



# Sustainability Report 2018

Braskem Idesa 



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# MESSAGE FROM THE CEO



▶ **Braskem Idesa continues to show its strong leadership through its role as the leading producer of polyethylene in Mexico. Commitment, transparency, innovation and results are the keywords that define Braskem Idesa's performance in 2018.**

2018 was a year during which, despite all the challenges within the global market, we achieved record cash generation, underpinned by a robust EBITDA.

In addition to our on-going commitment to generating value for our shareholders, we focused once again on the innovation on the innovation and value added we offer our clients through specialized technical services, motivating our Team Members to continue following global disruptive trends to develop new management and innovation paradigms with our sights firmly set on the future of our business, underpinned by ethics and transparency to help us become agents of change to promote local development within the communities in which we operate.

Through the collaboration of our Team Members, we design programs to create tools that help streamline processes, implement preventive maintenance measures, quality control and safe processes, and adopt technologies such as automatic learning, all of which drives our on-going evolution.

We also strive to boost our environmental performance indicators and implement measures to tackle the global challenges facing plastic products by searching for solutions and developing ever more sustainable products to help protect the planet.

We focus on being a better company every single day, not only in terms of the products and services we offer, but also to ensure we remain an excellent place to work.

**I would like to focus on some of the company's major milestones in 2018:**

Braskem Idesa remains a workplace that promotes collaboration and teamwork to create an ecosystem in which its Team Members work in harmony to live their lives to the full by setting out personal and professional goals.

[102-14, 102-15]

In our on-going search for innovation, we ensure we never lose sight of our strong commitment to governance and compliance. In 2018, we continued promoting a culture of ethical integrity and transparency with all our stakeholders by implementing and updating our guidelines, procedures and our codes of ethics and conduct, contributing to the perfection of the company's governance.

In 2018, we updated our Global Sustainable Development Policy, a document that consolidates our commitments to complying with the precepts of the Declaration of Human Rights and aligning our goals and aspirations with the United Nations' Sustainable Development Goals.

In terms of sustainability, we believe that plastics play a crucial role in improving people's lives, but we also recognize the need to properly manage post-consumer waste.

Aware of our role in tackling this global challenge, we have published our position on the Circular Economy, in which we highlight our commitment to better supporting sustainable and innovative technologies and driving recycling efforts at the sites in which we operate, in addition to working alongside the value chain because: Together, We are Part of the Solution.

Finally, I would like to express my gratitude to our shareholders and our Clients for the trust they have placed in Braskem Idesa. I would also like to thank our suppliers, business partners and Team Members for their dedication and skill, which is why they play a key role in ensuring that Braskem Idesa continues to consolidate its position within a highly competitive global market.

Stefan Lepecki  
CEO- Braskem Idesa



# CORPORATE PROFILE



## History

### 2008: Ethane Tender.

The Mexican government announces the tender process, in which more than 30 companies from around the world take part. Braskem partners with Grupo Idesa for this process.

### 2009: Results of the Tender.

The results of the Pemex Basic Petrochemical and Gas (PGPB) tender for ethane supply are announced. Braskem and Grupo Idesa are declared the winning bid.

### 2010: Creation of Braskem Idesa.

Braskem Idesa S.A.P.I is incorporated as a company, and the XXI Ethylene Project gets underway.

### 2011: Groundbreaking Begins.

SEMARNAT authorizes the construction project, and flora and fauna are transported to a nature reserve.

### 2012: Construction of the Petrochemical Complex Begins.

The civil engineering project commences, and long-term equipment and materials are acquired. Pre-marketing processes with Mexican clients commence.

### 2013: Success, Construction and Storage

Braskem Idesa is ranked as the "Sixth Dream Company for Young Mexicans". The construction project is 56% complete, and the first product and raw material storage equipment arrives on site.

### 2014: Milestones.

The company has 16,000 employees on site, and it trains more than 120 operators and technicians at its plants in Brazil and Europe. 100% of construction equipment is acquired.

### 2015: Benchmark in the Sector.

During the 6-year construction process, more than 26,000 direct jobs are created with an advance of 99.2%.

### 2016: Operations Commence.

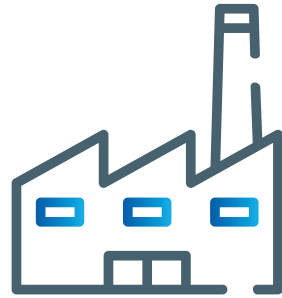
Polyethylene production begins with the goal of reaching 1,050,000 tons per year. It is made available to clients once the resin has surpassed the highest quality standards.

### 2018: Circular Economy.

Braskem Idesa reaffirms its position as a benchmark within the Mexican petrochemical industry through its commitments to the Circular Economy.

### 2017: Growth and Consolidation.

2017 marks the first full year of operations, with 56% of production remaining in Mexico, while the remaining 44% is exported to 43 countries around the world.



## Production

capacity at our petrochemical plant located in Nanchital, Veracruz, stands at 1 million 50 tons of high- and low-density polyethylene

### Company

Our story dates back to 2010 following the partnership of Braskem (75% shareholder), the leading producer of thermoplastic resins in the Americas, and Grupo Idesa (25% shareholder), one of Mexico's major business consortiums. Both companies jointly operate the Braskem Idesa plant located in the community of Nanchital de Lázaro Cárdenas del Río in the state of Veracruz.

This partnership clearly highlights the impact of both companies' experience and leadership within the sector, and we will continue to focus our efforts on being a company that contributes to economic, social and environmental growth within Mexico.





## Principles and Values [102-16]

At Braskem Idesa, we strive to meet the expectations of our stakeholders, focusing on mitigating the impact of our operations and maintaining an ethical approach in all our areas and processes.

The principles on which we have built our organizational culture are outlined below:

- **Integrity:** We ensure that ethical integrity is an integral part of the systems that govern the company's internal and external relations.
- **Transparency:** We provide transparent information and promote free, accurate and effective communication.
- **Ethics:** We act based on a framework of standards that are legal, statutory or regulatory in nature.
- **Continuity:** We closely monitor our operations and ensure compliance in all areas.
- **Responsibility:** We help the Board of Directors ensure the sustainability of the company by incorporating a wide-ranging business strategy that encompasses sustainable development principles.
- **Equality:** We treat our stakeholders in a fair and equitable manner.

Furthermore, Braskem Idesa has established a set of values that underpin our quality standards and the policies that govern our operations, embodying them to help guide each and every one of the relationships we have with our different stakeholders:

- **Trust in People** and in their capacity and desire to prosper.
- **Customer Satisfaction**, focusing on quality, productivity and environmental and social responsibility.
- **Returns for Shareholders** and the valuation of their assets.
- **Collaboration** between those who participate in the design and implementation of the company's operations, in addition to its business results.
- **Employee Self-Development**, mainly through workplace education, driving the growth and sustainability of the organization.
- **Reinvestment** to create new employment opportunities and contribute to community development.

▶ **We unite people; we surpass results; we conquer opportunities; we share achievements.**

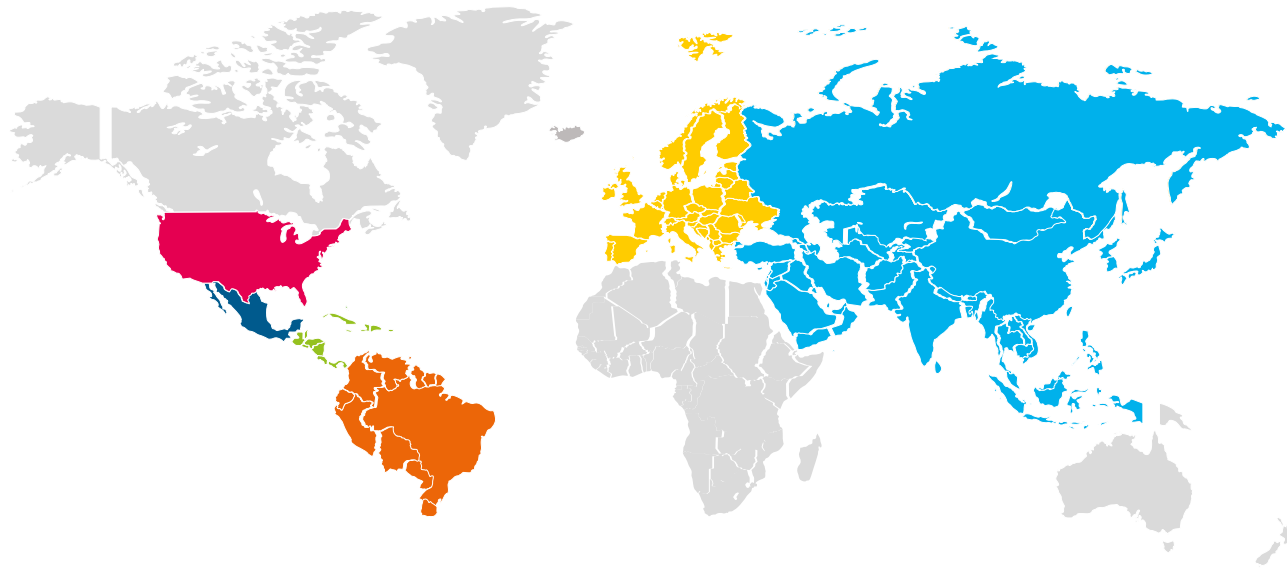
## Markets and Products [102-2, 102-4, 102-6]

Our hard work and dedication can be seen in each of the markets we have conquered, and, as a result, we export our products to more than 40 countries around the world.

# 3

**industrial plants** located in Nanchital, Veracruz, Mexico.

**Clients in more than 41 countries.**



**812**  
**Team Members**  
in Mexico.





Braskem Idesa is the leading producer of polyethylene in Mexico and is present in the market through the following:

[102-2]

## Injection

Used in end injection molding applications, such as: toys, paddles, lids, containers, household items, buckets, tables, boxes and thin-walled containers, among others.



## Pipes

- Conduit (protection and conduction for electrical/ telecommunications cables).
- Corrugated pipes (storm drainage, wastewater and sewage systems).
- Energy systems (natural gas, LPG, propane).
- Local and industrial (potable water, mining, industrial-chemical).

## Blow-Molded

Small- and large-volume blow-molded with a comprehensive portfolio of monomodal and bimodal packaging for products ranging from 0.2 to 1,000 liters. This product portfolio meets the needs and requirements of the market, ensuring a balance between processing and mechanical properties.

Used in the production of packaging for chemicals, domestic products, food, sheet extrusion and products requiring special materials, among others.

