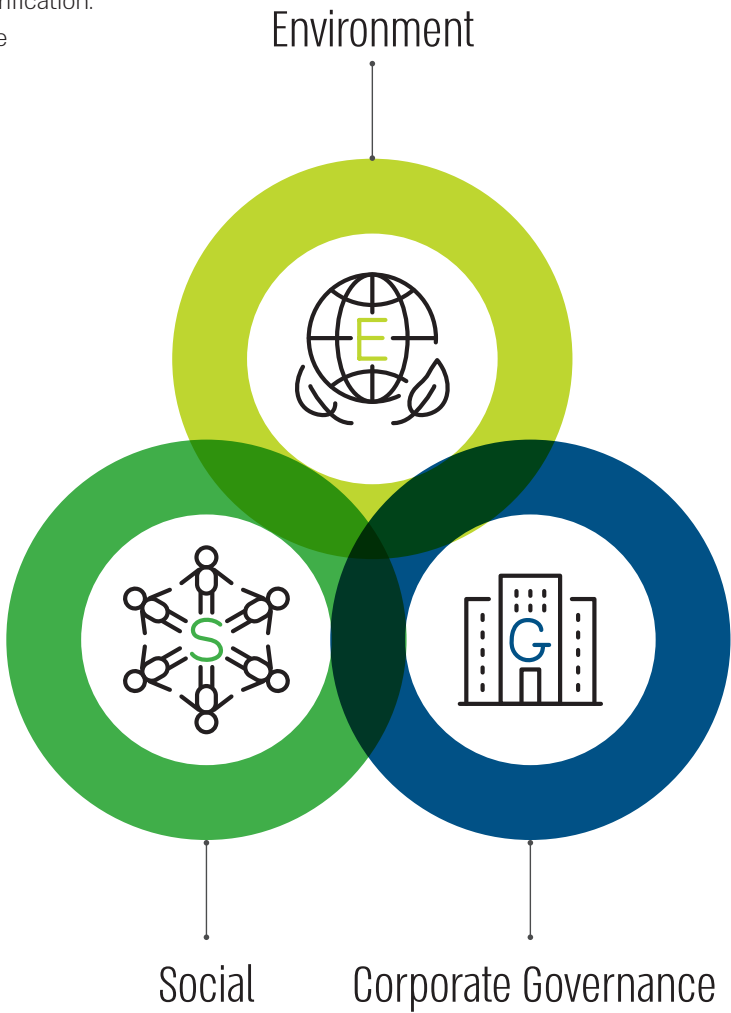
Please note that data in this report may differ from data reported in the past, due to data cleansing, improvement of data collection processes, and supportive controls.

The report was prepared in accordance with the standards of the Global Reporting Initiative (GRI), at the Core reporting level, and has undergone comprehensive internal verification. In addition, external assurance was performed by the accounting firm KPMG.

The report was written according to the following reporting guidelines:

SASB (Sustainability Accounting Standards Board) to Sector Extractives & Minerals Processing – Oil & Gas – Refining & Marketing, (SASB code – EM-RM).

This ESG report has been approved by the environment, safety, and ESG committee of the board of directors.



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Independent Limited Assurance Report to the users/readers of BAZAN Group Oil Refineries Ltd. 2019-2021 ESG Report

We were engaged by the management of BAZAN Group Oil Refineries Ltd. (further referred to as “BAZAN” or “the Group”) to provide limited assurance on the specified parts as mentioned in the table below (further referred to as “specified parts”), regarding the information presented on BAZAN’s 2019-2021 ESG Report for the years ended 31 December 2021, 31 December 2020 and 31 December 2019 (further referred to as “the Report”). It should be noted that the assurance refers to the information and data included in the topics listed in this table, regarding the reporting years, only.

