



*ESG*

Sustainability Report | 2019



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# LETTER FROM THE PRESIDENT

[102-14,102-15]



At Braskem Idesa, innovation drives us to seek pioneering, diversified and sustainable solutions, under an ethical management framework in the conduct of our business; with this vision, during 2019, we overcame the multiple challenges presented by the global market, such as the downturn cycle due to the overproduction of thermoplastic resins in the world.



[102-14, 102-15]

However, in the face of this scenario, we remain focused on creating value for our stakeholders, increasing and maintaining the efficiency and competitiveness of our operations to provide a specialized service to our clients by maintaining the highest quality standards and adding value as a benchmark in the polyethylene industry, from a sustainable perspective, where economic performance, social development and care for the environment are harmonized, all supported by a solid corporate governance structure, concluding in 2019 the implementation of our Compliance System maintaining a firm culture of integrity, ethics and transparency with all our stakeholders; with a record cash generation showing a solid EBITDA and a growth of 41% compared to 2018.

We follow our Global Business Policy for Sustainable Development, a document that reinforces the commitments we have established in alignment with the Sustainable Development Goals (SDG) of the United Nations (UN), which is reflected in each of the actions that we carry out focusing on improving our environmental indicators (Water, Energy, Emissions and Waste), with the aim of developing increasingly sustainable products for the preservation of the planet, acting within the plastic value chain by creating alliances focused on recycling post-consumer polyethylene waste, and maintaining our vision to comply with the Circular Economy commitments to which we adhere.

We recognize the importance of our business and its impacts on society, so we act in the local development of the communities that are in the areas of social influence of the company to maintain our social license to operate.

For 2019, I would like to highlight the most relevant initiatives of our company:

In accordance with the generation of value, we managed to enter the global market through a bond for exclusive investors; with this, we were able to replace part of our Project Finance debt acquired in 2012 to build and start production of the Complex at Nanchital. This fact, is a sign of confidence on the part of international investors, who see Braskem Idesa as a solid company capable of generating significant profits through our Business and reaffirms our commitment to position the Mexican petrochemical industry globally.

[102-14, 102-15]

We maintain ourselves as a workspace that encourages collaboration through the implementation of value proposals, for the development of our professionals in balance, to have a full life through the realization of their personal and professional goals through our program (BEUx).

We are aware that our environment is in a process of accelerated change, which translates into important challenges and opportunities for which we are prepared thanks to our Team Members, technology, value chain and sustainable vision, all supported by continuous investment.

It only remains for me to thank our stakeholders, our clients and suppliers for the trust they have placed in Braskem Idesa, also for all who make up this great company, for their work and passion for continuing to build together a benchmark in the global industry.

Stefan Lepecki  
CEO- Braskem Idesa

# CORPORATE PROFILE

## Foreword

Innovation drives us to search for pioneering, diversified and sustainable solutions, underpinned by an ethical management framework that guides our business, helping us become a key player in Value Creation within the Mexican market throughout 2019.

Given the fundamental role played by the chemical and petrochemical sector in driving the economic development of numerous production chains, we fully understand the importance of our business and the impact that it has on society, which is why we focus our investments on responsible growth through an approach that benefits well-being and resource management.

In the following pages, we will share the challenges and advances we faced during 2019, a year of major challenges but also outstanding results, including the consolidation of our Circular Economy strategy, the conclusion of the implementation of our Compliance System, and the issuance of a bond on the international capital markets .

The progress that we have made reflects our efforts to continue evolving into a committed, ethical and socially responsible company that creates products and solutions that are increasingly sustainable and efficient.

We hope you enjoy reading this report.



## Principles and Values [\[102-16\]](#)

At Braskem Idesa, we engage with our stakeholders and manage our businesses and processes within a framework of principles and values. These are:

- **Integrity:** Ensure that ethical integrity permeates all systems of governance in the internal and external relations of the company
- **Transparency:** Be transparent in the information provided, going beyond the minimum required, promoting, therefore, a frank, accurate and fast communication.
- **Ethics:** Act in accordance with the regulatory norms, be they legal, statutory or regulatory.
- **Perennial:** Demand that government agents (Administrators, Fiscal Council Members, and Auditors) respond in full to the one who elected them for their actions in the exercise of their mandates.
- **Responsibility:** Ensure that government agents look after the sustainability of the company, incorporating a broader vision of business strategy and considering the principles of sustainable development.
- **Equality:** Give a fair and equitable treatment to stakeholders.

▶ We are committed to operating in an ethical, honorable and transparent manner.

[\[102-16\]](#)

We have value that underpin our quality standards and policies that govern our actions, including:

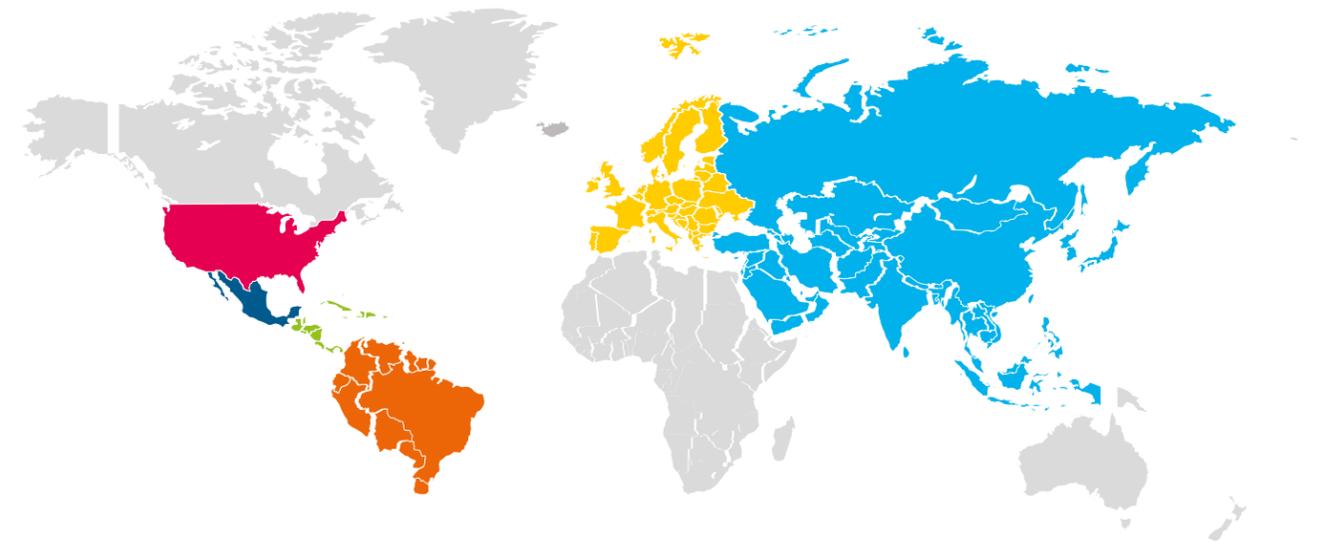
- **Trust in People** and in their capacity and desire for progress.
- **Customer Satisfaction**, with an emphasis on quality, productivity and social and environmental responsibility.
- **Return to Shareholders** and the valuation of their equity.
- **Partnership among the team members** who in planning and executing the work and share in the results they generate.
- **Self-development of personnel**, mainly via education through work, ensuring the survival, growth, and perpetuity of the Organization.
- **Reinvestment of results** for the creation of new job opportunities and the development of communities.



Operations Map [102-2, 102-4, 102-6]

**4**  
**processing plants**  
located in Nanchital, Veracruz  
México.

**Exports**  
to more than **41**  
**countries.**



**830**  
**team members.**

**Production**  
capacity of more than  
1 million tons/year.



To learn more about our global presence,  
[please click here](#)

## Market Segments [102-2, 102-6]

Chemistry and plastic are key elements in modern life and are used in every market segment in which we operate. The major applications of these elements include:



[102-2, 102-6]



**1 million**  
**tons of polyethylene**  
produced per year.

## Film

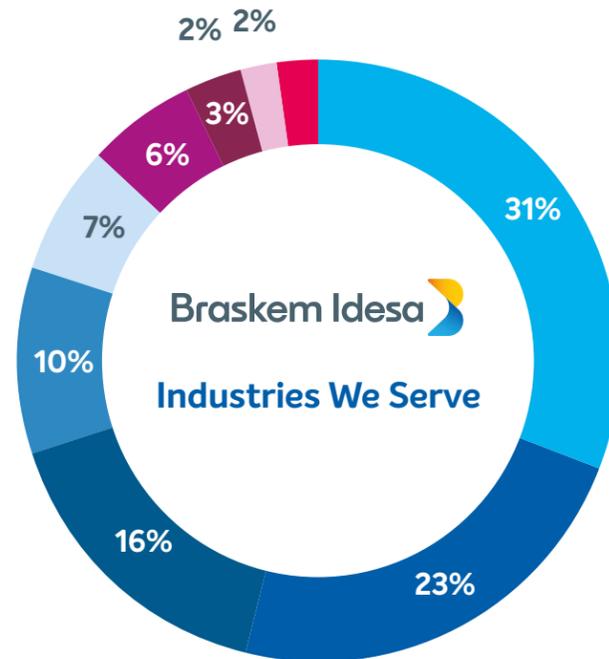
- **High Molecular Weight Film**  
High molecular weight resins for making films that are used mostly in the shopping bag and bag rolls market.
- **Low-Density Polyethylene**  
It can be used in a wide variety of applications, from simple films to multi-layer and laminated films.
- **Thermo-Shrink Film**  
We offer three grades of low-density polyethylene for the production of thermo-shrink films:
  - » Medium-resistant film for the packaging of numerous products, in addition to the outer films of diapers.
  - » HDPE and LDPE mixes for extrusion, bags and sacks, bottles for consumer goods, agricultural film and greenhouse sheeting, industrial film, thermo-shrink film and blown film.
  - » Low molecular weight LDPE for industrial bags, thermo-shrink agricultural films, pipes and hoses.
  - » Special films for the production of highly resistant geomembranes for a wide range of chemical products.



## Products [102-2, 102-6]

We have 1 Cracker and 3 High- and Low-Density Polyethylene plants at our petrochemical complex located in Nanchital, Veracruz. We have an annual production capacity that exceeds 1 million tons of polyethylene, which is increasing through collaboration and our position as a key player within the value chain.

Our High-Density Polyethylene (HDPE) and Low-Density Polyethylene (LDPE) resins offer us the opportunity to work with range different industries by providing a wide variety of solutions based on products of the highest quality:



Bags and Films



Packing and Packaging



Construction



Industrial



Home Care



Chemicals



Agriculture



Cosmetics and Pharmaceuticals



Others



# BRASKEM IDESA IN FIGURES 2019

[102-7]



US \$361 million in recurring EBITDA in 2019.



US \$775 million in net revenue in 2019.



US \$3.6 million in trade balance.



830 Team members.



32,251 training hours offered.



USD \$533,038.41 invested in training.

[102-7]



29 projects that focus on driving environmental and/or social impacts.



+30,000 people benefitted through social and/or environmental projects.



1 million tons of polyethylene produced.



460 species recorded and protected by the Environmental Management Unit at the complex

We ensure constant communication with our stakeholders, consolidating our relations with them given the fundamental importance of understanding their expectations in order to work on them, meet them and exceed them, with the goal of driving positive results that have a positive impact on all parties involved.

Stakeholders	Description	Expectations	Communication Channels
 <b>Creditors and Investors</b>	Financial organizations and institutions involved in international capital markets, our Project Finance and creditors in general	<ul style="list-style-type: none"> <li>• Provide transparent and quality information.</li> <li>• Ensure that investors and creditors correctly analyze the company's credit.</li> </ul>	<ul style="list-style-type: none"> <li>• Investor Relations Website (IR)</li> <li>• E-mail</li> <li>• IR Mailbox</li> <li>• IR Phonenumber</li> <li>• Management Call</li> <li>• Consolidated Financial Statements</li> </ul>
 <b>Team Members</b>	All of the company's employees who work to achieve its business goals and whose rights as workers are respected by the company, which promotes their professional development and respects the diversity they offer Braskem Idesa.	<ul style="list-style-type: none"> <li>• Good work environment</li> <li>• Talent attraction and retention</li> <li>• Career development</li> <li>• Workplace diversity and equality</li> <li>• Opportunities for professional growth</li> <li>• Performance recognition</li> <li>• Attractive salaries and benefits</li> <li>• Workplace integration</li> </ul>	<ul style="list-style-type: none"> <li>• E-Mail</li> <li>• Newsletters</li> <li>• Braskem Idesa TV</li> <li>• Bulletin board</li> <li>• Braskem Idesa View</li> </ul>
 <b>Suppliers</b>	Those who supply the resources, raw materials and services required for Braskem Idesa's operations, which is why we treat them fairly and impartially, contributing to our sustainability strategy.	<ul style="list-style-type: none"> <li>• Fair trade practices</li> <li>• Fair competition</li> <li>• Supply responsibility</li> <li>• Transparent assessment</li> </ul>	<ul style="list-style-type: none"> <li>• Audits</li> <li>• Surveys</li> </ul>
 <b>Associations (Chambers)</b>	Institutions that advocate the interests of the sector and in which Braskem Idesa engages to drive the best possible social and/or economic impact.	<ul style="list-style-type: none"> <li>• Partnerships to promote better quality of life</li> <li>• Agreements to promote a sustainable plastic culture</li> </ul>	<ul style="list-style-type: none"> <li>• Meetings</li> <li>• Events</li> <li>• Commissions</li> <li>• Working groups</li> </ul>
 <b>Clients</b>	Companies that use Braskem Idesa's products to make their own and reach their end consumers. Braskem Idesa strives to meet their needs through innovation, technology and the highest levels of quality and service.	<ul style="list-style-type: none"> <li>• Quality and safety</li> <li>• Efficient time management</li> <li>• Price vs. quality</li> <li>• Opportune monitoring and follow-up</li> </ul>	<ul style="list-style-type: none"> <li>• Satisfaction surveys</li> <li>• E-mail</li> <li>• Suggestions box</li> </ul>
 <b>Organizations and Institutions</b>	Social groups that work alongside Braskem Idesa to drive social development, knowledge, and growth in the communities in which the company operates.	<ul style="list-style-type: none"> <li>• Partnerships to promote development</li> </ul>	<ul style="list-style-type: none"> <li>• Meetings</li> <li>• Face-to-face visits</li> <li>• Suggestions box</li> <li>• E-mail</li> </ul>
 <b>Community</b>	Those people on which the company's operations have an impact or benefit. Braskem Idesa strives to operate responsibly and transparently in its dealings with the community, helping drive its development and contributing to safeguarding its natural resources, in addition to organizing activities that benefit it socially.	<ul style="list-style-type: none"> <li>• Social support</li> <li>• Contributions to community development</li> <li>• Donations</li> </ul>	<ul style="list-style-type: none"> <li>• Face-to-face visits</li> <li>• Suggestions box</li> <li>• E-mail</li> <li>• Community telephone</li> <li>• Semi-annual reports</li> </ul>
 <b>Authorities</b>	All domestic or international government bodies, whose regulations and auditing processes regulate Braskem Idesa's operations and processes.	<ul style="list-style-type: none"> <li>• Compliance</li> <li>• Forging of partnerships to drive development</li> </ul>	<ul style="list-style-type: none"> <li>• Meetings</li> <li>• Joint events</li> </ul>
 <b>Media Outlets</b>	Publications that transmit and create informative content for public or private use, and which have an influence on Braskem Idesa's operations and its surroundings.	<ul style="list-style-type: none"> <li>• Clear and true information</li> <li>• Relevant information for public analysis</li> <li>• Focus on significant issues</li> </ul>	<ul style="list-style-type: none"> <li>• Meetings</li> <li>• Conferences</li> <li>• Interviews</li> <li>• Press seminars</li> </ul>



# COMPLIANCE AND CORPORATE GOVERNANCE

[103-2, 103-3]



At Braskem Idesa, our businesses operates within an ethical, honorable and transparent management framework. Our Compliance System represents the commitment, hard work and dedication of everyone at the company, in addition to its corporate governance structure.

We also rely on business risk management processes that ensure compliance and outline anti-corruption control mechanisms, procedures and policies that guarantee ethical behavior, prevent illegal acts and put ethics and transparency at the forefront of everything we do through the following tools:

- **Anti-corruption Policy**
- **Business Courtesy Procedures at Braskem Idesa**
- **Internal Control Guidelines at Braskem Idesa**
- **Lobbying and Political Contributions Procedure at Braskem Idesa**
- **Donations and Sponsorship**
- **Conflicts of Interest**
- **Global Compliance Policy**
- **Disciplinary Measures Guidelines**

## Corporate Governance [\[102-18\]](#)

Our commitment to acting in an ethical, honorable and transparent manner begins with our Board of Directors (BD) and involves every single Team Member of Braskem Idesa. The on-going support for leadership and the commitment to ensuring proper conduct are indispensable elements in promoting a culture based on ethics, integrity, transparency and legality, a culture that must be consolidated and implemented at all levels within the company.

