Braskem S/A

2024 CDP Corporate Questionnaire 2024

Word version

Important: this export excludes unanswered questions

10/14/2024, 02:10 pm

Contents

C1. Introduction

(1.1) In which language are you submitting your response?

Select from:

☑ English

(1.2) Select the currency used for all financial information disclosed throughout your response.

Select from:

☑ USD

(1.3) Provide an overview and introduction to your organization.

(1.3.2) Organization type

Select from:

☑ Privately owned organization

(1.3.3) Description of organization

Braskem S.A. is a global petrochemical company, a leader in the production of biopolymers manufactured from ethanol produced on an industrial scale from sugarcane. As the largest plastics producer in the Americas, Braskem is committed to the circular economy and carbon neutrality and believe in innovation as the strategic pillar of our actions. Founded in 2002 in Brazil, it is currently the sixth-largest petrochemical company in the world in the production of thermoplastic resins, leader in Americas, and a market leader and pioneer in the industrial-scale production of bio-polymers (plastic made from renewable raw materials). Braskem is the largest producer of polypropylene in the Americas, based on the annual production capacity of its plants in Brazil and the United States of America. Braskem is the only integrated petrochemical company that produces basic chemicals and polymers in Brazil, and the largest producer of PE in Mexico and PP in the United States. Braskem produces a diverse portfolio of petrochemicals and thermoplastics, including polyethylene, green polyethylene (biopolymer), polypropylene and PVC. The products are typically used in high-volume applications, and we benefit from our world-scale plants to increase our competitiveness. The clients use our plastics and chemical products to produce a wide variety of products that people employ in their daily lives to meet their essential needs in food packaging, home furnishings, industrial and automotive components, paints and coatings. Braskem's purpose is to create sustainable solutions through chemicals and plastics. To that end, Braskem has adopted a business strategy integrated with sustainable development, strengthening our commitment to economic growth, conservation of the environment and social justice. Braskem has a human perspective and encourage leadership in all our team members, who work daily to develop a broad and diverse portfolio, with products and solutions that serve its customers in more than 71 countries. The achievement of the sustainable macro objectives disclosed by the

Company (within the projected costs and expected timelines) is also subject to uncertainties and risks, including but not limited to: the advancement, availability, development, and financial feasibility of the technology required to achieve these objectives
[Fixed row]

(1.4) State the end date of the year for which you are reporting data. For emissions data, indicate whether you will be providing emissions data for past reporting years.

	End date of reporting year	Alignment of this reporting period with your financial reporting period	Indicate if you are providing emissions data for past reporting years
	12/31/2023	*Select from:* ☑ Yes	*Select from:* ☑ No

[Fixed row]

(1.4.1) What is your organization's annual revenue for the reporting period?

3600000000

(1.5) Provide details on your reporting boundary.

	Is your reporting boundary for your CDP disclosure the same as that used in your financial statements?
	Select from: ☑ Yes

[Fixed row]

(1.6) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

ISIN code - bond

(1.6.1) Does your organization use this unique identifier?

Select from:

☑ No

ISIN code - equity

(1.6.1) Does your organization use this unique identifier?

Select from:

☑ No

CUSIP number

(1.6.1) Does your organization use this unique identifier?

Select from:

☑ No

Ticker symbol

(1.6.1) Does your organization use this unique identifier?

Select from:

☑ Yes

(1.6.2) Provide your unique identifier

BRKM5

SEDOL code

(1.6.1) Does your organization use this unique identifier?

Select from:
☑ No

LEI number

(1.6.1) Does your organization use this unique identifier?

Select from:
☑ No

D-U-N-S number

(1.6.1) Does your organization use this unique identifier?

Select from:
☑ No

Other unique identifier

(1.6.1) Does your organization use this unique identifier?

Select from:
☑ No
[Add row]

(1.7) Select the countries/areas in which you operate.

Select all that apply
☑ Brazil

☑ Germany
☑ Mexico
☑ United States of America

(1.8) Are you able to provide geolocation data for your facilities?

	Are you able to provide geolocation data for your facilities?	Comment
	Select from: ☑ Yes, for all facilities	-

[Fixed row]

(1.8.1) Please provide all available geolocation data for your facilities.

Row 1

(1.8.1.1) Identifier

PP 4 ABC

(1.8.1.2) Latitude

-23.640301

(1.8.1.3) Longitude

-46.465745

(1.8.1.4) Comment

This asset is located in Brazil

Row 2

(1.8.1.1) Identifier

PP 11 GER

(1.8.1.2) Latitude

50.8423

(1.8.1.3) Longitude

6.9455

(1.8.1.4) Comment

This Asset is located in Germany.

Row 3

(1.8.1.1) Identifier

PP 12 GER

(1.8.1.2) Latitude

51.3945

(1.8.1.3) Longitude

11.974

(1.8.1.4) Comment

This Asset is located in Germany.

Row 4

(1.8.1.1) Identifier

CS 2 BA

(1.8.1.2) Latitude

-12.655718

(1.8.1.3) Longitude

-38.307192

(1.8.1.4) Comment

This Asset is located in Brazil.

Row 5

(1.8.1.1) Identifier

PP 2 RS

(1.8.1.2) Latitude

-29.873

(1.8.1.3) Longitude

-51.3989

(1.8.1.4) Comment

This Asset is located in Brazil.

Row 6

(1.8.1.1) Identifier

PE 1 BA

(1.8.1.2) Latitude

-12.662917

(1.8.1.3) Longitude

-38.324718

(1.8.1.4) Comment

This Asset is located in Brazil.

Row 7

(1.8.1.1) Identifier

PVC 2 AL

(1.8.1.2) Latitude

-9.669779

(1.8.1.3) Longitude

-35.824888

(1.8.1.4) Comment

This Asset is located in Brazil.

Row 8

(1.8.1.1) Identifier

Q 4 DCX

(1.8.1.2) Latitude

-22.713099

(1.8.1.3) Longitude

-43.242728

(1.8.1.4) Comment

This Asset is located in Brazil.

Row 9

(1.8.1.1) Identifier

CS 1 AL

(1.8.1.2) Latitude

-9.672095

(1.8.1.3) Longitude

-35.746608

(1.8.1.4) Comment

This Asset is located in Brazil.

Row 10

(1.8.1.1) Identifier

Braskem BI MX

(1.8.1.2) Latitude

18.1348

(1.8.1.3) Longitude

-94.3698

(1.8.1.4) Comment

This Asset is located in Mexico

Row 11

(1.8.1.1) Identifier

PE 6 RS

(1.8.1.2) Latitude

-29.872

(1.8.1.3) Longitude

-51.3992

(1.8.1.4) Comment

This Asset is located in Brazil.

Row 12

(1.8.1.1) Identifier

PP Marcus Hook USA

(1.8.1.2) Latitude

39.8149

(1.8.1.3) Longitude

-75.4267

(1.8.1.4) Comment

This Asset is located in USA.

Row 13

(1.8.1.1) Identifier

Q 2 RS

(1.8.1.2) Latitude

-29.8774

(1.8.1.3) Longitude

-51.382

(1.8.1.4) Comment

This Asset is located in Brazil.

Row 14

(1.8.1.1) Identifier

PE 5 RS

(1.8.1.2) Latitude

-29.873

(1.8.1.3) Longitude

-51.3989

(1.8.1.4) Comment

This Asset is located in Brazil.

Row 15

(1.8.1.1) Identifier

PP LA Porte USA

(1.8.1.2) Latitude

29.7024

(1.8.1.3) Longitude

-95.0803

(1.8.1.4) Comment

This Asset is located in USA.

Row 16

(1.8.1.1) Identifier

PVC 1 BA

(1.8.1.2) Latitude

-12.653599

(1.8.1.3) Longitude

-38.316587

(1.8.1.4) Comment

This Asset is located in Brazil.

Row 17

(1.8.1.1) Identifier

PP 5 DCX

(1.8.1.2) Latitude

-22.714783

(1.8.1.3) Longitude

-43.240188

(1.8.1.4) Comment

This Asset is located in Brazil.

Row 18

(1.8.1.1) Identifier

PE 4 RS

(1.8.1.2) Latitude

-29.872

(1.8.1.3) Longitude

-51.3992

(1.8.1.4) Comment

This Asset is located in Brazil.

Row 19

(1.8.1.1) Identifier

PE 9 DCX

(1.8.1.2) Latitude

-22.713099

(1.8.1.3) Longitude

-43.242728

(1.8.1.4) Comment

This Asset is located in Brazil.

Row 20

(1.8.1.1) Identifier

PP 3 PLN

(1.8.1.2) Latitude

-22.7181

(1.8.1.3) Longitude

-47.1343

(1.8.1.4) Comment

This Asset is located in Brazil.

Row 21

(1.8.1.1) Identifier

PP Oyster Creek USA

(1.8.1.2) Latitude

28.9338

(1.8.1.3) Longitude

-95.3361

(1.8.1.4) Comment

This Asset is located in USA.

Row 22

(1.8.1.1) Identifier

Q 1 BA

(1.8.1.2) Latitude

-12.663054

(1.8.1.3) Longitude

-38.328438

(1.8.1.4) Comment

This Asset is located in Brazil.

Row 23

(1.8.1.1) Identifier

PE 2 BA

(1.8.1.2) Latitude

-12.649768

(1.8.1.3) Longitude

-38.316281

(1.8.1.4) Comment

This Asset is located in Brazil.

Row 24

(1.8.1.1) Identifier

PE 3 BA

(1.8.1.2) Latitude

-12.65387

(1.8.1.3) Longitude

-38.319307

(1.8.1.4) Comment

This Asset is located in Brazil.

Row 25

(1.8.1.1) Identifier

PE 8 CUB

(1.8.1.2) Latitude

-23.856066

(1.8.1.3) Longitude

-46.413245

(1.8.1.4) Comment

This Asset is located in Brazil.

Row 26

(1.8.1.1) Identifier

PP Neal USA

(1.8.1.2) Latitude

38.3298

(1.8.1.3) Longitude

-82.5837

(1.8.1.4) Comment

This Asset is located in USA.

Row 27

(1.8.1.1) Identifier

PP 1 RS

(1.8.1.2) Latitude

-29.8858

(1.8.1.3) Longitude

-51.3937

(1.8.1.4) Comment

This Asset is located in Brazil.

Row 28

(1.8.1.1) Identifier

Q 3 ABC

(1.8.1.2) Latitude

-23.639331

(1.8.1.3) Longitude

-46.486444

(1.8.1.4) Comment

This Asset is located in Brazil.

Row 29

(1.8.1.1) Identifier

PP Seadrift USA

(1.8.1.2) Latitude

28.615

(1.8.1.3) Longitude

-96.6261

(1.8.1.4) Comment

This Asset is located in USA.

Row 30

(1.8.1.1) Identifier

PE 7 ABC

(1.8.1.2) Latitude

-23.646045

(1.8.1.3) Longitude

-46.487657

(1.8.1.4) Comment

This Asset is located in Brazil.
[Add row]

(1.14) In which part of the chemicals value chain does your organization operate?

Bulk inorganic chemicals

☑ Chlorine and Sodium hydroxide

Bulk organic chemicals

☑ Aromatics

☑ Lower olefins (cracking)

☑ Polymers

Other chemicals

☑ Specialty organic chemicals

(1.24) Has your organization mapped its value chain?

(1.24.1) Value chain mapped

Select from:

☑ Yes, we have mapped or are currently in the process of mapping our value chain

(1.24.2) Value chain stages covered in mapping

Select all that apply

☑ Upstream value chain

☑ Downstream value chain

(1.24.3) Highest supplier tier mapped

Select from:

☑ Tier 1 suppliers

(1.24.4) Highest supplier tier known but not mapped

Select from:

☑ Tier 2 suppliers

(1.24.7) Description of mapping process and coverage

Braskem maintains full control over its suppliers, with a registry and a designated manager for each contract. The company has a process for evaluating and classifying suppliers based on economic and socio-environmental criteria, thus determining its list of critical suppliers.
[Fixed row]

(1.24.1) Have you mapped where in your direct operations or elsewhere in your value chain plastics are produced, commercialized, used, and/or disposed of?

(1.24.1.1) Plastics mapping

Select from:

☑ Yes, we have mapped or are currently in the process of mapping plastics in our value chain

(1.24.1.2) Value chain stages covered in mapping

Select all that apply

☑ Downstream value chain

☑ End-of-life management

(1.24.1.4) End-of-life management pathways mapped

Select all that apply

☑ Preparation for reuse

☑ Recycling

☑ Incineration

☑ Landfill

☑ Mismanaged waste

[Fixed row]

C2. Identification, assessment, and management of dependencies, impacts, risks, and opportunities

(2.1) How does your organization define short-, medium-, and long-term time horizons in relation to the identification, assessment, and management of your environmental dependencies, impacts, risks, and opportunities?

Short-term

(2.1.1) From (years)

1

(2.1.3) To (years)

5

(2.1.4) How this time horizon is linked to strategic and/or financial planning

Completely integrated, planning is carried out considering actions to achieve short, medium and long-term goals.

Medium-term

(2.1.1) From (years)

6

(2.1.3) To (years)

16

(2.1.4) How this time horizon is linked to strategic and/or financial planning

Completely integrated, planning is carried out considering actions to achieve short, medium and long-term goals.

Long-term

(2.1.1) From (years)

17

(2.1.2) Is your long-term time horizon open ended?

Select from:

☑ No

(2.1.3) To (years)

26

(2.1.4) How this time horizon is linked to strategic and/or financial planning

Completely integrated, planning is carried out considering actions to achieve short, medium and long-term goals.
[Fixed row]

(2.2) Does your organization have a process for identifying, assessing, and managing environmental dependencies and/or impacts?

	Process in place	Dependencies and/or impacts evaluated in this process
	Select from: ☑ Yes	*Select from:* ☑ Both dependencies and impacts

[Fixed row]

(2.2.1) Does your organization have a process for identifying, assessing, and managing environmental risks and/or opportunities?

	Process in place	Risks and/or opportunities evaluated in this process	Is this process informed by the dependencies and/or impacts process?
	Select from: ☑ Yes	*Select from:* ☑ Both risks and opportunities	*Select from:* ☑ Yes

[Fixed row]

(2.2.2) Provide details of your organization's process for identifying, assessing, and managing environmental dependencies, impacts, risks, and/or opportunities.

Row 1

(2.2.2.1) Environmental issue

Select all that apply

☑ Climate change

(2.2.2.2) Indicate which of dependencies, impacts, risks, and opportunities are covered by the process for this environmental issue

Select all that apply

☑ Dependencies

☑ Impacts

☑ Risks

☑ Opportunities

(2.2.2.3) Value chain stages covered

Select all that apply

☑ Direct operations

☑ Upstream value chain

☑ Downstream value chain

(2.2.2.4) Coverage

Select from:

☑ Full

(2.2.2.5) Supplier tiers covered

Select all that apply

☑ Tier 1 suppliers

(2.2.2.7) Type of assessment

Select from:

☑ Qualitative and quantitative

(2.2.2.8) Frequency of assessment

Select from:

☑ Annually

(2.2.2.9) Time horizons covered

Select all that apply

☑ Short-term

☑ Medium-term

☑ Long-term

(2.2.2.10) Integration of risk management process

Select from:

☑ Integrated into multi-disciplinary organization-wide risk management process

(2.2.2.11) Location-specificity used

Select all that apply

☑ Site-specific

☑ Local

☑ Sub-national

☑ National

(2.2.2.12) Tools and methods used

Commercially/publicly available tools

☑ Other commercially/publicly available tools, please specify :EcoVadis

Enterprise Risk Management

☑ Enterprise Risk Management

☑ Internal company methods

☑ Risk models

☑ Stress tests

International methodologies and standards

☑ IPCC Climate Change Projections

☑ ISO 14001 Environmental Management Standard

☑ Life Cycle Assessment

Databases

☑ Nation-specific databases, tools, or standards

☑ Regional government databases

Other

☑ Scenario analysis
☑ External consultants
☑ Materiality assessment
☑ Internal company methods
☑ Jurisdictional/landscape assessment
☑ Partner and stakeholder consultation/analysis

(2.2.2.13) Risk types and criteria considered

Acute physical

☑ Drought
☑ Landslide
☑ Heat waves
☑ Cold wave/frost
☑ Cyclones, hurricanes, typhoons
☑ Flood (coastal, fluvial, pluvial, ground water)
☑ Storm (including blizzards, dust, and sandstorms)

Chronic physical

☑ Water stress
☑ Sea level rise
☑ Change in land-use
☑ Water quality at a basin/catchment level
☑ Water availability at a basin/catchment level
☑ Other chronic physical driver, please specify **:Declining water quality**

Policy

☑ Carbon pricing mechanisms
☑ Changes to international law and bilateral agreements
☑ Changes to national legislation

Market

☑ Availability and/or increased cost of certified sustainable material
☑ Availability and/or increased cost of raw materials

☑ Changing customer behavior

☑ Other market, please specify :Inadequate access to water, sanitation, and hygiene services (WASH)

Reputation

☑ Stakeholder conflicts concerning water resources at a basin/catchment level

☑ Stigmatization of sector

Technology

☑ Dependency on water-intensive energy sources

☑ Transition to lower emissions technology and products

☑ Transition to water intensive, low carbon energy sources

☑ Other technology, please specify :Transition to reusable products , Transition to bio-based chemicals, Transition to recyclable plastic products , Transition to increasing recycled content , Transition to increasing renewable content ,

Liability

☑ Exposure to litigation

(2.2.2.14) Partners and stakeholders considered

Select all that apply

☑ Customers

☑ Employees

☑ Investors

☑ Suppliers

☑ Regulators

☑ Local communities

(2.2.2.15) Has this process changed since the previous reporting year?

Select from:

☑ No

(2.2.2.16) Further details of process

Braskem identifies the physical and transition risks and opportunities with a potential impact on 100% of its industrial operations, in all the operations. Analysis is considering the climate models and the IPCC scenarios, identifying the impacts and vulnerabilities of our operations in the present time horizon (Short-term), year 2030 (Medium-term) and year 2050 (Long-term). Compliance with the risk mitigation action plan is evaluated annually and a new assessment of the most relevant climate risks is performed. Periodically, these studies are updated for reassessment of scenarios and residual risks and maximized opportunities. For risks associated with the value chain, Braskem uses the CDP Supply Chain to identify these risks and opportunities. The identification of risks and opportunities at the asset level focuses on the present and the future. To evaluate the magnitude of the impact, both positive and negative, the following criteria are considered depending on if it is an opportunity or risk impact on people, considering the seriousness of the injury; in the environment, considering if the impact is internal or external, reversible or not and how extensive it is; in operations, if there is a partial or total interruption, frequent or not, including that which ends up stopping an operation; financial impact; and reputation, if the repercussions are in the internal, local, regional or international media. For opportunities, positive impacts are verified such as development of a new product, development of a new market, increase in market share and impacts that improve the company's profits. In this analysis, financial losses above US 10,000,000 are considered as a substantial financial impact. However, not only this value is used during prioritization. Considering the combination of the magnitude of this financial impact with the probability of the event occurring, scenarios with a low financial impact, but high probability, might also be classified as high-risk scenarios. Considering that all climate risks and opportunities were identified and classified as low, moderate or high, for every high risk or opportunity, it is mandatory to identify an action to mitigate or eliminate the risk or an action to keep the opportunity in the 'high' position. All actions validated are approved and its implementation is monitored according to its approved schedule. Management of these actions is made by monitoring the accomplishment percentage of the action plan and by the reduction of high-risk scenarios. The achievement of these measures is now evaluated according to an achievement projection, considering that plants achieve measures' goals in a linear tendency throughout the years.

Row 2

(2.2.2.1) Environmental issue

Select all that apply

☑ Water

(2.2.2.2) Indicate which of dependencies, impacts, risks, and opportunities are covered by the process for this environmental issue

Select all that apply

☑ Dependencies

☑ Impacts

☑ Risks

☑ Opportunities

(2.2.2.3) Value chain stages covered

Select all that apply

☑ Direct operations

☑ Upstream value chain

(2.2.2.4) Coverage

Select from:

☑ Full

(2.2.2.5) Supplier tiers covered

Select all that apply

☑ Tier 1 suppliers

(2.2.2.7) Type of assessment

Select from:

☑ Qualitative and quantitative

(2.2.2.8) Frequency of assessment

Select from:

☑ Annually

(2.2.2.9) Time horizons covered

Select all that apply

☑ Short-term

☑ Medium-term

☑ Long-term

(2.2.2.10) Integration of risk management process

Select from:

☑ Integrated into multi-disciplinary organization-wide risk management process

(2.2.2.11) Location-specificity used

Select all that apply

☑ Site-specific

☑ Local

☑ Sub-national

☑ National

(2.2.2.12) Tools and methods used

Commercially/publicly available tools

☑ Water Footprint Network Assessment tool

☑ WRI Aqueduct

☑ WWF Water Risk Filter

Enterprise Risk Management

☑ Enterprise Risk Management

☑ Internal company methods

☑ Risk models

☑ Stress tests

International methodologies and standards

☑ ISO 14046 Environmental Management – Water Footprint

Databases

☑ Nation-specific databases, tools, or standards

☑ Regional government databases

Other

☑ Scenario analysis

☑ External consultants

☑ Source Water Vulnerability Assessment

☑ Partner and stakeholder consultation/analysis

☑ Materiality assessment

☑ Internal company methods

☑ Jurisdictional/landscape assessment

(2.2.2.13) Risk types and criteria considered

Acute physical

☑ Drought

☑ Flood (coastal, fluvial, pluvial, ground water)

Chronic physical

☑ Declining water quality

☑ Water availability at a basin/catchment level

☑ Water stress

Policy

☑ Changes to international law and bilateral agreements

☑ Changes to national legislation

☑ Increased pricing of water

Market

☑ Inadequate access to water, sanitation, and hygiene services (WASH)

Reputation

☑ Stakeholder conflicts concerning water resources at a basin/catchment level

Technology

☑ Transition to water efficient and low water intensity technologies and products

☑ Transition to water intensive, low carbon energy sources

☑ Unsuccessful investment in new technologies

Liability

☑ Exposure to litigation

(2.2.2.14) Partners and stakeholders considered

Select all that apply

☑ Customers

☑ Employees

☑ Investors

☑ Suppliers

☑ Regulators

☑ Local communities

☑ Water utilities at a local level

(2.2.2.15) Has this process changed since the previous reporting year?

Select from:

☑ No

(2.2.2.16) Further details of process

Braskem identifies the physical and transition risks and opportunities with a potential impact on 100% of its industrial operations, in all the operations. Analysis is considering the climate models and the IPCC scenarios, identifying the impacts and vulnerabilities of our operations in the present time horizon (Short-term), year 2030 (Medium-term) and year 2050 (Long-term). Compliance with the risk mitigation action plan is evaluated annually and a new assessment of the most relevant climate risks is performed. Periodically, these studies are updated for reassessment of scenarios and residual risks and maximized opportunities. For risks associated with the value chain, Braskem uses the CDP Supply Chain to identify these risks and opportunities. The identification of risks and opportunities at the asset level focuses on the present and the future. To evaluate the magnitude of the impact, both positive and negative, the following criteria are considered depending on if it is an opportunity or risk impact on people, considering the seriousness of the injury; in the environment, considering if the impact is internal or external, reversible or not and how extensive it is; in operations, if there is a partial or total interruption, frequent or not, including that which ends up stopping an operation; financial impact; and reputation, if the repercussions are in the internal, local, regional or international media. For opportunities, positive impacts are verified such as development of a new product, development of a new market, increase in market share and impacts that improve the company's profits. In this analysis, financial losses above US 10,000,000 are considered as a substantial financial impact. However, not only this value is used during prioritization. Considering the combination of the magnitude of this financial impact with the probability of the event occurring, scenarios with a low financial impact, but high probability, might also be classified as high-risk scenarios. Considering that all climate risks and opportunities were identified and classified as low, moderate or high, for every high risk or opportunity, it is mandatory to identify an action to mitigate or eliminate the risk or an action to keep the opportunity in the 'high' position. All actions validated are approved and its implementation is monitored according to its approved schedule. Management of these actions is made by monitoring the accomplishment percentage of the action plan and by the

reduction of high-risk scenarios. The achievement of these measures is now evaluated according to an achievement projection, considering that plants achieve measures' goals in a linear tendency throughout the years
[Add row]

(2.2.7) Are the interconnections between environmental dependencies, impacts, risks and/or opportunities assessed?

(2.2.7.1) Interconnections between environmental dependencies, impacts, risks and/or opportunities assessed

Select from:
☑ Yes

(2.2.7.2) Description of how interconnections are assessed

When carrying out the analysis of risks and opportunities, dependencies and impacts are also evaluated, seeking to identify actions that make operations more efficient and resilient and enhancing the opportunities identified. For example, for water, all dependencies and impacts in relation to quality are evaluated. Also evaluated are water quantity and availability for operations and other users, thus avoiding potential conflicts related to these natural resources.
[Fixed row]

(2.3) Have you identified priority locations across your value chain?

(2.3.1) Identification of priority locations

Select from:
☑ Yes, we have identified priority locations

(2.3.2) Value chain stages where priority locations have been identified

Select all that apply
☑ Direct operations

(2.3.3) Types of priority locations identified

Sensitive locations
☑ Areas of limited water availability, flooding, and/or poor quality of water

Locations with substantive dependencies, impacts, risks, and/or opportunities

☑ Locations with substantive dependencies, impacts, risks, and/or opportunities relating to water

(2.3.4) Description of process to identify priority locations

Braskem carries out a risk study of the river basin for its operations, considering the time horizon of 2040, considering the quality and availability of water, to identify those with high risk and thus define actions to increase the resilience of operations, as well as identify collective actions that can be engaged to increase the positive impact on these sources.

(2.3.5) Will you be disclosing a list/spatial map of priority locations?

Select from:

☑ Yes, we will be disclosing the list/geospatial map of priority locations

(2.3.6) Provide a list and/or spatial map of priority locations

CDP2.3 list of priority locations.pdf
[Fixed row]

(2.4) How does your organization define substantive effects on your organization?

Risks

(2.4.1) Type of definition

Select all that apply

☑ Qualitative

☑ Quantitative

(2.4.2) Indicator used to define substantive effect

Select from:

☑ Other, please specify :a) Financial b) Environmental c) Health and Safety d) Social e) Image/Reputation f) Infrastructure

(2.4.3) Change to indicator

Select from:

☑ Absolute increase

(2.4.5) Absolute increase/ decrease figure

10000000

(2.4.6) Metrics considered in definition

Select all that apply

☑ Time horizon over which the effect occurs

☑ Likelihood of effect occurring

(2.4.7) Application of definition

Impact measurement for the study of climate risks - physical risks and water risks (with respective Thresholds): a) Financial: Above 'Losses above USD 100,000.00' (Threshold) b) Environmental: Above 'Impact of considerable magnitude, but reversible with mitigation actions restricted to the company's area; and/or absence of impact on sensitive species/habitats.' (Threshold) c) Health and Safety: Above 'Injury/disorder with medical leave, or injury/disorder without medical leave with restriction.' (Threshold) d) Social: Above 'Complaints submitted to user/consumer/society service.' (Threshold) e) Image/Reputation: Above 'Report on media at local (municipal or state) level; concern/complaints of specific groups/organizations (e.g. NGOs).' (Threshold) f) Infrastructure: Above 'Frequent partial reduction of production process.' (Threshold Metrics and indicator used: a) Metrics: The metric used was the cross between probability of occurrence (frequency) and impact measurement of each climate event for every category listed above. With these results, it was possible to classify the risks in low, medium and high by the crossing of the frequency with the impact measurement. b) Indicators: The indicator used was the risk classification (low, medium and high). The risks classified as high are the ones that represent substantive change in our business and were the ones prioritized in the definition of adaptation actions.

Opportunities

(2.4.1) Type of definition

Select all that apply

☑ Qualitative

☑ Quantitative

(2.4.2) Indicator used to define substantive effect

Select from:

☑ Other, please specify :a) Financial b) Environmental c) Health and Safety d) Social e) Image/Reputation f) Infrastructure

(2.4.3) Change to indicator

Select from:

☑ Absolute increase

(2.4.5) Absolute increase/ decrease figure

10000000

(2.4.6) Metrics considered in definition

Select all that apply

☑ Time horizon over which the effect occurs

☑ Likelihood of effect occurring

(2.4.7) Application of definition

Impact measurement for the study of climate risks and opportunities (with respective Thresholds): a) Financial: Above ' Earnings above USD 100,000.00' (Threshold) b) Environmental: 'NOT Impact of considerable magnitude, but reversible with mitigation actions restricted to the company's area; and/or NOT absence of impact on sensitive species/habitats.' (Threshold) c) Health and Safety: 'NOT Injury/disorder with medical leave, or NOT injury/disorder without medical leave with restriction.' (Threshold) d) Social: 'NOT Complaints submitted to user/consumer/society service.' (Threshold) e) Image/Reputation: 'POSITIVE Report on media at local (municipal or state) level.' (Threshold) f) Infrastructure: 'INCREASE of production process.' (Threshold Metrics and indicator used: a) Metrics: The metric used was the cross between probability of occurrence (frequency) and positive impact measurement of each climate event for every category listed above. With these results, it is possible to classify the opportunities as low, medium and high by the crossing of the frequency with the positive impact measurement. b) Indicators: The indicator used is the opportunity classification (low, medium and high). The opportunities classified as high are the ones that represent substantive change in our business and are the ones prioritized in the definition of adaptation actions.

[Add row]

(2.5) Does your organization identify and classify potential water pollutants associated with its activities that could have a detrimental impact on water ecosystems or human health?