[102-2]

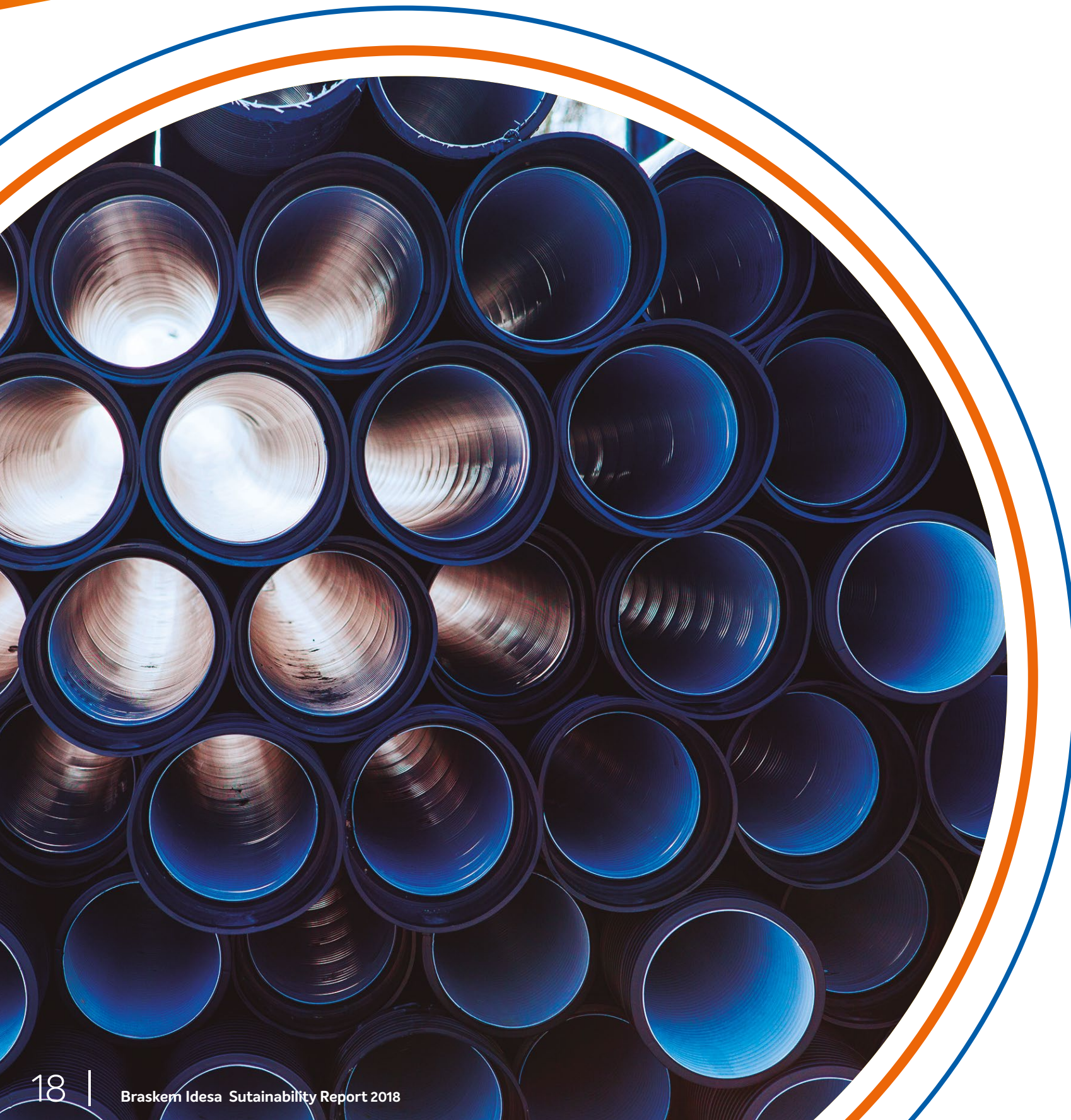
## Film

- **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.



**In 2018**

**we produced  
808,490 tons of  
polyethylene**

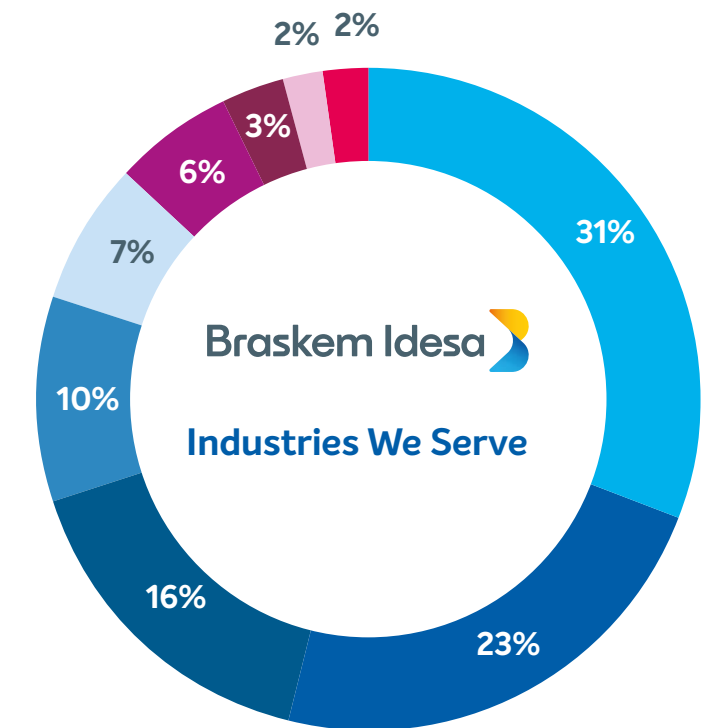


At Braskem Idesa, we offer innovative solutions to all our clients, which is why we produce two types of polyethylene:

- **High-Density Polyethylene (HDPE):** it offers the features necessary for thicker and more resistant plastic containers.
- **Low-Density Polyethylene (LDPE):** it is used for more flexible plastics.

Polyethylene is a very versatile and in-demand material that allows us to meet the specific needs of each of our market segments in Mexico and around the world, through a number of different applications:

-  **Bags and Films**
-  **Packing and Packaging**
-  **Construction**
-  **Industrial**
-  **Home Care**
-  **Chemicals**
-  **Agriculture**
-  **Cosmetics and Pharmaceuticals**
-  **Others**





## Braskem Idesa in numbers

**Sales for**  
19,831 million MXN.



**808,490 tons**  
of polyethylene produced.



**We conquered 67%**  
of sales in the domestic market  
and **33%** in international  
markets.

**418 species**

**registered and protected** at the  
Environmental Management Unit  
"El Benjamín".



**812 Team Members in  
Mexico**

**More than**  
\$10 million MXN invested in  
training.

**We supported**  
4 productive projects of  
cooperatives in Veracruz.



**39,957 training**  
hours for our Team Members.



**1,643 community**  
visits.

At Braskem Idesa, we are aware that the growth of our company is the result of numerous stakeholders with whom we are in constant contact in order to forge long-term relationships, respond to their concerns and meet their expectations:

Simbología:  On-going  Monthly

Stakeholders	Description	Expectations	Communication Channels	Frequency of Contact
 <b>Team Members</b>	<p>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.</p>	<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>	<p>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.</p>	<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>	<p>Institutions that advocate the interests of the sector and in which Braskem Idesa engages to drive the best possible social and/or economic impact.</p>	<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>	<p>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.</p>	<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>	<p>Social groups that work alongside Braskem Idesa to drive social development, knowledge, and growth in the communities in which the company operates.</p>	<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>	<p>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.</p>	<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>	<p>All domestic or international government bodies, whose regulations and auditing processes regulate Braskem Idesa's operations and processes.</p>	<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>	<p>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.</p>	<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



During 2018, we promoted a culture of ethical integrity and transparency among all our stakeholders by implementing and updating our guidelines, procedures and code of ethic and conduct, thereby contributing to perfecting the company's governance.

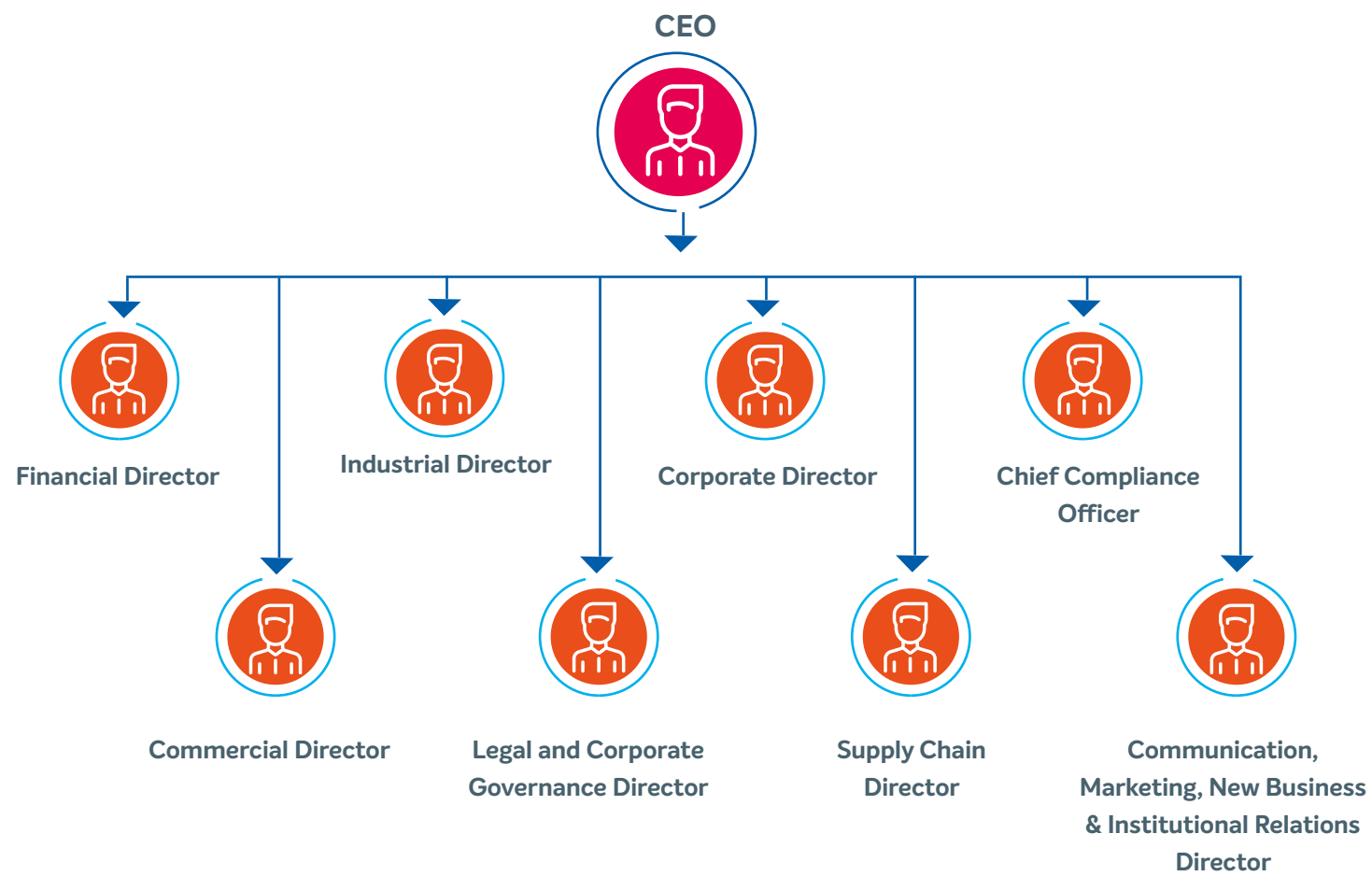
## Corporate Governance

We operate within an ethical framework of respect and transparency for all our stakeholders, part of which is our Board of Directors, which, in turn, supervises five committees:



All our committees meet periodically to ensure a close-working relationship among each area, in addition to promoting on-going communication.