The limited assurance was performed regarding the data and information in the specified parts detailed in the table below:

Subject Matter	Units	2019	2020	2021
Employees				
Total number of employees	#	1,365	1,341	1,332
Training				
Average employees' training hours – total	hours	34	19	27
Average employees' training hours – men	hours	35	21	29
Average employees' training hours – women	hours	24	10	19
Safety				
Injury rate (IR) – group employees (direct)	#	1.2	0.62	0.49
Injury rate (IR) – contract workers	#	1.34	0.36	1.26
Injury rate (IR) – total	#	1.26	0.53	0.78
Number of work related accidents – group employees (direct)	#	18	9	7
Number of work related accidents – contract workers	#	16	3	11
Number of work related accidents – total	#	34	12	18
Absence rate (SR) – direct group employees only	#	13	23	27
Energy consumption				
Natural gas consumption	GJ	32,724,065	30,328,655	32,365,614
Electricity consumption - external sources	GJ	3,087,206	3,112,757	2,919,151
Electricity consumption - internal production	GJ	860,857	755,116	915,125
Water consumption				
Potable water consumption	m³	3,085,874	3,018,690	3,691,528
Reclaimed water consumption	m³	3,610,419	3,457,150	3,299,322
Brackish water consumption	m³	2,150,424	2,133,733	1,849,724
Wastewater - discharge into the river				
Industrial effluents discharged into the Kishon River - total	m³	821,235	1,070,564	300,890
Industrial effluents discharged into the Kishon River - Caol	m³	153,838	226,733	94,228
Industrial effluents discharged into the Kishon River - Bazan	m³	667,397	843,831	206,662
Hazardous Waste				
Hazardous waste - total	ton	6,149	7,134	7,560

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Further information and details, including the scope, content, assumptions and estimates determined by the Group regarding the specified parts included in the process, can be found in the relevant chapters of the Group's Report.

BAZAN management is responsible for A. the preparation and the presentation of the ESG Report in accordance with the Sustainability Reporting Standards of the Global Reporting Initiative (“GRI-SRS”) as described on the relevant page of the Report site, and the information and assertions contained within it B. for determining BAZAN’s objectives in respect of sustainable development performance and reporting C. for establishing and maintaining appropriate performance management and internal control systems from which the information is derived, to be free from omissions and material misstatements whether due to fraud or error. D. the identification of stakeholders and material issues for reporting.

Our responsibility is to provide a limited assurance engagement and to express a conclusion based on the work performed. We conducted our engagement in accordance with International Standard on Assurance Engagements (ISAE) 3000, *Assurance Engagements other than Audits or Reviews of Historical Financial Information*, issued by the International Auditing and Assurance Standards Board (IAASB). That Standard requires that we comply with applicable ethical requirements, including independence requirements, and that we plan and perform the engagement to obtain limited assurance about whether the Report is free from material misstatement.

A limited assurance engagement, regarding data and information in the specified parts on the ESG Report, consists of making interviews, primarily of persons responsible for the preparation of information presented in the Report, and applying analytical and other evidence gathering procedures, as appropriate. These procedures included:

- Examination of the specified parts in the Report, for the purpose of performing a limited assurance, based on public information sources, knowledge of the Group business and other comparative information of similar organizations.
- Interviews of management to gain an understanding regarding the specified parts.
- Interviews with senior management and relevant staff of BAZAN management concerning ESG strategy and policies for the specified parts, and the implementation of these across the business.
- Interviews with relevant staff at corporate and business unit level responsible for providing the information in the Report.
- Visits to BAZAN's sites located in Haifa (BAZAN, CAOL, GADIV), selected on the basis of a risk analysis including the consideration of both quantitative and qualitative criteria regarding the specified parts.
- Comparing the information regarding the specified parts presented in the Report to corresponding information in the relevant underlying sources to determine whether all the relevant information contained in such underlying sources has been included in the Report.
- Where relevant, conducting interviews regarding the calculation, aggregation and methods used to collect and report the specified parts in the Report.
- Reading the information presented in the Report to determine whether it is in line with our overall knowledge of, and experience with, the ESG performance of BAZAN.

As part of the process of performing a limited assurance, we reviewed the changes made to the draft ESG Report of BAZAN and reviewed the final version of the Report to ensure that it reflects our findings.

Limited assurance is less than absolute assurance and reasonable assurance. A limited assurance engagement is substantially less in scope than a reasonable assurance engagement. As a result, the level of assurance obtained in a limited assurance engagement is lower than the assurance that would have been obtained had we performed a reasonable assurance engagement.