(2.5.1) Identification and classification of potential water pollutants

Select from:

☑ Yes, we identify and classify our potential water pollutants

(2.5.2) How potential water pollutants are identified and classified

Due to the nature of Braskem's operations, the company is legally obliged to carry out a series of monitoring procedures for its liquid waste (parameters such as pH, temperature, OBD, sediments, oils, floating materials, benzene, among many others). These obligations and monitoring activities are monitored and supervised by government environmental agencies through periodic reports and oversight, after being identified in a risk analysis as part of an Environmental Impact Study. Each Braskem business has its own matrix of specific parameters to be monitored and, therefore, considered to be pollutants. Determined in the environmental operating license, these parameters have as a minimum requirement what is established in regulations of countries, such as CONAMA Resolution No. 430/2011 in Brazil. Non-compliance can lead to fines and a ban on releasing effluents. Depending on the business and its risks, the company can carry out additional monitoring (in addition to legal regulations) on its own, such as the concentration of BTX in effluents, following regulations and standards of the Ministry of Labour, and National and International Agreements. All effluents receive appropriate treatment before final disposal and the samples are analyzed in specific laboratories (allowing the identification of potential water pollutants) and the results are forwarded to regulatory bodies.
[Fixed row]

(2.5.1) Describe how your organization minimizes the adverse impacts of potential water pollutants on water ecosystems or human health associated with your activities.

Row 1

(2.5.1.1) Water pollutant category

Select from:

☑ Phosphates

(2.5.1.2) Description of water pollutant and potential impacts

Nitrates and phosphates potential impact occurs in water bodies. Contamination of surface water bodies by nitrogen and phosphorus compounds can lead to the eutrophication process, characterized by an increase in the concentration of nutrients, which favors the accelerated multiplication of algae and cyanobacteria, resulting in an imbalance in the aquatic environment (low oxygen concentration and reduced light transmission). The high concentration of these pollutants also modify the quality of water for human consumption, which can unbalance the body. For Braskem's effluents, the concentration limits are in compliance with and monitored as stipulated Operational permits.

(2.5.1.3) Value chain stage

Select all that apply

☑ Direct operations

(2.5.1.4) Actions and procedures to minimize adverse impacts

Select all that apply

☑ Upgrading of process equipment/methods

☑ Beyond compliance with regulatory requirements

☑ Requirement for suppliers to comply with regulatory requirements

☑ Industrial and chemical accidents prevention, preparedness, and response

☑ Discharge treatment using sector-specific processes to ensure compliance with regulatory requirements

☑ Assessment of critical infrastructure and storage condition (leakages, spillages, pipe erosion etc.) and their resilience

(2.5.1.5) Please explain

Braskem has an integrated management system, Intelius that provides a standard model for documentation, quality, productivity, health, safety and environment for all production units worldwide. Intelius is clearly correlated with Braskem's sustainability and continuous improvement strategy, and ensures prevention, preparation and response to industrial and chemical accidents. In order to guide suppliers to comply with legal requirements and good market practices, Braskem has a Third-Party Code of Conduct. There is an Environmental team, Occupational Hygiene and Health team and a Product Stewardship team that define and implement procedures to reduce the pollutants potential impacts. The technical team is responsible for assessing critical infrastructure and storage conditions and their resilience. Effluent discharge treatment is carried out with all the necessary steps to retain pollutants and bring the concentration compliance with all limits specified in local legislation. Sometimes beyond compliance with regulatory requirements due to Braskem's culture of seeking best practices whenever possible. Updating equipment/process methods helps reduce pollutant concentrations, as can be seen in the optimization of concentration cycles in cooling towers, which reduce the volume of effluent generated and discharged. These activities have their effectiveness proven in periodic internal audits and by environmental agencies through the verification of self-monitoring reports.

Row 3

(2.5.1.1) Water pollutant category

Select from:

☑ Nitrates

(2.5.1.2) Description of water pollutant and potential impacts

Nitrates and phosphates potential impact occurs in water bodies. Contamination of surface water bodies by nitrogen and phosphorus compounds can lead to the eutrophication process, characterized by an increase in the concentration of nutrients, which favors the accelerated multiplication of algae and cyanobacteria, resulting in an imbalance in the aquatic environment (low oxygen concentration and reduced light transmission). The high concentration of these pollutants also modify the quality of water for human consumption, which can unbalance the body. For Braskem's effluents, the concentration limits are in compliance with and monitored as stipulated Operational permits.

(2.5.1.3) Value chain stage

Select all that apply

☑ Direct operations

(2.5.1.4) Actions and procedures to minimize adverse impacts

Select all that apply

☑ Upgrading of process equipment/methods

☑ Beyond compliance with regulatory requirements

☑ Requirement for suppliers to comply with regulatory requirements

☑ Industrial and chemical accidents prevention, preparedness, and response

☑ Discharge treatment using sector-specific processes to ensure compliance with regulatory requirements

☑ Assessment of critical infrastructure and storage condition (leakages, spillages, pipe erosion etc.) and their resilience

(2.5.1.5) Please explain

Braskem has an integrated management system, Intelius that provides a standard model for documentation, quality, productivity, health, safety and environment for all production units worldwide. Intelius is clearly correlated with Braskem's sustainability and continuous improvement strategy, and ensures prevention, preparation and response to industrial and chemical accidents. In order to guide suppliers to comply with legal requirements and good market practices, Braskem has a Third-Party Code of Conduct. There is an Environmental team, Occupational Hygiene and Health team and a Product Stewardship team that define and implement procedures to reduce the pollutants potential impacts. The technical team is responsible for assessing critical infrastructure and storage conditions and their *resilience. Effluent discharge treatment is carried out with all the necessary steps to retain pollutants and bring the concentration compliance with all limits specified in local legislation. Sometimes beyond compliance with regulatory requirements due to Braskem's culture of seeking best practices whenever possible. Updating equipment/process methods helps reduce pollutant concentrations, as can be seen in the optimization of concentration cycles in cooling towers, which reduce the volume of effluent generated and discharged. These activities have their effectiveness proven in periodic internal audits and by environmental agencies through the verification of self-monitoring reports.*

[Add row]

C3. Disclosure of risks and opportunities

(3.1) Have you identified any environmental risks which have had a substantive effect on your organization in the reporting year, or are anticipated to have a substantive effect on your organization in the future?

Climate change

(3.1.1) Environmental risks identified

Select from:

☑ Yes, only within our direct operations

(3.1.2) Primary reason why your organization does not consider itself to have environmental risks in your direct operations and/or upstream/downstream value chain

Select from:

☑ Evaluation in progress

(3.1.3) Please explain

For Guandu industrial plants (RJ, Brazil), Braskem is currently evaluating long-term contracts. The potential financial impact is based on a series of potential hypotheticals climate scenarios and using business guidelines for economic evaluation of ecosystem services at FGV-São Paulo. The value represents the potential impact of one of the scenarios, and is subject to risks and uncertainties which include, but are not limited to: advancement, availability, development and affordability of technology necessary to mitigate this impact; unforeseen design, operational and technological difficulties; availability of necessary materials and components; adapting products to customer preferences and customer acceptance of sustainable supply chain solutions; changes in public sentiment and political leadership; our ability to comply with changing regulations, taxes, mandates or requirements related to greenhouse gas emissions or other climate-related matters. The value was limited to US10 MM due to the criterion of significant impact for physical risk, since any loss (for physical risk) above US10 MM is considered as the most relevant impact in the risk classification matrix.

Water

(3.1.1) Environmental risks identified

Select from:
☑ Yes, only within our direct operations

(3.1.2) Primary reason why your organization does not consider itself to have environmental risks in your direct operations and/or upstream/downstream value chain

Select from:
☑ Evaluation in progress

(3.1.3) Please explain

As an example, our Climate Risk and Adaptation Assessment considered 3 areas (in the states of Bahia, Rio de Janeiro and Alagoas) where Braskem has operations of high risk for water scarcity. This risk was classified as 'High' for these three regions because the Financial impact measurement surpasses the USD 100,000.00 threshold. Once those areas were identified, the company developed a study with FGV to better understand the risks and analyses scenarios, with solutions such as reuse. Now the company is working on action plans with the operations from those areas to mitigate/eliminate water scarcity risks by adopting alternatives such as reuse, desalination and safe source of groundwater. The risk of water scarcity is crucial for Braskem's operations, thus the importance of rating direct and indirect use of water is vital. Freshwater and reuse water is used throughout the entire production process, in processes such as cooling, steam generation, effluent treatment. Therefore, the lack of water can affect operational costs and ultimately cease operations. Because Braskem is a chemical industry, a significant part of our suppliers use water in a similar way to our processes, especially considering that Braskem's main raw material is petrochemical naphtha.

Plastics

(3.1.1) Environmental risks identified

Select from:
☑ Yes, both in direct operations and upstream/downstream value chain
[Fixed row]

(3.1.1) Provide details of the environmental risks identified which have had a substantive effect on your organization in the reporting year, or are anticipated to have a substantive effect on your organization in the future.

Climate change

(3.1.1.1) Risk identifier

Select from:

☑ Risk2

(3.1.1.3) Risk types and primary environmental risk driver

Chronic physical

☑ Water stress

(3.1.1.4) Value chain stage where the risk occurs

Select from:

☑ Direct operations

(3.1.1.6) Country/area where the risk occurs

Select all that apply

☑ Brazil

(3.1.1.9) Organization-specific description of risk

The increase in average global temperatures disturbs the balance of climatic systems, intensifying phenomena that directly impact Braskem's activities, such as water availability. In Brazil, INPE indicates that by 2040, for Brazilian regions where Braskem operates, the average precipitation in the summer could be reduced to 2.3 mm/day in the RCP 4.5 scenario and 3.7 mm/day in the RCP 8.5 scenario. A primary risk driver was identified through Braskem Climate Change study, followed by the analysis of specific watershed scenarios, considering 2040 as a timeframe and factors such as one drought event every five years, lasting for 12 months, among other variables. Such drought would lead the company to its primary potential impact – reduction of or disruption in production capacity, considering the current technology. The plants located in Duque de Caxias (Chemicals 4, PE 9 and PP 5) are part of the Atlantic Forest biome of the State of Rio de Janeiro. Although the increase in temperature and reduction of precipitation are less impacting than in the other South-eastern biomes, the next years will tend to be hotter and drier, with reduced rainfall periods. The water availability of plants may be reduced in the short and long term, resulting from an increase in temperature and consequent evaporation of bodies of water. The potential impacts: (i) Operational/structural impacts: Reducing water availability causing unscheduled outages impacting industrial processes and electricity gene

(3.1.1.11) Primary financial effect of the risk

Select from:

☑ Disruption in production capacity

(3.1.1.12) Time horizon over which the risk is anticipated to have a substantive effect on the organization

Select all that apply

☑ Medium-term

(3.1.1.13) Likelihood of the risk having an effect within the anticipated time horizon

Select from:

☑ Virtually certain

(3.1.1.14) Magnitude

Select from:

☑ Medium-high

(3.1.1.16) Anticipated effect of the risk on the financial position, financial performance and cash flows of the organization in the selected future time horizons

The potential financial impact is associated with the loss of revenue due to the partial reduction in production as a consequence of the reduction in water withdrawal, due to severe drought scenarios that are simulated, based on the results of the climate risk study. This potential financial impact was calculated based on potential financial losses considering the reduction in production at the industrial unit. The value was limited to US 10 MM due to the significant impact criterion for physical risk, since any loss (for physical risk) above US 10 MM is considered as the most relevant impact in the company's risk classification matrix.

(3.1.1.17) Are you able to quantify the financial effect of the risk?

Select from:

☑ Yes

(3.1.1.21) Anticipated financial effect figure in the medium-term – minimum (currency)

0

(3.1.1.22) Anticipated financial effect figure in the medium-term – maximum (currency)

10000000

(3.1.1.25) Explanation of financial effect figure

*Based on a series of 9 potential climate scenarios and using business guidelines for economic evaluation of ecosystem services at FGV-São Paulo, the value represents the potential impact of one of the scenarios. In this scenario, we considered a 30% reduction in the water permit withdrawal for 12 months in a 5-year period that could lead to a calculated reduction in production directly affecting the regional plant’s load (reflecting on the plant’s EBITDA). This potential financial impact was calculated based on potential financial losses considering the reduction in production at the industrial unit. Potential impact cost quantity of product produced during 12 months * 30% * loss of profit *Production at the industrial unit Q4, Rio de Janeiro, Brazil **30% because we consider 30% reduction in the water permit withdrawal The value was limited to US10 MM due to the criterion of significant impact for physical risk, since any loss (for physical risk) above US10 MM is considered as the most relevant impact in the risk classification matrix.*

(3.1.1.26) Primary response to risk

Infrastructure, technology and spending

☑ Adopt water efficiency, water reuse, recycling and conservation practices

(3.1.1.27) Cost of response to risk

3301886.79

(3.1.1.28) Explanation of cost calculation

*The cost represents the difference between purchasing freshwater and purchasing reuse water at a price like Aquapolo (ABC reuse project - around 6.74 BRL/m3), to supply 100% of the region’s operations (values refer to the year of 2020). Formula: Cost of Response to Risk B*D - A*C A Annual amount of water consumed by 3 industrial units surface water withdrawal (m3) B Annual amount of water consumed by 3 industrial units' withdrawal from third-party reuse water (m3) C Cost of fresh water (BRL/m3) D Cost of reuse water (BRL/m3)*

(3.1.1.29) Description of response

The Climate Change Adaptation Plan indicated droughts as the main potential risk to the company's operations. One of the main actions to mitigate the risk of water scarcity is the identification and implementation of a new sustainable source of water withdrawal, replacing the current water withdrawal in a hydrographic basin with high risk. Braskem has studied seawater desalination and sewage reuse options for this region, and is in the final stages of this project, defining the best solution for approval in 2023 and planning to start implementing this project next year, 2024. This will reduce the risk as well as bring the water security index in that region to 100%.

Water

(3.1.1.1) Risk identifier

Select from:

☑ Risk1

(3.1.1.3) Risk types and primary environmental risk driver

Chronic physical

☑ Water stress

(3.1.1.4) Value chain stage where the risk occurs

Select from:

☑ Direct operations

(3.1.1.6) Country/area where the risk occurs

Select all that apply

☑ Brazil

(3.1.1.7) River basin where the risk occurs

Select all that apply

☑ Other, please specify :Guandu, Rio de Janeiro

(3.1.1.9) Organization-specific description of risk

The increase in average global temperatures disturbs the balance of climatic systems, intensifying phenomena that directly impact Braskem's activities, such as water availability. In Brazil, INPE indicates that by 2040, for Brazilian regions where Braskem operates, the average precipitation in the summer could be reduced to 2.3 mm/day in the RCP 4.5 scenario and 3.7 mm/day in the RCP 8.5 scenario. A primary risk driver was identified through Braskem Climate Change study, followed by the analysis of specific watershed scenarios, considering 2040 as a timeframe and factors such as one drought event every five years, lasting for 12 months, among other variables. Such drought would lead the company to its primary potential impact – reduction of or disruption in production capacity, considering the current technology.. The water availability of plants may be reduced in the short and long term, resulting from an increase in temperature and consequent evaporation of bodies of water. The potential impacts: (i) Operational/structural impacts: Reducing water availability causing unscheduled outages impacting industrial processes *and electricity generation, especially considering Brazilian energy matrix characteristics (major contribution of hydro-electric energy). (ii) Financial impacts: water scarcity increasing the price of water will generate financial impact for the plant.*

(3.1.1.11) Primary financial effect of the risk

Select from:

☑ Disruption in production capacity

(3.1.1.12) Time horizon over which the risk is anticipated to have a substantive effect on the organization

Select all that apply

☑ Medium-term

(3.1.1.13) Likelihood of the risk having an effect within the anticipated time horizon

Select from:

☑ Virtually certain

(3.1.1.14) Magnitude

Select from:

☑ Medium-high

(3.1.1.16) Anticipated effect of the risk on the financial position, financial performance and cash flows of the organization in the selected future time horizons

The potential financial impact is associated with the loss of revenue due to the partial reduction in production as a consequence of the reduction in water withdrawal, due to severe drought scenarios that are simulated, based on the results of the climate risk study. This potential financial impact was calculated based on potential financial losses considering the reduction in production at the industrial unit. The value was limited to US 10 MM due to the significant impact criterion for physical risk, since any loss (for physical risk) above US 10 MM is considered as the most relevant impact in the company's risk classification matrix.

(3.1.1.17) Are you able to quantify the financial effect of the risk?

Select from:

☑ Yes

(3.1.1.21) Anticipated financial effect figure in the medium-term – minimum (currency)

0

(3.1.1.22) Anticipated financial effect figure in the medium-term – maximum (currency)

10000000

(3.1.1.25) Explanation of financial effect figure

*Based on a series of 9 potential climate scenarios and using business guidelines for economic evaluation of ecosystem services at FGV-São Paulo, the value represents the potential impact of one of the scenarios. In this scenario, we considered a 30% reduction in the water permit withdrawal for 12 months in a 5-year period that could lead to a calculated reduction in production directly affecting the regional plant's load (reflecting on the plant's EBITDA). This potential financial impact was calculated based on potential financial losses considering the reduction in production at the industrial unit. Potential impact cost quantity of product produced during 12 months * 30% * loss of profit *Production at the industrial unit Q4, Rio de Janeiro, Brazil **30% because we consider 30% reduction in the water permit withdrawal The value was limited to US10 MM due to the criterion of significant impact for physical risk, since any loss (for physical risk) above US10 MM is considered as the most relevant impact in the risk classification matrix.*

(3.1.1.26) Primary response to risk

Infrastructure, technology and spending

☑ Increase investment in water, sanitation and hygiene [WASH]

(3.1.1.27) Cost of response to risk

3301886.79

(3.1.1.28) Explanation of cost calculation

*The cost represents the difference between purchasing freshwater and purchasing reuse water at a price like Aquapolo (ABC reuse project - around 6.74 BRL/m3), to supply 100% of the region's operations (values refer to the year of 2020). Formula: Cost of Response to Risk B*D - A*C A Annual amount of water consumed by 3 industrial units surface water withdrawal (m3) B Annual amount of water consumed by 3 industrial units' withdrawal from third-party reuse water (m3) C Cost of fresh water (BRL/m3) D Cost of reuse water (BRL/m3)*

(3.1.1.29) Description of response

The Climate Change Adaptation Plan indicated droughts as the main potential risk to the company's operations. One of the main actions to mitigate the risk of water scarcity is the identification and implementation of a new sustainable source of water withdrawal, replacing the current water withdrawal in a hydrographic basin with high risk. Braskem has studied seawater desalination and sewage reuse options for this region, and is in the final stages of this project, defining the best solution for approval in 2023 and planning to start implementing this project next year, 2024. This will reduce the risk as well as bring the water security index in that region to 100%.

Plastics

(3.1.1.1) Risk identifier

Select from:

☑ Risk6

(3.1.1.3) Risk types and primary environmental risk driver

Reputation

☑ Stigmatization of sector

(3.1.1.4) Value chain stage where the risk occurs

Select from:

☑ End-of-life management

(3.1.1.6) Country/area where the risk occurs

Select all that apply

☑ Brazil

☑ Germany

☑ Mexico

☑ United States of America

(3.1.1.9) Organization-specific description of risk

Global concern for the environment, inadequate disposal of post consumer plastic waste and governamental regulations of plastics

(3.1.1.11) Primary financial effect of the risk

Select from:

☑ Other, please specify :Decrease revenues due to reduced demand for products and services

(3.1.1.12) Time horizon over which the risk is anticipated to have a substantive effect on the organization

Select all that apply

☑ Long-term

(3.1.1.13) Likelihood of the risk having an effect within the anticipated time horizon

Select from:

☑ Unknown

(3.1.1.14) Magnitude

Select from:

☑ Medium

(3.1.1.16) Anticipated effect of the risk on the financial position, financial performance and cash flows of the organization in the selected future time horizons

Braskem has a strategy that considers actions to mitigate risk. Eliimination of plastic waste: With a deadline horizon for 2030, there are our long term objectives: Increase the sales volume of products with recycled content to 1 million tons and Recover 1.5 milliion tons of plastic waste

(3.1.1.26) Primary response to risk

Diversification

☑ Develop new products, services and/or markets

(3.1.1.29) Description of response

For this environmental issue, we have established a objective with targets to be achieved by 2030 and 2050 to the elimination of plastic waste.This objective receive specific monitoring governance, reporting periodically to the Executive Committee, composed by the CEO and vice-presidents. In 2023, we participated in the discussions regarding the global plastics treaty, and we joined the five Movements of the UN Global Compact Brazil, Ambition 2030: Water, 100% Transparency, They Lead 2030, Mind in Focus and Circular Connection We also act through industry organizations to seek joint solutions to challenges in plastics. We are part of the Alliance to End Plastic Waste, whose goal is to improve the infrastructure of sorting and recycling plastic waste through individual and collective investments. Braskem is part of the alliance's board of directors and has already invested R118 million in 12 initiatives since 2019. We also operate through The Recycling Partnership and the Polypropylene Recycling Coalition in the United States and Plastics Europe in Europe, stimulating the recycling chain in these regions. We have been a member of Blue Keepers since 2021, an initiative led by UN Global Compact Brazil, which aims to implement joint actions to prevent the escape of plastic waste into rivers and oceans in a lasting manner. In 2023, we moved forward with the creation of a national inventory of the types of waste that end up in the sea, with the sampling of five more municipalities, totaling 20 cities so far. We also approved the viability of a floating ecobarrier in Santos, with Braskem playing an important leadership role, given that it supported the implementation of the same system in Rio Grande do Sul in 2016. Ecobarriers collect floating waste disposed of in rivers and will contribute to the progress of the inventories.

Water

(3.1.1.1) Risk identifier

Select from:

☑ Risk3

(3.1.1.3) Risk types and primary environmental risk driver

Chronic physical

☑ Water stress

(3.1.1.4) Value chain stage where the risk occurs

Select from:

☑ Direct operations

(3.1.1.6) Country/area where the risk occurs

Select all that apply

☑ Brazil

(3.1.1.7) River basin where the risk occurs

Select all that apply

☑ Other, please specify :Reconcavo Norte (Bahia)

(3.1.1.9) Organization-specific description of risk

The increase in average global temperatures disturbs the balance of climatic systems, intensifying phenomena that directly impact Braskem's activities, such as water availability. In Brazil, INPE indicates that by 2040, for Brazilian regions where Braskem operates, the average precipitation in the summer could be reduced to 2.3 mm/day in the RCP 4.5 scenario and 3.7 mm/day in the RCP 8.5 scenario. A primary risk driver was identified through Braskem Climate Change study, followed by the analysis of specific watershed scenarios, considering 2040 as a timeframe and factors such as one drought event every five years, lasting for 12 months, among other variables. Such drought would lead the company to its primary potential impact – reduction of or disruption in production capacity, considering the current technology.. The water availability of plants may be reduced in the short and long term, resulting from an increase in temperature and consequent evaporation of bodies of water. The potential impacts: (i) Operational/structural impacts: Reducing water availability causing unscheduled outages impacting industrial processes and electricity generation, especially considering Brazilian energy matrix characteristics (major contribution of hydro-electric energy). (ii) Financial impacts: water scarcity increasing the price of water will generate financial impact for the plant.

(3.1.1.11) Primary financial effect of the risk

Select from:

☑ Disruption in production capacity

(3.1.1.12) Time horizon over which the risk is anticipated to have a substantive effect on the organization

Select all that apply

☑ Medium-term

(3.1.1.13) Likelihood of the risk having an effect within the anticipated time horizon

Select from:

☑ Virtually certain

(3.1.1.14) Magnitude

Select from:

☑ Medium-high

(3.1.1.16) Anticipated effect of the risk on the financial position, financial performance and cash flows of the organization in the selected future time horizons

The potential financial impact is associated with the loss of revenue due to the partial reduction in production as a consequence of the reduction in water withdrawal, due to severe drought scenarios that are simulated, based on the results of the climate risk study. This potential financial impact was calculated based on potential financial losses considering the reduction in production at the industrial unit. The value was limited to US 10 MM due to the significant impact criterion for physical risk, since any loss (for physical risk) above US 10 MM is considered as the most relevant impact in the company's risk classification matrix.

(3.1.1.17) Are you able to quantify the financial effect of the risk?

Select from:

☑ Yes

(3.1.1.21) Anticipated financial effect figure in the medium-term – minimum (currency)

0

(3.1.1.22) Anticipated financial effect figure in the medium-term – maximum (currency)

10000000

(3.1.1.25) Explanation of financial effect figure

*Based on a series of 9 potential climate scenarios and using business guidelines for economic evaluation of ecosystem services at FGV-São Paulo, the value represents the potential impact of one of the scenarios. In this scenario, we considered a 30% reduction in the water permit withdrawal for 12 months in a 5-year period that could lead to a calculated reduction in production directly affecting the regional plant's load (reflecting on the plant's EBITDA). This potential financial impact was calculated based on potential financial losses considering the reduction in production at the industrial unit. Potential impact cost quantity of product produced during 12 months * 30% * loss of profit *Production at the industrial unit Q4, Rio de Janeiro, Brazil **30% because we consider 30% reduction in the water permit withdrawal The value was limited to US10 MM due to the criterion of significant impact for physical risk, since any loss (for physical risk) above US10 MM is considered as the most relevant impact in the risk classification matrix.*

(3.1.1.26) Primary response to risk

Infrastructure, technology and spending

☑ Increase investment in water, sanitation and hygiene [WASH]

(3.1.1.27) Cost of response to risk

3301886.79

(3.1.1.28) Explanation of cost calculation

*The cost represents the difference between purchasing freshwater and purchasing reuse water at a price like Aquapolo (ABC reuse project - around 6.74 BRL/m3), to supply 100% of the region's operations (values refer to the year of 2020). Formula: Cost of Response to Risk B*D - A*C A Annual amount of water consumed by 3 industrial units surface water withdrawal (m3) B Annual amount of water consumed by 3 industrial units' withdrawal from third-party reuse water (m3) C Cost of fresh water (BRL/m3) D Cost of reuse water (BRL/m3)*

(3.1.1.29) Description of response

The Climate Change Adaptation Plan indicated droughts as the main potential risk to the company's operations. One of the main actions to mitigate the risk of water scarcity is the identification and implementation of a new sustainable source of water withdrawal, replacing the current water withdrawal in a hydrographic basin with high risk. Braskem has studied seawater desalination and sewage reuse options for this region, and is in the final stages of this project, defining the best solution for approval in 2023 and planning to start implementing this project next year, 2024. This will reduce the risk as well as bring the water security index in that region to 100%.

Water

(3.1.1.1) Risk identifier

Select from:

☑ Risk4

(3.1.1.3) Risk types and primary environmental risk driver

Chronic physical

☑ Water stress

(3.1.1.4) Value chain stage where the risk occurs

Select from:

☑ Direct operations

(3.1.1.6) Country/area where the risk occurs

Select all that apply

☑ Brazil

(3.1.1.7) River basin where the risk occurs

Select all that apply

☑ Other, please specify :Remédios (Alagoas)

(3.1.1.9) Organization-specific description of risk

The increase in average global temperatures disturbs the balance of climatic systems, intensifying phenomena that directly impact Braskem's activities, such as water availability. In Brazil, INPE indicates that by 2040, for Brazilian regions where Braskem operates, the average precipitation in the summer could be reduced to 2.3 mm/day in the RCP 4.5 scenario and 3.7 mm/day in the RCP 8.5 scenario. A primary risk driver was identified through Braskem Climate Change study, followed by the analysis of specific watershed scenarios, considering 2040 as a timeframe and factors such as one drought event every five years, lasting for 12 months, among other variables. Such drought would lead the company to its primary potential impact – reduction of or disruption in production capacity, considering the current technology.. The water availability of plants may be reduced in the short and long term, resulting from an increase in temperature and consequent evaporation of bodies of water. The potential impacts: (i) Operational/structural impacts: Reducing water availability causing unscheduled outages impacting industrial processes and electricity generation, especially considering Brazilian energy matrix characteristics (major contribution of hydro-electric energy). (ii) Financial impacts: water scarcity increasing the price of water will generate financial impact for the plant.

(3.1.1.11) Primary financial effect of the risk

Select from:

☑ Disruption in production capacity

(3.1.1.12) Time horizon over which the risk is anticipated to have a substantive effect on the organization

Select all that apply

☑ Medium-term

(3.1.1.13) Likelihood of the risk having an effect within the anticipated time horizon

Select from:

☑ Virtually certain

(3.1.1.14) Magnitude

Select from:

☑ Medium-high

(3.1.1.16) Anticipated effect of the risk on the financial position, financial performance and cash flows of the organization in the selected future time horizons

The potential financial impact is associated with the loss of revenue due to the partial reduction in production as a consequence of the reduction in water withdrawal, due to severe drought scenarios that are simulated, based on the results of the climate risk study. This potential financial impact was calculated based on potential financial losses considering the reduction in production at the industrial unit. The value was limited to US 10 MM due to the significant impact criterion for physical risk, since any loss (for physical risk) above US 10 MM is considered as the most relevant impact in the company's risk classification matrix.

(3.1.1.17) Are you able to quantify the financial effect of the risk?

Select from:

☑ Yes

(3.1.1.21) Anticipated financial effect figure in the medium-term – minimum (currency)

0

(3.1.1.22) Anticipated financial effect figure in the medium-term – maximum (currency)

10000000

(3.1.1.25) Explanation of financial effect figure

*Based on a series of 9 potential climate scenarios and using business guidelines for economic evaluation of ecosystem services at FGV-São Paulo, the value represents the potential impact of one of the scenarios. In this scenario, we considered a 30% reduction in the water permit withdrawal for 12 months in a 5-year period that could lead to a calculated reduction in production directly affecting the regional plant's load (reflecting on the plant's EBITDA). This potential financial impact was calculated based on potential financial losses considering the reduction in production at the industrial unit. Potential impact cost quantity of product produced during 12 months * 30% * loss of profit *Production at the industrial unit Q4, Rio de Janeiro, Brazil **30% because we consider 30% reduction in the water permit withdrawal The value was limited to US10 MM due to the criterion of significant impact for physical risk, since any loss (for physical risk) above US10 MM is considered as the most relevant impact in the risk classification matrix.*

(3.1.1.26) Primary response to risk

Infrastructure, technology and spending

☑ Increase investment in water, sanitation and hygiene [WASH]

(3.1.1.27) Cost of response to risk

3301886.79

(3.1.1.28) Explanation of cost calculation

*The cost represents the difference between purchasing freshwater and purchasing reuse water at a price like Aquapolo (ABC reuse project - around 6.74 BRL/m3), to supply 100% of the region's operations (values refer to the year of 2020). Formula: Cost of Response to Risk B*D - A*C A Annual amount of water consumed by 3 industrial units surface water withdrawal (m3) B Annual amount of water consumed by 3 industrial units' withdrawal from third-party reuse water (m3) C Cost of fresh water (BRL/m3) D Cost of reuse water (BRL/m3)*

(3.1.1.29) Description of response

The Climate Change Adaptation Plan indicated droughts as the main potential risk to the company's operations. One of the main actions to mitigate the risk of water scarcity is the identification and implementation of a new sustainable source of water withdrawal, replacing the current water withdrawal in a hydrographic basin with high risk. Braskem has studied seawater desalination and sewage reuse options for this region, and is in the final stages of this project, defining the best solution for approval in 2023 and planning to start implementing this project next year, 2024. This will reduce the risk as well as bring the water security index in that region to 100%.