To ensure the importance and relevance of this strategy within Braskem Idesa, we have organized our directors in the following manner:



### Business Ethics

We are committed to complying with national and international standards, which is why Braskem Idesa operates and engages with its stakeholders under strict ethical standards within a framework of transparency.

This responsibility has enabled us to implement numerous measures to coordinate and promote a culture of ethics and compliance within the organization.



## Code of Conduct [103-1, 103-2, 103-3, 205-2]

The Code of Conduct encompasses the principles and values that promote ethical behavior within the organization. Its goal is to ensure both the company's employees and the rest of the value chain follow the same ethical principles and guidelines that govern our operations.

It is of the utmost importance for the company that each of our employees fully understands the guidelines in place, which is why all our new employees receive induction training, ensuring that they are prepared to act in accordance with the guidelines it contains, in addition to signing the Code of Conduct to demonstrate their commitment to following it.

To help consolidate ethics within our company, all employees receive an e-mail reminder that includes a "Statement of Acceptance and Commitment", in which each employee stated they had read and understood the document, confirming their commitment to the guidelines contained within the Code, in addition to reporting any compliance issues through the necessary channels:

- Global Compliance System Policy
- Code of Conduct
- Code of Conduct for Third Parties
- Internal Audit Guidelines
- Disciplinary Measure Guidelines
- Conflict of Interest Guidelines
- Due Diligence Guidelines for Third Parties
- Guidelines for Engagement with Government Officials
- Global Anti-Corruption Policy
- Global Corporate Risk Management Guidelines
- Compliance Risk Control Matrix



**100%**  
of our employees  
received Code of Conduct  
training

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

Braskem Idesa has consolidated its ethical management procedures through mechanisms that allow employees and third-parties to report any concerns they may have regarding the Code of Conduct. If there is any doubt or dilemma with regard to questions of ethics, they can use the following channels to report their concerns:



- • • **Suggestion boxes in the offices located close to Braskem Idesa.**



- • • **Sending a message via the company's website:**  
[www.lineadeeticabraskemidesa.com](http://www.lineadeeticabraskemidesa.com)



- • • **Calling the Ethics Hotline. A toll-free number (01 800 681 6940) that is available 24 hours a day and 7 days a week.**



- • • **Grievances & Complaints Mechanism**



- • • **Risk Evaluation Methodology**





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

Braskem Idesa's Compliance System aims to safeguard and protect our employees and stakeholders, in addition to consolidating our day-to-day operations. To ensure the system is effective, as well as mitigating any risks associated with the business, it is based on 3 pillars and 10 compliance measures.





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

Braskem Idesa focuses on the pillars of Ethics, Integrity and Transparency to govern its day-to-day activities. These 3 pillars encompass 10 principles that are deemed essential in undertaking our day-to-day operations.

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 transparency regarding information about Braskem Idesa, which should be accurate, wide-ranging, accessible and regularly communicated.
6. Increasing awareness that any violation of the Code of Conduct, be it through action, omission or complacency, affects our society, contravenes the law, and destroys the image of Braskem Idesa.
7. Guaranteeing that Braskem Idesa and its entire value chain implements the Compliance System and ensuring that the latter always employs best practices.
8. Contributing individually and collectively to undertaking any necessary changes to the markets in which there may be incitement to contravene the Code of 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.

This system is based on the pillars of Ethics, Integrity and Transparency, elements that play a fundamental role in our operations and that allow us to prevent any situation that could put the company, our team or any of our partners at risk.



**In 2018**  
these compliance tools helped ensure our operations were free from any ethical risks

## Training [103-1, 103-2, 103-3, 205-1, 205-2]

We see ethics as a major part of who we are, not just in terms of legal issues, but also as an intrinsic part of our organizational culture. This is why we keep our Members informed of all policies and procedures, as well as offering training in anti-corruption measures.

We are convinced that these issues should be broached both internally and externally, which is why we include our Value Chain in training sessions encompassing ethics and anti-corruption, helping us to consolidate our relationship with them and positioning them as a key part of our company's operations.



**In 2018**  
we trained  
812 Members in  
anti-corruption measures

► We formally share the Code of Conduct for Third Parties, as well as the company's ethics policies, with clients, distributors and suppliers

## Risk Assessment Methodology [103-2, 103-3, 205-2]

We have a methodology in place that is based on a model that is divided into 3 stages and 6 steps, which help us to identify corporate risks stemming from anti-corruption and money laundering prevention, among others.





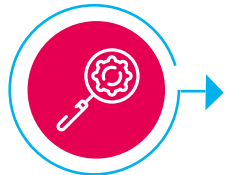
### Context Establishment

Understand Braskem Idesa's business and compliance goals, in addition to any future events that could affect the organization's critical goals (production and inventory problems, etc.).



### Identification

- Identify and validate risks.
- Assess inherent risk with no controls and residual risk with controls.
- Consider both internal and external information in the risk identification process.
- Consider Braskem's risk appetite and use the Risk Dictionary as a reference source.
- This should be undertaken by interacting with leaders from the BI areas.



### Analysis and Assessment

- Assess the risks identified with regard to impact and probability.
- Draft a final risk assessment to outline possible scenarios.



### Prioritization

- Prioritize risks and scenarios.
- Create an annual heat map for Braskem Idesa.
- Assign risk responsibilities and levels.



### Treatment

- Develop and implement risk treatment plans that include measures to manage risks, as well as contingency plans (if necessary).
- Assign responsibilities for each risk for the subsequent supervision, development and implementation of the Risk Treatment Plan.



### Monitoring and Communication

- Establish a reporting process that promotes monitoring of the Risk Treatment Plans by interested parties, the Management and the Board of Directors.
- Define Key Risk Indicators (KRI).

This methodology has allowed us to opportunely identify risks, ensuring that the areas in question, in collaboration with Braskem Idesa's Corporate Governance, can take the best possible decisions to avoid, mitigate and tackle each situation that could have a significant impact on the company's operations





## Chambers and Associations [102-13]

Braskem Idesa maintains strategic relations with industry chambers and associations to help drive free competition among Team Members and within the sector by participating in events and programs in order to have a positive impact on our surroundings. We collaborate with the following institutions:

- **National Association of the Chemical Industry (ANIQ).**
- **National Association of the Plastics Industry (ANIPAC).**
- **National Chamber of the Manufacturing Industry – Veracruz Chapter (CANACINTRA VERACRUZ).**
- **Standardization and Certification (NYCE).**
- **Industrial Association of the State of Veracruz (AIEVAC).**
- **Latin American Petrochemical and Chemical Association (APLA).**
- **National Association of Plastic Bag Manufacturers (INBOPLAST).**
- **Engineering Pipe Industries (ITIAC).**
- **International Chamber of Commerce (ICC)**
- **Mexican Institute of Chemical Engineers (IMIQ)**
- **Mexico-Brazil Chamber of Commerce (CAMEBRA)**
- **Mexican Packaging Association (AMEE).**

▶ **Participating in numerous associations and chambers allows Braskem Idesa to bolster its presence and engage with its stakeholders**






# FINANCIAL PERFORMANCE



## Financial Results and Investment

Two years have passed since we commenced operations, and we have successfully consolidated our position as a key driver of economic development for the country, the petrochemical industry, our communities and the members of our company, not to mention our stakeholders. Our petrochemical complex is home to cutting-edge technology for polyethylene production. This plant was designed to reach a production capacity of more than 1.5 million tons of high- (HDPE) and low-density polyethylene (LDPE).

	 Direct Economic Value Generated	 Economic Value Distributed	 Economic Value Retained
(Million pesos)			
2017	21,368	9,772	11,596
2018	19,831	16,760	3,071



**The economic value generated** in 2018 by Braskem Idesa reached **sales for 19,831 million MXN**

## Financial Results and Investment

Braskem Idesa's financial results are thanks mainly to our on-going focus on technological innovation, which brings with it major economic, environmental and social benefits.

Braskem Idesa represents a major advance for the petrochemical industry in Mexico as it adds value to the country's entire productive chain, creating social and economic development opportunities. Our exports reach more than 40 countries and are a major contribution to the country's finances, while 67% of our production is earmarked for the domestic market, helping to reduce the need for imports.

Risk prevention is a fundamental part of our operations, which is why we have implemented institutional programs to help manage and evaluate our performance:

- Global Procurement Directive
- Global Sales Directive
- Supplier Evaluation
- Global Sustainable Development Policy

 **79% of our managers and directors** are Mexican

 **48% of our workforce on the logistics platform** are part of our local sphere of influence, ensuring a positive impact on the regional economy

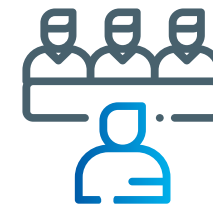
## Market Presence

Chemistry and plastics play a key role in our daily lives, and their applications can be found everywhere, which is why we are consolidating our participation in this market by developing programs that meet the expectations of our stakeholders, focusing on the Circular Economy, sustainability and social responsibility.



This program (Plastic Chain Incentive Program), was created in 2013 by Braskem Idesa in conjunction with ABIPLAST (Brazilian Association of the Plastic Industry). Over the years, it has been adopted in Mexico to drive development within the sector and incentivize the plastic chain in three major areas.





## We train

10 companies located throughout the country in our PICPLAST program

### Competitiveness and Innovation in the Sector

innovation within the sector through training sessions in conjunction with Universidad Anáhuac, the goal of which is to drive improvements to processes and products and the proposal of new solutions. Some of the areas we focus on include:

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

### Promoting Exports

This area has been designed to provide an incentive for companies to expand and grow internationally by consolidating their focus on export, including:

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

### Advantages of Plastic

This area focuses on highlighting the role plastic plays as a sustainable alternative solution, in addition to its use in meeting the needs of modern society, through measures that include:

- Waste Management Programs
- Awareness Campaigns highlighting the Benefits of Plastics
- Analysis of Product Lifecycle and Circular Economy

### Value Chain [102-9]

At Braskem Idesa, one of our major goals is to work closely with our suppliers through direct, effective and on-going communication in order to drive innovation and improvements to our products.

This is why we have implemented a range of measures to select the best elements of our supply chain, especially those who are committed to respecting and complying with our ethical guidelines, including: our stance against discrimination, corruption or child labor, among others.