Based on the limited assurance procedures performed and the evidence we have obtained, described in this report, nothing has come to our attention to indicate that the specified parts as mentioned in the

table above, in BAZAN’s 2019-2021 ESG Report are not presented, in all material respects, in accordance with the GRI-SRS and BAZAN 's reporting criteria.

Our limited assurance report is made solely to BAZAN in accordance with the terms of our engagement. Our work has been undertaken so that we might state to BAZAN those specified parts we have been engaged to state in this limited assurance report and for no other purpose or in any other context. We do not accept or assume responsibility to anyone other than BAZAN for our work, for this limited assurance report, or for the conclusions we have reached.

Somekh Chaikin
Certified Public Accountants
Tel Aviv, Israel
8 November 2022

Group Data

Energy consumption (GJ) / year	2016	2017	2018	2019	2020	2021
Energy consumption by source						
Electricity consumed from external sources			3,031,715	3,087,206	3,112,757	2,919,151
Electricity consumed from internal production			787,606	860,857	755,116	915,125
Natural gas			30,145,434	32,724,065	30,328,655	32,365,614
Fuels			35,439,990	36,068,504	35,512,626	35,311,364
LPG			396,322	109,837	334,464	254,399
Energy consumption by activity						
Bazan and Gadiv – refineries			54,824,082	56,282,748	52,627,491	54,419,201
Carmel Olefins - petrochemical			14,941,824	16,567,721	17,416,127	17,346,452
Haifa Basic Oils – aromatic oils			35,160	0	0	0
Total energy consumption			69,801,066	72,850,469	70,043,618	71,765,653

GHG emissions (tons CO ₂ e/year)	2016	2017	2018	2019	2020	2021
Total Scope 1	2,449,827	2,518,314	2,471,436	2,440,192	2,219,973	2,224,300
Bazan	1,896,748	1,913,533	1,841,354	1,790,657	1,572,645	1,592,046
Carmel Olefins	405,102	486,376	458,179	488,143	465,689	452,164
Gadiv	147,977	118,405	171,903	161,393	181,638	180,091
Total Scope 2	229,393	265,469	261,013	269,232	293,804	321,394
Bazan	88,234	103,753	99,028	100,712	137,802	142,123
Carmel Olefins	118,683	145,300	140,622	148,110	134,145	154,146
Gadiv	22,477	16,415	21,363	20,410	21,857	25,126
Total GHG emissions	2,679,220	2,783,783	2,732,449	2,709,424	2,513,777	2,545,695

Emissions kg/year	2016	2017	2018	2019	2020	2021
Total suspended particulate matter (SPM)	44,789	44,123	35,744	23,749	34,204	22,498
Bazan	44,789	27,498	24,632	23,749	21,662	22,498
Carmel Olefins	-	16,625	11,112	-	12,542	-
Gadiv	-	-	-	-	-	-
Total non-methane volatile organic compounds (NMVOCs)	564,616	504,332	493,084	275,073	233,301	221,987
Bazan	222,764	269,000	265,485	129,239	79,778	66,984
Carmel Olefins	259,241	166,002	180,917	117,175	114,730	143,969
Haifa Basic Oils	8,545	2,737	-			
Gadiv	74,066	66,593	46,682	28,659	38,793	11,034

Group Data

Emissions kg/year	2016	2017	2018	2019	2020	2021
Total nitrogen oxides (NOx)	1,387,730	1,518,414	1,212,304	1,119,791	1,113,191	1,056,251
Bazan	931,939	1,019,059	757,275	674,324	683,771	671,537
Carmel Olefins	358,287	423,788	361,493	348,232	324,032	280,511
Gadiv	97,504	75,567	93,536	97,235	105,388	104,202
Total sulfur oxides (SOx)	314,162	383,848	431,969	238,022	180,485	220,583
Bazan	220,583	180,485	238,022	431,969	383,848	314,162
Carmel Olefins	-	-	-	-	-	-
Gadiv	-	-	-	-	-	-
Total benzene (C ₆ H ₆)	3,401	2,491	2,231	554	571	411
Bazan	1,326	1,485	1,396	300	257	232
Carmel Olefins	1,152	494	513	123	64	66
Gadiv	923	512	322	132	250	113

