

# SUMMARY

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Based on a solid internationalization strategy in the Americas, pursued in recent years, and the search for competitiveness throughout the entire chemical and petrochemical chain, Braskem has consolidated its position as a global player in the sector - an instrumental condition to ensure the perpetuity of its operations, overcoming turbulent economic cycles such as the one we are experiencing.

We have undergone a period of uncertainty in the political and economic scenario, both domestically and internationally. The deceleration of the Chinese economy was higher than expected and affected the imbalance in different markets, most notably in emerging economies with a higher dependency on the trade flow with China, such as the case for Brazil. This context, coupled with historical bottlenecks of the so-called "Brazil cost", and aggravated by a prolonged political-institutional crisis, has been deleterious to the growth of the Brazilian economy, Proof of this was the drop of the Gross Domestic Product (GDP) by 3.5 percent in 2015, compared with 2014 - the worst performance in 25 years, followed by a hike in interest rates and inflation

pressures that strongly impacted consumption of families and investments in production.

This weak performance of the Brazilian economy negatively affected local demand for resins (PE, PP, and PVC), contributing to a 7.6 percent downturn in the domestic market compared with 2014, totaling 4.9 million tons. During the year, Braskem's market share grew one percentage point, and company sales totaled 3.4 million tons, six percent below 2014, albeit less than the retraction of the market. To offset this reduction in the domestic market, Braskem geared part of its production to foreign markets and increased its exports of resins by 28 percent and of basic petrochemicals by one percent.

Thanks to the good operating performance of its plants, to larger sales by its operations in the United States and Europe, to the increase in exports, coupled with the positive effect of the exchange rate and the international spreads in the petrochemical sector, Braskem recorded strong results in 2015. The company posted a record EBITDA of R\$ 9.37 billion in the year, 67 percent above 2014. In the period, net profit reached

R\$ 2.89 billion and financial leverage, measured by the ratio between net debt and EBITDA, in dollars, closed the year at 1.91x, the lowest level in nine years. Net revenue totaled R\$ 47.3 billion, up 3%. Of Braskem's total revenue, the foreign market accounted for 43 percent.

The average rate for the occupation of crackers in 2015 was 89%, three percentage points above the previous year, reflecting a good operational performance of the company with a record production in the basic petrochemicals unit. If it were not for the insufficient supply of raw materials to the Rio de Janeiro Complex, the operation rate for the year would have closed at 92%. In the USA and Europe, the average activity rate for the industrial polypropylene (PP) units was 98%, six percentage points above 2014.

Regarding strategic projects, it is important to note the final construction phase of the petrochemical complex in Mexico, the Company's largest investment, together with the Mexican group Idesa, totaling USD 5.2 billion. In 2015, the number of workers on the

project peaked at 17,000 with a minimal injury rate - 0.41 per million man-hours. Such level of excellence was recognized by the DuPont Safety and Sustainability Awards as a global highlight in the Industrial Safety category. The project provides a significant diversity in raw materials and geography to the Company's asset portfolio, with a production capacity of 1.05 million tons of polyethylene (PE) produced from ethane supplied by PEMEX.

Throughout the year, Braskem brought important contributions to the development of products for its Clients including more resistant bags for cement and concrete, with an additional layer to ensure the conservation of the product against humidity, thereby reducing losses. There were also advances in the application of polyethylene in agriculture, recognizing the advantages of using plastic film to cover soil (mulching) in coffee and citric fruit crops, which reduces water consumption and increases productivity in the fields. In partnership with the coffee shop network Starbucks, the WeCycle platform was launched seeking to value recycling of plastic waste in different sectors of the economy.

With regard to its commitment to sustainable development and as a signatory to the UN Global Compact, Braskem's commitments also brought significant internal and external achievements in 2015. The company advanced in several actions that resulted in record results in all eco-efficiency indicators and was chosen the best company by CDP Brazil (Carbon Disclosure Project) in the transparency category. Also, we were included in the 11th portfolio of BM&F BOVESPA's Corporate Sustainability Index (ISE), in the Dow Jones Sustainability Emerging Markets Index for the fourth consecutive time, and in BM&FBOVESPA's Carbon Efficient Index portfolio (ICO2), for the fifth successive time. Regarding innovation, the Company was recognized through a survey published by the Brazilian newspaper Valor Econômico journal and the consulting company Strategy& as the fourth most innovative company in Brazil.

After almost three years of negotiations, Braskem signed a new contract with Petrobras to supply a volume of seven million tons per year of naphtha for five years. Although the new contract does not fully reflect the

conditions required to ensure competitiveness of the chemical and petrochemical industries, Braskem decided that signing this contract was important to reduce the uncertainties that haunt the industry. The decision could help prevent the shutdown of petrochemical plants during this difficult period for the industry and the Brazilian economy. On the other hand, the Company secured an extension of its energy contracts at fair and long-term costs (up to 2037) for its most energy-intensive units in the Northeastern region, securing the necessary supply from the electric company, Companhia utility Hidrelétrica do São Francisco (Chesf).

It is also worth noting the adoption of a successful program to reduce fixed costs, which generated savings of R\$ 156 million in its first year of implementation. The program – which focuses on 11 work fronts and has the potential to save up to R\$ 400 million per year on a recurring basis -should be fully acomplished in 2017. Regarding safety, the accident rate with and without lost time, including Members and partners, was 0.68 per million hours worked, the best result in Braskem's history.

#### **OUTLOOK FOR 2016**

The challenges of the 2015 macroeconomic agenda remain ongoing throughout 2016. In Brazil, it is expected that the economy will continue retracting while growth is expected for the United States, Mexico and Europe. About the dynamics of the oil market, there is a perspective for excess supply, a positive aspect for the competitiveness of naphthabased petrochemical players.

In this context, Braskem's strategy remains based on diversification of the raw material and geographic matrix; on strengthening the relationship with its Clients; on the development of the Brazilian petrochemical and plastics chain; and on the quest for operational efficiency — without neglecting the

maintenance of its financial health and cost discipline.

Additionally, it is important to highlight in 2016 the start of operations of the Complex in Mexico. Throughout the year, the activity curve should increase more steeply after the second half of the year. In the strategy for diversification of raw material, the Company will begin the project that will enable importing ethane from the United States to the Camaçari complex, in Bahia, adapting part of the cracker to operate using both gas and naphtha.

True to its belief and purpose to improve the lives of people by seeking sustainable solutions through chemicals and plastics, Braskem will continue with its commitment to growth, acting proactively to create value for its Clients, Shareholders, and society as a whole. These are aspects that will contribute to maintaining the soundness of the company and to face turbulence of different natures in Brazil and the world.

Finally, Ι reiterate the acknowledgement to Braskem's teams and Shareholders, for their support in the materialization of the Company's strategic projects. To our Investors for the trust they have placed on us. And to our Clients, with whom we have established a longstanding partnership. Together we can strengthen the value chain of chemicals and plastics, the inspiration that invigorates and motivates us to face the challenges of today.

Fernando Musa
Entrepreneurial Leader





Braskem is the largest producer of thermoplastic resins (polyethylene, polypropylene polyvinyl chloride) in the Americas and the sixth largest petrochemical Company in the world, with annual production of 16 million tons, including chemicals and basic petrochemicals, such ethylene, propylene, butadiene and others. It is also the world's largest producer of biopolymers, with annual capacity of 200,000 tons of Green Plastic I'm green™, polyethylene produced from 100% renewable sugar cane ethanol.

Braskem is the only integrated petrochemical Company of first and second generation thermoplastic resins in Brazil,

which translates into competitive advantages, such as production scale and operational efficiency.

Founded in August 2002 through the integration of six companies¹ of the Odebrecht Organization and Mariani Group, Braskem² is headquartered in São Paulo and has production units in Brazil, the United States, Germany and Mexico, in the latter through a joint venture with the Mexican company Idesa.

In addition to the diverse matrix of raw materials, including renewable raw materials, and the creation of new sustainable plastic solutions, Braskem's growth strategy is based on strengthening the relationship with its Clients, on the

development of petrochemical and plastic chains, on the quest for operational efficiency and geographic diversification, as well as on maintaining its financial soundness and discipline in costs. To this end, the Company is committed to continuously investing in Research Development (R&D), supported two Innovation Technology Centers, with integrated and complementary operation profile, located in Triunfo, Rio Grande do Sul (Brazil) and in Pittsburgh, Pennsylvania (USA).

With worldwide operations, Braskem has Clients in over 70 countries, served by 16 regional offices located in the world's main economic centers.

<sup>&</sup>lt;sup>1</sup> Copene, OPP, Trikem, Proppet, Nitrocarbono e Polialden.

 $<sup>^2</sup>$  To identify entities included in the consolidated financial statements and entities not covered in the report, there are references to the financial statements of the holding company, which were developed according to accounting practices adopted in Brazil, pursuant to the provisions in Law N°. 6.404/76 (Brazilian Corporate Law), and subsequent amendments, as well as standards issued by the CPC and in accordance with as IFRS (International Financial Reporting Standards) issued by IASB, and which are being published together with the consolidated financial statements.

### **BRASKEM IN FIGURES**



#### **40 INDUSTRIAL UNITS**

29 in Brazil, five in the United States, four in Mexico, and two in Germany



#### 16 MILLION TONS/YEAR

of thermoplastic resins and other chemical and petrochemical products



**7,995 TEAM MEMBERS** worldwide



R\$ 54 BILLION of Annual revenue



R\$ 9.4 BILLION in EBITDA<sup>3</sup> in 2015



R\$ 280 MILLION

in spending on Innovation and Technology in 2015

# ODEBRECHT ENTREPRENEURIAL TECHNOLOGY – TEO

G4-56 | GLOBAL COMPACT- PRINCIPLE 10

Braskem follows a corporate culture common to all of its operations:

Odebrecht Entrepreneurial Technology (TEO), a set of principles, concepts, and criteria shared by all Companies controlled

by the Odebrecht Organization, and defined based on the beliefs of its founder, Norberto Odebrecht. These principles establish ethical values that make up the essence of the Shareholders' Intangible Assets, promote effectiveness and clarity in interactions between Leaders and the Led, and seek to ensure the consistency of corporate conduct in its various Businesses.

### **Fundamental Principles of TEO**

- **Trust in People**, in their capacity and desire to progress.
- Client Satisfaction, by serving with an emphasis on quality, productivity, and social and economic responsibility.
- Return to Shareholders and valuing their equity.
- Partnership among Team
   Members, who participate in
   planning and implementation of
   the work, and the results that it
   generates.
- Self-development of People, especially by means of Education through Work, ensuring the Survival, Growth, and Perpetuity of the Organization.
- Reinvestment of Results, in order to create new job opportunities and contribute to developing communities.

<sup>&</sup>lt;sup>3</sup> Earnings before interest, taxes, depreciation and amortization

#### **TEO Portal**

Aiming to contribute to disseminating the culture's concepts and principles, the TEO Portal was launched three years ago, which includes articles, videos of Leaders, and excerpts from references in the original books written by Norberto Odebrecht.

Its content includes excerpts from the books Sobreviver, Crescer e Perpetuar (Survival, Growth, and Perpetuity), written by Norberto Odebrecht, learning tools about the culture that are continuously used by Learders in face-to-face communication.

Fundamental to the process of integrating new professionals, in 2015, the TEO Portal had over 11,000 views, and browsing analysis demonstrated that many Team Members return to access the vast content available in Portuguese, English, German, and Spanish.



Learn more at:



Braskem > Principles and Values

# Memory Portal: a new platform for the Company's historical records

Aiming to preserve corporate memory, in 2012, Braskem began a permanent historical heritage management program. The process of collecting and organizing the archives carried out over three years culminated in the launch of the Memory Portal in December 2015.

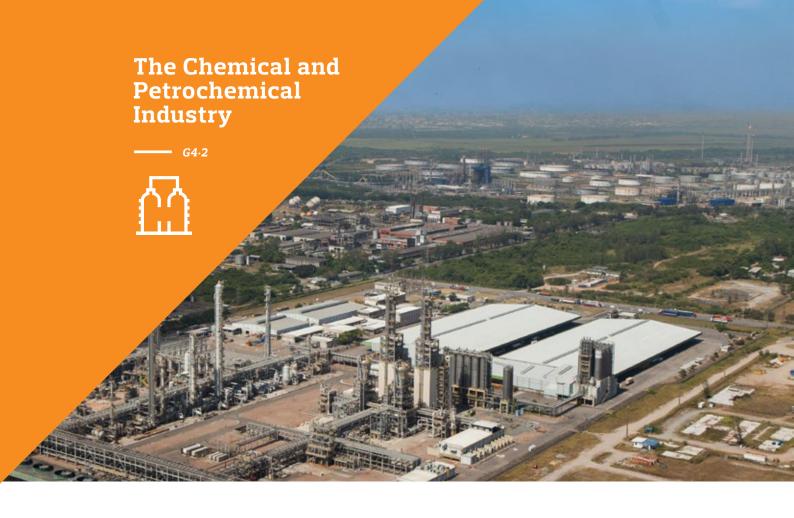
This platform, in four languages (Portuguese, English, German, and Spanish), makes digital archives available to Team Members in the form of text,

images, videos, advertisements, and other countless pieces that bring back the history of the Company, and of its acquired businesses, over the years, and consequently, a significant portion of the history of the Brazilian petrochemical industry.

Between Brazilian petrochemical records and records of Braskem's important achievements, such as opening the green ethylene production plant, the Memory Portal currently joins over

17,000 archives. The purpose of the platform is to concentrate historical material from the entire Company and continue increasing its total archives. To encourage constant recording of historical moments and establish a collaborative dynamic, there is a tool allowing the Team Members to contribute via the Memory Portal, a platform with access restricted to the Company's internal audience.





From footwear to packaging for food and electronic devices, today it is difficult to find consumer goods in modern society that do not use materials produced by the chemical and petrochemical industry.

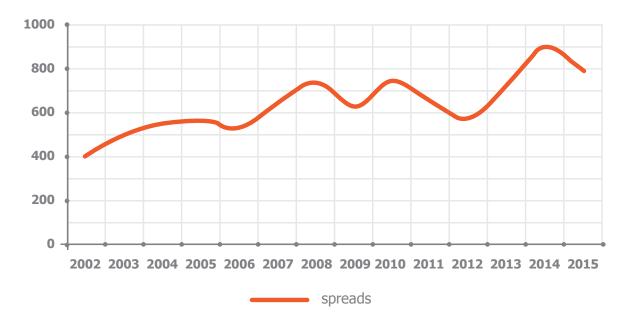
The first generation of the chemical and petrochemical industry is formed by companies that use raw materials such as naphtha, a by-product of oil refining, and natural gas to be manufactured into basic chemical inputs, such as ethylene, propylene, and butadiene. The second generation of the chain involves the production process for thermoplastic resins - polyethylene (PE), polypropylene (PP), polyvinyl chloride (PVC) -

materials with high value added with several applications in the plastics transformation industry for manufacturing products that reach end consumers.

Because it involves complex production processes at different stages, the petrochemical industry depends on the application of intensive capital, which is only justified by increasing gains in scale. This is a characteristic that, beginning in 1990, led to the formation of large global conglomerates such as Braskem, the Brazilian representative in the international industry, and the sixth largest petrochemical Company in the world in production capacity.

Thermoplastic resins (PE, PP, and PVC) are commodities sold in global markets. The prices of these resins are influenced by global macroeconomic factors, and formulated based on the cost of raw materials, demand trends in the sectors that use these resins, and the cost of transport. With this, the profitability of companies manufacturing these products is evaluated according to the concept of "spread" (the difference between the price of the resin and the cost of the base raw material for production), which on a larger scale are mainly naphtha or natural gas, inputs priced according to the behavior of prices of barrels of oil sold in the global market.

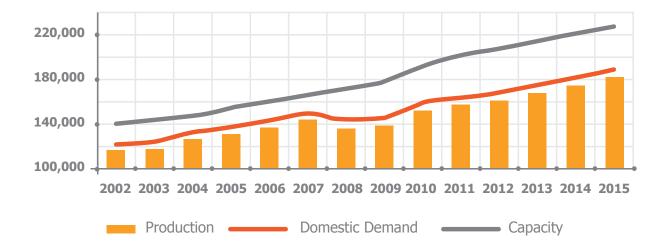
#### spreads



Based on the chart above, 2002 represented the end of the low cycle in which the lowest spreads for resins were recorded in recent years and, from this date, the high petrochemical cycle was initiated, with spreads reaching over US\$500.00 per ton. Additionally, it is worth

highlighting the period beginning at the end of 2008, when the global economic downturn affected the profitability of the petrochemical industry demonstrated recovery after the second quarter of 2009. More recently, 2015, the petrochemical spreads

continued at healthy levels, but at levels lower than in 2014. The expectation is that by 2017 and 2018, with the entry of new production capacity for ethylene in the world, the petrochemical spreads will continue to drop.





# INTEGRATED OPERATION IN THE PETROCHEMICAL CHAIN

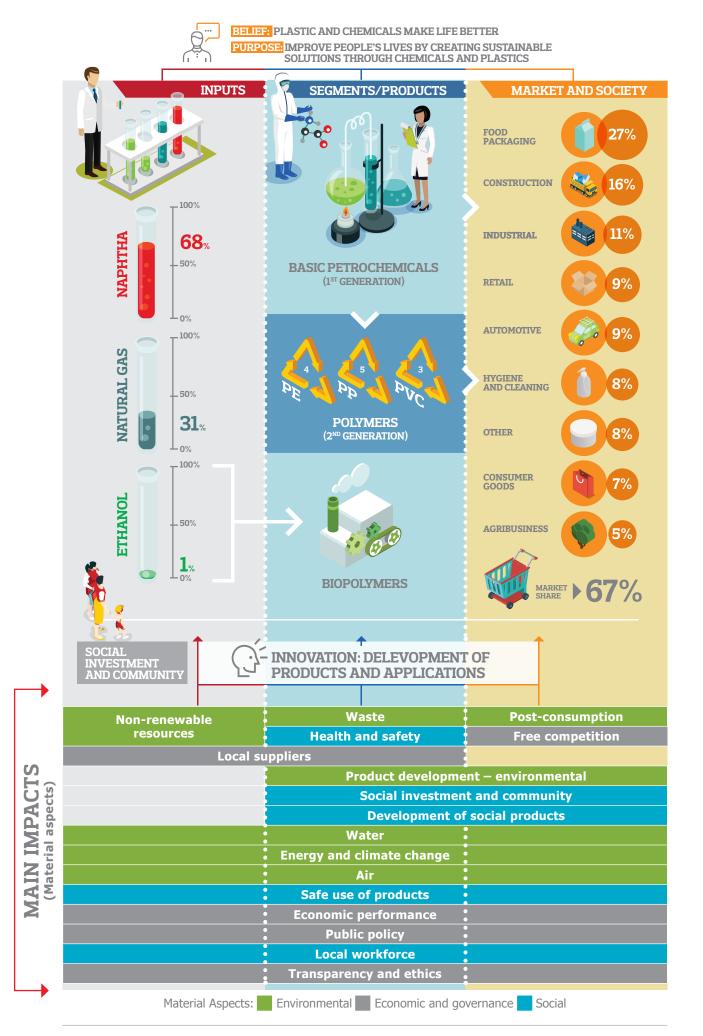
G4-EC8

Braskem is the only petrochemical Company in Brazil with a business model that integrates first and second-generation operations, producing basic chemical inputs such as ethylene and propylene from naphtha, natural gas, and ethane. These compounds are fundamental for the second generation, which involves

manufacturing thermoplastic resins (PE, PP, and PVC), sold to Clients on the chain's third generation, formed by plastic converters.

The structure of Braskem's operation requires investment in intensive capital such as crackers responsible for separation processes (cracking)

of hydrocarbon chains that enable the production of petrochemical products. In this context, integrating first and second-generation operations guarantees competitive advantages, such as production scale and operational efficiency, which are strategies for the Company's growth and continuity.



### **BUSINESS PILLARS**

Braskem's operations are guided by pillars that direct its growth strategy. Survive, grow, and perpetuate are key words for the development of a Company focused on the Client and the market, with its eye on internationalization, the sustainability of its operations, and product and process innovation.

# **Strategic Pillars**

#### **Survive**

- Focus on the Client and the market
- Competitive raw material and energy
- Productivity and operational efficiency

#### **Grow**

- Geographic diversity
- Serve the Brazilian market
- Renewable chemicals

#### **Perpetuate**

- Skills and technology
- People and organization
- Sustainability and innovation



# Survive: protecting value

Based on these guidelines, the Company invests in different initiatives adopted to guarantee protection of value for Shareholders and mitigate risk factors, among them dependence on the input matrix, naphtha, the challenge of competitiveness of the Brazilian industry, the water shortage, lack of adequate post-consumer solutions, and attacks on image and reputation.

With focus on structured operations in each of the strategic pillars, Braskem recognizes the importance of training its staff to support the Client when building competitive business, and

changing and strengthening the petrochemical chain (first, second, and third generations). Beginning with a strong partnership with Clients, when developing new projects such as the search for innovation - its strategy is also driven by the search for more efficient raw materials that reflect on productivity, bring results, and generate an increase in operational profitability and cost management.

This work, focused on business continuity, increasingly consolidates the Company in the Brazilian market and strengthens the path to internationalization — especially

in the Americas, with entry in the Braskem Idesa operation, and several investments in the units in the United States. However, a growth project cannot be carried out without special attention to sustainable development and a strong commitment to the health and safety of its Team Members and the communities in which the Company operates. Therefore, Braskem places among its pillars the concern for the development of a chemical based on renewable sources of raw material, 100% recycled plastics, and technology that helps reduce consumption and preserve natural resources.

# Grow and Perpetuate: creating value

Aligned with the global governance agenda for sustainable development, Braskem seeks to grow by creating value for Shareholders and gains in competitiveness obtained through new, more efficient industrial processes based on renewable sources.

# **Growth Drivers**

#### **BRAZIL**

- Commitment to supplying the growing domestic demand for thermoplastic resins, seeking to add value to already existing currents.
- Strategically well positioned to grasp future availability of raw material.
- Commitment to competitiveness and the development of the Brazilian petrochemical and plastics chain.
- Expand with future availability of raw material.
- Diversification of raw materials.

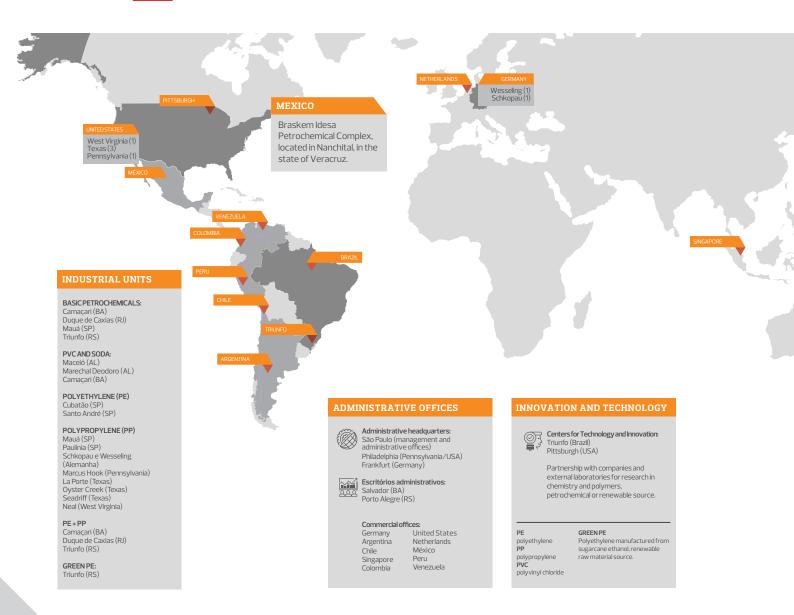
#### **INTERNATIONALIZATION**

- Broaden presence in countries with competitive raw material.
- Be a preferred partner for the development of the Latin American petrochemical industry.

#### **SUSTAINABLE CHEMICALS**

- Capture the advantages of Brazilian ethanol and bring.
   innovative solutions that guarantee the chain's sustainability.
- Develop new paths to growth through the use of renewable raw material.

# **BRASKEM IN THE WORLD**





To learn more, visit



Braskem > Braskem in the world

# BRASKEM IDESA PETROCHEMICAL COMPLEX COMES INTO OPERATION

G4-13

The year 2015 marked the beginning of a new phase for Braskem's global expansion strategy. At the end of 2015, the Brazilian Company, in a joint venture with Grupo Idesa, reached 99% of physical progress on the construction of the Etileno XXI (Ethylene XXI) project, a new Petrochemical Complex to produce ethylene and polyethylene, located in Nanchital, in the State of Veracruz, in Mexico.

With the start of operations planned for the beginning of 2016, the project budgeted at R\$ 15 billion and the biggest petrochemical industry in Latin America in recent years, reduces the Country's dependence on imports of petrochemical products and strengthens Braskem's participation in meeting the demands of global Clients, especially in the packaging industry.

The Braskem Idesa Petrochemical Complex has annual production capacity of 1.05 million tons of high and low density polyethylene resin, as well as an equivalent volume of ethylene from ethane gas, whose supply is ensured by a 20 year-contract with Mexican oil company Pemex.

# **Figures of the Mexican market**



**TOTAL NUMBER OF CLIENTS:** 1,500 transformers



**MARKET DEMAND:** 2.1 million tons/year polyethylene



PRE-MARKETING
NEGOTIATIONS:
100,000 tons in 2015



# Project structure and competitive and environmental advantages

- Boilers: the project has natural gas boilers to generate steam for power generators (combined-cycle turbines) and compressors.
- Logistics network: operated railways from interconnecting the Southeast region, where it is located, to the Central and North regions of the Country. The logistics platform is considered one of the largest in Latin America with an area of approximately 20 hectares, a covered warehouse of 20,000 square meters, 21
- silos with capacity of 1,000 cubic meters each, and other support facilities. In 2015, the Company signed a contract with five distribution companies and five logistics operators.
- **Fleet:** composed of 1,300 train cars used for distribution of polyethylene production in the domestic market and for export.
- construction of 200 kilometers of pipelines to supply 1.23 million tons of ethane gas a year, through

- long-term contract with Mexican oil company PEMEX.
- Energy: from the new equipment installed, the complex will have 12% reduction in specific energy consumption relative to the average of all Braskem operations.
- GHG: reducing the intensity of greenhouse gas emissions (GHG), 28% lower than the Braskem average.
- Water: reclaimed water facilities that should provide a water reuse rate of approximately 20%.

# **Braskem Idesa Complex:** an example of safety

In 2015, the Braskem Idesa Petrochemical Complex became a benchmark in safety. The project consolidated, at the end of the year, an accident rate of 0.44 per million man-hours, considering direct involvement in the construction work of 17,000 workers (peak in 2015). Given the performance in safety in Mexico, the project received the Industrial Safety Award, from DuPont as a global highlight in construction safety.

# Ethylene XXI: best pre-marketing of the Company

In pre-marketing sales alone, the Company reached 100,000 tons of products traded in 2015 from the operation of the Mexican complex, which was regarded as one of the most interesting pre-marketing operations in the history of Braskem. The Braskem Idesa Petrochemical Complex will help increase Braskem's participation in sales of chemical inputs and thermoplastic resins to the United States.

# **Biodiversity**

G4-EN12 | G4-EN14

During the construction phase, three programs were implemented to reduce impacts on biodiversity:

- Relocation, conservation, and multiplication of the vegetation of 331 plants of the species Ceratozamia Miqueliana (a rare and endangered species),
- expanding by a factor of five the total population initially identified.
- Salvage and relocation of 549 individuals of the local wildlife, among amphibians, reptiles, and mammals.
- Reforestation process by planting approximately 300 hectares.

Of the 200 hectares of land acquired for the project, 30 remained untouched as environmental conservation area. In addition, 100 hectares were acquired for management and conservation of biodiversity, as well as other projects in third-party areas.

# Social projects

Along with the completion of the Ethylene XXI Project, Braskem Idesa advanced in the demobilization process of the teams of workers who worked directly in the construction —

which in 2015 achieved a total of 17,000 people, with 90% recruited from the region surrounding the petrochemical complex. With the goal of transferring earnings of the complex to local

communities, Braskem Idesa invests in social projects that have been implemented since 2014 and which also reached their mature stage in 2015.

# 1. Training of manpower for jobs associated with the Ethylene XXI Project

Actions in partnership with the Government of the State of Veracruz involved four communities surrounding the project.

Training focused on developing skills to the required positions, such as industrial welding, use of forklifts, and industrial painting.

## 2. Incentive to entrepreneurship

Since 2014, Braskem Idesa has mapped regional suitability for the development of production chains through entrepreneurship projects. In 2015, this work evolved into hiring consulting services and training courses. As a result, 13 formal cooperatives

were formed with the involvement of 200 people, 93% of them women. Regularization of these activities enabled the beginning of the businesses that related to these actions.

#### **Projects that were implemented were**

- Tilapia farming
- Production of cleaning products
- Production of uniforms and recycling of materials provided by Braskem Idesa for craft production and chicken farming.



Braskem operates in line with best corporate governance practices in the market, having as a priority in this model responsible and transparent management of all its assets. These principles are part of the Public Commitment assumed by the Company since its formation in 2002, and that represents a differentiator perceived by Team Members, Clients, Shareholders, Suppliers, and Society.

The Company operates within the highest corporate governance standards in the market, participating in Level 1 of the São Paulo Stock Exchange (BM&FBOVESPA) since 2003 and meeting some requirements of Level 2 and Novo Mercado (special listing segments of BM&FBOVESPA companies ), including:

- Disclosure of financial statements in English, according to international standards (IFRS).
- Board of Directors with at least five members, unified term of up to two years, allowing for re-election, and at least 20% of Independent Members.
- 100% tag along for all shares in the event of change in controlling interest.

Outside of Brazil, Braskem's shares are also listed on the New York Stock Exchange (NYSE) and Latibex — Latin American section of the Madrid Stock Exchange — and, for this reason, are subject to the requirements of the respective regulatory bodies, namely, Securities Exchange Commission (SEC), in the United States and

Bolsas y Mercados Españoles (BME), in Spain. In 2005, Braskem was one of the first Foreign Private Issuers (FPIs) in South America to adjust to the requirements of Sections 404 and 302 of the Sarbanes-Oxley Act (SOx).

For the fifth consecutive time, Braskem was chosen to join BM&FBOVESPA the carbon efficient Index (ICO2) portfolio, and remained on the list of the Corporate Sustainability Index (ISE) of the São Paulo Stock (BM&FBOVESPA), Exchange a position the Company has held since the creation of the index in 2005. In addition, the Company is also listed on the Dow Jones Sustainability Index (DJSI) of the New York Stock Exchange, since 2012.

# Communication: transparency in relations with the market and internal audience

G4.58

As part of its legal commitments, Braskem regularly sends information to the Securities and Exchange Commission (CVM) and to the São Paulo (BM&FBOVESPA) and New York (NYSE) Stock Exchanges, as standardized financial statements, press releases, relevant facts, among others.

In addition, the members of the Board of Directors and Fiscal Council provide an exclusive information channel that can be accessed on the company's website on the Internet, which provides security, transparency, fairness and speed in the process to communicate with Shareholders.

To the internal audience, the communication channel Braskem View (intranet), developed in Portuguese, English, and Spanish, publishes the Company's national and regional news, business and corporate information, products, campaigns and internal processes and acknowledgments.



These documents are available on the Company's investor relations website

(>) Braskem > Investor Relations

### Code of Conduct: Ethics and Integrity

G4-56 | G4-57

Operating in accordance with the applicable laws, regulations, policies and best practices is a fundamental principle of Braskem.

Effective compliance represents for Braskem an intangible asset, in the protection and strengthening of the Business. The constant review of the compliance standards, as well as of the code of conduct, are recommended practices to ensure that Braskem is adherent to the best global processes. In relation to the Code of Conduct, it was last reviewed in 2014, with subsequent dissemination of its contents to all Team Members of the Company. The process included questionnaires on the subject and electronic signature of the term of commitment with the guidelines of the Code. It is a model that remains in

force in order to ensure full assimilation of content by all Team Members.

Braskem's Code of Conduct is translated into all languages of the countries where Braskem has operations. It can also be accessed through the corporate intranet and the website of the Company (www.braskem.com).

#### **Ethics Line Channel**

G4.58

In a cross-sectional manner. Braskem offers the Ethics Line Channel. Through this channel, Team Members, Suppliers, Third Parties, Clients and other stakeholders can, in a secure and responsible way, contribute information to maintain a corporate environment that is trustworthy, secure, ethical, transparent and productive. This channel can be accessed via the Company's website or toll free in the language of the countries where Braskem has operations. All information received through the channel is investigated respecting confidentiality and independence, ensuring the anonymity of denouncers and security in investigation.

The results from the respective investigations are presented and discussed in the Ethics Committee, composed of the Legal Representative, Corporate Security Manager, People and Organization Manager, Finance Manager, and Institutional Relations

Manager. No retaliation is allowed or tolerated against those who, in good faith, report a concern about a conduct that is not in compliance with the guidelines laid down in the Code of Conduct.

The following diagram presents a summary of the cases recorded through the Ethics Line and the remedies taken by the Company in response, with a breakdown of cases concerning corruption, conflicts of interest, and discrimination.



Learn more at



(→) Braskem > Ethics Line

#### **MAIN RESULTS FROM THE ETHICS LINE 2015**

29 cases opened in 2014 started under an investigation process in 2015

85 cases opened in 2015

31 cases opened in 2015 under an

18 cases filed without deviation of conduct

11 cases filed with deviation of conduct, with the following remedies taken:

- 3 Team Members terminated
- 1 Partner suspended
- 6 Suppliers blocked
- 15 process improvements implemented

35 cases filed without deviation of conduct

19 cases filed with deviation of conduct, with the following remedies taken:

- 5 Team Members terminated
- 4 Partners suspended
- 2 cases passed on to the Federal Public Attorney's Office
- 23 process improvements implemented

investigation process in 2016

#### Considerations:

- The cases of the Ethics Line are filed in the quarterly meetings of the Ethics Committee
- The last meeting of 2015 was held on December 3, 2015
- All actions subsequent to this date will be announced in the next Annual Report

#### CASES OF DISCRIMINATION<sup>4</sup> G4·HR3

Number of Cases with legal basis: four

**Measures adopted by the Company:** the Team Members involved received feedbacks and P&O is following the development of these professionals. There was no new evidence of deviation of behavioral conduct on the part of these Team Members that have been reported to the Corporate Security area.