**We have reaffirmed our social commitment** by collaborating with 9.8% local suppliers



**63% of our suppliers are from Mexico and 37% from abroad**




# SOCIAL PERFORMANCE



## Collaborators [102-7, 102-8, 102-41, 103-1, 103-2, 103-3]


▶ The Braskem Idesa team is the linchpin of our operations, helping ensure that we achieve our goals in a sustainable manner. This is why we implement a range of activities to drive their development within the company, ensuring that we recognize the potential of each Member of the company.


The commitment we have to our Team Members can be seen in the fact that they all have permanent and full-time contracts, while 41.75% of our Team Members are covered by a collective bargaining agreement.

	2017	2018
Women at Corporate Offices	76	86
Woman at Plant	95	108
<b>Total Women</b>	<b>171</b>	<b>194</b>
	2017	2018
Men at Corporate Offices	94	90
Men at Plant	520	528
<b>Total Men</b>	<b>614</b>	<b>618</b>
	2017	2018
<b>Total Employees</b>	<b>785</b>	<b>812</b>


[401-1]


In 2018, 82 new employees joined our organization (30 women and 52 men), meaning that our team is divided as follows:

	Total Female Employees	Total Female Employees Hired in 2018	Female Employee Recruitment Rate
Below the age of 30	84	24	12.37
Between 30 and 50	110	6	3.09
Over the age of 50	0	0	0
<b>Total</b>	<b>194</b>	<b>30</b>	<b>15.46</b>

	Total Male Employees	Total Male Employees Hired in 2018	Male Employee Recruitment Rate
Below the age of 30	178	26	4.21
Between 30 and 50	366	26	4.21
Over the age of 50	74	0	0
<b>Total</b>	<b>618</b>	<b>52</b>	<b>8.42</b>

Our turnover rate, divided by age and gender, for 2018 is shown below:

	Total Female Employees	Total Female Employees Dismissed in 2018	Female Employee Turnover Rate
Below the age of 30	84	6	3.09
Between 30 and 50	110	5	2.58
Over the age of 50	0	0	0
<b>Total</b>	<b>194</b>	<b>11</b>	<b>5.67</b>




	Total Male Employees	Total Male Employees Dismissed in 2018	Male Employee Turnover Rate
Below the age of 30	178	19	3.07
Between 30 and 50	366	15	2.43
Over the age of 50	74	16	2.59
<b>Total</b>	<b>618</b>	<b>50</b>	<b>8.09</b>








## Training

We promote the development of our Members through training sessions that focus on helping them consolidate their skills and competencies, as well as their professional development. In 2018, we gave 39,957.30 hours of training to our Members, with a total average of training hours per employee of 65.7.

	 Total Hours	 Average Hours per Employee	 Total Investment (MXN)
2017	27,912.28	35.5	\$10,000,000.00
2018	39,957.30	65.7	\$10,297,832.37

	 Total Hours Women	 Total Hours Men	 Total Hours
Quality	690	1,321	2,011
Institutional Competencies	208	1,062	1,270
Technical Competencies	3,190	12,443	15,633
Skill Development	508	1,615	2,123
Languages	624	1,588	2,212
H&S and CSR Program	1,583	15,125.3	16,708.3
<b>Total</b>	<b>6,803</b>	<b>33,154.30</b>	<b>39,957.30</b>



**We invested more than MXN \$10 million in training**

## Local Workforce [103-1, 103-2, 103-3]

As an essential part of the sustainability strategy in Braskem Idesa, we take into account the communities that are close to our operations, and in order to boost their development, we employ people who reside and belong to those communities. Therefore, we have a Local Labor Preference Policy, and by putting it into practice this year, we hired 86 local people in 2018:



Community	2017	2018
Pollo de oro	27	44
Lázaro Cárdenas	12	17
Nahualapa	11	25
<b>Total</b>	<b>50</b>	<b>86</b>

**We coordinate the recruitment of local talent through the Macro Social Investment Plan and Local Hiring and Induction Protocol**



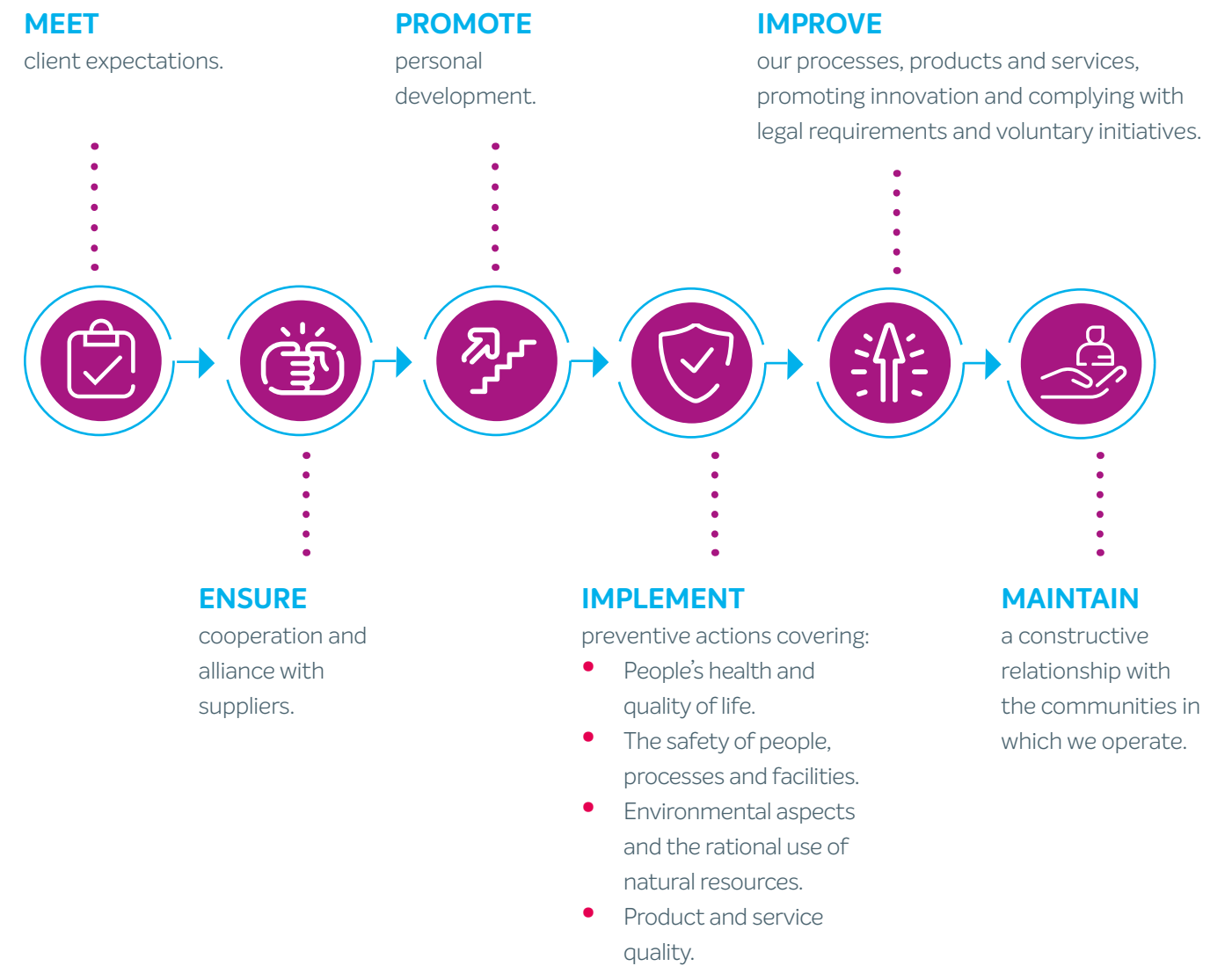
**Braskem Idesa** has recruited **1,213 people** since it began operations as part of its focus on promoting local development

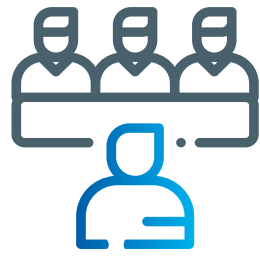




## Industrial Health and Safety [103-1, 103-2]

At Braskem Idesa, we have programs in place to ensure the health and safety of our employees. These programs have helped consolidate the growth and development of our Members. Our major program in this area is our SEMPRE Management System (Integrated Health, Safety and Environment System). It follows the principles outlined below:





**100%**  
of people who visit the **complex** receive induction in the Integrated Health, Safety and Environment System

The results we have obtained are a satisfactory reflection of these principles, in addition to allowing us to ensure a safe and reliable work environment for each of our Team Members.

	2017	2018
Temporary Lost-Time Accidents	0	0
Days Lost per Accident	0	0
Training Hours in Health and Safety Issues	7,384	17,060
Workplace Deaths	0	0
Drills	11	13

To consolidate our strategy in these areas, we have implemented a number of measures, including our Health and Safety Committee, which, in 2018, was composed of 13 men and 4 women. All employees who form part of a collective bargaining agreement have peace of mind knowing that Braskem Idesa has agreements with the Union that cover 100% of the issues in this area.



**All our Collaborators** are represented by formal **health and safety committees**



**We have 3 safety brigades** that cover areas such as **intervention, first aid and evacuation**

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

The comprehensive strategy that we have implemented encompasses numerous programs that benefit the local community, especially those located within our sphere of social influence. Our major goal is to foment relationships that are mutually beneficial, ensuring we maintain our Social License to Operate.

All the measures we have implemented have enabled us to drive local development in the communities located close to the complex through our Social Management System:

### 1. Relationship Plan with Interest Groups (PRGI)

This plan encompasses activities that allow neighboring communities to learn more about our operations, promoting a close-knit channel of communication:

#### Community Visits

These visits allow us to provide information about our operations and to learn more about the members of our neighboring communities. The results obtained in 2018 are outlined below:

	2017	2018
Total Visits	2,143	1,643

#### The Braskem Idesa Experience

At Braskem Idesa, we are proud of our facilities and the safety standards of our operations, which is why we open the doors of our plant to offer members of the community the opportunity to visit them.

	2017	2018
Total Visitors	145	58



**We took part in Community Meetings,** in which 82 members of the community took part






**In 2018, we held 12 events,** welcoming our different stakeholders to the plant

#### Casas Abiertas Program

The Casas Abiertas Program is an annual event held in Nanchital and Coatzacoalcos, Veracruz, that has been designed to offer members of the community the opportunity to learn more about plant safety, the environment, product lifecycles and relevant information about future programs and projects.

The goal of this program is to ensure the company is a responsible and transparent neighbor to the communities of Coatzacoalcos and Nanchital in Veracruz. The results this year can be seen below:




	 Total Participants from Neighboring Communities	 Total Participants from Braskem Idesa	 Cumulative Number of Participants
2017	101	50	2,801
2018	317	41	3,118

Our commitment is underpinned by the Macro Social Investment Plan, the Global Sustainable Development Policy, and the Quality, Social Responsibility and Health and Safety Policy, tools that allow us to coordinate social investment, community engagement and evaluation of the impact of these measures.