Water

(3.1.1.1) Risk identifier

Select from:

☑ Risk5

(3.1.1.3) Risk types and primary environmental risk driver

Chronic physical

☑ Water stress

(3.1.1.4) Value chain stage where the risk occurs

Select from:

☑ Direct operations

(3.1.1.6) Country/area where the risk occurs

Select all that apply

☑ Brazil

(3.1.1.7) River basin where the risk occurs

Select all that apply

☑ Other, please specify :Piracicaba, Capivari, Jundiaí (Sao Paulo)

(3.1.1.9) Organization-specific description of risk

The increase in average global temperatures disturbs the balance of climatic systems, intensifying phenomena that directly impact Braskem's activities, such as water availability. In Brazil, INPE indicates that by 2040, for Brazilian regions where Braskem operates, the average precipitation in the summer could be reduced to 2.3 mm/day in the RCP 4.5 scenario and 3.7 mm/day in the RCP 8.5 scenario. A primary risk driver was identified through Braskem Climate Change study, followed by the analysis of specific watershed scenarios, considering 2040 as a timeframe and factors such as one drought event every five years, lasting for 12 months, among other variables. Such drought would lead the company to its primary potential impact – reduction of or disruption in production capacity, considering the current technology.. The water availability of plants may be reduced in the short and long term, resulting from an increase in temperature and consequent evaporation of bodies of water. The potential impacts: (i) Operational/structural impacts: Reducing water availability causing unscheduled outages impacting industrial processes and electricity generation, especially considering Brazilian energy matrix characteristics (major contribution of hydro-electric energy). (ii) Financial impacts: water scarcity increasing the price of water will generate financial impact for the plant

(3.1.1.11) Primary financial effect of the risk

Select from:

☑ Disruption in production capacity

(3.1.1.12) Time horizon over which the risk is anticipated to have a substantive effect on the organization

Select all that apply

☑ Medium-term

(3.1.1.13) Likelihood of the risk having an effect within the anticipated time horizon

Select from:

☑ Virtually certain

(3.1.1.14) Magnitude

Select from:

☑ Medium-high

(3.1.1.16) Anticipated effect of the risk on the financial position, financial performance and cash flows of the organization in the selected future time horizons

The potential financial impact is associated with the loss of revenue due to the partial reduction in production as a consequence of the reduction in water withdrawal, due to severe drought scenarios that are simulated, based on the results of the climate risk study. This potential financial impact was calculated based on potential financial losses considering the reduction in production at the industrial unit. The value was limited to US 10 MM due to the significant impact criterion for physical risk, since any loss (for physical risk) above US 10 MM is considered as the most relevant impact in the company's risk classification matrix.

(3.1.1.17) Are you able to quantify the financial effect of the risk?

Select from:

☑ Yes

(3.1.1.21) Anticipated financial effect figure in the medium-term – minimum (currency)

0

(3.1.1.22) Anticipated financial effect figure in the medium-term – maximum (currency)

10000000

(3.1.1.25) Explanation of financial effect figure

*Based on a series of 9 potential climate scenarios and using business guidelines for economic evaluation of ecosystem services at FGV-São Paulo, the value represents the potential impact of one of the scenarios. In this scenario, we considered a 30% reduction in the water permit withdrawal for 12 months in a 5-year period that could lead to a calculated reduction in production directly affecting the regional plant's load (reflecting on the plant's EBITDA). This potential financial impact was calculated based on potential financial losses considering the reduction in production at the industrial unit. Potential impact cost quantity of product produced during 12 months * 30% * loss of profit *Production at the industrial unit Q4, Rio de Janeiro, Brazil **30% because we consider 30% reduction in the water permit withdrawal The value was limited to US10 MM due to the criterion of significant impact for physical risk, since any loss (for physical risk) above US10 MM is considered as the most relevant impact in the risk classification matrix.*

(3.1.1.26) Primary response to risk

Infrastructure, technology and spending

☑ Increase investment in water, sanitation and hygiene [WASH]

(3.1.1.27) Cost of response to risk

3301886.79

(3.1.1.28) Explanation of cost calculation

*The cost represents the difference between purchasing freshwater and purchasing reuse water at a price like Aquapolo (ABC reuse project - around 6.74 BRL/m3), to supply 100% of the region's operations (values refer to the year of 2020). Formula: Cost of Response to Risk B*D - A*C A Annual amount of water consumed by 3 industrial units surface water withdrawal (m3) B Annual amount of water consumed by 3 industrial units' withdrawal from third-party reuse water (m3) C Cost of fresh water (BRL/m3) D Cost of reuse water (BRL/m3)*

(3.1.1.29) Description of response

The Climate Change Adaptation Plan indicated droughts as the main potential risk to the company's operations. One of the main actions to mitigate the risk of water scarcity is the identification and implementation of a new sustainable source of water withdrawal, replacing the current water withdrawal in a hydrographic basin with high risk. Braskem has studied seawater desalination and sewage reuse options for this region, and is in the final stages of this project, defining the best solution for approval in 2023 and planning to start implementing this project next year, 2024. This will reduce the risk as well as bring the water security index in that region to 100%.
[Add row]

(3.1.2) Provide the amount and proportion of your financial metrics from the reporting year that are vulnerable to the substantive effects of environmental risks.

Climate change

(3.1.2.1) Financial metric

Select from:
☑ OPEX

(3.1.2.2) Amount of financial metric vulnerable to transition risks for this environmental issue (unit currency as selected in 1.2)

0

(3.1.2.3) % of total financial metric vulnerable to transition risks for this environmental issue

Select from:
☑ Less than 1%

(3.1.2.4) Amount of financial metric vulnerable to physical risks for this environmental issue (unit currency as selected in 1.2)

2400000

(3.1.2.5) % of total financial metric vulnerable to physical risks for this environmental issue

Select from:
☑ Less than 1%

(3.1.2.7) Explanation of financial figures

In this reporting year we were still studying to identify the solution.

Water

(3.1.2.1) Financial metric

Select from:
☑ OPEX

(3.1.2.2) Amount of financial metric vulnerable to transition risks for this environmental issue (unit currency as selected in 1.2)

0

(3.1.2.3) % of total financial metric vulnerable to transition risks for this environmental issue

Select from:
☑ Less than 1%

(3.1.2.4) Amount of financial metric vulnerable to physical risks for this environmental issue (unit currency as selected in 1.2)

0

(3.1.2.5) % of total financial metric vulnerable to physical risks for this environmental issue

Select from:
☑ Less than 1%

(3.1.2.7) Explanation of financial figures

In this reporting year we were structuring/revising our climate change adaptation plan.
[Add row]

(3.2) Within each river basin, how many facilities are exposed to substantive effects of water-related risks, and what percentage of your total number of facilities does this represent?

Row 1

(3.2.1) Country/Area & River basin

Brazil

☑ Other, please specify :Guandu (Rio de Janeiro)

(3.2.2) Value chain stages where facilities at risk have been identified in this river basin

Select all that apply

☑ Direct operations

(3.2.3) Number of facilities within direct operations exposed to water-related risk in this river basin

3

(3.2.4) % of your organization’s total facilities within direct operations exposed to water-related risk in this river basin

Select from:

☑ 1-25%

(3.2.10) % organization’s total global revenue that could be affected

Select from:

☑ 1-10%

(3.2.11) Please explain

According to Trucost, using the tool from WRI Aqueduct, the Guandu Basin presents a medium risk by 2040.Braskem has already identified a new sustainable source of water for the Rio de Janeiro region, and the project is at an advanced stage for approval by senior management. With this project, the region's water security index will be 100%.

Row 2

(3.2.1) Country/Area & River basin

Brazil

☑ Other, please specify :Reconcavo Norte (Bahia)

(3.2.2) Value chain stages where facilities at risk have been identified in this river basin

Select all that apply

☑ Direct operations

(3.2.3) Number of facilities within direct operations exposed to water-related risk in this river basin

5

(3.2.4) % of your organization’s total facilities within direct operations exposed to water-related risk in this river basin

Select from:

☑ 1-25%

(3.2.10) % organization’s total global revenue that could be affected

Select from:

☑ 1-10%

(3.2.11) Please explain

According to Trucost, using the tool from WRI Aqueduct, the Reconcavo Norte Basin in 2040 presents a low-to-medium scarcity risk.

Row 3

(3.2.1) Country/Area & River basin

Brazil

☑ Other, please specify :Piracicaba, Capivari, Jundiaí (SP)

(3.2.2) Value chain stages where facilities at risk have been identified in this river basin

Select all that apply

☑ Direct operations

(3.2.3) Number of facilities within direct operations exposed to water-related risk in this river basin

1

(3.2.4) % of your organization’s total facilities within direct operations exposed to water-related risk in this river basin

Select from:

☑ 1-25%

(3.2.10) % organization’s total global revenue that could be affected

Select from:

☑ 1-10%

(3.2.11) Please explain

According to Trucost, using the tool from WRI Aqueduct, Rios Piracicaba, Capivari and Jundiaí Basin in 2040 presents a low to medium scarcity risk.

Row 4

(3.2.1) Country/Area & River basin

Brazil

☑ Other, please specify **:**Remédios (Alagoas)

(3.2.2) Value chain stages where facilities at risk have been identified in this river basin

Select all that apply

☑ Direct operations

(3.2.3) Number of facilities within direct operations exposed to water-related risk in this river basin

2

(3.2.4) % of your organization's total facilities within direct operations exposed to water-related risk in this river basin

Select from:
☑ 1-25%

(3.2.10) % organization's total global revenue that could be affected

Select from:
☑ 1-10%

(3.2.11) Please explain

According to Trucost, using the tool from WRI Aqueduct, the CELMM Basin in 2040 presents a medium-to-high scarcity risk. Braskem is in the final phase of evaluating/defining new alternatives for water abstraction in this region, there are three options, seawater desalination, sewage reuse, or the combined solution of these options.
[Add row]

(3.3) In the reporting year, was your organization subject to any fines, enforcement orders, and/or other penalties for water-related regulatory violations?

	Water-related regulatory violations	Comment
	Select from: ☑ No	*No water-related regulatory violations*

[Fixed row]

(3.5) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

Select from:
☑ Yes

(3.5.1) Select the carbon pricing regulation(s) which impact your operations.

Select all that apply
☑ EU ETS

(3.5.2) Provide details of each Emissions Trading Scheme (ETS) your organization is regulated by.

EU ETS

(3.5.2.1) % of Scope 1 emissions covered by the ETS

0.1

(3.5.2.2) % of Scope 2 emissions covered by the ETS

0

(3.5.2.3) Period start date

01/01/2023

(3.5.2.4) Period end date

12/31/2023

(3.5.2.5) Allowances allocated

129

(3.5.2.6) Allowances purchased

0

(3.5.2.7) Verified Scope 1 emissions in metric tons CO2e

2841

(3.5.2.8) Verified Scope 2 emissions in metric tons CO2e

0

(3.5.2.9) Details of ownership

Select from:

☑ Facilities we own and operate

(3.5.2.10) Comment

805 Wesseling site, 1114 Schkopau site. Only for Stationary Combustion emissions. Installation Name/ Aircraft Operator Code: Braskem Europe Wesseling/ Polypropylen-Anlage Schkopau
[Fixed row]

(3.5.4) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

It is expected that in the next 3 years Iit will be establish an economic carbon pricing instrument in Brazil. In Mexico, it already exists in a pilot emissions trading system and the Braskem unit is participating. To prepare for a future regulated environment (carbon pricing), Braskem implemented the internal carbon pricing process, with the objective of incentivizing projects that reduce emissions. In this way, internal carbon pricing is being considered in investment decision-making. As a result, some projects that reduce GHG emissions are being approved, supporting the achievement of mitigation goals from 2023 to 2030, in addition to preparing the company for these future regulatory scenarios.

(3.6) Have you identified any environmental opportunities which have had a substantive effect on your organization in the reporting year, or are anticipated to have a substantive effect on your organization in the future?

	Environmental opportunities identified
Climate change	*Select from:* ☑ Yes, we have identified opportunities, and some/all are being realized
Water	*Select from:* ☑ Yes, we have identified opportunities, and some/all are being realized

[Fixed row]

(3.6.1) Provide details of the environmental opportunities identified which have had a substantive effect on your organization in the reporting year, or are anticipated to have a substantive effect on your organization in the future.

Climate change

(3.6.1.1) Opportunity identifier

Select from:

☑ Opp1

(3.6.1.3) Opportunity type and primary environmental opportunity driver

Products and services

☑ Development of new products or services through R&D and innovation

(3.6.1.4) Value chain stage where the opportunity occurs

Select from:

☑ Upstream value chain

(3.6.1.5) Country/area where the opportunity occurs

Select all that apply

☑ Brazil

☑ Thailand

(3.6.1.8) Organization specific description

The demand for products with better circular standards and from renewable sources, opening space for the development of products and markets. Braskem seeks to understand the change in consumer behaviour in this regard to adapt and develop new solutions. Examples of outcomes of this process are the bio-based polymers, which today are produced by the industrial units in Brazil. The Green PE for example is a polymer produced with a bio-based feedstock (from sugarcane ethanol), at the industrial units in southern Brazil, therefore promoting the storage of biogenic carbon that is removed during the bio-based feedstock production (in this case, sugarcane).

(3.6.1.9) Primary financial effect of the opportunity

Select from:

☑ Increased revenues resulting from increased demand for products and services

(3.6.1.10) Time horizon over which the opportunity is anticipated to have a substantive effect on the organization

Select all that apply

☑ Short-term

(3.6.1.11) Likelihood of the opportunity having an effect within the anticipated time horizon

Select from:

☑ Very likely (90–100%)

(3.6.1.12) Magnitude

Select from:

☑ Medium-high

(3.6.1.14) Anticipated effect of the opportunity on the financial position, financial performance and cash flows of the organization in the selected future time horizons

*The potential financial impact was calculated based on the historical revenue growth rate of the Green PE applied to revenue obtained with the sales of this resin in 2018. The financial implications associated with the opportunities indicate that the introduction of green products in the market adds value and increases profitability in a sustainable way. As the world's largest producer of biopolymers, in 2018 we started to supply our I'm green Green Polyethylene for the production of botanical elements such as the trees, shrubs and leaves of the Lego Group. A partnership that reinforces our successful strategy of investing in sustainable and innovative products. The potential financial impact was calculated considering the growth in demand for Green PE and thus, the company increasing its revenue for this product. Potential impact formula: annual revenue from Green PE * sales prospecting (based on historical data)*

(3.6.1.15) Are you able to quantify the financial effects of the opportunity?

Select from:

☑ Yes

(3.6.1.17) Anticipated financial effect figure in the short-term - minimum (currency)

0

(3.6.1.18) Anticipated financial effect figure in the short-term – maximum (currency)

36373584.9

(3.6.1.23) Explanation of financial effect figures

*The potential financial impact was calculated based on the historical revenue growth rate of the Green PE applied to revenue obtained with the sales of this resin in 2018. The financial implications associated with the opportunities indicate that the introduction of green products in the market adds value and increases profitability in a sustainable way. As the world's largest producer of biopolymers, in 2018 we started to supply our I'm green Green Polyethylene for the production of botanical elements such as the trees, shrubs and leaves of the Lego Group. A partnership that reinforces our successful strategy of investing in sustainable and innovative products. The potential financial impact was calculated considering the growth in demand for Green PE and thus, the company increasing its revenue for this product. Potential impact formula: annual revenue from Green PE * sales prospecting (based on historical data*

(3.6.1.24) Cost to realize opportunity

9509433.96

(3.6.1.25) Explanation of cost calculation

The cost of this opportunity refers to: 22% of investments in laboratories and technology and innovation centers and 78% in progress in research in renewables and others.

(3.6.1.26) Strategy to realize opportunity

Situation: The use of bio-based feedstock characterizes a unique opportunity for the reduction of Braskem's products' Carbon Footprint, resulting in greater acceptance in national markets and greater access to international regulated markets. Task: Braskem's goal in the development of green products is to take advantage of the opportunities identified and of the growing demand for these products in the market. The first Green PE plant started its operations during the second semester of 2010. Among its sustainable products portfolio, Braskem has improved the placement of Green Polyethylene, closing deals with important clients. Action: Braskem announced in 2021 the expansion of current green ethylene capacity at the Triunfo petrochemical complex in Rio Grande do Sul (Brazil) from 200 kt/year to 260 kt/year, with an estimated investment of USD87 million, which is expected to start operating in the second half of 2023. We also continue to study the feasibility of expanding green ethylene production to Thailand, in partnership with SCG Chemicals – during 2023, we expect to reach project milestones such as investment approval. Results: In 2022, we formalized our partnership with Lummus for licensing technology to produce green ethylene. The partnership will accelerate the use of bioethanol for the production of chemicals and plastics.

Water

(3.6.1.1) Opportunity identifier

Select from:

☑ Opp2

(3.6.1.3) Opportunity type and primary environmental opportunity driver

Products and services

☑ Increased sales of existing products and services

(3.6.1.4) Value chain stage where the opportunity occurs

Select from:

☑ Downstream value chain

(3.6.1.5) Country/area where the opportunity occurs

Select all that apply

☑ Brazil

(3.6.1.6) River basin where the opportunity occurs

Select all that apply

☑ Other, please specify :Reconcavo Norte (Bahia)

(3.6.1.8) Organization specific description

The Brazilian semi-arid region occupies approximately 12% of the national territory and is home to approximately 12% of the Brazilian population. In this region, rainfall is scarce, which considerably lowers the quality of life of families. One of the solutions implemented to try to combat the problem is masonry cisterns, with more than a million having been installed since 1999. But the poor conservation of the cisterns means that 30 to 40% of the more than 1.3 million masonry cisterns installed (known as concrete slab cisterns) show malfunctions and are totally or partially unused. Poor maintenance is a factor, but not the main one. The main cause of the breakdowns is the construction system of the cistern itself, which is handmade and of low complexity (since it is a solution with a social bias). With the cycles of filling and emptying of the cistern, it "shrinks" when empty due to soil pressure. Since the structure is weak, cracks and even greater damages are formed. Braskem has developed a "Cistern Liner" which is a solution to the problem, as it prevents leakage and waste of the stored water

(3.6.1.9) Primary financial effect of the opportunity

Select from:

☑ Increased revenues through access to new and emerging markets

(3.6.1.10) Time horizon over which the opportunity is anticipated to have a substantive effect on the organization

Select all that apply

☑ Short-term

(3.6.1.11) Likelihood of the opportunity having an effect within the anticipated time horizon

Select from:

☑ More likely than not (50–100%)

(3.6.1.12) Magnitude

Select from:

☑ High

(3.6.1.14) Anticipated effect of the opportunity on the financial position, financial performance and cash flows of the organization in the selected future time horizons

The impact will be positive on the company's revenue due to the development of a new product, along with the value chain, to meet the needs of regions with potential water stress in Brazil.

(3.6.1.15) Are you able to quantify the financial effects of the opportunity?

Select from:

☑ Yes

(3.6.1.17) Anticipated financial effect figure in the short-term - minimum (currency)

60000000

(3.6.1.18) Anticipated financial effect figure in the short-term – maximum (currency)

70000000

(3.6.1.23) Explanation of financial effect figures

More than 1.3 million cisterns built of concrete installed in Brazil, 30% out of use with leaks and cracks. Potential financial impact Number of units (potential sales) X unit profit Braskem in partnership with Pacifil, Cipatex, IAV (Instituto Água Viva) and Norsan/Geoscom developed a flexible liner to be installed as a cover inside concrete cysterns preveting water leakage and the permeation of contaminants from the ground (e.g animal and human excreta).

(3.6.1.24) Cost to realize opportunity

0

(3.6.1.25) Explanation of cost calculation

There is no additional cost beyond those already planned in the routine

(3.6.1.26) Strategy to realize opportunity

One of the solutions implemented to try to combat the problem is masonry cisterns, with more than a million having been installed since 1999. But the poor conservation of the cisterns means that 30 to 40% of the more than 1.3 million masonry cisterns installed (known as concrete slab cisterns) show malfunctions and are totally or partially unused. Poor maintenance is a factor, but not the main one. The main cause of the breakdowns is the construction system of the cistern itself, which is handmade and of low complexity (since it is a solution with a social bias). With the cycles of filling and emptying of the cistern, it "shrinks" when empty due to soil pressure. Since the structure is weak, cracks and even greater damage are formed. Braskem has developed a "Cistern Liner" which is a solution to the problem, as it prevents leakage and waste of the stored water. The strategy to develop and strengthen this opportunity is to continue working in partnership with the clients involved, in this and other potential products, as well as ensuring the supply of the necessary raw materials and support in product dissemination strategies.
[Add row]

(3.6.2) Provide the amount and proportion of your financial metrics in the reporting year that are aligned with the substantive effects of environmental opportunities.

Climate change

(3.6.2.1) Financial metric

Select from:
☑ CAPEX

(3.6.2.2) Amount of financial metric aligned with opportunities for this environmental issue (unit currency as selected in 1.2)

17000000

(3.6.2.3) % of total financial metric aligned with opportunities for this environmental issue

Select from:
☑ 1-10%

(3.6.2.4) Explanation of financial figures

Braskem's expected investment for 2024 is US440 million, which US17 is related to Climate Change Long-Term Objective investments.

Water

(3.6.2.1) Financial metric

Select from:

☑ CAPEX

(3.6.2.2) Amount of financial metric aligned with opportunities for this environmental issue (unit currency as selected in 1.2)

23000000

(3.6.2.3) % of total financial metric aligned with opportunities for this environmental issue

Select from:

☑ 1-10%

(3.6.2.4) Explanation of financial figures

Braskem's expected investment for 2024 is US440 million, which US10 million is related to Operational Eco-efficiency and US13 million to Sustainable innovation Long-Term Objective investments.
[Add row]

C4. Governance

(4.1) Does your organization have a board of directors or an equivalent governing body?

(4.1.1) Board of directors or equivalent governing body

Select from:

☑ Yes

(4.1.2) Frequency with which the board or equivalent meets

Select from:

☑ More frequently than quarterly

(4.1.3) Types of directors your board or equivalent is comprised of

Select all that apply

☑ Non-executive directors or equivalent

☑ Independent non-executive directors or equivalent

(4.1.4) Board diversity and inclusion policy

Select from:

☑ Yes, and it is publicly available

(4.1.5) Briefly describe what the policy covers

The Global policy establishes the standards and guides Braskem in its strategies related to Diversity, Equity and Inclusion. It contains our commitments and corporate goals and solidifies Respect as a non-negotiable value in all processes and throughout our chain, whether among customers, employees or partners. In addition, the document also covers our ambition and main procedures at a global level. In short, it consolidates our collective commitment to ensuring a respectful, fair, safe and welcoming work environment.
[Fixed row]

(4.1.1) Is there board-level oversight of environmental issues within your organization?

	Board-level oversight of this environmental issue
Climate change	*Select from:* ☑ Yes
Water	*Select from:* ☑ Yes
Biodiversity	*Select from:* ☑ Yes

[Fixed row]

(4.1.2) Identify the positions (do not include any names) of the individuals or committees on the board with accountability for environmental issues and provide details of the board's oversight of environmental issues.

Climate change

(4.1.2.1) Positions of individuals or committees with accountability for this environmental issue

Select all that apply

☑ Board-level committee

☑ President

☑ Other, please specify :Vice-president

(4.1.2.2) Positions' accountability for this environmental issue is outlined in policies applicable to the board

Select from:

☑ Yes

(4.1.2.3) Policies which outline the positions' accountability for this environmental issue

Select all that apply

☑ Other policy applicable to the board, please specify :GLOBAL SUSTAINABLE DEVELOPMENT GLOBAL POLICY

(4.1.2.4) Frequency with which this environmental issue is a scheduled agenda item

Select from:

☑ Scheduled agenda item in every board meeting (standing agenda item)

(4.1.2.5) Governance mechanisms into which this environmental issue is integrated

Select all that apply

☑ Reviewing and guiding annual budgets

☑ Overseeing the setting of corporate targets

☑ Monitoring progress towards corporate targets

☑ Reviewing and guiding innovation/R&D priorities

☑ Approving and/or overseeing employee incentives

☑ Overseeing and guiding major capital expenditures

☑ Monitoring the implementation of a climate transition plan

☑ Overseeing and guiding the development of a business strategy

☑ Overseeing and guiding acquisitions, mergers, and divestitures

☑ Reviewing and guiding the assessment process for dependencies, impacts, risks, and opportunities

(4.1.2.7) Please explain

Braskem's Sustainable Development Global Policy defines as assignment and responsibility that each Braskem Team Member must act as a transformation agent for sustainable development. Another objective of this Policy is to guide strategic, tactical and operational planning, as well as the respective budgeting processes, conducted company-wide. The implementation of this Policy should be done through an implementation of Strategy that is integrated into Braskem's business and conducted considering all the relationships, aimed at broadening the scale of the corporate contribution to Sustainable Development. Furthermore, the Policy determines the responsibilities of Braskem's Business Leader (CEO), for example, to lead the appropriate deployment of the Policy in the respective business, guaranteeing the availability of resources for the concrete evolution of economic, social and environmental performance, in order to reach the long-term objectives established periodically, and to review and report on the progress of implementation of this Policy to the Braskem Board of Directors on an annual basis. Also, the Policy determines the responsibilities of Braskem's Vice Presidents, as leading the appropriate deployment of the Policy and ensuring proper relationships with *stakeholders in the respective business, among others. Furthermore, the Strategy, Communication and ESG Committee (CECESG) is a permanent body to support Braskem's Board of Directors, and constantly evaluates the definitions for Braskem's strategic direction in its different business lines, ensuring compliance with the sustainable development guidelines adopted by the Company, the basis for the Company's business plan. Additionally, among its competencies, the CECESG accompanies the corporate policies in effect regarding disclosure of information, sustainable development and Health, Safety, Environment, Quality and Productivity, in addition to monitoring and evaluating Braskem's initiatives regarding corporate sustainability and ESG standards. As it's duties, the CECESG shall follow up and assess Braskem's initiatives regarding corporate sustainability and ESG criteria, among other demands specified in its internal regulations (available on the company's investor relations website).*

Water

(4.1.2.1) Positions of individuals or committees with accountability for this environmental issue

Select all that apply

☑ General Counsel

(4.1.2.2) Positions' accountability for this environmental issue is outlined in policies applicable to the board

Select from:

☑ Yes

(4.1.2.3) Policies which outline the positions' accountability for this environmental issue

Select all that apply

☑ Other policy applicable to the board, please specify :Sustainable Development Policy

(4.1.2.4) Frequency with which this environmental issue is a scheduled agenda item

Select from:

☑ Scheduled agenda item in some board meetings – at least annually

(4.1.2.5) Governance mechanisms into which this environmental issue is integrated

Select all that apply

☑ Reviewing and guiding annual budgets

☑ Overseeing and guiding scenario analysis

☑ Monitoring the implementation of the business strategy

☑ Monitoring the implementation of a climate transition plan

☑ Overseeing the setting of corporate targets

☑ Monitoring progress towards corporate targets

☑ Approving corporate policies and/or commitments

☑ Reviewing and guiding the assessment process for dependencies, impacts, risks, and opportunities

☑ Overseeing and guiding the development of a business strategy

☑ Monitoring supplier compliance with organizational requirements

☑ Overseeing and guiding the development of a climate transition plan

(4.1.2.7) Please explain

Strategy, Communication, and ESG Committee (CECESG): composed of three members of the BoD, one of which is independent, it is responsible for supporting the Board of Directors in the evaluation of the strategic direction, which shall observe Braskem's sustainable development guidelines, and for monitoring and evaluating the initiatives and goals assumed by the Company with respect to its corporate sustainability and the ESG criteria. Its duties include, without limitation, to monitor ESG aspects existing in the strategy and in the corporate policies relating to the disclosure of information, sustainable development, and health, safety, environment, quality, and productivity. The water theme is included in the monitored ESG aspects. From the Macro Goal Operational Eco- Efficiency, water risk was inserted into the Enterprise Risk Management (ERM) as one of the critical criteria for action plans, company strategies and investments. A water efficiency indicator supports the evaluation of plants exposed to high water risks leading to implementation and optimization of water use in the plants; and to analyze investments in reuse/desalination technologies to mitigate risks. All enforced by Braskem HSE and Sustainable Development policies that lead to Corporate Responsibility and Innovation projects (Braskem Labs). Performance targets direct investments in water efficiency and are publicly disclosed in the company’s annual report. All the information is presented to the board through a specific achievement indicator of the Macro Objectives, and actions are undertaken by the company to achieve this result. The Strategy, Communication, and ESG Committee (CECESG), reports periodically on the status of the progress of water stewardship to the board of directors; this being the main governance mechanism that allows constant oversight of water issues. The evolution of the action plan of the macro objective and the water security index, which is the main indicator, are monitored. Our goal for 2030 is that 100% of the water withdrawn for use in our operations comes from safe sources. That is, that industrial units have guaranteed sustainable access to adequate amounts of water of acceptable quality, using the resource in a socially fair way that is environmentally sustainable and economically beneficial. The achievement of the sustainable macro objectives disclosed by the Company (within the projected costs and expected timelines) is also subject to uncertainties and risks, including but not limited to: the advancement, availability, development, and financial feasibility of the technology required to achieve these objectives

Biodiversity

(4.1.2.1) Positions of individuals or committees with accountability for this environmental issue

Select all that apply

☑ Other, please specify **:**NA

(4.1.2.2) Positions’ accountability for this environmental issue is outlined in policies applicable to the board

Select from:

☑ No

(4.1.2.5) Governance mechanisms into which this environmental issue is integrated

Select all that apply

☑ Other, please specify :NA

(4.1.2.7) Please explain

NA
[Fixed row]

(4.2) Does your organization’s board have competency on environmental issues?