#### CASES OF CORRUPTION AND CONFLICT OF INTEREST<sup>5</sup> G4.S05

**Number of confirmed cases:** no case of corruption and four cases of conflict of interest, without involvement of public agents

**Type of cases:** Team Members sought benefits for themselves (without involvement of public agents)

**Actions taken:** three Team Members were terminated. In one of the cases, the Supplier was blocked. In the other three, there was no direct involvement of Suppliers or the infraction was direct between Team Member and Braskem.



Learn more at



Braskem > Corporate Governance

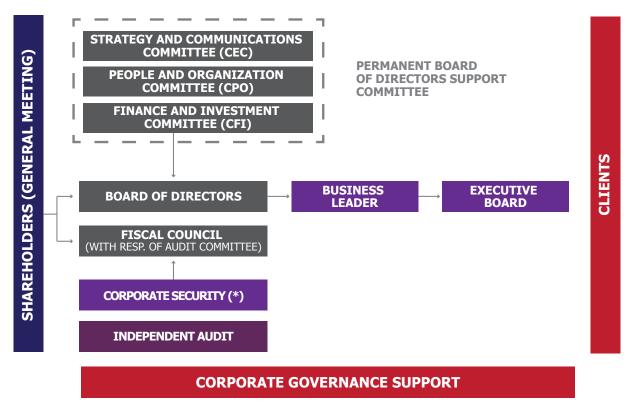
Note: There was no public corruption related lawsuit against Braskem or its members in 2015.  $^{4 \text{ and } 5}$  Registered in the Ethics Line Channel

#### **GOVERNANCE STRUCTURE**

G4-34 | G4-39

The coordination between the corporate governance agents – The General Meeting of Shareholders, Board of Directors, Standing Committees to Support the Board

of Directors, Fiscal Council, Business Leader, Executive Board and Independent Auditors – takes place through Braskem's Corporate Governance area with the support of the Corporate Security area, which acts as an internal audit regarding the activities carried out by the Fiscal Council, as shown below:



Note: Governance structure 31/12/2015. \*Area responsible for Internal Audit and Compliance

The responsibilities of each of the agents of Braskem's corporate governance structure are aligned with the goals to create value for the Company's Shareholders and include the following scope of operation:

**General Meeting of Shareholders** (AG): sovereign body, which has the power to decide on all business relating to the corporate purpose of the Company and take resolutions it deems convenient to its defense and development. Its competencies, forms and operation are governed by the Brazilian Corporate Law (Law No. 6,404) and its subsequent amendments.

Board of Directors (CA): it is an autonomous body of a collegiate nature with its operations regulated by the current legislation, by the By-laws and Rules of Operation. It is responsible for accountability to Shareholders, other stakeholders and society at large, and for the tangible and intangible assets used in the administration of the Company. Its main responsibilities are: to guide the Company's business, monitor its operation and administration, decide on strategic issues, guide the Executive Board on relevant issues, approve generally applicable policy proposals of the Company and decide

on investments within its purview, as well as other responsibilities provided for in the By-laws.

It is formed by 11 Board members and their respective alternates, elected or removed from Office at any time by the General Meeting of Shareholders. This instance is composed of two independent Board members, independent in relation to the controlling Shareholder, according to best governance practices indicated by BM&FBOVESPA and the guidelines of the Sarbanes-Oxley Act. None of the members of the Board of Directors has an executive role at Braskem.

<sup>&</sup>lt;sup>6</sup> On December 31, 2015, the Board of Directors had three open positions awaiting indication of Shareholders to recompose the Board of Directors.

#### HOLDERS

#### **ALTERNATES**

Newton Sergio de Souza  Chairman of the Board of Directors	Roberto Prisco Paraíso Ramos	
Patrick Horbach Fairon  Vice Chairman of the Board of Directors	Luis Adolfo Pereira Beckstein	
Alfredo Lisboa Ribeiro Tellechea	Luiz de Mendonça	
Álvaro Fernandes da Cunha Filho  Independent member	Paulo Oliveira Lacerda de Melo	
Antônio Aparecida de Oliveira	Marcus Vinicius de Oliveira Magalhães	
Andrea Damiani Maia	Arão Dias Tisser	
	Daniel Bezerra Villar	
Marcela Aparecida Drehmer	Mauro Motta Figueira	
Mauricio Roberto de Carvalho Ferro	Luciano Dequech	
Roberto Zurli Machado  Independent member	José de Freitas Mascarenhas	

.....

# **Standing Committees to Support the Board of Directors (Committees)**

The Board of Directors has three Committees provided for in the By-laws and in the Shareholders' Agreement, which integrate the corporate governance structure. They aim to assist the Board of Directors in pre-established matters and are composed of four directors each. They are:

People and Organization
Committee (CPO): supervises
policies and programs related
to People and Organization,
such as compensation, code
of conduct, health, safety and
environment, and the private
pension programs. In addition,
the CPO reviews significant
changes in macrostructure and
replacement and succession of
executives in strategic positions.
The CPO is formed by Andrea

Damiani Maia (Coordinator), Álvaro Fernandes da Cunha Filho, Daniel Bezerra Villar, and Paulo Oliveira Lacerda de Melo.

Finance and Investment Committee (CFI): supervises the policies related to finance; insurance and guarantees; financial risk management; the annual and quarterly results; the alliance agreement; evaluates and supervises the investment projects approved by the Board of Directors, as well as contributes to the development of the Action Program (PA) of the Business Leader (LE) to be proposed to the Board of Directors, among other issues. The CFI is formed by Marcela Aparecida Drehmer (Coordinator), Roberto

Prisco Paraíso Ramos, Antônio Aparecida de Oliveira, and Roberto Zurli Machado.

**Strategy and Communication** Committee (CEC): with regard to strategic directives, the CEC evaluates definitions for planning and preparation of the Action Plant of the Business Leader. With regard to communication issues, the Committee supervises policies and programs of institutional image, sustainability, social responsibility communication with the capitals market. CEC is formed by Mauricio Roberto de Carvalho Ferro (Coordinator), Alfredo Lisboa Ribeiro Tellechea, and Patrick Horbach Fairon.

### **Permanent Fiscal Council (CF)**

The activities of the Fiscal Council are governed by Law 6,404, by Braskem's By-laws and its Rules of Operation, as well as, to the extent compatible with the Brazilian legislation, by the SOx of the United States. In view of the requirements demanded by SOx, the Fiscal Council had its activities expanded in 2005, acquiring the responsibilities of an Audit Committee. Its main responsibilities are: (a) supervise the acts of the Administration, in

order to ensure fulfillment of their legal and statutory duties, issuing opinions and providing information to Shareholders; (b) follow up on annual and quarterly results of the Company; (c) approve the annual list of pre-approved services that can be provided by the independent auditors; (d) oversee the work of internal and external audit; (e) analyze the report of recommendations prepared by the independent auditors, as well

as the reports on internal controls containing the points that could impact the Company's financial statements; and (f) analyze and recommend to the Board of Directors the appointment of independent auditors. The Fiscal Council is formed by five Board members and their respective alternates, elected or removed from Office at any time by the General Meeting of Shareholders, for a term of one year.

On December 31, 2015, Braskem's Fiscal Council was composed of:

#### **HOLDERS**

#### **ALTERNATES**

Marcos Antônio Zacarias <b>President of the Fiscal Council</b>	Hubert Georg Deierl
Aluízio da Rocha Coelho Neto	Tatiana Macedo Costa Rego Tourinho
Ismael Campos de Abreu	Afonso Celso Florentino de Oliveira
Luiz Gonzaga do Monte Teixeira	Amós da Silva Câncio
Gilberto Braga	Ana Patricia Soares Nogueira

### **Business Leader and Executive Board**

Braskem's Executive Board has its operations regulated by the legislation and By-laws, and its responsibilities are management of the business and of the Company's functional areas, as well as the implementation of general policies and guidelines set out by the Board of Directors.

As provided for in its By-laws, the Statutory Board is a permanent body of the Company, and must be composed of at least four and at most ten members, with a President, a Director of Investor Relations, and the other Directors without specific designation, elected by the Board of Directors.

The President, in performing his role as a Business Leader, is responsible for creating the conditions necessary for the Survival and Growth of Braskem and for the development and consolidation of the bases for Perpetuity of the Company as defined by TEO.

Braskem's Executive Board is composed of:

Carlos Fadigas*	President
Mário Augusto da Silva*	Director of Finance and Investor Relations
Marcelo de Oliveira Cerqueira*	Responsible for the Basic Petrochemicals Unit
Luciano Nitrini Guidolin*	Responsible for the Polyolefins, Vinyls and Renewables Unit
Gustavo Sampaio Valverde*	Responsible for the Legal and Corporate Governance Departments
Marcelo Arantes de Carvalho*	Responsible for People & Organization, IT and Procurement
Marcelo Lyra do Amaral	Responsible for Institutional Relations and Sustainable Development
Fernando Musa	Responsible for the United States and Europe Unit
Roberto Bischoff	Responsible for the Latina America Unit

<sup>\*</sup> Statutory Directors

### Independent Audit

Is responsible for issuing technical opinions about the Financial Statements with independence and in compliance with the current legislation. Companies that provide audit services are replaced every five years, at the most, as determination of CVM Instruction No. 308/09.

# **Corporate Security**

Is responsible for evaluating the processes regarding effectiveness of risk management and internal controls and compliance with internal policies and guidelines and market regulations, independently and through a systematic and disciplined approach, with the purpose of improving the effectiveness of operations and add value to the business.

# **Internationalization and improvement of Corporate Security**

The global economy requires Braskem's ongoing commitment based on best practices worldwide, on the topics of Corporate Security that include compliance issues, risk management, internal audit, and management of the Ethics Line Channel.

As it consolidates a global

operating model, Braskem advances in strengthening the Corporate Security area and the Compliance program in a manner that is aligned with best practices and public commitments that highlights its operating model in the market. As part of this process, the Braskem Corporate Security

Program demonstrates that it is possible to increase the reach of its scope of activity and improve its effectiveness through incorporation of best practices captured in each location where Braskem has operations in order to maintain the effectiveness of the Corporate Security program globally. They are:

#### People

Strengthening the corporate structure with the Compliance program for supporting key areas. Formation of a single Ethics Committee for the entire global operation, with capacity building and training taught by local teams of each Country, under guidance of the Corporate Compliance team.

#### **Processes**

To simplify, standardize and qualify the processes, Braskem adopted a project for integrated management of business called Formula.

Braskem has a unique Code of Conduct and establishes a process for receipt and investigation of reports from the Braskem Ethics Line channels. A unique platform of knowledge management of policies, guidelines and procedures was also implemented.

#### **Technology**

Continuous monitoring of risk indicators of key processes, as well as the global solution for Risk Management and Compliance and automation of tests of key controls.

### **Anti-corruption Action**

A signatory to the Global Compact of the United Nations (UN), Braskem engaged in leading anti-corruption actions, one of the 10 principles listed in the Compact. In 2015, the Company took over the coordination of the Working Group (WG) Anti-corruption of the Brazilian Network of the Global Compact, the fourth largest network in the context of the organization, with more than 700 participating companies.

In this context, the WG, coordinated by a lead of Braskem, held workshops and conducted training courses focusing on expansion of discussions on the importance of effective compliance programs, presenting best practices of prevention and mitigation of risks of corruption. In addition, it was responsible for translating into Portuguese the Guide for Anti-Corruption Risk Assessment, prepared by the United Nations, and developed an Anti-Corruption booklet, released in Brazil on December 9, when the International Anti-Corruption Day is celebrated.

### 10 Principles of the Global Compact

Braskem has been a signatory to the Global Compact of the United Nations (UN) since 2007 and is in the lead among the participating companies with the highest levels of communication on progress in the adoption of the 10 Global Compact principles. Since 2008, the company has integrated the Brazilian Global Compact Network, responsible for its Chair for the 2013 – 2014 biennium.

Braskem is also a member of the LEAD Group, leading companies of the Global Compact selected among all the signatories in the world, since 2013. In addition, in 2014 the Company held a seat on the Steering Committee of the LEAD Group. Members of the group have the opportunity to closely monitor the Global Compact initiatives and influence their strategic decisions.



Management of sustainable continues be practices to prominent in all actions undertaken Braskem. For the fourth consecutive year, the Company has maintained its position on the Dow Jones Sustainability Emerging Markets Index, a sustainability index of companies in emerging countries listed by the New York Stock Exchange (NYSE)

composed of 92 companies, 16 of them Brazilian. In addition, for the fifth time, Braskem was selected to compose the Carbon Efficient Index Portfolio (ICO2) by BM&FBOVESPA, and remained on the Corporate Sustainability Index, also by the São Paulo Stock Exchange (BM&FBOVESPA), a position held since the creation of the index in 2005.

These achievements confirm the Company's commitment to the world's best sustainability practices in the industry. Its operation is guided by a concept development sustainable encompassing the economic, social, and environmental pillars related to the Company's activities and production chain.

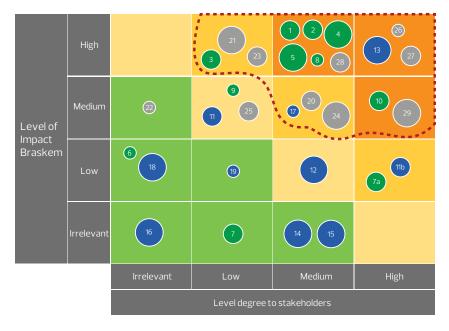
#### **MATERIALITY**

#### G4-18 | G4-19 | G4-20 | G4-24 | G4-25 | G4-26 | G4-27

matrix Braskem's materiality reflects its concern with minimizing negative impacts and maximizing its positive influence.

In order to reach this goal, the Company carried out a survey with its main stakeholders, and together defined the material aspects. The

ten strategic macro-objectives for sustainability cover these material aspects for the Company and its stakeholders.



#### **BRASKEM'S LEVEL OF CONTROL MATERIALITY** OR INFLUENCE UPON HE ASPECT **CRITICAL** 0 MINIMUM LOW **MEDIUM STRONG** LOW **MATERIAL ASPECTS**

#### **ENVIRONMENTAL**

- (1) Non-renewable resources
- (2) Water
- (3) Climate change and energy
- (4) Air
- (5) Waste
- (6) Transportation
- (7) Biodiversity
- (7) Biodiversity Mexico
- (8) Post-consumption
- (9) Suppliers environmental management
- (10) Product development environmental

#### **SOCIAL**

- (11) Jobs
- (11b) Jobs USA
- (12) Freedom of association
- (13) Health and Safety
- (14) Training and career
- (15) Equal opportunities
- (16) Property security (17) Safe use of products
- 18) Grievance mechanisms
- (19) Suppliers social management

- (20) Economic Performance
- (21) Social investments and community
- (22) Public assistance
- (23) Local suppliers (24) Free competition
- (25) Corruption
- (26) Public policies
- (27) Product development social (28) Labor from Local Communities
- (29) Transparency and integrity

Aspect 4 - Air was considered material given the level of importance assigned by local communities and the potential impact of the Company. It was not associated with any macro objective, since it is considered highly regulated and well managed by the Company, with no actual impact being observed. To learn about the Company's performance, see Social and Environmental Management, Environment, Energy, and Climate Change

To learn more about the process of consultation and analysis that identified the material topics for the Company and its stakeholders, see:



Braskem> Materiality Matrix

MAPPING OF STAKEHOLDERS	MAPPING OF STAKEHOLDERS				
Category of stakeholders interacting with Braskem		Means of engagement			
	Political/strategic: Trade unions, regulatory agencies, professional associations, executive branch, legislative branch, public prosecutor's office, environmental agencies, public/regional opinion, ngos, Financial market analysts, auditors	Meetings, Reputation Survey*			
Influenciators	<b>Industry:</b> Competitors, trade associations	Industry trade shows, Participation in sector meetings			
	Media: Coordinators, specialized media, general media, social networks/virtual environment	Press Releases, Meetings, Interviews, Reputation Survey*			
	Academia: Research centers, schools, researchers, Universities, technical schools	Meetings, Reputation Survey*, Projects in partnership			
Facilitators	<b>Suppliers:</b> Raw materials, Petrobras, indirect materials, services, technology	Meetings, E-Mails, Internet Channel with exclusive access, Reputation Survey*			
	Financial market: Controlling shareholder, minority shareholder, board of directors, financial institutions, debt provider, banks	Meetings, Website "Investor Relations", Reports, Video conference on results			
	Members: Members, third parties	E-Mails, Internal Campaigns, Newsletters, Safety Dialogues, Recognition Award, Intranet, Reputation Survey*, Climate Survey (every two years), Communication Survey (every two years)			
Impacting	Communities: Residents, local leadership, partners initiatives	Projects, Direct Relationships with Local Representatives from the Institutional Relations Area, Reputation Survey*			
Beneficiaries	Society: ABC 18+/ national, families of members	Reputation Survey*			
	Clients: Clients of end consumers distributor, Unib, Unipol, Unvin, international	Meetings, Visits to Facilities, Technical and Relationship Events, Industry Trade Shows, Sponsorship, Internet channel with exclusive access, Sales support service by account managers, Technical development agenda, Reputation Survey*			

<sup>\*</sup>The reputation survey has been carried out each year since 2009, with the support of the Reputation Institute.
The program relies on an Image and Reputation Management Committee, with participation of representatives of all Company areas, responsible for discussing the main risks and opportunities in the production process and the strengthening of the trust of Braskem's stakeholders.

# Macro-objectives for sustainable development



Increasingly sustainable Operations and resources Increasingly sustainable Product portfolio

Solutions for an increasingly sustainable life

#### PILLARS OF BRASKEM'S SUSTAINABILITY STRATEGY

**SAFETY:** be recognized as a reference in chemical, occupational and process safety, in the global chemical industry.

**ECONOMIC AND FINANCIAL RESULTS:** be among the three largest producers of thermoplastic resins in the world, guaranteeing profitability that supports the continuity of the business, maintaining "Investment Grade" classification in the 3 main international agencies.

**POST-CONSUMPTION:** be recognized as an important agent that contributes to the recycling of plastics

**RENEWABLE RESOURCES:** be recognized as a leader in the production of chemicals and thermoplastic resins from renewable raw materials, continuing to be the world's largest producer of thermoplastic resins from renewable sources.

WATER EFFICIENCY: continue as a reference in the use of water resources in the global chemical industry.

**CLIMATE CHANGES:** be among the best large chemical companies in the world in terms of greenhouse gas emissions (GHG) intensity and a major player in carbon sequestration, as a result of the use of renewable raw materials.

**ENERGY EFFICIENCY:** be among the world's best large chemical companies in terms of energy consumption intensity and a major user of renewable energy.

**LOCAL DEVELOPMENT:** be recognized by the communities surrounding our operational sites and by society in general for our contribution to the improvement of human development, as shown by achieving the reputation level of "excellent" in the Citizenship Dimension of our Reputation Survey (RepTrakTM Pulse).

**DEVELOPMENT OF SOLUTIONS:** be recognized as a company that supports its Clients in the development of environmental and social solutions; contribute to the perception of plastic as a solution to sustainable development due to its potential to improve people's lives.

**STRENGTHENING OF PRACTICES:** be recognized as a corporate leader in Brazil, as well as a global leader in the chemical industry, for our contribution to sustainable development.



For more information about each macro-objective and its main actions carried out in 2015 and planned until 2020.

Braskem > Goals and Initiatives

(A) Learn more about Braskem's Macro-objectives for sustainable on page 145

### **Paris Agreement**

The global debate on climate change gained a historical milestone in 2015 with the 21st edition of the UN Climate Conference in Paris, France. The international event, which brought together the heads of state of the world's main economies, culminated in a historical agreement that will guide the public and private actions in the coming years.

As one of the signatories to the Open Letter of global CEOs directed toward the world leaders present at the COP-21, Braskem is among the multinational participants of Caring for Climate Business Summit, of the Global Compact, the world's largest coalition of companies dedicated to developing solutions capable of accelerating the transition to a more sustainable economic model. At the event, the Company ratified its commitment to reducing CO<sub>2</sub>

emissions, to a continuous investment in product development with a lower carbon footprint and of products from renewable sources.

To strengthen the global movement for mitigating impacts arising from climate change, Braskem also joined the "Paris Pledge."

Braskem was also featured among the companies that participated in the Carbon Disclosure Program (CDP), an international non-profit organization seeking to foster management and pricing of greenhouse gases. The Company earned the highest possible score (on a scale of 0 to 100) regarding transparency when accounting for emissions data, in addition to an A- score (the best among Brazilian companies) regarding performance (on a scale of E to A+).

#### Sustainable Development Summit

The Sustainable Development Goals (SDG), a document establishing 17 global goals to be reached by 2030, were established between 2012 and 2015 with a broad consultation process. Braskem participated in this process as a Member of the Brazilian the Global Compact Committee, working actively in the Sustainable Development Summit.







The global economic scenario and the context of the economic recovery of the United States and Europe, responsible for boosting the global demand for petrochemical products, raised the Company's financial performance in the Brazilian real and the dollar in 2015 to one of the highest levels in its history.

During the year, Braskem reached a record EBTIDA amount of R\$ 9.37 billion accumulated in 2015, a 67% growth over the previous year. In US dollars, the result reached US\$ 2.8 billion, advancing 17% compared to 2014. The Company's corporate leveraging, measured in US dollars by the Net Debt/EBITDA, was 1.91x reaching the lowest level in nine years, representing a 26% drop compared to the same period the previous year. The consolidated net profit in 2015 reached R\$ 2.89 billion, of which R\$ 3.14 billion were for the Company's Shareholders, referring to parent Company profit. The Company's equity closed the year at R\$59,961,294.00.

#### **Profit**

Consolidated net profit of R\$ 2.89 billion in 2015.

#### Growth

In 2015, Braskem registered a record EBITDA in the real and the dollar, reaching R\$9.37 billion and US\$ 2.8 billion – a 67% growth compared to the previous year.

# **Aprimore Project**

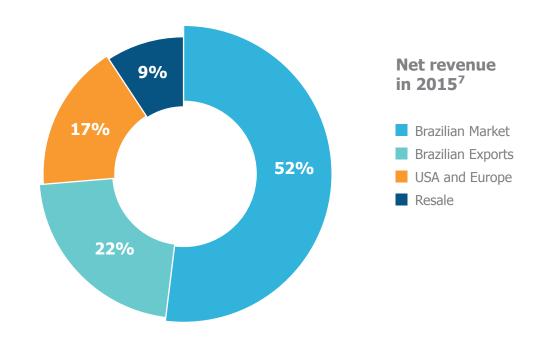
In line with the responsible management of financial assets, during the year 2015, Braskem implemented the Productivity and Efficiency Increase Project (Aprimore Project) which foresees

a cost reduction of R\$ 400 million per year on a recurring basis by 2017, without compromising investments in asset maintenance and safety. The plan involves over 200 Braskem Team Members in the implementation of 82 initiatives previously designed and approved by the Company in 2014. In 2015, the implemented actions reached recurring gains of R\$ 156 million.

The low price of oil in the international market broadened the sales margin for petrochemical products, which was one of the main drivers for the Company's strong cash generation in 2015. In addition, positive results were driven by good operational performance, especially in the United States and Europe for a larger volume of exports and,

partially, the average depreciation of the Brazilian real of 42% over the year. The depreciation of the exchange rate had a positive effect, since 100% of the Company's revenue is directly or indirectly pegged to only 80% of the costs.

In the United States and Europe, the average rate of operations in the industrial units for the year was 98%, recording 1.97 million tons of production, up 6 p.p. compared to 2014. The general operating result abroad was not higher only due to the overall shutdown of the Schkopau plant in Germany. It was a scheduled maintenance associated with a plant control system change.



<sup>&</sup>lt;sup>7</sup> Source: <u>http://www.braskem-ri.com.br/annual-reports</u>

#### **Detachment from the Brazilian crisis**

**Figures** from 2015 show Braskem's detachment from the Brazilian economic downturn due to the growing maturity of the Company's global operations. The Brazilian economic scenario was more unfavorable than initially predicted, aggravated by a lower than expected growth in China (6.9%, the lowest in 25 years), the drop in the international price of commodities, and the depreciation of currency in

emerging countries, especially the real. The sharp deceleration of important sectors in the Brazilian economy, such as services, construction, and infrastructure, also effected the labor market, reducing income, and consequently, affecting family consumption and levels of investment.

The scenario reduced demand, causing the Brazilian resins

market to reach 4.927 million tons, a drop of 7.6% compared to 2014. In this context, in 2015, Braskem sold a volume of 3.362 million tons in Brazil, 6% less than in 2014. Such a situation caused Braskem to pursue, over the year, opportunities in the foreign market, in order to maintain high rates of operation at its Brazilian plants.

# Strengthening exports

In 2015, the Company made progress in its organizational improvements aimed at developing processes linked to optimizing the flow of exports. These new operations had the purpose of more effectively raising industrial operations in Brazil to the level of foreign operations. Thus, revenue from the foreign market represented 43% of Braskem's total revenue, reaching

R\$22.7 billion year to date, of which R\$ 10.2 billion were from exports. With the most important operations in the United States and Europe, and the beginning of the project in Mexico, the Company has demonstrated a decreasing dependency on the Brazilian market, consolidating the growth of Braskem's global operations.



REVENUE

Revenue from the foreign market represented 43% of Braskem's total revenue

# **High credit notes and shares**

With financial advantage at the lowest level in nine years, Braskem managed to secure investment grade from the main risk classification agencies - Standard & Poor's, Fitch and Moody's – despite the downgrade of the Country's sovereign risk rating in 2015. The Company kept

the investment grade by the three global agencies, and for the first time ranked above the sovereign risk by Standard & Poor's, Fitch and Moody's.

In December, Standard & Poor's reaffirmed Braskem's rating in "BBB" (global scale), above the

sovereign rating, and with the possibility of being two steps above the sovereign rating. According to the agency, this confirmation reflects the strong position of the Company's liquidity, solid cash generation, and geographical diversification.

# Braskem guarantees competitiveness in energy consumption in the Northeast

In 2015, Braskem and other electro-intensive companies in the Northeast managed an important supply guarantee for its operations in the Northeast by extending electricity contracts with Companhia Hidrelétrica do São Francisco (Chesf). Beginning with the issue of Provisional Measure No. 677/2015 converted into Law 13,182/2015 and based on a history of decades

of regulated electricity supply, Braskem obtained an extension on the electricity purchase contracts. Thus, Braskem's main units at the petrochemical complex in Camaçari, Bahia, and in Alagoas, will have a supply available and guaranteed on competitive terms until 2037.

The extension agreement with Chesf and the Federal

Government also makes room for the growth of renewable energy sources in the region. Braskem, along with other electro-intensive companies, will contribute to strengthening the Northeast Energy Fund, for the expansion of the renewable energy matrix in the region, guaranteeing a long-term structured solution for regional and national industrial development.

The electricity supply agreement with Chesf is valid until 2037 and includes the creation of a fund for investing in energy generation primarily in the Northeast



# Renewal of the naphtha supply contract

At the end of 2015, Braskem managed to end a long impasse with Petrobras concerning the supply of naphtha, the raw material for producing thermoplastic resins. The negotiation, which lasted over two years and required contract amendments to enable the continuity of petrochemical operations, came to its end with the signing of a new contract with a term of five years for the supply

of a volume of seven million tons of naphtha annually at a price of 102.1% of the international reference, ARA<sup>8</sup>.

Despite the fact that the new contract does not fully reflect the conditions necessary to ensure the competitiveness of the chemical and petrochemical industry, Braskem considered the signing of the agreement an important way of reducing serious

uncertainties in the political and economic environment surrounding the industry, and thus, avoiding shutdowns of petrochemical plants.

In order to maintain competitive conditions, the contract with Petrobras provides renegotiation rights to both parties if certain market conditions change after the third year of the contract.

# **Allegations**

In early March 2015, Braskem learned, in the context of statements made in legal proceedings against third parties, of claims of alleged improper payments to favor the Company in raw material contracts executed with Petrobras hetween 2006 and 2012.

In view of such claims, the Company proactively initiated an internal investigation procedure. Law firms were hired in Brazil and in the United States, with recognized experience in similar cases, to conduct the process. Since then, Braskem has had frequent contact with U.S. authorities (Securities and

Exchange Commission-SEC and Department of Justice-DoJ) and the Brazilian Securities and Exchange Commission, in particular to provide information and provide documents required by these bodies within the competence of the DoJ and SEC.



To learn more, visit



Braskem > Investor Relations

 $<sup>^3</sup>$  Term used for prices practiced in the Amsterdam $^\circ$  Rotterdam $^\circ$  and Antwerp markets



# **Basic petrochemicals**

In 2015, although influenced by the incident in central São Paulo (learn more about the incident on page 64) and raw material supply problems at the Rio de Janeiro site, ethylene production reached 3.4 million tons, which was 4% above 2014. The main factors were good operating performance, more

competitive crackers based on naphtha in the international market due to the drop in the price of oil and naphtha, and the Company's ability to export the surplus not absorbed in the domestic market.

The production volume of main basic petrochemicals also

showed growth compared to the previous year, especially in the production of propylene and paraxylene influenced by the high average rate of the use of the crackers. In this context, sales of ethylene/propylene showed 1% growth. In turn, BTX and butadiene sales in 2015 grew by 2%.

Production	2015	2014
Ethylene	3,357,078	3,237,886
Propylene	1,389,796	1,306,636
Butadiene	389,272	374,827
BTX*	1,031,280	1,013,873

Total Sales	2015	2014
Ethylene/ Propylene	965,154	957,123
Butadiene	385,514	378,853
BTX*	1.037,307	1,012,091

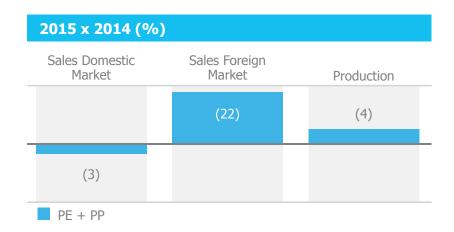
BTX: benzene, toluene, para-xylene and ortho-xylene. Sales of ethylene and propeline are significantly lower than production because part of these products is intended for Braskem's second generation units.

# **Polyolefins (PE and PP)**

Heavily impacted by the weak performance of Brazilian economic activity in 2015, the estimated demand for polyolefins (PE and PP) was approximately 3.9 million tons, a decrease of 5% compared to 2014. In 2015, production volume reached

4.2 million tons, which was 4% above that recorded in 2014, proving high rates of use recorded over the year and the Company's capacity to export the volume not absorbed by the domestic market. Braskem's polyolefins sales, in the domestic

market, decreased 3%, totaling 2,833,000 tons. The market share recorded in 2015 was 73%, a gain of 2 p.p. compared to 2014. Exports, in turn, totaled 1,307,000 tons, an increase of 22% compared to 2014.



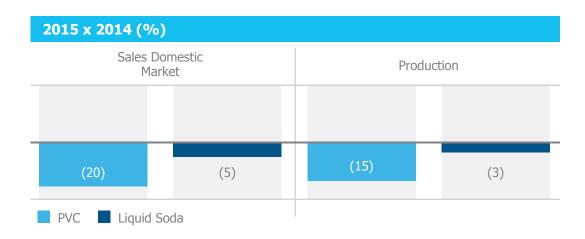
# **Vinyls**

In 2015, the approximate Brazilian demand for PVC was about 1,046,000 tons, a decrease of 16% compared to the previous year. The infrastructure and civil construction sectors, major resin consumer markets, were those that most suffered from the effects of the year's economic

crisis. PVC production volume in 2015 was 542,000 tons.

During this period, Braskem sales in the domestic market totaled 529,000 tons, a decrease of 20% compared to 2014, and the market share was 51%. In 2015, by taking advantage of more

competitive export opportunities, Braskem began to export PVC. The total volume of the resin sold in the foreign market was 65,000 tons. A total of 436,000 tons of sodium hydroxide were produced in 2015 and the Company's sales totaled 435,000 tons in the Brazilian market.



# **The United States and Europe**

In 2015, the North-American demand for polypropylene (PP) showed 5.5% growth in comparison to 2014. The good performance is a reflection of the increase in competitiveness due to the reduced price of propylene (raw material for PP production) as a result of oversupply. Demand for

PP in Europe grew 5.18% during the year. Industrial productivity improvement actions, such as identifying the products most adequate for each plant, optimizing the level of production of each product (faster production of these products), and initiatives towards reducing logistical bottlenecks when

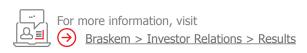
receiving raw materials brought the volume of PP production in 2015 to a growth of 6% compared to the previous year. Sales volume in 2015 was 6% higher, following the increased availability and the improved economy, especially in the United States.

	Sales	2015	2014	VAR.
PP		1,973,274	1,862,560	6%
	Production	2015	2014	VAR.
PP		1,967,028	1,855,676	6%

## **Value Added Statement**

BRASKEM S/A (Values expressed in thousands of Reais)					
	Consolidated		Holding		
	2015	2014	2015	2014	
Revenue	53,115,698	52,761,200	39,023,849	31,527,548	
Gross sales of products and services	53,803,890	52,689,183	39,342,353	31,229,283	
Other net (expenses) revenue	-636,824	153,095	-272,015	376,346	
Provision for doubtful debtors	-51,368	-81,078	-46,489	-78,081	
Inputs acquired from third parties	-42,208,079	-45,412,436	-29,807,759	-26,984,572	
Cost of goods and services sold	-40,772,490	-43,912,319	-28,680,882	-17,151,231	
Materials, energy, outsourced services and other	-1,436,092	-1,503,512	-1,117,036	-9,836,363	
Recovery (loss) of value of assets	503	3,395	-9,841	3,022	
Gross value added	10,907,619	7,348,764	9,216,090	4,542,976	

Depreciation, amortization and depletion	-2,114,929	-2,056,362	-1,774,973	-1,317,928
Net value added produced by the entity	8,792,690	5,292,402	7,441,117	3,225,048
Value added received in transfer	1,703,502	359,861	3,948,130	1,566,965
Results of equity income	2,219	3,929	752,037	621,002
Financial income	1,701,027	355,221	3,196,009	945,580
Other	256	711	84	383
Total value added for distribution	10,496,192	5,652,263	11,389,247	4,792,013
Payroll	1,209,732	1,095,545	740,476	521,546
Direct remuneration	943,263	836,525	551,092	394,135
Benefits	204,766	196,911	129,871	85,102
Government Severance Indemnity Fund (FGTS)	61,703	62,109	59,513	42,309
Taxes, fees, and contributions	1,968,053	902,864	2,296,187	476,470
Taxes, fees, and contributions	1,668,930	522,134	1,500,585	172,160
Estaduais	276,024	363,551	784,988	295,334
Municipais	23,099	17,179	10,614	-24
Remuneration of third-party capital	4,419,627	2,927,553	5,212,273	2,938,933
Financial charges (includes exchange variation)	4,173,254	2,708,331	5,007,564	2,775,028
Lease	246,373	219,222	204,709	163,905
Remuneration of own capital	2,898,780	726,301	3,140,311	864,064
Net income for the period	3,140,311	864,064	3,140,311	864,064
Share of non-controlling shareholder in Braskem Idesa	-241,531	-137,763	-	-
Value added distributed	10,496,192	5,652,263	11,389,247	4,792,013



#### GOVERNMENT

■ G4·EC4

Braskem believes in ongoing dialogue between the government, civil society, and partners from the private sector as the best way to overcome the barriers hindering the Country's sustainable development, Therefore, the Company has expanded its institutional field of action, increasingly assuming the role of a citizen Company, responsible and motivated to propose solutions for the main challenges concerning the business sector. Braskem includes entities with a specific scope of activity from different links on the petrochemical industry's production chain and the industry in general:

- Brazilian Chemical Industry Association (ABIQUIM): discusses topics concerning the and second generation on the petrochemical chain:
- Brazilian Plastic Industry Association (Abiplast): focuses on topics concerning manufacturing industry;
- National Confederation of Industry (CNI): promotes debate forums about the entire industrial sector;
- Brazilian Business Council for Sustainable Development (CEBDS), among others, in the context of macro-economic policies.