## 2. Grievances & Complaints Mechanism

We designed this protocol to allow our stakeholders to report any complaints about our operations through a free and accessible form that 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 Members, third parties, suppliers, clients and other partners to ensure that they can safely and responsibly provide information that helps promote a safe, ethical, transparent and productive corporate environment. In 2018, we handled the following complaints and requests:

	 Situations Monitored	 Complaints	 Requests
2017	58	22	36
2018	0	11	2





### 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.



Number of MAP's



Participants from the Community

Year	Number of MAP's	Participants from the Community
2017	11	78
2018	41	345

### 4. Community Health and Safety Program

Another major area in which we provide support to our communities is health and safety, which we embody through a range of different activities:

- **Community Health**

- » Medical visits were made to communities:



Patients Treated

Year	Patients Treated
2017	473
2018	528

- » **88 people treated** every month.

- » **2 major health campaigns:**

- **Breast cancer awareness campaign:** 120 women.
- **Dengue campaign:** 86 participants.

- » **200 families benefitted** through our first ever Health Fair:

- Medical examinations
- Dental examinations
- Deworming campaign
- Eye exams and donation of glasses
- Water disinfection program
- Well treatment workshop
- Nutrition: Healthy Eating Plate
- Fight against diabetes

**Community Safety**

- » **10 people from the community trained** to join community brigades.
- » **30 community brigade members benefitted** through our emergency response workshops.
- » Our Safe School program had a positive impact on:
  - **8 schools.**
  - **120 students.**
- » **Promotion of school safety through:**
  - Improvements to school infrastructure within the community.
  - Donation of first aid boxes.
  - Fire extinguisher maintenance.
  - Training for community brigade members and teachers in:
    - » Handling and use of fire extinguishers (30 participants).
    - » First aid (30 participants).
  - Promotion of road safety culture to help prevent traffic accidents.
  - Coordination of the Civil Protection Children's Fair.

In 2018, 4 productive projects supported by Braskem Idesa continued operations through the participation of a consultant specializing in projects of this kind within the team, who helped them consolidate their Management and Business areas.

A program entitled Learning On the Job was implemented to help them plan activities by reaching a consensus to help overcome obstacles and meet their goals. This program aims to:

- **Promote decision making**
- **Consolidate teamwork**
- **Develop communication skills**
- **Promote management skills**



**In 2018,**  
we supported **4 productive projects** and 4 cooperatives

Through this program we also successfully promoted the empowerment of women thanks to the support of female entrepreneurs, with 21 women out of a total of 25 people benefitted.



**In 2018,**  
we implemented **6 Corporate Volunteering campaigns** in which **200 people participated**

**5. Social Investment Plan**

As part of our community engagement strategy, Braskem Idesa firmly believes in local and economic development, which is why we focus on supporting local entrepreneurs and helping them consolidate their businesses through training sessions in collaboration with the cooperatives they belong to.

To ensure these projects are successful and grow, we help these entrepreneurs identify potential markets based on their products, helping them find the right sales strategy and facilitating the marketing of their products or services.

- **Production of uniforms**
- **Cleaning products**
- **Recycling**
- **Fish farms**

**6. AVANZA Program**

In keeping with our community support strategy, we coordinated this program as part of our Local Hiring Policy, offering training to members of the neighboring communities to help improve their employment prospects.

During 2018, we offered welder training sessions to a total of 30 people (28 men and 2 women). Through the AVANZA program, we have employed 86 people, who are now part of our team.

- **First year to be awarded the Socially Responsible Company (ESR) certification by CEMEFI.**
- **We successfully maintained our Social License to Operate.**
- **No blockades as a result of protests.**

**Achievements in 2018**

**Challenges for 2019**

- **Positioning ourselves as a company that promotes the collection of post-consumer plastics, supporting institutional recycling programs and raising awareness about the proper handling of plastic waste, responsible consumption and the circular economy.**
- **Be awarded the ESR certification for the second consecutive year.**



# ENVIRONMENTAL PERFORMANCE



## Environmental Risk Matrix [102-11]

The environmental risk matrix is a guide to help us identify the potential impact our operations have on climate change. This enables us to implement preventive measures that cover any possible environmental situation by designing and implementing plans of action:



Thanks to our model, we were able to identify high, medium and low-level risks regarding climate change. Braskem Idesa detected the following impacts:

- Increases in sea level
- Epidemics
- Severe cyclones
- Flooding
- Heatwaves
- Electrical energy generation
- Water shortages
- Torrential thunderstorms (lightning)

Braskem Idesa's environmental management is based on the following guidelines:



## Water [102-11, 103-1, 103-2, 103-3, 303-1, 303-3, 306-1]

Water is an important natural resource in our activities, which is why we have developed strategies and solutions to help drive water preservation efforts. We focus on two major programs in this area:

- Biannual monitoring of groundwater and surface water within the communities.
- Water discharges that comply with the 2018 Coatzacoalcos River Declaration, ensuring the neighboring communities and ecosystems are not affected.

	Total Water Use*	Waste Water**	Recycled Water	Percentage of Recycled Water
2017	8,910,816 m <sup>3</sup>	1,661,700 m <sup>3</sup>	1,522,868 m <sup>3</sup>	17%
2018	8,570,520 m <sup>3</sup>	1,491,680 m <sup>3</sup>	2,061,307 m <sup>3</sup>	24%

\* All the water used by the organization comes from surface water sources, including wetlands, rivers, lakes and oceans.





\*\*The total volume is in compliance with that stipulated in the Coatzacoalcos River Declaration.

**We recycle**  
24% of the water we use during the year





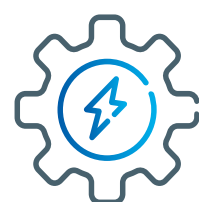
## Climate Change and Energy [102-11, 103-2, 103-3, 302-1, 302-3]

The energy we use at our Industrial Complex comes entirely from our natural gas co-generation plant. Total energy consumption in 2018 was 27,064,357.90 GJ.

	 Diesel	 Gasoline	 LP Gas	 Natural Gas
2017	753,051 litros	227,179 litros	243,782 litros	16,357,340 GJ
2018	184,359 litros	175,149 litros	174,000 litros	16,905,657 GJ

Our use of diesel, gasoline and LP gas decreased in a year-on-year comparison given lower maintenance demands, a decrease in the use of cranes and product storage logistics platforms, and the conclusion of several engineering projects, among others.

	 Electricity Used	 Electricity Sold	Intensity Ratio *
2017	696,267 MWh	209,210 MWh	13.23 GJ
2018	683,454 MWh	245,780 MWh	14.3 GJ



**Total energy**  
consumption in 2018 was  
27,064,357.90 GJ





## Emissions [102-11, 103-2, 103-3, 305-1, 305-2, 305-4, 305-7]

At Braskem Idesa, the steps we take to reduce emissions have helped us decrease our impact on climate change. During 2018, our GHG emissions totaled 1,820,482. tCO<sub>2</sub>e:



	2017	2018
<b>Total Emissions</b>	1,854,462 tCO <sub>2</sub> e	1,820,482 tCO <sub>2</sub> e
<b>Scope 1</b> (Fixed and mobile fuel combustion) Gases: CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O, HFC	1,837,696 tCO <sub>2</sub> e	1,790,722 tCO <sub>2</sub> e
<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

Note: Derived from an audit process, an error was identified in the calculation of the 2017 total emissions (1,871,255 tCO<sub>2</sub>e), since the emissions of scope 2 (16,764 tCO<sub>2</sub>e) were considered within scope 1 (1,854,461 tCO<sub>2</sub>e) and, additionally, they were reported individually, so the correct data for 2017 is: Scope 1: 1,837,696.5468 tCO<sub>2</sub>e, Scope 2: 16,764.85 tCO<sub>2</sub>e Total emissions for 2017: 1,854,461.3984 tCO<sub>2</sub> equivalent.

To compile information relating to energy use and estimated GHG emissions, we comply with the standards stipulated in the Energy and Commodity Balance Methodology with emission factors published by the Ministry for the Environment and Natural Resources Secretary (SEMARNAT) and by the the Secretariat of Energy (SENER).

We measure our air emissions by gas type to ensure a wide-ranging understanding of our environmental impact, enabling us to implement measures to reduce said impact. In 2018, our air emissions were:



Emissions by Gas Type	2017	2018
NOx	602.36	503.952
SOx	0.9069	6.129
Volatile Organic Compounds (VOC's)	1.3670	19.378
Particulate Matter (PM)	13.2808	39.802
Other Categories (Cr)	**	16.49

\*\* This parameter will be analyzed on an annual basis from 2018 onwards.

## Carbon Disclosure Project (CDP) [102-11, 102-12]

The Carbon Disclosure Project is an international program that measures carbon emissions and risks from the supply chain via assessments undertaken by participating companies.

At Braskem Idesa, this program has played an important role in our evolution, which is why we are focusing on helping our suppliers engage with sustainability and understand why it is important to safeguard the quality of products and the environmental impact they have.

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

In 2018, we used a range of waste disposal methods: recycling, incineration, landfill, composting, confinement and effluence treatment. During the year, the amount of hazardous and non-hazardous waste generated totaled 3,385.192 tons:

	Total Hazardous Waste (Ton)	Total Non-Hazardous Waste (Ton)	Total Waste (Ton)
2017	4,540	1,798	6,339
2018	1,778	1,606	3,385

## Hazardous Waste

Waste Elimination Method	Recycling (Ton)	Incineration (Ton)	Landfill (Ton)	Others (Ton)	Total (Ton)
2017	5.42	65.77	66	4,402	4,540
2018	7.55	56	35	1,678**	1,778

\*\*Including Industrial Confinement and Effluence Treatment





## Non-Hazardous Waste [102-11, 103-2, 103-3, 306-2]

Waste Elimination Method	Recycling (Ton)	Composting (Ton)	Landfill (Ton)	Total (Ton)
2017	5.760	**	1,792.235	1,797.995
2018	0	1,550	1,592.560	1,606.920

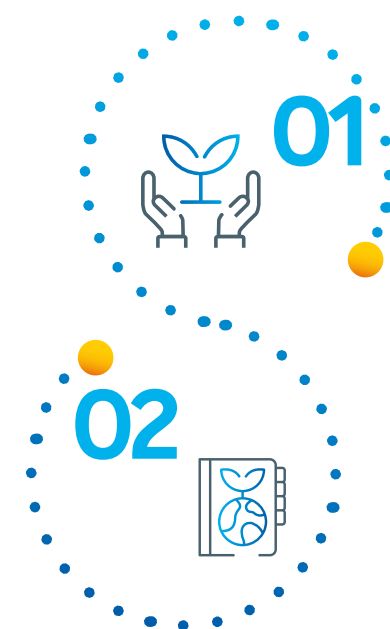
\*\*In 2017, no waste was sent for composting.