Water consumption in cubic meters / year	2016	2017	2018	2019	2020	2021
Total brackish water	2,627,373	2,351,479	2,085,839	2,150,424	2,133,733	1,849,724
Bazan	2,206,942	1,875,515	1,604,368	1,559,622	1,592,456	1,270,600
Carmel Olefins	366,914	434,254	447,636	530,836	492,171	499,174
Gadiv	67,400	41,710	33,835	59,967	49,106	79,951
Total potable water	6,548,927	3,486,630	2,748,576	3,085,874	3,018,690	3,691,528
Bazan	5,020,716	1,827,605	1,173,059	1,506,782	1,380,657	2,057,061
Carmel Olefins	1,193,935	1,347,360	1,255,106	1,341,735	1,383,981	1,384,710
Gadiv	334,276	311,665	320,411	237,357	254,053	249,757
Total reclaimed wastewater	929,866	2,856,555	3,409,661	3,610,419	3,457,150	3,299,322
Bazan	929,866	2,856,555	3,409,661	3,610,419	3,457,150	3,299,322
Carmel Olefins	0	0	0	0	0	0
Gadiv	0	0	0	0	0	0
Total water consumption	10,106,166	8,694,664	8,244,076	8,846,717	8,609,573	8,840,574

Group Data

Effluents kg/year	2016	2017	2018	2019	2020	2021
Total mineral oil discharged into the river	2,492	-	3,262	6,402	6,043	-
Bazan	2,492	-	3,262	6,402	6,043	-
Carmel Olefins	-	-	-	-	-	-
Total mineral oil discharged to effluent treatment plant	822	3,765	4,199	4,278	3,410	1,426
Bazan	-	1,145	1,639	1,628	1,390	581
Carmel Olefins	822	2,620	2,560	2,650	2,020	846
Total TOC discharged into the river	27,191	6,304	5,919	11,682	12,105	1,927
Bazan	24,395	6,304	5,919	11,682	10,500	1,927
Carmel Olefins	2,796	-	-	-	1,605	-
Total TOC discharged into effluent treatment plant	50,899	86,620	84,674	60,250	60,527	49,071
Bazan	29,680	53,231	51,850	44,876	40,771	31,087
Carmel Olefins	21,219	33,389	32,824	15,374	19,756	17,984
Total discharge into the river	2,719,233	578,650	662,674	821,235	1,070,564	300,890
Bazan	-	542,855	522,487	667,397	843,831	206,662
Carmel Olefins	-	35,794	140,187	153,838	226,733	94,228

Concrete waste / year*	2016	2017	2018	2019	2020	2021
Total hazardous waste treated	1,127	3,665	3,018	2,830	6,257	5,873
Bazan	295	1,760	979	593	4,578	3,463
Carmel Olefins	832	1,218	1,159	1,448	994	1,397
Gadiv	-	687	880	789	686	1,013
Total hazardous waste - landfilled	9,561	1,774	972	3,319	877	1,686
Bazan	8,549	1,554	841	2,724	609	1,500
Carmel Olefins	259	209	124	66	23	42
Gadiv	753	11	8	529	246	144
Total hazardous waste	10,688	5,439	3,990	6,149	7,134	7,560
Total non-hazardous waste treated	2,777	2,723	3,310	10,198	7,343	12,542
Bazan	2,274	2,184	2,633	8,836	6,567	11,158
Carmel Olefins	503	375	501	965	651	1,228
Gadiv	5	673	619	131	471	366
Total non-hazardous waste – landfill	2,755	2,378	2,189	1,899	1,168	1,128
Bazan	2,743	1,566	1,104	1,135	620	687
Carmel Olefins	5	673	619	131	471	366
Gadiv	7	139	466	633	77	74
Total non-hazardous waste	5,532	5,101	5,499	12,097	8,511	13,670

* Data refer to waste removed in the reported year.