It is important to highlight the performance of Braskem with other national entities such as the Ethos Institute, GVces, CEMPRE and Plastivida, and international organizations such as ICCA, ACC, among others. More information these entities about can he the in **Voluntary** Commitments section.

2015, Braskem continued participating in actions toward defending the chemical and plastic production chain, prioritizing the Country's challenges concerning logistics, infrastructure, and energy, topics linked to industrial policy.

The Special Chemical Industry Regime (Reig), an industry claim approved by the Brazilian Federal Government in 2013, remained on the agenda as one of the pillars of the industry's competitiveness recovery project. It provides exemption from PIS-Confins when acquiring raw materials for first and second-generation petrochemicals, benefitting around 50 companies, Braskem among them. Thus, throughout the year, the Company prioritized the topic, focusing on fully maintaining the measure for years to come.

Another incentive program that had been very well received by the production sector mid-2014, but suffered a setback in 2015, was Reintegra (The Special Tax Reintegration Regime for Exporting Companies), which returns a percentage of revenue from foreign sales to exporters of manufactured goods and compensates them for indirect taxes.

Created in 2011 as a temporary mechanism, Reintegra had a rate of 3%. Beginning in 2014, by decision of the Federal Government, the regime was permanently implemented with variable rates that could vary up to 5% of the revenue of exporting companies providing evidence of their export activity.

This rate of credit return, effective from March 1, 2015 to December 31, 2016, should be at 1%. However, with the change announced in September 2015, the rate in effect changed from 1% to 0.1%, valid from December 1, 2015 until December 31, 2016. According to the decree, beginning January 2017, Reintegra will rise to 2%, and again to 3% in January 2018.

R\$/thousand	2013	2014	2015
Total tax incentives / credits <sup>1</sup>	280.650	125.734	173.887
• PRODESIN - ICMS	50.908	60.033	71.614
• REINTEGRA	229.742	65.701	102.273
Grants for investments, research, and other relevant types of concessions <sup>2</sup>	6.518	1.623	-
FINEP	6.518	1.623	-
FINEP Award	1.550	-	-
ECAs (financial aid from export credit agencies) $^{3}$	468.000	-	-

<sup>1-</sup>Tax incentives/credits: federal tax refund by the REINTEGRA program and ICMS tax incentives, conceded by the government of Alagoas, through the Integrated Development Program for the State of Alagoas — Prodesin.

2 —Grants for investments, research, and development: FINEP awards and financing for innovation projects.

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<sup>3 —</sup> ECAs financial aid [export credit agencies]: risk insurance transaction made with Nippon Export and Investment Insurance (NEXI – Japanese agency) for investment in maintenance and the butadiene project.



To Braskem, investing in people is fundamental to ensuring the growth and perpetuity of the business. Operating in an industry subject to global trends, the Company needs high performance teams, capable of anticipating challenges, maximizing opportunities, and mitigating risks.

From the operational point of view, risks inherent to petrochemical industry production also require intense focus on personnel management in order to ensure safety. It is a topic that goes beyond paying attention to the different stages of the production process, and includes the products,

origins, waste, means of disposal, equipment, and most importantly, protecting the people who made the whole process work. To Braskem, safety is a primary concern and treated as the most important macro-objective related to sustainable development.

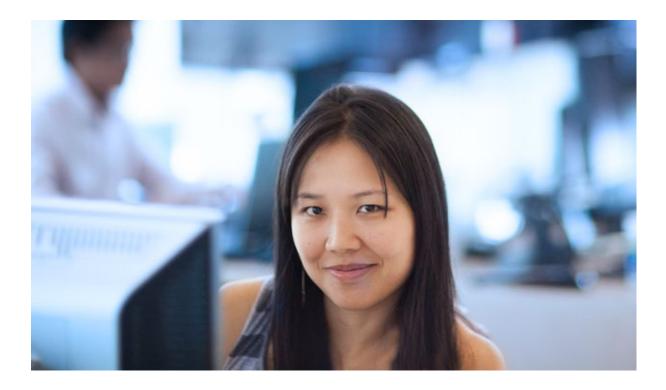
## **TEAM MEMBERS**

G4-LA12 | G4-10 | G4-LA1 | GLOBAL COMPACT - PRINCIPLE 6

People are at the center of Braskem's growth strategy. In line with TEO values, the Company believes in the entrepreneurial spirit of its professionals and the transformative potential of education as primary sources of the evolution of its business. Focused on growth,

the Company's personnel management seeks to strengthen the belief in the chemical and petrochemical industry as a creator of sustainable solutions for improving people's lives and more effectively attracting, integrating, and developing its Team Members.

At the end of 2015, Braskem had 7,995 Team Members. Of that total, 6,4019 worked at industrial units and offices located in five Brazilian states, 680 in the United States, 701 in Mexico, 174 in Germany, and 39 in international commercial offices<sup>10</sup>.



<sup>&</sup>lt;sup>9</sup> Including quantiQ, Brazilian distributor of chemical and petrochemical products directly and indirectly 100% controlled by Braskem.

<sup>&</sup>lt;sup>10</sup> Since they constitute a small portion of the Braskem workforce – 39 Team Members – the Company opted to insert simplified data, as follows: in all, Braskem's International Offices have one Team Member at the operational level, 27 administrators, and 11 Leaders. The majority (30 professionals) is between 31 and 50 years old, nine are under 30, and 23 of them are men and 16 women.

TEAM MEMBERS BY GENDER <sup>1</sup>			
	Men	Women	
Brazil <sup>2</sup>	4,995 (78%)	1,406 (22%)	
United States	556 (82%)	124 (18%)	
Germany	113 (65%)	61 (35%)	
Mexico	552 (79%)	149 (21%)	
Total	6,239 (78%)	1,756 (22%)	

TEAM MEMBERS BY JOB CATEGORY <sup>3</sup> Operational/technical			
	Men	Women	
Brazil	3,935 (89%)	475 (11%)	
United States	267 (92%)	22 (8%)	
Germany	68 (77%)	20 (23%)	
Mexico	406 (87%)	63 (13%)	
Total	4,677 (89%)	580 (11%)	

Administrative		
	Men	Women
Brazil	598 (43%)	788 (57%)
United States	225 (74%)	81 (26%)
Germany	31 (46%)	37 (54%)
Mexico	78 (52%)	72 (48%)
Total	945 (49%)	992 (51%)

Leaders		
	Men	Women
Brazil	462 (76%)	143 (24%)
United States	64 (75%)	21 (25%)
Germany	14 (78%)	4 (22%)
Mexico	68 (83%)	14 (17%)
Total	617 (77%)	184 (23%)

BRASKEM GOVERN	ASKEM GOVERNANCE BODIES				
Age	e bracket	Men	Women	Total	
<=	30 years old	0 (0%)	0 (0%)	0	
31-	50 years old	9 (69%)	4 (31%)	13	
>=	51 years old	16 (100%)	0 (0%)	16	
Tota	al	25 (86%)	4 (14%)	29	

<sup>(1)</sup>There are only 29 Team Members under temporary contracts. The others are hired for an undetermined amount of time. The majority work full time; only 11 work part-time.

→ Learn more about Braskem's Team Members on pages 139 to 142

<sup>(2)</sup> 98.8% of Team Members in Brazil are covered by collective bargaining agreements, 41.8% in Mexico, and 9.7% in the USA.

<sup>(3)</sup> The following positions are included in each work category: Operational/technical: Team Members who operate the plants, engineers, and chemists; Administrative: Team Members working in the business departments, such as: Human Resources, Finance, Institutional Relations, Legal, etc.; Leaders: coordinators and above who have subordinates. Including quantiQ, Brazilian distributor of chemical and petrochemical products controlled by Braskem.

# Management connected to local communities

G4.EC6

Braskem understands the importance of having local Leaders to ensure good comprehension of the needs of the Community, whenever possible, and seeks to hire local people. The Company also believes that it is important that its Leaders

learn about all its operations, valuing transfers to other units as a way of disseminating best practices and increasing Company cohesion. To ensure operations are in tune with reality and the needs of the communities around them,

Braskem also has teams dedicated to Institutional Relations that maintain an ongoing open dialogue with these communities, not only monitoring concerns and potential negative impact, but also working on projects focused on human development.

TEAM MEMBERS OF SENIOR MANAGEMENT FROM LOCAL COMMUNITIES		
Brazil	52%	
United States	Not available	
Germany	63%	
Mexico	21%	
International offices	38%	
Total geral	49%	

Note: Leaders born on the same state in which they are currently working.

## **Recruitment and selection**

Braskem maintains a set of programs aimed towards those who chose the Company as the place to take the first steps in their professional lives. In Brazil, carried out in partnership with Odebrecht Organization the since 2014, Jovem Parceiro - JP (Young Partner) is an integrated program for interns and trainees that quarantees exclusivity to interns for trainee positions, strengthening the importance and value of the internship stage. In 2015, over 50,000 students contacted the Company, resulting from interaction with learning institutions and students bodies,

generating 25,500 registrations. Over the year, 234 college students joined the Company, which closed 2015 with 321 active college interns. The Young Partner program also included 41 trainees in the Company's workforce, meeting the need for new talent in several areas.

Also focusing on the early career, the Youth Program in Mexico (Programa de Jóvenes) included 69 college interns and 10 trainees who had the opportunity to learn more about Braskem Idesa. Composed of 16 hours of training and 15 hours of coaching sessions,

the training program aims to form talent that may accompany the growth of the business. The Associate Program in the United States worked on the development of nine students from the classes of 2014 and 2015 and hired 10 new people for the class of 2016.

Braskem remains committed to investing in training specialized technical labor for the petrochemical industry, supporting the excellence of its operations and its growth strategy, developing its local communities, and strengthening the production chain. In 2015, Braskem operated

with the Brazilian Federal Government through PRONATEC (National Program for Access Technical Education and Employment). The partnership guaranteed the government investment of R\$ 2.4 million in the theoretical stage, carried out by SENAI, of technical courses offered to the Company's neighboring communities. In 2015, a total of 560 openings were created in specialized technical training courses in order to strengthen the chain of Suppliers and service providers, and 270 openings in the Operator Training Program, aimed at people who would like to begin an industrial career.

The Operator Training Program has three stages. After the theoretical

stage carried out by SENAI, practical stages are carried out through internships at Braskem, and the course lasts a total of approximately a year and a half. During the past three years, 35% of the 1,058 people who joined the program were hired by Braskem, supporting the sustainable growth of the business through developing qualified local labor.

#### Local development in Brazil

In addition to promoting the formation of new professionals through PRONATEC in communities neighboring its

industrial plants, Braskem strengthened its relationship with local technical education institutions through visits,

lectures, and participating in trade fairs, aiming to attract people to the Young Operator and Young Technician programs.



For more information, visit

→ Braskem > Careers

### **New hires and terminations**

G4-LA1 | GLOBAL COMPACT · PRINCIPLE 6

In 2015, Braskem hired 562 people in the countries where it operates. Considering the termination of 685 professionals, the Company reduced its workforce by 121 people, the majority of which due to the Aprimore Project carried out over the year. The overall termination rate was 8.6%, which was 10.8% for women (10.5% in 2014), and 7.9% for men (8.9% in 2014).

The overall hiring rate was 7%, which was 9.2% for women (opposed to 13.6% in 2014), and 6.3% for men (a drop compared to the 8.6% from the previous year). The decrease in the entrance rate was also due to decelerated hiring in Mexico, which in 2015 closed its staff of Team Members necessary for starting the operation.

The primary metric followed by the Company for its management is the rate of voluntary termination, which globally was 2.4%. In Brazil, the 1.9% result in 2015 followed the downward trend of recent years. The main reasons given by members for their leaving were to seek new challenges (37%) and personal reasons (35%).

BRASKEM VOLUNTARY TERMINATION RATE 2015			
COUNTRY	MEN	WOMEN	OVERALL
Brazil	1.5%	3.4%	1.9%
United States	6.1%	6.5%	6.2%
Germany	1.8%	4.9%	2.9%
Mexico	2.2%	2.7%	2.3%
Total	2.0%	3.6%	2.4%

# Training and development

Braskem's educational programs focus on the development of teams and are aligned with the Company's business needs and strategic objectives. There is specific planning for different moments in the Team Members' careers, and the process is understood as a succession

of challenges with growing complexity, not necessarily characterized as a rise to hierarchical positions.

All Team Members have an Individual Development Plan in which Education for Work actions are specified (formal

training, which may include technical, undergraduate, and graduate courses), and Onthe-job Education, which will be developed over the year. In 2015, the Company invested approximately R\$ 19 million in several training actions in its countries of operation.

Some of Braskem's main training programs include:

# Leadership Development Programs (Global)

Braskem works with Leadership Trails, a set of structured programs according to the Leader's stage of development. In 2015, a total of 147 Leaders were trained in programs focusing on the first two stages of leadership in Brazil, the United States, Germany, and Mexico. In addition, in the United States and Europe, the programs with a shorter duration were expanded, such as the Leader's Forum, providing more frequent opportunities for Leaders to share their experiences.

# **Entrepreneurs Development Program**

carried out in Brazil in partnership with other businesses from the Odebrecht Organization, the program enables participants from several companies to interact and share their knowledge. In 2015, the program trained six new professionals.

#### Leadership Workshop for Sustainable Development (Global)

trains Team Members on the topic and seeks to engage them in implementing the Company's sustainability strategy. With 90% of Leaders in Brazil trained in 2014, the focus in 2015 was to reach the same level of coverage in Mexico and the United States, thus training 104 Team Members in the United States, and 80 in Mexico. In Brazil, customized workshops were held for the Services and Personnel teams, involving 47 people.

# Technical Skill Development (Brazil)

seeks to strengthen and enhance the technical skills of its industrial teams. In 2015, over 2,090 Team Members were involved in training actions about industrial processes and equipment. These actions included 41 technical seminars with 497 participating operators, 117 forums with over 1,000 participants, as well as training for 429 Team Members in a portfolio of online courses with 24 topics.

#### Culture and Integration Program (Braskem America and Europe)

training new Team Members in company culture and values. In 2015, there were four sessions and 95 participants in the United States, and three sessions with 33 participants in Europe.

#### Company Integration and PDI Program (Braskem Idesa, Mexico)

270 hours of training for 142 new Team Members. In addition, about 21,300 hours were dedicated to PDIs (Individual Development Plans) training on and for the job, focused on technical knowledge and developing skills that Team Members need to meet their goals.

# Leadership Training Program (Brazil)

focused on labor and union issues, action and prevention in conflict management, and legal aspects. Trained 323 Team Members in 2015.



# Performance and career management

All Braskem Team Members have an Action Plan built with his or her Leader with goals to be developed and reached throughout the year. Composed of the Planning, Agreement, Monitoring, Evaluation, Final Assessment stages, the evolution of results may be reviewed and renegotiated during the process, as long as the final assessment takes place as a dialogue between the Leader and the Led. Reaching the goals and their alignment with TEO values determine the professional's variable remuneration.

This practice, combined with the Life and Career Plan, also developed in partnership with the Leader, encourages the Team Member to take on increasingly more challenging Action Plans, promoting his or her growth, career development, and perpetuity of the business.



# Braskem: one of the best companies to work for

In 2015, Braskem was recognized in Brazil, the United States and Mexico by awards focused on personnel management. In Brazil, the Company was listed in the ranking "The Best Companies to Begin a Career" in the Você S/A guide, organized by the Institute of Administration Foundation (FIA-USP) and Cia. de Talentos, a company of

reference in the selection and recruitment of professionals at the onset of their career. In the United States, the Company received the Top Work Places award, issued by Workplace Dynamics, and in Mexico, Braskem Idesa ranked fifth on the "Empresa de los Sueños de los Jóvenes", by Cia. de Talentos.

#### Remuneration

G4-EC5 | GLOBAL COMPACT · PRINCIPLE 6

Braskem Team Members receive fixed compensation, benefits, variable compensation pegged to the Company's results and meeting goals defined in the individual Action Plans. The Company values diversity and does not tolerate any type of discrimination based on sex, gender identification, sexual orientation, race, marital status, family structure, physical or mental condition, nationality, social class, age, or aspects not related to the Team Member's job performance. The remuneration strategy is linked to the following assumptions:

- Equality: compensates proportionally, according to skills, professional training, and impact on results.
- Competitiveness: meeting market standards.
- Effectiveness: cost effectiveness for the Company.
- Sustainability: commitment to business continuity.

Braskem contributes to generating high quality jobs for the growth and development of the communities where it operates. In the following chart, see the comparison between the entry salary according to Company policy, and minimum wage in the locations where the Company operates.

COMPARATIVE DATA BETWEEN THE LOWEST ENTRY SALARY AND LOCAL MINIMUM WAGE <sup>11</sup>				
	SP	1.7		
	RJ	2.2		
BRAZIL (Braskem only)	ВА	1.6		
	AL	1.5		
	RS	1.8		
QUANTIQ	1.1			
UNITED STATES 2.9				
GERMANY 2.0				
MEXICO 3.6				

<sup>&</sup>lt;sup>11</sup> The lowest salary offered to a Member is based on Braskem's salary table, not reported by gender because there are no differences; (2) Brazil's minimum wage is the minimum for the category according to the company's union agreement; (3) the minimum wage in the United States, Germany, and Mexico is the national minimum wage; historical data from Germany are not shown because until 2015 there was no minimum wage.

# **Destaque Award**

In order to disseminate and knowledge recognize work carried out by its Team Members, Braskem participates in the Odebrecht Destague (Highlight) Award, issued by the organization since 1992. In 2015, a total of 822 projects were registered, 338 from Braskem (41%). Registrations were carried out by category,

which were: Innovation, Young Members/Associates, Environment, Community Relations, Knowledge Reuse, Occupational Health and Safety.

In 2015, the Image category was created, which seeks to share projects that positively affect the Odebrecht brand in the eyes of its stakeholders. Braskem ranked

first in the Innovation category, with the project "Innovation Bringing Productivity to Brazilian Citriculture," developed by Team Members from the Polyolefins Unit (UNPOL). The project combined the use of plastic in agriculture to develop roots and enhance plant growth. The result showed a 50% increase in productivity.

# **Diversity**

#### GLOBAL COMPACT · PRINCIPLE 6

As part of its commitment to the promotion and protection of human rights in its business, Braskem understands fostering gender equality as an issue of great importance and assumes its responsibility to work proactively based on the following beliefs:

- It is necessary to invest in an environment where women have access to job opportunities where they may develop, as a support structure allowing everyone to take on multiple responsibilities.
- Valuing gender diversity is not only enriching to the work environment, but also essential for the growth, survival, and perpetuity of the business.

Based on these beliefs, in 2015, Braskem began the Women at Braskem Program, the first front in the Diversity Program. Actions developed by the program reaffirm the Company's commitment to gender equality and women's empowerment. Structured on the fundamental pillars for the work of women, the program discusses issues such as maternity and paternity leave, career development, health and well-being, and supply chain.

On the career development pillar, the Company developed the Braskem Women's Forum. The initiative included the participation of 350 Team Members from every region in Brazil that met with female Learders for a moment of reflection and inspiration about career and challenges for men and women when seeking balance between their personal and professional lives.

In addition, two internal surveys were carried out in Brazil: a survey of all Team Members who had been pregnant, in order to better understand their needs, and a survey of working conditions for women at the industrial plants. The two surveys generated input for defining actions such as developing a guide to the Company's policies and practices regarding paternity and maternity, the structure of milk pumping rooms, the creation of exclusive parking spaces for pregnant women at all units, adapting operating uniforms for pregnant women, reforming the women's bathrooms at the Industrial Units, and extending the fully paid maternity leave to 180 days for all pregnant women in the units in Brazil.

In Mexico, Braskem Idesa, in partnership with the World Bank,

developed initiatives to include women in the recruitment and selection process, leadership training and development, social and economic development projects in local communities, and carrying out awareness actions about sexual violence against women, and breast cancer, engaging Team Members and the Community.

In the United States, the Company created BAWI - Braskem America Women's Initiative, which is committed to supporting the advancement and development of Team Members, aiming for a more balanced distribution of gender in the Company's operations. Dialogue sessions were created -Lunch&Learns and Leader Panel - to encourage the debate about challenges and opportunities. BAWI will promote education, training, and enrichment of knowledge, aiming to accelerate advancement women's leadership positions, break barriers, and promote gender equality. Engagement in the topic is also being carried out by the Clinton Global Initiative, as well as in partnership with Ellevate, a global network of 30,000 women in 82 countries, to connect its members with more female professionals.

# **Women's Empowerment Principles**

In 2015, Braskem took one more important step toward increasing the visibility of its global commitment by signing the Women's Empowerment Principles. The UN Women initiative and the Global Compact help to guide the company in the direction of best practices in equality proposed by these two institutions.



Excellence, efficiency, and ongoing development of improvements are terms that define Health, Safety, Environment (HSE) management at Braskem. This concern for people and the environment is part of the Company's work assumptions, and therefore, since 2005, Braskem has operated in an integrated manner through SEMPRE – Integrated System of Health, Safety, and the Environment – composed of 16 Strategic Elements that mobilize Leaders and teams to incorporate

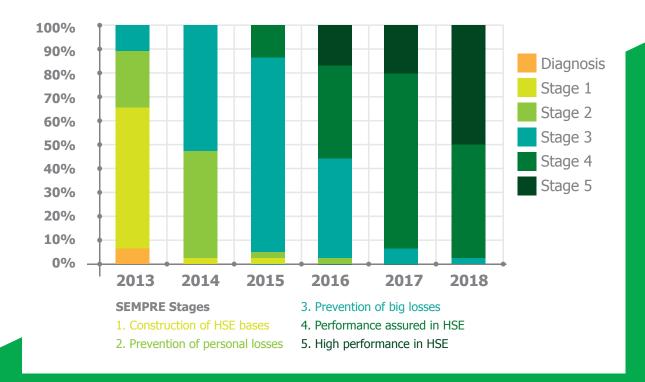
a culture of risk prevention based on discipline and respect for safety processes and procedures. In order to maintain excellence in its HSE procedures, Braskem carries out ongoing improvement and advancement work SEMPRE's five implementation stages, in order to prevent and minimize risks and personal, environmental, and material loss. The system is focused on work and process safety, logistics, the environment, chemical safety, health, occupational hygiene, and quality of life.

# **Evolution in the implementation phases of SEMPRE (in %)**

Taking into consideration the unit's profile, as well as its respective risks, Braskem establishes annual goals for progress. Its evolution is based

on previous results, levels of risk, and the improvement of performance in health, safety, and environmental indicators. Today, this forecast goes until

2018 and places the majority of plants at levels of performance that are safe and on the way to operational excellence.



As a way of guaranteeing the standardization of processes and the implementation of the system at all units across the world, annual audit processes were established that take the following points consideration: Strategic into Elements, SEMPRE Guidelines and Procedures in alignment with Quality and Productivity, and Verifying Obstacles for process safety risk scenarios.

SEMPRE audits were carried out 100%, and 88% of the units were certified meeting the planned standards. In addition, 57% evolved compared to 2014. Today, 80% of units are at stage 3 and 13% are at stage 4 and 7% at stages 1 and 2. It is worth noting that all audits were carried out in an integrated manner, including culture diagnostic, with an Integrated Management System, Atuação Responsável® (Responsible Operation), and Braskem+, and that all specific audits for Braskem Terminals were carried out separately from

the industrial units, focusing on logistics operations.

**Progress** the systemic implementation of SEMPRE has been accompanied by the gradual and consistent improvement of results in Health, Safety, and the Environment, as well as strengthening of operational discipline, leading by example, and a leading position in loss prevention in the global chemical industry.

For more information, visit



Braskem > Health, Safety, and the Environment

# Investments and financial gain<sup>12</sup>

In 2015, R\$ 114.43 million were invested in Health, Safety, and Environment projects.

			MAIN PROJECTS		
TOPIC	AMOUNT INVESTED (R\$ million)	NUMBER OF PROJECTS	DESCRIPTION	AMOUNT INVESTED (R\$ millions)	
			PP5 Duque de Caxias (RJ): new aeration system for the 500t silo	10.28	
Work safety	65.6	235	PP1 Triunfo (RS): new aeration system granulated silos	5.95	
,			Purchase of a Stuffing Box (Plenum) for the GI-4101A gas turbine exhaust	3.65	
			PE 5 SLR RS: new tools and new lines for removing hexane from the flare	2.16	
Process safety	13.05	34	UNIB 2 (RS): Flame Sensor Installation in 46GV01	2.04	
Survey			UNIB 3 (ABC): Elimination of risk scenario in C3 storage bullets (FB-24 A/B/C/D)	1.51	
			CS 1 (AL): Installation of synthetic diaphragm	1.99	
Health	4.65	22	UNIB 3 (ABC): Modification of the design of pumps with Benzene concentration	0.56	
			UNIB 1 (BA): Installation of new closed circuit dials at benzene points 1% $\mbox{v/v}$	0.46	
			UNIB 2 (RS): Purchase of new equipment for reducing emissions in TERG	9.00	
Environment	31.13	39	UNIB 3 (ABC): Technological improvements in the Effluent Treatment Unit	7.83	
			PP 7 Neal (West Virginia, USA): Spent Scrubber Oil System	2.74	

HSE management also includes monitoring savings and costs avoided through improvement projects developed by the area. In 2015, this work resulted in gains of approximately R\$ 136.80 million in operations in Brazil, the United States, and Germany.

TOPIC		2014	2015
Safety	Work Safety	0.6	0.6
	Process Safety	7.9	-27.0
Health	Occupational Health	37.1	19
	Waste generation	53.7	13.5
Environment	Water consumption	1.0	7.2
	Effluent generation	- 1.9	6.2
	Energy consumption	307.6	116.8*
	GHG emissions	4.5	-
HSE	Common impact	14.0	0.0
	Management	4.1	0.5
Total		431.4	136.80

<sup>\*</sup>Built-Economy in energy consumption economy.

<sup>&</sup>lt;sup>12</sup> Most of these values is in addition to amounts invested in environmental protection reported in the indicator GRI G4 – EN31, where the focus is on waste disposal costs, emissions treatment, remediation costs and costs of prevention and environmental management.

### **SAFETY**

Safety is a non-negotiable value at Braskem. Guaranteeing safety in every phase of the process is part of the Company's macro-objectives

for Sustainable Development and is a fundamental point in relationships with all of its stakeholders. To Braskem, safety includes not only work and process safety, but also the safe use of its products and waste generation, since the Company produces hazardous waste.

# **Occupational Health and Safety**

G4·LA6

guarantee the efficiency its actions, especially at its production units, Braskem has solid Health and Safety management that involves all of managers, representatives operating teams, commissions, and committees. Among the most important tools is Behavioral Dialogue, which involves teams in discussions about how to minimize risk and improve safety procedures. In 2015, approximately 117,627 behavioral dialogues were carried out, an average of one every four minutes. This figure represents a rise of 11% compared to 2014.

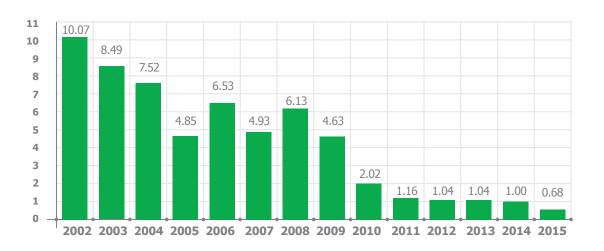
Braskem has not recorded any fatal accidents at the Company for the past five years, and 63% of the industrial plants have not recorded lost-time accidents for over two years. The reduced number of employee accidents represented an avoided cost of R\$ 600,000, based on costs recommended by the NSC - National Safety Council

With an accrued reduction of 93% between the years 2002 and 2015, the rate of accidents with and without lost time was 0.68 per million hours worked (including Team Members and Partners). This

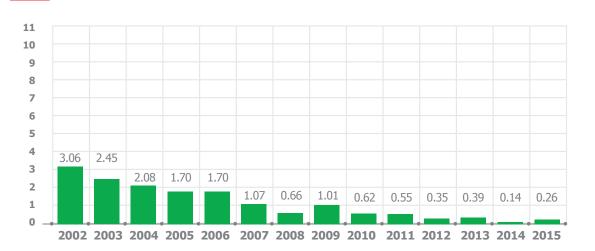
figure represents an improvement of 32% compared to the result in 2014 and exceeds the goal of 0.80 established for 2015, which was already considered highly challenging compared to the chemical industry average in Brazil.

Regarding accidents with greater severity (where the employee needed medical leave), there was also great progress: the rate of lost-time injury rate (CAF) per million hours worked was 0.26, a higher result than the 0.14 from 2014, but represents an accrued reduction of 92% between 2002 and 2015.

# Injury Rate Without Lost Time + With Lost Time (1,000,000 HHT)

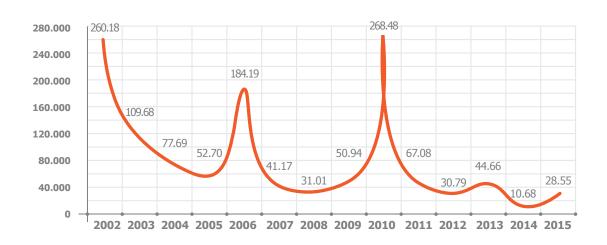


# Lost-time Injury Rate (1,000,000 HHT)



In 2015, the Company invested R\$ 79 million in workplace safety and process safety improvement projects, minimizing the risk of 16 scenarios with a high potential for accidents.

Severity Rate
(Lost Days + Paid x 1,000,000)/mhw



The lost-time injury rate (that assesses the severity of accidents using the number of days the injured Members miss work) was 28.55 per million hours worked. This represents a 90% rise compared to 2014, but an accrued reduction of 90% between 2002 and 2015, indicating that the accidents are less and less serious.

In occupational medicine and health management, Braskem recorded zero new cases of occupational illness. This is a result of improvement and awareness actions with investments of R\$ 4.6 million in projects related to the topic in 2015.

The avoided cost of amounts disbursed for the payment of

convictions in labor health and safety lawsuit decisions represented about R\$ 19 million. In addition, due to the reduced number of work accidents and occupational illnesses at Braskem from 2012 to 2013, a new accident prevention factor was defined and published by the Federal Government, a measure that generated savings of about R\$ 800,000 in 2015.

# Safety in Logistics

Braskem works continuously on developing and improving its processes, reassessing all logistical operational risks focused on reinforcing the HSE guidelines regarding highway and maritime transport, as well as the storage of chemical products at foreign terminals. This work considers current laws,

product families by risk class, the type of equipment used, loading and unloading operations, at industrial plants as well as terminals and ports, including the transport companies and their routes.

All guidelines about processes and equipment have the

purpose of reducing the number and consequences of possible incidents, improving the safety of operations and the entire supply chain. In 2015, the main focus was studying the risks of Braskem's priority operations, involving highway and maritime operations, with the consequent definition of control barriers.

#### **2015 HIGHLIGHTS**

- Zero record of serious maritime accidents involving hazardous chemical products.
- Reduction of 64% in the

   rate of highway accidents
   involving hazardous chemical
   products, compared to 2014.
- Risk studies carried out for 100% of products classified as priority, a total of 10 products: 46 routes, eight transporters, eight loading/unloading areas, highway two eauipment configurations, and nine ships were evaluated.
- HSE inspections at maritime terminals based on international standards
   such as the CDI-t (Chemical Distribution Institute), and

- SEMPRE, in order to identify risks and define control barriers.
- Defined Corporate Safety
  Guidelines for Logistics
  Operations Involving
  Hazardous Chemical Products
- Strengthened the Hazardous
  Chemical Product Logistics
  Suppliers Corporate
  Inspection Procedure
  (Transporters and Terminals),
  based on guidelines from the
  Health, Safety, Environment,
  and Quality Assessment
  System, ABIQUIM, and the
  CDI-t (Chemical Distribution
  Institute).
- Strengthening of the record and statistical handling of incidents, focusing on chemicals.

- Assessment of the HSE Requirements in Logistics Contracts for Highway Transport.
- Simulations of maritime and highway emergencies, with the participation of civil defense, environmental bodies, the fire department, and others.
- Social responsibility on the value chain: continuous support for the Na Mão Certa program, with the main purpose of ending sexual exploitation of children and adolescents on Brazilian highways.

# **Process safety**

#### G4·S02 | GLOBAL COMPACT · PRINCIPLE 1

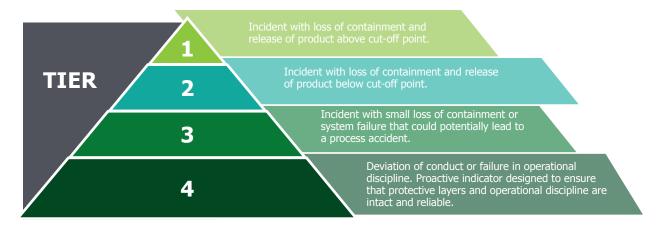
In order to ensure safety in all of its processes, Braskem carries out advance evaluations of scenarios for mitigating risk and potential safe management of changes. In addition, the Company annually carries out a Critical Analysis identify opportunities improvement and validate short, medium, and long-term strategies.