By acting with a focus on ethics, integrity and transparency, our leadership inspires all our Team Members to conduct themselves in accordance with the same principles, thereby laying the foundations for an effective Compliance System.

The independence, autonomy and impartiality of the Compliance area is safeguarded through its report to the BD, which, in turn, is supported by the Compliance Committee (CC), a body that offers on-going support to the BD to facilitate the monitoring of Internal Controls and any Risks to which the company may be exposed. The CC is supported by the Ethics Committee in all issues relating to Code of Conduct violations.

The Chief Compliance Officer (CCO) reports to the CC Coordinator and has the faculties necessary to carry out his or her duties, in addition to having the resources necessary to perform his or her functions. The CCO ensures constant collaboration with other areas within the Company to ensure that all Team Members fully understand and comply with the Compliance System.

To safeguard and bolster the ethical framework that governs our activities, and which we actively promote among our stakeholders, the Board of Directors is tasked with directing and supervising our reported activities.



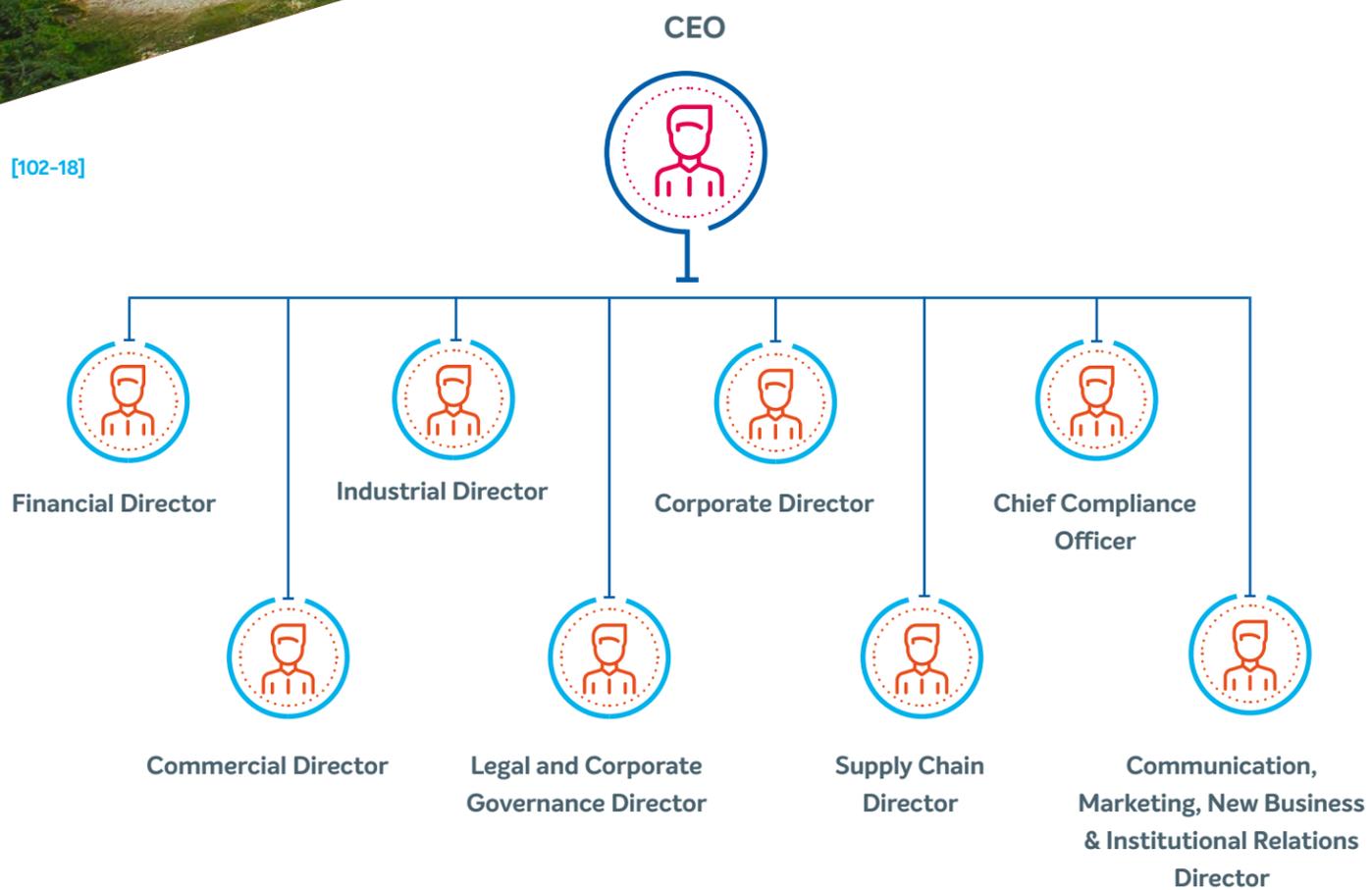
▶ We conduct our operations and activities in full compliance with all applicable Anti-Corruption legislation.

### Policy

As part of our comprehensive strategy, we ensure on-going communication and coordination between the different committees, thereby focusing all efforts and initiatives towards the accomplishment of a common goal. Furthermore, the different management teams within Braskem Idesa are involved in the strategic planning process.



[102-18]



### Code of Conduct [205-2]

The Code of Conduct outlines a common set of ethical standards and legal principles that we must adhere to when carrying out our professional responsibilities and when engaging with Braskem Idesa's shareholders, clients, suppliers and commercial partners. This Code provides guidance regarding how to manage our day-to-day activities in representation of Braskem Idesa. We must all be familiar with it and comply with the guidelines it contains.

Each of us is responsible for doing the right thing and exercising our own judgement, in addition to the ethical standards and values of Braskem Idesa, with regard to the business decisions that we take every single day. We would like to thank our Team Members for doing their part to defend our values and represent the Company by acting with ethics, integrity and transparency.



If you would like further information about our Code of Conduct, you can download it by clicking here.

To ensure that the guidelines established in the Code of Conduct are understood and embodied by each of our Team Members, when joining the company, they take part in an induction course, offering them the opportunity to read and sign the Code of Conduct.

### Code of Conduct for Third Parties

We strive to do business with third parties who share the same commitment to ethical business practices as us, including distributors, agents, intermediaries, supply chain partners, consultants, partners in joint ventures, contractors and other service providers.

The Code of Conduct for Third Parties contains our expectations regarding the services offered to and on behalf of Braskem Idesa.

After receiving this Code of Conduct, third parties are made aware that they are expected to undertake their activities in accordance with the guidelines contained in this document.



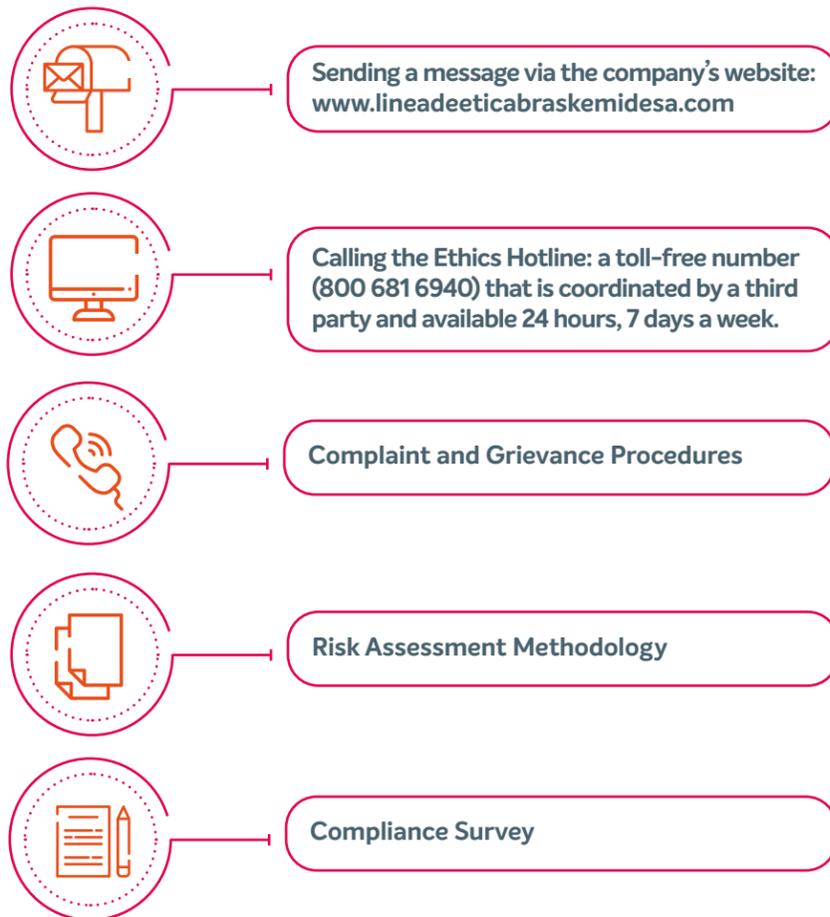
If you would like further information about our Code of Conduct for Third Parties, you can download it by clicking here.

▶ 100% of our suppliers received our Code of Conduct for Third Parties when signing their contracts.

## Reporting Mechanisms [102-17, 413-1, 103-2, 103-3]

We offer our Team Members, suppliers, third parties, clients and all other individuals a range of mechanisms through which they can safely and responsibly provide information, suggestions, concerns, etc., to ensure a safe, ethical, transparent and productive corporate environment.

This information is recorded and treated with the utmost confidentiality, protecting anonymity and safeguarding the impartiality of the data analysis process.



## Compliance System [103-2, 103-3]

The Compliance System comprises a series of standards that prevent, detect and resolve risks and situations that are not compatible with actions undertaken within a framework of ethics, integrity and transparency. This system must be implemented by the Leader in all activities and operations relating to the company, and it must be aligned with the Compliance Committee and CCO, in addition to being monitored systematically by the Board of Directors.

Its structure encompasses 10 measures, which are divided into three major areas.



[103-2]

We are committed to operating ethically, honorably and transparently by implementing Corporate Governance and Compliance systems through the adoption of best practices in these areas. To meet these goals, we have adopted 10 guiding principles:

1. Embodying a zero-tolerance policy and combatting corruption in all its forms, including extortion and bribery.
2. Firmly and determinedly saying 'no' to business opportunities that are not in keeping with this commitment.
3. Adopting ethical, upright and transparent principles when dealing with representatives from the public and private sectors.
4. Never using cultural or common market conditions to justify improper actions.
5. Guaranteeing that Braskem Idesa operate transparently by regularly providing accurate, wide-ranging and accessible and information.
6. Understanding that unethical conduct, be it as a result of actions, omissions or complacency, damages society, contravenes the law and damages the image of both the Company and its Members.
7. Guaranteeing that Braskem Idesa and its entire value chain implements the Compliance System, which is always up-to-date with best practices.
8. Contributing individually and collectively to undertaking any necessary changes to the markets and to our environment to eliminate any actions that incite improper conduct.
9. Incorporating into Employee Action Programs the assessment of their contribution to the Compliance System.
10. Understanding that this commitment will help drive Survival, Growth and Continuity.

▶ The implementation of an effective Compliance System is of vital importance to satisfactorily achieving our corporate goals.

## Training [103-2, 103-3]

In order to consolidate the content of our policies and to bolster the culture of ethics at Braskem Idesa, we offer bi-annual Anti-Corruption and Code of Conduct training, in both face-to-face and online versions.

Furthermore, based on the results of the Compliance Survey, we create a plan of action to offer training based on the requirements contained in this survey.

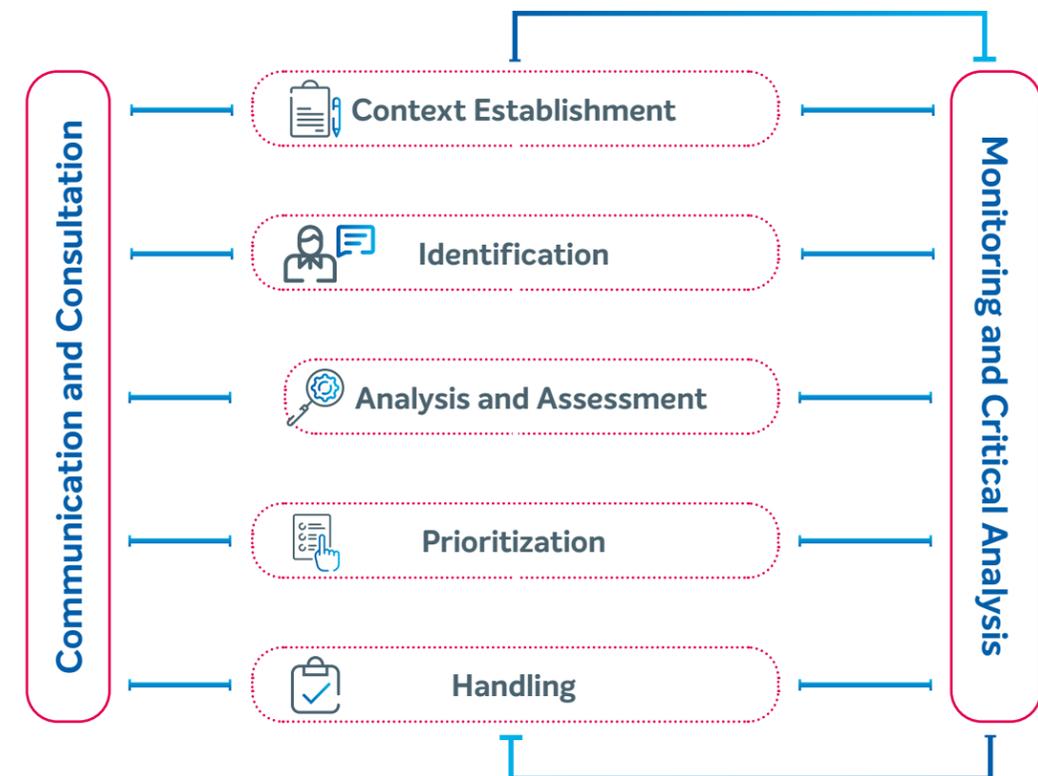


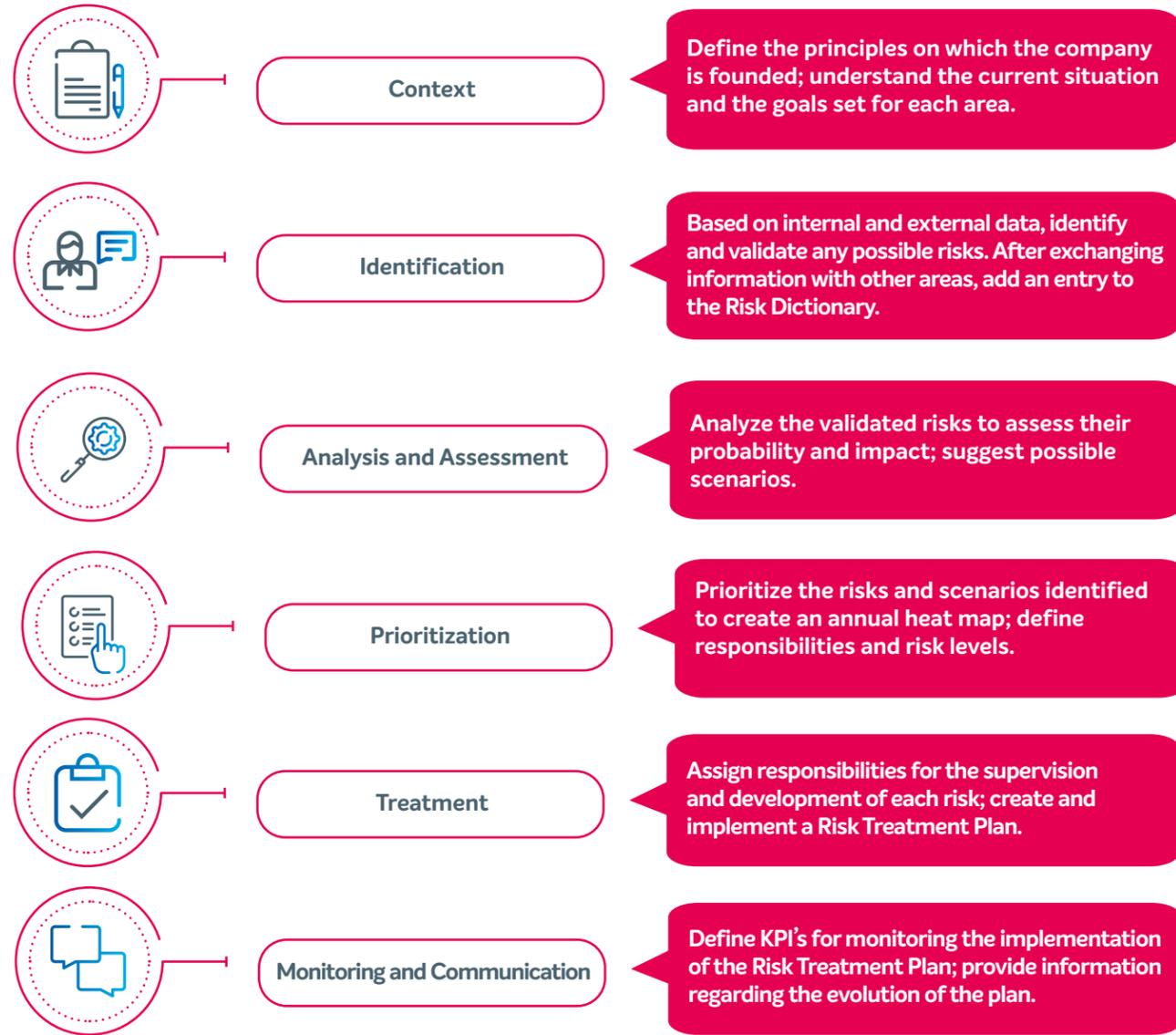
We provided  
100% of our Team  
Members Anti-  
Corruption and Code  
of Conduct training.