Climate change

(4.2.1) Board-level competency on this environmental issue

Select from:

☑ Yes

(4.2.2) Mechanisms to maintain an environmentally competent board

Select all that apply

☑ Integrating knowledge of environmental issues into board nominating process

☑ Having at least one board member with expertise on this environmental issue

☑ Consulting regularly with an internal, permanent, subject-expert working group

☑ Engaging regularly with external stakeholders and experts on environmental issues

☑ Regular training for directors on environmental issues, industry best practice, and standards (e.g., TCFD, SBTi)

☑ Other, please specify :Braskem’s Corporate Governance model have the Strategy, Communication and ESG Committee ("CECESG"), a Board of Directors Support Committee, which constantly evaluates the definitions for Braskem’s strategic direction in its different business lines,

(4.2.3) Environmental expertise of the board member

Experience

☑ Executive-level experience in a role focused on environmental issues

☑ Experience in an academic role focused on environmental issues

☑ Experience in the environmental department of a government (national or local)

☑ Active member of an environmental committee or organization

Water

(4.2.1) Board-level competency on this environmental issue

Select from:

☑ Yes

(4.2.2) Mechanisms to maintain an environmentally competent board

Select all that apply

☑ Consulting regularly with an internal, permanent, subject-expert working group

☑ Engaging regularly with external stakeholders and experts on environmental issues

☑ Integrating knowledge of environmental issues into board nominating process

☑ Regular training for directors on environmental issues, industry best practice, and standards (e.g., TCFD, SBTi)

☑ Having at least one board member with expertise on this environmental issue

(4.2.3) Environmental expertise of the board member

Experience

☑ Experience in an academic role focused on environmental issues

☑ Active member of an environmental committee or organization

Other

☑ Other, please specify :The criteria include: participation as a member in ESG committees; participation in academic activities in areas related to water or environmental solutions.

[Fixed row]

(4.3) Is there management-level responsibility for environmental issues within your organization?

	Management-level responsibility for this environmental issue
Climate change	*Select from:* ☑ Yes
Water	*Select from:* ☑ Yes
Biodiversity	*Select from:* ☑ Yes

[Fixed row]

(4.3.1) Provide the highest senior management-level positions or committees with responsibility for environmental issues (do not include the names of individuals).

Climate change

(4.3.1.1) Position of individual or committee with responsibility

Executive level

☑ Chief Executive Officer (CEO)

(4.3.1.2) Environmental responsibilities of this position

Dependencies, impacts, risks and opportunities

☑ Assessing environmental dependencies, impacts, risks, and opportunities

☑ Managing environmental dependencies, impacts, risks, and opportunities

Policies, commitments, and targets

☑ Setting corporate environmental targets

Strategy and financial planning

☑ Implementing the business strategy related to environmental issues

☑ Managing priorities related to innovation/low-environmental impact products or services (including R&D)

(4.3.1.4) Reporting line

Select from:

☑ Reports to the board directly

(4.3.1.5) Frequency of reporting to the board on environmental issues

Select from:

☑ More frequently than quarterly

(4.3.1.6) Please explain

Our Board of Directors (BoD) is the highest governance body, and its powers include to resolve on the company's Business Plan and on the objectives related to compliance and the environmental, social, and governance aspects (ESG), including Climate Change issues. Since 2021, the BoD has periodically evaluated the trends and evolution of the practices adopted by Braskem. During 2022, 25 meetings in all were held, including ordinary and extraordinary meetings, the main topics discussed being the monitoring of risk assessment, the discussion, approval and launch of investments and projects in line with the 2030 and 2050 sustainability commitments.

Water

(4.3.1.1) Position of individual or committee with responsibility

Executive level

☑ Chief Operating Officer (COO)

(4.3.1.2) Environmental responsibilities of this position

Dependencies, impacts, risks and opportunities

☑ Assessing environmental dependencies, impacts, risks, and opportunities

☑ Assessing future trends in environmental dependencies, impacts, risks, and opportunities

☑ Managing environmental dependencies, impacts, risks, and opportunities

Policies, commitments, and targets

☑ Monitoring compliance with corporate environmental policies and/or commitments

☑ Setting corporate environmental policies and/or commitments

☑ Setting corporate environmental targets

Strategy and financial planning

☑ Developing a business strategy which considers environmental issues

☑ Implementing the business strategy related to environmental issues

(4.3.1.4) Reporting line

Select from:

☑ Reports to the Chief Executive Officer (CEO)

(4.3.1.5) Frequency of reporting to the board on environmental issues

Select from:

☑ Quarterly

(4.3.1.6) Please explain

Braskem's COO, who is responsible for achieving the goals approved by the company's board. In the case of water, the sponsor is the Manufacturing & Global Industrial Operations Vice President (COO), the COO reports directly to the President of the company (CEO). His duty is therefore to enforce and guarantee the implementation of all the actions to achieve the operational eco-efficiency macro objectives. Management is carried out through a technical and strategic committee, in which leaders from all the technical areas involved (Directors and Vice Presidents) participate, who assess and define the main short and long-term challenges. The Corporate Environment area reports water issues to the COO. The COO reports water issues to the board, annually, that are the short- and long-term plans and goals, as well as compliance and evolution. The industrial directors responsible for water security action plans, periodically report the progress to the COO.

Biodiversity

(4.3.1.1) Position of individual or committee with responsibility

Executive level

☑ Chief Operating Officer (COO)

(4.3.1.2) Environmental responsibilities of this position

Dependencies, impacts, risks and opportunities

☑ Assessing environmental dependencies, impacts, risks, and opportunities

☑ Assessing future trends in environmental dependencies, impacts, risks, and opportunities

☑ Managing environmental dependencies, impacts, risks, and opportunities

Policies, commitments, and targets

☑ Monitoring compliance with corporate environmental policies and/or commitments

☑ Setting corporate environmental policies and/or commitments

☑ Setting corporate environmental targets

Strategy and financial planning

☑ Developing a business strategy which considers environmental issues

☑ Implementing the business strategy related to environmental issues

(4.3.1.4) Reporting line

Select from:

☑ Reports to the Chief Executive Officer (CEO)

(4.3.1.5) Frequency of reporting to the board on environmental issues

Select from:

☑ Quarterly

(4.3.1.6) Please explain

Braskem's COO, who is responsible for achieving the goals approved by the company's board. In the case of biodiversity, the sponsor is the Manufacturing & Global Industrial Operations Vice President (COO), the COO reports directly to the President of the company (CEO). His duty is therefore to enforce and guarantee the implementation of all the actions to achieve the operational eco-efficiency macro objectives. Management is carried out through a technical and strategic committee, in which leaders from all the technical areas involved (Directors and Vice Presidents) participate, who assess and define the main short and long-term challenges. The Corporate Environment area reports water issues to the COO. The COO reports water issues to the board, annually, that are the short- and long-term plans and goals, as well as compliance and evolution. The industrial directors responsible for water security action plans, periodically report the progress to the COO.

Climate change

(4.3.1.1) Position of individual or committee with responsibility

Executive level

☑ Chief Operating Officer (COO)

(4.3.1.2) Environmental responsibilities of this position

Policies, commitments, and targets

☑ Measuring progress towards environmental corporate targets

Strategy and financial planning

☑ Implementing a climate transition plan

☑ Managing annual budgets related to environmental issues

☑ Managing major capital and/or operational expenditures relating to environmental issues

(4.3.1.4) Reporting line

Select from:

☑ Reports to the Chief Executive Officer (CEO)

(4.3.1.5) Frequency of reporting to the board on environmental issues

Select from:

☑ More frequently than quarterly

(4.3.1.6) Please explain

Braskem's Vice President of Global Industrial Manufacturing and Operations (COO), owner of the industrial decarbonization strategy, reports directly to Braskem's CEO. Mitigation measures are monitored by the COO on a frequent basis and part of his performance is evaluated considering the decarbonization plan implementation. Operational risks related to climate issues are also discussed, which represents challenges to adapt to climate change and mitigate GHG emissions in the industrial facilities, including aspects such as improving energy efficiency and the use of renewable energy sources.

Climate change

(4.3.1.1) Position of individual or committee with responsibility

Other

☑ Other, please specify **:**Innovation, Technology and Sustainable Development Vice-President

(4.3.1.2) Environmental responsibilities of this position

Strategy and financial planning

☑ Developing a climate transition plan

☑ Implementing a climate transition plan

☑ Implementing the business strategy related to environmental issues

☑ Managing acquisitions, mergers, and divestitures related to environmental issues

☑ Managing priorities related to innovation/low-environmental impact products or services (including R&D)

(4.3.1.4) Reporting line

Select from:

☑ Reports to the Chief Executive Officer (CEO)

(4.3.1.5) Frequency of reporting to the board on environmental issues

Select from:
☑ More frequently than quarterly

(4.3.1.6) Please explain

Braskem's Vice President (VP) of Innovation, Technology and Sustainable Development, owner of the climate change strategy, reports directly to Braskem's CEO. The Climate Change transition plan is approved and monitored by this VP on a frequent basis and part of his performance is evaluated considering the transition plan implementation.
[Add row]

(4.5) Do you provide monetary incentives for the management of environmental issues, including the attainment of targets?

Climate change

(4.5.1) Provision of monetary incentives related to this environmental issue

Select from:
☑ Yes

(4.5.2) % of total C-suite and board-level monetary incentives linked to the management of this environmental issue

9

(4.5.3) Please explain

All directors involved in business risks (which contain environmental risks) have risk reduction targets associated with their Action Plans. It is important to highlight that this value is above 9%, being this percentage the minimum required within the company.

Water

(4.5.1) Provision of monetary incentives related to this environmental issue

Select from:

☑ Yes

(4.5.2) % of total C-suite and board-level monetary incentives linked to the management of this environmental issue

9

(4.5.3) Please explain

All directors involved in business risks (which contain environmental risks) have risk reduction targets associated with their Action Plans. It is important to highlight that this value is above 9%, being this percentage the minimum required within the company.
[Fixed row]

(4.5.1) Provide further details on the monetary incentives provided for the management of environmental issues (do not include the names of individuals).

Climate change

(4.5.1.1) Position entitled to monetary incentive

Board or executive level
☑ Chief Executive Officer (CEO)

(4.5.1.2) Incentives

Select all that apply
☑ Bonus – set figure

(4.5.1.3) Performance metrics

Targets
☑ Progress towards environmental targets

Strategy and financial planning

☑ Achievement of climate transition plan

Emission reduction

☑ Implementation of an emissions reduction initiative

☑ Reduction in absolute emissions

(4.5.1.4) Incentive plan the incentives are linked to

Select from:

☑ Both Short-Term and Long-Term Incentive Plan, or equivalent

(4.5.1.5) Further details of incentives

Braskem has an annual performance evaluation process that is based on an Action Program (PA) with corporate and individual targets and behavioural competencies, aligned with the company's culture. All members of the company – including the business leader – have a year base PA in place and performance in the PA (score is from 0-100) defines the variable remuneration (profit sharing) according to a pre-defined maximum bonus value. Since the establishment of Braskems emissions reduction target of 15% by 2030, a corporate and shared goal was put in place to map and implement decarbonization levers throughout the year that contribute to a predetermined amount of reduction per year in GHG emissions (scopes 1 and 2). This is a target that was part of the CEOs PA in 2023. The achievement of the sustainable macro objectives disclosed by the Company (within the projected costs and expected timelines) is also subject to uncertainties and risks, including but not limited to: the advancement, availability, development, and financial feasibility of the technology required to achieve these objectives

(4.5.1.6) How the position's incentives contribute to the achievement of your environmental commitments and/or climate transition plan

Reward is directly linked to Braskems 2030 and 2050 emission reduction and net-zero targets since the target is to reduce a predetermined amount of emissions per year at Braskems global operations

Water

(4.5.1.1) Position entitled to monetary incentive

Board or executive level

☑ Chief Operating Officer (COO)

(4.5.1.2) Incentives

Select all that apply

☑ Bonus - % of salary

(4.5.1.3) Performance metrics

Targets

☑ Progress towards environmental targets

Strategy and financial planning

☑ Achievement of climate transition plan

(4.5.1.4) Incentive plan the incentives are linked to

Select from:

☑ Both Short-Term and Long-Term Incentive Plan, or equivalent

(4.5.1.5) Further details of incentives

The goals are evaluated through an indicator related to the achievement of the action plan. The assessment of compliance following the results: 0% – not achieved, 50% – partial achievement, 100% – total achievement. It is recommended that each target value be at least 5% of the variable remuneration. Thus, it reaches the goal: 5% is obtained; partially reached: 2.5%; did not reach: 0. One of the examples are the actions in Rio de Janeiro (Brazil), which has a high water risk. They are in the final stages of deciding on new sources of water withdrawal.

(4.5.1.6) How the position's incentives contribute to the achievement of your environmental commitments and/or climate transition plan

The water security indicator has a target of reaching 100% by the year 2030. The actions are concentrated in the northeast and southeast regions of Brazil to implement new sources of water capture, reducing the water risk and consequently increasing the company's water security index. In other regions and other countries where the company operates, the water security index is already satisfactory. The indicator used is risk reduction. The goals are evaluated through an indicator related to the achievement of the action plan. The indicator was chosen because Braskem is a water-intensive industry and severe drought scenarios due to water scarcity can stop operations and generate conflicts with society. The assessment of compliance following the results: 0% – not achieved, 50% – partial *achievement, 100% – total achievement. It is recommended that each target value be at least 5% of the variable remuneration. Thus, it reaches the goal: 5% is obtained; partially reached: 2.5%; did not reach: 0. The achievement of the sustainable macro objectives disclosed by the Company (within the projected costs and expected timelines) is also subject to uncertainties and risks, including but not limited to: the advancement, availability, development, and financial feasibility of the technology required to achieve these objectives*

Climate change

(4.5.1.1) Position entitled to monetary incentive

Board or executive level

☑ Other C-Suite Officer, please specify **:**Industrial Operations Vice President)

(4.5.1.2) Incentives

Select all that apply

☑ Bonus – set figure

(4.5.1.3) Performance metrics

Targets

☑ Progress towards environmental targets

Emission reduction

☑ Implementation of an emissions reduction initiative

☑ Reduction in absolute emissions

(4.5.1.4) Incentive plan the incentives are linked to

Select from:

☑ Both Short-Term and Long-Term Incentive Plan, or equivalent

(4.5.1.5) Further details of incentives

Braskem has an annual performance evaluation process that is based on an Action Program (PA) with corporate and individual targets and behavioural competencies, aligned with the company's culture. All members of the company – including the business leaders – have a year base PA in place and performance in the PA (score is from 0-100) defines the variable remuneration (profit sharing) based on a pre-defined maximum value. Since the establishment of Braskems emissions reduction target of 15% by 2030, a corporate and shared goal was put in place to map and implement decarbonization levers through

(4.5.1.6) How the position's incentives contribute to the achievement of your environmental commitments and/or climate transition plan

Reward is directly linked to Braskems 2030 and 2050 emission reduction and net-zero targets, since the target is to reduce a predetermined amount of emissions per year at Braskems global operations

Climate change

(4.5.1.1) Position entitled to monetary incentive

Board or executive level

☑ Other C-Suite Officer, please specify **:**Europe/Asia Vice President

(4.5.1.2) Incentives

Select all that apply

☑ Bonus – set figure

(4.5.1.3) Performance metrics

Targets

☑ Progress towards environmental targets

(4.5.1.4) Incentive plan the incentives are linked to

Select from:

☑ Both Short-Term and Long-Term Incentive Plan, or equivalent

(4.5.1.5) Further details of incentives

Braskem has an annual performance evaluation process that is based on an Action Program (PA) with corporate and individual targets and behavioural competencies, aligned with the company's culture. All members of the company – including the business leaders – have a year base PA in place and performance in the PA (score is from 0-100) defines the variable remuneration (profit sharing) based on a pre-defined maximum value. In 2022, the Europe/Asia VP had a target in its PA to increase the production capacity of biopolymers made from bio-based feedstock that serve as a pool where carbon from biogenic removal processes on land can be transferred to.

(4.5.1.6) How the position's incentives contribute to the achievement of your environmental commitments and/or climate transition plan

Reward is directly linked to Braskems 2050 net-zero targets, since the target is related to our removal medium- and long-term strategies.

Climate change

(4.5.1.1) Position entitled to monetary incentive

Senior-mid management

☑ Energy manager

(4.5.1.2) Incentives

Select all that apply

☑ Bonus – set figure

(4.5.1.3) Performance metrics

Targets

☑ Progress towards environmental targets

Strategy and financial planning

☑ Other strategy and financial planning-related metrics, please specify :Company performance against a climate-related sustainability index (e.g., DJSI, CDP Climate Change score etc.

Emission reduction

☑ Implementation of an emissions reduction initiative

☑ Reduction in absolute emissions

(4.5.1.4) Incentive plan the incentives are linked to

Select from:

☑ Both Short-Term and Long-Term Incentive Plan, or equivalent

(4.5.1.5) Further details of incentives

: Braskem has an annual performance evaluation process that is based on an Action Program (PA) with corporate and individual targets and behavioural competencies, aligned with the company's culture. All members of the company – including the business leaders – have a year base PA in place and performance in the PA (score is from 0-100) defines the variable remuneration (profit sharing) based on a pre-defined maximum value. Since the establishment of Braskems emissions reduction target of 15% by 2030, a corporate and shared goal was put in place to map and implement decarbonization levers throughout the year that contribute to a predetermined amount of reduction per year in GHG emissions (scopes 1 and 2). This is a target that was part of the Sustainability and Energy directors PA in 2022. Also, the sustainability director has a target to strengthening Braskems reputation through improvements in the Brazil B3 ISE, Global DJSI Yearbook, Ecovadis index and others.

(4.5.1.6) How the position's incentives contribute to the achievement of your environmental commitments and/or climate transition plan

Reward is directly linked to Braskems 2030 and 2050 emission reduction and net-zero targets, since the target is to reduce a predetermined amount of emissions per year at Braskems global operations.

Climate change

(4.5.1.1) Position entitled to monetary incentive

Senior-mid management

☑ Environment/Sustainability manager

(4.5.1.2) Incentives

Select all that apply

☑ Bonus – set figure

(4.5.1.3) Performance metrics

Targets

☑ Progress towards environmental targets

☑ Other targets-related metrics, please specify **:**Company performance against a climate-related sustainability index (e.g., DJSI, CDP Climate Change score etc.

Emission reduction

☑ Implementation of an emissions reduction initiative

☑ Reduction in absolute emissions

(4.5.1.4) Incentive plan the incentives are linked to

Select from:

☑ Both Short-Term and Long-Term Incentive Plan, or equivalent

(4.5.1.5) Further details of incentives

Braskem has an annual performance evaluation process that is based on an Action Program (PA) with corporate and individual targets and behavioural competencies, aligned with the company's culture. All members of the company – including the business leaders – have a year base PA in place and performance in the PA (score is from 0-100) defines the variable remuneration (profit sharing) based on a pre-defined maximum value. Since the establishment of Braskems emissions reduction target of 15% by 2030, a corporate and shared goal was put in place to map and implement decarbonization levers throughout the year that contribute to a predetermined amount of reduction per year in GHG emissions (scopes 1 and 2). This is a target that was part of the Sustainability and Energy managers PA in 2022. Also, the sustainability manager has a target to strengthening Braskems reputation through improvements in the Brazil B3 ISE, Global DJSI Yearbook, Ecovadis index and others

(4.5.1.6) How the position's incentives contribute to the achievement of your environmental commitments and/or climate transition plan

: Reward is directly linked to Braskems 2030 and 2050 emission reduction and net-zero targets, since the target is to reduce a predetermined amount of emissions per year at Braskems global operations

[Add row]

(4.6) Does your organization have an environmental policy that addresses environmental issues?

	Does your organization have any environmental policies?
	Select from: ☑ Yes

[Fixed row]

(4.6.1) Provide details of your environmental policies.

Row 1

(4.6.1.1) Environmental issues covered

Select all that apply

☑ Climate change

☑ Water

(4.6.1.2) Level of coverage

Select from:

☑ Organization-wide

(4.6.1.3) Value chain stages covered

Select all that apply

☑ Direct operations

☑ Upstream value chain

☑ Downstream value chain

(4.6.1.4) Explain the coverage

The Sustainable Development Policy applies to all investments, operations, products, services, acquisitions, joint ventures and divestments, in all countries where Braskem operates. Its principles also guide relationships with all Braskem stakeholders, including its value chain (supply chains and customer chains)

(4.6.1.5) Environmental policy content

Environmental commitments

☑ Commitment to comply with regulations and mandatory standards

Climate-specific commitments

☑ Commitment to net-zero emissions

Water-specific commitments

☑ Commitment to reduce water consumption volumes

(4.6.1.6) Indicate whether your environmental policy is in line with global environmental treaties or policy goals

Select all that apply

☑ Yes, in line with the Paris Agreement

(4.6.1.7) Public availability

Select from:

☑ Publicly available

(4.6.1.8) Attach the policy

Braskem Sustainable Development Global Policy.pdf
[Add row]

(4.10) Are you a signatory or member of any environmental collaborative frameworks or initiatives?

(4.10.1) Are you a signatory or member of any environmental collaborative frameworks or initiatives?

Select from:

☑ Yes

(4.10.2) Collaborative framework or initiative

Select all that apply

☑ CEO Water Mandate

☑ UN Global Compact

☑ Water Action Hub (by CEO Water Mandate)

☑ World Business Council for Sustainable Development (WBCSD)

(4.10.3) Describe your organization's role within each framework or initiative

At the WBCSD, Braskem is a member of the Climate Imperative, that supports the company to operationalise credible climate action rapidly and at a scale across all GHG emission scopes considering two working groups: Accelerating Climate Action – SOS 1.5 and Tackling Scope 3 Transparency – PACT. At the UN Global Compact and the CEO Water Mandate, the company participates in technical groups with the aim of updating and aligning the Business strategy with practical improvements.

[Fixed row]

(4.11) In the reporting year, did your organization engage in activities that could directly or indirectly influence policy, law, or regulation that may (positively or negatively) impact the environment?

(4.11.1) External engagement activities that could directly or indirectly influence policy, law, or regulation that may impact the environment

Select all that apply

☑ Yes, we engaged directly with policy makers

☑ Yes, we engaged indirectly through, and/or provided financial or in-kind support to a trade association or other intermediary organization or individual whose activities could influence policy, law, or regulation

(4.11.2) Indicate whether your organization has a public commitment or position statement to conduct your engagement activities in line with global environmental treaties or policy goals

Select from:

☑ Yes, we have a public commitment or position statement in line with global environmental treaties or policy goals

(4.11.3) Global environmental treaties or policy goals in line with public commitment or position statement

Select all that apply

☑ Paris Agreement

☑ Another global environmental treaty or policy goal, please specify :Water Resilence Coalition (WRC) and Brazilian Business Council for Sustainable Development (CEBDS)

(4.11.4) Attach commitment or position statement

PosicionamentoCarbono+abiquim+v5.pdf

(4.11.5) Indicate whether your organization is registered on a transparency register

Select from:

☑ Yes

(4.11.6) Types of transparency register your organization is registered on

Select all that apply

☑ Voluntary government register

(4.11.7) Disclose the transparency registers on which your organization is registered & the relevant ID numbers for your organization

EU Transparency Register as Braskem Netherlands: 297770044319-79

(4.11.8) Describe the process your organization has in place to ensure that your external engagement activities are consistent with your environmental commitments and/or transition plan

Braskem has participated in a multidisciplinary committee in the association that evaluates new legislation, new public policies, among others. This way, we've had the opportunity to evaluate, together with the other companies and the association in alignment with our strategy and policy of sustainable development. One of the results was the Brazilian chemical industry positioning on carbon pricing that we built together..
[Fixed row]

(4.11.1) On what policies, laws, or regulations that may (positively or negatively) impact the environment has your organization been engaging directly with policy makers in the reporting year?

Row 1

(4.11.1.1) Specify the policy, law, or regulation on which your organization is engaging with policy makers

Bill of law for the regulation of the carbon market in Brazil.

(4.11.1.2) Environmental issues the policy, law, or regulation relates to

Select all that apply
☑ Climate change

(4.11.1.3) Focus area of policy, law, or regulation that may impact the environment

Environmental impacts and pressures
☑ Emissions – CO2
☑ Emissions – other GHGs

(4.11.1.4) Geographic coverage of policy, law, or regulation

Select from:
☑ National

(4.11.1.5) Country/area/region the policy, law, or regulation applies to

Select all that apply

☑ Brazil

(4.11.1.6) Your organization’s position on the policy, law, or regulation

Select from:

☑ Support with minor exceptions

(4.11.1.7) Details of any exceptions and your organization’s proposed alternative approach to the policy, law, or regulation

Braskem supports the regulation of a carbon market in Brazil, with the aim of facilitating the transition to a low-carbon economy. Therefore, we reinforce that the regulation includes important aspects such as: (i) Sectoral Agreements: It is important that the definition of the emissions cap, defined by the \emission quotas\, be done together with the private sector, through sectoral agreements, for example. The text of the draft is silent on this aspect. (ii) Double Counting and Safeguards: the absence of a forecast about some pillars considered structuring can generate inseK4curity and call into question the integrity and fungibility of Brazilian carbon credits, such as the absence of mention to the prohibition of double counting and omission in deal with safeguards. Predicting safeguards is crucial when encouraging projects that bring socio-environmental benefits. (iii) Interaction with the Voluntary Market: the draft does not provide for how the voluntary market will interact with the regulated market in order to meet the targets. It would be important, for example, to predict whether voluntary market credit will only be eligible for use in the regulated market if it meets certain requirements. (iv) Price stabilization: addressing this topic more expressly can bring more security to important players, such as investors. (v) Boundary Adjustment Mechanism: it is important to already foresee the Boundary Adjustment Mechanism in the draft, given that the main emissions markets around the world already have this concern and widely discuss the implementation of these mechanisms.

(4.11.1.8) Type of direct engagement with policy makers on this policy, law, or regulation

Select all that apply

☑ Ad-hoc meetings

☑ Participation in working groups organized by policy makers

☑ Responding to consultations

(4.11.1.9) Funding figure your organization provided to policy makers in the reporting year relevant to this policy, law, or regulation (currency)

0

(4.11.1.10) Explain the relevance of this policy, law, or regulation to the achievement of your environmental commitments and/or transition plan, how this has informed your engagement, and how you measure the success of your engagement

Braskem supports the creation of a regulated carbon market based on a cap-and-trade system, as we understand that carbon pricing is necessary to drive climate change mitigation projects in the industry it operates

(4.11.1.11) Indicate if you have evaluated whether your organization’s engagement on this policy, law, or regulation is aligned with global environmental treaties or policy goals

Select from:

☑ Yes, we have evaluated, and it is aligned

(4.11.1.12) Global environmental treaties or policy goals aligned with your organization's engagement on this policy, law or regulation

Select all that apply

☑ Paris Agreement

Row 2

(4.11.1.1) Specify the policy, law, or regulation on which your organization is engaging with policy makers

The Ecological Transformation Plan is a policy under construction by the Brazilian government, in favor of development based on sustainable solutions.

(4.11.1.2) Environmental issues the policy, law, or regulation relates to

Select all that apply

☑ Climate change

(4.11.1.3) Focus area of policy, law, or regulation that may impact the environment

Energy and renewables

☑ Alternative fuels

☑ Low-carbon, non-renewable energy generation

☑ Renewable energy generation

(4.11.1.4) Geographic coverage of policy, law, or regulation

Select from:

☑ National

(4.11.1.5) Country/area/region the policy, law, or regulation applies to

Select all that apply

☑ Brazil

(4.11.1.6) Your organization's position on the policy, law, or regulation

Select from:

☑ Support with minor exceptions

(4.11.1.7) Details of any exceptions and your organization's proposed alternative approach to the policy, law, or regulation

Braskem supports the Ecological Transformation Plan and identified priority needs that can be addressed in this policy for Brazilian industry to achieve the sustainability goals set for 2030 and 2050. (i) Bioeconomy - Encourage production processes that defossilize or promote decarbonization using renewable raw materials and sustainable use of biomass, adding value to the production chain and the environment. (ii) Technological Density – Chemical recycling is a technology under development and a complementary solution to manage plastic waste when mechanical recycling is not viable, with the potential to contribute to the reduction of CO2 emissions. (iii) New Green Infrastructure - Government support is needed to promote and develop carbon capture technologies for use and storage. (iv) Circular Economy • Legal Framework for the Circular Economy with the establishment of specific goals to encourage conscious consumption, correct waste management, the development of technologies to increase the recycling of materials and support innovation tools, such as design. • Extended Producer Responsibility (EPR) – It is impossible to reduce the cost of the circular economy and encourage the use of recycled materials without an EPR system capable of holding brand owners responsible for managing plastic waste and generating demand for products with recycled content. • 4.3. Recycled content - Setting a minimum recycled content in the composition of disposable plastic products is a possible solution to increase the demand for recycled plastics. (v)Sustainable Finance • The carbon market is an important and necessary pricing instrument to increase the scale of decarbonization projects in the private sector and contribute to the reduction of greenhouse gas (GHG) emissions. • The sustainable financial taxonomy must establish a classification system that defines the criteria for an economic activity to be considered sustainable, as in the European Union that aims to encourage a transition to sustainability.