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

### Ceratozamia Protection and Development Area (APDC)

When operations at the petrochemical plant begin in 2016, as part of our environmental conservation strategy we adopted a nearby zone (El Benjamín), totaling more than 100 hectares in area, for voluntary biodiversity research and conservation efforts. This area is located close to the community of El Chapo, Ixhuatlán del Sureste, Veracruz, and it is where we monitor 418 species of flora and fauna, which we are committed to protecting and conserving.

In 2018, we set out to achieve these goals by implementing 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. The results of these measures are outlined below:



#### Rescue and Conservation Efforts for Ceratozamia Miqueliana:

**1,300 individual plants** that are endemic to the region were rescued, relocated and protected by the Environmental Management Unit to prevent their extinction. We also worked alongside experts in cycads to coordinate a demography study of this plant family.

#### Biodiversity Monitoring by Experts:

**418 species of flora and fauna** have been identified thanks to the work done by our specialists. Of the 418 species, 129 are species of flora and 289 are species of fauna. It is important to highlight the fact that 15% of these species are classified to be at risk by Mexican environmental standard NOM-059-SEMARNAT-2010.

In addition to these conservation experts, in 2018 we collaborated with the Mexican Nature Conservation Fund to reforest 200 hectares of rainforest in the Coatzacoalcos River Basin as part of a program that, through environmental education and social inclusion activities, aims to restore the center of the Tuxtla Reserve.

### Institutional Recycling Programs [102-11]

Driving changes to promote environmental protection and conservation, in addition to fomenting responsible plastic consumption, is a task that requires collaboration from all sectors, which is why we have developed programs that include our stakeholders and members of the community of Nanchital, Veracruz, and outlying areas:

#### Plastianguis

In conjunction with the National Association of the Chemical Industry (ANIQ), we coordinated the second Plastianguis event, promoting the correct disposal of plastic waste and fomenting recycling, providing basic foodstuffs in return.

- **More than 28 tons** of plastic collected.
- **More than 1,000 families** took part in the event.

#### PlastiVale

A project focusing on the product lifecycle, which was developed in conjunction with schools from the community of Nanchital, to promote best practices such as the collection, recycling, disposal and correct use of plastics.

- **25 schools in the participating region.**
- **More than 4 tons of PET and HDPE bottles collected.**

- **Participation in Stanford - USAID Mexico Clean Economy 2050 Global Development Alliance.**
- **Participation in the 3rd MEXICO2 Carbon Market Platform.**
- **Publication of articles:**
  - » "Absence of Large and Presence of Medium-Sized Mammal Species of Conservation Concern in a Privately Protected Area of Rain Forest in Southeastern Mexico".
  - » "Amphibian and Reptile Diversity and Conservation in a Private Protected Area in a Highly Transformed Region of Southern Mexico".



Achievements  
in  
**2018**

Challenges  
for  
**2019**

- **Clean Industry Certification (PROFEPA)**
- **Level 3 Self-Management Certification (STPS)**

# CIRCULAR ECONOMY

Circular Economy: Nothing is created; nothing is wasted; everything is transformed



Transitioning to a circular economic model is a challenge for the industry as it implies changing business models, driving innovation, redesigning plastic products, changing technologies, creating infrastructure, implementing reduction goals and setting quality parameters for recycled materials contained in plastic packaging, containers and packing.



## Braskem Idesa

published in November 2018 its voluntary commitments to the circular economy

We have established the following commitments in keeping with our vision of the Circular Economy:

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

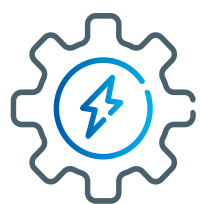
We have a vision of the future as Braskem Idesa is the largest producer of high- and low- density polyethylene in Mexico, which is why we have publicly reaffirmed our global commitment regarding the Circular Economy by subscribing to and supporting the vision underpinned by the voluntary commitments of the National Association of the Plastic Industry (ANIQ) and the National Association of the Plastic Industry (ANIPAC) to accept the challenge of post-consumer plastic waste in order to achieve sustainability.

## Zero Pellet Loss Program

We have reaffirmed our commitment to mitigating the impact we have on the environment through the global Zero Pellet Loss Program, coordinated by ANIPAC, 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.

The Operation Clean Sweep® program was originally created by the American Plastics Industry Association (PLASTICS) to implement best practices in the containment of pellets, flakes and powders to ensure zero loss, protect the environment and safeguard natural resources.

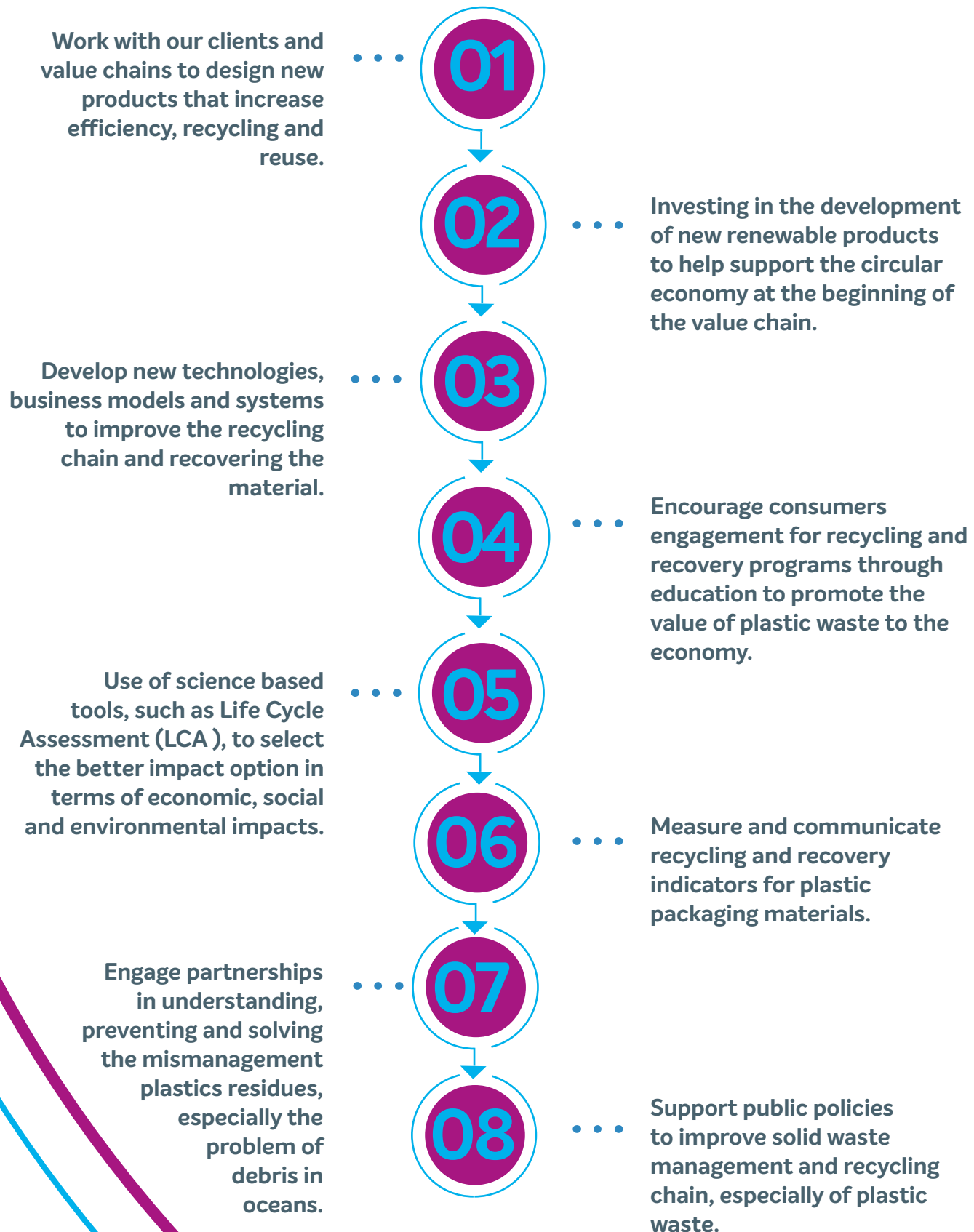
We are joining the mission to guarantee compliance with both domestic and international standards, in addition to being part of an international network of countries that are currently implementing these practices as part of their Circular Economy strategies.



**We are evolving** to ensure that, in 2019, we have our I'm Green® portfolio of green products



To meet our circular economy goals, we focus on an approach that is based on 8 fundamental axes:



▶ **Together, We are Part of the Solution**



In light of the need for policies and partnerships to promote the proper handling of plastic waste, it is necessary to:

- **Incentivize the focus on public policies that support, reward and value innovation, entrepreneurship and investment.**
- **Adopt specific measures to recover and reuse products and packaging, in the knowledge that the transition towards a sustainable circular economy will be an evolutionary one.**
- **Support collaboration between governments, communities, industry, brand owners, civil associations and society.**

We are committed to the circular economy in order to achieve a more innovative and sustainable economy that is capable of finding answers to a range of environmental problems, as well as becoming part of the solution that drives and meets the needs of a constantly changing world.

### **Life Cycle Assessment**

Braskem Idesa is well aware of the importance of gauging the environmental profile of its major products. The Life Cycle Assessment is a tool that aims to measure and compare the potential environmental impacts associated with a product or service, thereby allowing us to analyze its environmental performance to ensure a better decision-making process.

In collaboration with our main associations (ANIQ and ANIPAC), we will continue developing these types of studies that focus on the applications of polyethylene.



- **Formalize compliance and the launch of Braskem Idesa's commitment to the Zero Pellet Loss Program.**
- **Formalize the adherence of our logistics operators to the Zero Pellet Loss Program.**
- **Develop a resin solution for the market containing post consumer recycling materials.**





# CERTIFICATIONS AND AWARDS



Committed to our surroundings, at Braskem Idesa we operate to the highest Quality, Health and Safety, Environmental, Social Responsibility and Workplace standards, ensuring operational excellence.

As a result, in 2018 we were awarded the following certifications:

- Socially Responsible Company (ESR) from the Mexican Center for Philanthropy (CEMEFI).
- Sustainable Company of the Year by Expo Plásticos 2018.
- Community Engagement Award from the Mexican Association of the Chemical Industry (ANIQ).
- 500 Most Important Companies in Mexico by Expansión magazine.
- Annual Responsible Care Management System certification.
- Third place in the Carbon Market activity by the MexiCO<sub>2</sub> –SEMARNAT Carbon Platform.