## Risk Assessment Methodology [103-2, 103-3]

As part of our risk management process, we have created a methodology that helps us prevent and preempt possible threats and situations. This methodology comprises the following stages:





## Chambers and Associations [102-13]

We work in collaboration with a number of industry chambers and associations. By working alongside other members within the industry, we promote sustainability, innovation and growth within the industry. To help drive free competition, we collaborate with the following institutions:

- Mexican Association of the Plastics Industry (ANIPAC).
- Mexican Association of the Chemical Industry (ANIQ).
- Latin American Petrochemical and Chemical Association (APLA).
- Industrial Association of the State of Veracruz (AIEVAC).
- Mexico-Brazil Chamber of Commerce (CAMEBRA)
- National Chamber of the Manufacturing Industry – Veracruz Chapter (CANACINTRA VERACRUZ).
- ANIQ Plastic Industry Commission on Responsibility and Sustainable Development (CIPRES).
- Coatzacoalcos Local Mutual Help Committee (CLAM)
- Business Coordinating Council (CCE).
- Mexico-Brazil Business Council (CEBRAMEX).
- CCE's Center for Studies of the Private Sector for Sustainable Development (CESPEDES).
- Normalization and Certification (NYCE).
- Mexican Association of Plastic Bag Manufacturers (INBOPLAST).
- Mexican Institute of Chemical Engineers (IMIQ)
- Engineering Pipe Industries (ITIAC).



# ECONOMIC PERFORMANCE

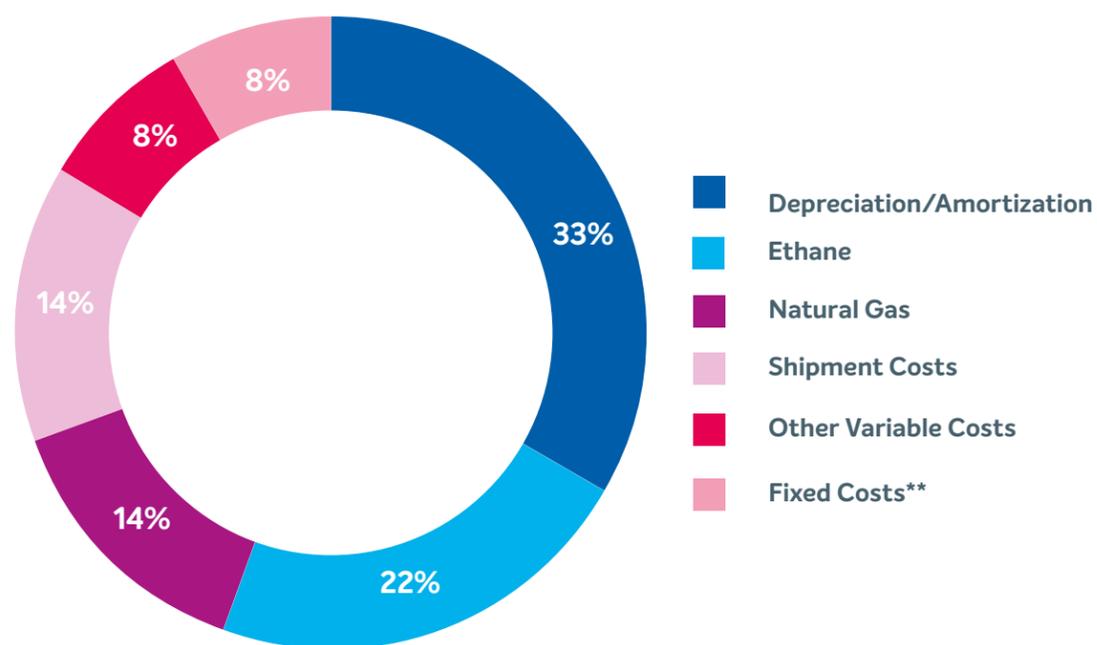
## Financial Results and Investment [102-2, 103-2, 103-3]

In 2019, operations in Mexico were influenced by several factors, including the downward cycle of the petrochemical industry – which led to a drop in demand in Mexico –, ethane supplies below contracted volumes, the downturn in the Mexican economy, and a product repositioning strategy that focuses on areas with higher margins.

[103-3]

The polyethylene spread in North America, a benchmark for operations in Mexico, experienced a year-on-year reduction as a result of a downturn in demand for polyethylene and the implementation of new operations in the region.

### COGS 2019 MEXICO\*



\*Considering book values.

\*\*Including salaries and benefits.

[103-3]

The Cost of Goods Sold (COGS) remained in line with targets, influenced by greater sales volumes and higher natural gas prices in the Mexican market, which were compensated by a drop in ethane prices. Operational results were boosted by more than USD \$21.2 million from a delivery-or-pay ethane supply contract.

One major financial aspect was the issuance of a USD \$900-million bond, the funds from which were earmarked mainly to settle financing from the Brazilian Development Bank (BNDES) and other Mexican development banks. In 2019, the Mexican plant recorded an EBITDA of USD \$361 million) a 41% decrease compared to 2018, representing 24% of the company's consolidated segments.

GENERAL FINANCIAL OVERVIEW (USD \$ MILLIONS)	2019 (A)	2018 (B)	VAR. (A) / (B)
NET REVENUE	775	1,034	-25%
COGS	(636)	(636)	0%
Gross Profit	139	398	-65%
Gross Margin	18%	38%	-20 p.p.
SG&A	(89)	(86)	4%
Other Operating Income (Expenses)	82	84	-3%
EBITDA	361	617	-41%
Operating EBITDA Margin*	34%	51%	-17 p.p.
Net Revenue	0.759	0.939	-19%
EBITDA	0.355	0.560	-37%

\*Deliver-or-pay from raw material contracts is not included.



Recurring  
EBITDA  
USD \$361 million in  
2019.

[103-3, 201-1]



US \$3.6 million in Trade Balance.



Net Revenue US\$ 775 million in 2019.

We continue consolidating our operations and driving development within our society and our country through the use of cutting-edge technology. Our petrochemical complex is designed and equipped to ensure that, every single year, we produce more than 1 million tons of high- and low-density polyethylene (HDPE and LDPE, respectively).

	2018 (MXN Million)	2019 (USD)*
Direct Economic Value Generated	19,831	676,672
Economic Value Distributed	16,760	658,822
Economic Value Retained	3,071	17,850

\*In 2019, the currency in which we report earnings was modified.

We are constantly adapting to new technologies and innovative processes to help drive even better results to benefit not only our procedures and value chain, but also to consolidate our social and economic impact and mitigate our environmental footprint.

We contribute to domestic growth by exporting to more than 40 countries, in addition to allocating 67% of our production to the Mexican market, helping reduce the need for imports.

Furthermore, we promote the professional development of people in Mexico, and, more specifically, we drive local growth in the communities in which we operate.



[202-2]



80% of our managers and 37% of our directors are Mexican.

### PICPLAST

To help bolster the Plastic Industry, we have a Plastic Chain Incentive Program (PICPLAST) that was created in conjunction with the Brazilian Association of the Plastic Industry (ABIPLAST). This program is based on three main pillars:



#### Competition and Innovation

In conjunction with Universidad Anáhuac, we offer a range of courses to help consolidate the sector by driving innovation in processes and solutions to create better products. Some of the areas we focus on include:

- Innovation.
- Family Succession.
- Cost Management and Profitability.
- Management Program.



**Promoting Exports**

We drive economic growth in the country by helping companies from the sector grow internationally by exporting their products. We have achieved this by focusing on the following areas:

- Customs Law.
- Export Networks.
- Export Processes.
- International Marketing.
- Export Services and Support.
- Participation at International Fairs.



**Advantages of Plastic**

We analyze and provide information regarding the versatility of plastic as a sustainable alternative to meet the numerous demands of our society, focusing on three main areas:

- Life Cycle Assessment (LCA) and Circular Economy.
- Waste Management Programs.
- Educational Campaigns about the Benefits of Plastics, recycling and post consumption.

**Value Chain** [102-9]

Our Value Chain needs an extra push, which is why we have expanded the scope of our commitment to include suppliers with whom we have a direct relationship, ensuring that they act within an ethical framework and stand against discrimination, corruption, child labor and forced labor, through our Compliance System.



**75%**  
of our value chain is made up of domestic suppliers.



**10%**  
of our suppliers are from the community located near the complex.

# SOCIAL PERFORMANCE

## Team Members [102-8, 102-41, 401-1, 103-2, 103-3]

We are a company that focuses on being human, driving the potential of all our Team Members, developing strategies to improve the workplace, and creating opportunities that help people grow both professionally and personally.



[102-8, 102-41, 103-2, 103-3]

During 2019, we implemented a range of Integration, Development and Training programs, in addition to leadership preparation and training courses.

Diversity and Inclusion are the pillars of all our projects. Within our BeUx Value Proposition, we have presented new opportunities for Team Members to develop and learn, in addition to improving their experience within the workplace. This year, we concluded the remodeling of our corporate offices in Mexico City, creating the perfect place to promote new experiences within an ideal working environment.

Each Team Member plays a fundamental role in ensuring we operate safely and achieve our goals.

## About Us

	2018	2019
Women at Corporate Offices	86	87
Women at Plant	108	106
<b>Total Women</b>	<b>194</b>	<b>193</b>

	2018	2019
Men at Corporate Offices	90	96
Men at Plant	528	541
<b>Total Men</b>	<b>618</b>	<b>637</b>

	2018	2019
<b>Total Employees</b>	<b>812</b>	<b>830</b>

\*41.68% of our employees are covered by collective bargaining agreements.

[102-8, 401-1]

The growth of our business means we create more jobs. This year, we added a further 18 people to our team:

	Total Female Employees	Total Female Employees Hired	Female Employee Recruitment Rate
Below the age of 30	77	10	5.18
Between 30 and 50	114	8	4.14
Over the age of 50	2	1	0.52
<b>Total</b>	<b>193</b>	<b>19</b>	<b>9.84</b>

	Total Male Employees	Total Male Employees Hired	Male Employee Recruitment Rate
Below the age of 30	164	29	4.55
Between 30 and 50	399	30	4.71
Over the age of 50	74	2	0.31
<b>Total</b>	<b>637</b>	<b>61</b>	<b>9.57</b>





[401-1]

While our turnover rate is outlined in the table below:

 Total Female Employees Dismissed	Female Employee Turnover Rate
Below the age of 30	4.14
Between 30 and 50	6.74
Over the age of 50	0
<b>Total</b>	<b>10.88</b>

 Total Male Employees Dismissed	Male Employee Turnover Rate
Below the age of 30	1.94
Between 30 and 50	4.05
Over the age of 50	1.29
<b>Total</b>	<b>7.28</b>

## Training

The training we offer to Team Members is of the utmost importance in their personal and professional development, which is why it is the keystone of our internal strategy, offering Team Members the opportunity to continue growing, learning and consolidating their skills and know-how.



In 2019,  
we invested **USD \$533,038.41** in  
32,251 training hours.



[102-11, 403-1, 403-2, 403-3, 403-4, 403-5, 403-6, 403-7, 403-8, 403-9, 403-10, 103-2, 103-3]

One of the milestones we reached in 2019 was the implementation of Intelius, our Integrated Management System, which combines EHS, Quality and Industrial Excellence requirements, and which, thanks to guidelines and information regarding both local and international best practices, drives collaboration among Team Members to bolster our culture of risk prevention through discipline and respect for safety procedures and processes.

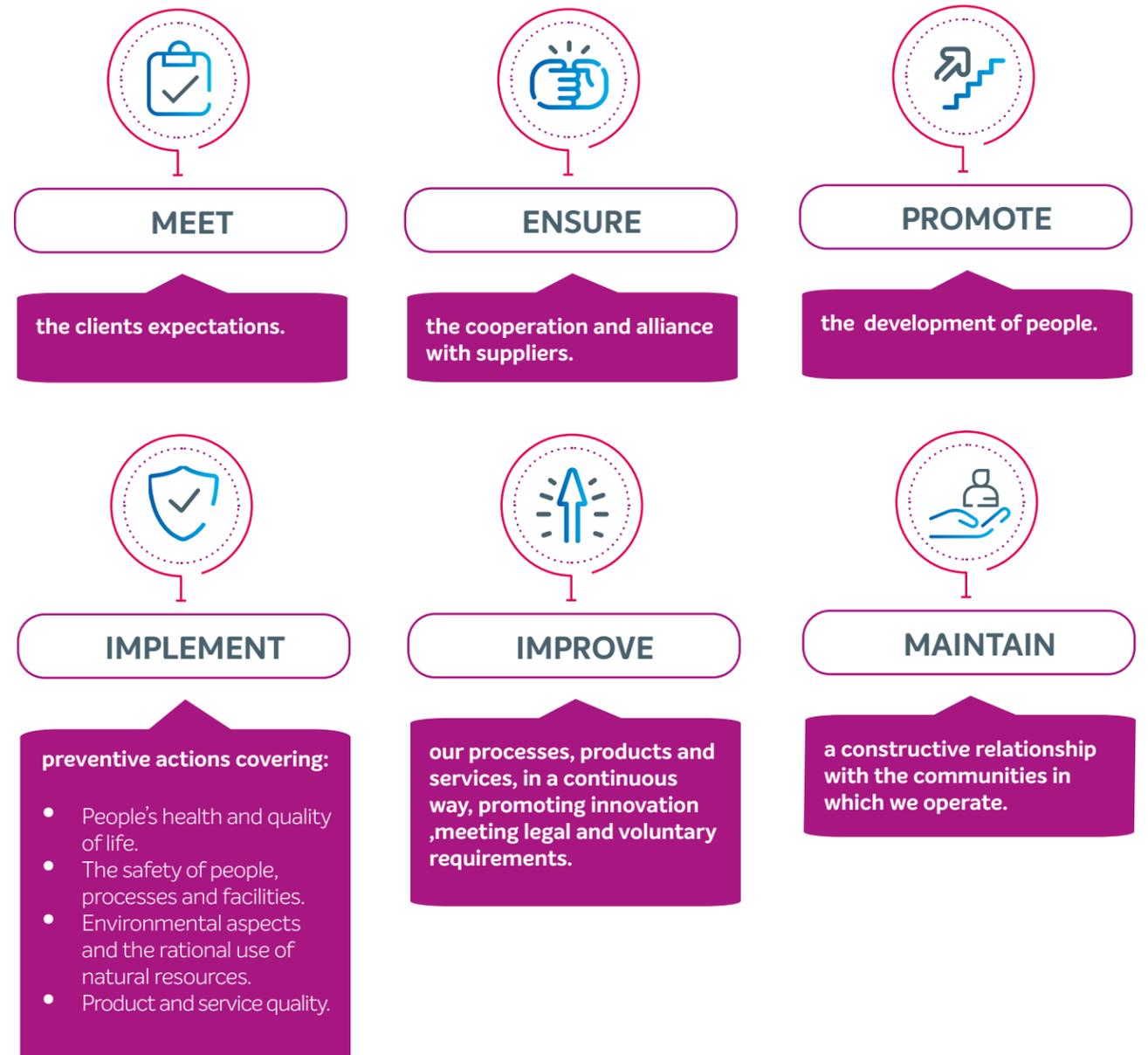
Our Health, Safety, Environment and Social Responsibility Policy is based on the following principles:

Team Members are included in the four major training areas we offer:

Training Types	Courses
Soft Skills and Culture	<ul style="list-style-type: none"> <li>Leadership Program</li> <li>Team Spirit and Accountability</li> <li>Operating Techniques Program</li> <li>Culture</li> </ul>
Compliance and Management	<ul style="list-style-type: none"> <li>Human Reliability</li> <li>EHS Events</li> <li>Brigade Training</li> </ul>
Technical	<ul style="list-style-type: none"> <li>Impact</li> </ul>
Activities and Projects	<ul style="list-style-type: none"> <li>Green Belt in Lean Six Sigma</li> </ul>

### Industrial Health and Safety [403-1, 403-2, 403-3, 403-4, 403-5, 403-6, 403-7, 403-8, 403-9, 403-10, 103-2, 103-3]

Throughout the year, we work every single day to achieve positive results and create opportunities for Team Members, the communities that are located close to our plants and the environment.