(4.11.1.8) Type of direct engagement with policy makers on this policy, law, or regulation

Select all that apply

☑ Ad-hoc meetings

☑ Participation in working groups organized by policy makers

☑ Responding to consultations

(4.11.1.9) Funding figure your organization provided to policy makers in the reporting year relevant to this policy, law, or regulation (currency)

0

(4.11.1.10) Explain the relevance of this policy, law, or regulation to the achievement of your environmental commitments and/or transition plan, how this has informed your engagement, and how you measure the success of your engagement

Braskem understands that the Ecological Transformation Plan is a commendable instrument to unlock growth in the six axes: bioeconomy, technological densification, new green infrastructure, energy transition, circular economy and sustainable finance.

(4.11.1.11) Indicate if you have evaluated whether your organization's engagement on this policy, law, or regulation is aligned with global environmental treaties or policy goals

Select from:
☑ Yes, we have evaluated, and it is aligned

(4.11.1.12) Global environmental treaties or policy goals aligned with your organization's engagement on this policy, law or regulation

Select all that apply
☑ Paris Agreement
[Add row]

(4.11.2) Provide details of your indirect engagement on policy, law, or regulation that may (positively or negatively) impact the environment through trade associations or other intermediary organizations or individuals in the reporting year.

Row 1

(4.11.2.1) Type of indirect engagement

Select from:

☑ Indirect engagement via other intermediary organization or individual

(4.11.2.2) Type of organization or individual

Select from:

☑ Other, please specify :Trade association

(4.11.2.3) State the organization or position of individual

• ABIQUIM – Brazilian Chemical Industry Association • CEBDS – Brazilian Business Council for Sustainable Development • IBP – Brazilian Institute of Oil and Gas • ABBI – Brazilian Bioinnovation Association • MBC – Competitive Brazil Movement • ICC – International Chamber of Commerce • ABRACE - Brazilian Association of Large Energy Consumers • "Sistema S" (Senai,Sesi-CNI; SENAC,SESC-CNC; Senat, SEST-CNT;Senar-CNA)

(4.11.2.5) Environmental issues relevant to the policies, laws, or regulations on which the organization or individual has taken a position

Select all that apply

☑ Climate change

(4.11.2.6) Indicate whether your organization's position is consistent with the organization or individual you engage with

Select from:

☑ Consistent

(4.11.2.7) Indicate whether your organization attempted to influence the organization or individual's position in the reporting year

Select from:

☑ Yes, we publicly promoted their current position

(4.11.2.8) Describe how your organization's position is consistent with or differs from the organization or individual's position, and any actions taken to influence their position

Braskem's position on climate change is in line with the associations it is part of.

(4.11.2.9) Funding figure your organization provided to this organization or individual in the reporting year (currency)

8538547.53

(4.11.2.10) Describe the aim of this funding and how it could influence policy, law or regulation that may impact the environment

Payment refers to the entity's association fee. The entity defends the interests of the sector of which it is part, consolidating the sector's position with technical materials to support discussions with authorities and policy makers.

(4.11.2.11) Indicate if you have evaluated whether your organization’s engagement is aligned with global environmental treaties or policy goals

Select from:

☑ Yes, we have evaluated, and it is aligned

(4.11.2.12) Global environmental treaties or policy goals aligned with your organization’s engagement on policy, law or regulation

Select all that apply

☑ Paris Agreement

[Add row]

(4.12) Have you published information about your organization’s response to environmental issues for this reporting year in places other than your CDP response?

Select from:

☑ Yes

(4.12.1) Provide details on the information published about your organization’s response to environmental issues for this reporting year in places other than your CDP response. Please attach the publication.

Row 1

(4.12.1.1) Publication

Select from:

☑ In mainstream reports

(4.12.1.3) Environmental issues covered in publication

Select all that apply

☑ Climate change

☑ Water

(4.12.1.4) Status of the publication

Select from:

☑ Complete

(4.12.1.5) Content elements

Select all that apply

☑ Strategy

☑ Governance

☑ Emission targets

☑ Emissions figures

☑ Risks & Opportunities

☑ Value chain engagement

☑ Water accounting figures

(4.12.1.6) Page/section reference

21,22,37-38,44-45,47-49,58

(4.12.1.7) Attach the relevant publication

Braskem-2023-Integrated-Report (1).pdf

(4.12.1.8) Comment

Our 2023 Integrated Report can be found at https://www.braskem.com.br/2023-integrated-report In it, it is possible to find all the company's new projects, actions and results regarding climate change strategy
[Add row]

C5. Business strategy

(5.1) Does your organization use scenario analysis to identify environmental outcomes?

Climate change

(5.1.1) Use of scenario analysis

Select from:
☑ Yes

(5.1.2) Frequency of analysis

Select from:
☑ Annually

Water

(5.1.1) Use of scenario analysis

Select from:
☑ Yes

(5.1.2) Frequency of analysis

Select from:
☑ Annually
[Fixed row]

(5.1.1) Provide details of the scenarios used in your organization's scenario analysis.

Climate change

(5.1.1.1) Scenario used

Climate transition scenarios

☑ IEA APS

(5.1.1.3) Approach to scenario

Select from:

☑ Qualitative and quantitative

(5.1.1.4) Scenario coverage

Select from:

☑ Organization-wide

(5.1.1.5) Risk types considered in scenario

Select all that apply

☑ Policy

☑ Market

☑ Liability

☑ Technology

☑ Acute physical

☑ Chronic physical

(5.1.1.6) Temperature alignment of scenario

Select from:

☑ 2.5°C - 2.9°C

(5.1.1.7) Reference year

2015

(5.1.1.8) Timeframes covered

Select all that apply

☑ 2030

☑ 2050

(5.1.1.9) Driving forces in scenario

Local ecosystem asset interactions, dependencies and impacts

☑ Climate change (one of five drivers of nature change)

Finance and insurance

☑ Sensitivity of capital (to nature impacts and dependencies)

Stakeholder and customer demands

☑ Consumer attention to impact

☑ Impact of nature footprint on reputation

Regulators, legal and policy regimes

☑ Global regulation

Relevant technology and science

☑ Data regime (from closed to open)

Direct interaction with climate

☑ On asset values, on the corporate

Macro and microeconomy

☑ Globalizing markets

(5.1.1.10) Assumptions, uncertainties and constraints in scenario

IPCC AR6 SSP1-2.6 (temperature target 2100); quantitative analysis IPCC AR6 SSP2-4.5 (temperature target 2100); quantitative analysis IPCC AR6 SSP3-7.0 (temperature target 2100); quantitative analysis NGFS NET ZERO 2050 (SSP1-1.9) This scenario imposes the goal of limiting the temperature increase to 1.5C by *the end of the 21st century, projecting the efforts that would be necessary for the transition to a low carbon economy. It assumes that the most ambitious climate policies are introduced early and gradually become more stringent, in an orderly fashion and across different countries and sectors. In this scenario, net carbon emissions are neutralized around 2050. NGFS BELOW 2C (SSP1-2.6) This scenario imposes the goal of limiting the temperature increase to 2C during the 21st century, projecting the efforts that would be necessary for the transition to a low carbon economy. It assumes that the most ambitious climate policies are introduced early and gradually become more stringent, in an orderly fashion and across different countries and sectors. In this scenario, net carbon emissions are neutralized around 2075. NGFS NDCs (SSP2-4.5) This scenario predicts that the unconditional NDCs promised by 2020 will be fully implemented and the respective energy and emissions targets in 2025 and 2030 will be achieved in all countries. The extrapolation of policy ambition levels over the 2030-2100 period is, however, subject to great uncertainties. In this scenario, it is also considered that there is no \transition\ to the low carbon economy, as efforts are insufficient and, consequently, physical risks will be more severe. NGFS CURRENT POLICIES Existing climate policies until 2020 remain in place, but there is no strengthening of the ambition level of these policies. Thus, it is considered that there is no \transition\ to the low carbon economy, as efforts are insufficient to limit the increase in the global average temperature and, consequently, the physical risks will be more severe.*

(5.1.1.11) Rationale for choice of scenario

By using climate-related scenarios, Braskem seeks to identify with better accuracy the risks and opportunities that are more relevant and adherent to the business, by using an analysis with more pessimistic scenarios and more optimistic ones. The analyses of physical climate scenarios helped identify the priority regions where Braskem is investing more resources to mitigate the risks, as they were shown to be more significant. Among the industrial units, those located in Brazil presented the highest incidence, where extreme climate events, such as severe droughts, heavy rains and floods, can occur. For each of the risks, classified as high, we prepared action plans with adaptation measures. As an example, Braskem has invested in actions to search for alternative sources of water withdrawal in the Northeast and Southeast regions of Brazil due to the threat of severe droughts. Similarly, for the transition risks, the analyses of climate-related scenarios provided a better support for prioritization of opportunities and risks with their respective action plans. As an example, we have implemented and revised our internal carbon pricing process to make sure that all material initiatives and projects that are being evaluated consider the financial impact of GHG emissions, for both risks (emissions increase) and opportunities (emissions reduction/removal).

Water

(5.1.1.1) Scenario used

Water scenarios

☑ WRI Aqueduct

(5.1.1.3) Approach to scenario

Select from:

☑ Qualitative and quantitative

(5.1.1.4) Scenario coverage

Select from:

☑ Organization-wide

(5.1.1.5) Risk types considered in scenario

Select all that apply

☑ Policy

☑ Market

☑ Liability

☑ Technology

☑ Acute physical

☑ Chronic physical

(5.1.1.7) Reference year

2015

(5.1.1.8) Timeframes covered

Select all that apply

☑ 2030

☑ 2050

(5.1.1.9) Driving forces in scenario

Local ecosystem asset interactions, dependencies and impacts

☑ Climate change (one of five drivers of nature change)

Finance and insurance

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☑ Impact of nature footprint on reputation

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☑ Data regime (from closed to open)

Direct interaction with climate

☑ On asset values, on the corporate

Macro and microeconomy

☑ Globalizing markets

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action plans with adaptation measures. As an example, Braskem has invested in actions to search for alternative sources of water withdrawal in the Northeast and Southeast regions of Brazil due to the threat of severe droughts. Similarly, for the transition risks, the analyses of climate-related scenarios provided a better support for prioritization of opportunities and risks with their respective action plans. As an example, we have implemented and revised our internal carbon pricing process to make sure that all material initiatives and projects that are being evaluated consider the financial impact of GHG emissions, for both risks (emissions increase) and opportunities (emissions reduction/removal).
[Add row]

(5.1.2) Provide details of the outcomes of your organization's scenario analysis.

Climate change

(5.1.2.1) Business processes influenced by your analysis of the reported scenarios

Select all that apply

☑ Risk and opportunities identification, assessment and management

(5.1.2.2) Coverage of analysis

Select from:

☑ Organization-wide

(5.1.2.3) Summarize the outcomes of the scenario analysis and any implications for other environmental issues

The diagnosis of physical risks involved a trend analysis of climate variables capable of influencing the possibility of the occurrence of climate threats analyzed in the study, as well as a survey of the possible impacts arising from the eventual occurrence of these threats. In the trend analysis, the annual anomaly of the average temperature of the land surface and the sea and the annual variation in precipitation are examined from the ensemble projections (Average of the results of four global climate models) for the 2030 and 2050 horizons, considering different climate scenarios, in comparison with the reference period (1950 – 1994). The results of the temperature and precipitation trend analysis reflect the behaviour of climate extremes that make up the climate hazards analyzed in this study. Transition risks and opportunities are identified through sectoral analyses and studies of Braskem's business model and production chain, with the aim of learning about the company's main raw materials, processes, and products, as well as their main applications in the Marketplace. In order to understand the company's strategy, business model, market positioning and other details relevant to the project, several meetings were held with representatives of the corporate areas.

Water

(5.1.2.1) Business processes influenced by your analysis of the reported scenarios

Select all that apply

☑ Risk and opportunities identification, assessment and management

(5.1.2.2) Coverage of analysis

Select from:

☑ Organization-wide

(5.1.2.3) Summarize the outcomes of the scenario analysis and any implications for other environmental issues

The diagnosis of physical risks involved a trend analysis of climate variables capable of influencing the possibility of the occurrence of climate threats analyzed in the study, as well as a survey of the possible impacts arising from the eventual occurrence of these threats. In the trend analysis, the annual anomaly of the average temperature of the land surface and the sea and the annual variation in precipitation are examined from the ensemble projections (Average of the results of four global climate models) for the 2030 and 2050 horizons, considering different climate scenarios, in comparison with the reference period (1950 – 1994). The results of the temperature and precipitation trend analysis reflect the behaviour of climate extremes that make up the climate hazards analyzed in this study.
[Fixed row]

(5.2) Does your organization's strategy include a climate transition plan?

(5.2.1) Transition plan

Select from:

☑ Yes, we have a climate transition plan which aligns with a 1.5°C world

(5.2.3) Publicly available climate transition plan

Select from:

☑ Yes

(5.2.4) Plan explicitly commits to cease all spending on, and revenue generation from, activities that contribute to fossil fuel expansion

Select from:

☑ No, and we do not plan to add an explicit commitment within the next two years

(5.2.6) Explain why your organization does not explicitly commit to cease all spending on and revenue generation from activities that contribute to fossil fuel expansion

This commitment requires an assessment of the entire chain, with a joint assessment with all those involved upstream and downstream, which makes the assessment very complex at the moment.

(5.2.7) Mechanism by which feedback is collected from shareholders on your climate transition plan

Select from:

☑ We have a different feedback mechanism in place

(5.2.8) Description of feedback mechanism

Meetings with Investors, meetings with clients, meetings with technical partners, and others.

(5.2.9) Frequency of feedback collection

Select from:

☑ Annually

(5.2.10) Description of key assumptions and dependencies on which the transition plan relies

The key assumptions include projections about future market trends, regulatory changes and technological advancements. The strategy is mainly focused on growing the portfolio of green products and the growth of new projects and technologies associated with the use of CO_2 emissions.

(5.2.11) Description of progress against transition plan disclosed in current or previous reporting period

As the transition plan was recently approved, it is in its initial stages.

(5.2.13) Other environmental issues that your climate transition plan considers

Select all that apply

☑ Water

(5.2.14) Explain how the other environmental issues are considered in your climate transition plan

The water issue is considered in the climate change adaptation plan as water risk is one of the most relevant climate risks for the company
[Fixed row]

(5.3) Have environmental risks and opportunities affected your strategy and/or financial planning?

(5.3.1) Environmental risks and/or opportunities have affected your strategy and/or financial planning

Select from:
☑ Yes, both strategy and financial planning

(5.3.2) Business areas where environmental risks and/or opportunities have affected your strategy

Select all that apply
☑ Products and services
☑ Upstream/downstream value chain
☑ Investment in R&D
☑ Operations
[Fixed row]

(5.3.1) Describe where and how environmental risks and opportunities have affected your strategy.

Products and services

(5.3.1.1) Effect type

Select all that apply
☑ Opportunities

(5.3.1.2) Environmental issues relevant to the risks and/or opportunities that have affected your strategy in this area

Select all that apply

☑ Climate change

☑ Water

(5.3.1.3) Describe how environmental risks and/or opportunities have affected your strategy in this area

The Bio-based growth avenue of the company's corporate strategy aims to continue to strengthen our global leadership position by developing new renewable solutions. Braskem's bio-based portfolio includes thermoplastic resins and chemicals from renewable raw materials that offer customers and consumers the same qualities as fossil equivalents. Braskem has developed, together with its customer chain, new products that mitigate the impact of water risk in regions of potential water stress.

Upstream/downstream value chain

(5.3.1.1) Effect type

Select all that apply

☑ Risks

☑ Opportunities

(5.3.1.2) Environmental issues relevant to the risks and/or opportunities that have affected your strategy in this area

Select all that apply

☑ Climate change

☑ Water

(5.3.1.3) Describe how environmental risks and/or opportunities have affected your strategy in this area

The company continues to leverage our traditional petrochemical business, comprised of fossil-based products, seeking to increase its profitability through selective, high value-added investments, including projects to improve productivity and competitiveness, as well as continuing to implement the decarbonization of our current assets. These measures collectively will enable us to deliver our objective(1) of reducing scope 1 and 2 emissions by 15% by 2030 and reaching carbon neutrality by 2050. (1) Such objectives are subject to risks that include, but are not limited to: advancement, availability, development and accessibility of technology necessary to achieve these objectives. Braskem has defined a strategy to achieve 100% water security by 2030, this means that all water withdrawal sources will be safe. There are some initiatives to replace some of the current water withdrawal sources. In regions of potential water stress, Braskem has an engagement process for suppliers located in these regions.The achievement of the sustainable macro objectives disclosed by the Company (within the projected costs and expected timelines) is also subject to uncertainties and risks, including but not limited to: the advancement, availability, development, and financial feasibility of the technology required to achieve these objectives

Investment in R&D

(5.3.1.1) Effect type

Select all that apply

☑ Risks

☑ Opportunities

(5.3.1.2) Environmental issues relevant to the risks and/or opportunities that have affected your strategy in this area

Select all that apply

☑ Climate change

(5.3.1.3) Describe how environmental risks and/or opportunities have affected your strategy in this area

Braskem sees Innovation and R&D as tools to build a more sustainable future. We are investing in the development of carbon capture technologies for storage and use as raw materials for chemical production. Our Innovation team is working with a pipeline where 170 ideas have been identified, 15 of which have been developed, becoming research already at various stages of development. Among the projects are a partnership with Northwestern University in the development of a co-electrolysis technology, which simultaneously transforms CO2 captured in CO and ethylene into ethylene oxide. With the University of São Paulo and the Federal University of São Carlos (UFSCar), we worked on creating a new technology to convert CO2 into light olefins or linear alpha-olefins. Together, we are also developing an electrocatalytic system to convert CO2 and water into ethanol.

Operations

(5.3.1.1) Effect type

Select all that apply

☑ Risks

☑ Opportunities

(5.3.1.2) Environmental issues relevant to the risks and/or opportunities that have affected your strategy in this area

Select all that apply

☑ Climate change

☑ Water

(5.3.1.3) Describe how environmental risks and/or opportunities have affected your strategy in this area

Our Industrial Decarbonization Program includes 4 lines of action: "Operational decisions", which implement continuous improvement operational initiatives with low or no investment with a view to reducing emissions; "Energy efficiency" to reduce GHG emissions through energy integration and optimization initiatives with investments; "Energy matrix" to increase the share of renewable energy and low-carbon fuels within Braskem's energy matrix; and "Transformational projects ("Big bets")", which aim to implement key initiatives capable of significantly reducing GHG emissions at the main plants responsible for such emissions. Braskem developed a climate risk and adaptation plan considering 2030 and 2050 AS THE TIME HORIZON. Based on these scenarios, critical areas for WATER SCARCITY (ISSUES) that impact business objectives were established. The Company then started developing action plans to mitigate and/or find alternatives to avoid production losses due to water security issues. These plans are considering alternatives such as water reuse and desalination. TO DEFINE THE BETTER ALTERNATIVE TO AVOID SCARCITY ISSUES, BRASKEM CALCULATED AN INTERNAL PRICE ON WATER CONSIDERING CLIMATE MODELS (WHY). The Company already has a successful reuse model that is the Aquapolo (project allowed the company to pass through the São Paulo water crisis without production losses - on the contrary, production increased). The possibility to replicate this model is currently associated with long-term business strategies to avoid production and financial losses.The achievement of the sustainable macro objectives disclosed by the Company (within the projected costs and expected timelines) is also subject to uncertainties and risks, including but not limited to: the advancement, availability, development, and financial feasibility of the technology required to achieve these objectives

[Add row]

(5.3.2) Describe where and how environmental risks and opportunities have affected your financial planning.

Row 1

(5.3.2.1) Financial planning elements that have been affected

Select all that apply

☑ Revenues

☑ Direct costs

☑ Indirect costs

☑ Assets

(5.3.2.2) Effect type

Select all that apply

☑ Risks

☑ Opportunities

(5.3.2.3) Environmental issues relevant to the risks and/or opportunities that have affected these financial planning elements

Select all that apply

☑ Climate change

☑ Water

(5.3.2.4) Describe how environmental risks and/or opportunities have affected these financial planning elements

In 2014/2015, during a drought in São Paulo, Brazil, many companies had to halt operations due to water scarcity. However, Braskem's units remained fully operational, thanks to a pre-implemented water reuse project that recycles 100% of the water consumed. This proactive risk management measure allowed Braskem to maintain operations without interruption and even positively impacted its operations. To ensure ongoing functionality in future drought scenarios, this water reuse project will continue to be critical

[Add row]

(5.4) In your organization's financial accounting, do you identify spending/revenue that is aligned with your organization's climate transition?

	Identification of spending/revenue that is aligned with your organization's climate transition	Methodology or framework used to assess alignment with your organization's climate transition
	Select from: ☑ Yes	*Select all that apply* ☑ Other methodology or framework

[Fixed row]

(5.4.1) Quantify the amount and percentage share of your spending/revenue that is aligned with your organization's climate transition.

Row 1

(5.4.1.1) Methodology or framework used to assess alignment

Select from:

☑ Other, please specify :Other.

(5.4.1.5) Financial metric

Select from:

☑ CAPEX

(5.4.1.6) Amount of selected financial metric that is aligned in the reporting year (currency)

27000000

(5.4.1.7) Percentage share of selected financial metric aligned in the reporting year (%)

6.3

(5.4.1.8) Percentage share of selected financial metric planned to align in 2025 (%)

22

(5.4.1.9) Percentage share of selected financial metric planned to align in 2030 (%)

41

(5.4.1.12) Details of the methodology or framework used to assess alignment with your organization's climate transition

Braskem has a Sustainable Development strategy supported by 7 Long-term Objectives. Three of these Long-term Objectives are: Climate Change, Disposal of Plastic Waste and Operational Eco-efficiency. Braskem's expected investment for 2024 is BRL 2,219 million, of which USD 139 million is for Climate Change, Disposal of Plastic Waste and Operational Eco-efficiency. Investments in Long-term Objectives do not consider investments in scheduled maintenance turnarounds, spare parts of equipment, among others.The achievement of the sustainable macro objectives disclosed by the Company (within the projected costs and expected timelines) is also subject to uncertainties and risks, including but not limited to: the advancement, availability, development, and financial feasibility of the technology required to achieve these objectives

[Add row]

(5.5) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

(5.5.1) Investment in low-carbon R&D

Select from:

☑ Yes

(5.5.2) Comment

Since 2010, we have enhanced our know-how for operating our ethanol dehydration plant for bio-ethylene production and expanded the market globally, achieving growing operational and financial results. This process was also accompanied by the adoption of responsible practices in purchasing this raw material, due to the potential socio-environmental risks associated with the sugarcane chain. In 2023, we completed the expansion of the production capacity of bio-ethylene at the Triunfo petrochemical complex, in Rio Grande do Sul, increasing it by 30% from 200,000 to 260,000 tons per year. Thus, in 2023, although the monthly sales volume of polyethylene I'm greenTM bio-based was a record in August, the annual volume decreased by 13%, due to lower availability of product for sale as a result of the scheduled maintenance shutdown and completion of the ramp-up process for the expansion project.

[Fixed row]

(5.5.3) Provide details of your organization's investments in low-carbon R&D for chemical production activities over the last three years.

Row 1

(5.5.3.1) Technology area

Select from:

☑ Bio technology

(5.5.3.2) Stage of development in the reporting year

Select from:

☑ Full/commercial-scale demonstration

(5.5.3.3) Average % of total R&D investment over the last 3 years

11

(5.5.3.4) R&D investment figure in the reporting year (unit currency as selected in 1.2) (optional)

89

(5.5.3.5) Average % of total R&D investment planned over the next 5 years

16.4

(5.5.3.6) Explain how your R&D investment in this technology area is aligned with your climate commitments and/or climate transition plan

We will continue to strengthen our global leadership position by developing new renewable solutions. Our strategy seeks to increase our production capacity in bio-based resins and chemical products to achieve our objective (1) of a bioproduct capacity of 1 million tons by 2030, including the use of renewable raw materials. The achievement of the sustainable macro objectives disclosed by the Company (within the projected costs and expected timelines) is also subject to uncertainties and risks, including but not limited to: the advancement, availability, development, and financial feasibility of the technology required to achieve these objectives

[Add row]

(5.9) What is the trend in your organization's water-related capital expenditure (CAPEX) and operating expenditure (OPEX) for the reporting year, and the anticipated trend for the next reporting year?

(5.9.1) Water-related CAPEX (+/- % change)

-41

(5.9.2) Anticipated forward trend for CAPEX (+/- % change)

34

(5.9.3) Water-related OPEX (+/- % change)

-2

(5.9.4) Anticipated forward trend for OPEX (+/- % change)

7

(5.9.5) Please explain

OPEX is calculated based on the cost of withdrawal, treating and purchasing water and also on the cost of managing, treating and disposing of effluents. For OPEX, there was a 2% reduction compared to 2022 mainly due to the reduction in water consumption, which is the most relevant cost, an increase of 7% is expected for 2024 due to the increase in production, consequently increased water consumption as well as an increase in generation of effluents. CAPEX considers all investments in the "Effluent Management", "Water Management" categories, in addition to the ESG category: Water Security. For CAPEX, there was a 41% decrease compared to 2022 due to production reduction. The expectation for 2024 is an increase of 34% due to the development of new water efficiency initiatives/projects.
[Fixed row]

(5.10) Does your organization use an internal price on environmental externalities?

	Use of internal pricing of environmental externalities	Environmental externality priced
	Select from: ☑ Yes	*Select all that apply* ☑ Carbon ☑ Water

[Fixed row]

(5.10.1) Provide details of your organization's internal price on carbon.

Row 1

(5.10.1.1) Type of pricing scheme

Select from:

☑ Implicit price

(5.10.1.2) Objectives for implementing internal price

Select all that apply

☑ Drive energy efficiency

☑ Drive low-carbon investment

☑ Setting and/or achieving of climate-related policies and targets

(5.10.1.3) Factors considered when determining the price

Select all that apply

☑ Cost of required measures to achieve climate-related targets

(5.10.1.4) Calculation methodology and assumptions made in determining the price

To determine the price, a MACC curve was considered considering all real and potential projects to achieve the agreed targets of the mitigation strategy. Internal carbon pricing is used in the investment decision-making process. All projects must be evaluated to identify those that impact, positively or negatively, GHG emissions. There is a tool that calculates the carbon impact with the project data, and with the assigned price per ton of CO2e it calculates this result (positive or negative), considering the economic flow of the project and composing the project's NPV. Projects are selected annually to compose the portfolio for the following year. For selection of the best projects there are economic and ESG criteria, NPV is one of these criteria, and thus projects that reduce emissions participate with a better score due to a higher NPV, as a consequence of internal carbon pricing.

(5.10.1.5) Scopes covered

Select all that apply

☑ Scope 1

☑ Scope 2

(5.10.1.6) Pricing approach used – spatial variance

Select from:

☑ Uniform

(5.10.1.8) Pricing approach used – temporal variance

Select from:

☑ Static

(5.10.1.10) Minimum actual price used (currency per metric ton CO2e)

50

(5.10.1.11) Maximum actual price used (currency per metric ton CO2e)

145

(5.10.1.12) Business decision-making processes the internal price is applied to

Select all that apply

☑ Capital expenditure

☑ Operations

☑ Product and R&D

☑ Opportunity management

(5.10.1.13) Internal price is mandatory within business decision-making processes

Select from:

☑ Yes, for all decision-making processes

(5.10.1.14) % total emissions in the reporting year in selected scopes this internal price covers

12

(5.10.1.15) Pricing approach is monitored and evaluated to achieve objectives

Select from:

☑ Yes

(5.10.1.16) Details of how the pricing approach is monitored and evaluated to achieve your objectives

Ongoing projects with carbon impact are checked annually by an external audit to verify whether the assumptions and calculations considered are correct. These projects support the achievement of short and medium-term decarbonization goals. Therefore, they are checked annually to confirm progress in meeting decarbonization targets.
[Add row]

(5.10.2) Provide details of your organization's internal price on water.

Row 1

(5.10.2.1) Type of pricing scheme

Select from:
☑ Shadow price

(5.10.2.2) Objectives for implementing internal price

Select all that apply
☑ Drive water-related investment

(5.10.2.3) Factors beyond current market price are considered in the price

Select from:
☑ Yes

(5.10.2.4) Factors considered when determining the price

Select all that apply
☑ Scenario analysis

(5.10.2.5) Calculation methodology and assumptions made in determining the price

Once Braskem developed a water risk analysis for the river basin, where it operates, and identified the ones with high risk (Rio de Janeiro and Alagoas), it developed an internal price on water based on the Getulio Vargas Foundation methodology – DEVESE. The price considered potential losses in production and revenue considering a disruption (reduction of water grant) caused by a drought scenario such as one serious drought event in a five-year period and a 12-month duration, plus 3 other, different scenarios. Now with that price calculated, the company can compare with prices from reuse (using Aquapolo as the referral case) and desalination that would be alternatives. These would counter the disruption and loss of production risks/impacts and support the decision to implement projects to access safe alternative sources of water.

(5.10.2.6) Stages of the value chain covered

Select all that apply

☑ Direct operations

(5.10.2.7) Pricing approach used – spatial variance

Select from:

☑ Uniform

(5.10.2.9) Pricing approach used – temporal variance

Select from:

☑ Static

(5.10.2.11) Minimum actual price used (currency per cubic meter)

0.5

(5.10.2.12) Maximum actual price used (currency per cubic meter)

10

(5.10.2.13) Business decision-making processes the internal water price is applied to

Select all that apply

☑ Operations

(5.10.2.14) Internal price is mandatory within business decision-making processes

Select from:

☑ Yes, for some decision-making processes, please specify :New water withdrawal sources

(5.10.2.15) Pricing approach is monitored and evaluated to achieve objectives

Select from:

☑ Yes

(5.10.2.16) Details of how the pricing approach is monitored and evaluated to achieve your objectives

Monitoring takes place for each process of selecting a new source of water withdrawal, since the decision-making process considers socio-economic and environmental criteria. Thus, in each process, scenarios are simulated considering water pricing based on water stress scenarios, supporting the decision for the best proposal.
[Add row]

(5.11) Do you engage with your value chain on environmental issues?