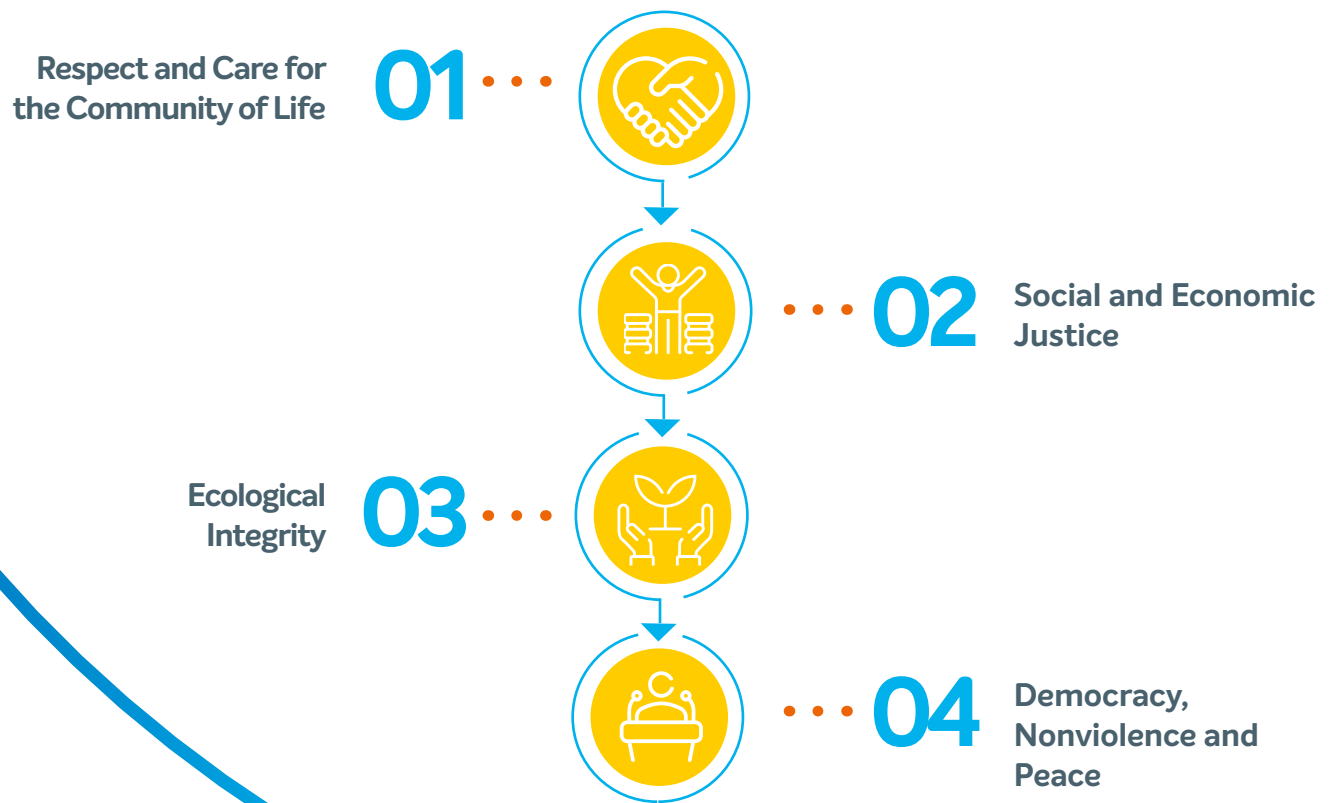
# EARTH CHARTER



➤ 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:



# REPORTING PROCESS

➤ Braskem Idesa SAPI (Investment Promotion Corporation) and Braskem Idesa Servicios S.A. de C.V. in addition to all Braskem Idesa's entities, for the third consecutive year, have published their Annual Sustainability Report, which encompasses the most significant milestones for the company, the results of its activities and its commitments to its stakeholders and its surroundings throughout 2018.

This document has been drafted using the Core Conformity option stipulated by the Global Reporting Initiative (GRI), covering the period from January 1st, 2018, to December 31st, 2018.

This report is published on an annual basis and, taking into account the information reported in our previous report published in 2018, there has been no reformulation of the data used, meaning that the information published previously has not been modified, nor have the organization or its supply chain.

In terms of the information presented, and in comparison with the previous report, some units used have been modified to help standardize the information presented.



# Materiality [102-46, 102-47, 102-53, 103-1]

In the drafting of this report, we commissioned a materiality analysis\* in 2018, which enabled us to identify issues relating to sustainability within Braskem Idesa, in addition to better understanding the perception of our stakeholders and taking their opinion into account through on-going dialog.

This interaction has allowed us to identify our materiality issues and adopt an exhaustive approach to ensure we remain at the cutting edge.

Furthermore, the information contained in this report, the goals achieved, and the challenges set are the result of this materiality analysis, which has enabled us to create this report based on:

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

Below are the results of the materiality analysis and the material issues identified:

- **Water**
- **Air**
- Customer Service
- **Biodiversity**
- **Corruption**
- **Financial Performance**
- **Circular Economy**
- Employment
- **Energy**
- Training and Career Development
- Corporate Governance
- Equal Opportunities
- **Social Investment in Communities**
- Freedom of Association
- **Local Workforce**
- **Complaint Procedures**
- Public Policies
- Post-Consumption
- Suppliers – Environmental Management
- Local Suppliers
- Non-Renewable Resources
- Reporting and Publication
- Waste
- **Health and Safety**
- Property Security
- Transparency and Integrity

If you require further information about this report or its contents, as well as other issues regarding sustainability processes at Braskem Idesa, please contact the Circular Economy and Sustainability department at the following e-mail address: [sustentabilidad@braskem.com](mailto:sustentabilidad@braskem.com)

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



# Alignment with Global Sustainability Standards [103-1]

At Braskem Idesa, we are committed to Sustainability, which is why, as part of our strategy, we developed 10 Sustainable Development Macro Goals that govern our operations and are aligned with global methodologies, such as GRI Standards and the United Nations Sustainable Development Goals (SDG).

## 10 Braskem Idesa 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

Our commitment to the Sustainable Development Goals can be seen in everything we do, which is why we have outlined the 17 SDG below and those to which we have made a contribution:

## SUSTAINABLE DEVELOPMENT GOALS



Below is a comparative analysis of materiality issues at Braskem Idesa and our 10 Macro Goals that correspond to the GRI standards and SDG.

Material Issue	Macro Goals BI	GRI Content	SDG	Coverage	
				Internal	External
 <b>Social Investment in Communities</b>	10	413-1, <b>413-2</b>	1, 3, 4, 13		✓
 <b>Energy</b>	7	302-1, 302-3	7, 13	✓	
 <b>Water</b>	3	303-1, 303-3, 306-1	6		✓
 <b>Biodiversity</b>	10	304-3, 304-4	13, 15		✓
 <b>Air</b>	6	305-1, 305-2, 305-4, 305-7	13		✓
 <b>Complaints Procedures</b>	5	413-1, <b>419-1</b>	16	✓	✓
 <b>Corruption</b>	5	205-1, 205-2, <b>205-3</b>	16	✓	
 <b>Workforce</b>	10	401-1	1, 8	✓	
 <b>Health and Safety</b>	1	403-1, 403-2, 403-3, 403-4	3, 8	✓	✓
 <b>Financial Performance</b>	2	201-1, 202-2	8	✓	
 <b>Circular Economy</b>	8, 9	306-2, 306-4	12, 13	✓	✓

# 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>		
102-1	Name of the organization	P. 84-85
102-2	Activities, brands, products, and services	P. 14, 16, 17 y 19
102-3	Location of headquarters	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 Boulevard Manuel Ávila Camacho, 36, piso 24. Col Lomas de Chapultepec. CP 11000 México. The Complex is located at Carretera Nanchital- El Chapo, Km 3.5, Nanchital de Lázaro Cárdenas del Río, Veracruz.
102-4	Location of operations	P. 14
102-5	Ownership and legal form	P. 85
102-6	Markets served	P. 14 y 19
102-7	Scale of the organization	P. 21 y 45
102-8	Information on employees and other workers	P. 45 b. Permanent contract at our corporate offices: 176; at our complex: 636. c. Full-time female employees: 194; male employees: 618
102-9	Supply chain	P. 43
102-10	Significant changes to the organization and its supply chain	P. 85
102-11	Precautionary Principle or approach	P. 61- 64, 67-68, 71-73
102-12	External initiatives	P. 68
102-13	Membership of associations	P. 37, 75-76
<b>2. Strategy</b>		
102-14	Statement from senior decision-maker	P. 5-6

GRI Standard	Disclosure Title	Page Number/Omission
102-15	Key impacts, risks, and opportunities	P. 5-6
<b>3. Ethics and integrity</b>		
102-16	Values, principles, standards, and norms of behavior	P. 13
102-17	Mechanisms for advice and concerns about ethics	P. 29
<b>4. Governance</b>		
102-18	Governance structure	P. 25-26
<b>5. Stakeholder engagement</b>		
102-40	List of stakeholder groups	P. 22-23
102-41	Collective bargaining agreements	P. 45
102-42	Identifying and selecting stakeholders	P. 22-23
102-43	Approach to stakeholder engagement	P. 22-23
102-44	Key topics and concerns raised	P. 22-23
<b>6. Reporting practice</b>		
102-45	Entities included in the consolidated financial statements	P. 85
102-46	Defining report content and topic Boundaries	P. 86
102-47	List of material topics	P. 86
102-48	Restatements of information	P. 85 Hazardous and non-hazardous waste table: there was a change in the data from 2017, which had been reported in kilograms, while, in 2018, data was reported in tons.
102-49	Changes in reporting	P. 85
102-50	Reporting period	P. 85
102-51	Date of most recent report	P. 85

"For Materiality Disclosures Services, 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
102-52	Reporting cycle	P. 85
102-53	Contact point for questions regarding the report	P. 86
102-54	Claims of reporting in accordance with the GRI Standards	P. 85
102-55	GRI content index	P. 90-97
102-56	External assurance	P. 98-99
<b>MATERIAL TOPICS</b>		
<b>Economic Performance</b>		
<b>GRI 103: MANAGEMENT APPROACH 2016</b>		
103-1	Explanation of the material topic and its Boundary	P. 86, 88-89
103-2	The management approach and its components	P. 39-40
103-3	Evaluation of the management approach	P. 39-40
<b>GRI 201: Economic Performance 2016</b>		
201-1	Direct economic value generated and distributed	P. 39-40 b. Reported at a national level.
<b>GRI 202: Market Presence 2016</b>		
202-2	Proportion of senior management hired from the local community	P. 40 a. The local community encompasses the country of operation: Mexico. The location of our significant operations: Braskem Idesa Complex in Veracruz and our Corporate Offices in Mexico City.
<b>Corruption</b>		
<b>GRI 103: MANAGEMENT APPROACH 2016</b>		
103-1	Explanation of the material topic and its Boundary	P. 86, 88-89
103-2	The management approach and its components	P. 28-29, 31-34
103-3	Evaluation of the management approach	P. 28-29, 31-34
<b>GRI 205: Anticorruption 2016</b>		
205-1	Operations assessed for risks related to corruption	P. 34
205-2	Communication and training about anti-corruption policies and procedures	P. 28, 33
205-3	Confirmed incidents of corruption and actions taken	In 2018, there were no confirmed cases of corruption.