This culture is not limited to Team Members ; we also share all Braskem Idesa's Environmental, Health and Safety (EHS) requirements during tender processes with contractors, ensuring that, when entering into contracts with the latter, they adhere to the EHS Management System.

One of our major Sustainable Development goals focuses on safeguarding the health and safety of both our internal and external stakeholders, which is why we have consolidated our concepts, comply with all requirements, and work to promote prevention:

- To consolidate risk prevention, we offer training to all Team Members, in compliance with Mexican standards stipulated by the Mexican Department of Labor (STPS) and international benchmarks (OSHA, ANSI, NFPA).
- All contractors working at our plant must take part in the following training courses: EHS Induction, Risk Identification, Hazardous Substances and the Use of PPE, and Behavioral Dialog.
- Risk Communication System- Harmonized Global System (GHS).
- Waste Management.
- Emergency Response Plan.
- Work Permits Safe Task Analysis (AST)

Furthermore, they are offered complementary training based on their functions, including:

- Confined Spaces.
- Work at Heights.
- Hot Work.
- Hazardous Energy Isolation (PAEP).
- Work with Energized Equipment.
- Hydro Jetting.
- Blasting.
- Among others.

It is important to mention that one of our programs for Team Members is focused on the importance of correctly using personal protection equipment (PPE). Furthermore, during 2019, we worked alongside the internal communication department for the ¡Ponte Buzo! campaign, which focused on providing prevention messages in four main areas: Your Job, Your Surroundings, Your Person, Your Personal Protection Equipment.

To establish and consolidate adequate safety processes, we implemented a Work Permit Audit system that encompasses Safe Task Analysis, Work Permit and Preliminary Service Risk Analysis to ensure on-going assessments and improvements to the Occupational Health and Safety Management System, which complies with Mexican Department of Labor (STPS) standards and the Intelius system.

Through the System assessment, we involve Team Members and contractors, receiving their feedback through:

1. Monthly Safety Inspections.
2. Communication of Lessons Learned
3. Contractor Training Programs

In terms of health, we have a program that provides the following services to Team Members and contractors in the event they are required:

1. Reception of Contractors Laboratory Studies.
2. General Check-Up.
3. Outpatient Treatments.
4. First Aid.
5. Patient Transfers to Local Hospitals and Clinics.
6. Preventive Medical Services.
7. Clinical File Management and Monitoring.



4,190,757  
hours worked in  
2019.

[403-9]

## Community [103-2, 103-3, 413-1, 413-2]

All our operations have engagement programs in place with the communities in which we operate. Our Private Social Investment (PSI)\* strategy is underpinned by three major pillars: Consumption, Sustainable Post-Consumption and the Circular Economy; Sustainable Entrepreneurial Spirit and Innovation; and Local Development.

To ensure that these projects are aligned with our strategies, they must accomplish three fundamental goals: increase the scope of positive social and environmental impact, promote the company's role as a provider of sustainable solutions, and forge trust-based relationships with the communities and other interested parties.

Our community engagement strategy is part of our Social Management System, which, in addition to our Global Sustainable Development Policy and the EHS, Quality and Social Responsibility Policy, monitors the positive impacts that help drive economic and social development in communities, in accordance with our risk management vision, in order to **maintain our Social License to Operate**.

\*Private Social Investment is the voluntary, planned, supervised and assessed use of private resources for the implementation of programs that are in the public interest, underpinned by the company's strategy and the active participation of the community, public authorities and other companies.

► We benefitted 10,808 people from the community through 21 social, environmental and community safety programs.

Our Social Management System comprises the programs outlined below:

### 1. Stakeholder Engagement Plan (PRGI)

We promote on-going relations with all our stakeholders to help drive engagement and offer general information about our operations and facilities.



[103-2, 103-3, 413-1]

### Community Visits

We promote communication through meetings with communities that are located in the area surrounding our Petrochemical Plant.

	2018	2019
 Total Visits	1,643	1,667

### The Braskem Idesa Experience – Community Visits to our Petrochemical Complex

We invite members from neighboring communities to our plant to learn more about our operations, Team Members and protocols.

	2018	2019
 Total Visitors	58	60



1,727

interactions as a result of our Stakeholder Engagement Plan in 2019.

### Casas Abiertas Program

Casas Abiertas Program is open to the general public and allows us to provide information to our visitors regarding our processes, environmental indicators, biodiversity, local recruitment, job opportunities, Social Investment Plan, health and safety indicators and plastic lifecycle.



[103-2, 103-3, 413-1]

	 Total Participants from Communities	 Total Participants from Braskem Idesa	 Cumulative Total Participants since the Creation of the Program
2018	317	41	3,118
2019	129	49	3,247

## 2. Complaints Procedure (MAQ)

We offer members of communities access to a system of suggestion boxes, freely available complaint forms and an anonymous hotline to report any complaints or comments about our operations. These suggestion boxes are found in public areas around the plant and our facilities.

To ensure the confidentiality and monitoring of the complaints received, we have an Ethics Line run by a third party for receiving complaints. It is open to all Team Members, third parties, suppliers, clients and other partners to ensure that they can safely and responsibly provide information that helps promote a safe, ethical and transparent corporate environment.

	 Situations Monitored	 Complaints	 Requests
2018	0	11	2
2019	0	6	0

## 3. Participative Environmental Monitoring (MAP)

This strategy involves numerous stakeholders, including the community, and begins with training in health and safety to ensure that participants can take part in the environmental monitoring process. The steps to be followed and the result are clearly explained to all involved throughout the process.

Throughout 2019, we monitored and compiled results regarding air, water and noise. This allows us to ensure transparency and set an environmental baseline for our operations while involving the community.

	 Number of MAP's	 Participants from the Community
2018	41	345
2019	28	255

## 4. Community Health and Safety Program

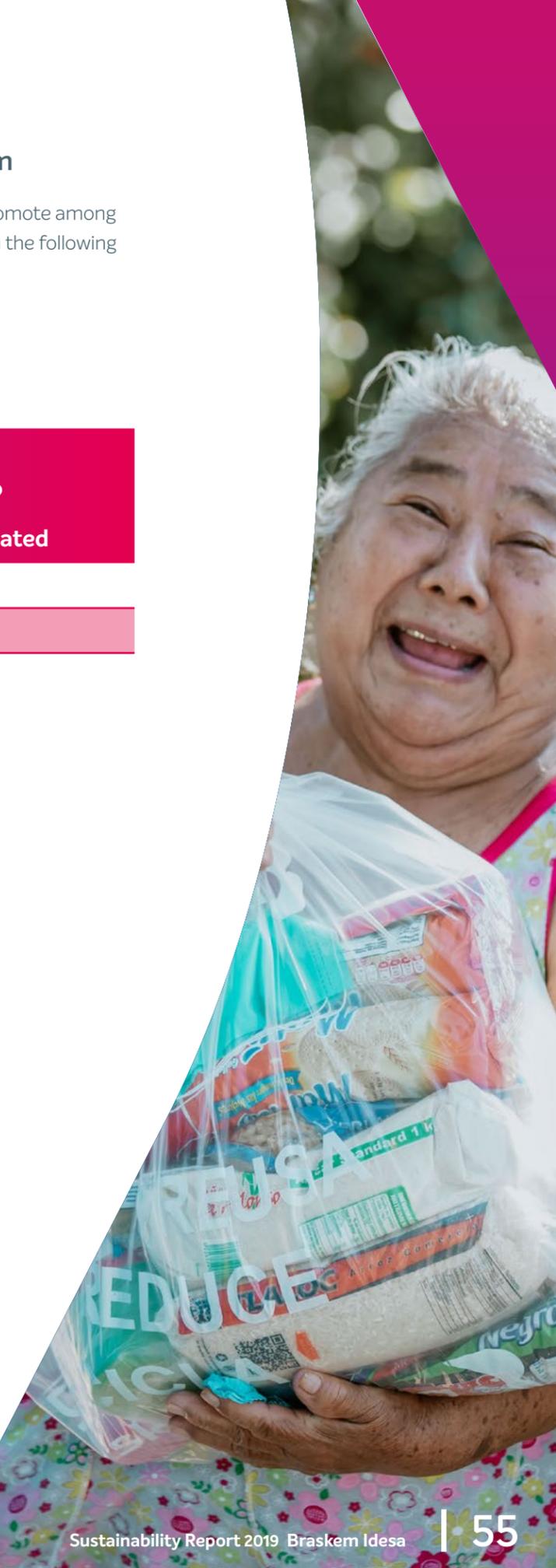
Community Health and Safety is a relevant area that we promote among the communities that are located around our plant through the following programs:

- **Community Health**

- » Medical visits were made to communities:

	 Patients Treated
2018	528
2019	556

- » **88 people treated** every month.
- » **7 major health campaigns:**
  - **Breast cancer awareness campaign:** 120 women.
  - **Dengue prevention campaign in 2 stages:**
    - » Communal work in 3 communities.
    - » Activity with 73 kindergarten and elementary school students.
  - **Environmentally friendly stove workshop:** 30 participants from different families.
  - **Breast cancer prevention campaign (Enlázate conmigo):** 70 women.
  - **Malaria prevention campaign:**
    - » 37 people were provided with information and a thick blood smear test.
    - » 17 children took part in informative sessions.
    - » 4 community healthcare workers trained in how to take thick blood smears.
  - **Diabetes campaign:** +45 people benefitted through awareness workshops and glucose tests.
  - **HIV/AIDS campaign:** 33 representatives from different families took part in awareness workshops, in addition to being offered access to rapid HIV tests and free condoms.



[103-2, 103-3, 413-1]

» **+120 families benefitted through our Health Fairs:**

- Medical examinations.
- Dental examinations.
- Deworming campaign.
- Early detection of diabetes and high blood pressure.
- Water disinfection and bacteriological quality program.
- Nutrition (how to make healthy and low-cost meals).
- Recycling workshop.
- Vaccine drive (influenza, tetanus, pneumococcus and hexavalent).
- Ecological bartering: collection of plastic, aluminum, copper and cardboard in exchange for fruit, vegetables and clothing.
- Among others.

» For the 3<sup>rd</sup> year, we have been recognized by ANIQ as implementing good practices in the area of “Education with the Community”.

• **Community Safety**

- » **11 community brigade members received training** in emergency response, the handling and use of fire extinguishers and first aid.
- » **30 teachers from community schools and 4 members of the Civil Protection team received training** in emergency response, the handling and use of fire extinguishers and first aid.
- » **Through our Safe School program, we benefitted:**
  - 13 schools.
  - +1,000 students from different communities.
- » **We promoted school safety through the:**
  - Installation and monthly maintenance of fire extinguishers at 6 schools, benefitting 210 students.
  - Installation of signage and meeting points at 5 schools, benefitting 115 students.
  - Donation of school supplies and uniforms at 4 schools, benefitting 83 students.
  - Holiday’s Season donation at 4 schools, benefitting 83 children.
- » **Handling and use of fire extinguishers:** 30 participants.
- » **First aid:** 30 participants.

[103-2, 103-3, 413-1]

## 5. Social Investment Plan

The goal of our business model is to drive the development of the local economy in the communities in which we operate. Part of these efforts focuses on consolidating cooperatives. This year, we supported:

- **TEXTISUR:** A cooperative that makes industrial and school uniforms.
- **PLASTIEN:** A cooperative that collects and processes waste that requires special handling (plastics).

Through training and donations during 2019, these cooperatives achieved the following results:

1. They consolidated their internal processes.
2. They developed their ability for self-management.
3. They increased their customer portfolios, driving access to the industrial sector.
4. They took charge of their businesses.
5. They promoted training to drive continuous improvements.
6. They increased their earnings.
7. They hired young interns through the federal government’s Young People Building the Future program to enrich their administrative and operational structures.

This was made possible by the support provided through two consultancy teams: one focusing on accounting and administration, while the other aims to drive improvements to their management and commerce structures.

» We promote self-employment and entrepreneurs by supporting 2 productive projects, 93% of whose members are women.

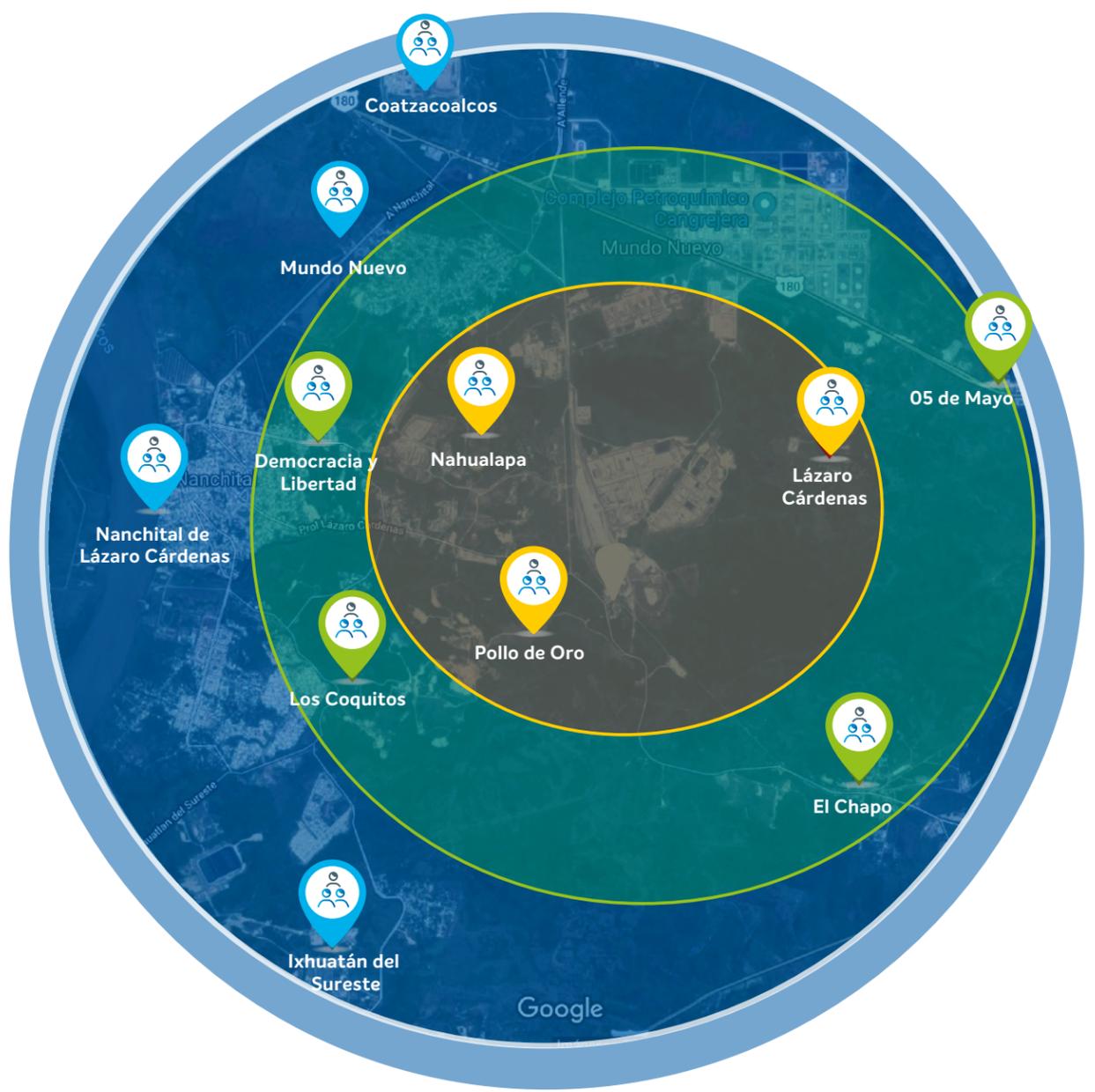
## 6. AVANZA Program

We complement our strategy to drive the local economy through our Local Hiring Policy, which offers members of our neighboring communities, through AVANZA, the opportunity to be employed at our Petrochemical Complex and form part of our local supply chain. As such, in 2019, we offered safety training to 33 people, in addition to facilitating all required medical examinations

» We maintain 24% of the members of F1 communities economically active as Braskem Idesa employees.