Group Data

No. of work accidents*

	2017	2018	2019	2020	2021
Company employees	46	18	18	9	7
Contracted workers	25	24	16	3	11
Employees - total	71	42	34	12	18

Accident incident rate (IR)*

	2017	2018	2019	2020	2021
Company employees	2.9	1.2	1.2	0.62	0.49
Contracted workers	1.9	1.8	1.34	0.36	1.26
Employees - total	2.4	1.5	1.26	0.53	0.78

Average days of absence due to safety incidents (Company employees) – SR*

	2017	2018	2019	2020	2021
Company employees	7	18	13	23	27

* The average number of work accidents (IR) and the rate of work absence days (SR) are reported according to the guidelines of the Occupational Safety and Health Administration (OSHA) in the United States.

Employee turnover rate

	2019		2020		2021	
	Hired employees	Exited employees	Hired employees	Exited employees	Hired employees	Exited employees
Men	4%	6%	3%	4%	7%	8%
Women	1%	1%	0%	1%	1%	1%
Age 30 or lower	1%	0%	1%	0%	3%	0%
30–50-year-old	3%	3%	2%	2%	5%	3%
Over 50	0%	4%	0%	3%	1%	5%
Total	4%	7%	3%	5%	8%	8%

Group Data

Bazan Group Employees

Unit	2019	2020	2021
Company headquarters and management	274	263	257
Fuels Business Unit	549	541	548
Polyolefins Business Unit	448	447	447
Aromatics and Oils Business Unit	94	90	80
Total	1,365	1,341	1,332
Service providers and employees of contractors and service providers of the Bazan Group	1,610	1,830	1,881

Diversity and inclusion at Bazan

	2019		2020		2021	
Employee rank	Percentage of women	Percentage of underrepresented groups	Percentage of women	Percentage of underrepresented groups	Percentage of women	Percentage of underrepresented groups
Senior management	33%	11%	27%	9%	27%	10%
Management	15%	3%	16%	3%	19%	3%
Non-management employees	14%	9%	14%	9%	14%	9%
Total	15%	8%	15%	8%	15%	8%

Bazan Group training hours – average training hours per employee

Gender	2018	2019	2020	2021
Women	31	24	10	19
Men	38	35	21	29
Total	37	34	19	27

Parental Leave

	2019			2020			2021		
	Women	Men	Total	Women	Men	Total	Women	Men	Total
Employees entitled to parental leave	12	63	75	14	58	72	10	62	72
Employees who took parental leave	12	1	13	14	1	15	10	0	10
Employees who returned to work after parental leave	4	1	5	5	1	6	10	0	10
Employees who returned to work after extension of parental leave	7	0	7	2	0	2	8	0	8
Employees who remained at work 12 months after returning from parental leave	4	1	5	12	1	13	10	0	10

Group Data

GRI Index

Indicator no.	Indicator no.	Source	Location
The Organization and Its Reporting Practices			
2-1	Organizational details	ESG Report	pp. 12-14
2-2	Entities included in the organization's sustainability reporting	ESG Report	pp. 15, 98
2-3	Reporting period, frequency and contact point	ESG Report	pp. 8, 98
2-5	External assurance for the report	ESG Report	pp. 99-101
2-6	Activities, value chain and other business relationships	ESG Report	pp. 16-27
2-7	Employees	ESG Report	p. 106
2-8	Workers who are not employees	ESG Report	p. 106
Governance & Ethics			
2-9	Governance structure and composition	ESG Report	pp. 93-94
2-10	Determining the composition of the board of directors	Periodic Report for 2021 ESG Report	Part D Further information regarding the corporation
2-11	Chair of the highest governance body	Periodic Report for 2021	Part D Further information regarding the corporation
2-12	Role of the highest governance body in overseeing the management of impacts	ESG Report	pp. 93-94
2-13	Delegation of responsibility for managing impacts	ESG Report	pp. 93-94
2-14	Role of the highest governance body in sustainability reporting	ESG Report	pp. 93-94
2-17	Collective knowledge of the highest governance body	ESG Report	94 ענה
2-19	Remuneration policies	Periodic Report for 2021	Chapter A Description of the Company's Businesses Page 51