This process is continuously strengthened by the Company's, who work hard on managing risks in processes, operations, and logistics. An

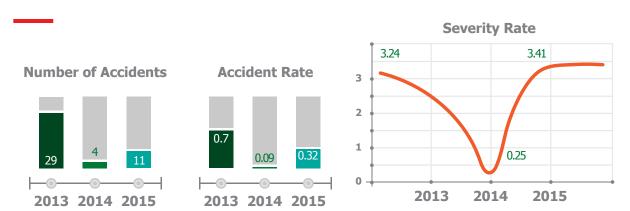
important focus for the year was developing improvements in criteria, practices, standards, management recommendations, and the pyramid of Process Safety events13, as well as the continuity of barrier audits and the implementation of technical actions for mitigation for scenarios with greater significance.

In 2015, Braskem recorded 11 Tier 1 events (as shown in the table below), an increase compared to the four events recorded the previous year. The Tier 1 accident rate was 0.32. Although it is higher than that of 2014, it is still lower than average for companies in the American chemical industry (0.36 in 2014).

At the base of the pyramid, 2,823 events were registered, ensuring strengthened operational discipline. The 8% higher record compared to the previous year demonstrates the commitment of Team Members to reducing the number of small events in order to minimize the likelihood of occurrence of events of higher severity.



#### **Process Safety Indicators (Tier 1)**<sup>14</sup>



<sup>&</sup>lt;sup>13</sup> The Pyramid of Events 'or Losses' provides the basic necessary theory for understanding the logic of the safety policies and programs adopted at the companies for loss and/or accident prevention

**62** 

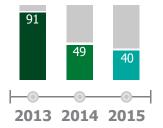
<sup>&</sup>lt;sup>14</sup> Tier 1: i) most severe level of accident in the process, according to CCPS (Center for Chemical Process Safety); ii) Number of Tier 1 Accidents multiplied by 1 million, divided by number of hours worked; iii) Severity of Tier 1 accidents according to CCPS score multiplied by 1 million, divided by number of hours worked.

In 2015, R\$ 13 million were invested in process safety improvement processes. The outlook for 2016 is for continued improvement through

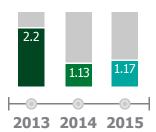
strengthening the discipline in key aspects of process safety, such as change management, accident investigation and risk analysis, monitoring small leaks and deviations in process safety, strengthening the learning and scope of process events.

#### PROCESS SAFETY INDICATORS (TIER 2)15

#### **Number of Accidents**



#### **Accident Rate**



# **Risk Rating**

G4·22

In a search for an improved Risk Rating for its plants, Braskem advanced at almost all the plants inspected by insurers and reinsurers during the year 2015. The result achieved is due to the efforts undertaken in risk management programs, improvements in the facilities and in safer production processes. These gains are the result of improvements in the implementation of Management System for training programs, internal safety audits, and the

direct participation of Leaders in prevention actions. We point out that Risk Rating criteria is increasingly more rigorous, so much so that in order to stay at the same rating level the plants require continuous improvement. In the 2014 report, there was incorrect information concerning the number of plants classified as "Above Standard" and of the expected goal, which were corrected below:



Number of plants rated Above Standard in 2015: 12.

Total number of plants rated Standard in 2015:

INTERNATIONAL STANDARD			
<b>Total Plants</b>	Above Standard	Standard	
2014	10	18	
2015	12	16	

Braskem does not have a goal for this indicator.

Note: determining the number of industrial plants considers the site. Is processes are considered, the number of Braskem plants is 36.

<sup>&</sup>lt;sup>15</sup> Tier 2: i) safety events in processes similar to Tier 1, with loss of primary contention, of lesser significance; in other words, with smaller criteria, such as: volume of chemicals released to the atmosphere (10% of Tier 1); personal accident without lost time; cost of material loss associated with fires/explosions (10% of Tier 1), according to CCPS (Center for Chemical Process Safety); ii) number of Tier 2 accidents multiplied by 1 million, divided by number of hours worked.

#### RAPID RETURN TO OPERATIONS AT ABC

Efficiency and the levels of operational safety management at Braskem were highlights of 2015. After an incident caused by the rupture of a pipe in a transfer line from the pyrolysis furnaces, with the leak of a flammable gas on October 14, the Company returned to operations at the Grande ABC Petrochemical Center in São Paulo (Brazil), just over a month after the fire occurred on November 24.

This rapid recovery was due to contention work begun just ten minutes after the accident joining members of the operational team, the emergency brigade, and the local fire department. Through this coordinated action,

the fire was extinguished in just thirty minutes, without causing serious injury to Team Members or major damage to the location.

In addition to the immediate shutdown of the plant, Braskem was concerned about maintaining transparency of the facts with the local Community. To this end, the Company distributed newsletters with details about the event to the residential areas located a three-kilometer radius from the plant and provided the population with a direct toll free line.

This temporary shutdown of the unit did not leave Clients without supplies, because Braskem redirected production that would

have been exported to supply Clients served by the plant in the ABC region. It is worth noting that the return of operations occurred only after the implementation of all measures and improvements recommended by the Braskem Investigation Committee and verified by competent authorities, as well as an inspection carried out by the Ministry of Labor. Since assuming plant operations in 2010, the Company has had environmental operating licenses, as well as ISO 9001 and ISO 14001 certifications, certifying, through independent auditors, its excellence in quality management and environmental management.



# **Product Safety**

G4-PR1 | G4-PR2 | G4-PR3 | G4-PR4

Braskem considers safety to be one of its biggest competitive advantages and the Company adopts higher safety standards not only in its operational processes, but also when considering the use of its products by Clients in the different sectors of the chemical and manufacturing industries.

Because of aspects inherent to petrochemical products such dangerousness, toxicity, corrosiveness, flammability, sensitivity, environmental impact, and others, Braskem rigorously identifies impacts when controlling documentation provided, the safe handling of inputs, raw materials, and products, and information provided to transporters, distributors, and Clients. Safety procedures adopted by Braskem focus on reducing impacts throughout the production process through the use of technology with fewer gas emissions, monitoring the rate of resource consumption, waste generation, and the proper treatment and disposal of effluents and waste. For this, the Company uses specific tools for analysis and adopts the necessary measures for mitigating identified risks. It is a continuous action, not inflexible, with a frequency that may vary between the three years defined in an internal procedure and any

other time depending on the progress of safety information and the publication of studies about the products.

In 2015, Braskem made advances by improving product management, issuing specific documents for sensitive products, and publishing a global position about Phthalates for key areas.

Control and updates of product information are available on Chemical Materials Safety Data Sheet (FISPQs in the Brazilian acronvm) and on Braskem labeling, product based on Brazilian standard NBR 14725 concerning "GHS Classification and Labeling of Chemical Products - contemplating classification for products in order to synchronize health, safety, and environmental information." All FISPQs for manufactured marketed by the Company are updated and may be found on the Braskem website. Recorded information contains guidelines transport, handling, and disposal of each product. Inspection programs, and external audits, audits by SEMPRE and the corresponding action plans prepared based on the diagnostics of these audits.

Data on third parties or component origins are not provided because substances with significant

potential social and environmental impact (such as minerals from conflict zones, regions where disrespect for human rights occurs associated with the mining, transport, or marketing of minerals, for example) are not used.

In the United States, the Company uses the MSDS (Material Safety Data Sheet), and in Europe, the SDS (Safety Data Sheet). Both are items required by the regulatory agency in the USA (Occupational Safety and Health Administration, or OSHA) and the relevant policy from the European Union (REACH), based on the Globally Harmonized System of Classification and Labeling of Chemicals (GHS), created by the UN.

These FISPOs, MSDS, **SDS** were evaluated, revised, validated in 2015. The Product Stewardship procedure product management the Client) was also enhanced through the evaluation international requirements Responsible Action programs and the Global Product Strategy, coordinated by the International Counsel of Chemical Associations. procedure establishes communication with stakeholders, including Clients, and clearly defines roles and responsibilities.

In 2015, no cases were recorded of non-compliance with regulations regarding impacts on health and safety during the life cycle of Braskem products, including issues related to information sheets and product labeling

# **ENVIRONMENT**

GLOBAL COMPACT · PRINCIPLES 7, 8 AND 9

Braskem seeks to continuously develop innovative solutions that may generate less environmental impact. In 2015<sup>16</sup>, Braskem continued investing in and implementing initiatives toward reducing generation of liquid effluents and waste, as well as the

consumption of energy, water, and intensity of greenhouse gas (GHG) emissions. This way, its indicators for waste and effluent generation and energy consumption and GHG emissions showed their best performance in Braskem history.

During the year, the Company invested R\$ 31 million in environmental improvement projects, generating savings of R\$ 144.4 million in 2015, as a result of process improvements with an impact on environmental and energy efficiency indicators.

# Waste management<sup>17</sup>

G4-EN23

Due to the potential negative impact on the health of people and the environment, the reduction and correct disposal of waste is part of Braskem's macro-objective for Safety of the Strategy for Sustainable Development.

Waste generation at Braskem is influenced by seasonal and non-seasonal events such as unplanned shutdowns (that may occur due to a power outage, for example), and planned shutdowns for maintenance and improvements

to plant efficiency. During these events, the teams work on reducing waste generation and adding value to the waste that will be generated.

After identifying the types of waste generated, Braskem seeks solutions for those that may be reused through composting, recycling, or recovery, transforming some of the industrial waste into business opportunities. The Company provides correct disposal of the waste that is not reused, in accordance with local environmental law.

In 2015, waste generation had the best result in the history of Braskem. During the year, 32,900 tons of liquid, solid, and sludge waste were generated at Braskem plants, representing a 10.3% reduction compared to 2014. The waste generation index was 2.01 kg/t of marketable product produced, a result 12.6% less than 2014, and 8.6% better than the goal established for the period, which was 2.20 kg/ton. Achieving the goal meant savings of R\$ 3.7 million in 2015.

Since 2002, the volume generated showed an aggregate reduction of 65%, result of intensifying measures focusing on avoiding generating waste. On average, waste generation at Braskem is 2.2 times less than the average in the chemical industry in Brazil

<sup>&</sup>lt;sup>16</sup> From 2012 to 2015, eco-indicators for the production of vinyl ics sold between units were not included; however they were included in the GHG indicators and the company's financial statements.

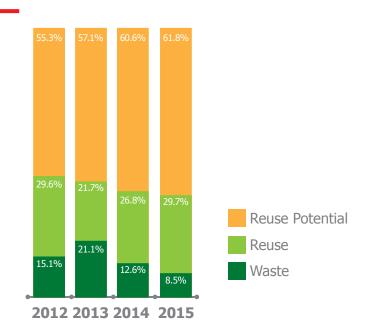
<sup>&</sup>lt;sup>17</sup> The total production does not include the internal transfer of finished goods at the Vinyls Unit.

#### **WASTE GENERATION - KG/T**

Among the points that positively influenced the results improvements in plant maintenance and cleaning procedures, classification and separation of waste, and changing equipment that generates waste, as well as reverse logistics actions. This index considers the generation of waste during production processes divided by the total production of marketable products, excluding finished goods transferred between vinyls units.



#### **DISPOSAL OF WASTE GENERATED (%)\***



<sup>\*</sup>These percentages were estimated from the data referring for approximately 94% of waste generated in 2015.

#### WASTE DISPOSAL\* (THOUSAND KG)

The Company continued working on several studies for reducing waste generation and the increase of its reuse. An example was the development of a

Supplier that recovers organic solvents and generated an impact on the increase of the Company's reuse rate in 2015. The expectation for 2016 is

to keep reducing the generation rate of non-reusable waste and increase its reuse rate.

In 2015, Braskem reused 9.3 million kg of waste that were disposed of as follows:

2013	2014	2015	
19,858	7,930	4,628	
3.169	5,424	3,975	
11,152	21,493	2,804	
187	748	1,859	
17,263	20,408	1,713	
290	238	739	
306	662	274	
8,568	7,960	0	
9,650	5	3,700	
70,443	64,698	19,692	
	19,858 3.169 11,152 187 17,263 290 306 8,568 9,650	19,858       7,930         3.169       5,424         11,152       21,493         187       748         17,263       20,408         290       238         306       662         8,568       7,960         9,650       5	

<sup>\*</sup>There is no direct correlation between generated waste (the base of the eco-indicator) and the disposed waste, because much of the waste generated during the year is stored until reaching the proper volume to be sent to the chosen destination, which may occur years after being generated.

# Water efficiency<sup>18</sup>

G4.EN8 | G4.EN10 | G4.EN22

In the year where the risk of lack of water supply reached alarming levels, especially in São Paulo, Braskem ensured important results regarding water recycling and reuse in its operations, as well as significantly reduced water

consumption rates during the year. The estimate is that the savings reached R\$ 5.5 million, achieving R\$ 3.1 million by adjusting consumption, and R\$ 2.4 million by reducing expenses on effluent disposal. All Braskem units carried out

operations unrestricted, due to water availability and disposal in 2015.

In addition, Braskem has been developing a set of initiatives with the purpose of improving its water use performance:

#### **ALAGOAS**

**PVC2 AL:** R\$ 1.2 million invested in improving cooling towers, measuring, steam traps, and eliminating physical losses during the period of

2013 to 2015, providing a 23% reduction in the average water flow collection from the Rio dos Remédios river, a 19% improvement in the rate

of water consumption, and a 14% reduction in the rate of liquid effluent generation, totaling an estimated gain of R\$ 700,000/year.

<sup>\*\*</sup> Other: autoclave; thermal vacuum demercuration; co-processing of waste in clinker rotary kilns for cement manufacturing; soil decontamination by thermal desorption.

<sup>&</sup>lt;sup>18</sup> The total production does not include the internal transfer of finished goods at the Vinyl Unit, which will be included beginning 2016.

## **SÃO PAULO**

**UNIB 3 ABC:** R\$ 28,000 invested in a recovery project for cooling water from analyzers of olefin pyrolysis furnaces, allowed a reduction of 0.014m<sup>3</sup>/t in the effluent index, representing an estimated savings of R\$ 150,000/year.

**UNIB 3 ABC:** due to the better quality of purchased water (Aquapolo), it was possible to:

 Recover water from water treatment boilers, furnaces, and analyzers, approximately 10m<sup>3</sup>/h.

- Increase the number of concentration cycles in the cooling towers; in 2013, there were 5 Concentration Cycles, and in 2015 there were 8.3 cycles, providing savings of 56 m<sup>3</sup>/h.
- Use waste from reverse osmosis in the cooling tower.
- Reuse industrial effluents as service water at the plant;
- Reduce Blow Down in the dilution steam generator vessel (FA-221-Effluents) and the cracking furnaces in the

- olefins area.
- Return the Blow Down from the furnaces to the water cooling system rather than draining into the channels.
- Reduce the use of cooling water in the furnace decoking knockout drums.

**PP3 PLN:** eliminated the use of 139 m³/year of drinking water at the quality control laboratory, representing an economic gain of R\$ 3,500 in project 6Sigma of "zero" investment.

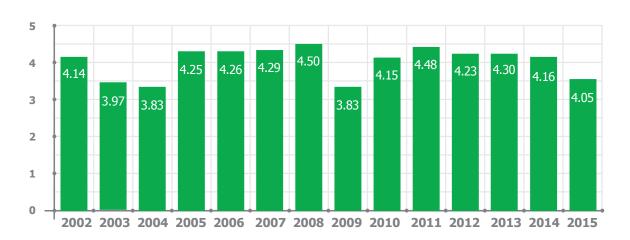
#### **RIO DE JANEIRO**

**PE9 DCX:** implementation of water reuse project using water from the sealing of extruders allowed for the reuse of 110 m<sup>3</sup> per day, as well as promoted the reduction of 62 m<sup>3</sup> per day of demineralized water, totaling an estimated annual savings of R\$ 291,000. At the end of 2015, Braskem began a water stress assessment project at four

river basins in Brazil, focusing on areas where their operations are located. This study will serve as a basis for defining regions where the Company should focus its efforts on water reuse and consumption reduction projects. Completion is scheduled for the first half of 2016. Action plans will be built in partnership with the plants.

All of the Company's water consumption is monitored by an indicator correlating the water consumed with the production of marketable products. This allows Braskem to closely analyze the performance of its process regarding water efficiency.

#### WATER CONSUMPTION m3/t



Note: this index considers water consumption during production processes divided by the total production of marketable products, excluding finished goods transferred between vinyls units.

Consumption of  $4.5 \,\mathrm{m}^3/\mathrm{t}$  of water at Braskem is about six times less than average for the global chemical industry, which is  $25.64 \,\mathrm{m}^3/\mathrm{t}$  (based on the International Council of Chemical Associations–2013).

In 2015, a total of 4.05m<sup>3</sup> of water per ton produced was consumed, a result 1.6% better than the goal stipulated for the year (4.11 m<sup>3</sup>/t). In absolute terms, Braskem consumed 66.2 million m<sup>3</sup> of water in 2015, representing a 0,7% reduction compared to 2014. Around 99.9% of this total was used in production processes. The Brazilian industrial plants consumed 62 million m<sup>3</sup> and the international plants consumed 4.2 million m<sup>3</sup>.

Despite some negative impacts, such as the incident in October 2015 with the cracker in the ABC region, the increase in the use of clarified water at some of the plants due to the low quality of water withdrawn and the intense heat of 2015, causing more evaporation at the cooling towers, Braskem was successful with several actions that significantly contributed to good performance regarding the conscious use of water:

- Clarified water reduction project for hauling coal ash and improving the steam consumption in the flare in UNIB2 RS.
- Reduced leaks and losses at the plants

- Improving concentration cycles at the cooling towers, reducing blow-down. Particularly Ciclo Máximo Project at UNIB 4 DCX.
- Improved equipment maintenance (reactors and heat exchangers).

It is important to highlight that the accident that occurred in October 2015 at UNIB 3 ABC, caused an unplanned shutdown at the plant. This fact reduced water consumption and predominantly affected the reduction in the company's consumption rate.



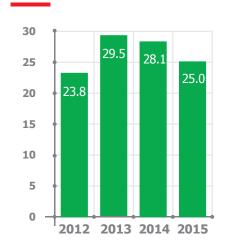
# → Virada Sustentável

For the fifth consecutive year, Braskem sponsored the Virada Sustentável (Sustainable Agenda), an event that took place in São Paulo that includes educational

and social mobilization actions around the importance of the conscious use of water resources. The Company invested in brand association with four educational attractions carried out by the project, in specific public spaces, one of the highlights being a ball pit for adults at the Villa Lobos park.

Regarding the reuse water, the Company has been developing actions including the use of rainwater, treated domestic sewage water, and industrial effluents. In 2015, the reuse rate reached 25%, and therefore, 16.6 billion liters of water were kept from being extracted from bodies of water.

#### **WATER REUSE RATE\***



\* Not including reuse of water in cooling towers

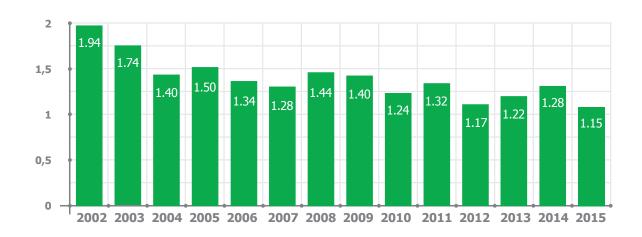
The good results of Braskem's water reuse rate are due to developing projects with Aquapolo – an initiative created in the ABC Petrochemical Complex, in São Paulo, in order to treat sewage water for industrial purposes. A partnership with Sabesp and Odebrecht Ambiental, the project has helped reduce the demand for drinking water supply at

the Capuava petrochemical complex, in Mauá, SP. In 2015, Aquapolo enabled the reuse of approximately 8.3 billion liters of water, treated domestic sewage water, accounting for 50% of Braskem's total water reuse.

The Água Viva project, developed in partnership with Cetrel for treating effluents and waste at the Camaçari complex in Bahia, has been undergoing reevaluation since March 2015.

In 2015, a total of 1.15 m³ of liquid effluents per ton produced was generated, 6.6% below the goal established for the period, which was 1.23 m³/t, and 10.3% below the total reached in 2014. This was the best result for Braskem since its founding.

#### Liquid Effluent Generation - m<sup>3</sup>/t



Note: this index considers the generation of effluents during production processes divided by the total production of marketable products, excluding finished goods transferred between Vinyls units.

Among the year's highlights for record reduction in effluent generation, are improvement of concentration cycles in cooling towers, reduced blow-down (particularly the Ciclo Máximo Projectat UNIB 4 DCX), improved equipment maintenance (heat

exchangers), and the overall reduction of leaks and losses at the plants.

For 2016, Braskem foresees an increase in intensity of consumption due to the new complex in Mexico beginning operations, where about US\$ 40 million in projects ensuring water efficiency have already been invested. However the water collected is low quality according to some parameters that directly impact consumption.

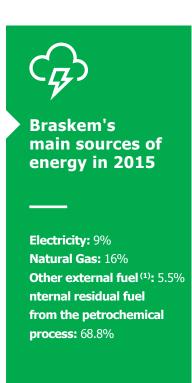
#### ENERGY EFFICIENCY<sup>19</sup>

G4·EC2 | G4·EN3 | G4·EN5 | G4·EN6 | G4·EN15 G4·EN16 | G4·EN17 | G4·EN18 | G4·EN20 G4·EN21 | GLOBAL COMPACT · PRINCIPLE 7

Regarding the electricity purchase portfolio, despite the continued water shortage in Brazil, the extension of the hydroelectricity contract with Chesf secured a significant interest in renewable energy in the contracts. Additionally, the increase in wind power generation in the Brazilian alleviated electrical system an even greater impact of the share of thermoelectric plants in purchased energy. On the other hand, the water restriction implied an increase in internal generation based on the reuse

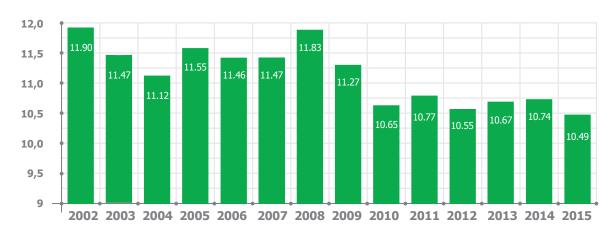
of internal energy sources, and mainly, the use of natural gas.

Energy consumption met the year's goal and showed a result 2.4% better than 2014. This is the best result since Braskem was founded, and meant savings of R\$ 56 million in 2015. In 2015, a total of 10.49 GJ of energy per ton of produced product were consumed, a result 1.3% better than the goal established for the period. In addition, 8% of all energy consumed came from renewable sources, the equivalent of 13.7 million GJ.



<sup>1</sup>Other fuel mainly comes from burning oil and coal.

## **ENERGY CONSUMPTION - GJ/t**



Note: this index considers energy consumption during production processes divided by the total production of marketable products, excluding finished goods transferred between Vinyls units.

<sup>&</sup>lt;sup>19</sup> Total production does not include the internal transfer of finished aoods at the Vinyls Unit.

Among actions that contributed to this result are energy optimization initiatives at UNIB 2 RS, the reduction of intermediate stock, cleaning the heat exchangers with increased efficiency, the sale of LSC at UNIB 2 RS, the use of steam traps to produce steam for dilution and energy optimization at the plants.

The Company has also been monitoring points needing attention that negatively impact the indicator in 2015, such as:

- Production 3.7% below planned
- Loss of steam
- Planned and unplanned shutdowns
- Temperatures lower than the historical average during the

- winter in the USA
- High-voltage electrolysis cells at chlor-alkali plant
- Incident in October 2015 with the cracker at ABC also had negative impact on some eco-indicators.
- Use of steam to offset loss of efficiency in some exchangers.

# Camaçari Plant

In 2015, an intelligent load shedding system began operation at the Camaçari plant (UNIB 1), that isolates the critical loads in the external electrical system. The solution

protects the cracker from blackouts or sudden surges of power failure, ensuring more safety and stability for the petrochemical operation. In addition, Camaçari (UNIB 1) plant operations ensured gains in competitiveness by renewing the energy supply contracts with the Companhia Hidrelétrica do São Francisco (Chesf).

# MAIN BRASKEM INITIATIVES THAT RESULT IN GAINS IN ENERGY AND SAVINGS

**G**4⋅EN20 | G4⋅EN21

INITIATIVE	ECONOMIC GAIN (R\$ MILLION)	
Improvements in production process (except furnaces) and the sale of electricity	50.755	
Furnace optimization	32.702	
Improvements to boilers and turbines	19.265	
Reduced steam consumption	8.063	
Reducing flare loss	5.047	
Improvements to cooling systems	0.977	

#### Other Emissions

In addition to GHG emissions, Braskem manages other air emissions for which it is liable, such as ozone layer depleting substances and local pollutants (NOx, SOx, etc.).

#### **EMISSION OF OZONE LAYER DEPLETING SUBSTANCES**

SUBSTANCE	2013 (T)	2014 (T)	2015 (T)
HCFC 22	175.7	48.3	53.0
HCFC 141b	4.8	0.3	2.3

Braskem has also been replacing substances that deplete the ozone layer for other substances not in the Montreal Protocol.

#### NO<sub>x</sub>, SO<sub>x</sub> AND OTHER SIGNIFICANT AIR EMISSIONS <sup>1</sup>

EMISSION	2013 (T)	2014 (T)	2015 (T)
NO <sub>x</sub>	12,157	11,421	9,546
SO <sub>x</sub>	6,582	11,509	4,503
Volatile Organic Compounds	2,707	3,881	3,808
Particulate Matter	1,547	1,225	911
Toxic Air Pollutants	549	97	652 <sup>(2)</sup>
Other <sup>(3)</sup>	6,108	6,190	14,495(2)

(1)Methodologies used are recommended by state environmental agencies. Where there is no measurement, estimates are used (emission factors) based on recognized methods, such as AP-42 from USEPA, for example.

The participation of coal increased in the energy matrix by replacing non-renewable, less sustainable fuels. This movement was only possible due to the improved quality of coal that kept its emissions standards and was justified through the study of the Life Cycle Assessment conducted in 2014. This study indicated that among all fuel options available in Rio Grande do Sul, coal is the most

appropriate energy option, from the eco social and environmental tripod perspective, for UNIB 2 RS, the user of this fuel.

Stricter environmental regulations for air emissions are expected for the coming years. Thus, the Company has been seeking to increase the share of renewable resources in its energy matrix, especially the introduction of wind power

based electricity and evaluating the introduction of biomass.

In addition, increased availability of natural gas in Brazil contributes to the increased share of this fuel in the energy matrix, replacing other inputs such as oil fuel and other petroleum by-products, reducing emissions and contributing to a cleaner matrix.

<sup>(2)</sup> The plants have been expanding their evaluations; this explains the increase in these parameters.

<sup>(3)</sup> Includes total hydrocarbons and carbon monoxide.



# **Social and Environmental Protection**

G4-EN31

In addition to working to prevent environmental damage through continuous monitoring of ground water, surface water and sediments, air emissions and air quality, and wildlife and flora in the

environmental stations, Braskem makes specific investments to address environmental liabilities.

**75** 

TYPE OF EXPENSE	AMOUNT (R\$ MILLION)
Investments in HSE	114.4
Work Safety	65.6
Process Safety	13.0
Health	4.7
Environment	31.1
Spending on treating effluents and waste	93.2
Treatment of liquid effluents	50.5
Waste management	42.7
Management of Emissions	8.1
Environmental Licenses	1.1
Depreciation <sup>(1)</sup>	46.0
Environmental liabilities (2)	65.8
Other Environmental Management Costs (3)	66.6

<sup>(1)</sup> The depreciation value is an estimate based on previous years.

<sup>(2)</sup> The value reported in Environmental Liabilities refers to what has been provided for use based on expected needs for the coming years.

<sup>(3)</sup> Other costs with environmental management include ground water management, environmental noise monitoring programs, the quality of surface water resources (lakes, rivers, oceans), and pipelines, environmental risk management, and energy and water administration.

# **Suppliers**





As a result of the decentralized structure of Europe, Braskem Supplier management is divided between several contract areas, each one responsible for its analysis of expenses, the quality of products and services purchased, adherence to the Code of Conduct, and legal regulations and requirements

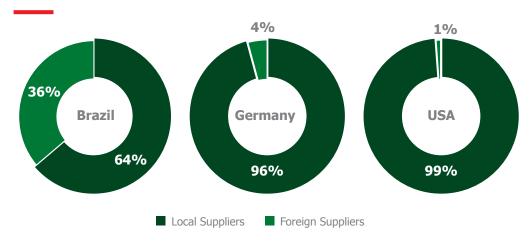
concerning Health, Environment and Safety (HSE). With specific regard to this issue, the Company has a robust HSE culture that permeates relationships with Suppliers.

The Company expects that all of its partners behave in a manner aligned with its ethical

and professional principles. Thus, the Company only hires Suppliers that are current with their regulatory and tax obligations, technical and administrative qualifications, and have a healthy economic and financial situation. Today, Braskem has approximately 8,000 Suppliers.

All Suppliers have access to the Braskem Ethics Line communication channel, where they may contribute information that strengthens the transparency and trust between the parties. All complaints registered are investigated and remedial measures are taken to ensure the correct outcome of any problems

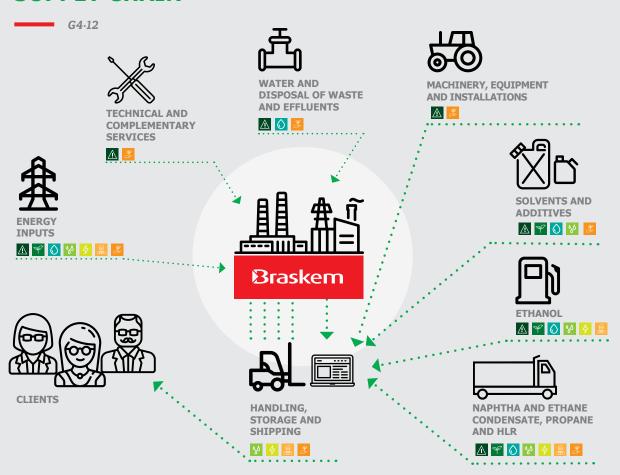
#### PERCENTAGE OF PURCHASES FROM LOCAL SUPPLIERS BY COUNTRY<sup>20</sup>

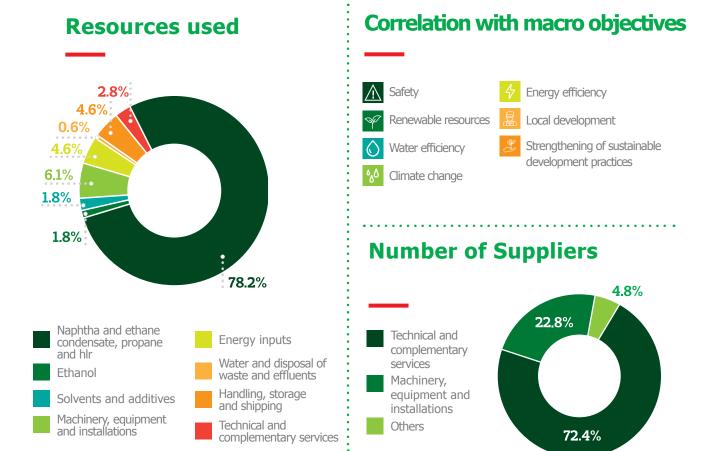


It is worth noting that the increase in the percentage of spending in Brazil with foreign Suppliers is mainly due to the depreciation of the Brazilian real, not the increase in imports.

 $<sup>^{20}</sup>$  Purchases in Mexico will begin to be reported after the start of the plant, so that the data reflects the operational profile and not the construction or preparation phase.

#### SUPPLY CHAIN





### **Management of main Supplier categories**

The following are highlighted practices and specific results of Braskem's main procurement.

#### Fossil raw materials

The largest share of Braskem's spending on Suppliers refers to fossil raw materials - naphtha, condensate, ethane, propane and HLR in Brazil, ethylene and

propylene in the United States and Germany, and ethane in Mexico. In Brazil, the main naphtha Supplier is Petrobras, a Braskem Shareholder. To ensure the continuity of operations and keep costs under control, the Company has contracts for these strategic raw materials, in all of its countries of operation.

#### **Ethanol**

Ethanol Suppliers represent one of the categories with the highest social and environmental risk for the Company, and therefore, undergo a careful management process. A specialized team ensures that the supply is in line with the commitments and values of the Company and its Clients, working mostly with

Suppliers through long-term contracts that include signing the Code of Conduct for Ethanol Suppliers, developed in 2010 by Braskem specifically for this category with the support of Proforest.

In 2015, a total of 99.8% of ethanol purchased by Braskem

came from plants with which the Company has contracts, well over the goal of 90%. The remaining 0.2% was bought via the commodities exchange to meet temporary demands. It is worth noting that the goal for 2016 will remain at 90% so that the Company has flexibility and access to new Suppliers.

The Code of Conduct for Ethanol Suppliers establishes standards expected by the Company in terms of deforestation and fire prevention, biodiversity protection, respect for human rights, and labor relations, and monitoring social and environmental indicators



Learn in detail about management process for these Suppliers and the Code of Conduct at

Braskem > Code of Conduct for Ethanol Suppliers

The monitoring of contracted Suppliers includes independent audits at plants and forest areas. In 2015, they were carried out by WQS, a company specialized in industry certifications, such as Bonsucro. The plants that supply 87% of the ethanol purchased between July 2013 and June 2015 were audited, a result above the

annual goal of 80%. All results of these audits are communicated to the plants and corrective action plans are established and monitored jointly by the companies.

It is important to note that the audits are valid for two years and the volume supplied per plant

each year may vary. Therefore, there was a natural variation in this figure when comparing to the 95.7% audited in 2014.

Generally, audits attested to a good level of compliance to the Code. The following is a general overview of the results obtained in 2015.

#### Positive highlights:

 100% of the harvest was done mechanically, without the use of fire, and in 83% of the plants, the sugar cane bagasse was used to generate energy, an important factor for the level of carbon sequestration of green plastic;

#### Main areas for improvement:

 One plant had not yet concluded the mapping of its riparian woods in leased areas and another must improve the quality of its map in order to identify areas in need of recovery;

- All plants carried out training for continuous improvement in health, safety, and the environment with their local communities. Some projects stand out for going beyond philanthropic donations and creating structured, continuous Community training programs about
- At two plants, procedure flaws were identified that caused a lack of appropriate personal protective equipment;
- Two plants were asked to improve pesticide labeling and storage procedures, and training of the workers in that area;

- environmental as well as social issues;
- Interviews with workers and review of plant records attest to compliance with human rights, including but not limited to the prohibition of child or forced labor.
- At one plant, opportunities for improvement were identified in the monitoring process of corrective actions defined for accident prevention after incidents and investigations. ocorrências e investigações.