Our Social Influence Areas [103-2, 103-3, 413-1]



■ F1 Communities    
 ■ F2 Communities    
 ■ F3 Communities

Social Performance Results

	2018	2019
Investment in Social Management System (USD)	600,000 USD	644,000 USD
Direct Beneficiaries of Social Management System (F1 and F2 Area of Social Influence)	5490	10,808
Number of Private Social Investment Projects (PSI)	16	9
Number of Donation Projects	12	11
Plastic Waste Collected and Recycled (ton)	104	148
Institutional Recycling Programs (Plastien, Plastianguis, Plastivale, Biobox, Parque ExFactoría, Volunteering Program, Plastiferia)	4	7
Schools Benefitted	26	26
Volunteering Programs	15	21

► For the 2<sup>nd</sup> year, we were awarded the Socially Responsible Company (ESR) certification.



# ENVIRONMENTAL PERFORMANCE

[102-11]



One of the pillars of our strategy is our commitment to driving the sustainability of our operations and services. Our focus is based on increasing the scope of the positive impacts of Braskem Idesa's activities and operations, in addition to controlling and/or mitigating any impacts, especially during times of major global challenges, including areas such as water, waste, climate change, and sustainable consumption and production.

[102-11]

Our environmental responsibility is governed and assessed through the guidelines contained in our:

1. Global Sustainable Development Policy.
2. EHS, Quality and Social Responsibility Policy.
3. Efficient Cogeneration Certification.
4. Responsible Care Certification (SARI).
5. Environmental Risk Matrix.

Our environmental risk matrix is a guide to help us identify the potential impact our operations have on climate change, energy, water, biodiversity, air, health and safety, in addition to implementing prevention measures.



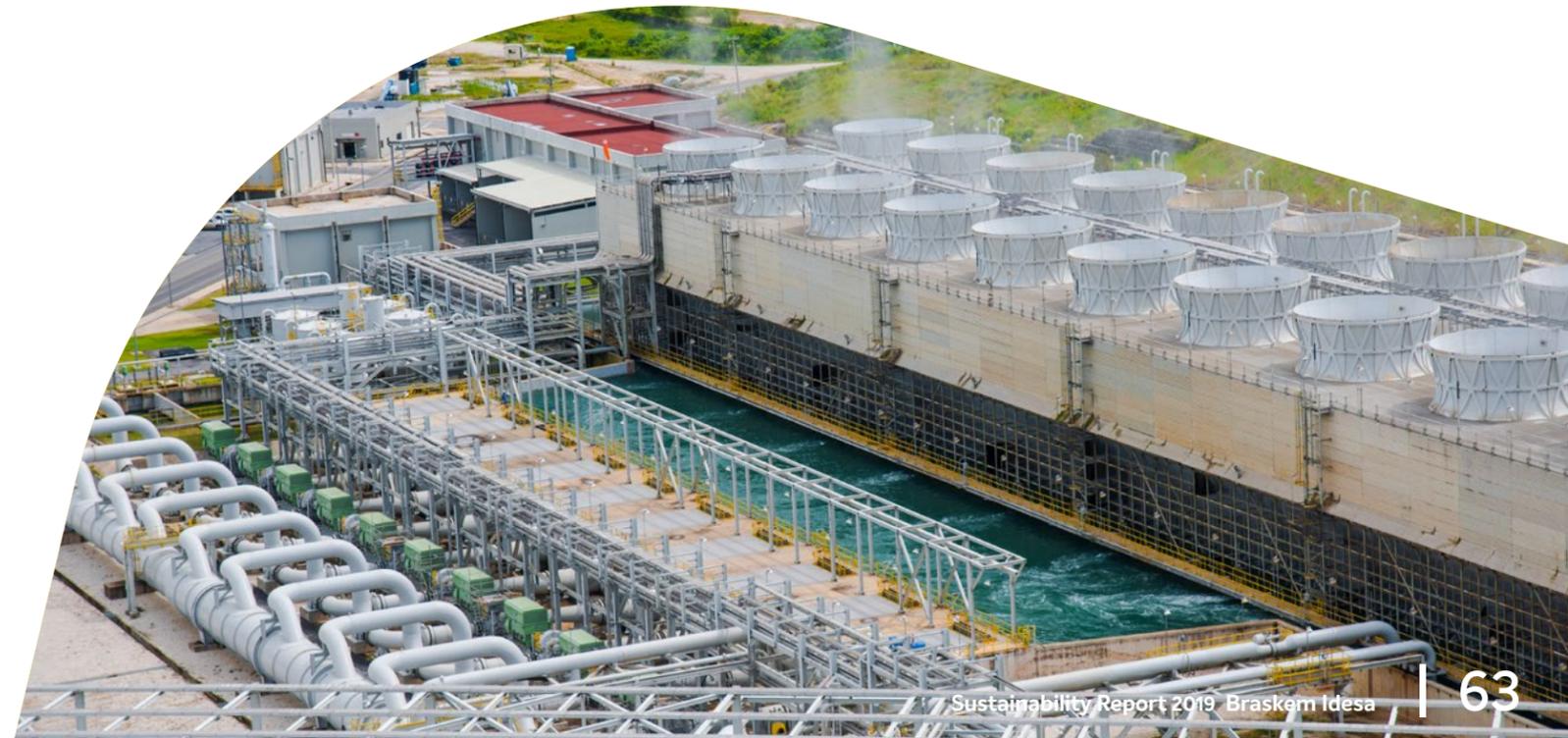
## Water Efficiency [102-11, 103-2, 103-3, 303-1, 303-2, 303-3, 303-4, 303-5]

Water is an essential element for our industry and for our operations, which is why the management of processes linked to this issue form part of our business risk management process.

Our major demand for water comes from our production process, mainly focusing on steam generation, refrigeration systems, processes, products and effluence disposal. We vary the sources from which we get our water, including surface water, groundwater and third-party water (including water that has been reused) sources, by developing strategies and actions that drive efficiency and continuous improvements to the way in which we use and reuse this resource, including:

- Biannual monitoring of groundwater and surface water within the communities surrounding our plant.
- Guaranteeing our water discharges comply with the 2018 Coatzacoalcos River Declaration, ensuring the river's capacity is not exceeded, in addition to permitting natural degradation and tributary recovery.
- We extract surface water from the Uxpanapa River, which is transported from the dam to our petrochemical plant through our pumping plant. We clarify the water for its subsequent distribution and use, mainly to replace cooling water or to generate steam.

	 Total Water Use	 Wastewater	 Recycled Water	 Percent of Water Recycled
2018	8,570,520 m <sup>3</sup>	1,491,680 m <sup>3</sup>	2,061,307 m <sup>3</sup>	24%
2019	8,676,045 m <sup>3</sup>	1,427,890 m <sup>3</sup>	1,587,590 m <sup>3</sup>	15.9%





[303-4, 303-5]

In 2019, we used a total of 8,676,045 m<sup>3</sup> of water from surface water sources and 630 m<sup>3</sup> from wells. As part of our commitment to this natural resource, we have built a wastewater treatment plant which, after the water has been used, discharges it to the *Gopalapa* River with a lower amount of total suspended solids and color compared to the water received.

Our results can be seen in the 1,427,890 m<sup>3</sup> that we discharged into the river that runs close to the plant. We directly measured the water discharged and sent the samples for analysis by external laboratories that have been approved by numerous environmental agencies, including EMA, CONAGUA and PROFEPA.



**15.9%**  
of the water we used in 2019 was recycled.

## Energy [102-11, 103-2, 103-3, 302-1, 302-3, 302-4]

Energy efficiency is another of our material issues, which is why we develop and implement solutions that reduce the energy used at our plants, both in environmental and economic terms.

Part of the energy we use at our Complex comes from our natural gas cogeneration plant, helping decrease our environmental impact. Our energy indicators in 2019 were:

	 Electricity Used	 Electricity Sold	Intensity Ratio*
2018	683,454 MWh	245,780 MWh	14 GJ
<b>2019</b>	<b>682,276 MWh</b>	<b>105,582 MWh</b>	<b>14 GJ</b>

\*The energy intensity ratio is calculated per ton of production, taking into account a total of 250 tons of polyethylene and ethylene per hour.

[302-1]

Throughout 2019, we implemented numerous programs, such as the automation of our boilers and ethylene furnace, to reduce the energy used at our industrial plants and ensure optimal ethylene and polyethylene production.

## Consumption by Energy Type

	 Diesel	 Gasoline	 LP Gas	 Natural Gas
2018	184,359 L	175,149 L	174,000 L	16,905,657 GJ
<b>2019</b>	<b>291,543 L</b>	<b>179,128 L</b>	<b>164,968 L</b>	<b>16,295,296 GJ</b>

All our calculations regarding the energy used by Braskem Idesa are based on the invoicing amounts for each fuel sources, electricity bills and readings of the electricity generated on site.



**Total energy consumption in 2019 was 26,176,383 GJ.**



**We used 400,209 GJ of electricity from the grid and exported 1,525,669.87 GJ.**

## Climate Change and Emissions Management [102-11, 103-2, 103-3, 305-1, 305-2, 305-4, 305-7]

At Braskem Idesa, we follow a wide-ranging and robust strategy to ensure that issues relating to climate change are included in our 10 Sustainability Goals. One of the aspirations of our Global Sustainable Development Policy is to be recognized as a leader in these areas.

[305-1, 305-2, 305-4]

This is why we mitigate and reduce the impact we have on the environment by measuring our air emissions by gas type - NOx, SOx, COV, CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFC, PM and other categories (Cr) - in addition to structuring our internal emission management processes and implementing measures to mitigate and adapt in order to tackle possible risks and leverage potential business opportunities relating to climate change. The comparison in emission reductions by gas type was made with 2017, a base year for production stability.

	2017	2018	2019
<b>Total Emissions</b>	1,871,225 tCO <sub>2</sub> e	1,820,482 tCO <sub>2</sub> e	<b>1,835,509 tCO<sub>2</sub>e</b>
<b>Scope 1</b> (Fixed and mobile fuel combustion) Gases: CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O, HFC	1,854,461 tCO <sub>2</sub> e	1,790,722 tCO <sub>2</sub> e	<b>1,776,776 tCO<sub>2</sub>e</b>
<b>Scope 2*</b> (Company's use of electrical energy) Gases: CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O, HFC.	16,764 tCO <sub>2</sub> e	29,759 tCO <sub>2</sub> e	<b>58,732 tCO<sub>2</sub>e</b>

\*The increase in 2019 vs. 2018 was the result of a higher amount of energy consumed from the electrical grid given a reduced ethane supply and a decrease in the amount of electricity generated internally.

## 4.8% Reduction in tCO<sub>2</sub>e (2019 vs. 2017)

\*Comparison was made with 2017 as the base year given the greater process stability.

The data reported was compiled in compliance with the requirements stipulated by the Mexican Department of the Environment and Natural Resources (SEMARNAT) and the Mexican Department of Energy (SENER) in the Matter and Energy Balance Methodology.

Furthermore, it is of the utmost importance that all emissions are included in our carbon footprint, in order to comply with regulations, policies and/or measures that reduce the potential impact of our operations.

Emissions by Gas Type	(Ton) 2017	(Ton) 2018	(Ton) 2019
NOx*	602.36	503.952	<b>1,195.50</b>
SOx*	0.9069	6.129	<b>36.8</b>
Volatile Organic Compounds (VOC)	1.3670	19.378	<b>21.55</b>
Particulate Matter (PM)	13.2808	39.802	<b>10.89</b>
Other Categories (Cr)	0	16.49	<b>0.000204</b>

\*Significant changes are a result of equipment operating times, which are within the maximum limits allowed.



During 2019, we continued raising awareness among and involving our critical suppliers in areas relating to climate change through the Carbon Disclosure Project (CDP), which identifies opportunities to reduce costs, emissions and energy use in supply chains through periodic assessments. This forms part of our business model in order to ensure that this leads suppliers to publish their emission reduction goals and, in turn, pass this commitment on to their business partners.

## Waste Management [102-11, 103-2, 103-3, 306-2, 306-4]

We drive the evolution of our waste management through eco-efficiency indicators that compare the amount of waste generated with the amount of waste processed through a range of different methods, including recycling, incineration, landfill, composting, confinement and effluence treatment.

We believe that correctly managing the waste generated in our production processes plays an essential role in driving the sustainable development of our businesses, in addition to playing a major role in our commitment to the Circular Economy.

In 2019, the following waste was generated\*:

	Hazardous Waste (Ton)	Non-Hazardous Waste** (Ton)	Total Waste (Ton)
2018	1,776	1,593.5	3,369.5
<b>2019</b>	<b>2,349</b>	<b>1,695</b>	<b>4,044</b>

\* An adjustment was made to the figures presented in 2018 in the tables.

\*\*Solid urban waste + Waste that requires special handling.

▶ We transported 2,339.94 tons of Hazardous Waste for disposal and 2,337.3465 tons were treated.

[306-2]

## Hazardous Waste\*

Waste Elimination Method	 Recycling (Ton)	 Incineration (Ton)	 Landfill (Ton)	 Others (Ton)	Total (Ton)
2018	75	56	35	1,678***	1,776
<b>2019</b>	<b>92.9</b>	<b>0</b>	<b>2.59</b>	<b>2,244</b>	<b>2,349**</b>

\*\*\*Includes industrial confinement and effluence treatment.

## Non-Hazardous Waste\*

Waste Elimination Method	 Composting (Ton)	 Landfill (Ton)	Total
2018	1.5	1,592	1,593.5
<b>2019</b>	<b>11</b>	<b>325</b>	<b>1,695**</b>

\* An adjustment was made to the figures presented in 2018 in the tables.

\*\* The information presented is comparative to the previous year. For a better reference, consult the GRI content index, 306-4, p. 100

## Biodiversity [102-11, 103-2, 103-3, 304-3, 304-4]

Safeguarding and preserving flora and fauna is something we are passionate about, which is why, when our operations began in 2016, we adopted an area covering more than 100 hectares for voluntary biodiversity research and conservation efforts in the areas surrounding our petrochemical complex.

The **Ceratozamia Protection and Development Area (APDC)**, which we call *El Benjamín*, is located close to the community of *El Chapo in Ixhuatlán del Sureste, Veracruz*, and it is where we monitor, protect and proliferate 460 species of living things.

To achieve these goals, we have implemented numerous measures that comply with state and federal SEMARNAT guidelines, International Finance Corporation (IFC) guidelines governing biodiversity, and the Management Plans stipulated by the Environmental Management Unit.

▶ Every three months, we carry out monitoring studies in *El Benjamín* to safeguard and preserve biodiversity in the area.

The results we have achieved to date include:

- **1,300 *Ceratozamia Miqueliana* plants** that are endemic to the southern region of the state of Veracruz were rescued, relocated and protected.
- **We also worked alongside experts** in cycads to coordinate a demography study of this plant family.
- **460 species of flora and fauna have been identified** thanks to the biodiversity monitoring efforts of a team of experts.
- **9.1% of the species identified** within Braskem Idesa's Environmental Management Unit (EMU) are classified to be at risk according to Mexican environmental SEMARNAT standard NOM-059, while 18 species of flora and fauna are on the International Union for Nature Conservation's (IUCN) Red List of Threatened Species.



**460**  
**species of flora and fauna** registered and protected during 2019.



▶ We undertook 15 environmental monitoring studies in 2019 to identify the species of flora and fauna living within Braskem Idesa's EMU.

Furthermore, the following articles about the studies and monitoring activities undertaken within *El Benjamín* were published:

- Diversity and conservation of amphibians and reptiles in a private protected area in a region in the south of Veracruz, Mexico, that has undergone a major transformation.
- Neo-tropical fauna and environment studies.
- A private protected natural area in Mexico: exploring the value of conservation in south-east Mexico.



# CIRCULAR ECONOMY



Nothing is created; nothing is wasted; everything is transformed



Sustainability is a way of guiding and developing our businesses based on the needs of all those involved, both today and in the future, which is why we are committed to complying with and contributing to a shift toward a Circular Economy, which, unlike a linear economy, proposes an on-going process of redesign, reuse and recycling, transforming waste into raw materials that can be used to create new products and materials, in addition to employing more innovative, efficient and sustainable systems and processes.