GRI Index

Location	Source	Indicator no.	Indicator no.
2-20	Process to determine remuneration	Periodic Report for 2021	Chapter A Description of the Company's Businesses Page 51
Strategy, Policies and Practices			
2-22	Statement on sustainable development strategy	ESG Report	pp. 6-9
2-23	Policy commitments	ESG Report	pp. 91-92
2-24	Embedding policy commitments	ESG Report	p. 92
2-26	Mechanisms for seeking advice and raising concerns	ESG Report	p. 92
2-27	Compliance with laws and regulations	ESG Report Periodic Report for 2021	p. 91 Part C Consolidated financial statements, Note 20, pp. 72-85
2-28	Membership associations	ESG Report	p. 72
Stakeholder Engagement			
2-29	Collective bargaining agreements	ESG Report	pp. 32-33
Employment & OHS			
2-30	Collective bargaining agreements	ESG Report	p. 79
Materiel Topics			
3-1	Process to determine material topics	ESG Report	p. 34
3-2	List of material topics	ESG Report	p. 34
Economic Preformences			
201-1	Direct economic value generated and distributed	Periodic Report for 2021	Part C Consolidated financial statements p. 5-12

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Location	Source	Indicator no.	Indicator no.
201-3	Defined benefit plan obligations and other retirement plans	Periodic Report for 2021	Part C Consolidated financial statements, Note 3, pp. 28-30 Note 18, p. 71
Indirect Economic Impacts			
203-2	Significant indirect economic impacts	ESG Report	pp. 70-71
Anti-Competitive Behavior			
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	Periodic Report for 2021	Part C Consolidated financial statements, Note 20, pp. 72-85
Energy			
302-1	Energy consumption within the organization	ESG Report	pp. 48-49, 102
302-4	Reduction of energy consumption	ESG Report	pp. 48-49
Water and Effluent			
303-1	Interactions with water as a shared resource	ESG Report	pp. 56-61
303-2	Management of water discharge-related impacts	ESG Report	pp. 56-61, 104
303-3	Water withdrawal	ESG Report	pp. 56-61, 103
303-4	Water discharge	ESG Report	pp. 56-61, 104
303-5	Water consumption	ESG Report	pp. 56-61, 103
Emissions			
305-1	Direct (Scope 1) GHG emissions	ESG Report	pp. 46-47, 102
305-2	Energy indirect (Scope 2) GHG emissions	ESG Report	pp. 46-47, 102
305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	ESG Report	pp. 42-45, 103

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Location	Source	Indicator no.	Indicator no.
Waste			
306-1	Waste generation and waste-related impacts	ESG Report	p. 62
306-3	Waste generated	ESG Report	pp. 63, 104
306-4	Waste diverted from disposal	ESG Report	pp. 63, 104
306-5	Waste directed to disposal	ESG Report	pp. 63, 104
Employment			
401-1	New employee hires and employee turnover	ESG Report	p. 105
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	ESG Report	p. 79
401-3	Parental Leave	ESG Report	p. 106
Occupational Health & Safety			
403-1	Occupational health and safety management system	ESG Report	pp. 82-85
403-2	Hazard identification, risk assessment, and incident investigation	ESG Report	pp. 84-85
403-5	Worker training on occupational health and safety	ESG Report	pp. 84-85
403-6	Promotion of worker health	ESG Report	p. 86
403-9	Work-related injuries	ESG Report	pp. 82-85, 105
Training & Education			
404-2	Programs for upgrading employee skills and transition assistance programs	ESG Report	pp. 80-81
Diversity and Equal Opportunity			
405-1	Diversity of governance bodies and employees	ESG Report	pp. 77-78, 106
405-2	Ratio of basic salary and remuneration of women to men	ESG Report	pp. 78-79