	Engaging with this stakeholder on environmental issues	Environmental issues covered
Suppliers	*Select from:* ☑ Yes	*Select all that apply* ☑ Climate change ☑ Water
Customers	*Select from:* ☑ Yes	*Select all that apply* ☑ Climate change ☑ Water
Investors and shareholders	*Select from:* ☑ Yes	*Select all that apply* ☑ Climate change ☑ Water

	Engaging with this stakeholder on environmental issues	Environmental issues covered
Other value chain stakeholders	*Select from:* ☑ Yes	*Select all that apply* ☑ Climate change

[Fixed row]

(5.11.1) Does your organization assess and classify suppliers according to their dependencies and/or impacts on the environment?

Climate change

(5.11.1.1) Assessment of supplier dependencies and/or impacts on the environment

Select from:

☑ Yes, we assess the dependencies and/or impacts of our suppliers

(5.11.1.2) Criteria for assessing supplier dependencies and/or impacts on the environment

Select all that apply

☑ Dependence on water

☑ Basin/landscape condition

☑ Impact on pollution levels

☑ Impact on water availability

☑ Impact on plastic waste and pollution

☑ Contribution to supplier-related Scope 3 emissions

☑ Dependence on ecosystem services/environmental assets

(5.11.1.3) % Tier 1 suppliers assessed

Select from:

☑ 1-25%

(5.11.1.4) Define a threshold for classifying suppliers as having substantive dependencies and/or impacts on the environment

There is a supplier criticality matrix, based on economic and ESG standards. At the y-axis, the relevance of the service or activity category to the business and on the x-axis the socio-environmental impact of the category are measured. The limits for considering the supplier as critical are when the relevance of the category to the business is considered high and also the socio-environmental impact of the category is considered high for all vectors.

(5.11.1.5) % Tier 1 suppliers meeting the thresholds for substantive dependencies and/or impacts on the environment

Select from:

☑ 1-25%

(5.11.1.6) Number of Tier 1 suppliers meeting the thresholds for substantive dependencies and/or impacts on the environment

172

Water

(5.11.1.1) Assessment of supplier dependencies and/or impacts on the environment

Select from:

☑ Yes, we assess the dependencies and/or impacts of our suppliers

(5.11.1.2) Criteria for assessing supplier dependencies and/or impacts on the environment

Select all that apply

☑ Dependence on water
☑ Basin/landscape condition
☑ Impact on pollution levels
☑ Impact on water availability
☑ Impact on plastic waste and pollution
☑ Contribution to supplier-related Scope 3 emissions
☑ Dependence on ecosystem services/environmental assets

(5.11.1.3) % Tier 1 suppliers assessed

Select from:
☑ 1-25%

(5.11.1.4) Define a threshold for classifying suppliers as having substantive dependencies and/or impacts on the environment

There is a supplier criticality matrix, based on economic and ESG standards. At the y-axis, the relevance of the service or activity category to the business and on the x-axis the socio-environmental impact of the category are measured. The limits for considering the supplier as critical are when the relevance of the category to the business is considered high and also the socio-environmental impact of the category is considered high for all vectors.

(5.11.1.5) % Tier 1 suppliers meeting the thresholds for substantive dependencies and/or impacts on the environment

Select from:
☑ 1-25%

(5.11.1.6) Number of Tier 1 suppliers meeting the thresholds for substantive dependencies and/or impacts on the environment

125
[Fixed row]

(5.11.2) Does your organization prioritize which suppliers to engage with on environmental issues?

Climate change

(5.11.2.1) Supplier engagement prioritization on this environmental issue

Select from:
☑ Yes, we prioritize which suppliers to engage with on this environmental issue

(5.11.2.2) Criteria informing which suppliers are prioritized for engagement on this environmental issue

Select all that apply
☑ Business risk mitigation

☑ Material sourcing

☑ Procurement spend

☑ Strategic status of suppliers

☑ Supplier performance improvement

(5.11.2.4) Please explain

To select the suppliers that will be invited to the engagement process, among the critical suppliers, those belonging to carbon-intensive activities, such as logistics, the fossil chain, etc. are identified

Water

(5.11.2.1) Supplier engagement prioritization on this environmental issue

Select from:

☑ Yes, we prioritize which suppliers to engage with on this environmental issue

(5.11.2.2) Criteria informing which suppliers are prioritized for engagement on this environmental issue

Select all that apply

☑ Business risk mitigation

☑ Material sourcing

☑ Procurement spend

☑ Strategic status of suppliers

(5.11.2.4) Please explain

To select the suppliers that will be invited to the engagement process, among the critical suppliers, those who have their main operations in regions of potential water stress, that is, with a high probability of severe droughts, are identified
[Fixed row]

(5.11.5) Do your suppliers have to meet environmental requirements as part of your organization's purchasing process?

Climate change

(5.11.5.1) Suppliers have to meet specific environmental requirements related to this environmental issue as part of the purchasing process

Select from:

☑ Yes, environmental requirements related to this environmental issue are included in our supplier contracts

(5.11.5.2) Policy in place for addressing supplier non-compliance

Select from:

☑ Yes, we have a policy in place for addressing non-compliance

(5.11.5.3) Comment

Braskem's Third-Party Code of Conduct is one of the ways for creating external communication, which includes sharing Braskem's alignment with the UN Global Compact. It's available publicly in our site in the link below: https://www.braskem.com.br/portal/Principal/arquivos/imagens/Download/Upload/Third-Party-Code-of-Conduct_ENG.pdf. All suppliers need to accept the Third-Party Code of Conduct when signing a contract with Braskem. Moreover, depending on the product or service provided by the supplier, specific contract clauses can be required for addressing the issue. Since the entering of a supplier in the Braskem bidding process, we also start a screening according to minimum requirements and basic ESG criteria. To reinforce social-environmental screening with a more specific and specialized ESG tool, we consolidated our partnership with Ecovadis, one of the world's largest global supply chain sustainability rating companies, to evaluate the environmental, social and governance management of the supplier base. In 2023, we were counting more than 500 companies being evaluated by Ecovadis. Integrated Report: https://www.braskem.com/usa/2023-integrated-report – pag. 72 and 74

Water

(5.11.5.1) Suppliers have to meet specific environmental requirements related to this environmental issue as part of the purchasing process

Select from:

☑ Yes, environmental requirements related to this environmental issue are included in our supplier contracts

(5.11.5.2) Policy in place for addressing supplier non-compliance

Select from:

☑ Yes, we have a policy in place for addressing non-compliance

(5.11.5.3) Comment

Braskem's Third-Party Code of Conduct is one of the ways for creating external communication, which includes sharing Braskem's alignment with the UN Global Compact. It's available publicly in our site in the link below: https://www.braskem.com.br/portal/Principal/arquivos/imagens/Download/Upload/Third-Party-Code-of-Conduct_ENG.pdf. All suppliers need to accept the Third-Party Code of Conduct when signing a contract with Braskem. Moreover, depending on the product or service provided by the supplier, specific contract clauses can be required for addressing the issue. Since the entering of a supplier in the Braskem bidding process, we also start a screening according to minimum requirements and basic ESG criteria. To reinforce social-environmental screening with a more specific and specialized ESG tool, we consolidated our partnership with Ecovadis, one of the world's largest global supply chain sustainability rating companies, to evaluate the environmental, social and governance management of the supplier base. In 2023, we were counting more than 500 companies being evaluated by Ecovadis. Integrated Report: https://www.braskem.com/usa/2023-integrated-report – pag. 72 and 74
[Fixed row]

(5.11.6) Provide details of the environmental requirements that suppliers have to meet as part of your organization's purchasing process, and the compliance measures in place.

Climate change

(5.11.6.1) Environmental requirement

Select from:
☑ Regular environmental risk assessments (at least once annually)

(5.11.6.2) Mechanisms for monitoring compliance with this environmental requirement

Select all that apply
☑ Supplier scorecard or rating
☑ Supplier self-assessment

(5.11.6.3) % tier 1 suppliers by procurement spend required to comply with this environmental requirement

Select from:
☑ 100%

(5.11.6.4) % tier 1 suppliers by procurement spend in compliance with this environmental requirement

Select from:

☑ 100%

(5.11.6.7) % tier 1 supplier-related scope 3 emissions attributable to the suppliers required to comply with this environmental requirement

Select from:

☑ None

(5.11.6.8) % tier 1 supplier-related scope 3 emissions attributable to the suppliers in compliance with this environmental requirement

Select from:

☑ 100%

(5.11.6.9) Response to supplier non-compliance with this environmental requirement

Select from:

☑ Retain and engage

(5.11.6.10) % of non-compliant suppliers engaged

Select from:

☑ 100%

(5.11.6.11) Procedures to engage non-compliant suppliers

Select all that apply

☑ Assessing the efficacy and efforts of non-compliant supplier actions through consistent and quantified metrics

☑ Developing quantifiable, time-bound targets and milestones to bring suppliers back into compliance

☑ Providing information on appropriate actions that can be taken to address non-compliance

☑ Other, please specify

(5.11.6.12) Comment

Since the entering of a supplier in Braskem bid process, we start a screening according to minimum requirements and basic ESG criteria. To reinforce social-environmental screening with a more specific and specialized ESG tool, we consolidated our partnership with Ecovadis, one of the world's largest global supply chain sustainability rating companies, to evaluate the environmental, social and governance management of the supplier base. In 2023, we were accounting more than 500 companies being evaluated by Ecovadis. We also have on engagement suppliers in the assessment of CDP Supply Chain Climate and CDP Supply Chain Water.

Water

(5.11.6.1) Environmental requirement

Select from:

☑ Regular environmental risk assessments (at least once annually)

(5.11.6.2) Mechanisms for monitoring compliance with this environmental requirement

Select all that apply

☑ Supplier scorecard or rating

☑ Supplier self-assessment

(5.11.6.3) % tier 1 suppliers by procurement spend required to comply with this environmental requirement

Select from:

☑ 100%

(5.11.6.4) % tier 1 suppliers by procurement spend in compliance with this environmental requirement

Select from:

☑ 100%

(5.11.6.5) % tier 1 suppliers with substantive environmental dependencies and/or impacts related to this environmental issue required to comply with this environmental requirement

Select from:

☑ None

(5.11.6.6) % tier 1 suppliers with substantive environmental dependencies and/or impacts related to this environmental issue that are in compliance with this environmental requirement

Select from:

☑ 100%

(5.11.6.9) Response to supplier non-compliance with this environmental requirement

Select from:

☑ Retain and engage

(5.11.6.10) % of non-compliant suppliers engaged

Select from:

☑ 100%

(5.11.6.11) Procedures to engage non-compliant suppliers

Select all that apply

☑ Assessing the efficacy and efforts of non-compliant supplier actions through consistent and quantified metrics

☑ Developing quantifiable, time-bound targets and milestones to bring suppliers back into compliance

☑ Providing information on appropriate actions that can be taken to address non-compliance

(5.11.6.12) Comment

Since the entering of a supplier in Braskem bid process, we start a screening according to minimum requirements and basic ESG criteria. To reinforce social-environmental screening with a more specific and specialized ESG tool, we consolidated our partnership with Ecovadis, one of the world's largest global supply chain sustainability rating companies, to evaluate the environmental, social and governance management of the supplier base. In 2023, we were accounting more than 500 companies being evaluated by Ecovadis. We also have on engagement suppliers in the assessment of CDP Supply Chain Climate and CDP Supply Chain Water.
Integrated Report: https://www.braskem.com/usa/2023-integrated-report – pag. 72 and 74
[Add row]

(5.11.7) Provide further details of your organization's supplier engagement on environmental issues.

Climate change

(5.11.7.2) Action driven by supplier engagement

Select from:

☑ Emissions reduction

(5.11.7.3) Type and details of engagement

Capacity building

☑ Provide training, support and best practices on how to mitigate environmental impact

☑ Support suppliers to develop public time-bound action plans with clear milestones

☑ Support suppliers to set their own environmental commitments across their operations

(5.11.7.4) Upstream value chain coverage

Select all that apply

☑ Tier 1 suppliers

(5.11.7.5) % of tier 1 suppliers by procurement spend covered by engagement

Select from:

☑ 1-25%

(5.11.7.6) % of tier 1 supplier-related scope 3 emissions covered by engagement

Select from:

☑ 1-25%

(5.11.7.9) Describe the engagement and explain the effect of your engagement on the selected environmental action

Engagement consists of annually inviting selected critical suppliers to respond to a questionnaire about their strategy and results, with the support of CDP Supply Chain. With the answers, it is possible to assess the stage of each supplier, whether it is still identifying impacts, whether it has already defined indicators and goals, *whether it is already implementing initiatives to reduce the impact, and it is also possible to identify, in the view of these suppliers, which would be the most relevant risks, where Braskem can support in monitoring actions to mitigate these risks.*

(5.11.7.10) Engagement is helping your tier 1 suppliers meet an environmental requirement related to this environmental issue

Select from:

☑ Yes, please specify the environmental requirement

(5.11.7.11) Engagement is helping your tier 1 suppliers engage with their own suppliers on the selected action

Select from:

☑ Yes

Water

(5.11.7.2) Action driven by supplier engagement

Select from:

☑ Waste and resource reduction and improved end-of-life management

(5.11.7.3) Type and details of engagement

Capacity building

☑ Provide training, support and best practices on how to mitigate environmental impact

☑ Support suppliers to develop public time-bound action plans with clear milestones

☑ Support suppliers to set their own environmental commitments across their operations

Information collection

☑ Collect environmental risk and opportunity information at least annually from suppliers

☑ Collect GHG emissions data at least annually from suppliers

☑ Collect targets information at least annually from suppliers

☑ Collect water quality information at least annually from suppliers (e.g., discharge quality, pollution incidents, hazardous substances)

☑ Collect water quantity information at least annually from suppliers (e.g., withdrawal and discharge volumes)

Innovation and collaboration

☑ Run a campaign to encourage innovation to reduce environmental impacts on products and services

☑ Other innovation and collaboration activity, please specify

(5.11.7.4) Upstream value chain coverage

Select all that apply

☑ Tier 1 suppliers

(5.11.7.5) % of tier 1 suppliers by procurement spend covered by engagement

Select from:

☑ 1-25%

(5.11.7.7) % tier 1 suppliers with substantive impacts and/or dependencies related to this environmental issue covered by engagement

Select from:

☑ 1-25%

(5.11.7.9) Describe the engagement and explain the effect of your engagement on the selected environmental action

Engagement consists of annually inviting selected critical suppliers to respond to a questionnaire about their strategy and results, with the support of CDP Supply Chain. With the answers, it is possible to assess the stage of each supplier, whether it is still identifying impacts, whether it has already defined indicators and goals, whether it is already implementing initiatives to reduce the impact, and it is also possible to identify, in the view of these suppliers, which would be the most relevant risks, where Braskem can support in monitoring actions to mitigate these risks.

(5.11.7.10) Engagement is helping your tier 1 suppliers meet an environmental requirement related to this environmental issue

Select from:

☑ Yes, please specify the environmental requirement :water risk management

(5.11.7.11) Engagement is helping your tier 1 suppliers engage with their own suppliers on the selected action

Select from:

☑ Yes

[Add row]

(5.11.9) Provide details of any environmental engagement activity with other stakeholders in the value chain.

Climate change

(5.11.9.1) Type of stakeholder

Select from:

☑ Customers

(5.11.9.2) Type and details of engagement

Innovation and collaboration

☑ Run a campaign to encourage innovation to reduce environmental impacts

(5.11.9.3) % of stakeholder type engaged

Select from:

☑ 1-25%

(5.11.9.4) % stakeholder-associated scope 3 emissions

Select from:

☑ 26-50%

(5.11.9.5) Rationale for engaging these stakeholders and scope of engagement

Using the Life Cycle Analysis (LCA) tool, Braskem selects clients that show the best opportunities for developing new products or solutions that prove to be a better option with a lower environmental impact. We prioritize this group because there are more opportunities to reduce emissions, through redesign of packaging and products, bringing environmental benefits, including the reduction of emissions.

(5.11.9.6) Effect of engagement and measures of success

In relation to customers, Braskem use tools such as Life Cycle Analysis (LCA) and Carbon Footprint to calculate results of its main products, offering these to all customers that ask for them. In addition, the company offers carbon footprint calculation to any customer that requests it. To measure the success of this type of engagement, Braskem evaluates the number of LCA studies performed and provided to its customers. Throughout 2023, we completed 13 life cycle assessment studies. By 2023, Braskem had completed 129 LCA projects in partnership with its customers. Braskem also publishes its GHG inventory annually to customers. For some customers, Braskem even registers GHG emissions (from the plant where the purchased products were produced) on the customer system itself. Braskem also has Brazil's first packaging development center for the circular economy: Cazoolo. Its main goal is to design and develop improvements for the entire packaging journey – from conception to post-consumer. There Braskem wants to bring together all the links in the production chain, such as clients, brand owners, designers, startups and universities, so that they can create and co-create projects that aim at the complete circularity of their products, reducing environmental impacts and leveraging innovations with technology. The initiative has already started to reap good results, with packaging solutions developed and available for the market.The success metric is the percentage of completion of p

Water

(5.11.9.1) Type of stakeholder

Select from:

☑ Customers

(5.11.9.2) Type and details of engagement

Innovation and collaboration

☑ Encourage collaborative work in multi-stakeholder landscape towards initiatives for sustainable land-use goals

(5.11.9.3) % of stakeholder type engaged

Select from:

☑ Less than 1%

(5.11.9.5) Rationale for engaging these stakeholders and scope of engagement

Customers are chosen because they are in the value chain and joint action has greater potential. So, to engage, we invite customers who withdraw water in the same watershed as our operations and participate in the same Braskem forums, such as the CEBDS water technical group, the Global Compact technical group, among others

(5.11.9.6) Effect of engagement and measures of success

Number of drainage basins with high water risk with collective actions implemented and in progress. The result will both positively impact Braskem's operations and increase the water resilience of the communities surrounding the drainage basins with collective actions being implemented. METRICS: Number of watersheds with high water risk with collective actions implemented or in progress. PROJECTS: Braskem is identifying a collective action project, in the watersheds of Rio de Janeiro and Sao Paulo, in Brazil, which have a high water risk, to start in 2024. The result will positively impact Braskem's operations and increase the water resilience of the communities surrounding the river basins with the implementation of collective actions. The success metric is the percentage of completion of project planning and customer initiatives. The goal is to achieve 100%.

Climate change

(5.11.9.1) Type of stakeholder

Select from:

☑ Investors and shareholders

(5.11.9.2) Type and details of engagement

Education/Information sharing

☑ Educate and work with stakeholders on understanding and measuring exposure to environmental risks

☑ Share information on environmental initiatives, progress and achievements

(5.11.9.3) % of stakeholder type engaged

Select from:

☑ 100%

(5.11.9.4) % stakeholder-associated scope 3 emissions

Select from:

☑ Less than 1%

(5.11.9.5) Rationale for engaging these stakeholders and scope of engagement

Braskem is a publicly traded company, which is why investors are extremely relevant stakeholders.

(5.11.9.6) Effect of engagement and measures of success

n addition to making all information about economic, socio-environmental performance and strategic planning available on a public website, Braskem holds meetings and sends reports to investors. The metric of success is the % of participation in planned events.

Water

(5.11.9.1) Type of stakeholder

Select from:

☑ Investors and shareholders

(5.11.9.2) Type and details of engagement

Education/Information sharing

☑ Educate and work with stakeholders on understanding and measuring exposure to environmental risks

☑ Share information on environmental initiatives, progress and achievements

(5.11.9.3) % of stakeholder type engaged

Select from:

☑ 100%

(5.11.9.5) Rationale for engaging these stakeholders and scope of engagement

Braskem is a publicly traded company, which is why investors are extremely relevant stakeholders.

(5.11.9.6) Effect of engagement and measures of success

n addition to making all information about economic, socio-environmental performance and strategic planning available on a public website, Braskem holds meetings and sends reports to investors. The metric of success is the % of participation in planned events.
[Add row]

(5.12) Indicate any mutually beneficial environmental initiatives you could collaborate on with specific CDP Supply Chain members.

Row 1

(5.12.1) Requesting member

Select from:

(5.12.2) Environmental issues the initiative relates to

Select all that apply
☑ Climate change

(5.12.4) Initiative category and type

Innovation
☑ New product or service that has a lower upstream emissions footprint

(5.12.5) Details of initiative

Initiatives related to the expansion of production capacity for Renewable solutions (PE, PP, MEG), Initiatives related to decarbonization projects, Initiatives related to Chemical and Mechanical recycling

(5.12.6) Expected benefits

Select all that apply
☑ Reduction of customers’ operational emissions (customer scope 1 & 2)

(5.12.7) Estimated timeframe for realization of benefits

Select from:

☑ > 5 years

(5.12.8) Are you able to estimate the lifetime CO2e and/or water savings of this initiative?

Select from:

☑ No

(5.12.11) Please explain

This initiative is in the planning phase, with environmental gains that will be calculated.

Row 2

(5.12.1) Requesting member

Select from:

(5.12.2) Environmental issues the initiative relates to

Select all that apply

☑ Climate change

(5.12.4) Initiative category and type

Change to provision of goods and services

☑ Reduce packaging weight

(5.12.5) Details of initiative

There is an opportunity to reduce the packaging weight

(5.12.6) Expected benefits

Select all that apply

☑ Reduction of downstream value chain emissions (own scope 3)

(5.12.7) Estimated timeframe for realization of benefits

Select from:

☑ > 5 years

(5.12.8) Are you able to estimate the lifetime CO2e and/or water savings of this initiative?

Select from:

☑ No

(5.12.11) Please explain

This initiative is in the planning phase, with environmental gains that will be calculated.

Row 3

(5.12.1) Requesting member

Select from:

(5.12.2) Environmental issues the initiative relates to

Select all that apply

☑ Climate change

(5.12.4) Initiative category and type

Innovation

☑ New product or service that has a lower upstream emissions footprint

(5.12.5) Details of initiative

Increase in the percentage of post consumer resin within the products

(5.12.6) Expected benefits

Select all that apply

☑ Lower price per unit

☑ Reduction of customers' operational emissions (customer scope 1 & 2)

☑ Reduction of downstream value chain emissions (own scope 3)

(5.12.7) Estimated timeframe for realization of benefits

Select from:

☑ > 5 years

(5.12.8) Are you able to estimate the lifetime CO2e and/or water savings of this initiative?

Select from:

☑ No

(5.12.11) Please explain

This initiative is in the planning phase, with environmental gains that will be calculated.

Row 4

(5.12.1) Requesting member

Select from:

(5.12.2) Environmental issues the initiative relates to

Select all that apply

☑ Climate change

(5.12.4) Initiative category and type

Innovation

☑ New product or service that has a lower upstream emissions footprint

(5.12.5) Details of initiative

Development of more sustainable product

(5.12.6) Expected benefits

Select all that apply

☑ Reduction of downstream value chain emissions (own scope 3)

(5.12.7) Estimated timeframe for realization of benefits

Select from:

☑ > 5 years

(5.12.8) Are you able to estimate the lifetime CO2e and/or water savings of this initiative?

Select from:

☑ No

(5.12.11) Please explain

This initiative is in the planning phase, with environmental gains that will be calculated.
[Add row]

(5.13) Has your organization already implemented any mutually beneficial environmental initiatives due to CDP Supply Chain member engagement?

	Environmental initiatives implemented due to CDP Supply Chain member engagement
	Select from: ☑ Yes

[Fixed row]

(5.13.1) Specify the CDP Supply Chain members that have prompted your implementation of mutually beneficial environmental initiatives and provide information on the initiatives.

Row 1

(5.13.1.1) Requesting member

Select from:

(5.13.1.2) Environmental issues the initiative relates to

Select all that apply
☑ Climate change

(5.13.1.4) Initiative ID

Select from:
☑ Ini1

(5.13.1.5) Initiative category and type

Change to supplier operations
☑ Increase proportion of renewable energy purchased

(5.13.1.6) Details of initiative

Since 2022, we have been supplying electrical energy to Bayer with an international energy certificate with renewability attribute (I-REC).

(5.13.1.7) Benefits achieved

Select all that apply

☑ Reduction of customers' operational emissions (customer scope 1 & 2)

(5.13.1.8) Are you able to provide figures for emissions savings or water savings in the reporting year?

Select from:

☑ No

(5.13.1.11) Please explain how success for this initiative is measured

There are periodically evaluation's meetings to measure the progress

(5.13.1.12) Would you be happy for CDP Supply Chain members to highlight this work in their external communication?

Select from:

☑ Yes

Row 2

(5.13.1.1) Requesting member

Select from:

(5.13.1.2) Environmental issues the initiative relates to

Select all that apply

☑ Climate change

(5.13.1.4) Initiative ID

Select from:
☑ Ini2

(5.13.1.5) Initiative category and type

Logistical change
☑ Consolidate logistics

(5.13.1.6) Details of initiative

Changes in logistics that contributed to the reduction of emissions from CO2 in the environment, due to international sea freight.

(5.13.1.7) Benefits achieved

Select all that apply
☑ Reduction of downstream value chain emissions (own scope 3)

(5.13.1.8) Are you able to provide figures for emissions savings or water savings in the reporting year?

Select from:
☑ No

(5.13.1.11) Please explain how success for this initiative is measured

There are periodically evaluation's meetings to measure the progress

(5.13.1.12) Would you be happy for CDP Supply Chain members to highlight this work in their external communication?

Select from:
☑ Yes

Row 3

(5.13.1.1) Requesting member

Select from:

(5.13.1.2) Environmental issues the initiative relates to

Select all that apply

☑ Climate change

(5.13.1.4) Initiative ID

Select from:

☑ Ini3

(5.13.1.5) Initiative category and type

Certification

☑ Other certification, please specify **:**Responsable Sourcing Program of Ethanol

(5.13.1.6) Details of initiative

Tetra Pak has been actively contributing over the years to the development of the Braskem Program on Responsible Ethanol Sourcing, in addition to monitoring the social and environmental sustainability practices throughout its chain to improve this process

(5.13.1.7) Benefits achieved

Select all that apply

☑ Increased transparency of upstream/downstream value chain

(5.13.1.8) Are you able to provide figures for emissions savings or water savings in the reporting year?

Select from:

☑ No

(5.13.1.11) Please explain how success for this initiative is measured

There are periodically evaluation's meetings to measure the progress

(5.13.1.12) Would you be happy for CDP Supply Chain members to highlight this work in their external communication?

Select from:

☑ Yes

Row 4

(5.13.1.1) Requesting member

Select from:

(5.13.1.2) Environmental issues the initiative relates to

Select all that apply

☑ Climate change

(5.13.1.4) Initiative ID

Select from:

☑ Ini4

(5.13.1.5) Initiative category and type

Innovation

☑ New product or service that reduces customers' products/services operational emissions

(5.13.1.6) Details of initiative

Increase in the percentage of Post- Consumer Resin in the clients products, in order to increase the recycled content

(5.13.1.7) Benefits achieved

Select all that apply

☑ Reduction of downstream value chain emissions (own scope 3)

(5.13.1.8) Are you able to provide figures for emissions savings or water savings in the reporting year?

Select from:

☑ No

(5.13.1.11) Please explain how success for this initiative is measured

There are periodically evaluation's meetings to measure the progress

(5.13.1.12) Would you be happy for CDP Supply Chain members to highlight this work in their external communication?

Select from:

☑ Yes

Row 5

(5.13.1.1) Requesting member

Select from:

(5.13.1.2) Environmental issues the initiative relates to

Select all that apply

☑ Climate change

(5.13.1.4) Initiative ID

Select from:

☑ Ini5

(5.13.1.5) Initiative category and type

Innovation

☑ New product or service that reduces customers' products/services operational emissions

(5.13.1.6) Details of initiative

Increase in the percentage of Post- Consumer Resin in the clients products, in order to increase the recycled content

(5.13.1.7) Benefits achieved

Select all that apply

☑ Reduction of downstream value chain emissions (own scope 3)

(5.13.1.8) Are you able to provide figures for emissions savings or water savings in the reporting year?

Select from:

☑ No

(5.13.1.11) Please explain how success for this initiative is measured

There are periodically evaluation's meetings to measure the progress

(5.13.1.12) Would you be happy for CDP Supply Chain members to highlight this work in their external communication?

Select from:

☑ Yes

Row 6

(5.13.1.1) Requesting member

Select from:

(5.13.1.2) Environmental issues the initiative relates to

Select all that apply

☑ Climate change

(5.13.1.4) Initiative ID

Select from:

☑ Ini5

(5.13.1.5) Initiative category and type

Innovation

☑ New product or service that has a lower upstream emissions footprint

(5.13.1.6) Details of initiative

Increase in the percentage of Post- Consumer Resin in the clients products, in order to increase the recycled content and homologation PCR in new parts instead of PP virgin

(5.13.1.7) Benefits achieved

Select all that apply

☑ Lower price per unit

☑ Reduction of customers' operational emissions (customer scope 1 & 2)

(5.13.1.8) Are you able to provide figures for emissions savings or water savings in the reporting year?

Select from:

☑ Yes, emissions savings only

(5.13.1.9) Estimated savings in the reporting year in metric tons of CO2e

345.9

(5.13.1.11) Please explain how success for this initiative is measured

There are periodically evaluation's meetings to measure the progress

(5.13.1.12) Would you be happy for CDP Supply Chain members to highlight this work in their external communication?

Select from:

☑ Yes

[Add row]

C6. Environmental Performance - Consolidation Approach

(6.1) Provide details on your chosen consolidation approach for the calculation of environmental performance data.