Transitioning to a circular economy is a challenge for the industry as it implies improving practices in the design of plastic products, changing technologies, creating infrastructure and developing strategies that allow us to work with our clients and value chains, ensuring longer lasting product value within their respective life cycles and safeguarding environmental resources. This is why, in 2018, Braskem Idesa published its Voluntary Commitments to the Circular Economy:

- 100% of Braskem Idesa's industrial units adopt best practices for pellet control, including becoming an Operation Clean Sweep Blue Member by 2020.
- 100% of plastic packing be reused, recycled or recovered by 2040.

We will achieve this by defining and complying with eight fundamental pillars that will help us fulfill our commitments:

1. Work with our clients and value chains to design new products that increase efficiency, recycling and reuse.
2. Invest in the development of new renewable products to support circular economy at the beginning of the value chain.
3. Develop new technologies, business models and systems for improving the recycling chain and recovering the material.
4. Encourage consumer's engagement for recycling and recovery programs through education to promote the value of plastic waste to the economy.
5. Use of science based tools, such as LCA, to select the better impact option in terms of economic, social and environmental impacts.
6. Measure and communicate recycling and recovery indicators for plastic packaging materials.

7. Engage partnerships in understanding, preventing and solving the mismanagement plastics residues, especially the problem of debris in oceans.
8. Support public policies to improve solid waste management and recycling chain, especially of plastic waste.

As partners, we support the vision of the voluntary commitments of the Mexican Association of the Chemical Industry (ANIQ) and the Mexican Association of the Plastic Industry (ANIPAC) and accept the challenge of post-consumer plastic waste in order to achieve sustainability and move closer to a Circular Economy.

▶ We are committed to the circular economy in order to achieve a more innovative and sustainable society.

If you would like to learn more about our commitment to the Circular Economy, please visit our website: <http://www.braskemidesa.com.mx/posicionamiento-economiacircular>



In 2019, we reaffirmed our commitment to the Circular Economy through the development of an innovative High-Density Polyethylene resin (HDPE) that is made from recycled post-consumer material.

We have also ratified our commitment to the Circular Economy by driving the on-going assessment of the impact of our products and our progressive evolution, both of which are underpinned by this model.

## Circular Solutions I'm Green Portfolio

Based on our commitment to the Circular Economy, in 2019 we developed and launched an innovative solution, whose formula offers a major alternative for processors from the plastic chain in Mexico, incorporating a recycling process into our operations and business model, which has allowed us to shift from a linear economy to a circular economy and maintain the value of plastic within its respective life cycle for longer. This has enabled us to increase our I'm Green® portfolio of sustainable products, which includes the following solutions:

- 1. I'm Green Biobased.** Polyethylene resins manufactured from a renewable source (sugar cane), which are countertypes to resins made from fossil fuels, helping reduce the environmental impact of their production.
- 2. I'm Green Recycled.** Polyethylene resins containing recycled post-consumer material, which guarantee quality, standardization and batch traceability.
- 3. I'm Green Biobased & Recycled.** The combination of the first two solutions: polyethylene resins made from a renewable source and containing recycled post-consumer material, reducing the environmental impact of their production and breathing new life into recycled plastic, while maintaining the same properties.



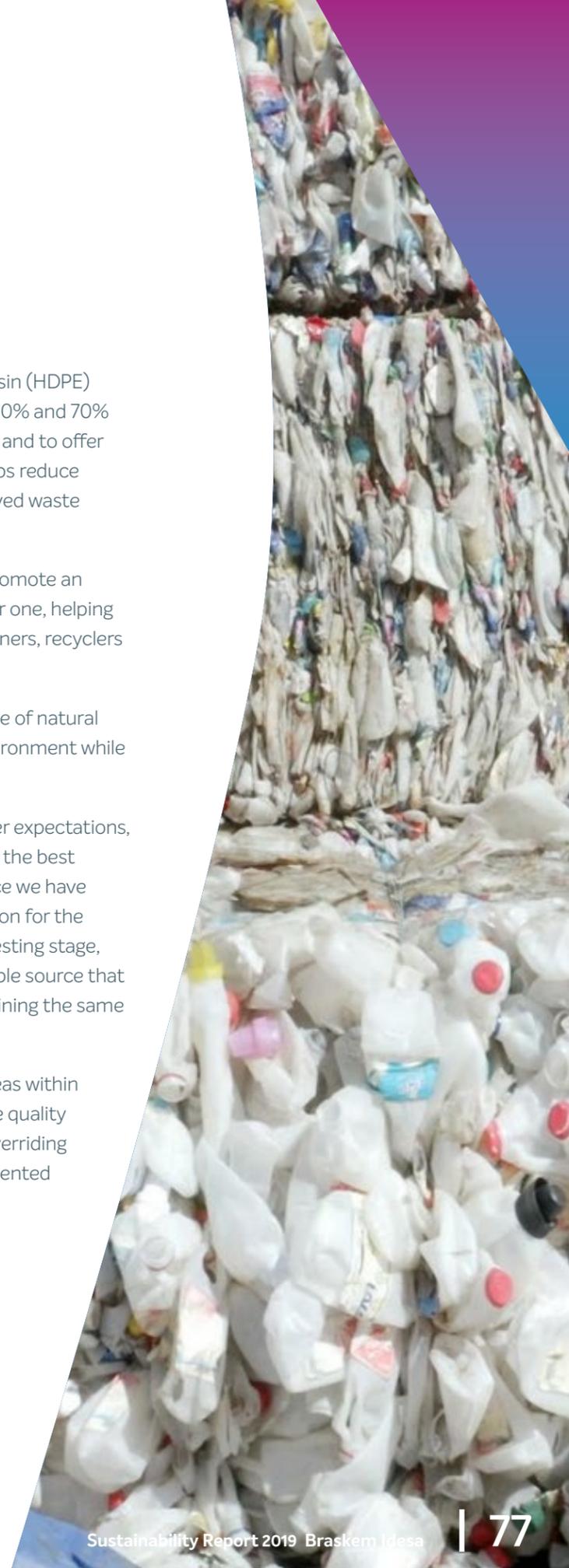
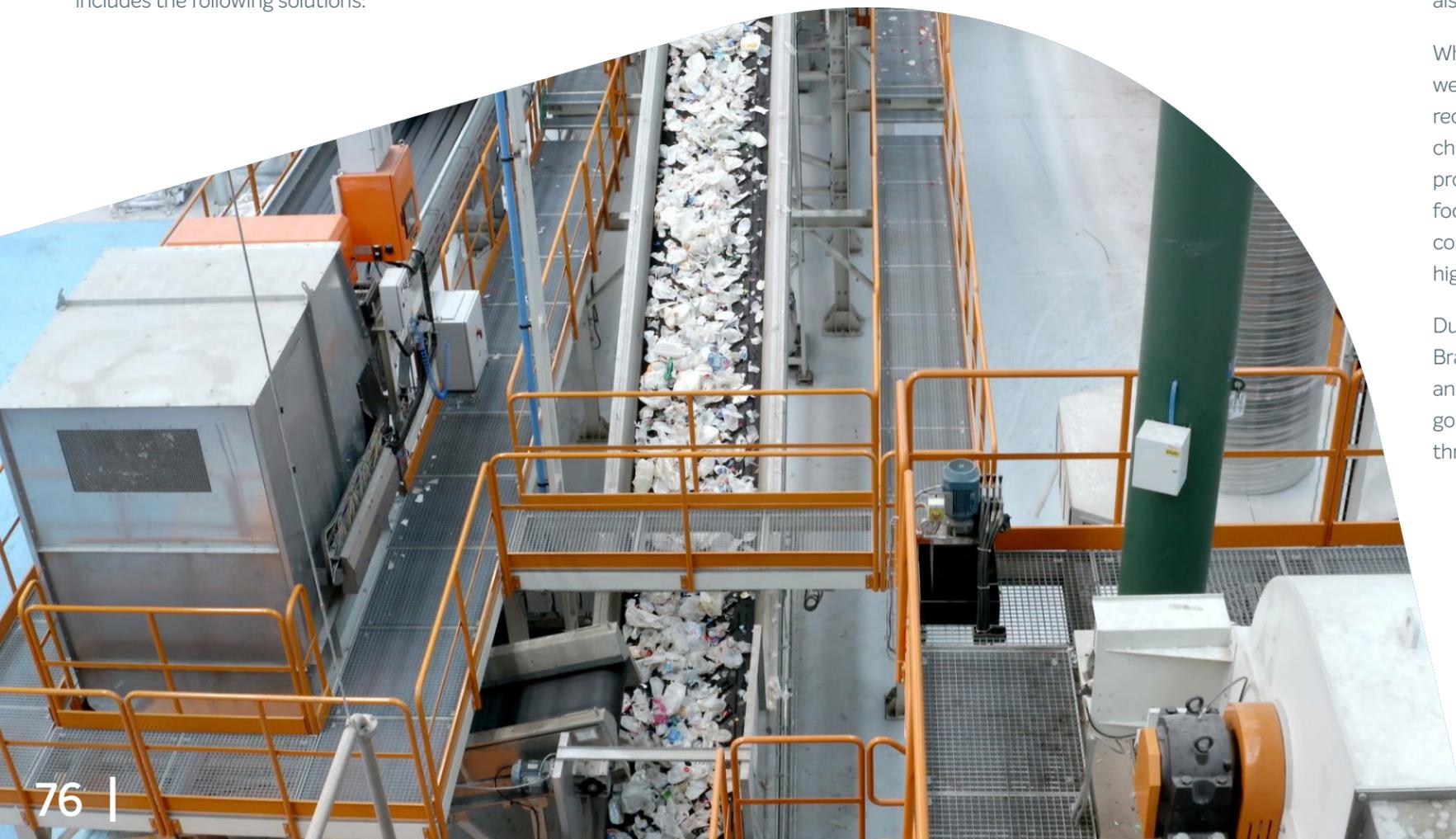
I'm Green Recycled is a new High-Density Polyethylene resin (HDPE) containing 30% recycled post-consumer material (PCR) 30% and 70% virgin resin, which has been designed for rigid applications and to offer both the Mexican and export markets a solutions that helps reduce waste generation and, at the same time, promotes improved waste management.

The creation of this new resin has enabled us to further promote an economic model in which the productive chain is a circular one, helping forge partnerships with processors, distributors, brand owners, recyclers and those involved in the recovery process.

This resin increases the opportunity to fully take advantage of natural resources, in addition to mitigating the impact on the environment while also driving social co-responsibility.

When we identify a market opportunity and new consumer expectations, we undertake a research and investigation process to find the best recyclers for the project we are looking to implement. Once we have chosen our partners, and after aligning the value proposition for the product with them, we start the laboratory analysis and testing stage, focusing on being able to obtain a product from a renewable source that contains recycled post-consumer materials, while maintaining the same high levels of quality.

During this process, it was necessary to involve several areas within Braskem Idesa, including the supply chain, in order to drive quality and product development, among other functions. The overriding goal of this process is to ensure best practices are implemented throughout the development of the project.





### What is it?

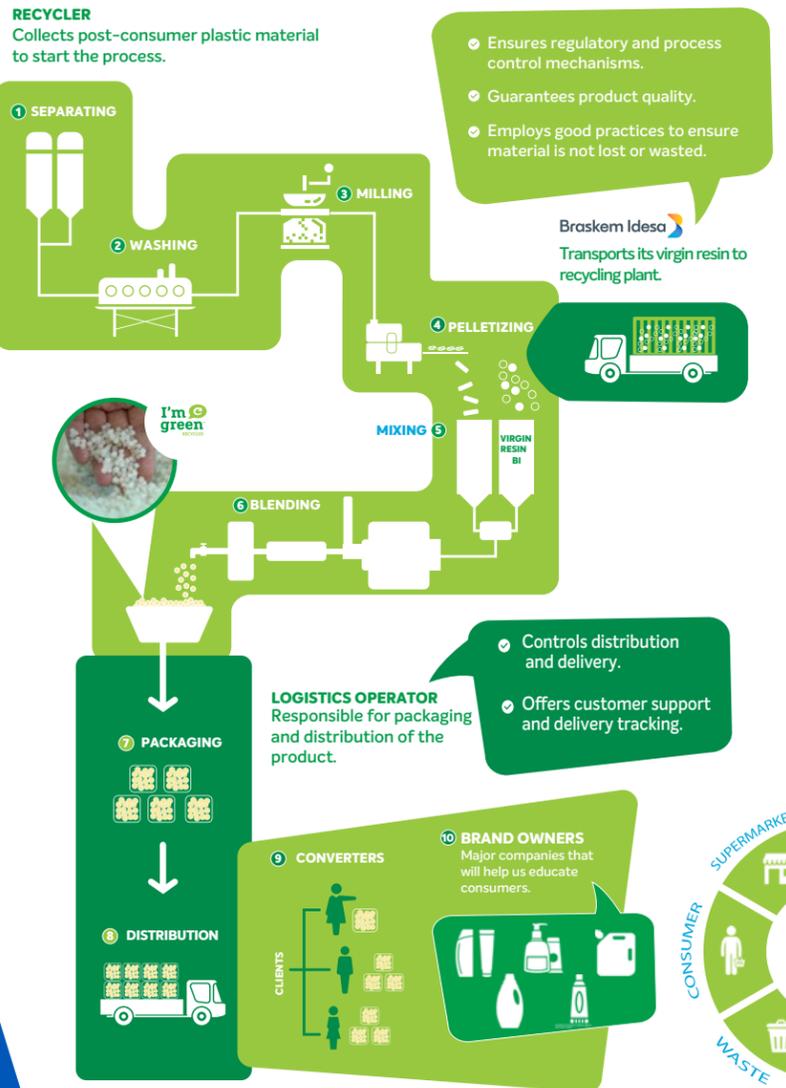
I'm Green is the **first high-performance HDPE resin** containing recycled post-consumer material in Mexico.

Its formula contains:



### How is it made?

To keep the plastic that has been used within the economy, we have developed a productive and **circular business model**. With our current infrastructure, this model requires 3 sectors: **Braskem Idesa, a Recycler and a Logistics Operator**.



We control our processes TO GUARANTEE A HIGH QUALITY RESIN, fully understanding the origin and destination of the product.

**Together, we can build a better circular future for all.**



### Joint Environmental Efforts

The proper management and disposal of solid waste are two major factors that have an impact on the amount of plastic that ends up in our seas and oceans. We recognize the complexity of this problem, and we know that solutions will only be possible if different social sectors pool their resources: governments, industry, society and companies. This is why we have not only invested in the innovation and creation of more sustainable products, but we also play an active role in searching for and developing responses and solutions that combat the amount of plastic waste that ends up in our oceans and ecosystems.

### Operation Clean Sweep®- Zero Pellet Loss Program

In 2019, we become a member of the global Zero Pellet Loss Program, coordinated by ANIPAC in Mexico, the goal of which is to support each segment of the industry, from resin producers and transport specialists to carriers and manufacturers, who are all part of the productive chain, helping them replicate and implement a best practice model within their companies to ensure these measures minimize the loss of pellets and contributing to the conservation of marine ecosystems.

This is how we are ensuring compliance with national and international standards, in addition to being a member of an international network of countries that are currently implementing these practices as part of the pillars of their Circular Economy.

The Operation Clean Sweep® program was originally created by the American Plastics Industry Association (PLASTICS).

▶ During 2019, we decreased pellet loss by implementing measures to ensure their proper containment.

**Involve partners from the value chain, specifically our Logistics Operators**

**Best Places to Work and Logistics**



**Create and promote best internal processes**

**Communication and training campaigns for Members**

▶ As the result of 46 informative sessions regarding the program, 903 Members and Contractors signed the commitment.

We made 36 changes to our processes and part of our machinery in 2019 to recover pellets, waste or small pieces of polyethylene that, during production, can get lost, become stuck or spill over. This is how we have successfully decreased the number of pellets that were lost during operations at our Complex, compared to 2018.

**Alliance to End Plastic Waste** [102-12, 102-13]

In January 2019, we joined the Alliance to End Plastic Waste, a non-profit organization whose goal is to help find solutions to combat the incorrect disposal of plastic waste within the environment, bringing together the entire plastic value chain: resin manufacturers, processors, retailers, recyclers, and brand owners who produce, use, sell, process, collect and recycle materials.

More than 30 major companies from around the world have joined this Alliance, reaffirming their commitment to investing up to USD \$1.5 billion over the next five years in projects and new technologies relating to this area. The Alliance has the strategic support of the World Business Council for Sustainable Development, in addition to collaborating with intergovernmental organizations, such as the United Nations and Circulate Capital, to develop measures that help ensure plastics do not end up in our oceans, in addition to promoting waste management and recycling.

Every year, the Alliance to End Plastic Waste (AEPW) publishes its progress report, detailing the advances being made to its mission and raising awareness about innovative projects that combat plastic waste in the environment. One of the goals for 2025 is to create several Zero Waste cities around the world, properly disposing of 3.4 million tons of waste, and we are fully committed to achieving this goal.