#### **Procurement Brazil**

In Brazil, the Procurement area concerns the purchase of direct and indirect goods and services. The area is responsible for contracting Industrial Services, essential to maintaining plant operation; Corporate Services, that support other areas of the Company and its Members; the purchase of Inputs and Packaging necessary for production; the purchase of materials applied during maintenance operations (MRO - Maintenance, Repair and Operation), and equipment for new investments. In addition, in 2015, the area became responsible for management of warehouses and the Company's stock of MRO materials.

In 2015, due to the troubled economic scenario in Brazil, the area had as one of its main focuses maintenance of

Braskem's competitiveness and the guarantee of the availability of goods and services essential to the business.

The selection of Suppliers is made by a Supply team jointly with user areas and undergoes quality analysis with established parameters, as well as standardized HSE evaluations, and must meet financial criteria and fulfill regulatory obligations. Among indicators used for their management is the Supplier Performance Index, in which indicators considered critical are evaluated by Braskem concerning quality, productivity, and HSE. Deviations identified through these assessments are addressed with an action plan involving the user, the Supplier and the Procurement areas. Throughout 2015, this indicator underwent revisions and updates that will

go into effect for evaluations that will be carried out in 2016. The review had the purpose of improving the identification of deviations and expanding its use in routine follow-ups. Suppliers that must be monitored by the Supplier Performance Index are identified by the Criticality Matrix of the Company's purchase categories, which take into consideration the category's importance to the Business and its social and environmental risk.

For Suppliers providing services within Braskem plants, additional risk criteria in terms of HSE are included. These critical Suppliers are monitored by a Prevention Index. The Prevention Index takes into consideration several points, such as deviations and losses, plans for maintenance and inspection, and HSE. Its monitoring includes an annual

audit that verifies compliance with the annual HSE program, characterized by the evaluation of results and prevention practices. In addition, it identifies opportunities to improve and recognize best practices.

Also in 2015, the Procurement area supported the CDP

Supply Chain Project once again, which asks Suppliers to report their greenhouse gas emissions, risks, and associated opportunities, and their strategy for ensuring improved management of the issue.

Another focus was on supporting the implementation of the

purchasing area of Braskem Idesa in Mexico, carrying out planning of each category, contract negotiation, and training in the procurement process. The area also coordinated activities with purchasing teams from the United States, Germany, and Mexico operations, aiming to identify and capture synergies in global negotiations. As part of the initiative, the 3rd Global Procurement Meeting was held in São Paulo, with the presence of Members from the area from these countries.

In 2015, a total of 74 Suppliers answered a survey about air emissions management and their environmental impacts, an increase of 270% in the number of responses compared to the previous year

### **Logistics Brazil**

Just procurement management, Braskem's Logistics teams work closely with HSE professionals to guarantee compliance with all social and environmental requirements critical to Braskem's operations. Each team has its own methods of evaluation according to their specific needs, all monitored by a Braskem system of performance analysis and ABIQUIM's Safety, Health, Environment, and Quality Assessment System (SASSMAQ).

- Propylene: uses the Accident/ Incident Prevention Index and the Service Level Agreement (SLA), a tool that is also used by the resins team.
- encourages adherence to programs such as Olho Vivo na Estrada, Transportadora da Vida, and Na Mão Certa, and carries out the Conscious Partner program with periodic meetings to share best HSE practices with transporters.
- Chlor-Alkali and Polyolefins:
   Suppliers showing indicators lower than the target for the Performance Index participate in monthly meetings for evaluation and corrective action plans. Transporters below these targets for three consecutive months are disaccredited. The area also encourages participation in the Olho Vivo na Estrada and Na Mão Certa programs, as well as annual audits of the transporters headquarters.

Logistics teams have the support of professionals in Health, Environment and Safety (HSE) when managing social and environmental requirements critical to Braskem's operations

Braskem also maintains partnerships with Brazil's key risk managers, and contracts the majority of its resins highway freight (non-hazardous product) with electronic locators or tracking devices. As for hazardous products such as chlor-alkali, the requirement is that 100% of the freight be tracked and transported by the Suppliers own fleet, while propylene has 100% of its freight tracked with telemetry

embedded in the vehicles. For products marketed by Basic Petrochemicals, implementation of tracking for 100% of its cargo is in the final phase, as is the Study of Risk in Logistics for priority products (Benzene and Pygas).

The Company also entered into a contract with SUATRANS, a leader in highway chemical and environmental emergency services in Brazil, and carries out audits at service bases and in simulated emergencies on main cargo transport routes.

All of this concern is returned with the careful monitoring of events and cargo transport indicators: Transport Accident Frequency Rate (Per number of trips and per kilometer travelled) and Accident Severity.

Braskem has a Policy for internally handling Transport Accidents that provides specific actions, such as deadline for concluding an investigation, according to the severity of the event



For more information, visit



Concern for the environment is present as an important topic in Supplier management. The Company constantly seeks to operate with more sustainable modes of transportation (whenever applicable), and began in 2014 and continued in 2015 the process of

engaging Suppliers in voluntarily monitoring their greenhouse gas emissions and opportunities to reduce those emissions.

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Braskem's growth strategy is based on the development of sustainable solutions with value added to different production chains that use plastic as an essential raw material for the manufacture of final products.

Thus, Braskem significantly invests in Research and Development (R&D) for new products and

services adherent to the business model of its Clients – over 700 companies operating in different sectors of the converting industry.

One of the Company's main features is Green Polyethylene, a 100% renewable plastic resin created with its unique proprietary technology after three years of investment in R&D.

The innovation made Braskem the largest industrial scale <sup>21</sup> manufacturer of biopolymers in the world, with a dedicated production line at its Triunfo plant in Rio Grande do Sul, Brazil, where the Company's Technology and Innovation Center is also located.

<sup>&</sup>lt;sup>21</sup> The installed capacity of the companies was used as a parameter, not the annual production. Source: http://www.cmaiglobal.com/marketreports/globalplastics\_polymers.aspx





Innovation is Braskem's path towards growth and indispensable to the Company's survival and perpetuity. With a team of 300 professionals specialized in research and product development, two Innovation and Technology Centers located in Brazil and the United States, 23 laboratories, and seven pilot plants, Braskem is committed to the continuous evolution of the petrochemical industry and

the plastic production chain. The Company combines internal and external knowledge, based on the concept of open innovation, for developing new market solutions. Also, Braskem maintains partnerships with 15 universities and research institutions in Brazil with the purpose of finding new solutions for the market of petrochemical products. In 2015, the Company ranked fourth

among the 100 most innovative companies in the Country, published by the newspaper Valor Econômico in partnership with consulting firm Strategy&, which has been publishing global innovation rankings for over a decade. This was accomplished one year after American magazine Fast Company chose Braskem as one of the 50 most innovative companies in the world.

# **Braskem innovation in figures**



**2 TECHNOLOGY AND INNOVATION CENTERS** (one in Triunfo, Rio
Grande do Sul, Brazil, and one in
Pittsburgh, Pennsylvania, in the
United States)





23 LABORATORIES



R\$ 280 MILLION INVESTMENT IN INNOVATION AND TECHNOLOGY



**7 PILOT PLANTS** 



903 PATENT documents registered worldwide



**276 PROJECTS** in the technology and innovation pipeline

#### **New resins**

In 2015, Braskem added nine new resin grades to its portfolio. Some of these new releases are highlighted below:

- Norvic® S80SA: resin with heavy molecular weight and high porosity. Because of its flexibility, it is recommended for the production of items with high value added, such as shoes.
- HD7000C, high-density polyethylene (HDPE), has high rigidity and excellent organoleptic properties, which

- may be perceived by human senses, and is recommended for the food industry, such as dairy and juices.
- ML3602U: an all-purpose, medium density polyethylene (MDPE) for roto molding. In addition to its hiah performance, this resin has excellent mechanical finishina properties, and particularly for use agriculture and technical parts.
- H614: homopolymer polypropylene with UV

- protection, adjusted to meet the Brazilian NBR 16029 standard, used for the manufacturing of big bags.
- VA4018R: ethylene vinyl acetate copolymer, a product with properties similar to those of elastomers (rubbers), utilized in the footwear industry in expandable and cross-linked compounds. It has a lower density, providing a more anatomical design and a lighter finished product with more flexibility and comfort.

#### **Renewable Butadiene**

In 2015, Braskem, in partnership with the North American bioengineering company Genomatica, announced the production of butadiene on a laboratory scale through a direct

process from renewable sources. Together, the companies have developed technology for the renewable production of this input since 2013. Butadiene is a raw material used in the

manufacturing of rubber for tires also with applications for electrica appliances, shoes, plastics asphalt, construction materials and latex.

# **Braskem Scientific Advisory Group**

Attentive to what is most innovative in the chemical and petrochemical production chain, in 2015 Braskem invested consolidating Scientific Advisory Group. This group joins specialists in five key areas for managing the Company's knowledge: Catalysis; Renewable Technologies; Materials Science; Macromolecular Chemistry; Chemical, Thermodynamics, Process Engineering. The Company chose renowned international scientists linked to research centers at the most prestigious academic institutions in the world to

ead each one of the areas. For the Catalysis area, Braskem relies on the knowledge of Vincenzo Busico, from the University of Naples (Italy). Professor Richard Register, from Princeton University (USA), leads the Materials Science field. The Renewable Technologies chair is Professor James Liao, from the University of California (UCLA), in Los Angeles (USA). Professor Gilbert Casamatta, president of the IRT Saint Exupéry, located in Toulouse, France, leads the Thermodynamics, and **Process** Engineering efforts. Finally, Professor

Kenneth Wagener, a leader in the field of Macromolecular Chemistry and most senior member of the crew, is in charge of providing technical advice in the Polymer Science field.

The Scientific Advisory Group plays an important role in the Company's growth strategy. Among other actions, it is also through this group of specialists that Braskem targets its investment decisions for projects with high technical content and complexity among the most modern applications in the industry.

# International Conference on Innovation and Technology

As part of its technological development incentive agenda, Braskem invested in carrying out the International Conference on Innovation and Technology for the second consecutive year, in October 2015 in the city of Porto Alegre, RS, home state of Braskem's Innovation and Technology Center.

With the purpose to promote integration and sharing of knowledge between researchers from different companies, the conference rallied 170 professionals interested in the chemical and petrochemical industry. The schedule included lectures and the presentation of 100 scientific articles that were pre-selected by a technical committee, with research

projects for developing industrial process improvement. Among speakers were Professor Dr. Julia Kornfield, from the California Institute of Technology, Professor Vincenzo Busico, Ph.D. in Inorganic Chemistry and full professor of Inorganic Chemistry at Frederico II University of Naples, in Italy, and a member of Braskem's Scientific Advisory Group.

#### **New laboratories**

In 2015, Braskem increased the physical capacity of its Innovation and Technology Center located in Triunfo, RS, aiming to advance the Research and Development (R&D) of new solutions for plastics applications.

The R\$ 1.5 million investment enabled the construction of two new laboratories for chemical testing and analyzes of polymers. One of them is focused on the analysis of x-rays to measure residual content and polymer crystallinity

properties to strengthen catalyst development. The other is dedicated to evaluating barriers to the passage of gasses through polymer films, an important tool for the application of plastics in food packaging, pharmaceuticals, agrochemical drums, and fuel tanks. Also at the Technology and Innovation Center, the Company invested R\$ 720,000 in the expansion catalyst characterization laboratory through the purchase of new equipment and more physical space.

The year also saw the startup of the Process Technology Development Laboratory, which is located at the petrochemical complex in Mauá, SP, an investment of over R\$3 million in equipment alone.

These three new laboratories will further increase Braskem's capabilities to create value for chemical and plastic based production chains through research.



For more information, visit



Braskem > Innovation



With the purpose to innovate and continue serving Clients with quality, and therefore, to improve people's lives, Braskem teams seek solutions in the segments in which they operate and invest funding and creativity to increase possibilities for the use of plastic in society. Learn about some highlights and examples of improvements provided by the new products.



For more information, visit



Braskem > Products and Innovation

# **POLYPROPYLENE (PP)**

# More productivity with Braskem Maxio<sup>®</sup> line



Braskem developed the KM 6150HC resin for application in plastic chairs. It showed significant efficiency results for Tramontina, which was Braskem's partner in the creation of this product. The resin grade, which is a part of Braskem Maxio® product line, was responsible for a 10% increase in productivity as well as a 10% reduction in

energy consumption, enabling the manufacturer to reduce the weight of new projects by 10%.

Also, in 2015, as part of its commitment to the Client, Braskem developed an application for Smartphones that calculates the advantages of using the products within the Maxio® product line. Its

benefits can be easily and quickly estimated: the user only has to insert data about the piece being manufactured in two situations — using a standard resin and using a Maxio® resin. The application is available on Android and iOS platforms, under the name Braskem Maxio®.

Braskem Maxio® portfolio of resins has a seal, developed to offer reduced energy consumption, increased productivity, and less weight, guaranteeing more efficiency and, consequently, environmental gains such as reduction in greenhouse gas emissions.

#### **Braskem Maxio® Recognition**

Braskem was recognized for Braskem Maxio® in the Challenge category of the Brazil-Germany Innovation Award, promoted by the Brazil-Germany Chamber of Commerce. This seal of recognition was a result of the improved performance and energy efficiency guaranteed by the resins.

### **Design Challenge Odebrecht Braskem**

Developed three years ago in a partnership between Odebrecht and Braskem, the Design Challenge project joins architecture and design universities and students to create new furniture products using plastic as a raw material. In 2015, the competition focused on urban furniture, split into two categories: social, for the development of chairs, tables, and benches; and kids, aimed at playground production. The selected projects will be available at Odebrecht Real State Developments projects. For its third year, the Design Challenge included a partnership with the

design agency Mais Packing, which supported the students who participated in the contest with the development of their projects, and companies Tramontina and Freso,

who are in charge of producing and marketing the winning pieces. This year, the competition involved 18 students from six Brazilian universities.



# Super sacks made from raffia

In 2015, Braskem made substantial progress in the development of a new raffia technology, cabable of making super sacks for cement and more resistant concrete packaging. For extra protection, the products for

this business segment gained one more barrier of film lining over the bag's woven material to ensure impermeability for stored concrete. Through a partnership with Holcim, which launched Concreto Pronto, Braskem developed a type of super sack capable to withstand the product being prepared inside the packaging. The water consumption of super sacks made with raffia in its life cycle is only 1/8 compared with the traditional alternative and the energy consumption is only half.

# Braskem and Inline: partners in the development of plastic fences for major events

With the purpose of bringing new safety solutions to this market, in Brazil, the manufacturer Inline, in partnership with Braskem, began manufacturing mobile fences made of polypropylene for signage, crowd organization, and area isolation. The product

is the only plastic option available in Brazil and presents a set of advantages compared to its metal counterpart, such as reduced weight and greater practicality, as well as being 100% recyclable. Launched in 2015, the fences have already been used at renowned

music festivals, sporting events, and fairs all over the Country. Also, the product has been adopted by industries, such as Braskem, as a work safety solution in machinery and equipment, aligned with Brazil Ministry of Labor's Regulatory Standard 12 (NR-12).

#### PARTNERSHIP WITH AACD

In 2015, Braskem secured a partnership with AACD, as an association that assists children with disabilities, for the donation of 18,000 tons of polypropylene. The material will be used to manufacture about 24,000 prostheses, meeting 100% of the AACD's resin needs for one year.

# POLYETHYLENE (PE)

# **Investment in Linear Low-Density Polyethylene**

The R\$ 50 million investment carried out in 2015 to increase the linear low-density polyethylene (LLDPE) production capacity by 120,000 tons annually at Braskem's Camaçari plant in Bahia, Brazil, enabled an increase in the supply of products from the Flexus® family. Braskem's family of high-performance metallocene polyethylene guarantees support

for Client growth in segments requiring high technology resins.

With the increase in this line's capacity, new polyethylene products and solutions arrived on the market in 2015, particularly the Proxess® family, which introduced new products to produce flexible, high-performance films (Proxess 2606 and Proxess 1806S3).

With the purpose to promote effortless processing and meet the market's high demand for flexible packaging, the products in the Proxess® family can deliver performance and flexibility to different applications and Clients. They are recommended for automatic packaging boxes, super sacks, and agricultural and heat shrinkable films.

# Solutions for agribusiness

Braskem also made progress on new fronts applying plastic films in agriculture. In partnership with EletroPlastic and the Federal University of Uberlândia (UFU) - Monte Carmelo Campus, in Minas Gerais, Brazil, in 2015 Braskem developed a field study about the use of plastic film for soil covering, also known as mulching, in coffee crops. The mulching tests on coffee plants began in January 2014 and were concluded in 2015, at Juliana Farm in Monte Carmelo, one of the leading coffee export regions in the Country.

After a year and a half of planting, the study concluded that the crops with mulching had better results than the control samples,



since it prevents the development of weeds, thereby reducing the cost of weeding and application of pre-emergent herbicides. The solution also reduced water evaporation, so that the area always remains moist, with less need for frequent irrigation.

Two additional highlights are the use of mulching in pineapple crops and the production of citric fruits. It provides benefits such as reduced production cost and water consumption, increased productivity and reduced loss.

### Launch in the rotational molding segment

In 2015, Braskem launched another grade in its resin portfolio for rotational molding. It is the ML3602U, Linear Medium Density Polyethylene (LMDPE), commonly used with a balance of the most appropriate properties for meeting the

increasingly more demanding segment requirements. This product allowed Braskem to access more markets such as those of technical parts and agricultural implements for better mechanical strength compared to the previous version, in addition

to allowing transformers and end users to work with lighter parts. The most common applications of this grade are the sprayer tanks for agricultural machines, seed boxes for planters, diesel tanks for buses and tractors, 500-liter water reservoirs, among others.

## **Launch for the Consumer Packaging Segment**

Throughout 2015, Braskem developed and launched the HD7000C, an HDPE resin for the Consumer Packaging segment designed to produce bottles with

superior hardness, excellent processability and surface finish of the package. The balance of properties of this grade allows Clients to explore new thicknesses and weight of the final product. The HD7000C is recommended for packaging liquid foods and powders, and for the cosmetics and personal care market.

#### **Window frames**

Braskem focuses on the development of PVC solutions to meet the needs of the Brazilian civil construction market. Among the plastic resin options for the segment is window frames, which

since 2013 must meet performance standards for Buildings (ABNT NBR 15575 and NBR 10821). The regulation establishes norms for ensuring window frame performance and avoiding

problems such as leaks, wind passage when closed, constant need of repairs, little resistance to break-ins, and deformations caused by regular use.

#### **PVC Pipes**

In 2015, Braskem announced the donation of 7,000 meters of PVC pipes to the Municipality of Maceió, Alagoas. The material will be used for drainage and improved usability of the city's waterfront. The work consists of collection and removal, through PVC pipes, of water from the water table. The collection network will be

installed on the stretch of sand, with 11 pumping stations along the waterfront, interrupting the flow of water currently released into the ocean.

# All across: innovation at RIOgaleão Airport

Partnerships with Clients enabled the implementation of new plastic solutions for the construction work at RIOgaleão – Tom Jobim International Airport in Rio Janeiro. Braskem supplied the total volume of over 540 tons of plastic for applications such as Bubbledeck, PVC roofing, and polyethylene pipes. The products are part of all stages of airport

construction, from foundation to finishing. Braskem PVC roofing was used at the work sites at the Galeão Airport, an area of 1,046 m².

The Bubbledeck application, consisting of polypropylene spheres evenly inserted between two steel meshes, was used in slabs in 44,696 m<sup>2</sup> of the airport Garage Building,

yielding four new floors and 2,000 additional parking spaces.

The polyethylene pipes replaced concrete structures. A total of 6,888 meters of piping made up the new drainage system, which now has greater mechanical and structural resistance with high hydraulic performance.



# **RENEWABLES**

### Five years of Green Polyethylene I'm green™

In 2015, Plástico Verde completed five years on the market, consolidating presence its segments different and consumers in countries in North and South America, Europe, Asia, and Oceania. The research for a renewable raw material, capable of maintaining production quality providing environmental advantages, began in 2007. Three years later, Braskem invested US\$ 290 million to inaugurate its Green Polyethylene plant in Triunfo, Rio Grande do Sul, Brazil. In this period, several achievements gave Green PE strength and space in the global market.

The production process begins with

dehydrating ethanol to change it into green ethylene, which then goes to the polymerization units where it is turned into polyethylene. The sugar cane plastic is then taken to third generation companies, called transformers or converters, which will manufacture it into products. Since it is made from a renewable raw material, Green Polyethylene helps capture and keep the CO<sub>2</sub> from the atmosphere, the primary cause of the greenhouse effect, representing approximately 2.15 tons of carbon dioxide for each ton of Green Plastic produced.

For the market, another positive aspect is that the mechanical and processability properties of I'm

green™ are identical to those shown by the conventional petrochemical. Braskem has been producing a high density (HDPE) and a linear low-density polyethylene from a renewable source (LLDPE) on an industrial scale since September 2010. Since 2013, low-density Polyethylene (LDPE) from a renewable source was incorporated into the portfolio. Also, the vast application alternatives are possible due to the supply of 30 resin grades present in these product families. The expansion of the green product line strengthened the Company's commitment to creating value through sustainable development for the sector's production chain, its Clients, and society.

## Sugar cane production chain incentives

As part of Braskem's efforts to support the industry, the Company integrated a joint initiative for the launch of the campaign Sugar Cane the Culture of Innovation coordinated by the NGC Solidaridad in partnership with Raízen, Braskem, Tetra Pak, and Sociana (Guariba Sugar Cane Suppliers Association). The

common goal was to promote sustainability and innovation in the sugar cane production chain. Together, the companies worked to educate consumers and influencers about the progress made in recent decades in the entire sugar and ethanol manufacturing process, from field production to manufacturing packages for everyday use.

In addition to technologies enabling sugar, ethanol, and electricity generation, other products originated from sugar cane transform the raw material into goods with more value added, such as Green PE used in high-tech packaging.

### Partnership with Tramontina

The new gardening line by Tramontina, the Sweet Garden collection, uses Green Polyethylene in its products, such as watering cans, shovel supports, and cachepots.



# **Packaging in Green PE**

PremieR Pet adopted the green plastic for the packaging of its Natural Selection PremieR line, for dogs and cats. Pernod Ricard Brazil, affiliates of the French distilled beverage multinational, also adopted the renewable raw material for the lids of the products in its local portfolio. These partnerships demonstrate the presence of Green PE in industries from different segments.

# **Feiplastic**

In 2015, Braskem brought its complete product portfolio to Feiplastic, the largest plastic industry fair in Latin America Focusing on innovation as a too for transformation, the Company

presented the primary applications for polyethylene, green polyethylene, polypropylene, and PVC to various markets, such as agribusiness, construction, retail, automotive, and logistics. Overall,

Braskem joined about 30 product catalogs from different resin families for diverse applications developed to meet each

### **Clients**

Braskem has a portfolio of over 700 Clients from several segments of the conversion industry. Established partnerships include not only the development of new products and solutions, but also the implementation of conversion units close to the Company's complexes, bringing gains to both parties, especially in logistics, as well as generating revenue, jobs, and taxes for regions where these projects are implemented.

## **Visio Program Braskem**

The Visio program provides integrated management for sharing knowledge and experience with Clients. The goal is to strengthen the relationship by generating common value capable of increasing business competitiveness

and productivity. In 2015, over 454 initiatives were carried out, with over 197 Clients from all of Braskem's business areas, according to CRM (Customer Relationship Management) records, a tool used by Braskem.

#### **PICPlast**

PICPLAST
Plano de Incentivo à Cadeia do Plástico

Based on its commitment to developing the plastic chain and in the spirit of Client service, Braskem advanced together with the Brazilian Plastic Industry Association (Abiplast) in the Plastic Chain Incentive Plan (PICPlast).

PICPlast is based on three areas: promoting the export of transformed plastic parts; increased competitiveness and innovation of the transformation sector; and promotion of the advantages of plastics. Since the beginning of the training actions

and participation in fairs of different market segments, in 2014, more than 900 Brazilian companies from the plastics transformation sector were benefited by actions taken by the plan to contribute to the development of Brazilian industry, involving more than 1,200 professionals who work in the industry.

On the pillar of stimulating the export of transformed plastics, the accumulated volume of incentivized resins reached approximately 70,000 tons in

December 2015, representing over R\$ 80 million invested over the past two years.

In 2015, PICPlast also secured a partnership with Sebrae (Brazilian Support Service for Micro and Small Enterprises), and, beginning 2016, an educational and consulting program on management development will be offered to stimulate the growth of micro and small enterprises operating in the plastic production chain.

# **Industry Fund**

The Industry Fund, one of PICPlast's operations, created to fund promotion actions valuing the advantages of plastic, completed one year in December and collected

significant results since its launch. By December, the plan had already received the support of 317 companies from the plastic industry throughout Brazil.

The amount collected in 2015 reached about R\$ 2.7 million, which will be used during the next few months toward communication, education, recycling, and technical studies.

#### Let's Talk Packaging



Braskem's brand content platform coordinated by the Company's Packaging Committee is an initiative created to publicize the advantages of using plastic packaging, trends, and market design innovations. The platform stimulated brainstorming and development of innovative solutions for plastic in packaging.

For more information, visit

Braskem > Clients

#### **Life Cycle Assessment**

Braskem leads industry initiatives to strengthen the environmental attributes of plastic. The work is developed using Life Cycle Assessment (LCA) studies, a technique used since 2005 to evaluate environmental aspects the potential impacts and associated with the product. It includes the stages from the removal of raw material from nature to the disposal of the final product. This analysis allows Braskem continue to increasing its understanding of the environmental impact of its products during their life cycle to make business decisions.

In 2015, the Company concluded 11 studies and an inventory of 85% of the plants operating in Brazil. Among the main results for the year are:

 Benefits of packaging for paint produced from polypropylene compared traditional packaging. The study showed that if one million liters of paint were packaged in 3.6 L plastic packaging rather than traditional packaging, emissions of 58 tons of CO<sub>2</sub>

- would be avoided–equivalent to emissions from 222,000 km of car travel -, in addition to a volume of acid rain sufficient to fill 1,262 Olympic-sized pools. The gains shown are related to global warming and toxicity.
- Assessment of the best process for Urban Solid Waste disposal to aid Braskem's positioning. The Life Cycle Assessment compares the landfill and incineration solutions, revealing trade-offs between the two alternatives.
- A comparative study between traditional promotional bags and I'm green™ Green Polyethylene for the transport of 14-liter volumes that hold up to 10 kg. Both were classified in the same price range and printing area. The result showed that the I'm green™ Polyethylene option has better environmental performance in the majority of categories of impact evaluated.
- Emissions Avoided by Plastic, a project using the

- methodology developed by the International Council of Chemical Associations (ICCA), in which eight applications are assessed comparing plastic to its substitutes. The results showed reduced greenhouse gas (GHG) emissions in the life cycles of all plastic applications studied.
- A comparative study between disposable and reusable cups demonstrated that reusable cup washed manually consumes around 1.2 L of water, a consumption five times greater than the dishwasher. On the other hand, a disposable cup consumes only 26 mL throughout its entire life cycle, including the recycling process.

The sustainability of plastics as a solution for improving people's lives is a strategic aspect for the Company and in the interest of its stakeholders, especially its Clients. The life cycle concept is understood more and more by the Company, due to the growing involvement of the Company's business units in these studies.



The Life Cycle Assessment studies are available upon request through e-mail

acv@braskem.com



#### **LCA Network**





→ Braskem > Life Cycle Assessment



www.cebds.org > Working Goups

96

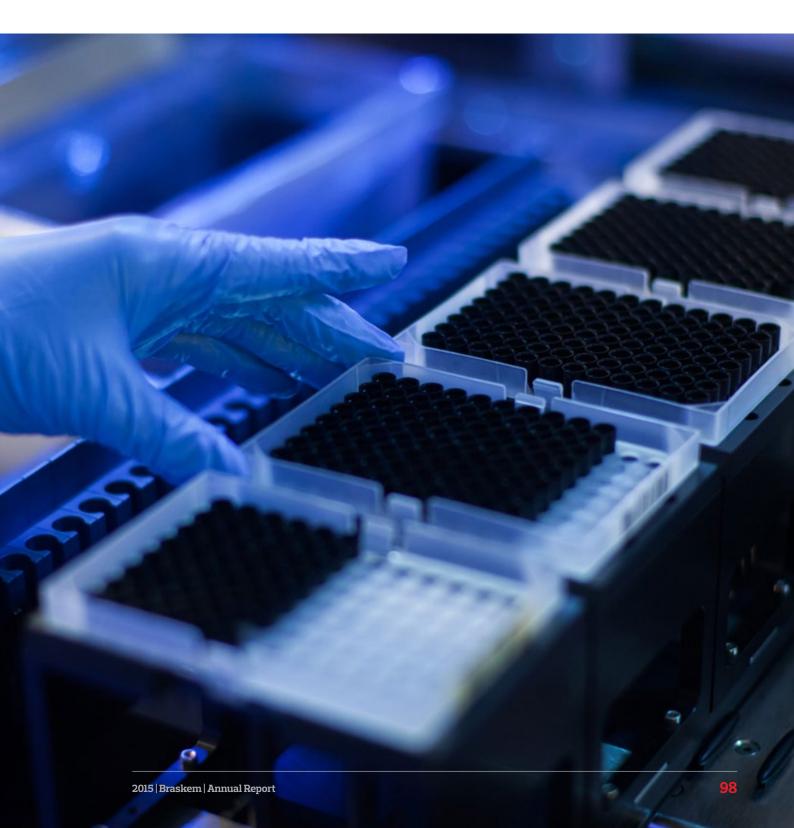


Braskem seeks to grow in the market by producing a positive legacy for society. In this regard, the Company develops a set of social and environmental responsibility initiatives, carried out in partnership with different civil society agencies, and makes industrial commitments to creating sustainable solutions in its production chain. These fronts form an umbrella of value

creation for society involving more sustainable processes, resources, and products for an increasingly better life.

Braskem's purpose materializes in innovative incentive projects for increasing the universe of plastics applications. The prostheses used by athletes with disabilities are an example of how plastic may contribute to solutions

enabling better accessibility and quality of life. It is what drove the Company's support for the Brazilian Disabled Athletes Team, for disabled athlete Alan Fonteles – world record amputee sprinter of the 100m and 200m –, and for triathlete Adriele Silva – gold medal winner of the London Games, in 2012, and first and only amputee in Brazil to participate in the triathlon for the disabled.



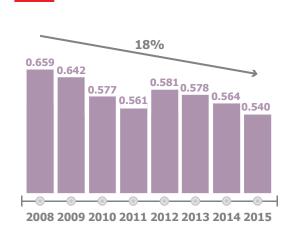


Discussions on the global agenda about climate change represent a structural pillar of Braskem's sustainable development actions. The Company has made a constant effort to diversify renewable raw materials with the purpose of progressively reducing the level of greenhouse gas (GHG) emissions. In this regard, Braskem is a leader

in biopolymer (Green Plastic) production using sugarcane and has been progressively increasing its consumption of natural gas, which has less GHG emission fuel when compared to the crude oil distillate.

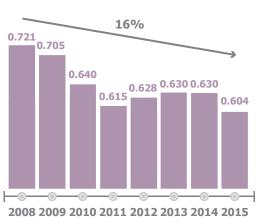
Braskem's corporate GHG emissions inventory includes all categories in Scopes 1, 2, and 3 applied to 100% of the Company's operations. In 2015, considering only Scope 1 emissions, directly managed by Braskem, the actions initiatives implemented totaled a cumulative reduction of about 18% compared to the base year of 2008.

#### **GHG EMISSIONS - SCOPE 1** TCO,e/T OF PRODUCT



Evolution of carbon intensity (scope 1 + 2)

#### SCOPE 1+2 TCO,e / T OF PRODUCT



In 2015, carbon intensity (scopes 1 + 2) show a cumulative reduction of approximately 16% compared to the base year 2008. Among the actions that most contributed to this result are the energy optimization initiatives at complexes and other plants, aligned with energy efficiency indicators.

The initiatives that most contributed to the year's results were:

In the UNIBs, reduction in scope
 1 due to the implementation of energy efficiency projects, with emphasis on maximizing efficiency, increased productivity in furnaces, and

the operation configuration of boilers with a consequent 8% reduction in consumption of the liquid fuel pool. Also, consider the reduction of loss to flare and the optimization of the fuel matrix.

• At the Polymer plants, there was reduced consumption of some fuels and losses to the flare. Additionally, there was a catalyzer change at one plant, from a particular class of product that caused the reduction of 60% in propane burning in the flare for these resin grades. It is important

to note that some absolute reductions are associated with less consumption due to shutdowns for maintenance or operation with a reduced load caused by trade restrictions.

If considered the differences in absolute values, between actual emissions between 2009 and 2015 in comparison to the baseline year of 2008, the aggregate emissions avoided totaled 5.3 million tons of  $CO_2e$ , which is equivalent to planting 35 million trees in the period.

### **Managing indirect emissions**

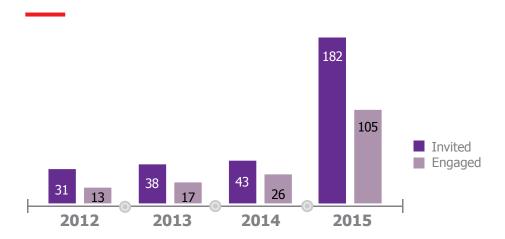
Braskem has been carrying out the GHG emissions inventory from scope 3, indirect emissions, since the year 2011, and has evolved its actions and initiatives to reduce these emissions, strengthening the engagement of the chain and the internally involved areas, such as personnel transportation, product transport, Information Technology, raw materials, and other. During the year of 2015, Braskem's emissions from scope 3 totaled 15.8 million tons of CO<sub>2</sub>e, reporting the 15 categories of all industrial operations. In the

continuous improvement process in reporting scope 3<sup>22</sup> emissions, after 2015, there was an increase in reporting categories associated with the transport of waste, raw materials and other. For more detailed information about these emissions, the data is available on the CDP Investor website.

Braskem does not have mandatory requirements for its Suppliers; however, for four years the Company has developed voluntary engagement initiatives as a way of obtaining more efficient risk management and opportunities for the chain as a whole. Actions toward awareness, encouraging emission inventory reporting and identifying risks and opportunities are carried out annually with the support of CDP Supply Chain. In 2015, the CDP published the ranking of Suppliers in Latin America: five of the ten best results in the Transparency category belonged to Braskem's Suppliers, and in the Performance list there is only one vendor from Latin America, who is also one of Braskem's Suppliers.