GRI Standard	Disclosure Title	Page Number/Omission
<b>Circular Economy</b>		
<b>GRI 103: MANAGEMENT APPROACH 2016</b>		
103-1	Explanation of the material topic and its Boundary	P. 75-78, 86, 88-89
103-2	The management approach and its components	P. 68-71
103-3	Evaluation of the management approach	P. 68-71
<b>GRI 306: Effluents and Waste 2016</b>		
306-2	Waste by type and disposal method	P. 68, 71 a. Composting, recycling, recovery, deep well injection, landfill and on-site storage are not used. Others: landfill. Hazardous waste transported = 6,878 tons. Hazardous waste treated = 5,873 tons. b. Incineration, deep well injection, landfill and on-site storage are not used.
306-4	Transport of hazardous waste	No waste is imported or exported.
<b>Energy</b>		
<b>GRI 103: MANAGEMENT APPROACH 2016</b>		
103-1	Explanation of the material topic and its Boundary	P. 86, 88-89
103-2	The management approach and its components	P. 64
103-3	Evaluation of the management approach	P. 64
<b>GRI 302: Energy 2016</b>		
302-1	Energy consumption within the organization	P. 64 b. No consumption from renewable sources. c. ii, iii, iv. No consumption. d. ii, iii, iv. Not applicable. f. Calculations for energy use are based on the invoice data for each fuel, electricity invoices, as well as on-site meters for electricity generation. g. Conversion factors published through the Energy Information System pertaining to the Department of Energy (SENER).
302-3	Energy intensity	P. 64 b. The energy intensity ratio is calculated per ton of production, considering a total of 250 tons of polyethylene and ethylene per hour. c. Energy from natural gas and gas recirculation at the ethylene plant. d. Energy at the Coatzacoalcos plant.

GRI Standard	Disclosure Title	Page Number/Omission
<b>Water</b>		
<b>GRI 103: MANAGEMENT APPROACH 2016</b>		
103-1	Explanation of the material topic and its Boundary	P. 63, 86, 88-89
103-2	The management approach and its components	P. 63
103-3	Evaluation of the management approach	P. 63
<b>GRI 303: Water 2016</b>		
303-1	Water withdrawal by source	P. 63 iii. Rainwater is not harvested. iv. Waste water from other organizations is not treated. v. No water supplies or other public or private services.
303-3	Water recycled and reused	P. 63
<b>GRI 306: Effluents and Waste 2016</b>		
306-1	Water discharge by quality and destination	P. 63 ii. The treatment is carried out at a physicochemical and biological waste water treatment plant, which will be designed to harvest, store, distribute, treat and reuse pre-treated water within the facility and discharge treated water that can no longer be used into the Gopalapa River.
<b>Biodiversity</b>		
<b>GRI 103: MANAGEMENT APPROACH 2016</b>		
103-1	Explanation of the material topic and its Boundary	P. 86, 88-89
103-2	The management approach and its components	P. 71-72
103-3	Evaluation of the management approach	P. 71-72
<b>GRI 304: Biodiversity 2016</b>		
304-3	Habitats protected or restored	P. 71-72 c. The hectares earmarked for the Ceratozamia Protection and Development Area are currently in a SEMICONSERVED state, which is defined by the types of species housed in the Environmental Management Unit.

GRI Standard	Disclosure Title	Page Number/Omission
304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	P. 71-72
<b>Air</b>		
<b>GRI 103: MANAGEMENT APPROACH 2016</b>		
103-1	Explanation of the material topic and its Boundary	P. 86, 88-89
103-2	The management approach and its components	P. 67
103-3	Evaluation of the management approach	P. 67
<b>GRI 305: Emissions 2016</b>		
305-1	Direct (Scope 1) GHG emissions	P. 67 d ii. Operational capacity has not yet reached 100%. 2018 is taken as the baseline given that it was a more stable year. iii. None. e. Source of emission factors and global warming potentials used: National Regulation published in the official gazette and issued by SEMARNAT. f. Operational Control. g. National Regulation Methodologies published in the official gazettes and issued by SEMARNAT.
305-2	Energy indirect (Scope 2) GHG emissions	P. 67 d ii. Operational capacity has not yet reached 100%. 2018 is taken as the baseline given that it was a more stable year. iii. None. e, f. Source of emission factors used is that stipulated by SEMARNAT. Consolidation approach is operational control through the Material and Energy Balance Methodology.
305-4	GHG emissions intensity	P. 67 a. Emission intensity ratio per ton of production stands at 1:12, taking into consideration total production (ethylene and PE's) regarding total Scope 1 and 2 emissions. b. tCO <sub>2</sub> Equivalent = 1,820,482.0152 tons. Total production = 1,621,950.8583. c. Direct Scope 1 (Fixed Combustion + Mobile Combustion + Process Emissions) = 1,790,722.9840 tCO <sub>2</sub> e. Indirect Scope 2 (electricity purchased) = 29,759.0313 tCO <sub>2</sub> e. d. Gases included: CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O, HFC.



GRI Standard	Disclosure Title	Page Number/Omission
<b>305-7</b>	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	P. 67 b. Air emissions based on AP-42 emission factors (those that cannot be monitored are calculated using this emission factor) c. Calculations based on material balances and direct measurements from sources (where we have flows and direct monitoring from sources).
<b>Workforce</b>		
<b>GRI 103: MANAGEMENT APPROACH 2016</b>		
<b>103-1</b>	Explanation of the material topic and its Boundary	P. 49, 86, 88-89
<b>103-2</b>	The management approach and its components	P. 49
<b>103-3</b>	Evaluation of the management approach	P. 49
<b>GRI 401: Employment 2016</b>		
<b>401-1</b>	New employee hires and employee turnover	P. 46, 49
<b>Salud y seguridad</b>		
<b>GRI 103: MANAGEMENT APPROACH 2016</b>		
<b>103-1</b>	Explanation of the material topic and its Boundary	P. 86, 88-89
<b>103-2</b>	The management approach and its components	P. 51-52, 96
<b>103-3</b>	Evaluation of the management approach	P. 51-52, 96
<b>GRI 403: Occupational health and safety 2016</b>		
<b>403-1</b>	Workers representation in formal joint management-worker health and safety committees	P. 51-52
<b>403-2</b>	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	P. 51-52 c. We have specialized software for reporting incidents (Sphera Impact). Compiled information is reported on a monthly basis during a specific meeting with management, including area coordinators and managers.
<b>403-3</b>	Workers with high incidence or high risk of diseases related to their occupation	No employees are involved in tasks that have a high incidence or risk of specific diseases.
<b>403-4</b>	Health and safety topics covered in formal agreements with trade unions	P. 51-52

GRI Standard	Disclosure Title	Page Number/Omission
<b>Social Investment in Communities</b>		
<b>GRI 103: MANAGEMENT APPROACH 2016</b>		
<b>103-1</b>	Explanation of the material topic and its Boundary	P. 53, 86, 88-89
<b>103-2</b>	The management approach and its components	P. 53-54, 57-59
<b>103-3</b>	Evaluation of the management approach	P. 53-54, 57-59
<b>GRI 413: Local Communities 2016</b>		
<b>413-1</b>	Operations with local community engagement, impact assessments, and development programs	P. 53-54, 57-59
<b>413-2</b>	Operations with significant actual and potential negative impacts on local communities	Braskem Idesa has no operations that have a significant negative impact, be it real or potential.
<b>Complaint Procedures</b>		
<b>GRI 103: MANAGEMENT APPROACH 2016</b>		
<b>103-1</b>	Explanation of the material topic and its Boundary	P. 86, 88-89
<b>103-2</b>	The management approach and its components	P. 53-54, 57-59
<b>103-3</b>	Evaluation of the management approach	P. 53-54, 57-59
<b>GRI 413: Local Communities 2016</b>		
<b>413-1</b>	Operations with local community engagement, impact assessments, and development programs	P. 53-54, 57-59
<b>GRI 419: Socioeconomic compliance 2016</b>		
<b>419-1</b>	Non-compliance with laws and regulations in the social and economic area	Braskem Idesa has not been fined as a result of compliance issues with social or economic regulations.

# Verification letter



## Verification Report 2018 Braskem Idesa's Sustainability Report

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

You are informed that Redes Sociales en Línea Timberlan carried out an independent and impartial verification of 2018 Braskem Idesa's Sustainability Report.

### Scope

A limited verification of the content of this report was developed. Based on the material issues list, the methodological compliance of the GRI Standards in accordance with the Comprehensive option, the nature of the process for information definition and quality, the internal systems of controller as well as quality and the congruence of the published data were validated. The following contents were verified.

102-1	102-9	102-17	102-46	102-54	304-4
102-2	102-10	102-18	102-47	102-55	404-1
102-3	102-11	102-40	102-48	201-1	403-1
102-4	102-12	102-41	102-49	202-2	413-1
102-5	102-13	102-42	102-50	205-2	419-1
102-6	102-14	102-43	102-51	306-4	
102-7	102-15	102-44	102-52	302-1	
102-8	102-16	102-45	102-53	303-1	

### Responsibilities

Braskem Idesa is responsible for the preparation and presentation of 2018 Braskem Idesa's Sustainability Report as well as the selection of material issues and GRI content reported. Our commitment is to issue objective opinions about the report quality and the presentation of the information, taking as reference International Standards, such as: Ethical Principles of Independence of ISAE 3000; and *The external assurance of sustainability reporting of GRI*.

### Activities for the verification

Our verification process covered the following activities:

- Compliance review and methodological adherence to GRI Standards.
- Review of information collection processes and validation of published data.
- Verification of published data through documentary evidence.
- Comparison of information presented in reports from past years.



### Conclusions

During the report verification process did not found any factor that allows us to consider that:

- The quality of the information presented does not comply with the principles for preparing the report regarding the definition of the content and quality of the GRI Standards report.

### Recommendations

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

Alma Paulina Garduño Arellano  
Redes Sociales en Línea Timberlan S.A. de C.V  
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Tlalpan, C.P. 14210, CDMX.  
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January 20, 2020

### Redes Sociales LT Independence and competence statement.

Redes Sociales employees have the competence level necessary to verify the compliance with standards used in the preparation of Sustainability Reports, so they can issue a professional opinion of non-financial information reports, complying with the principles of independence, integrity, objectivity, competence and professional diligence, confidentiality and professional behaviour. In no case our verification statement can be understood as an audit report and therefore no responsibility is assumed for the systems and processes of management and internal control from which the information is obtained. This Verification Letter is issued on January, 20th two thousand twenty and is valid as long as there are no subsequent and substantial modifications to the 2018 Braskem Idesa's Sustainability Report.



[www.braskemidesa.com.mx](http://www.braskemidesa.com.mx)