**[If you would like to learn more about the sustainable strategy we have implemented in collaboration with the AEPW, please click here.](#)**

## Institutional Recycling Programs

We strive to promote partnerships through our programs focusing on plastic recycling, awareness programs on proper waste separation, plastic waste recycling, and social responsibility.

We firmly believe that plastics play a crucial role in improving people's quality of life, but we also fully understand the need to properly manage post-consumer waste. Aware of the role we play in this global challenge, we publish information about our Circular Economy, in which we reaffirm our on-going commitment to driving the development of more sustainable and innovative technologies, in addition to promoting recycling and the creation of institutional recycling programs at all our sites, not to mention working alongside our clients and the value chain because we firmly believe that **Together, We Are Part of the Solution**.

### Plastianguis

A program created by the Mexican Association of the Chemical Industry (ANIQ), which focuses on exchanging plastic waste for basic food products or school supplies. We strive to promote responsible consumption, recycling and plastic processing by creating an itinerant infrastructure for collecting plastic waste. We coordinated this campaign twice in Mexico (three events in *Nanchital, Veracruz*, and one in Mexico City in collaboration with the Faculty of Chemistry of the National Autonomous University of Mexico (UNAM)).

The results we achieved until 2019 include:

- **+9 tons of plastic waste collected.**
- **+ 4,000 participants.**
- **+ 280 volunteers.**
- **+ 2,500 families benefitted.**

▶ In 2019, we collected more than 61 tons of plastic waste, and more than 4,000 people took part in the two campaigns we coordinated.

### PlastiVale

The goal of this project is to promote good practices in plastic collection, recycling, disposal and use, helping encompass the entire life cycle. It also helps us better engage with the local community as we work alongside schools from *Nanchital*.

- **26 participating schools from Nanchital, Veracruz.**
- **+9 tons of PET and PEAD bottles collected ready for valorization.**
- **+2,000 students benefitted.**

### Plastiferia

An educational fair aimed at children from the communities of *Nanchital* and *Coatzacoalcos, Veracruz*, the goal of which is to educate and raise awareness regarding the identification of different plastics, responsible consumption, the recycling process, adequate reuse, and proper waste separation.

- **+800 children from Nanchital and Coatzacoalcos took part in the event.**
- **75 volunteers from Braskem Idesa.**

### Plastien

*Plastien* is a cooperative located in the region of *Nanchital, Veracruz*, which focuses on collecting and valorization waste that requires special handling (plastic). This cooperative is part of our social investment plan, through which we aim to drive the inclusion and social and economic development of MSME entrepreneurs in the region by providing training, generating infrastructure and increasing household income.



**+6 tons of plastic waste collected every month.**



## Plastic Waste Collection Program through BIOBOX Recycling Machines

In order to promote a culture among Braskem Idesa's Team Members and visitors of separating and processing plastic waste, we created an educational waste collection and recycling program at our offices and petrochemical plant, consisting of the installation of three BIOBOX recycling machines, two located at our plant and one at our corporate offices in Mexico City.

Our Members deposit their polyethylene and PET waste in the machine for processing and recycling, and, in return, they receive coupons for buying products or paying for services, or they can also make a donation to Alianza Anticáncer Infantil, a non-profit organization that supports children with cancer.

All the plastic waste collected in Mexico City is donated to Alianza Anticáncer Infantil; while in Nanchital, the plastic waste collected is donated to the Plastien cooperative for its subsequent valorization and recycling.

- **+6 tons of plastic waste (polyethylene and PET) collected every year.**
- **+800 Braskem Idesa Team Members took part in the program.**

## Recovery of *Ex Factoría* Park in Nanchital, Veracruz

The *Ex Factoría* park is a space covering more than 10,000 m<sup>2</sup> that was recovered in collaboration between neighbors from the community of Nanchital, Veracruz, and Love.Futbol (an international non-profit organization), financed by Braskem Idesa and coordinated by *Fundación Chico Balderas*. The goal of this project is to promote sports, environmental education, community empowerment and the development of the Local Economy.

The buildings in this park used recycled plastic and reused materials, such as a roof made from PET bottles, benches made from plastic pallets and children's play areas made from polyethylene. We also provided infrastructure where people can deposit their PET, containers and polyethylene bags for recycling.

- **+10,000 m<sup>2</sup> recovered.**
- **+600 volunteers took part in the recovery and construction of the *Ex Factoría* park.**
- **+3,000 volunteering hours.**

## Corporate Volunteering Program

The goal of our volunteering program is to create a positive social and environmental impact on the communities situated close to our operations by working on volunteering programs alongside Team Members and guest volunteers through 3 major programs aimed at our operations in Mexico and around the world:

**Volunteer Challenge:** A global competition among Team Members from all Braskem Idesa and Braskem units located in Mexico, Brazil, the United States and Europe. Teams of 2 or more members are created to work with a social organization located close to their workplace. This team works for a 3-month period to help support the organization in question. At the end of the game, the teams with the highest number of points, on both a local and global scale, win a prize that they then donate to the organizations they supported.

**Local Crowd Effort:** Local volunteering programs, lasting for one or two days and comprising large groups of volunteers, that focus on recycling, the conservation of rivers and lakes, health, safety, and support for people living in vulnerable situations, among others.

**WeCareWeek:** A global week of volunteering activities that focuses on promoting the Circular Economy.

Results of our 2019 Volunteering Program:

- **Global winner** of the 2019 Braskem Volunteer Challenge.
- **21 activities** generated as part of the Local Crowd Effort.
- **+300 volunteers** from Braskem Idesa.
- **+1,500 guest volunteers.**
- **+180,000 people benefitted.**
- **18 associations and foundations** took part in the Volunteering Program.
- **+3 tons of waste collected** during a project to clean up 1 kilometer of Coatzacoalcos beach, We Care Week (conservation of the Lerma River), and World Clean-up Day (Clean up at the Sumidero Canyon in Chiapas).

▶ In 2019, we invested more than USD \$49,000 in the development and implementation of the Corporate Volunteering program.





## PRODUCT LIFECYCLE



Monitoring and reducing environmental impacts is a fundamental part of our strategy, which is why we analyze the lifecycle of our products, encompassing the entire value chain, from the extraction of raw materials to final disposal. This is a clear way of verifying the benefits our solutions can have on sustainable development.

Throughout 2019, we undertook a comparative Life Cycle Assessment (LCA) of plastic bags to measure and compare the potential environmental impacts of a product or service, which, in turn, allows us to analyze its environmental performance to drive improved decision-making. In collaboration with INBOPLAST and ANIPAC, we will continue developing these types of studies, which focus on the applications of polyethylene.

Furthermore, in 2019 we collaborated with the Universidad Autónoma Metropolitana (UAM) on a study monitoring microplastics and waste management along 33 beaches in Mexico. We also developed diagnostic studies regarding the generation of polyethylene plastic waste, in addition to planning Circular Economy strategies for post-consumer polyethylene.

# EARTH CHARTER

# CERTIFICATIONS AND AWARDS

The Earth Charter is a declaration of ethical principles that form the basis for the creation of a fair, sustainable and peaceful global society. This initiative focuses on the transition to sustainable lifestyles and human development. It began as a United Nations program, concluding in the year 2000 with the creation of the Earth Charter Commission, an international body that promotes compliance with these principles.

At Braskem Idesa, we joined this program in 2017, implementing its recommendations into our day-to-day operations. We support the principles and global alliance it proposes to help create a fair, sustainable and peaceful world.

The principles of this Charter are:



Respect and Care for the Community of Life



Social and Economic Justice



Ecological Integrity



Democracy, Nonviolence and Peace

As a result of our continuing efforts and on-going commitment to further contribute to both our society and our planet, in 2019 we were presented with the following awards:

- Adhesion Certificate from the Zero Pellet Loss Program - Operation Clean Sweep (OCS) by the Mexican Association of the Plastics Industry (ANIPAC)
- Braskem Idesa joined the international capital market through the issuance of a private bond.
- Socially Responsible Company (ESR) by the Mexican Center for Philanthropy (CEMEFI).
- Pollution Prevention, Comprehensive Responsibility Management System (SARI) or Responsible Care® by the Mexican Association of the Chemical Industry (ANIQ).
- Water Use and Management. Comprehensive Responsibility Management System (SARI) or Responsible Care® by the Mexican Association of the Chemical Industry (ANIQ).
- Annual certification from the Comprehensive Responsibility Management System (SARI) or Responsible Care® by the Mexican Association of the Chemical Industry (ANIQ).
- 2019 Super Place to Work by We Work from Expansión and TOP Companies.
- One of the 500 Most Important Companies in Mexico by Expansión magazine.
- 1,000 Most Important Companies by Mundo Ejecutivo magazine.
- Corporate Integrity Index (IC500) by Transparencia Mexicana and Mexicanos contra la Corrupción la Impunidad.
- Approval for Compliance System by the US Department of Justice.
- Global Winner of the Braskem Corporate Volunteering Program.



# ABOUT THIS REPORT

[102-1, 102-5, 102-10, 102-45, 102-48, 102-49, 102-50, 102-51, 102-52, 102-54, 102-56]



This annual Sustainability Report reflects the growth, performance, results, programs and milestones achieved between January 1 and December 31, 2019, by Braskem Idesa SAPI (Investment Promotion Corporation) and Braskem Idesa Servicios SA de CV.

As part of the evolution of our company during the year, Braskem Idesa joined the capital market through the issuance of a private bond, which represented a significant change in 2019.

This document has been drafted using the Core Conformity option stipulated by the Global Reporting Initiative (GRI), and the information published herein has been verified by an external party. Compared to our 2018 report, this year the coverage in the areas of water, health and safety were modified after being updated in accordance with GRI 303: Water and Effluents 2018 and GRI 403: Occupational Health and Safety 2018.

The only reformulation of data focuses on GRI 201-1: Economic Performance 2016, given that results were previously expressed in Mexican pesos (MXN), but, this year, are now reported in US dollars (USD), helping standardize the public information reported by the company.



## Materiality [102-46, 102-47, 103-1]

To achieve our goal of aligning our growth plan with the creation of products, processes and solutions that drive the maximum possible reduction in potential environmental and social impacts, we follow our Global Sustainable Development Policy. Through this document, we create a roadmap for our goals and aspirations, which also encompass our Materiality Matrix, which provides guidelines regarding the relevance of sustainability issues within our business strategy. We now use the updated 2018\* Materiality Matrix, which encompasses 26 aspects, 18 of which were taken into consideration as a result of our on-going dialog with our stakeholders, in turn allowing us to apply the Comprehensive option to continue driving our innovation.

\* In 2018, a global update was implemented in order to identify material issues. This report corresponds to Braskem Idesa's materiality.

After completing this process, we selected the final materiality issues to be taken into account before proceeding to compile data and draft the report based on the following principles:

- **Accuracy**
- **Balance**
- **Clarity**
- **Comparability**
- **Reliability**
- **Timeliness**

In this report, we have continued with the material issues reflected in the 2018 report and those identified in 2019:

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• <b>Water</b></li> <li>• <b>Air</b></li> <li>• Customer Service</li> <li>• <b>Biodiversity</b></li> <li>• <b>Corruption</b></li> <li>• <b>Financial Performance</b></li> <li>• <b>Circular Economy</b></li> <li>• Employment</li> <li>• <b>Energy</b></li> <li>• <b>Training and Career Development</b></li> <li>• <b>Corporate Governance</b></li> <li>• <b>Equal Opportunities</b></li> <li>• <b>Social Investment in Communities</b></li> <li>• Freedom of Association</li> <li>• <b>Local Workforce</b></li> </ul> | <ul style="list-style-type: none"> <li>• <b>Complaint Procedures</b></li> <li>• Public Policies</li> <li>• <b>Post-Consumption</b></li> <li>• Suppliers – Environmental Management</li> <li>• Local Suppliers</li> <li>• Non-Renewable Resources</li> <li>• Reporting and Publication</li> <li>• <b>Waste</b></li> <li>• <b>Health and Safety</b></li> <li>• Property Security</li> <li>• <b>Transparency and Integrity</b></li> </ul> |
|--|--|

## Alignment with Global Sustainability Standards [102-12, 103-1]

At Braskem Idesa, we are committed to Sustainability, which is why, as part of our strategy, we developed 10 Macro Sustainable Development Goals that govern our operations and are aligned with global methodologies, such as GRI Standards and the United Nations Sustainable Development Goals (SDG), focusing more on the SDG that are to be achieved by 2020. We are now defining the challenges for the new 2020-2031 period, in addition to updating our goals based on the current global panorama. It is important to highlight the fact that, from 2021, these macro goals will be presented based on the direct impact they have on the priority SDG goals.

10 Braskem Idesa's Macro Goals	
1	Safety
2	Economic and Financial Results
3	Water Efficiency
4	Solution Development
5	Strengthening of Practices
6	Climate Change
7	Energy Efficiency
8	Renewable Resources
9	Post-Consumption
10	Local Development

These are the United Nations Sustainable Development Goals, and we directly contribute to 14 of these SDG, which are highlighted below.

## SUSTAINABLE DEVELOPMENT GOALS



[102-46]

Material Issue	BI Macro Goals	SDG	GRI Content	Coverage	
				Internal	External
 Social Investment in Communities	10	1, 3, 4, 11 13, 17	413-1, 413-2		✓
 Energy	7	7, 13	302-1, 302-3, 302-4	✓	
 Water	3	6	303-1, 303-2, 303-3, 303-4, 303-5		✓
 Biodiversity	10	14, 13, 15, 17	304-3, 304-4		✓
 Air	6	13	305-1, 305-2, 305-4, 305-7		✓
 Complaints Procedures	5	16	413-1, 419-1	✓	✓
 Corruption	5	16	205-1, 205-2, 205-3	✓	
 Workforce	10	1, 8	401-1	✓	
 Health and Safety	1	3, 8	403-1, 403-2, 403-3, 403-4, 403-5, 403-6, 403-7, 403-8, 403-9, 403-10	✓	✓
 Financial Performance	2	8	201-1, 202-2	✓	
 Circular Economy	8, 9	11, 12, 13, 14, 17	306-2, 306-4	✓	✓
 Corporate Governance	5	16	102-14, 102-18	✓	
 Post-Consumption	6, 8, 9	9, 11, 12, 13, 17	306-2, 306-4	✓	✓
 Waste	6, 8, 9	9, 11, 12, 13, 17	306-1, 306-2, 306-4	✓	✓
 Transparency and Integrity	5	16	102-16, 107-17, 103-1, 103-2, 103-3	✓	✓

[102-53]

If you require further information about this annual sustainability report, or if you have any doubts, suggestions or comments about it, please contact the Circular Economy and Sustainability department at the following e-mail address: [sustentabilidad@braskem.com](mailto:sustentabilidad@braskem.com)





# GRI CONTENT INDEX

[102-55]



GRI Standard	Disclosure Title	Page Number/Omission
<b>GRI 101: FOUNDATION 2016</b>		
<b>GENERAL DISCLOSURES</b>		
<b>GRI 102: GENERAL DISCLOSURES 2016</b>		
<b>1. Organizational profile</b>		
<b>102-1</b>	Name of the organization	P. 91
<b>102-2</b>	Activities, brands, products, and services	P. 13-16, 35
<b>102-3</b>	Location of headquarters	P. 36-37 The Braskem Idesa Complex comprises 1 ethane cracker and 2 high-density (HDPE) and 1 low-density polyethylene plants (LDPE). Our corporate offices are located in Mexico City at <i>Boulevard Manuel Ávila Camacho</i> , 36, 24th floor. <i>Col. Lomas de Chapultepec</i> . CP 11000 México. The Complex is located at <i>Carretera Nanchital- El Chapo</i> , Km 3.5, <i>Nanchital de Lázaro Cárdenas del Río, Veracruz</i> .
<b>102-4</b>	Location of operations	P. 13
<b>102-5</b>	Ownership and legal form	P. 91
<b>102-6</b>	Markets served	P. 13-16
<b>102-7</b>	Scale of the organization	P. 18-19, 43-46
<b>102-8</b>	Information on employees and other workers	P. 43-45
<b>102-9</b>	Supply chain	P. 41
<b>102-10</b>	Significant changes to the organization and its supply chain	P. 91
<b>102-11</b>	Precautionary Principle or approach	P. 49, 61-65, 68, 70
<b>102-12</b>	External initiatives	P. 81, 93 Braskem Idesa adhered to the "Social Dimension of Companies" principles of the <i>Consejo Coordinador Empresarial</i> .
<b>102-13</b>	Membership of associations	P. 33, 81
<b>2. Strategy</b>		
<b>102-14</b>	Statement from senior decision-maker	P. 5-7

For Materiality Disclosures Service, GRI Services has reviewed that the GRI Content Index is clear and that the references for 102-40 to 102-49 contents correspond to the right sections of the report. The service was performed on the Spanish version of the report.