<sup>&</sup>lt;sup>22</sup> Reporting categories for Scope 3 emissions, according to standards defined by Corporate Value Chain (Scope 3) Accounting and Reporting Standard, published by GHG Protocol

#### NUMBER OF SUPPLIERS INVITED X ENGAGED



The Company also holds a prominent position in international debates to define policies aligned with the industry's commitment

to reducing greenhouse gas emissions. Since 2009, the year the Braskem's Manifesto for Climate Change was published ("É preciso amadurecer para ser verde"), the Company has been working in the market following the voluntary goals for reducing the intensity of carbon emissions.



# Carbon pricing

During COP-21, Braskem contributed to advances in the local and global agenda facing the climate change challenge The Company gave particular attention to the debate on a pricing model capable of encouraging companies from diverse sectors to reduce their levels of greenhouse gas (GHG) emissions. Also, the Company joined two initiatives toward a low-carbon economy: in Brazil, the Open Letter on Climate Change, coordinated by the Ethos Institute, and the Movement of CEOs for Climate, organized by the World Economic Forum.

As an example of the

model of operations toward achieving these goals, Braskem continues investing in innovation technology focused on creating products with a smaller carbon footprint, as well as supporting Clients and partners when developing solutions that reduce greenhouse gas emissions in the areas of transportation, water efficiency, agriculture, and others.

In 2015, the Company initiated a work platform with the purpose of aiding its investment decisions. The tool will calculate the virtual cost of carbon as an anticipatory way of regulating

future impacts, identifying the projects' positive and negative contributions.

Furthermore, in the last five years, the Company has invested close to \$ 1.5 million in information systems for greater traceability and reliability of the carbon inventory of its operations.

It is worth noting that Braskem also actively participates in the Emissions Trading Simulation, from the Companies for Climate Platform, a helpful carbon market experience for the debate and generation of knowledge, increasing corporate contribution to government proposals.

In 2015, the last greenhouse gas (GHG) emissions inventory published by Braskem obtained, for the 5th consecutive year, the GOLD Category in the Brazilian GHG Protocol Program. CDP also recognized the Company as the best carbon manager in Brazil

### **Risks and opportunities**

To ensure competitiveness and contribute to the emerging of a new low-carbon economy development model, Braskem has been working on a comprehensive adaptation plan on five fronts — internal engagement, external coordination, acquisition and interpretation of information, and an increase in risk management —, all the while incorporating climate variables into its strategic plan.

A significant milestone of this plan in 2015 was identifying and prioritizing potential climate opportunities and risks at all

the plants in Brazil, the United States, and Germany until 2040. To achieve this, the Company relied on two external partners: the National Institute for Space Research, for discovering and interpreting data for future climate scenarios, and the Getúlio Vargas Foundation, for methodology support.

The reuse of water as a mitigation initiative and a viable alternative during water shortage periods, practices already ongoing at some of the Company's plants, were among the study's primary

recommendations. In São Paulo, within a region called The ABC, Braskem's units use reclaimed wastewater as feedstock. The resource is supplied by Aquapolo, the largest Company of its kind in Latin America, with a reuse rate of 97% and capable of processing 1000 liters per second. Braskem consumes 65% of Aquapolo's production capacity, liberating for human consumption enough raw water to serve 500,000 people. Note: For more details about

Braskem's climate opportunities and risks, the data is available on the CDP Investor website.





Braskem is permanently focused on improving people's lives through sustainable solutions of chemicals and plastics. In 2015, the Company took significant steps toward strengthening its strategic vision by launching and consolidating two important projects. Wecycle, focused on plastic waste recycling. And Braskem Labs, that encourages entrepreneurship and new applications development that have high social and environmental impact and use plastic as a raw material.

# Wecycle: responsibility for the product and post-consumer use

In 2015, Braskem launched Wecycle, a business platform seeking to increase plastic waste recycling in different sectors of the economy through partnerships with organizations that already operate or are interested in working in this segment.

The platform also strengthens Braskem's commitment to Brazil's plastic value chain, to innovation, technology and sustainability. Its scope of operation ranges from the creating products that use post-consumer recycled material to the certification or qualification of

processes and social responsibility actions that focus on recycling and enhancing the image of plastic waste.

The highlight of the launch was an initiative developed with Starbucks® Brazil throughout the year. On an experimental basis, the project made use of discarded waste - plastic cups and coffee grounds to manufacture Starbucks' wastebaskets for shops. The recycling process used Braskem's Green Polyethylene I'm green™ to manufacture these bins, reducing plastic waste disposal and generating lower



levels of emissions during the production of materials used in Starbucks® operations. Starbucks stores in Brazil were the first in the world to reuse waste discarded by customers and employees as a source of recyclable raw material for the production of wastebaskets.

Wecycle closes the virtual consumer cycle and should develop further in 2016 through new partnerships with other institutions.

Also, in 2015 Braskem made efforts toward increasing recycling of waste generated by its operation through a pilot project encouraging the collection, separation, and correct

disposal of bulk bags, drums, and disposable water cups.

In the same year, Brazilian institute Plastivida signed an industry agreement regarding the National Solid Waste Policy (PNRS), a law regulated in 2012 establishing shared liability for Urban Solid Waste management. Once the commitment is signed, the agreement should

promote the progressive increase of package recycling and provide, now in its first phase, a 22% reduction in the products disposed of in landfills.

In 2016, the Company expects to seek innovative recycling projects in the market and continue to invest in partnerships with major institutions.

# Braskem Labs: encouraging innovation with social and environmental impact

In 2015, Braskem created Braskem Labs, an incentive program for entrepreneurs with innovative solutions that improve people's lives through plastics. In partnership with Endeavor, an international NGO that offers support to entrepreneurs, Braskem

developed a training program for selected entrepreneurs with projects in areas such as construction, health, culture, and others.

The project came from Braskem's belief in increasingly using plastics



to improving people's lives. As a result of the first edition, Braskem Labs had 159 projects registered and 19 selected, and the mentoring process included 36 Braskem Leaders and 33 Endeavor mentors.

To encourage the entrepreneurial spirit in Brazil, Braskem Labs seeks to fill in the gaps of knowledge and experience in the selected projects, strengthening their processes of creation, innovation, and management

During 45 days, selected companies were able to improve their operations and produtcs through individual and collective mentoring with business experts, guided by learning paths customized for their specific needs. Out of the 19 participants, two projects were awarded support for effective development of their businesses: ColOff®, a toilet seat covering

that provides convenience and hygiene for patients and avoids contamination of samples for laboratory testing – which is now produced with Green PE after participating in Braskem Labs – and B-Rap, plastic boxes used for storing rainwater that have the potential of replacing concrete structures in civil construction.

# Next steps

In 2016, there will be a second edition of Braskem Labs. In addition to proposals using plastic for the development of social and environmental solutions, the program will also accept projects focused on chemistry. A special category dedicated for projects fighting the Aedes aegypti mosquito



Improving people's lives through sustainable solutions of chemicals and plastics is the main positive effect generated by Braskem's operations in Brazil and worldwide. Materializing this objective is directly associated with social and environmental responsibility

projects carried out by the Company with communities in the vicinity of its production units, cascading to the regions where they operate.

In 2015, this strategy was strengthened through the

creation of new projects that combine social impact and market development and also with the broad dissemination to Leaders and Team Members. Today, they are organized around a social operations strategy as shown in the chart below:

# **Social Action Strategy**

#### **BOOST HUMAN DEVELOPMENT**

Stimulate the growth of people that form our communities

# PROMOTE SOCIAL AND ENVIRONMENTAL DEVELOPMENT THROUGH CHEMICALS AND PLASTICS

Strengthen the social and environmental contributions of the cycles of our main products

#### **PROGRAMS**

STAKEHOLDER COMMUNITIES

SURROUNDING COMMUNITIES

CHEMICALS AND PLASTICS CHAIN

PLASTICS AND CHEMICALS AS A SOLUTION

#### **PROJECTS**

Braskem Theater Award Braskem on Stage Award Braskem Environmental Stations Forest Factory Institute Lagoa Viva Environmental Education Program Innovating to Build ser+ realizador Edukatu Braskem Labs Fewer losses, more water

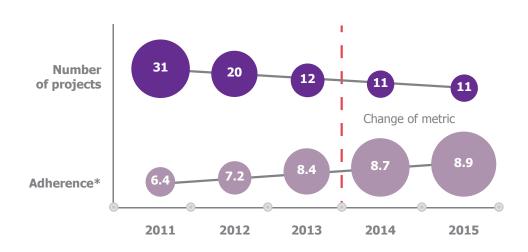
Every project supported by Braskem must address at least one of the two social causes supported by the Company: to generate social impact, to strengthen its reputation as a Company that contributes to the

development of communities, to bring together the Company and its stakeholders, and to increase the level of familiarity and visibility of its operations.

To determine if the projects

address these strategic objectives, its components and characteristics are assessed annually with the help of a tool that allows for the precise diagnostic of the situation of each project.

# EVOLUTION OF THE ADHERENCE OF BRASKEM'S PROJECT PORTFOLIO TO THE SOCIAL OPERATIONS STRATEGY



<sup>\*</sup> Adherence not evaluated for projects in the process of construction or discontinuation.

### **Investment in social responsibility projects**



G4-EC7 | G4-S01 | G4-EN28

In 2015, Braskem and its Team Members invested R\$ 25.8 million in social, environmental, cultural and sports projects in Brazil as per broken down numbers below:



#### **INVESTMENT**

Private Social Investment (PSI) projects: R\$ 5.4 million



#### **GOVERNMENT-INCENTIVIZED SPONSORSHIPS**

Projects of public interest: R\$ 11 million in tax incentives (R\$ 2.2 million in Income Tax (IR) and R\$ 8.8 million in ICMS (sales tax), in addition to R\$ 697,000 as direct funds as consideration.

<sup>&</sup>lt;sup>23</sup> An additional R\$ 279,000 in Income Tax is already recordedin the total amount for the Odebrecht Foundation's Tribute to the Future program.

 $<sup>^{24}</sup>$  Another R\$ 660,000 was invested as Braskem's consideration, already recorded in the total for the Private Social Investment projects.



#### **ODEBRECHT FOUNDATION**

A total of R\$ 7 million was donated by Braskem to the PDCIS and R\$ 1.59 million jointly by Braskem and its Team Members (subject to fiscal benefit) for the Tributo ao Futuro (Tribute to the Future) program.



#### **INVESTIMENT**

Investment in a recycling project through PICPlast: approximately R\$ 100,000.

In addition to direct investments by Braskem and its Team Members, the Private Social Investment (PSI) projects in Brazil raised over R\$ 7 million in 2015, with the participation of several partners, among which were Ambev, Bunge, Gerdau, municipal governments, and SEBRAE (Brazilian Service to Support Micro and Small Enterprises).

In partnership with the Odebrecht Foundation, Braskem supports **PDCIS** - Program for Development Integrated and Growth with Sustainability. Its challenge is to establish a social, economic, and environmentally sustainable development model, retaining young people in the fields, integrated with their family units in their communities. In the scope of this program, created by the Odebrecht Foundation, initiatives were carried out in 350 communities, directly benefiting more than 30,000 people, and indirectly, another 285,000.

Additionally, Braskem and almost 1,450 of its Team Members made donations through a program from the Odebrecht Foundation called "Tribute to the Future" - donations to the Municipal Funds for the Rights of Children and Adolescents, which are entitled to be deducted from income tax. The program supports educational and social projects based on the Charter for Children and Adolescents (ECA - in the Brazilian acronym), Law No. 8,069/90, and are conducted by the institutions that integrate the Governance Pact of the Odebrecht Foundation, aiming to contribute to the positive transformation in the lives of children and adolescents.

Since 2013, part of the Private Social Investment (PSI) by Braskem and Odebrecht Foundation is used to substantiate the BNDES Social Subcredit, a mechanism that allocates 0.05% of the organization's financing (equal to or greater than R\$ 100 million) to initiatives that generate income

and social inclusion. On average, R\$ 5 million is substantiated every year.

In Mexico, R\$ 2.1 million (US\$ 629,500 / MX\$ 10 million) were invested in production projects. In the United States, Braskem invested more than R\$ 667,700 (US\$ 200,000) in philanthropic donations, benefiting more than 30 organizations or programs focused on the benefits of plastics in the lives of people and the field of sciences, technology, engineering, mathematics. The amount invested adds to the hundreds of hours of volunteer work by Braskem's Members in local communities. One of the greatest contributions was made to the United Way, an organization that has existed for over 125 years and that provides support to local communities. Every year, Braskem, as well as numerous other organizations throughout the United States, hold campaigns to encourage their Team Members to contribute to the program.



To learn more about the programs from Odebrecht Foundation, visit



<sup>&</sup>lt;sup>25</sup> Donations can be deducted from Income Tax

<sup>&</sup>lt;sup>26</sup> Average exchange rate in 2005 was US\$ 1.00 = MX\$ 15.8846 and US\$ 1.00 = R\$ 3.3387. Source: Explanatory notes from the administration for the financial statements on December 31, 2015 (amounts in thousands, except when stated otherwise) page 13, section c. Effect of exchange variation.

#### PRIVATE SOCIAL INVESTMENT PROJECTS

Braskem's Private Social Investment projects benefited more than 100,000 people in 2015. Among them we can highlight the projects:

# ser Frealizador

It is a collaborative initiative promoted by Braskem in partnership with Ambev, Bunge, Gerdau and Sebrae whose goal is to increase recycling of post-consumption waste in Brazil, combining the promotion of the supply chain efficiency in recycling to the inclusion and social and economic development of waste pickers. Braskem's contribution is mainly geared toward the development of waste pickers and their social inclusion.

Through investments in equipment and infrastructure of the screening units, training and personalized consulting, as well as a stimulus to work in a network, the waste pickers of recyclable material managed to increase their productivity and income.

In 2015, a total of 70 cooperatives, that gather 3,538 pickers, were benefited by the project. Of this amount, 48 received guidance and managed to send more than 25,000 tons of

waste for recycling (12% of the total refers to plastics produced by Braskem: PP, PE and PVC). Of the total number of people, more than 1,369 received monthly guidance, and 70% of them managed to increase income. The ser+ realizador project attracted workers committed to the recycling cause in Brazil, and this integration allows for larger and more structured investments: in 2015, the partners invested more than R\$ 5 million in project initiatives.



## Highlights of the ser+ realizador program in 2015

Parceria pelo Meio Ambiente (Partnership for **Environment):** together with the donation of 7,100 m of PVC piping to drain rainwater from the Maceió, AL beachfront, Braskem also contributed to the project Praia Viva through the project ser+ realizador, delivering 100 sets of double waste collectors (each comprised of one bin for organic material and another for recyclable waste), totaling 200 plastic bins to be installed on the beaches of Pajucara and Ponta Verde, important tourist and leisure area for the capital city. City officials are responsible for collecting waste from the bins and discharging the material to big containers on the beach where the cooperative supported by the ser+ realizador performs the collection.

Increase in income with recycling of electronics: members of the recycling cooperatives in the city of Maceió are benefiting from training and qualification on the segregation of electronic scrap. Knowledge about electronic components and the correct extraction of parts has yielded an increase in income of 56% in the sale of these products, since after receiving training they are able to better identify components and, what was once sold for R\$ 7 per kilo, can now be sold for as much as R\$ 90 per kilo. In addition to training courses in partnership with SEBRAE, Braskem donated toolkits and specific equipment for this activity, thereby increasing workplace safety for the members of the cooperative.

**Champions** increased income in the state of Bahia: the 33 members of the cooperative CAMAPET, a cooperative located in the city of Salvador, closed the year 2015 with an increase in income of 72% over the average for 2014. This significant increase occurred after members of the cooperative organized themselves and began charging for waste collection services in residential condominiums and companies such as Coelba and Infraero.

Collection at the Triunfo, **RS Petrochemical Complex:** with the Maintenance Shutdown of plant 1 of UNIB, RS, an opportunity appeared to collect significant amounts of solid waste to be sent to the AECO shed, the city's Recycling Association. Currently, in addition to UNIB 2, other Braskem units in the state of Rio Grande do Sul, such as PP1, PE4 and PE6, also sent their solid waste to the Association, with transportation paid for by the city government. Through this initiative, other companies of the petrochemical complex such as White Martins and the State Sanitation Company of Rio Grande do Sul (Corsan), in Brazil, also started to send their waste to AECO.

As a result of this coordination, the volume of materials sent by the Braskem plants to the Association can be highlighted:

between November and December 2015, a total of 4.9 tons of plastic and 5.6 tons of paper and cardboard were sent, with benefits to the workers in the shed.

**Support to municipal governments:** Braskem has supported, since 2010, the municipal waste management program called Todos Somos Porto Alegre (We Are All Porto Alegre), created to comply with Law No. 10,531, which establishes the prohibition of traffic of vehicles drawn by people and animal in Porto Alegre by 2016.

To achieve the objective of socially including those who had their wagons removed from circulation, efforts were joined between public authorities, civil society, and the private sector. During the first phase of the program, social educators identified the primary needs of participants and sent those who wished to change profession to a training course - and those who wanted to continue in the recycling area received specialized training. In the second phase of the program, initiated in 2015, the Screening Units where the cooperatives work, underwent physical and administrative restructuring. The third stage of the program, which shall gain momentum in 2016, will focus on environmental education, raising awareness among society about the importance of recycling. Considering the success of this initiative, which in 2015 supported more than 1,900 pickers and sent more than 10,000 tons of waste for recycling, Braskem promoted the structured management of postconsumption and waste in other communities near its operations. In 2014, with the support from Braskem, the cooperative Mãos Verdes (which helps with management of the Todos Somos Porto Alegre program) approved with the Salvador Municipal Government and other organizations interested

in the Program for the Productive Inclusion of Pickers of Recyclable Materials and Implementation of Selective Waste Collection in the City of Salvador - in 2015, a consultation letter to obtain financing for the initiative from BNDES. Also in 2015, PICPlast (Incentive Plan for the Plastics Chain) and the Inter-Municipal

Consortium of the Greater ABC Region established a partnership to plan and restructure the post-consumption waste and recycling management system for the seven cities that comprise the region. PICPlast is an initiative that aims to contribute to competitiveness and growth of plastic converting; and the support to waste management

is the way to join all of the links of this chain. In 2016, the focus of partners and the Mãos Verdes Cooperative in the ABC region will be on completing the diagnostic and delivering the consultation letter to BNDES, seeking sponsorship for the actions that will be conducted in the coming years by the municipalities.

#### 2016

In 2016, the idea is to strengthen the ser+ realizador through new partnerships and to promote the sharing of best practices among partner

institutions. As one example, the cooperatives will be evaluated through a diagnostic tool of the PEX excellence program, from Ambev, which

assesses the development of co-ops in various fronts (legal requirements, equipment, infrastructure, leadership, training, health, among others).



The first online learning network which in Brazil, promotes sharing of the knowledge practices in conscious consumption and sustainability among teachers and students in grade school throughout Brazil. Advocated by the Akatu Institute in partnership with Braskem, the project has the support from HP, Cargill Foundation, Costa Brava, KPMG, Grupo Mais Unidos, and institutional support from the Ministry of the Environment and the Ministry of Education.

On its online platform (www. edukatu.org.br), the initiative offers access to content on conscious consumption and sustainability, and makes available students and teachers materials about issues such as recycling, climate change, mobility, water, use of natural resources, and sustainable food, in formats and language that are compelling to the project's audience - games, videos, infographics, primers, and classroom plans.

In 2015, Edukatu doubled the number of participants, reaching 20,000 registered in the portal, from more than 2,000 schools in 27 states. Of this total, more than 7,000 are directly involved in intervention projects in their school communities, mobilizing approximately 43,000 people around the conscious consumption issue.

Among the main highlights of the project for 2015, there are:



**Growing visitation:** the monthly average page views was approximately 77,000 in the year, up 83% when compared to the 42,000 page views in 2014.

Personal mobilization: developed with support from Braskem, direct visitation to schools and teachers was maintained in the state of Alagoas, in partnership with the Lagoa Viva Institute. The activity was also reinforced in São Paulo in the first half of 2016, with three regional departments of the city (Jaçanã/Tremembé, Campo Limpo, and Capela do Socorro),

enabled through the promotion of a pilot project together with the São Paulo Municipal Board of Education. Together, the two initiatives resulted in more than 50% of the total number of teachers and students registered.

National challenge "The Nature of Things": Edukatu, in partnership with Braskem, promoted a campaign called "A Natureza das Coisas 2015" ("The Nature of Things 2015") to discuss and analyze the impact of the life cycle of products, from production and use, up to

disposal. Differently from the version in the previous year, it involved schools throughout the Country. Three teachers - one from São Paulo, and two from Alagoas - were awarded for this challenge, which reached more than 8,000 people in different regions. The winning teacher, Maria Ester Aluizo Nascimento, from EMEF Octávio Pereira Lopes, in São Paulo, worked with elementary and middle school students on excessive consumption and correct destination of waste and was awarded a trip to Itacaré, BA.

#### 2016

In 2016, Edukatu should continue to escalate its results of the work with local partners, aiming to decentralize activities and to produce specific tools for mobile platforms. New content about recycling,

hygiene and water prices have been available on the platform since the beginning of the 2016 school year. In all, approximately 20 new bits of content will be published (between infographics, games,

animations, texts, and class programs), encouraging those who interact with the platform to learn about the novelty and remain engaged through the use of new materials and resources.



Instituto Fábrica de Florestas - IFF (Forest Factory Institute) contributed towards construction of environmentally responsible communities through the expansion, recovery, and maintenance of green areas, along with integrated environmental education. The organization operates in the states of Bahia, Rio de Janeiro, and São Paulo, and is maintained by Braskem, Cetrel - Odebrecht Ambiental, and COFIC (Camaçari Industrial Development Committee).

The work conducted by IFF is developed together with the Community, which is trained to collect seeds, produce and plant native seedlings, and maintain planted areas. The project promotes the Environmental Education Program (PEA), by training teachers and providing guided tours of its Seedling School for students of public and private schools.

Throughout the year, more than

1,000 people were trained, and 16,739 were alerted about the value of forests. More than 116,000 seedlings were produced, and approximately 39,000 were planted and are being monitored. There was a 53% reduction in the number of seedlings planted in 2014, resulting from a general decline in demand for the planting services in rural and urban areas. Among the main highlights of the program for 2015, there are:

1 million seedlings produced: since 2008, IFF has produced more than 1 million seedlings, 600,000 of which have already been planted. Furthermore, approximately 7,000 people have been trained and an additional 100,000 people alerted about the importance of environmental preservation.

**Verão Eco Parque Sauípe:** this program protects a 66-hectare area in the transition region of two ecosystems of the Atlantic Rainforest biome (forests and

restinga vegetation), in addition to providing seedlings of native plants used for the reforestation of the northern coast of the state of Bahia. In 2015, the "Verão Eco Parque project promoted adventure Sauípe" activities inside the park, such as climbing walls, zip line, kayak, and bicycles, among other educational activities such as a visit to Braskem's Environmental Station, and the Museum of Natural History. There were more than 2,800 visitors during the three months of the project.

Financial Sustainability: IFF close the year with an achievement that contributed to the financial balance of its activities - as an OSCIP, it was exempted from the cost of an Operating License. Adding this benefit to previous achievements such as exemption of IPTU (property tax) and ISS (service tax), IFF managed to save R\$100,000.

#### 2016

For 2016, IFF plans on strengthening its financial sustainability, focusing on the donation of seedlings through the hiring of planting services, in

addition to reinforcing partnerships with public authorities and with the support of companies that need to comply with legal reforestation requirements. Other sources of revenue will still be explored, such as the recovery of springs to mitigate the water crisis and the achievement of carbon credits from the planted areas.

### **Local initiatives**

Pescadores de Mel (Alagoas): created in 2006 and reactivated in 2011, the project is the result of a partnership between Braskem and Uniprópolis (Union of Red Propolis Producers in the State of Alagoas) for the social inclusion of fishermen in the communities of Mundaú-Manguaba through training on beekeeping. All honey and red propolis produced by the fishermen are processed by Uniprópolis for marketing, and the propolis has a global competitive advantage of the geographic certification issued by INPI. In 2015, the project benefited 79 fishermen in the municipalities

of Maceió, Barra de São Miguel, Marechal Deodoro, and Coqueiro Seco.

Inovar para Construir (Rio de Janeiro): developed in partnership with the FIRJAN system, the project Inovar para Construir (Innovate to Build) is an initiative that aims to disseminate solutions using plastic for civil construction. These solutions are communicated via a virtual platform (http://www.firjan.com. br/visaotecnologica), which is dedicated to promoting innovative solutions for all industry sectors, starting with civil construction.

For architects and engineers, specialization courses are offered, and for job site workers, courses on professional initiation are made available focusing on low-income young adults in Rio de Janeiro. In 2015, Inovar para Construir created, in partnership with Braskem Clients, five courses (involving 17 solutions using plastic), which are available on SENAI's product portfolio. Also in 2015, a total of 19 architects and engineers, and 17 worksite workers were trained in the pilot courses.



#### **Green belts**

G4·S02

In all, 29 of the 40 Braskem units have a green belt - a green area surrounding the plants that offer an extra level of protection, preventing the approximation of people and reducing exposure to risks. The greenbelt also protects species of the local wildlife and flora and helps improve air quality.

Covering an area of 68 hectares, the green belt surrounding the Triunfo Petrochemical Complex carries out - with support from Fundação Zoobotânica the continuous monitoring of local wildlife and flora and conducts guided tours for students aiming to promote environmental education through games and workshops among the native woods. There were more than 2,300 visitors in 2015, in addition to the distribution of the book "Habitantes da Estação Ambiental Braskem -25 anos de pesquisa" (in loose translation: "Dwellers of Braskem Environmental Station - 25 Years of Research") for schools, libraries and environmental organizations in the region, serving as a source of research and teaching support. In the District of Pontal da Barra, adjacent to Braskem's chlor-alkali unit, in Maceió, AL, the green belt is a space for studies, visits, and development of social and environmental projects. Recognized by UNESCO as an Advance Post of the Atlantic Forest Biosphere, in 2015, more than 3,800 people visited the location.

## Safety and communication with communities

Braskem has open communication channels to all communities where it operates. In addition to a toll-free number and the ombudsman's office, the Community can talk to the Company through regular meetings, visitation programs, training, and interface with public authorities - initiatives which are commonly promoted by Community Consulting Councils in each location.

One of the highlights of the

program is APELL (Community Alert and Preparedness for Local Emergencies), implemented in Maceió 15 years ago to train and prepare public agencies, members and residents of the vicinity in case of emergencies. Every year, two drills are conducted: one focusing on highway accidents and the other with a focus on safety in industrial processes.

For the pipeline (connecting the Camaçari Industrial Complex to

the port of Aratu), more than ten years ago, the six companies that own the pipelines signed a Term of Adjustment to enable Shared Management to minimize failure and seek continuous improvement in prevention and control of risks. In the ethanol pipeline (a 475-km pipeline that stretches through the states of Alagoas, Sergipe, and Bahia), safety information is conveyed to communities through theater plays as a means to ensure adhesion and learning.



For more information, visit

Braskem > Society



Braskem's sustainability principles, which are incorporated into the operating processes and in the fabrication of the Company's products, also extend to projects carried out "externally". These initiatives are conducted as part of the voluntary commitments signed by the Company under the governance agenda of the international organizations for sustainable development and materialized through participation in corporate forums with specific competencies within the economic, social, and environmental pillars.

Throughout the years, Braskem has been expanding the level of involvement in these forums, the relevance of its proposals, and the scope of its voluntary commitments aiming to streamline the transition process to a low carbon economy that is competitive, responsible, and inclusive.

Concerns with climate, the impact on global warming, and the need to implement a carbon pricing market were some of the aspects with greatest highlights in Braskem's operations in 2015; the year when the 21st edition of the Conference of the Parties (COP-21) on Climate

Change, of the United Nations, was held in Paris France. The Company, through several forums and multilateral programs, participated in support of proposals defended by the Brazilian government.

As a member of the Brazilian Network of the UN Global Compact, the Company had an active contribution in the construction of Sustainable Development Goals (SDGs), which will enter into force with goal established to be fulfilled by 2030 and replace the Millennium Development Goals (MDGs), set up for the period of 2000 to 2015.

# **Brazilian Corporate Council for Sustainable Development (CEBDS)**

In 2015, Braskem was one of the first companies to adhere to the coalition "We Mean Business". In Brazil, it is supported by CEBDS, an association that gathers 70 corporate groups in Brazil acting as representatives of the World

Business Council for Sustainable Development (WBCSD), which has almost 60 national and regional councils in 36 countries in 22 industry sectors, in addition to 200 corporate groups operating in all continents. The coalition advanced

in relevant aspects for Braskem is sustainability agenda during the COP-21 including pricing of carbon and use of an energy matrix from renewable sources. In 2014, CEBDS assumed coordination of the Brazilian Network for LCA.

## **Ethos Institute - Companies of the Climate Forum**

In August 2015, four months before COP-21, Braskem expanded its voluntary commitments towards a reduction in the level of greenhouse gasses by signing the Open Letter to Brazil on Climate Change. The document, produced with the Companies of the Climate Forum organization and whose executive secretary is

conducted by the Ethos Institute, replaced the commitments assumed by the companies in the previous Open Letter, in 2009, in addition to proposing new initiatives. Companies signatory to the document agreed to reduce greenhouse gas emissions and increase their energy efficiency, as well as eliminate from its

networks the production and marketing of products from illegal deforestation or illegal exploitation. Additionally, the document suggests to the Brazilian government the creation of a multilateral mechanism for the pricing of carbon and the strengthening of mechanisms to promote innovation.

## Fundação Getúlio Vargas - Companies for the Climate

Since 2012, Braskem has participated in the initiative Companies for the Climate, a corporate platform created by the Center for Studies on Sustainability by the Fundação Getúlio Vargas, with the support of other businesses of the private sector. The idea is to raise awareness and coordinate corporate leaders towards management and

reduction of greenhouse gas emissions, management of climate risks, and proposal of public policies concerning climate change. In this aspect, Braskem made substantial progress in 2015 by completing the study on risk management and climate opportunities (physical, reputational, of the value chain) for 100% of its industrial plants with the support of GVCes and

INPE (National Institute for Space Research). Also, as a way to take the lead in the process to develop a carbon pricing market, the Company participated, in 2015, in a simulation to trade emissions, which reinforces the Company's initiatives to lead the process of consolidating a carbon pricing market.

## **Global Sustainability Program (CDP)**

In 2015, the Company was the highlight of the carbon management product of CDP Brazil, with 100% transparency and A- level results. CDP was launched in 2000 aiming to collect and publish data on greenhouse gas emissions (GHG) of companies in more than 60 countries, becoming one of the most important indicators of its kind. Braskem has supported the initiative since its inception

and, in 2008, started reporting its GHG emissions. All information published can be consulted at www. cdp.net (the website is in English). In 2013, Braskem joined the CDP Supply Chain in the module Climate Change, aiming to raise awareness and engage its prime Suppliers for the preparation of GHG emissions inventory and identification of risks and opportunities to reduce their impacts (for more information, see

the section on climate change). As a next step, Braskem will expand the approach to Suppliers in 2016 in the water resources module, focusing on companies that are located in regions prone to water shortages). Since 2014, Braskem has voluntarily responded to CDP Water, addressing its strategy and results regarding water resources. All data are available on the CDP website.

## **Brazilian Network of the Global Compact of the United Nations**

In 2015, the global compact of the United Nations completed 15 years, and Braskem, a signatory to and member of the Brazilian network of the Global Compact since 2007, has been among the companies recognized for their efforts toward Sustainable Development.

One of the first collective actions to advance in the SDGs, filed in 2015, is jointly led by Braskem. Together with SANASA, the Company launched the Movement for the Reduction of

Losses in Water Distribution, which aims to fight losses in treated water throughout the distribution network. The initiative is in line with the sixth Sustainable Development Goal (SDG), which seeks to "Ensure availability and sustainable handling of water and sanitation by all." The project also relies on the participation of companies, government organizations, and nongovernmental organizations.

Braskem is a member of the Brazilian Network of the Global Compact Committee since 2008. The company chaired the committee in the 2013-2014 biennium, the same year when it joined the "Corporate Leadership for Pricing of Carbon".

Braskem has also integrated the LEAD Group of the Global Compact since 2013. Forty-five companies are selected to have a closer contact with the leadership of the initiative in the United States and enable their influence on strategic decisions.

## **Carbon Pricing Leadership Coalition (WB)**

Continuously seeking to expand the consolidation of the carbon pricing market, Braskem joined in 2014 the "Carbon Pricing Leadership Coalition"; an initiative of the World Bank that seeks to mitigate climate change through the introduction of carbon pricing mechanisms.

## **Women's Empowerment Principles (WEP)**

Also in 2015, Braskem assumed a public commitment to the United Nations' initiative called Women's Empowerment Principle, which aims to promote measures that support gender equality and empowerment

of women. This public engagement is one of the initiatives within the Diversity Program, launched by Braskem with a primary focus on the gender equality issue. One of the Women's Empowerment Principles

has to do with equal treatment of women and men, respecting human rights and nondiscrimination, and the assessment and publication of Company progress towards promoting gender equality.

## **International Council of Chemical Associations (ICCA)**

As a member of the International Council Chemical Associations, Braskem presented a set of its sustainability initiatives in a corporate event on the reduction of greenhouse gas emissions called "Brazilian Strategy Post-2020: Challenges and Opportunities," sponsored by ICCA, as the concurrent activity with COP-21, in 2015.

The group integrates the executive leadership group of the entity

and operates in working groups on energy, climate change, and chemical safety. The company also has a seat in internal groups on leadership in Responsible Operation, Chemical Safety, and Energy & Climate Change.

Through ABIQUIM (Brazilian Association of the Chemical Industry) and ACC (American Chemistry Council), Braskem contributed with initiatives of the ICCA, such as Responsible

Care, which, since 1992, has sought to improve environmental management of chemical industries and of their production chain in Brazil, and the Global Product Strategy (GPS) a program that seeks to promote recognition and dissemination of possible risks to workers, consumers, and the environment, arising from the production, handling, and marketing of chemical products.