	Consolidation approach used	Provide the rationale for the choice of consolidation approach
Climate change	*Select from:* ☑ Operational control	*Our consolidation approach to accounting for GHG emissions is aligned with the GHG emissions Protocol*
Water	*Select from:* ☑ Operational control	*Our approach to consolidating water management indicators is aligned with the global GRI standard*
Plastics	*Select from:* ☑ Operational control	*GRI*
Biodiversity	*Select from:* ☑ Operational control	*GRI*

[Fixed row]

C7. Environmental performance - Climate Change

(7.1) Is this your first year of reporting emissions data to CDP?

Select from:

☑ No

(7.1.1) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

	Has there been a structural change?
	Select all that apply ☑ No

[Fixed row]

(7.1.2) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

	Change(s) in methodology, boundary, and/or reporting year definition?
	Select all that apply ☑ No

[Fixed row]

(7.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

Select all that apply

☑ ISO 14064-1

☑ Brazil GHG Protocol Programme

☑ The Greenhouse Gas Protocol: Scope 2 Guidance

☑ IPCC Guidelines for National Greenhouse Gas Inventories, 2006

☑ US EPA Emissions & Generation Resource Integrated Database (eGRID)

☑ The Greenhouse Gas Protocol: Corporate Value Chain (Scope 3) Standard

☑ IPIECA's Petroleum Industry Guidelines for reporting GHG emissions, 2nd edition, 2011

☑ The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

☑ Defra Environmental Reporting Guidelines: Including streamlined energy and carbon reporting guidance, 2019

☑ American Petroleum Institute Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Natural Gas Industry, 2009

☑ Other, please specify **:IPCC Guidelines for National Greenhouse Gas Inventories, 2019**

(7.3) Describe your organization's approach to reporting Scope 2 emissions.

(7.3.1) Scope 2, location-based

Select from:

☑ We are reporting a Scope 2, location-based figure

(7.3.2) Scope 2, market-based

Select from:

☑ We are reporting a Scope 2, market-based figure

(7.3.3) Comment

Although we have purchased electricity from the free market, it was only in 2019 that we decided to officially report market-based emissions from our operations.
[Fixed row]

(7.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1, Scope 2 or Scope 3 emissions that are within your selected reporting boundary which are not included in your disclosure?

Select from:

☑ No

(7.5) Provide your base year and base year emissions.

Scope 1

(7.5.1) Base year end

12/31/2020

(7.5.2) Base year emissions (metric tons CO2e)

9988101.89

(7.5.3) Methodological details

Braskem currently uses an average of Scope 1 emissions from 2018 to 2020 as a base for its emission reduction goals. The Scope 1 emissions are as follows: 2018 (10,192,253 tCO2e), 2019 (9,750,862 tCO2e) and 2020 (10.021.191 tCO2e).

Scope 2 (location-based)

(7.5.1) Base year end

12/31/2020

(7.5.2) Base year emissions (metric tons CO2e)

0

(7.5.3) Methodological details

Braskem uses Scope 2 market-based in its targets;

Scope 2 (market-based)

(7.5.1) Base year end

12/31/2020

(7.5.2) Base year emissions (metric tons CO2e)

766314.79

(7.5.3) Methodological details

Braskem currently uses an average of Scope 2 emissions from 2018 to 2020. The Scope 2 emissions are as follows: 2018 (732,025 tCO2e), 2019 (801,633 tCO2e) and 2020 (765,287 tCO2e).

Scope 3 category 1: Purchased goods and services

(7.5.1) Base year end

12/31/2021

(7.5.2) Base year emissions (metric tons CO2e)

13079946.57

(7.5.3) Methodological details

Braskem applies the rolling base year method for Scope 3, always considering the previous year to measure performance.

Scope 3 category 2: Capital goods

(7.5.1) Base year end

12/31/2021

(7.5.2) Base year emissions (metric tons CO2e)

499612.58

(7.5.3) Methodological details

Braskem applies the rolling base year method for Scope 3, always considering the previous year to measure performance.

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)

(7.5.1) Base year end

12/31/2021

(7.5.2) Base year emissions (metric tons CO2e)

787530.64

(7.5.3) Methodological details

Braskem applies the rolling base year method for Scope 3, always considering the previous year to measure performance.

Scope 3 category 4: Upstream transportation and distribution

(7.5.1) Base year end

12/31/2021

(7.5.2) Base year emissions (metric tons CO2e)

1056346.5

(7.5.3) Methodological details

Braskem applies the rolling base year method for Scope 3, always considering the previous year to measure performance.

Scope 3 category 5: Waste generated in operations

(7.5.1) Base year end

12/31/2021

(7.5.2) Base year emissions (metric tons CO2e)

38188.88

(7.5.3) Methodological details

Braskem applies the rolling base year method for Scope 3, always considering the previous year to measure performance.

Scope 3 category 6: Business travel

(7.5.1) Base year end

12/31/2021

(7.5.2) Base year emissions (metric tons CO2e)

1773.99

(7.5.3) Methodological details

Braskem applies the rolling base year method for Scope 3, always considering the previous year to measure performance.

Scope 3 category 7: Employee commuting

(7.5.1) Base year end

12/31/2021

(7.5.2) Base year emissions (metric tons CO2e)

9620.05

(7.5.3) Methodological details

Braskem applies the rolling base year method for Scope 3, always considering the previous year to measure performance.

Scope 3 category 8: Upstream leased assets

(7.5.1) Base year end

12/31/2021

(7.5.2) Base year emissions (metric tons CO2e)

0.61

(7.5.3) Methodological details

Braskem applies the rolling base year method for Scope 3, always considering the previous year to measure performance.

Scope 3 category 9: Downstream transportation and distribution

(7.5.1) Base year end

12/31/2021

(7.5.2) Base year emissions (metric tons CO2e)

273426.71

(7.5.3) Methodological details

Braskem applies the rolling base year method for Scope 3, always considering the previous year to measure performance.

Scope 3 category 10: Processing of sold products

(7.5.1) Base year end

12/31/2021

(7.5.2) Base year emissions (metric tons CO2e)

8438264.43

(7.5.3) Methodological details

Braskem applies the rolling base year method for Scope 3, always considering the previous year to measure performance.

Scope 3 category 11: Use of sold products

(7.5.1) Base year end

12/31/2021

(7.5.2) Base year emissions (metric tons CO2e)

3759706.87

(7.5.3) Methodological details

Braskem applies the rolling base year method for Scope 3, always considering the previous year to measure performance.

Scope 3 category 12: End of life treatment of sold products

(7.5.1) Base year end

12/31/2021

(7.5.2) Base year emissions (metric tons CO2e)

1910766.84

(7.5.3) Methodological details

Braskem applies the rolling base year method for Scope 3, always considering the previous year to measure performance.

Scope 3 category 13: Downstream leased assets

(7.5.1) Base year end

12/31/2021

(7.5.2) Base year emissions (metric tons CO2e)

0.0

(7.5.3) Methodological details

Braskem applies the rolling base year method for Scope 3, always considering the previous year to measure performance. Even though we currently don't have emissions related to Downstream leased assets, emissions from this category are treated, monitored, and if applicable quantified, and included in the inventory annually.

Scope 3 category 14: Franchises

(7.5.1) Base year end

12/31/2021

(7.5.2) Base year emissions (metric tons CO2e)

0.0

(7.5.3) Methodological details

Braskem applies the rolling base year method for Scope 3, always considering the previous year to measure performance. Even though we currently don't have emissions related to Downstream leased assets, emissions from this category are treated, monitored, and if applicable quantified, and included in the inventory annually.

Scope 3 category 15: Investments

(7.5.1) Base year end

12/31/2021

(7.5.2) Base year emissions (metric tons CO2e)

265517.13

(7.5.3) Methodological details

Braskem applies the rolling base year method for Scope 3, always considering the previous year to measure performance.

Scope 3: Other (upstream)

(7.5.1) Base year end

12/31/2021

(7.5.2) Base year emissions (metric tons CO2e)

0

(7.5.3) Methodological details

Not applicable.

Scope 3: Other (downstream)

(7.5.1) Base year end

12/31/2021

(7.5.2) Base year emissions (metric tons CO2e)

0

(7.5.3) Methodological details

Not applicable
[Fixed row]

(7.6) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

	Gross global Scope 1 emissions (metric tons CO2e)	Methodological details
Reporting year	*9316492.38*	*N/A*

[Fixed row]

(7.7) What were your organization's gross global Scope 2 emissions in metric tons CO2e?

	Gross global Scope 2, location-based emissions (metric tons CO2e)	Gross global Scope 2, market-based emissions (metric tons CO2e) (if applicable)	Methodological details
Reporting year	*819864.12*	*553004.08*	*N/A*

[Fixed row]

(7.8) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

12854726.34

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Supplier-specific method

☑ Hybrid method

(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

(7.8.5) Please explain

Data Source: primary data gathered from Braskem’s database of purchased goods and services Emission Factors: Cradle to Gate emission factors from Ecoinvent and specific regional emission factors developed by CarbonMinds Boundaries: considers about 91% (materiality principle) of all good and services purchased by Braskem in 2023 in total volume.

Capital goods

(7.8.1) Evaluation status

Select from:

☑ Not relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

0

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Spend-based method

(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

(7.8.5) Please explain

It is not relevant because during the period considered there were no significant acquisitions of capital goods.

Fuel-and-energy-related activities (not included in Scope 1 or 2)

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

591725

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Supplier-specific method

☑ Fuel-based method

(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

(7.8.5) Please explain

Data Source: primary data gathered from Braskem's operations Emission Factors: Cradle to Gate emission factors from Ecoinvent and UK Defra databases and official electricity grid emissions factor and losses reported by Energy Agencies from the countries that we have operations Boundaries: considers 100% of Braskem's Fuel-and energy-related activities from categories A, C and D.

Upstream transportation and distribution

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

1354471.39

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Fuel-based method

☑ Distance-based method

(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

(7.8.5) Please explain

Data Source: primary data gathered from Braskem's internal database, considering total distance and total volume transported by product type and fleet type Emission Factors: T.KM emission factors from UK Defra; KM emission factors from UK Defra; Direct fuel consumption emission factors from ship suppliers. Boundaries: considers 100% of Braskem's upstream transportation and distribution.

Waste generated in operations

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

26134.78

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Waste-type-specific method

(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

(7.8.5) Please explain

Data Source: primary data gathered from Braskem's industrial facilities Emission Factors: IPCC 2019 Guidelines. Boundaries: considers 100% of Braskem's operations waste and wastewater disposal and treatment.

Business travel

(7.8.1) Evaluation status

Select from:

☑ Not relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

2202.82

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Distance-based method

(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

(7.8.5) Please explain

Data Source: primary data gathered from Braskem's travel agency Emission Factors: UK Defra Boundaries: considers 100% of Braskem's business travels

Employee commuting

(7.8.1) Evaluation status

Select from:

☑ Not relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

9172.91

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Fuel-based method

☑ Distance-based method

(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

(7.8.5) Please explain

Data Source: primary data gathered from Braskem's human resources database Emission Factors: GHG Protocol Brazilian Program (IPCC) Boundaries: considers only Braskem's chartered buses transportation within Brazilian industrial facilities.

Upstream leased assets

(7.8.1) Evaluation status

Select from:

☑ Not relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

129.38

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Asset-specific method

(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

(7.8.5) Please explain

Data Source: primary data gathered from Braskem's facility's management database Emission Factors: Brazilian national GRID Boundaries: considers only the electricity consumed in Braskem's leased distribution centers.

Downstream transportation and distribution

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

237782.99

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Fuel-based method

☑ Distance-based method

(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

(7.8.5) Please explain

Data Source: primary data gathered from Braskem’s internal database, considering total distance and total volume transported by product type and fleet type
Emission Factors: T.KM emission factors from UK Defra; KM emission factors from UK Defra; Direct fuel consumption emission factors from ship suppliers.
Boundaries: considers 100% of Braskem’s downstream transportation and distribution.

Processing of sold products

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

6373029.3

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Average data method

(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

(7.8.5) Please explain

Data Source: primary data gathered from Braskem's database of total sold products; secondary categorization of sales volume allocation per type of plastics transformation processes Emission Factors: Gate to Gate emission factors from Ecoinvent considering four types of production process for plastics transformation Boundaries: considers 100% of Braskem sold resins (chemical products are not included - not material and too heterogeneous).

Use of sold products

(7.8.1) Evaluation status

Select from:
☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

3745343.55

(7.8.3) Emissions calculation methodology

Select all that apply
☑ Methodology for direct use phase emissions, please specify

(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

(7.8.5) Please explain

Data Source: primary data gathered from Braskem's database of total volume of fuels sold by type. Emission Factors: Fuel emission factors from IPCC 2019

End of life treatment of sold products

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

2109961.68

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Average data method

(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

(7.8.5) Please explain

Data Source: primary data gathered from Braskem’s database of total volume, type and geography destination of resins sold; secondary data of plastics recycling, incineration and landfilled rates by geography destiny Emission Factors: Cradle to Gate emission factors from Ecoinvent for each type of resin and destination Boundaries: considers 100% of Braskem sold resins (chemicals products are not material and too heterogeneous

Downstream leased assets

(7.8.1) Evaluation status

Select from:

☑ Not relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

0

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Lessor-specific method

(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

(7.8.5) Please explain

There are no leased assets downstream.

Franchises

(7.8.1) Evaluation status

Select from:

☑ Not relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

0

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Franchise-specific method

(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

(7.8.5) Please explain

There is no franchise operation/business in Braskem's Business.

Investments

(7.8.1) Evaluation status

Select from:

☑ Relevant, calculated

(7.8.2) Emissions in reporting year (metric tons CO2e)

508570.42

(7.8.3) Emissions calculation methodology

Select all that apply

☑ Investment-specific method

(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

(7.8.5) Please explain

Data Source: secondary data considering company's financial statements (revenue). Emission Factors: secondary data based on industry average of tCO2e emitted per dollars. Boundaries: all companies that Braskem has participation but not operational control

Other (upstream)

(7.8.1) Evaluation status

Select from:

☑ Not evaluated

(7.8.5) Please explain

Not Applicable

Other (downstream)

(7.8.1) Evaluation status

Select from:

☑ Not evaluated

(7.8.5) Please explain

Not Applicable

[Fixed row]

(7.9) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	*Select from:* ☑ Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	*Select from:* ☑ Third-party verification or assurance process in place
Scope 3	*Select from:* ☑ Third-party verification or assurance process in place

[Fixed row]

(7.9.1) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.

Row 1

(7.9.1.1) Verification or assurance cycle in place

Select from:

☑ Annual process

(7.9.1.2) Status in the current reporting year

Select from:

☑ Complete

(7.9.1.3) Type of verification or assurance

Select from:

☑ Limited assurance

(7.9.1.4) Attach the statement

1377678 - 02 - 1377678 - 02 - CDP-verification-BRASKEM-2023_CLIENTE.pdf

(7.9.1.5) Page/section reference

All pages

(7.9.1.6) Relevant standard

Select from:

☑ ABNT NBR ISO 14064-3:2007 (Associação Brasileira de Normas Técnicas)

(7.9.1.7) Proportion of reported emissions verified (%)

100
[Add row]

(7.9.2) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

Row 1

(7.9.2.1) Scope 2 approach

Select from:

☑ Scope 2 market-based

(7.9.2.2) Verification or assurance cycle in place

Select from:

☑ Annual process

(7.9.2.3) Status in the current reporting year

Select from:

☑ Complete

(7.9.2.4) Type of verification or assurance

Select from:

☑ Limited assurance

(7.9.2.5) Attach the statement

1377678 - 02 - 1377678 - 02 - CDP-verification-BRASKEM-2023_CLIENTE.pdf

(7.9.2.6) Page/ section reference

All pages

(7.9.2.7) Relevant standard

Select from:
☑ ABNT NBR ISO 14064-3:2007 (Associação Brasileira de Normas Técnicas)

(7.9.2.8) Proportion of reported emissions verified (%)

100
[Add row]

(7.9.3) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Row 1

(7.9.3.1) Scope 3 category

Select all that apply
☑ Scope 3: Franchises
☑ Scope 3: Investments
☑ Scope 3: Capital goods
☑ Scope 3: Business travel
☑ Scope 3: Employee commuting
☑ Scope 3: Waste generated in operations
☑ Scope 3: End-of-life treatment of sold products
☑ Scope 3: Upstream transportation and distribution
☑ Scope 3: Downstream transportation and distribution
☑ Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)
☑ Scope 3: Use of sold products
☑ Scope 3: Upstream leased assets
☑ Scope 3: Downstream leased assets
☑ Scope 3: Processing of sold products
☑ Scope 3: Purchased goods and services

(7.9.3.2) Verification or assurance cycle in place

Select from:
☑ Annual process

(7.9.3.3) Status in the current reporting year

Select from:
☑ Complete

(7.9.3.4) Type of verification or assurance

Select from:
☑ Limited assurance

(7.9.3.5) Attach the statement

1377678 - 02 - 1377678 - 02 - CDP-verification-BRASKEM-2023_CLIENTE.pdf

(7.9.3.6) Page/section reference

All pages

(7.9.3.7) Relevant standard

Select from:
☑ ABNT NBR ISO 14064-3:2007 (Associação Brasileira de Normas Técnicas)

(7.9.3.8) Proportion of reported emissions verified (%)

100
[Add row]

(7.10) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Select from:
☑ Decreased

(7.10.1) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

Change in renewable energy consumption

(7.10.1.1) Change in emissions (metric tons CO2e)

43666.1

(7.10.1.2) Direction of change in emissions

Select from:
☑ Decreased

(7.10.1.3) Emissions value (percentage)

0.44

(7.10.1.4) Please explain calculation

*There was a 43,666.1 tCO2e reduction compared to 2022 due to the consumption of an additional amount of MWh of renewable electricity. The total Scope 12 emissions of 2023 are 9,869,496.46 tCO2e, therefore we arrived at 0.44% through (43,666.1/9,869,496.46) * 100 0.44%.*

Other emissions reduction activities

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:
☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

No material change in 2023.

Divestment

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:

☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

No material change in 2023.

Acquisitions

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:

☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

No material change in 2023.

Mergers

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:

☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

No material change in 2023.

Change in output

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:

☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

No material change in 2023.

Change in methodology

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:
☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

No material change in 2023.

Change in boundary

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:

☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

No material change in 2023.

Change in physical operating conditions

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:

☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

No material change in 2023.

Unidentified

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:
☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

Not applicable.

Other

(7.10.1.1) Change in emissions (metric tons CO2e)

0

(7.10.1.2) Direction of change in emissions

Select from:
☑ No change

(7.10.1.3) Emissions value (percentage)

0

(7.10.1.4) Please explain calculation

Not applicable
[Fixed row]

(7.10.2) Are your emissions performance calculations in 7.10 and 7.10.1 based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Select from:
☑ Market-based

(7.12) Are carbon dioxide emissions from biogenic carbon relevant to your organization?

Select from:
☑ No

(7.15) Does your organization break down its Scope 1 emissions by greenhouse gas type?

Select from:
☑ Yes

(7.15.1) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used global warming potential (GWP).

Row 1

(7.15.1.1) Greenhouse gas

Select from:
☑ CO_2

(7.15.1.2) Scope 1 emissions (metric tons of CO_2e)

9135076.94

(7.15.1.3) GWP Reference

Select from:
☑ IPCC Fifth Assessment Report (AR5 – 100 year)

Row 2

(7.15.1.1) Greenhouse gas

Select from:

☑ CH4

(7.15.1.2) Scope 1 emissions (metric tons of CO2e)

989.36

(7.15.1.3) GWP Reference

Select from:

☑ IPCC Fifth Assessment Report (AR5 – 100 year)

Row 3

(7.15.1.1) Greenhouse gas

Select from:

☑ N2O

(7.15.1.2) Scope 1 emissions (metric tons of CO2e)

162.15

(7.15.1.3) GWP Reference

Select from:

☑ IPCC Fifth Assessment Report (AR5 – 100 year)

Row 4

(7.15.1.1) Greenhouse gas

Select from:
☑ HFCs

(7.15.1.2) Scope 1 emissions (metric tons of CO2e)

116.46

(7.15.1.3) GWP Reference

Select from:
☑ IPCC Fifth Assessment Report (AR5 – 100 year)

Row 5

(7.15.1.1) Greenhouse gas

Select from:
☑ SF6

(7.15.1.2) Scope 1 emissions (metric tons of CO2e)

0.02

(7.15.1.3) GWP Reference

Select from:
☑ IPCC Fifth Assessment Report (AR5 – 100 year)
[Add row]

(7.16) Break down your total gross global Scope 1 and 2 emissions by country/area.

	Scope 1 emissions (metric tons CO2e)	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Brazil	*7955627.52*	*400055.624*	*243592.33*
Germany	*6085.845*	*68198.894*	*18035.367*
Mexico	*1179344.55*	*30061.88*	*30061.88*
United States of America	*123114.04*	*316122.708*	*255889.489*

[Fixed row]

(7.17) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

Select all that apply

☑ By business division

☑ By facility

(7.17.1) Break down your total gross global Scope 1 emissions by business division.

	Business division	Scope 1 emissions (metric ton CO2e)
Row 1	*Others*	*76070.17*
Row 2	*Polyethylene*	*136672.45*
Row 3	*Polypropylene*	*175233.04*
Row 4	*Vinyls and Chloride*	*537503.85*
Row 5	*Crackers*	*8391012.87*

[Add row]

(7.17.2) Break down your total gross global Scope 1 emissions by business facility.

Row 1

(7.17.2.1) Facility

PVC 1 BA

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

121900.38

(7.17.2.3) Latitude

-12.6535

(7.17.2.4) Longitude

-38.3165

Row 3

(7.17.2.1) Facility

PE 7 ABC

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

4556.11

(7.17.2.3) Latitude

-23.6458

(7.17.2.4) Longitude

-46.4885

Row 4

(7.17.2.1) Facility

PP 4 ABC

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

29915.8

(7.17.2.3) Latitude

-23.6392

(7.17.2.4) Longitude

-46.467

Row 5

(7.17.2.1) Facility

PP 8 USA

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

71012.83

(7.17.2.3) Latitude

29.7024

(7.17.2.4) Longitude

-95.0803

Row 6

(7.17.2.1) Facility

PP 1 RS

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

5474.59

(7.17.2.3) Latitude

-29.8858

(7.17.2.4) Longitude

-51.3937

Row 7

(7.17.2.1) Facility

PP 5 DCX

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

1867.06

(7.17.2.3) Latitude

-22.713

(7.17.2.4) Longitude

-43.2427

Row 8

(7.17.2.1) Facility

PP 2 RS

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

3116.99

(7.17.2.3) Latitude

-29.873

(7.17.2.4) Longitude

-51.3989

Row 9

(7.17.2.1) Facility

CS 2 BA

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

23.35

(7.17.2.3) Latitude

-12.6557

(7.17.2.4) Longitude

-38.3071

Row 10

(7.17.2.1) Facility

CETREL/DAC

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

52320.43

(7.17.2.3) Latitude

-12.708029

(7.17.2.4) Longitude

-38.317329

Row 11

(7.17.2.1) Facility

CS 1 AL

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

146546.16

(7.17.2.3) Latitude

-9.672

(7.17.2.4) Longitude

-35.7466

Row 12

(7.17.2.1) Facility

PVC 2 AL

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

276314.79

(7.17.2.3) Latitude

-9.6697

(7.17.2.4) Longitude

-35.8248

Row 13

(7.17.2.1) Facility

PE 4 RS

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

5007.16

(7.17.2.3) Latitude

-29.872

(7.17.2.4) Longitude

-51.3992

Row 14

(7.17.2.1) Facility

Corporate

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

21359.44

(7.17.2.3) Latitude

-23.5711

(7.17.2.4) Longitude

-46.7032

Row 15

(7.17.2.1) Facility

PP 9 USA

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

8628.66

(7.17.2.3) Latitude

39.8149

(7.17.2.4) Longitude

-75.4267

Row 16

(7.17.2.1) Facility

PE 8 CUB

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

831.48

(7.17.2.3) Latitude

-23.856

(7.17.2.4) Longitude

-46.4132

Row 17

(7.17.2.1) Facility

Q3 ABC

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

1407379.84

(7.17.2.3) Latitude

-23.6393

(7.17.2.4) Longitude

-46.4864

Row 18

(7.17.2.1) Facility

PP 11 GER

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

1990.16

(7.17.2.3) Latitude

50.8423

(7.17.2.4) Longitude

6.9455

Row 19

(7.17.2.1) Facility

PP 12 GER

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

4095.68

(7.17.2.3) Latitude

51.3945

(7.17.2.4) Longitude

11.974

Row 20

(7.17.2.1) Facility

PP 13 USA

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

4219.49

(7.17.2.3) Latitude

28.9338

(7.17.2.4) Longitude

-95.3361

Row 21

(7.17.2.1) Facility

PP 7 USA

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

29115.1

(7.17.2.3) Latitude

38.3298

(7.17.2.4) Longitude

-82.5837

Row 22

(7.17.2.1) Facility

PE 3 BA

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

38056.62

(7.17.2.3) Latitude

-12.6538

(7.17.2.4) Longitude

-38.3193

Row 23

(7.17.2.1) Facility

PP 3 PLN

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

5658.7

(7.17.2.3) Latitude

-22.7181

(7.17.2.4) Longitude

-47.1343

Row 24

(7.17.2.1) Facility

PE 1 BA

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

14540

(7.17.2.3) Latitude

-12.6629

(7.17.2.4) Longitude

-38.3247

Row 25

(7.17.2.1) Facility

Braskem BI MX

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

1179344.55

(7.17.2.3) Latitude

18.1348

(7.17.2.4) Longitude

-94.3698

Row 26

(7.17.2.1) Facility

Q 1 BA

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

2769528.46

(7.17.2.3) Latitude

-12.663

(7.17.2.4) Longitude

-38.3284

Row 27

(7.17.2.1) Facility

Q2 RS

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

2578211.71

(7.17.2.3) Latitude

-29.8774

(7.17.2.4) Longitude

-51.382

Row 28

(7.17.2.1) Facility

PE 2 BA

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

22279.25

(7.17.2.3) Latitude

-12.6497

(7.17.2.4) Longitude

-38.3162

Row 29

(7.17.2.1) Facility

Q4 DCX/PE 9 DCX

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

495145.33

(7.17.2.3) Latitude

-22.713

(7.17.2.4) Longitude

-43.2427

Row 30

(7.17.2.1) Facility

PE 6 RS

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

668.79

(7.17.2.3) Latitude

-29.872

(7.17.2.4) Longitude

-51.3992

Row 31

(7.17.2.1) Facility

PP 10 USA

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

10137.96

(7.17.2.3) Latitude

28.615

(7.17.2.4) Longitude

-96.6261

Row 32

(7.17.2.1) Facility

PE 5 RS

(7.17.2.2) Scope 1 emissions (metric tons CO2e)

12135.41

(7.17.2.3) Latitude

-29.873

(7.17.2.4) Longitude

-51.3989
[Add row]

(7.19) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO2e.

Chemicals production activities

(7.19.1) Gross Scope 1 emissions, metric tons CO2e

9264171.951

(7.19.3) Comment

Almost 100% of our Scope 1 emissions are for chemical production activities. The only exception are the emissions from CETREL, a wastewater and waste treatment facility.
[Fixed row]

(7.20) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

Select all that apply
☑ By business division
☑ By facility

(7.20.1) Break down your total gross global Scope 2 emissions by business division.

	Business division	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Row 1	*Others*	*2364.9*	*2364.9*
Row 2	*Polyethylene*	*187915.72*	*126667.76*
Row 4	*Crackers*	*166306.26*	*87334.52*
Row 5	*Vinyls and Chloride*	*50136.81*	*38076.4*
Row 6	*Polypropylene*	*413140.44*	*298560.51*

[Add row]

(7.20.2) Break down your total gross global Scope 2 emissions by business facility.

Row 1

(7.20.2.1) Facility

PP 4 ABC

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

3534.04

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

2662.42

Row 3

(7.20.2.1) Facility

PE 2 BA

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

1555.01

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

1178.56

Row 4

(7.20.2.1) Facility

Q4 DCX/PE9 DCX

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

9998.09

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

7524.6

Row 5

(7.20.2.1) Facility

PE 8 CUB

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

76952.08

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

76139.28

Row 6

(7.20.2.1) Facility

PP 3 PLN

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

15893.61

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

14907.32

Row 7

(7.20.2.1) Facility

PP 7 USA

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

42825

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

42825

Row 8

(7.20.2.1) Facility

PE 5 RS

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

9374.4

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

7026.3

Row 9

(7.20.2.1) Facility

PP 12 GER

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

38503.32

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

11561.22

Row 10

(7.20.2.1) Facility

PE 6 RS

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

5366.38

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

4040.99

Row 11

(7.20.2.1) Facility

PVC 1 BA

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

3272.95

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

2457.16

Row 12

(7.20.2.1) Facility

Q1 BA

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

1568.67

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

0

Row 13

(7.20.2.1) Facility

PP 2 RS

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

1939.53

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

1453.72

Row 14

(7.20.2.1) Facility

PVC 2 AL

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

8754.21

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

6736.31

Row 15

(7.20.2.1) Facility

CETREL/ DAC

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

1726.14

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

1726.14

Row 16

(7.20.2.1) Facility

Braskem BI MX

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

30061.88

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

30061.88

Row 17

(7.20.2.1) Facility

PE 3 BA

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

5084.57

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

3837.22

Row 18

(7.20.2.1) Facility

Q3 ABC

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

140028.15

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

65137.04

Row 19

(7.20.2.1) Facility

PE 1 BA

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

2287.4

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

1747.13

Row 20

(7.20.2.1) Facility

PP 11 GER

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

29695.58

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

6474.15

Row 21

(7.20.2.1) Facility

CS 1 AL

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

38105.09

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

28878.38

Row 22

(7.20.2.1) Facility

PE 7 ABC

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

55641.63

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

5209.29

Row 23

(7.20.2.1) Facility

PP 10 USA

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

24729.8

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

18286.12

Row 24

(7.20.2.1) Facility

Q2 RS

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

5205.94

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

3813.81

Row 25

(7.20.2.1) Facility

PP 5 DCX

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

2559.93

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

1919.52

Row 26

(7.20.2.1) Facility

Corporate

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

638.76

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

638.76

Row 27

(7.20.2.1) Facility

CS 2 BA

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

4.56

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

4.56

Row 28

(7.20.2.1) Facility

PP 13 USA

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

60007.02

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

60007.02

Row 29

(7.20.2.1) Facility

PP 1 RS

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

4891.73

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

3692.67

Row 30

(7.20.2.1) Facility

PE 4 RS

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

11097.77

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

8286.18

Row 31

(7.20.2.1) Facility

PP 9 USA

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

85234.71

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

62070.51

Row 32

(7.20.2.1) Facility

PP 8 USA

(7.20.2.2) Scope 2, location-based (metric tons CO2e)

103326.19

(7.20.2.3) Scope 2, market-based (metric tons CO2e)

72700.85
[Add row]

(7.21) Break down your organization’s total gross global Scope 2 emissions by sector production activity in metric tons CO2e.