SASB Sector Level: OIL & GAS –
REFINING & MARKETING

Table 1. Sustainability Disclosure Topics & Accounting Metrics

SB DISCLOSURE TOPIC	DESCRIPTION	CATEGORY	UNIT OF MEASURE	CODE	RESPONSE
Greenhouse Gas Emissions	(1) Gross global Scope 1 emissions, percentage covered under (2) emissions-limiting regulations, and (3) emissions-reporting regulations	Quantitative	metric tons (t) CO2-e, percentage (%)	EM-RM-110a.1	ESG Report, P.46-47,102 Bazan does not calculate Scope 3 emissions at this point in time, yet is planning to do so in coming reports.
	Discussion of long-term and short-term strategy or plan to manage Scope 1 and lifecycle emissions, emissions reduction targets, and an analysis of performance against those targets	Discussion and Analysis"	n/a	EM-RM-110a.2	ESG Report, P.46-47 Bazan does not calculate Scope 3 emissions at this point in time, yet is planning to do so in coming reports.
Air Quality	Air emissions of the following pollutants: (1) NOx (excluding N2O), (2) SOx, (3) particulate matter (PM10), (4) H2S, and (5) volatile organic compounds (VOCs)	Quantitative	Metric tons (t)	EM-RM-120a.1	ESG Report, P.42-45,103
	Number of refineries in or near areas of dense population	Quantitative	number	EM-RM-120a.2	1
water management	(1) Total fresh water withdrawn, (2) percentage recycled, (3) percentage in regions with High or Extremely High Baseline Water Stress	Quantitative	Thousand cubic meters (m³), Percentage (%)	EM-RM-140a.1	ESG Report, P.56-67, 103-104
	Number of incidents of non-compliance associated with water quality permits, standards, and regulations	Quantitative	number	EM-RM-140a.2	0
Hazardous Materials Management	Amount of hazardous waste generated, percentage recycled	Quantitative	Metric tons (t), Percentage (%)	EM-RM-150a.1	ESG Report, P.63,104
	(1) Number of underground storage tanks (USTs), (2) number of UST releases requiring cleanup, and (3) percentage in states with UST financial assurance funds	Quantitative	Number, Percentage (%)	EM-RM-150a.2	0
Workforce Health & Safety	(1) Total recordable incident rate (TRIR), (2) fatality rate, and (3) near miss frequency rate (NMFR) for (a) direct employees and (b) contract employees	Quantitative	Rate	EM-RM-320a.1	ESG Report, P.82-85,105
	Discussion of management systems used to integrate a culture of safety	Discussion and Analysis	n/a	EM-RM-320a.2	ESG Report, P.82-86

SASB Disclosure topic	DESCRIPTION	CATEGORY	UNIT OF MEASURE	CODE	RESPONSE
Product Specifications & Clean Fuel Blends	Percentage of Renewable Volume Obligation (RVO) met through: (1) production of renewable fuels, (2) purchase of "separated" renewable identification numbers (RIN)	Quantitative	Percentage (%)	EM-RM-410a.1	Not applicable: We do not produce renewable fuels yet.
	Total addressable market and share of market for advanced biofuels and associated infrastructure	Quantitative	Reporting currency, Percentage (%)	EM-RM-410a.2	Not applicable: We do not produce renewable fuels yet.
Pricing Integrity & Transparency	Total amount of monetary losses as a result of legal proceedings associated with price fixing or price manipulation	Quantitative	Reporting currency	EM-RM-520a.1	This is not relevant due to local laws and regulations in areas of operation
Management of the Legal & Regulatory Environment	Discussion of corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry	Discussion and Analysis	n/a	EM-RM-530a.1	At this moment, Bazan is not able to report on this topic and is planning to do so in future reports.
Critical Incident Risk Management	Process Safety Event (PSE) rates for Loss of Primary Containment (LOPC) of greater consequence (Tier 1) and lesser consequence (Tier 2)	Quantitative	Rate	EM-RM-540a.1	Data is unavailable at this time
	Challenges to Safety Systems indicator rate (Tier 3)	Quantitative	Rate	EM-RM-540a.2	Data is unavailable at this time
	Discussion of measurement of Operating Discipline and Management System Performance through Tier 4 Indicators	Discussion and Analysis	n/a	EM-RM-540a.3	Data is unavailable at this time