## Map of Corporate Recycling Commitment (CEMPRE) and the Declaration of Cleaner Production

Braskem also operates with commitments geared toward waste management in its production, aiming to reduce impact on the environment and gain more efficiency in the use of natural resources in its production

processes. In this sense, the company participates together with other businesses in the private sector of the CEMPRE – Corporate Committee on Recycling, a nonprofit organization dedicated to promoting recycling, focusing

on integrated management of waste. Created in 1992, CEMPRE conducts technical research and seminars, disclosing publications and organizing databases on reduction, reuse, and recycling of waste.

### Akatu Institute

A nonprofit, nongovernmental organization that works together with society to promote conscious consumption. Braskem supports the Institute and sponsors the program Edukatu, an initiative that focuses on education towards sustainability. More information about Edukatu can be found in the Social and Environmental section of this report.

## Trata Brazil Institute

A Civil Society Organization of Public Interest, Trata Brasil aims to coordinate initiatives on information and national mobilization for Brazil to reach universal access to basic sanitation. As a member of the

board of Trata Brasil, Braskem was one of the founders of the Institute in 2007, along with companies such as Solvay Indupa, Tigre, Amanco, and others.

# **Brazilian Corporate Network for Life Cycle Assessment**

The network was officially launched in October 2013 to disseminate the practice of Life Cycle Assessment (LCA), to promote training on Life Cycle Management and support the creation of a Brazilian database for life cycle inventories. Currently, the network has the participation of companies such

as Basf, Braskem, Boticário, Danone, Duratex, Embraer, Embrapa, GE, Klabin, Natura, Odebrecht, Oxiteno, Pepsico, Petrobras, Raízen, Tetra Pak, Vale, Volkswagen, Votorantim Cimentos and 3M. In 2014, the LCA Network joined CEBDS as a thematic chamber.

## Plastivida-Plastics Social and Environmental Institute

An entity that institutionally represents the production chain of the sector to communicate the importance of plastics in modern lifestyles and promote its environmentally correct use, while prioritizing social responsibility initiatives.

### Na Mão Certa Program

Launched in 2006 by Childhood Brazil, the Na Mão Certa Program aims to mobilize governments, companies, and third sector organizations around more efficient

ways of fighting sexual exploitation of children and adolescents on Brazilian highways. More than 1,400 companies, among which Braskem, have signed the pact.

This includes businesses in the logistics and transport sectors, in addition to companies from a variety of industry sectors that hire these services.

## **Green Industry Platform**

Braskem was the first Brazilian Company to adhere to this initiative of the United Nations Industrial Development Organization (UNIDO), and the United Nations program for the Environment. The platform aims to promote and disseminate the development of environmental, climate, and social programs among Company operations.

#### **Forums and Associations**

Braskem also participates, in an engaged and strategic manner, of the following forums and associations:

- Abiclor: Associação Brasileira das Indústrias de Cloro
- Abiquim: Associação Brasileira da Indústria Química
- Abrace: Associação Brasileira dos Grandes Consumidores Industriais de Energia
- ABRE: Associação Brasileira de Embalagens
- ABTP: Associação Brasileira de Terminais e Portos
- ACC: American Chemistry

- Council
- AFPM: American Fuel & Petrochemical Manufacturers
- Anpei: Associação Nacional de Pesquisa e Desenvolvimento das Empresas Inovadoras
- ASEMEXBRA: Associação Comercial Mexicana
- Asfamas: Associação Brasileira dos Fabricantes de Materiais para Saneamento
- Bioplastics Council

- CCPS: Center for Chemical Process Safety
- CNI: Confederação Nacional da Indústria
- INP: Instituto Nacional do Plástico
- Instituto Ethos
- Instituto PVC
- Think Plastic Brazil



For more information, visit

→ Braskem > Voluntary Commitments



Indicator	Description	Disclosure	
Content Overall Standards			
Strategy and	l Analyses		
G4-1	Statement from the most senior decision-maker of the organization (such as CEO, chair, or equivalent senior position) about the relevance of sustainability to the organization and the organization's strategy for addressing sustainability.	Page 3	
G4-2	Description of key impacts, risks, and opportunities related to sustainability and its effects on stakeholders.	Pages 3, 12	
Organization	nal Profile		
G4-3	Name of the organization	Page 7	
G4-4	Primary brands, products, and/or services	Page 7	
G4-5	Location of the organization headquarters	Page 7	
G4-6	The number of countries where the organization operates, and names of countries where either the organization has significant operations or that are specifically relevant to the sustainability topics covered in the report.	Page 7	
G4-7	Nature of ownership and legal form.	Page 7	
G4-8	Markets served (including geographic breakdown, sectors served, and types of customers/ beneficiaries).	Page 7	
G4-9	Scale of the organization, including number of employees, number of operations, net sales, total capitalization (debt and net equity), products or services provided	Pages 7, 36	
G4-10	The total number of employees by type of contract, gender, and region.	Page 48	
G4-11	Percentage of employees covered by collective bargaining agreements.	98.8% of Members in Brazil are covered by collective bargaining agreements, 41.8% in Mexico, and 9.7% in the USA.	
G4-12	The organization's supply chain	Page 77	

Indicator	Description	Disclosure
G4-13	Significant changes during the reporting period regarding the organization size, structure, ownership, or its supply chain, including: changes in the location or operations (facility openings, closings, and expansions); changes in the share capital structure and other capital formation, maintenance, and alteration; changes in the location of Suppliers, or in relationships with Suppliers, including selection and termination.	Page 19
G4-14	Report whether and how the organization addresses the precautionary approach or principle.	Page 115 As a principle, by the Health, Safety, Environment, Quality, and Productivity Policy, Braskem does not produce, handle, use, market, transport, or dispose of any product if it is not possible to do so safely with minimal impact on the environment.
G4-15	Externally developed economic, environmental and social charters, principles to which the organization subscribes or which it endorses.	Page 115
G4-16	Memberships of associations (such as industry associations) and/or national or international advocacy organizations in which the organization holds a position on the governance body; participates in projects or committees; provides substantive funding beyond routine membership dues; views membership as strategic	Page 115
Identified Ma	aterial Aspects and Boundaries	
G4-17	a. List all entities included in the organization's consolidated financial statements or equivalent documents b. Report whether any entity included in the organization's consolidated financial statements or equivalent documents is not covered by the report.	Page 7
G4-18	Process for defining the report content and the Aspect Boundaries: process for implementation of the principles for defining report content	Page 32
G4-19	Material aspects identified in the process for defining report content.	Page 32

Indicator	Description	Disclosure
G4-20	For each material Aspect, report the Aspect Boundary within the organization, as follows: (1) whether the Aspect is material within the organization; (2) If the Aspect is not material for all entities within the organization (divisions, operating units, subsidiaries, and joint ventures), select one of the following two approaches and report either: (i) entities or groups of entities included in G4-17 for which the Aspect is not material or (ii) entities or groups of entities for which the Aspect is material; (3) any specific limitation regarding the Aspect Boundary within the organization.	Page 32
G4-21	For each material aspect, report its boundary outside the organization, as follows: (1) whether the Aspect is material outside of the organization; (2) if the Aspect is material outside of the organization, identify the entities, groups of entities or elements for which the Aspect is material and describe the geographical; (3) report any specific limitation regarding the Aspect Boundary outside the organization.	For this cycle, no new material aspects were identified. Reference of the macro-objectives defined by the organization and the aspects related to each one of them were followed. Thus, the classification of aspects and boundaries, both inside and outside the organization, is shown below: The following macro-objectives are considered material, outside of the Company: Climate change, post-consumption, local development, and Safety (safe use of the product). Braskem monitors Indicators related to these aspects outside the Company, when the third-party database is available and reliable. Examples of monitored data: Scope 3 emissions, plastics recycled by recycling cooperatives supported by the Company, benefits from social investment partners, and the safe use of products. The geographic locations of the entities are scattered, with the exception of local development, which focuses on communities neighboring Braskem operations.
G4-22	Effect of any restatements of information provided in previous reports, and the reasons for such restatements (such as mergers or acquisitions, change of base year or period, in the type of business, in measurement methods).	Page 63
G4-23	Significant changes from previous reporting periods in the Scope and Aspect Boundaries.	No major change in addition to the start of operations of the Braskem Idesa plant, in Mexico.

Indicator	Description	Disclosure
Stakeholder Engagement		
G4-24	List of stakeholder groups engaged by the organization.	Page 32
G4-25	The basis for identification and selection of stakeholders with whom to engage.	Page 32
G4-26	Approach to stakeholder engagement, including frequency of engagement by type and by stakeholder group, and an indication of whether any of the engagement was undertaken specifically as part of the report preparation process.	Page 32
G4-27	Report key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting. Stakeholder groups that raised each of the key topics and concerns.	Page 32
Report Profil	e	
G4-28	Reporting period (such as fiscal or calendar year) for information provided.	2015
G4-29	Date of most recent previous report (if any).	2014
G4-30	Reporting cycle (such as annual, biennial, etc.).	Annual
G4-31	Contact point for questions regarding the report or its contents.	Page 153
G4-32	Table that identifies the location of the information in the report, mentioning: (1) the 'in accordance' option the organization has chosen, (2) external assurance (if any).	G4 Core Page 121, GRI Content Index
G4-33	Policy and current practices with regard to seeking external assurance for the report; relationship between the organization and the assurance providers; whether the highest governance body or senior executives are involved in seeking assurance for the report.	External assurance carried out by KPMG, occurs through the request of the Leaders and is part of the set of annual goals for the Leaders responsible for developing the report.
Governance		
G4-34	Governance structure of the organization, including committees of the highest governance body responsible for specific tasks, such as assisting the Board of Directors in decision-making on economic, environmental and social impacts.	Pages 22, 26

Indicator	Description	Disclosure
G4-39	Report whether the Chair of the highest governance body is also an executive officer (and, if so, his or her function within the organization's management and the reasons for this arrangement).	Page 26
Ethics and in	tegrity	
G4-56	Organization's values, principles, standards and norms of behavior, such as codes of conduct and ethics	Pages 9, 24
G4-57	Internal and external mechanisms for seeking advice on ethical and lawful behavior and in compliance with the legislation, such as relationship channel (ex.: Ombudsman's Office).	Page 24
G4-58	Report the internal and external mechanisms for reporting concerns about unethical or unlawful behavior, and matters related to organizational integrity, such as escalation through line management, whistleblowing mechanisms or hotlines.	Pages 23, 24
<b>Specific Stan</b>	dard Disclosures	
Material Asp	ects: all	
Macro Object	tives: all	
G4-DMA	Generic Disclosures on management approach	Page 37
Material Asp	ects: Economic performance	
Macro Object	tives: Economic-financial results	
G4-EC1	Direct economic value generated and distributed	Page 36
G4-EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change	Pages 36, 72, 99 Additional information about this indicator is available in the CDP 2015 report, found at: https://www.cdp.net > Company Responses > Braskem S. A. (https://www.cdp.net/en-US/ Results/Pages/Company-Responses. aspx?company=2135)
G4-EC4	Financial assistance received from government	Page 46
Aspects: Market presence		
Macro Object	tives: Local development	
G4-EC5	Ratios of standard entry level wage by gender compared to local minimum wage at significant locations of operation	Page 54 Amounts per gender are not shown, since the entry level wage at Braskem is the same for men and women; in other words, the same amount applies to both.

Indicator	Description	Disclosure
G4-EC6	Proportion of senior management hired from the local Community at significant locations of operation	Page 50 Management positions and above: 82% are local (were born in the state in which they are allocated). In Mexico and Germany, Leaders include all Team Members with subordinates and 21% and 63% of them, respectively, were hired locally. At international offices, 38%. There is no data reported from the United States because there was no monitoring of this information.
Aspects: Indi	irect economic impacts	
Macro Object	tives: Local development	
G4-EC7	Development and impact of infrastructure investments and services provided	Pages 105, 106 There is no breakdown of this information, since all investments were made as contributions (cash or donated equipment), and all services were offered for free.
G4-EC8	Significant indirect economic impacts, including the extent of impacts	Pages 14, 87, 105
Aspects: Prod	curement practices	
Macro Objectives: Local development		
G4-EC9	Proportion of spending on local Suppliers at significant operating units	Page 76 Braskem defines local Suppliers as those located in the same Country as the Company's unit that purchased its products or services.

Indicator	Description	Disclosure
Aspects: Mat	erials	
Macro Object	tives: Renewable resources	
G4-EN1	Materials used by weight or volume	Among the main non-renewable direct materials used by Braskem are naphtha, condensate, ethane, propane, HLR, and sodium chloride. The Company also uses ethanol manufactured from sugar cane to produce ethylene from renewable sources, thus reducing demand for non-renewable resources.  Braskem considers materials to be those present in the final product. Non-renewable materials are resources that cannot be renewed at the same rate as they are consumed, such as minerals, metals, oil, coal, and gas.  The amounts used are not disclosed, since it is commercially sensitive information.
G4-EN2	Percentage of materials used that are recycled input materials	Braskem invests in renewable raw materials, so there are no raw materials from recycling. At industrial plants, reuse is maximized through a return to the chain within the production process, which would be equivalent to internal recycling. Investments in energy and chemical recycling are being made for the future.
Aspects: Ene	rgy	
	tives: Energy efficiency	
G4-EN3	Energy consumption within the organization	Pages 72, 99
G4-EN5	Energy intensity	Page 72
G4-EN6	Reduction of energy consumption.	Page 72
G4-EN7	Reductions in energy requirements of products and services	Page 87
Aspects: Wat		
	tives: Water efficiency	2 60
G4-EN8	Total water withdrawal by source	Page 68
G4-EN10	Percentage and total volume of water recycled and reused	Page 68

Indicator	Description	Disclosure
Aspects: Biod	liversity	
Macro Objectives: n/a (material only for Mexico)		
G4-EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas	Page 20 The main impact of Braskem's operations on biological diversity occurs when new units are built in areas where there was no industrial activity, such as in Mexico, the Country where Braskem Idesa concluded the construction of a petrochemical complex. These impacts are reversible in the medium-term (approximately 10 years).
G4-EN14	Total number of IUCN red list species and in other conservation lists with habitats in areas affected by operations of the organization, by level of extinction risk	Page 20 There is only one endangered species affected by Braskem's operations, the Ceratozamia miqueliana (flora, critical status), in Mexico. With the transposition of the plants found to an environmental protection area created by the Company, the number of plants significantly increased.
Aspects: Emi	ssions	
Macro Object	ives: Climate change	
G4-EN15	Direct greenhouse gas (GHG) emissions (Scope 1)	Pages 72, 99
G4-EN16	Indirect Greenhouse Gas (GHG) emissions from the purchase of energy (scope 2)	Pages 72, 99
G4-EN17	Other indirect emissions of greenhouse gases	Pages 72, 99
G4-EN18	Intensity of greenhouse gas (GHG) emissions	Pages 72, 99
G4-EN19	Reduction of greenhouse gas (GHG) emissions	Page 99
Macro Object	ives: Climate change	
G4-EN20	Emissions of ozone-depleting substances (ODS)	Pages 72, 73, 99
Macro Object	ives: Energy	
G4-EN21	NOx, SOx and other significant air emissions	Pages 72, 73, 99
Aspects: Efflu	uents and waste	
Macro Object	ives: Water efficiency	
G4-EN22	Total water discharges by quality and destination	Page 68
Macro Object	ives: Safety	
G4-EN23	Total weight of waste by type and disposal method	Page 66

Indicator	Description	Disclosure
Aspects: Pro	oducts and services	
Macro Objec	tives: Development of applications	
G4-EN27	Extent of impact mitigation of environmental impacts of products and services	Page 87 57.2 million tons of CO <sub>2</sub> equivalent of greenhouse gas emissions avoided by the use of Braskem products. Of this total, 54.2 million tons refer to emissions avoided during the estimated lifetime of 974,000 vehicles in Brazil.
Macro Objec	tives: Post-consumption	
G4-EN28	Percentage of products sold and their packaging materials that are reclaimed by category	Page 106 Braskem works with recycling cooperatives in Brazil to encourage recycling of its products and packages.
Material asp	ects: Compliance	
Macro Objec	tive: Strengthening of practices	
G4-EN29	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	Braskem was not definitively convicted to pay fines or comply with non-monetary sanctions during the period. For the purpose of this report, the same materiality criteria used in the form of reference established by the Brazilian Securities Exchange Commission ("CVM") was adopted, in accordance with CVM Instruction Standard 480/2009 – R\$ 60 million. For environmental issues, the amount of R\$ 10 million was considered.
Aspects: Ove	erall	
Macro Objec	tives: Climate change, energy, water	
G4-EN31	Total investments and expenditures in environmental protection by type	Page 75
Aspects: Em	· ·	
Macro Objec	ctives: Economic-financial results	
G4-LA1	Total number and rates of new employee hired and employee turnover by age group, gender and region	Pages 48, 51

Indicator	Description	Disclosure
Material aspe	ects: Safety	
Macro Object	ives: Occupational health	
G4-LA6	Types and rates of injuries, occupational diseases, lost days, absenteeism and number of work-related fatalities, by region and gender.	Page 59 The registration system for health and safety does not discriminate data by gender. The method of monitoring absenteeism is being revised; therefore, it was not possible to raise this data. Expected adjustment deadline: 2nd half of 2016, to be included in the 2016 AR.
Material aspe	ects: Diversity and Equal Opportunity	
Macro Object	ives: None, since the related issues are not mate	rial
LA12	Composition of governance bodies and breakdown of employees by employee category according to gender, age group, minority group membership, and other indicators of diversity.	Page 48
Material aspe	ects: Local communities	
Macro Object	ives: Local development	
G4-S01	Percentage of operations with implemented local Community engagement, impact assessments, and development programs	Page 106
G4-S02	Operations with significant actual and potential negative impacts on local communities	Pages 62, 105, 114
Material aspe	ects: Anti-corruption	
Macro Object	ives: Strengthening of Practices	
G4-S05	Confirmed incidents of corruption and actions taken	Page 25
	ects: Public Policies	
Macro Object	ives: Strengthening of Practices	
G4-S06	Total value of political contributions by Country and recipient/beneficiary	Zero. In Brazil, in 2015, Braskem did not make any donations to political parties. Made only in election years in the past, these donations are now suspended and prohibited by law. Braskem does not make political contributions in any of its other countries of operation.

Indicator	Description	Disclosure
Material asp	pects: Anti-competitive Behavior	
Macro Obje	ctives: Strengthening of Practices	
G4-S07	Total number of legal actions for anticompetitive behavior, anti-trust, and monopoly practices and their outcomes	Zero (Indicator restricted to national territory)
Material asp	pects: Compliance	
Macro Obje	ctives: Strengthening of Practices	
G4-S08	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	Braskem was not definitively convicted to pay fines or comply with non-monetary sanctions during the period. For the purpose of this report, the same materiality criteria used in the form of reference established by the Brazilian Securities Exchange Commission ("CVM") was adopted, in accordance with CVM Instruction Standard 480/2009 – R\$ 60 million. For environmental issues, the amount of R\$ 10 million was considered.
Material asp	pects: Client Health and Safety	
Macro Obje	ctives: Safety	
G4-PR1	Percentage of significant product and service categories for which health and safety impacts are assessed for improvement	Page 65 The entire portfolio (100%). Product categories: Basic Inputs, PP, PE/EVA, PVC and Chlor-Alkali. Evaluation of impact on health and safety. Internal Audits are periodically carried out (SEMPRE, SGI, and external certifications such as ISO 14001, etc.)
G4-PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning the health and safety impacts of products and services during their life cycle, by type of outcome	Page 65 We did not have registered complaints, systematically or through focus groups for Client feedback, for regulations regarding impacts on health or safety during the life cycle of Braskem products, including issues regarding data sheets and product labeling.

Indicator	Description	Disclosure
Material aspe	ects: Product and Service Labeling	
Macro Object	ives: Safety	
G4-PR3	Type of product and service information required by the organization's procedures for product and service information and labeling, and percentage of significant product and service categories subject to such information	Page 65
G4-PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes	Page 65 We did not have registered complaints, systematically or through focus groups for Client feedback, for regulations regarding impacts on health or safety during the life cycle of Braskem products, including issues regarding data sheets and product labeling.
Aspects: Mar	keting Communications	
Macro Object	ives: Strengthening of Practices	
G4-PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship, by type of outcomes	There were no cases of noncompliance with voluntary regulations and codes relating to marketing communications, including advertising, promotion, and sponsorship.
Material aspe	ects: Compliance	
Macro Object	ives: Strengthening of Practices	
G4-PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services.	Braskem was not definitively convicted to pay fines or comply with non-monetary sanctions during the period. For the purpose of this report, the same materiality criteria used in the form of reference established by the Brazilian Securities Exchange Commission ("CVM") was adopted, in accordance with CVM Instruction Standard 480/2009 – R\$ 60 million. For environmental issues, the amount of R\$ 10 million was considered.
Aspects: Non	-discrimination	CONSIDERED.
	ives: Strengthening of Practices	
G4-HR3	Total number of incidents of discrimination and corrective actions taken	Page 25

## LIMITED ASSURANCE REPORT ISSUED BY INDEPENDENT AUDITORS

To the Directors and Officers of Braskem S/A São Paulo - SP



#### Introduction

We have been engaged by Braskem S/A ("Braskem") to apply limited assurance procedures on the sustainability information disclosed in Braskem's 2015 Annual Report, related to the year ended December 31<sup>st</sup>, 2015.

## Responsibilities of Braskem's Management

The management of Braskem is responsible for preparing and adequately presenting the information in the 2015 Annual Report in accordance with the Global Reporting Initiative (GRI) Sustainability Reporting Guidelines (GRI-G4) as well as the internal controls determined necessary to ensure this information is free from material misstatement, resulting from fraud or error.

## Independent auditors' responsibility

Our responsibility is to express a conclusion about the information in the 2015 Annual Report based on the limited assurance engagement conducted in accordance with Technical Communication (TC) 07/2012 approved by the Federal Accounting Council and prepared in accordance with NBC TO 3000 (Assurance Engagements Other Than Audits and Reviews), issued by the Brazilian Federal Accounting Council - CFC, which is the equivalent to international standard ISAE 3000 issued by the International Federation of Accountants applicable to Non-Financial Historical Information. These standards require compliance with ethical requirements, including independence ones and also that the engagement is conducted to provide limited assurance that the information in the 2015 Annual Report, taken as a whole, is free from material misstatement.

A limited assurance engagement conducted in accordance with NBC TO 3000 (ISAE 3000) consists mainly of questioning the management of Braskem and other professionals of the Company involved in the preparation of the information disclosed in the 2015 Annual Report and applying analytical procedures to obtain evidence that allows us to make a limited assurance conclusion about the sustainability information taken as a whole. A limited assurance engagement also requires additional procedures when the independent auditor learns of issues which lead them to believe that the information disclosed in the Annual Report 2015 taken as a whole could present material misstatement.

The selected procedures were based on our understanding of the issues related to the compilation, materiality and presentation of the information disclosed in the 2015 Annual Report, other engagement circumstances and considerations regarding areas and procedures associated with the material sustainability information disclosed in the 2015 Annual Report where material misstatement could exist. The procedures consisted of:

(a) planning: consideration of the materiality of aspects to Braskem's activities, relevance of the information disclosed, amount of quantitative and qualitative information and operational systems and internal controls that served as a basis for preparation of the information in the 2015 Annual Report. This analysis defined the indicators to be tested in detail;

- (b) understanding and analysis of the information disclosed related to the management of material aspects;
- **(c)** analysis of processes for the preparation of the 2015 Annual Report and its structure and content, based on the *Principles for Defining Report Content and Quality of the Global Reporting Initiative GRI (GRI-G4)*;
- (d) evaluation of indicators and other non-financial information:
- understanding the calculation methodology and procedures for the compilation of indicators through interviews with managers responsible for preparing the information;
- application of analytical procedures on the quantitative information and questions about qualitative information and their correlation with indicators disclosed in the 2015 Annual Report;
- analysis of evidence supporting the information disclosed;
- visits to four of Braskem's operational units and its head office for application of these procedures, as well as of items (b) and (c);
- **(e)** plausibility analysis of the reasons for omissions of performance indicators associated with topics and aspects identified as material through the Company's materiality assessment; and
- (f) comparison of financial indicators with the financial statements and/or accounting records.

We believe the information, evidence and results we have obtained are sufficient and appropriate to provide a basis for our limited conclusion.

## Scope and limitations

The procedures applied in a limited assurance engagement are substantially less extensive than those applied in a reasonable assurance engagement. Therefore, we cannot ensure we are aware of all the issues that would have been identified in a reasonable assurance engagement, which aims to issue an opinion. If we had conducted a reasonable assurance engagement, we may have identified other issues and possible misstatements within the information presented in the Annual Report 2015.

Nonfinancial data is subject to more inherent limitations than financial data, due to the nature and diversity of the methods used to determine, calculate or estimate this data. Qualitative interpretations of the data's materiality and accuracy are subject to individual presumptions and judgments. Additionally, we did not examine data regarding prior periods to assess the adequacy of policies, practices and sustainability performance, nor future projections data.

## **Conclusion**

Based on the procedures carried out, described in this report, nothing has come to our attention to suggest that the information in Braskem's 2015 Annual Report is not, in all material respects, fairly stated in accordance with the Global Reporting Initiative Sustainability Reporting Guidelines (GRI-G4), and with its source records and files.

São Paulo, May 4th, 2016

KPMG Assessores Ltda. CRC SP-023233/O-4

KPMG Financial Risk & Actuarial Services Ltda.

Eduardo V. Cipullo Accountant CRC 1SP135597/O-6 Ricardo Algis Zibas



#### **BIOPOLYMER**

thermoplastic resin produced from renewable raw materials

#### CAP

threshold for emissions Cracker – industrial equipment where naphtha is transformed into by-products, such as ethylene, propylene, and other co-products Cracking (of naphtha) – breaks down molecules to produce ethylene

#### THERMAL DESORPTION

an environmental remediation technology that uses heat to increase volatility of contaminants in order to be removed (separated) from the solid matrix where they are found, typically contaminated soil, until its decontamination

#### DEVIATION

noncompliance with a requirement of the operation, such as for example, not use appropriately the personal protection equipment required

#### **ECO-EFFICIENCY**

ratio between the use of necessary resources for the production of a given product and its production volume. This ratio expresses productivity from an environmental standpoint

#### **ECO-INDICATORS**

environmental performance indicators

#### **GRID FACTOR**

average rate of greenhouse gas emissions resulting from the generation of electricity

#### FI.ARE

mechanical safety equipment which is used to burn chemical compounds that an industrial plant is unable to process, either due to not achieving suitable operational parameters (for example, inappropriate composition or extremely high pressure), or in cases of emergency, such as a non-programmed shut down for lack of energy. Burning prevents hazardous compounds from being released into the atmosphere. Flares are continuously operated to ensure their proper functioning in emergencies

#### ROTARY KILNS FOR CLINKER

Kilns used to produce cement

#### **GRADE (RESIN)**

type, specification

#### **REVERSE LOGISTICS**

a set of actions, procedures and means intended to enable the collection and return of solid waste to the corporate sector, for reuse, in its cycle, or in other production cycles, or other destination

#### **CAP & TRADE MARKET**

It is a system composed of several parts - for example, countries or companies - where quotas for emissions are established (permits) for each participant, in a way that the sum of all quotas does not exceed the maximum cap established for the system. The threshold is established in order to ensure that total emissions from the system are reduced from one period to the next (for example, for each year operating on the market). Trade is the marketing of permits among participants - those that managed to reduce more of their emissions can sell their surplus permits to those whose cost to reduce emissions is higher than the cost of purchasing permits from others. In other words, it is a trade mechanism that allows for the desired reduction intended by a group to be reached at the lowest possible cost.

#### **OFFSETS**

emission credits that can be negotiated in a cap & trade market. They are generated through the reduction of emissions,, or emissions avoided in accredited locations outside the coverage of the market (for example, reforestation). These securities can be used by participants to offset their emissions in a cap & trade market when they exceed their emission threshold

#### RAFFIA (POLYPROPYLENE FIBERS)

name given to the textile fibers normally used to produce bags for transportation of fruit and small loads

#### RISK RATING (PROCESSES)

safety index established by insurance companies for processes Second generation (in the petrochemical industry) - second-generation units that produce intermediary products and thermoplastic resins (PE, PP, and PVC)

#### **SPREAD**

margin (profitability)
Tag along - a mechanism that gives minority Shareholders, holders of common shares (with voting rights) of a given company, the same rights offered to controlling Shareholders in the case of sale or transfer of controlling interest. Foreseen in the Brazilian legislation (Law of Corporations).

#### **ACRONYMS**

ABS

Acrylonitrile butadiene styrene

GJ

Gigajoules

GPS

Global Product Strategy

KWH/T

Kilowatt-hour per ton

KG/T

Kilogram per ton

PΕ

Polyethylene

HDPE

High-Density Polyethylene

LDPE

Low-Density Polyethylene

LLDPE

Linear Low-Density Polyethylene

PP

Polypropylene

PVC

Polyvinyl chloride

REACH

Register Evaluation

Authorization and Restriction of

Chemicals

SAN

Styrene acrylonitrile

BUI

Basic Unit of Inputs

UNPOL

Polyolefins, Vynilic and Renewables Unit (Brazil)

UNUSE

United States and European Unit

UTEC

Ultrahigh molecular weight -

a Braskem brand

## Appendix



## TEAM MEMBERS SUPPLEMENTARY DATA

TURNOVER RATI	E - 2015			
BRAZIL				
	Age bracket	Men	Women	Total
	<=30 years old	63	60	123
<b>-</b>	31-50 years old	177	80	257
Terminations	>=51 years old	177	20	197
	Total	417	160	577
New Hires	<=30 years old	139	66	205
	31-50 years old	76	16	92
	>=51 years old	4	2	6
	Total	219	84	303

UNITED STATES				
	Age bracket	Men	Women	Total
	<=30 years old	5	2	7
Terminations	31-50 years old	25	6	31
Terminations	>=51 years old	18	4	22
	Total	48	12	60
	<=30 years old	32	9	41
New Hires	31-50 years old	30	6	36
	>=51 years old	9	1	10
	Total	71	16	87

GERMANY				
	Age bracket	Men	Women	Total
	<=30 years old	0	0	0
Terminations	31-50 years old	2	3	5
Terminations	>=51 years old	1	1	2
	Total	3	4	7
	<=30 years old	3	4	7
Now Hiros	31-50 years old	4	8	12
New Hires	>=51 years old	1	1	2
	Total	8	13	21

MEXICO				
	Age bracket	Men	Women	Total
	<=30 years old	10	3	13
Terminations	31-50 years old	17	6	23
Terminations	>=51 years old	1	0	1
	Total	28	9	37
	<=30 years old	51	32	83
New Hires	31-50 years old	47	14	61
New Hires	>=51 years old	2	0	2
	Total	100	46	146

INTERNATIONAL OFFICES				
	Age bracket	Men	Women	Total
	<=30 years old	0	1	1
Total	31-50 years old	0	3	3
Terminations	>=51 years old	0	0	0
	Total	0	4	4
	<=30 years old	1	2	3
Number Hired	31-50 years old	2	0	2
Nulliber filled	>=51 years old	0	0	0
	Total	3	2	5

TURNOVER RATE - 2014				
BRAZIL				
	Age bracket	Men	Women	Total
	<=30 years old	68	46	114
Torminations	31-50 years old	206	102	308
Terminations	>=51 years old	219	22	241
	Total	493	170	663
	<=30 years old	237	137	374
New Hires	31-50 years old	173	52	225
	>=51 years old	8	2	10
	Total	418	191	609

UNITED STATES				
	Age bracket	Men	Women	Total
	<=30 years old	7	1	8
Terminations	31-50 years old	18	5	23
Terminations	>=51 years old	12	1	13
	Total	37	7	44
	<=30 years old	20	6	26
New Hires	31-50 years old	37	8	45
	>=51 years old	1	1	2
	Total	58	15	73

GERMANY				
	Age bracket	Men	Women	Total
	<=30 years old	0	1	1
Terminations	31-50 years old	7	3	10
Terminations	>=51 years old	1	0	1
	Total	8	4	11
	<=30 years old	4	0	4
New Hires	31-50 years old	6	3	9
	>=51 years old	1	2	3
	Total	11	5	16

MEXICO				
	Age bracket	Men	Women	Total
	<=30 years old	5	2	7
Terminations	31-50 years old	15	4	19
	>=51 years old	5	0	5
	Total	25	6	31
	<=30 years old	13	10	23
New Hires	31-50 years old	38	22	60
	>=51 years old	6	1	7
	Total	57	33	90

INTERNATIONAL OFFICES				
	Age bracket	Men	Women	Total
	<=30 years old	0	0	0
Total	31-50 years old	1	0	1
Terminations	>=51 years old	0	0	0
	Total	1	0	1
	<=30 years old	0	1	1
Number Hired	31-50 years old	1	0	1
Number Filed	>=51 years old	0	0	0
	Total	1	1	2

TURNOVER RAT	E – 2013*			
BRAZIL				
	Age bracket	Men	Women	Total
	<=30 years old	56	50	106
Tamada aktawa	31-50 years old	194	78	272
Terminations	>=51 years old	181	8	189
	Total	431	136	567
	<=30 years old	184	99	283
Now Hime	31-50 years old	164	63	227
New Hires	>=51 years old	11	2	13
	Total	359	164	523

UNITED STATES				
	Age bracket	Men	Women	Total
	<=30 years old	19	1	20
Torminations	31-50 years old	11	4	15
Terminations	>=51 years old	11	4	15
	Total	41	9	50
	<=30 years old	20	10	30
New Hires	31-50 years old	25	11	36
	>=51 years old	3	3	6
	Total	48	24	72

GERMANY				
	Age bracket	Men	Women	Total
Terminations	<=30 years old	4	1	5
	31-50 years old	0	3	3
	>=51 years old	0	0	0
	Total	4	4	8
New Hires	<=30 years old	7	4	11
	31-50 years old	9	10	19
	>=51 years old	0	0	0
	Total	16	14	30

MEXICO				
	Age bracket	Men	Women	Total
	<=30 years old	6	2	8
Terminations	31-50 years old	0	0	0
Terminations	>=51 years old	0	0	0
	Total	6	2	8
	<=30 years old	200	47	247
New Hires	31-50 years old	154	21	175
	>=51 years old	2	0	2
	Total	356	68	424

<sup>\*</sup> International trade offices and quantiQ not included

TEAM MEMBERS	BY AGE - 2015			
BRAZIL				
	Age bracket	Men	Women	Total
Operational/ technical	<=30 years old	744 (79%)	199 (21%)	943
	31-50 years old	2.424 (90%)	257 (10%)	2.681
	>=51 years old	767 (98%)	19 (2%)	786
	Total	3,935 (89%)	475 (11%)	4,410
	<=30 years old	184 (39%)	292 (61%)	476
A desimination	31-50 years old	326 (42%)	446 (58%)	772
Administrative	>=51 years old	88 (64%)	50 (36%)	138
	Total	598 (43%)	788 (57%)	1,386
	<=30 years old	7 (54%)	6 (46%)	13
andors	31-50 years old	322 (73%)	120 (27%)	442
Leaders	>=51 years old	133 (89%)	17 (11%)	150
	Total	462 (76%)	143 (24%)	605
	<=30 years old	935 (65%)	497 (35%)	1,432
OTA I	31-50 years old	3,072 (79%)	823 (21%)	3,895
OTAL	>=51 years old	988 (92%)	86 (8%)	1,074
	Total	4,995 (78%)	1,406 (22%)	6,401
NITED STATES				
	Age bracket	Men	Women	Total
	<=30 years old	33 (83%)	7 (17%)	40
perational/	31-50 years old	113 (91%)	11 (9%)	124
chnical	>=51 years old	121 (97%)	4 (3%)	125
	Total	267 (92%)	22 (8%)	289
	<=30 years old	46 (68%)	22 (32%)	68
Administrative	31-50 years old	111 (75%)	37 (25%)	148
uniiiiisuduve	>=51 years old	68 (76%)	22 (24%)	90
	Total	225 (74%)	81 (26%)	306
	<=30 years old	2 (67%)	1 (33%)	3
a a da ca	31-50 years old	42 (78%)	12 (22%)	54
eaders	>=51 years old	20 (71%)	8 (29%)	28
	Total	64 (75%)	21 (25%)	85
	<=30 years old	81 (73%)	30 (27%)	111
TOTAL	31-50 years old	266 (82%)	60 (18%)	326
TOTAL	>=51 years old	209 (86%)	34 (14%)	243

GERMANY				
	Age bracket	Men	Women	Total
	<=30 years old	12 (71%)	5 (29%)	17
Operational/	31-50 years old	23 (72%)	9 (28%)	32
technical	>=51 years old	33 (85%)	6 (15%)	39
	Total	68 (77%)	20 (23%)	88
	<=30 years old	4 (36%)	7 (64%)	11
Administrative	31-50 years old	19 (43%)	25 (57%)	44
Auministrative	>=51 years old	8 (62%)	5 (38%)	13
	Total	31 (46%)	37 (54%)	68
	<=30 years old	0 (0%)	0 (0%)	0
Loadors	31-50 years old	9 (69%)	4 (31%)	13
Leaders	31-50 years old >=51 years old	9 (69%) 5 (100%)	4 (31%) 0 (0%)	13 5
Leaders				
Leaders	>=51 years old	5 (100%)	0 (0%)	5
	>=51 years old <b>Total</b>	5 (100%) <b>14 (78%)</b>	0 (0%) 4 (22%)	5 <b>18</b>
Leaders	>=51 years old  Total <=30 years old	5 (100%) <b>14 (78%)</b> 16 (57%)	0 (0%) 4 (22%) 12 (43%)	5 <b>18</b> 28

MEXICO				
	Age bracket	Men	Women	Total
	<=30 years old	186 (81%)	45 (19%)	231
Operational/	31-50 years old	182 (91%)	18 (9%)	200
technical	>=51 years old	38 (100%)	0 (0%)	38
	Total	406 (87%)	63 (13%)	469
	<=30 years old	36 (47%)	40 (53%)	76
Administrative	31-50 years old	33 (51%)	32 (49%)	65
Aummstrative	>=51 years old	9 (100%)	0 (0%)	9
	Total	78 (52%)	72 (48%)	150
	<=30 years old	2 (100%)	0 (0%)	2
Leaders	31-50 years old	38 (73%)	14 (27%)	52
Leauers	>=51 years old	28 (100%)	0 (0%)	28
	Total	68 (83%)	14 (17%)	82
	<=30 years old	224 (72%)	85 (28%)	309
TOTAL	31-50 years old	253 (80%)	64 (20%)	317
TOTAL	>=51 years old	75 (100%)	0 (0%)	75
	Total	552 (79%)	149 (21%)	701

### MACRO-OBJETIVO

# • Mai

#### **ACTIONS IN 2015**



Safety

Be recognized as a reference in Safety in Chemicals, Work, and Processes in the global chemical industry. Maintain system
 of annual audits
 with SEMPRE
 – Integrated
 Health, Safety,
 and Environment
 System.