GRI Standard	Disclosure Title	Page Number/Omission
102-15	Key impacts, risks, and opportunities	P. 5-7
<b>3. Ethics and integrity</b>		
102-16	Values, principles, standards, and norms of behavior	P. 10-11, 14-16
102-17	Mechanisms for advice and concerns about ethics	P. 28
<b>4. Governance</b>		
102-18	Governance structure	P. 24, 26
<b>5. Stakeholder engagement</b>		
102-40	List of stakeholder groups	P. 20, 21
102-41	Collective bargaining agreements	P. 43-44
102-42	Identifying and selecting stakeholders	P. 20, 21
102-43	Approach to stakeholder engagement	P. 20, 21
102-44	Key topics and concerns raised	P. 20, 21
<b>6. Reporting practice</b>		
102-45	Entities included in the consolidated financial statements	P. 91
102-46	Defining report content and topic Boundaries	P. 92,94
102-47	List of material topics	P. 92 Of the material topics reported last year, an update was made by adding 3 material topics as a result of our Customer Service and Reputation Survey that is carried out periodically at Braskem Idesa.
102-48	Restatements of information	P. 91
102-49	Changes in reporting	P. 91
102-50	Reporting period	P. 91
102-51	Date of most recent report	P. 91 The last report was published on January 2020.
102-52	Reporting cycle	P. 91
102-53	Contact point for questions regarding the report	P. 94
102-54	Claims of reporting in accordance with the GRI Standards	P. 91

GRI Standard	Disclosure Title	Page Number/Omission
102-55	GRI content index	P. 97-105
102-56	External assurance	P. 91, 106-107
<b>MATERIAL TOPICS</b>		
<b>GRI 103: MANAGEMENT APPROACH 2016</b>		
103-1	Explanation of the material topic and its Boundary	P. 92, 93 This content covers the material topics: Economic performance, Corruption, Circular Economy, Energy, Water, Biodiversity, Air, Labor, Health and Safety, Social investment in communities, Mechanisms for complaints.
<b>Economic Performance</b>		
<b>GRI 103: MANAGEMENT APPROACH 2016</b>		
103-2	The management approach and its components	P. 35
103-3	Evaluation of the management approach	P. 35-38
<b>Gri 201: Economic Performance 2016</b>		
201-1	Direct economic value generated and distributed	P. 38
<b>Gri 202: Market Presence 2016</b>		
202-2	Proportion of senior management hired from the local community	P. 39 b, c, d. Senior managers are those employees who hold positions of managers, directors, vice-presidents and presidents. To calculate the number of managers from the local community (born in the same state where they work), we use the number of senior managers and place of birth. This content is controlled in all the countries where there are operations, both those with industrial plants and those with only commercial offices.
<b>Corruption</b>		
<b>GRI 103: MANAGEMENT APPROACH 2016</b>		
103-2	The management approach and its components	P. 23-24, 29-32
103-3	Evaluation of the management approach	P. 23-24, 29-32
<b>Gri 205: Anticorruption 2016</b>		
205-1	Operations assessed for risks related to corruption	b. 31 risks were analyzed, of which none was weighted as significant. The main risks that are being monitored by the Company, to mention a few, are "Negotiation Process with suppliers", "Third party administration" and "Anti-corruption"

GRI Standard	Disclosure Title	Page Number/Omission
205-2	Communication and training about anticorruption policies and procedures	P. 27 a, d. It was presented to 100% of the Board of Directors (11 members) and 100% of the Compliance Committee (3 members).
205-3	Confirmed incidents of corruption and actions taken	a. During 2019, no confirmed cases of corruption were presented. There is a lack of knowledge about the definition of "Corruption", for which some reports were received with this classification. However, when analyzed, they were reclassified because they corresponded to other categories such as potential Conflicts of Interest, Claims, behavior and breaches of contracts.

**Circular Economy**

**GRI 103: MANAGEMENT APPROACH 2016**

103-2	The management approach and its components	P. 74
103-3	Evaluation of the management approach	P. 74

**Gri 306: Effluents and Waste 2016**

306-2	Waste by type and disposal method	P. 68, 69 This content covers material topics of Waste in the Environmental Performance section.
306-4	Transport of hazardous waste	P. 68, 69 This content covers material issues of Waste in the Environmental Performance section. a. Composting, reclamation, deep well injection, and on-site storage are not used. i. Reuse: 9.7 Ton. b. Incineration, deep well injection and on-site storage are not used. i. Reuse: There was no reuse ii. Recycling: 83,1 iii. iv. Recovery: 6,9 ix. Others: 1,269 b, c. Hazardous waste is not exported.

**Energy**

**GRI 103: MANAGEMENT APPROACH 2016**

103-2	The management approach and its components	P. 64
103-3	Evaluation of the management approach	P. 64

GRI Standard	Disclosure Title	Page Number/Omission
<b>Gri 302: Energy 2016</b>		
302-1	Energy consumption within the organization	P. 64, 65 b. There are no consumptions from renewable sources. c.i. Electric Power from the Grid: 111,169,177 MWh = 400,209,037,20 MJ = 400,209,037,2 GJ ii, iii, iv. There is no consumption. d. i. Exported Electricity: 105,582,69 MW = 1,525,669,87 GJ ii, iii, iv. Not applicable g. Conversion factors published in the Energy Information System of the Ministry of Energy (SENER).
302-3	Energy intensity	P. 64 c. Natural gas and recirculation gas energy from the Ethylene plant. d. Energy within the <i>Coatzacoalcos</i> plant.
302-4	Reduction of energy consumption	P. 64
<b>Water</b>		
<b>GRI 103: MANAGEMENT APPROACH 2016</b>		
103-2	The management approach and its components	P. 63
103-3	Evaluation of the management approach	P. 63
<b>Gri 303: Water and Effluents 2018</b>		
303-1	Interactions with water as a shared resource	P. 63 c. Participates in the Gulf basin committee.
303-2	Management of water discharge-related impacts	P. 63 ii. iii. The formula of the Rio Coatzacoalcos declaration was used to determine CPD for the companies that discharge into the stream. iv. The profile of the receiving water mass was taken into account according to the Rio Coatzacoalcos declaration and its tributaries.
303-3	Water withdrawal	P. 63 iii. Sea water is not used IV. It is not produced. V. Wastewater from another organization is not treated. b.This information is not available, it is not considered a water stress zone. c. This data is not available. d. Direct measurement of water consumption.
303-4	Water discharge	P. 63 b,c. This information is not available, since this analysis is not carried out. d. Total phenole, Benzene, Toluene, Ethylbenzene, Xylenes, Polychlorinated biphenyls, HAP, SAAM. iii. There have been no breaches.

GRI Standard	Disclosure Title	Page Number/Omission
303-5	Water consumption	P. 63, 64 b. This data is not available, the area is not considered with water stress. c. There are no changes in storage. d. They are made through direct measurements of meters or totalizers.
<b>Biodiversity</b>		
<b>GRI 103: MANAGEMENT APPROACH 2016</b>		
103-2	The management approach and its components	P. 70
103-3	Evaluation of the management approach	P. 70
<b>Gri 304: Biodiversity 2016</b>		
304-3	Habitats protected or restored	P. 70 c. 100 hectares destined for the Area of Protection and Development of Ceratozamia is in a SEMICONSERVED state, this is defined by the type of species that the Environmental Management Unit has.
304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	P. 70 They are not found in affected areas, on the contrary, what is reported here is a conservation area.
<b>Emmissions</b>		
<b>GRI 103: MANAGEMENT APPROACH 2016</b>		
103-2	The management approach and its components	P. 65
103-3	Evaluation of the management approach	P. 65
<b>Gri 305: Emisiones 2016</b>		
305-1	Direct (Scope 1) GHG emissions	P. 65-66 c. They are not calculated. d. i. There is not yet a 100% operational capacity operation. ii. SEMARNAT for the SCE is based on 2016 as it is the year verified in the RENE system by Braskem Idesa: Scope 1 = 1,551,087.23 tCO <sub>2</sub> equ and Scope 2 = 58,732.67 tCO <sub>2</sub> equ. iii. If we consider the base year 2016, this year there were not 100% operations compared to 2017, 2018 and 2019. e. Source of emission factors and global warming potentials used: National regulation established published by the DOF and issued by SEMARNAT. F. Operational control. g. Methodologies of the National Regulation published by the DOF and issued by SEMARNAT.

GRI Standard	Disclosure Title	Page Number/Omission
305-2	Energy indirect (Scope 2) GHG emissions	P. 65-66 b. N / A. d.i. It will be taken based on what SEMARNAT is issuing for the SCE, taking 2016 as the base year since it is the year verified by RENE for Braskem Idesa. ii. SEMARNAT for the SCE is taking 2016 as the base year since it is the year verified by RENE for Braskem Idesa: Scope 1 = 1.551.087,23 tCO <sub>2</sub> equ and Scope 2 = 58.732,67 tCO <sub>2</sub> equ. iii. There are no changes.
305-4	GHG emissions intensity	P. 65-66 a.iv. More number of hours of equipment operation.
305-6	Emissions of ozone-depleting substances (ODS)	a. There were no such emissions. b. R-134 a. c. Emission factors issued by SEMARNAT. d. By emission factors for the quantity consumed
305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	P. 65 b. Air emissions based on AP-42 emission factors (where it cannot be monitored, it is done with this emission factor) c. Calculations by material balance and direct measurements of the sources (Where we have direct flows and monitoring of the source).
<b>Workforce</b>		
<b>GRI 103: MANAGEMENT APPROACH 2016</b>		
103-2	The management approach and its components	P. 43-44
103-3	Evaluation of the management approach	P. 43-44
<b>Gri 401: Employment 2016</b>		
401-1	New employee hires and employee turnover	P. 43,45,46
<b>Occupational health and safety</b>		
<b>GRI 103: MANAGEMENT APPROACH 2016</b>		
103-2	The management approach and its components	P. 48-50
103-3	Evaluation of the management approach	P. 48-50
<b>Gri 403: Occupational Health and Safety 2018</b>		
403-1	Occupational health and safety management system	P. 48-50 All the HSE requirements of Braskem Idesa are shared with all contractors in contract tenders and who are in the contract start-up meeting stage, where the contractor adheres to the HSE Management System, based on the PO-SSMA procedure -SI-23 HSE requirements for contractors, in compliance with official Mexican standards (STPS), specifically NOM-030-STPS-2009 Preventive Health and Safety Services at Work, functions and activities.

GRI Standard	Disclosure Title	Page Number/Omission
403-2	Hazard identification, risk assessment, and incident investigation	P. 48-50 a) Braskem Idesa uses the following procedures to identify associated risks and hazards: PO-SSMA-SI-01 Preliminary Analysis of Hazards for Services, PO-SSMA-SI-07 Work Permit, PO-SSMA-SI-07 Safety Analysis in the homework. i) Braskem Idesa guarantees the quality of these processes through training in HSE procedures. ii) There is a Work Permit Audit system that includes Safe Task Analysis, Work Permit, Preliminary Hazard Analysis for Services, to continuously evaluate and improve the Health and Safety Management System in the job.
403-3	Occupational health services	P. 48-50
403-4	Worker participation, consultation, and communication on occupational health and safety	P. 48-50
403-5	Worker training on occupational health and safety	P. 48-50
403-6	Promotion of worker health	P. 48-50
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	P. 48-50
403-8	Workers covered by an occupational health and safety management system	P. 48-50 a. Aligned with the Secretary of Labor and Social Welfare (STPS) and with the global INTELIIUS system and the global standards of Braskem Idesa. i. Contractors: 1,033 and 47.3% & BI: 1,153 and 52.7%. ii. Contractors: 1,033 and 47.3% & BI: 1,153 and 52.7%.
403-9	Work-related injuries	P. 48-50 a. i. There are no deaths. ii. 2 Injuries due to work-related accidents with great consequences, which gives a rate of 0.48. iii. 6 minor injuries, giving a rate of 1.43. iv. The main types of workplace accident injuries: hands, right knee, on shoulder, head and back

GRI Standard	Disclosure Title	Page Number/Omission
403-10	Work-related ill health	P. 48-50 Medical services are available to register any type of illness or disease. i. There are no deaths resulting from any occupational disease or illness. ii. 6 cases. iii. The main types of ailments detected at Braskem Idesa were in: hand, right knee, shoulder, head, back. b. No occupational diseases or illnesses registered in 2019.
<b>Social Investment in Communities</b>		
<b>GRI 103: MANAGEMENT APPROACH 2016</b>		
103-2	The management approach and its components	P. 51-58
103-3	Evaluation of the management approach	P. 51-58
<b>Gri 413: Local Communities 2016</b>		
413-1	Operaciones con participación de la comunidad local, evaluaciones del impacto y programas de desarrollo	P. 28, 51-58 This content covers the material topic of Mechanisms for complaints in the community.
413-2	Operaciones con impactos negativos significativos -reales o potenciales- en las comunidades locales	Braskem Idesa has no operations that have a significant negative impact, either real or potential.
<b>Complaint Procedures</b>		
<b>GRI 103: MANAGEMENT APPROACH 2016</b>		
103-2	The management approach and its components	P. 28-30
103-3	Evaluation of the management approach	P. 28-29
<b>Gri 419: Socioeconomic Compliance 2016</b>		
419-1	Incumplimiento de las leyes normativas en los ámbitos social y económico	Braskem Idesa has not been fined as a result of compliance issues with social or economic regulations.

# LETTER OF VERIFICATION



## Verification Letter of the 2019 Annual Sustainability Report

### Braskem Idesa

To the Board of Directors of Braskem Idesa (SAPI) and Braskem Idesa Servicios S.A de C.V.:

You are informed that Redes Sociales en Línea Timberlan carried out a limited verification of certain information presented in the Annual Sustainability Report corresponding to the year 2019 of Braskem Idesa (SAPI) and Braskem Idesa Servicios S.A de C.V. based on the requirements of the GRI Standards of Essential compliance.

Our mission is to issue impartial and objective opinions about the presentation and quality of the information contained in the 2019 Annual Sustainability Report of Braskem Idesa, which is responsible for the selection of material topics and GRI content reported. Our work took as reference International Norms and Standards, such as: ISAE 3000's Ethical Independence Principles and the GRI publication The External Assurance of Sustainability Reporting.

An independent verification was carried out to ensure the quality of the information reported on the following GRI contents:

102-1	102-14	102-48	303-1	403-3
102-2	102-15	102-49	303-2	403-4
102-3	102-16	102-50	303-3	403-5
102-4	102-17	102-51	303-4	403-6
102-5	102-18	102-52	303-5	403-7
102-6	102-40	102-53	304-3	403-8
102-7	102-41	102-54	304-4	403-9
102-8	102-42	102-55	305-1	403-10
102-9	102-43	201-1	305-2	419-1
102-10	102-44	205-2	306-4	
102-11	102-45	205-3	401-1	
102-12	102-46	302-1	403-1	
102-13	102-47	302-3	403-2	

Our verification process covered the following activities:

- Analysis and verification of qualitative and quantitative information through visual, documentary and public evidence of the GRI content sample.
- Comparison of information presented in previous reports.
- Understanding of the information gathering processes, as well as the visualization of the information management systems.
- Validation of the methodological compliance of selected content (listed above) based on the GRI Standards.



## Conclusions

The report verification process did not present any inconsistencies that lead us to consider that:

- The published data contains errors.
- Braskem Idesa's 2019 Annual Sustainability Report does not meet the requirements requested by the GRI Standards in accordance with the Essential option.

An internal report of recommendations, exclusive to the client, is delivered separately, containing the areas of opportunity detected for a future report.

**Alma Paulina Garduño Arellano**  
 Redes Sociales en Línea Timberlan S.A. de C.V  
 Pico Sorata 180, Jardines en la Montaña,  
 Tlalpan, C.P. 14210, CDMX.  
[paulina@redsociales.com](mailto:paulina@redsociales.com)  
 T. (55) 54 46 74 84  
 Octubre 13, 2020

## Declaration of independence and competence of Redes Sociales en Línea Timberlan

Employees of Redes Sociales have the level of competence necessary to verify compliance with the standards used in the preparation of Sustainability Reports, so they can issue a professional opinion on the reports of non-financial information, complying with the principles of independence, integrity, objectivity, competence and professional diligence, confidentiality and professional behavior. In no case can our verification statement be understood as an audit report, so no responsibility is assumed for the management and internal control systems and processes from which the information is obtained. This Verification Letter is issued on October 13, 2020 and is valid as long as no subsequent and substantial modifications are made to the 2019 Annual Sustainability Report of Braskem Idesa (SAPI) and Braskem Idesa Servicios S.A de C.V.



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