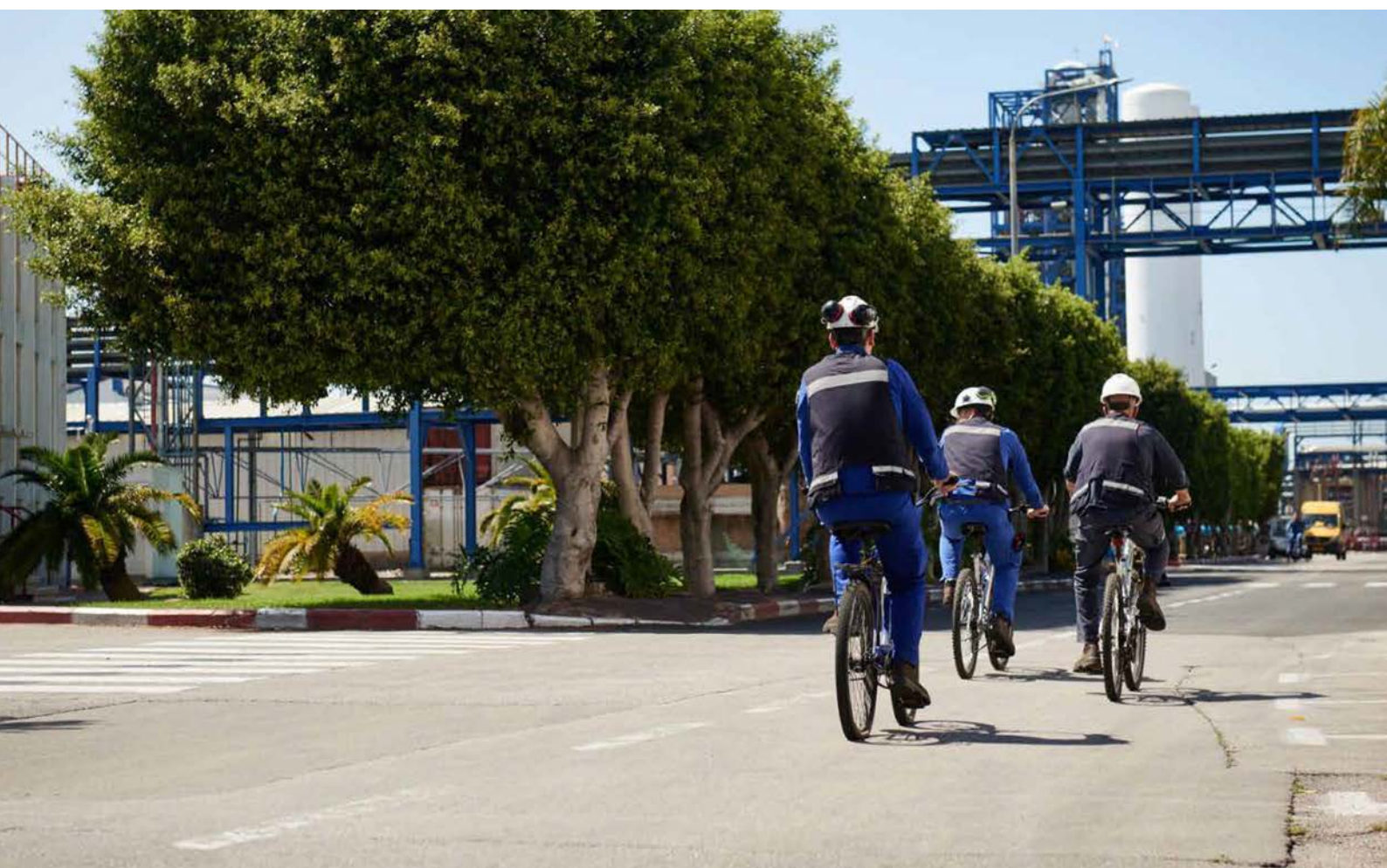
Table 2. Activity Metrics

ACTIVITY METRIC	CATEGORY	UNIT OF MEASURE	CODE	RESPONSE
Refining throughput of crude oil and other feedstocks	Quantitative	Barrels of oil equivalent (BOE)	EM-RM-000.A	62,500,000
Refining operating capacity	Quantitative	Million barrels per calendar day (MBPD)	EM-RM-000.B	0.197

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