**ACTION PLAN UNTIL 2020** 

- Promote continuous improvement of the risk rating, process safety index established by insurance companies, in order to achieve at le ast 90 points for the Braskem average, with all plants above standard.
- Identify alternatives for the gradual replacement of ozone depleting substances,
- Continue the implementation of the GPS – Global Product Strategy in Latin America.
- Maintain waste generation stable and remain a reference in the industry.

**Work Safety:** No fatal work accident recorded. A total of R\$66 million were invested in work safety, and we recorded the best historical work safety accident rate per million hours worked by members and outsourced workers, since 2002.

- In 2015, the injury rate with and without lost time (CAF + SAF) for members and outsourced workers was 0.68 accidents / million hours worked, 32% better compared to 2014;
- Braskem Idesa received the DuPont Safety and Sustainability award and the UNIB 1 BA plant received the Brazil Protection Award.

**Process Safety:** A total of R\$ 13 million were invested in work safety, and 94 potential high-risk scenarios have been eliminated since 2013.

**Chemical Safety:** Corporate "Product Stewardship" procedure issued, which strengthens the commitment to reducing product toxicity and establishes a responsibility matrix for the entire organization.

**Occupational Health:** No record of new cases of occupational illness in 2015.

**Solid, Liquid, and Sludge Waste:** In 2015, a total of 32.9 million kg of solid, liquid, and sludge waste were generated at Braskem plants, representing a 10% reduction compared to 2014. The waste generation rate was 2.01 kg per ton of marketable product produced, a result 12.6% less than 2014 and 8.6% better than the goal established for the period, of 2.20 kg/t. It was the best historical result since 2002.



# Economic and financial results

Be among the three largest thermoplastic resin producers in the world, and guarantee profitability that ensures the perpetuity of the business, maintaining an "Investment Grade" rating classification.

- Begin operating the Ethylene XXI project (Braskem-Idesa, in Mexico), with a capacity of one million tons of PE based on gas.
- Foster sustained growth of the plastic manufacturing industry in the domestic market and the increasing export of manufactured goods.
- Replace licensed catalysts with our own inputs or inputs developed in partnerships, aiming to diversify production and reduce costs.

**Production Capacity:** The petrochemical complex in Mexico reached 99% physical progress. It will provide an increase in LDPE capacity of 1.05 million t/year.

**EBITDA:** Registered a record EBITDA of R\$ 9,372 million, mainly explained by (i) operational performance; (ii) healthy spread level for resins in the international market; (iii) greater export volume; (iv) good performance at the USA and Europe operations; and (v) average depreciation of the real of 42%.

**Investment Grade:** Maintained the Investment Grade ratings from the three major global risk classification agencies - Moody's, Fitch Rating, and Standard & Poor's.

OBJECTIVES 2020



Be recognized as an important agent that contributes to the recycling of plastics Strengthen partnerships (CEMPRE, CNI, CEBDS...) to support the implementation of the PNRS.

Define a business and partnership model for the first energy recycling unit in Brazil.

Strengthen the social and environmental project supporting 15 mechanical recycling cooperatives in the states of RS, SP, RJ, BA, and AL.

Enable the Energy Optimization Unit in Mauá, SP, in partnership with Odebrecht Ambiental.

Continue fostering the chemical recycling project.

Wecycle Platform: Launched aiming to foster business and initiatives toward recovering plastic waste, seeking the development of solutions, products, and processes that involve plastic recycling. In partnership with Starbucks® Brazil, a pilot project was launched that uses Plástico Verde I'm Green™, recycled plastic cups and coffee grounds to manufacture wastebaskets to be used in the internal areas of some stores, which will be the first in the world to use these wastebaskets;

**Chemical Recycling:** Three chemical recycling technologies selected for detailed technical economic evaluation: Eco Energy, Michaelis, and JBI. EVTE (Technical and Environmental Feasibility Study) concluded for Michaelis and Innova BR technologies.

**Sustainable bike racks:** Produced from recycled plastic. The equipment, which holds up to six bikes and will last an estimated 15 years, is produced with 53 kg of post-consumer recycled plastic, the equivalent to 12,455 plastic bags or 24,910 disposable 200 ml cups;

**PNRS:** signed industry reverse logistics agreement for non-hazardous packaging, involving 20 associations representing 75% of the packaging produced in Brazil.



# Renewable resources

Be recognized as a leading producer of chemical products and thermoplastic resins from renewable raw materials and continue as the largest producer of thermoplastic resins from renewable sources in the world.

Continue Innovation and Technology (I&T) projects for new products and processes using raw materials from renewable resources. **Green PE:** The first polyethylene from a renewable source in the world to be produced on an industrial scale celebrated five years of existence. Today there are over 80 brands in various segments and in several countries in North and South America, Europe, Asia, and Oceania;

**Green Butadiene:** Genomática, a North American bioengineering company, and Braskem announced the production of butadiene on a laboratory scale through a direct process from renewable sources;

**Ethanol Supply:** the percentage of ethanol supply from signatories to the Braskem Code of Conduct for Ethanol Suppliers remained at 99.7% for the year, exceeding the goal of 90%. The remaining 0.3% was bought through commodity exchange.

**OBJECTIVES 2020** 



# Water efficiency

Continue as a reference for the use of water resources in the global chemical industry.

Continue improving the water consumption rate and the percentage of water reuse at Braskem.

Continue remediation projects. Braskem's remediation management process focuses on preventing liabilities and mitigating possible problems detected. The new projects introduce improved impact elimination mechanisms.

**Water Consumption:** The water consumption rate was 4.05 m³/t, which was 2.6% better than the previous year. The Braskem rate is about six times better than the average in the global chemical industry (based on: ICCA 2013- 25.64m³/t). In absolute terms, Braskem consumed 66.2 million m³ of water in 2015, representing a 7% reduction compared to 2014.

We saved an estimated R\$ 5.5 million, a total of R\$ 3.1 million due to consumption improvements, and R\$ 2.4 million due to reduced spending on disposal of effluents. Braskem units operated without restrictions due to water availability and disposal in 2015.

**Water Reuse:** The total reuse rate, which includes the use of rainwater, treated domestic sewage, and industrial effluents, reached 25.1% in 2015. Due to reuse, close to 16.6 billion liters were kept from being extracted from bodies of water (estuaries, rivers, groundwater, etc.), the equivalent to the volume of 7,000 Olympic pools, enough to meet the consumption needs of 444,000 people for one year.

The PE9 DCX industrial unit began a project for the reuse of 110 m<sup>3</sup> per day in sealing processes, which in addition to reducing demineralized water consumption by 62 m<sup>3</sup> per day, enables an annual estimated savings of R\$291,000.



# Climate change

Be among the world's best large chemical companies in Greenhouse Gas (GHG) emissions intensity and be an important agent in GHG emissions sequestration due to the use of renewable raw materials.

Reduce emissions intensity to 0.60 KgtCO<sub>2</sub>e/t.

Keep evolving the CDP in the "transparency" and "results" dimensions.

Continue working to obtain the first carbon credits (deadline extended due to the instability of the carbon market and drop in credit attractiveness). Braskem's **greenhouse gas inventory**, audited by a third party, earned gold classification on the GHG Protocol for the 6th consecutive year. The program aims to encourage companies to develop and publish greenhouse gas inventories in Brazil.

Braskem reached a leading position in the CDP Investor in Brazil, with 100% transparency and level "A-" in results.

For the fifth consecutive year, Braskem was selected to compose the portfolio of the Carbon Efficient Index (ICO2) from BM&FBOVESPA.

The number of Braskem suppliers that adhered to the CDP Supply emissions report increased from 18 in 2013, to 26 companies in 2014, and to about 110 in 2015.

Concluded the study of climate risk generation (physical, reputational, value chain), and opportunities for 100% of Braskem industrial plants, supported by GVCes and INPE.

A smartphone application launched that calculates the advantages of using resins from the Braskem Maxio® family. Launched in 2012, the label gathers a portfolio offering more productivity with less energy consumption and greenhouse gas emissions.

From 2008 to 2015, there was an 8.4% improvement at Braskem operations in absolute GHG emissions values, and a 16.2% improvement in carbon intensity (scopes 1+2).

# Energy efficiency

Be among the world's best large chemical companies in energy consumption intensity and be an important user of energy from renewable sources

Continue to reduce the intensity of energy consumption.

Continue to assess the viability of the project for energy cogeneration from biomass and the use of urban solid waste.

Kick off the project for generation from biomass in Alagoas.

In 2015, a total of 10.49 GJ of energy per ton produced was consumed, a result 1.3% better than the goal established for the period, of 10.63 GJ/t, and 2.4% better than consumption in 2014. When performance since 2002 is assessed, however, energy consumption shows a 11.8% reduction.

Approximately R\$ 55 million invested in the past three years in the control and protection of the internal electrical system at the Camaçari-SISUP Complex, in Bahia. Aiming to reduce risk resulting from possible power shutdowns or surges. In case of failure in power supply, the system prioritizes supply for key operational areas in order to reduce the risks associated with unscheduled operational shutdowns.



# Local development

Reach an "excellent" level of reputation in the Citizenship Dimension of RepTrakTM Pulse, showing we are recognized by the Communities close to our facilities and Society in general for our contribution to improving human development.

Extend the scope of the social integration program to a national level by strengthening the plastic mechanical recycling chain.

Strengthen partnerships around ISP Braskem focusing on long-term measurable impacts in the form of:

- Education for Conscious Consumption: Engage one million students through Edukatu (by 2020).
- Fábrica de Florestas
  (Forest Factory):
  Promote the
  planting of 1,000
  ha with community
  involvement, and
  educate 100,000
  people (2013 to 2020).
- Social Inclusion of Waste Pickers: Benefit 3,000 waste pickers by promoting a 50% increase in income (2013 to 2020).

In 2015, this macro-objective reached a development level of approximately 89% regarding the 2020 goal.

Braskem Social Investments 2015 - nearly R\$25.7 million:
• Private Social Investment Projects (ISP): R\$5.4 million

- Incentivized sponsorships (public interest projects): R\$11.3 million in tax benefits (R\$2.5 million Income Tax and R\$8.8 million sales tax - ICMS), plus an additional R\$697,000 in direct funding consideration;
- Odebrecht Foundation: R\$ 7 million donated to PDCIS and R\$ 1.3 million donated to members of the Tribute to the Future Program;

Implementation of the Braskem social action strategy through a project portfolio with 89% adherence to ISP guidelines, reaching over R\$7 million in funding (135% of the BRK private social investment in Brazil) with external partners (AMBEV, Bunge, Gerdau, the City Government of Porto Alegre, SEBRAE, SESI/SENAI, among others).

**Ser+ Realizador program:** 70% of assisted cooperatives in 2015 (with continuous monitoring by a consultant) had an increase in income. A total of 52% had an increase in income above inflation (9.25%). Over 24,000 tons of waste were delivered for recycling (close to 12% of the total refers to PP, PE, and PVC);

**Instituto Fábrica de Florestas:** Reached the benchmark of one million seedlings produced and over 600,000 planted over seven years of operation in the states of Bahia, Rio de Janeiro, and São Paulo.

**Edukatu:** Over 20,000 participants on the platform. Visitation increased 84% in 2015 and the average monthly views reached almost 77,000 views this year, compared to 42,000 monthly views in 2014.

The 22nd edition of the Braskem Theater Award was carried out. The most important award in Bahia performing arts is already consolidated in the state's cultural scene, carried out by Caderno 2 Produções Artísticas sponsored by Braskem and the state government through FazCultura. The award is part of Braskem's social action strategy of appreciating and promoting culture and the arts, focusing on human development.

The public-private partnerships secured between Braskem and Maceió City Government aims to improve drainage and swimming conditions on the beachfront, which is preparing for a summer celebrating 200 years since its foundation.

**OBJECTIVES 2020** 

Braskem will donate over 7,000 meters of PVC pipes to the Maceió City Government.

At the beginning of 2010, Braskem Idesa made an important contribution to recovering the history of Central America through an archeological project in the Coatzacoalcos region, in the state of Veracruz, Mexico, which resulted in the publication of "Achado Arqueológico da Bacia Inferior de Coatzacoalcos" ("Archeological Findings in the Coatzacoalcos Lower Basin"), showing images and descriptions of the archeological findings such as the remains of ceramic vases, bowls, and statuettes characteristic of the pre-classical period (2000) B.C. to 100 A.D.). It is the result of a four-year project in partnership with the National Institute of Anthropology and History (INAH), the entity responsible for the research, conservation, protection, and dissemination of Mexico's historical heritage. The team at the Institute followed every stage of construction of the petrochemical complex, to inspect and ensure the removal of all archeological material from the location.

Braskem was classified as one of the "Best Companies to Start a Career" is 2015, by Você S/A magazine, in partnership with Cia de Talentos and Fundação Instituto de Administração (FIA).

Braskem launched the Braskem Labs program, which seeks to encourage entrepreneurs with innovative projects that improve people's lives through plastic. Of the 159 proposals registered with Braskem Labs, Braskem's entrepreneur incentive program, 19 have already been chosen for the next selection stage, covering sectors such as: education, energy, sanitation, and agribusiness, that could benefit from the solutions proposed. In the next stage, the teams of project authors from different Brazilian states will meet with mentors from the company and the NGO Endeavor for a personalized training process.

Braskem sponsors the Brazilian team of athletes with a range of physical disabilities because the company believes that investments in innovations and medical advances benefit people's lives, allowing them to achieve what before seemed impossible. The initiative is part of the campaign called "Innovation brings the future. And the future involves chemicals and plastics."



# Development of solutions

Be recognized as a company that supports its Clients in developing environmental and social solutions. Plastic perceived as a solution for Sustainable Development for its contribution to improving people's lives.

Continue studies and strengthen the use of the LCA tool in order to develop new applications for our resins.

Continue implementing the plastic image promotion program.

Implement the program for identifying environmental and social gains for each market development.

Develop new programs with social and environmental benefits: Building System for Daycares and Hospitals, Low Cost Solar Heating, Gas Cylinders, Railway Ties, Cement Bags, etc. In 2015, this macro-objective reached a development stage of about 23% related to the goal for 2020.

**LCA Studies:** Braskem has 61 studies in its LCA pipeline, 9 more than in 2014. A total of 27 were concluded, and 10 are currently in the communication phase. A total of 15 are in progress and 9 are in the exploration phase. In addition, the company concluded 66% of its efforts to complete the inventory of its plants in Brazil.

**Communication:** A total of 11 LCA studies were reported. These studies represent a market of R\$ 880 million.

**Publications:** A booklet was prepared about the environmental benefits of plastics; Braskem was selected to publish the ICCA about Avoided Emissions from plastics; LCA Compendium: "Life Cycle Management" highlighting the Corporate LCA Network. Another two publications about the social and environmental impact of plastics are being developed.



# Strengthening of practices

Be recognized as one of the business references in Brazil and one of the global references in the industry for its contribution to sustainable development.

2013-2015: remain on the DJSI Emerging Markets (The Dow Jones Sustainability Index for Emerging Markets).

2013-2015: become a benchmark in Environmental and Climate Management on the ISE.

2013 – 2015: structured management in organizations focusing on sustainable development.

2013 – 2015: continue to contribute to defining and implementing public policies (examples: PNRS, Chemical Safety, and Global Agreement for Sustainable Development). In 2015, this macro-objective reached a development level of about 87% related to the goal for 2020.

Braskem, as a signatory company and member of the Global Compact LEAD group, actively contributed to giving a Brazilian point of view when building the Sustainable Development Goals - SDGs with the UN, and attended the launch event along with nearly 150 world leaders;

The Movement to Reduce Loss in Water Distribution was launched, which aims to combat treated water loss in distribution systems. This initiative is aligned with the sixth Sustainable Development Goal (SDG), which aims to "ensure availability and sustainable handling of water and sanitation for all." The project is co-led along with Sanasa and includes the participation of companies, and governmental and non-governmental organizations; Adhered to the Open Letter to Brazil about Climate Change, in São Paulo. Produced by the Ethos Institute and companies from the Climate Forum, the document renews and expands the commitments made in the 2009 letter, and proposes actions to stimulate the development of a low-carbon economy that is competitive, responsible, and inclusive; Braskem was recognized for its Sustainable Development performance at the event celebrating the 15th anniversary of the Global Compact, promoted by the UN, and stood out in two publications, "NEXT," and IMPACT." The General Secretary of the UN, Bon Ki-moon, attended the event:

For the fifth consecutive year, Braskem was chosen the best company in the Chemical and Petrochemical sector by the publication "As Melhores da Dinheiro" ("The Best of Dinheiro") by Istoé Dinheiro magazine; For the 11th consecutive time, Braskem was part of the Corporate Sustainability Index (ISE), and for the 4th consecutive time, on the Dow Jones Sustainability Emerging Markets Index, respectively the sustainability indexes of BM&FBOVESPA of São Paulo and the DJSI index of emerging countries of the New York Stock Exchange.

Braskem, for the second time, was included in The Sustainability Yearbook, a publication developed by RobecoSAM, an international investment consulting firm specializing in sustainability. The ranking lists the 457 most sustainable companies in the world, and Braskem is listed among the 19 top companies in the global chemical industry and the 12 top Brazilian companies (considering the 59 sectors covered in the analysis). Braskem is committed to the Women's Empowerment Principles (WEP), aiming to adopt and encourage measures promoting gender equality and women's empowerment. This public commitment is one of the initiatives within the Diversity Program, launched this year by Braskem with an initial focus on the gender equality issue. One of the Women's Empowerment Principles is equal treatment for men and women, respecting human rights and non-discrimination, and the assessment and publication of the company's progress in promoting gender equality.

# **GLOBAL COMPACT PRINCIPLES**

PRINCIPLE	DESCRIPTION	ASSOCIATED SECTIONS AND INDICATORS
Principle 1	Respect and protect human rights	Corporate Governance G4-HR3
Principle 2	Prevent violation of human rights	Corporate Governance / Solutions for Society / Voluntary Commitments
Principle 3	Support freedom of association at work	People and processes
Principle 4	Eliminate forced labor	Solutions for Society
Principle 5	Abolish child labor	Solutions for Society
Principle 6	Eliminate employment discrimination	Corporate Governance / People and processes G4-10, G4-EC5, G4-EC6, G4-LA1, G4-HR3
Principle 7	Support a precautionary approach to environmental challenges	Profile / Sustainable Development / Solutions for Society / More Sustainable Products G4-EC2, G4-EN7, G4-EN12, G4-EN14, G4-EN27
Principle 8	Promote environmental responsibility	Profile / Sustainable Development / People and processes / More Sustainable Products G4-EC2, G4-EN7, G4-EN14, G4-EN27, G4-EN28
Principle 9	Encourage environmentally friendly technologies	Sustainable Development / Solutions for Society / More Sustainable Products G4-EC2, G4-EN7, G4-EN27
Principle 10	Work against corruption in all its forms, including extortion and bribery	Corporate Governance G4-S05

# SUSTAINABLE DEVELOPMENT GOALS (SDG)

The Sustainable Development Goals (SDG), launched in 2015 by the United Nations, aims to eliminate poverty and promote universal economic prosperity, social development and environmental protection.

As a LEAD Company of the Global Compact since 2013, Braskem has actively participated in the debate and definition of issues involving global sustainable development, always representing a Brazilian vision of global perspectives.

Since its creation in 2002, Braskem has had Sustainable Development at the core of its strategy, which materializes through the Company's 10 macro objectives. See below how the macro objectives are aligned with the SDG:

FOCUS OF GLOBAL OBJECTIVES IN SUSTAINABLE MANAGEMENT	Ä		2	全	$\bigcirc$	CO2	5	· · · · · · · · · · · · · · · · · · ·	**************************************	
1. Eradication of poverty		<b>~</b>	<b>*</b>			<b>*</b>		<b>*</b>	<b>*</b>	<b>~</b>
2. Hunger, food and agriculture									~	<b>*</b>
3. Health	~				~				<b>~</b>	<b>~</b>
4. Education								<b>~</b>	~	<b>~</b>
5. Gender equality		~						~		<b>~</b>
6. Water and sanitation	~				<b>~</b>			<b>~</b>	~	<b>~</b>
7. Energy			~				~		~	<b>~</b>
8. Economic growth	~	~	<b>~</b>	~	~	~	~	<b>~</b>	~	<b>~</b>
9. Infrastructure and industrialization	~	~	~	<b>~</b>	<b>~</b>	~	~	~	~	<b>~</b>
10. Inequality between countries		~						<b>~</b>		<b>~</b>
11. Sustainable cities	~		<b>~</b>			<b>*</b>		<b>*</b>	<b>*</b>	~
12. Sustainable production and consumption	~		~	~	~	~	~	~	~	<b>~</b>
13. Climate change						<b>~</b>			~	<b>*</b>
14. Oceans and seas			~					<b>*</b>		<b>*</b>
15. Land ecosystems				~				<b>~</b>		<b>~</b>
16. Peace and governance										<b>~</b>
17. Means of implementation		~								<b>~</b>



### Location



## **BRAZIL**

# **Southeast**

#### **UNIB 3 CK ABC**

Avenida Presidente Costa e Silva, 1178, Pq. Capuava Santo André (SP) CEP: 09270-901 Tel: 55 11 4478-1515

#### **UNIB 3 CK ABC**

Avenida Presidente Costa e Silva, 1178, Pq. Capuava Santo André (SP) CEP: 09270-901 Phone: 55 11 4478-1515

#### UNIB 3 IN ABC

Rua da União, 765, Jardim Sonia Maria - Mauá (SP) CEP: 09380-900

Phone: 55 11 4977-2020

#### **UN PE 7 ABC**

Avenida Presidente Costa e Silva, 400, Pq. Capuava Santo André (SP) CEP: 09270-000

Phone: 55 11 4478-4000

#### **UN PP 4 ABC**

Avenida Ayrton Senna da Silva, 2700, Jardim Oratório Mauá (SP) CEP: 09380-901

Phone: 55 11 3583-2200

#### **UN PE 8 CUB**

Rodovia Cônego Domenico Rangoni,55, s/n – Km 266 – Pista Oeste

Cubatão (SP) CEP: 11573-903 Phone: 55 13 3362-9001 /

#### **UNIB 4 AND PE 9 DCX**

Rua Marumbi, 1001, Campos Elíseos Duque de Caxias (RJ) CEP: 25221-000

Phone: 55 21 2187-8883

#### **UN PP 5 DCX**

Rua Marumbi, 1400, Campos Elíseos Duque de Caxias (RJ) CEP: 25221-000

Phone: 55 21 2173-4100

#### UN PP 3 PLN

Avenida Wagner Samara, 1280, Bairro Cascata- Paulínia (SP)

CEP: 13147-082

Phone: 55 19 3344-6700

### SÃO PAULO OFFICE HEADQUARTERS

Rua Lemos Monteiro, 120, Edifício Odebrecht Butantã (SP) CEP: 05501-050 Phone: 55 11 3576-9000

### SÃO PAULO OFFICE VILLA LOBOS

Avenida das Nações Unidas, 4.777, 11º andar Edifício Villa Lobos Pinheiros (SP) CEP: 05477-000

Phone: 55 11 3576-9000

### South

#### **UNIB 2 RS**

BR 386, Rod. Tabaí Canoas, km 419,

Via de Contorno 850, Triunfo (RS)

CEP: 95853-000 Phone: 55 51 3457-6310

#### PP 1 RS

BR 386 KM 419 - III Polo Petroquímico, Via Oeste – Lote 5, Triunfo (RS)

CEP: 95853-000

Phone: 55 51 3721-8161

#### PP 2 / PE 5 RS

BR 386 KM 419 Lote 4 Polo Petroquímico do Sul, Triunfo (RS) CEP: 95853-000 Phone: 55 51-3457-5511

#### PE 4 RS

BR 386 - Rodovia Tabaí / Canoas -Km 419, Via de Contorno, 1216 Polo Petroquímico, Triunfo, (RS)

CEP: 95853-000

Phone: 55 51-3721-8661

#### PE 6 RS

BR 386 - Rodovia Tabaí-Canoas -Km 419, Via de Contorno 1178 Polo Petroquímico, Lote 29 Passo Raso, Triunfo (RS)

CEP: 95853-000

Phone: 55 51-3457-2351

#### **RIO GRANDE DO SUL OFFICE**

Av. Soledade, 550, 2º andar, Petrópolis, Porto Alegre (RS)

CEP: 90470-340

Phone: 55 51 3216-2626

# **Alagoas**

#### CS 1 AL

Avenida Assis Chateaubriand, 5260 Bairro Pontal da Barra Maceió (AL)

CEP: 57010-900

Phone: 55 82 3177-5151

#### **PVC 2 AL**

Rodovia Divaldo Suruagy Km 12 – Via II - Polo Industrial José Aprígio Vilela, Marechal Deodoro (AL) CEP: 57160-000

Phone: 55 82-3177-5412

#### **MINING**

Av. Av. Major Cícero Goes Monteiro, 2889, Mutange, Maceió (AL)

CEP: 57017-515

# **Bahia**

#### **UNIB 1 BA**

Rua Eteno, 1561, Copec Polo de Camaçari Camaçari (BA) CEP: 42810-000

Phone: 55 71 3413-2200

### PE 1 BA

Rua Eteno, 1582, Copec Polo de Camaçari Camaçari (BA) CEP:42810-000

Phone: 55 71 3413 3711

#### PE 2 BA

Rua Hidrogênio, nº 3520, Copec, Polo de Camaçari Camaçari (BA)

CEP: 42810-280

Phone: 55 71 3413 3860

#### **PVC 1 BA**

Rua Hidrogênio, 3342, Copec, Polo de Camaçari Camaçari (BA) CEP: 42810-280

Phone: 55 71 3413-2800

#### PE 3 BA

Rua Benzeno, 2391, Copec, Polo de Camaçari Camaçari (BA) CEP:42810-020 Phone: 55 71 3413 4100

#### CS 2 BA

Rua Oxigênio, 765, Copec - Polo de Camaçari Camaçari (BA) CEP:42810-270 Phone: 55 71 3413 3344

### **BAHIA OFFICE**

Av. Antônio Carlos Magalhães, 3244, Edf. Thomé de Souza, 20° andar Salvador (BA) CEP: 41820-000

Phone: 55 71 3504-7932

## **UNITED STATES**

#### **HEADQUARTERS**

1735 Market Street, 28th floor Philadelphia, PA 19103 Phone: 1 215 831-3100

#### LA PORTE PLANT

8811 Strang Road, La Porte, TX 77571 Phone: 1 281 476-0303 Fax: 1 281 930-2070

#### **MARCUS HOOK PLANT**

P.O. Box 432, Marcus Hook PA 19061

Phone: 1 610 497-8850 Fax: 1 610 494-3792

#### **NEAL PLANT**

200 Big Sandy Road Kenova, WV 25530 Phone: 1 304 453-1371 Fax: 1 304 453-5916

# TECHNOLOGY AND INNOVATION CENTER

550 Technology Drive Pittsburgh, PA15219 Phone: 1 412 208-8100 Fax: 1 412 20-88205

#### **HOUSTON SALES OFFICE**

Basic Petrochemicals produced in Brazil, 5100 Westheimer Rd – Suite 495,

Houston, TX 77056 Phone: 1 713 255-4747 / Fax: 1 713 255-4740

#### **SEADRIFT PLANT**

P.O. Box 105, Port Lavaca, TX 77979 Phone: 1 361 487-1100

#### **OYSTER CREEK PLANT**

P.O. Box 2168, Freeport, TX 77542 Phone: 1 979 705-2650

## **GERMANY**

#### **HEADQUARTERS**

An der Welle 3 60322 Frankfurt am Main Phone: +49 69 427 299 200

#### **PP11 WESSELING**

Werk Wesseling Rodenkirchner Str. 400 50389 Wesseling

Phone: +49 2232 705 356

#### PP12 SCHKOPAU

Werk Schkopau, PF 1163 06201 Merseburg

Phone: +49 3461 54740 245

# **MEXICO**

#### **BRASKEM IDESA SAPI**

Boulevard Manuel Avila Camacho 36, Piso 24 Col. Lomas de Chapultepec CP 11000 México D.F

#### **PLANTA COATZACOALCOS**

Camino Petrolero El Chapo s/n, Km. 1.3, Col. Zona Industrial de Coatzacoalcos Veracruz, México

## OTHER COUNTRIES

#### **ARGENTINA**

Braskem Argentina S.R.L., Carlos Pellegrini, 1.149, 7º piso, C1009ABW, Ciudad Autônoma de Buenos Aires

Phone: 54 11 5275-6600 / Fax: 54 11 5275-6699

#### **VENEZUELA**

Av. Río Caura – Torre Humboldt, Piso 19, Oficina 1901, Urb. Prados del Este, Caracas 1080 Phone: +58 (212) 976-5025

#### **PERU**

Av. Victor Andres Belaunde N°. 280 Of. 603, San Isidro, Lima 27

Phone: +51 (1) 442-4241

#### **COLOMBIA**

Capital Park – Centro Empresarial, Calle 93 – 11A – 28 – Sala 302, Bogotá

Phone: 0057-1-589-7077

#### CHILE

Av. Nueva Tajamar, 481, WTC Torre Norte – Oficina 301 Las Condes – Santiago Phone: 0056-2-482-7000

#### **HOLLAND**

Braskem Europe BV, Beursplein, 37 – 3.011, AA, Kamer 859, PO Box 30128, 3001 DC Rotterdam

Phone: 31 10 205-2943

#### **SINGAPORE**

8 EU TONG SEN STREET #22-89 The Central, 059818 – Singapore

Phone: +65 6671 0431

### **CREDITS**

Vice President Institutional Relations and Sustainable Development MARCELO LYRA DO AMARAL

Analysis and Content Production KEYASSOCIADOS

Responsibility for Corporate Communication ANDRÉ VIEIRA

Design and web development KITE ESTRATÉGIAS DIGITAIS

Responsibility for Sustainable Development JORGE SOTO

Assurance KPMG

External Communications Supervision
CARLOS EDUARDO DOS SANTOS
MARIANA FERNANDES CARDOSO

Photographs
JULIO BITTENCOURT
BRASKEM COLLECTION

Sustainable Development Supervision
MARIO PINO
LUIZ CARLOS XAVIER

Translation
GOTCHA! IDIOMAS