Chemicals production activities

(7.21.1) Scope 2, location-based, metric tons CO2e

818137.98

(7.21.2) Scope 2, market-based (if applicable), metric tons CO2e

551277.94

(7.21.3) Comment

Almost 100% of our Scope 2 emissions are for chemical production activities. The only exception are the emissions from CETREL, a wastewater and waste treatment facility.
[Fixed row]

(7.22) Break down your gross Scope 1 and Scope 2 emissions between your consolidated accounting group and other entities included in your response.

Consolidated accounting group

(7.22.1) Scope 1 emissions (metric tons CO2e)

9316492.38

(7.22.2) Scope 2, location-based emissions (metric tons CO2e)

819864.12

(7.22.3) Scope 2, market-based emissions (metric tons CO2e)

553004.08

(7.22.4) Please explain

All emissions are consolidated in this group.

All other entities

(7.22.1) Scope 1 emissions (metric tons CO2e)

0

(7.22.2) Scope 2, location-based emissions (metric tons CO2e)

0

(7.22.3) Scope 2, market-based emissions (metric tons CO2e)

0

(7.22.4) Please explain

No relavant emissions.
[Fixed row]

(7.23) Is your organization able to break down your emissions data for any of the subsidiaries included in your CDP response?

Select from:
☑ Yes

(7.23.1) Break down your gross Scope 1 and Scope 2 emissions by subsidiary.

Row 1

(7.23.1.1) Subsidiary name

CETREL/ DAC

(7.23.1.2) Primary activity

Select from:

☑ Waste water management

(7.23.1.3) Select the unique identifier you are able to provide for this subsidiary

Select all that apply

☑ No unique identifier

(7.23.1.12) Scope 1 emissions (metric tons CO2e)

52320.43

(7.23.1.13) Scope 2, location-based emissions (metric tons CO2e)

1726.14

(7.23.1.14) Scope 2, market-based emissions (metric tons CO2e)

1726.14

(7.23.1.15) Comment

No comments.

Row 2

(7.23.1.1) Subsidiary name

Braskem Idesa

(7.23.1.2) Primary activity

Select from:

☑ Plastic products

(7.23.1.3) Select the unique identifier you are able to provide for this subsidiary

Select all that apply

☑ No unique identifier

(7.23.1.12) Scope 1 emissions (metric tons CO2e)

1179344.55

(7.23.1.13) Scope 2, location-based emissions (metric tons CO2e)

30061.88

(7.23.1.14) Scope 2, market-based emissions (metric tons CO2e)

30061.88

(7.23.1.15) Comment

Braskem Idesa is controlled by Braskem, which holds 75% of Braskem's stake, while Idesa is a partner of Braskem in the project and holds 25% of the stake.
[Add row]

(7.25) Disclose the percentage of your organization’s Scope 3, Category 1 emissions by purchased chemical feedstock.

Row 1

(7.25.1) Purchased feedstock

Select from:

☑ Naphtha

(7.25.2) Percentage of Scope 3, Category 1 tCO2e from purchased feedstock

46.6

(7.25.3) Explain calculation methodology

Naphtha is one the most relevant feedstocks for Braskems operations. Considering the amount consumed and emission factors provided by EcoInvent (The emission factor was calculated from the weighted average of the factors of naphtha purchased in 2023).

Row 2

(7.25.1) Purchased feedstock

Select from:

☑ Propane gas

(7.25.2) Percentage of Scope 3, Category 1 tCO2e from purchased feedstock

38.5

(7.25.3) Explain calculation methodology

Propane is the sum of all propane and propene acquired by Braskem in the reporting year (liquid or gas). Considering the amount consumed and emission factors provided by Ecoinvent.

Row 3

(7.25.1) Purchased feedstock

Select from:

☑ Ethane

(7.25.2) Percentage of Scope 3, Category 1 tCO2e from purchased feedstock

10.9

(7.25.3) Explain calculation methodology

Ethane is the sum of all ethane and ethylene acquired by Braskem in the reporting year. Considering the amount consumed and emission factors provided by Ecoinvent.

Row 4

(7.25.1) Purchased feedstock

Select from:

☑ Other (please specify) **:**Sodium chloride, dichlorethane and other minor additives.

(7.25.2) Percentage of Scope 3, Category 1 tCO2e from purchased feedstock

4

(7.25.3) Explain calculation methodology

Considering the amount consumed and emission factors provided by Ecoinvent.
[Add row]

(7.25.1) Disclose sales of products that are greenhouse gases.

Carbon dioxide (CO2)

(7.25.1.1) Sales, metric tons

0

(7.25.1.2) Comment

Braskem does not produce any CO2 for selling purposes.

Methane (CH4)

(7.25.1.1) Sales, metric tons

0

(7.25.1.2) Comment

Braskem does not produce any CH4 for selling purposes.

Nitrous oxide (N2O)

(7.25.1.1) Sales, metric tons

0

(7.25.1.2) Comment

Braskem does not produce any N2O for selling purposes.

Hydrofluorocarbons (HFC)

(7.25.1.1) Sales, metric tons

0

(7.25.1.2) Comment

Braskem does not produce any HFC for selling purposes.

Perfluorocarbons (PFC)

(7.25.1.1) Sales, metric tons

0

(7.25.1.2) Comment

Braskem does not produce any PFC for selling purposes.

Sulphur hexafluoride (SF6)

(7.25.1.1) Sales, metric tons

0

(7.25.1.2) Comment

Braskem does not produce any SF6 for selling purposes.

Nitrogen trifluoride (NF3)

(7.25.1.1) Sales, metric tons

0

(7.25.1.2) Comment

Braskem does not produce any NF3 for selling purposes.
[Fixed row]

(7.26) Allocate your emissions to your customers listed below according to the goods or services you have sold them in this reporting period.

Row 1

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:
☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Facility

(7.26.5) Allocation level detail

The GHG emissions were calculated taking into account the industrial site intensity of GHG emissions (tCO2e/t) and the quantity of product (t) acquired by customer through a mass allocation method.

(7.26.6) Allocation method

Select from:

☑ Allocation based on mass of products purchased

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Metric tons

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

112221.3

(7.26.9) Emissions in metric tonnes of CO2e

1433.61

(7.26.10) Uncertainty (±%)

5

(7.26.11) Major sources of emissions

Emissions from all Scope 1 emissionscategories applicable for the unit: stationary sources, mobile sources, industrial processes, fugitive emissions and wastewater treatment plant.

(7.26.12) Allocation verified by a third party?

Select from:

☑ Yes

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

*Braskem monitors the quantity and the industrial site that provides product for each of its customers. Based on this data, it was possible to estimate the emissions associated with each customer through an allocation based on mass of product purchased. The emission intensity of each site that supplies customers was multiplied by the quantity of product purchased to obtain the total emissions. E_client jΣ (i1 -; n) [emission intensity_industrial site i (tCO2e/t) * quantity of product purchased by client j from industrial site i (t)] Where: E_client j is the total emissions (tCO2e) associated with client j, and n is equal to the number of industrial sites that supply client j. By using the emission intensity in the calculation, it is assumed that the plant emits the same amount per ton of product sold, although this indicator varies (in theory) for each type of product produced by the plant. Braskem adopts the oil & gas sector's publication (IPIECA, OGP and API) "Oil Industry Guidelines for the communication of Greenhouse Effect Gas Emissions", from December/2003, as a reference to determine the global uncertainty level in the Emissions calculation. All emissions data is extracted from Braskem's GHG Inventory. Braskem develops its Inventory every year, audited by an independent third party. The results are published annually in external reports, such as Annual Report (GRI Standard), CDP Climate Change, Dow Jones Sustainability Index and Bovespa/ICO2.*

(7.26.14) Where published information has been used, please provide a reference

Our total annual emissions are disclosed in our Annual Integraed Report

Row 2

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Facility

(7.26.5) Allocation level detail

The GHG emissions were calculated taking into account the industrial site intensity of GHG emissions (tCO2e/t) and the quantity of product (t) acquired by customer through a mass allocation method.

(7.26.6) Allocation method

Select from:

☑ Allocation based on mass of products purchased

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Metric tons

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

1415

(7.26.9) Emissions in metric tonnes of CO2e

24.54

(7.26.10) Uncertainty (±%)

5

(7.26.11) Major sources of emissions

Emissions from all Scope 1 emissionscategories applicable for the unit: stationary sources, mobile sources, industrial processes, fugitive emissions and wastewater treatment plant.

(7.26.12) Allocation verified by a third party?

Select from:

☑ Yes

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

*Braskem monitors the quantity and the industrial site that provides product for each of its customers. Based on this data, it was possible to estimate the emissions associated with each customer through an allocation based on mass of product purchased. The emission intensity of each site that supplies customers was multiplied by the quantity of product purchased to obtain the total emissions. E_client jΣ (i1 -; n) [emission intensity_industrial site i (tCO2e/t) * quantity of product purchased by client j from industrial site i (t)] Where: E_client j is the total emissions (tCO2e) associated with client j, and n is equal to the number of industrial sites that supply client j. By using the emission intensity in the calculation, it is assumed that the plant emits the same amount per ton of product sold, although this indicator varies (in theory) for each type of product produced by the plant. Braskem adopts the oil & gas sector's publication (IPIECA, OGP and API) "Oil Industry Guidelines for the communication of Greenhouse Effect Gas Emissions", from December/2003, as a reference to determine the global uncertainty level in the Emissions calculation. All emissions data is extracted from Braskem's GHG Inventory. Braskem develops its Inventory every year, audited by an independent third party. The results are published annually in external reports, such as Annual Report (GRI Standard), CDP Climate Change, Dow Jones Sustainability Index and Bovespa/ICO2.*

(7.26.14) Where published information has been used, please provide a reference

Our total annual emissions are disclosed in our Annual Integraed Report

Row 3

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Facility

(7.26.5) Allocation level detail

The GHG emissions were calculated taking into account the industrial site intensity of GHG emissions (tCO2e/t) and the quantity of product (t) acquired by customer through a mass allocation method.

(7.26.6) Allocation method

Select from:

☑ Allocation based on mass of products purchased

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Metric tons

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

117729.7

(7.26.9) Emissions in metric tonnes of CO2e

2948.41

(7.26.10) Uncertainty (±%)

5

(7.26.11) Major sources of emissions

Emissions from all Scope 1 emissionscategories applicable for the unit: stationary sources, mobile sources, industrial processes, fugitive emissions and wastewater treatment plant.

(7.26.12) Allocation verified by a third party?

Select from:

☑ Yes

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

*Braskem monitors the quantity and the industrial site that provides product for each of its customers. Based on this data, it was possible to estimate the emissions associated with each customer through an allocation based on mass of product purchased. The emission intensity of each site that supplies customers was multiplied by the quantity of product purchased to obtain the total emissions. E_client jΣ (i1 -; n) [emission intensity_industrial site i (tCO2e/t) * quantity of product purchased by client j from industrial site i (t)] Where: E_client j is the total emissions (tCO2e) associated with client j, and n is equal to the number of industrial sites that supply client j. By using the emission intensity in the calculation, it is assumed that the plant emits the same amount per ton of product sold, although this indicator varies (in theory) for each type of product produced by the plant. Braskem adopts the oil & gas sector's publication (IPIECA, OGP and API) "Oil Industry Guidelines for the communication of Greenhouse Effect Gas Emissions", from December/2003, as a reference to determine the global uncertainty level in the Emissions calculation. All emissions data is extracted from Braskem's GHG Inventory. Braskem develops its Inventory every year, audited by an independent third party. The results are published annually in external reports, such as Annual Report (GRI Standard), CDP Climate Change, Dow Jones Sustainability Index and Bovespa/ICO2.*

(7.26.14) Where published information has been used, please provide a reference

Our total annual emissions are disclosed in our Annual Integraed Report

Row 4

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Facility

(7.26.5) Allocation level detail

The GHG emissions were calculated taking into account the industrial site intensity of GHG emissions (tCO2e/t) and the quantity of product (t) acquired by customer through a mass allocation method.

(7.26.6) Allocation method

Select from:

☑ Allocation based on mass of products purchased

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Metric tons

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

5900

(7.26.9) Emissions in metric tonnes of CO2e

753.77

(7.26.10) Uncertainty (±%)

5

(7.26.11) Major sources of emissions

Emissions from all Scope 1 emissionscategories applicable for the unit: stationary sources, mobile sources, industrial processes, fugitive emissions and wastewater treatment plant.

(7.26.12) Allocation verified by a third party?

Select from:

☑ Yes

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

*Braskem monitors the quantity and the industrial site that provides product for each of its customers. Based on this data, it was possible to estimate the emissions associated with each customer through an allocation based on mass of product purchased. The emission intensity of each site that supplies customers was multiplied by the quantity of product purchased to obtain the total emissions. E_client jΣ (i1 -; n) [emission intensity_industrial site i (tCO2e/t) * quantity of product purchased by client j from industrial site i (t)] Where: E_client j is the total emissions (tCO2e) associated with client j, and n is equal to the number of industrial sites that supply client j. By using the emission intensity in the calculation, it is assumed that the plant emits the same amount per ton of product sold, although this indicator varies (in theory) for each type of product produced by the plant. Braskem adopts the oil & gas sector's publication (IPIECA, OGP and API) "Oil Industry Guidelines for the communication of Greenhouse Effect Gas Emissions", from December/2003, as a reference to determine the global uncertainty level in the Emissions calculation. All emissions data is extracted from Braskem's GHG Inventory. Braskem develops its Inventory every year, audited by an independent third party. The results are published annually in external reports, such as Annual Report (GRI Standard), CDP Climate Change, Dow Jones Sustainability Index and Bovespa/ICO2.*

(7.26.14) Where published information has been used, please provide a reference

Our total annual emissions are disclosed in our Annual Integraed Report

Row 5

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Facility

(7.26.5) Allocation level detail

The GHG emissions were calculated taking into account the industrial site intensity of GHG emissions (tCO2e/t) and the quantity of product (t) acquired by customer through a mass allocation method.

(7.26.6) Allocation method

Select from:

☑ Allocation based on mass of products purchased

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Metric tons

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

4727

(7.26.9) Emissions in metric tonnes of CO2e

70.93

(7.26.10) Uncertainty (±%)

5

(7.26.11) Major sources of emissions

Emissions from all Scope 1 emissionscategories applicable for the unit: stationary sources, mobile sources, industrial processes, fugitive emissions and wastewater treatment plant.

(7.26.12) Allocation verified by a third party?

Select from:

☑ Yes

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

*Braskem monitors the quantity and the industrial site that provides product for each of its customers. Based on this data, it was possible to estimate the emissions associated with each customer through an allocation based on mass of product purchased. The emission intensity of each site that supplies customers was multiplied by the quantity of product purchased to obtain the total emissions. E_client jΣ (i1 -; n) [emission intensity_industrial site i (tCO2e/t) * quantity of product purchased by client j from industrial site i (t)] Where: E_client j is the total emissions (tCO2e) associated with client j, and n is equal to the number of industrial sites that supply client j. By using the emission intensity in the calculation, it is assumed that the plant emits the same amount per ton of product sold, although this indicator varies (in theory) for each type of product produced by the plant. Braskem adopts the oil & gas sector's publication (IPIECA, OGP and API) "Oil Industry Guidelines for the communication of Greenhouse Effect Gas Emissions", from December/2003, as a reference to determine the global uncertainty level in the Emissions calculation. All emissions data is extracted from Braskem's GHG Inventory. Braskem develops its Inventory every year, audited by an independent third party. The results are published annually in external reports, such as Annual Report (GRI Standard), CDP Climate Change, Dow Jones Sustainability Index and Bovespa/ICO2.*

(7.26.14) Where published information has been used, please provide a reference

Our total annual emissions are disclosed in our Annual Integraed Report

Row 6

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Facility

(7.26.5) Allocation level detail

The GHG emissions were calculated taking into account the industrial site intensity of GHG emissions (tCO2e/t) and the quantity of product (t) acquired by customer through a mass allocation method.

(7.26.6) Allocation method

Select from:

☑ Allocation based on mass of products purchased

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Metric tons

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

430

(7.26.9) Emissions in metric tonnes of CO2e

7.46

(7.26.10) Uncertainty (±%)

5

(7.26.11) Major sources of emissions

Emissions from all Scope 1 emissionscategories applicable for the unit: stationary sources, mobile sources, industrial processes, fugitive emissions and wastewater treatment plant.

(7.26.12) Allocation verified by a third party?

Select from:

☑ Yes

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

*Braskem monitors the quantity and the industrial site that provides product for each of its customers. Based on this data, it was possible to estimate the emissions associated with each customer through an allocation based on mass of product purchased. The emission intensity of each site that supplies customers was multiplied by the quantity of product purchased to obtain the total emissions. E_client jΣ (i1 -; n) [emission intensity_industrial site i (tCO2e/t) * quantity of product purchased by client j from industrial site i (t)] Where: E_client j is the total emissions (tCO2e) associated with client j, and n is equal to the number of industrial sites that supply client j. By using the emission intensity in the calculation, it is assumed that the plant emits the same amount per ton of product sold, although this indicator varies (in theory) for each type of product produced by the plant. Braskem adopts the oil & gas sector's publication (IPIECA, OGP and API) "Oil Industry Guidelines for the communication of Greenhouse Effect Gas Emissions", from December/2003, as a reference to determine the global uncertainty level in the Emissions calculation. All emissions data is extracted from Braskem's GHG Inventory. Braskem develops its Inventory every year, audited by an independent third party. The results are published annually in external reports, such as Annual Report (GRI Standard), CDP Climate Change, Dow Jones Sustainability Index and Bovespa/ICO2.*

(7.26.14) Where published information has been used, please provide a reference

Our total annual emissions are disclosed in our Annual Integraed Report

Row 7

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Facility

(7.26.5) Allocation level detail

The GHG emissions were calculated taking into account the industrial site intensity of GHG emissions (tCO2e/t) and the quantity of product (t) acquired by customer through a mass allocation method.

(7.26.6) Allocation method

Select from:

☑ Allocation based on mass of products purchased

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Metric tons

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

8400

(7.26.9) Emissions in metric tonnes of CO2e

1073.17

(7.26.10) Uncertainty (±%)

5

(7.26.11) Major sources of emissions

Emissions from all Scope 1 emissionscategories applicable for the unit: stationary sources, mobile sources, industrial processes, fugitive emissions and wastewater treatment plant.

(7.26.12) Allocation verified by a third party?

Select from:

☑ Yes

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

*Braskem monitors the quantity and the industrial site that provides product for each of its customers. Based on this data, it was possible to estimate the emissions associated with each customer through an allocation based on mass of product purchased. The emission intensity of each site that supplies customers was multiplied by the quantity of product purchased to obtain the total emissions. E_client jΣ (i1 -; n) [emission intensity_industrial site i (tCO2e/t) * quantity of product purchased by client j from industrial site i (t)] Where: E_client j is the total emissions (tCO2e) associated with client j, and n is equal to the number of industrial sites that supply client j. By using the emission intensity in the calculation, it is assumed that the plant emits the same amount per ton of product sold, although this indicator varies (in theory) for each type of product produced by the plant. Braskem adopts the oil & gas sector's publication (IPIECA, OGP and API) "Oil Industry Guidelines for the communication of Greenhouse Effect Gas Emissions", from December/2003, as a reference to determine the global uncertainty level in the Emissions calculation. All emissions data is extracted from Braskem's GHG Inventory. Braskem develops its Inventory every year, audited by an independent third party. The results are published annually in external reports, such as Annual Report (GRI Standard), CDP Climate Change, Dow Jones Sustainability Index and Bovespa/ICO2.*

(7.26.14) Where published information has been used, please provide a reference

Our total annual emissions are disclosed in our Annual Integraed Report

Row 8

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Facility

(7.26.5) Allocation level detail

The GHG emissions were calculated taking into account the industrial site intensity of GHG emissions (tCO2e/t) and the quantity of product (t) acquired by customer through a mass allocation method.

(7.26.6) Allocation method

Select from:

☑ Allocation based on mass of products purchased

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Metric tons

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

465

(7.26.9) Emissions in metric tonnes of CO2e

2157.65

(7.26.10) Uncertainty (±%)

5

(7.26.11) Major sources of emissions

Emissions from all Scope 1 emissionscategories applicable for the unit: stationary sources, mobile sources, industrial processes, fugitive emissions and wastewater treatment plant.

(7.26.12) Allocation verified by a third party?

Select from:

☑ Yes

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

*Braskem monitors the quantity and the industrial site that provides product for each of its customers. Based on this data, it was possible to estimate the emissions associated with each customer through an allocation based on mass of product purchased. The emission intensity of each site that supplies customers was multiplied by the quantity of product purchased to obtain the total emissions. E_client jΣ (i1 -; n) [emission intensity_industrial site i (tCO2e/t) * quantity of product purchased by client j from industrial site i (t)] Where: E_client j is the total emissions (tCO2e) associated with client j, and n is equal to the number of industrial sites that supply client j. By using the emission intensity in the calculation, it is assumed that the plant emits the same amount per ton of product sold, although this indicator varies (in theory) for each type of product produced by the plant. Braskem adopts the oil & gas sector's publication (IPIECA, OGP and API) "Oil Industry Guidelines for the communication of Greenhouse Effect Gas Emissions", from December/2003, as a reference to determine the global uncertainty level in the Emissions calculation. All emissions data is extracted from Braskem's GHG Inventory. Braskem develops its Inventory every year, audited by an independent third party. The results are published annually in external reports, such as Annual Report (GRI Standard), CDP Climate Change, Dow Jones Sustainability Index and Bovespa/ICO2.*

(7.26.14) Where published information has been used, please provide a reference

Our total annual emissions are disclosed in our Annual Integraed Report

Row 9

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Facility

(7.26.5) Allocation level detail

The GHG emissions were calculated taking into account the industrial site intensity of GHG emissions (tCO2e/t) and the quantity of product (t) acquired by customer through a mass allocation method.

(7.26.6) Allocation method

Select from:

☑ Allocation based on mass of products purchased

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Metric tons

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

6785

(7.26.9) Emissions in metric tonnes of CO2e

231.19

(7.26.10) Uncertainty (±%)

5

(7.26.11) Major sources of emissions

Emissions from all Scope 1 emissionscategories applicable for the unit: stationary sources, mobile sources, industrial processes, fugitive emissions and wastewater treatment plant.

(7.26.12) Allocation verified by a third party?

Select from:

☑ Yes

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

*Braskem monitors the quantity and the industrial site that provides product for each of its customers. Based on this data, it was possible to estimate the emissions associated with each customer through an allocation based on mass of product purchased. The emission intensity of each site that supplies customers was multiplied by the quantity of product purchased to obtain the total emissions. E_client jΣ (i1 -; n) [emission intensity_industrial site i (tCO2e/t) * quantity of product purchased by client j from industrial site i (t)] Where: E_client j is the total emissions (tCO2e) associated with client j, and n is equal to the number of industrial sites that supply client j. By using the emission intensity in the calculation, it is assumed that the plant emits the same amount per ton of product sold, although this indicator varies (in theory) for each type of product produced by the plant. Braskem adopts the oil & gas sector's publication (IPIECA, OGP and API) "Oil Industry Guidelines for the communication of Greenhouse Effect Gas Emissions", from December/2003, as a reference to determine the global uncertainty level in the Emissions calculation. All emissions data is extracted from Braskem's GHG Inventory. Braskem develops its Inventory every year, audited by an independent third party. The results are published annually in external reports, such as Annual Report (GRI Standard), CDP Climate Change, Dow Jones Sustainability Index and Bovespa/ICO2.*

(7.26.14) Where published information has been used, please provide a reference

Our total annual emissions are disclosed in our Annual Integraed Report

Row 10

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Facility

(7.26.5) Allocation level detail

The GHG emissions were calculated taking into account the industrial site intensity of GHG emissions (tCO2e/t) and the quantity of product (t) acquired by customer through a mass allocation method.

(7.26.6) Allocation method

Select from:

☑ Allocation based on mass of products purchased

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Metric tons

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

44375

(7.26.9) Emissions in metric tonnes of CO2e

5669.26

(7.26.10) Uncertainty (±%)

5

(7.26.11) Major sources of emissions

Emissions from all Scope 1 emissionscategories applicable for the unit: stationary sources, mobile sources, industrial processes, fugitive emissions and wastewater treatment plant.

(7.26.12) Allocation verified by a third party?

Select from:

☑ Yes

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

*Braskem monitors the quantity and the industrial site that provides product for each of its customers. Based on this data, it was possible to estimate the emissions associated with each customer through an allocation based on mass of product purchased. The emission intensity of each site that supplies customers was multiplied by the quantity of product purchased to obtain the total emissions. E_client jΣ (i1 -; n) [emission intensity_industrial site i (tCO2e/t) * quantity of product purchased by client j from industrial site i (t)] Where: E_client j is the total emissions (tCO2e) associated with client j, and n is equal to the number of industrial sites that supply client j. By using the emission intensity in the calculation, it is assumed that the plant emits the same amount per ton of product sold, although this indicator varies (in theory) for each type of product produced by the plant. Braskem adopts the oil & gas sector's publication (IPIECA, OGP and API) "Oil Industry Guidelines for the communication of Greenhouse Effect Gas Emissions", from December/2003, as a reference to determine the global uncertainty level in the Emissions calculation. All emissions data is extracted from Braskem's GHG Inventory. Braskem develops its Inventory every year, audited by an independent third party. The results are published annually in external reports, such as Annual Report (GRI Standard), CDP Climate Change, Dow Jones Sustainability Index and Bovespa/ICO2.*

(7.26.14) Where published information has been used, please provide a reference

Our total annual emissions are disclosed in our Annual Integraed Report

Row 11

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Facility

(7.26.5) Allocation level detail

The GHG emissions were calculated taking into account the industrial site intensity of GHG emissions (tCO2e/t) and the quantity of product (t) acquired by customer through a mass allocation method.

(7.26.6) Allocation method

Select from:

☑ Allocation based on mass of products purchased

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Metric tons

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

17554

(7.26.9) Emissions in metric tonnes of CO2e

583.37

(7.26.10) Uncertainty (±%)

5

(7.26.11) Major sources of emissions

Emissions from all Scope 1 emissionscategories applicable for the unit: stationary sources, mobile sources, industrial processes, fugitive emissions and wastewater treatment plant.

(7.26.12) Allocation verified by a third party?

Select from:

☑ Yes

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

*Braskem monitors the quantity and the industrial site that provides product for each of its customers. Based on this data, it was possible to estimate the emissions associated with each customer through an allocation based on mass of product purchased. The emission intensity of each site that supplies customers was multiplied by the quantity of product purchased to obtain the total emissions. E_client jΣ (i1 -; n) [emission intensity_industrial site i (tCO2e/t) * quantity of product purchased by client j from industrial site i (t)] Where: E_client j is the total emissions (tCO2e) associated with client j, and n is equal to the number of industrial sites that supply client j. By using the emission intensity in the calculation, it is assumed that the plant emits the same amount per ton of product sold, although this indicator varies (in theory) for each type of product produced by the plant. Braskem adopts the oil & gas sector's publication (IPIECA, OGP and API) "Oil Industry Guidelines for the communication of Greenhouse Effect Gas Emissions", from December/2003, as a reference to determine the global uncertainty level in the Emissions calculation. All emissions data is extracted from Braskem's GHG Inventory. Braskem develops its Inventory every year, audited by an independent third party. The results are published annually in external reports, such as Annual Report (GRI Standard), CDP Climate Change, Dow Jones Sustainability Index and Bovespa/ICO2.*

(7.26.14) Where published information has been used, please provide a reference

Our total annual emissions are disclosed in our Annual Integraed Report

Row 12

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Facility

(7.26.5) Allocation level detail

The GHG emissions were calculated taking into account the industrial site intensity of GHG emissions (tCO2e/t) and the quantity of product (t) acquired by customer through a mass allocation method.

(7.26.6) Allocation method

Select from:

☑ Allocation based on mass of products purchased

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Metric tons

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

6012

(7.26.9) Emissions in metric tonnes of CO2e

93.88

(7.26.10) Uncertainty (±%)

5

(7.26.11) Major sources of emissions

Emissions from all Scope 1 emissionscategories applicable for the unit: stationary sources, mobile sources, industrial processes, fugitive emissions and wastewater treatment plant.

(7.26.12) Allocation verified by a third party?

Select from:

☑ Yes

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

*Braskem monitors the quantity and the industrial site that provides product for each of its customers. Based on this data, it was possible to estimate the emissions associated with each customer through an allocation based on mass of product purchased. The emission intensity of each site that supplies customers was multiplied by the quantity of product purchased to obtain the total emissions. E_client jΣ (i1 -; n) [emission intensity_industrial site i (tCO2e/t) * quantity of product purchased by client j from industrial site i (t)] Where: E_client j is the total emissions (tCO2e) associated with client j, and n is equal to the number of industrial sites that supply client j. By using the emission intensity in the calculation, it is assumed that the plant emits the same amount per ton of product sold, although this indicator varies (in theory) for each type of product produced by the plant. Braskem adopts the oil & gas sector's publication (IPIECA, OGP and API) "Oil Industry Guidelines for the communication of Greenhouse Effect Gas Emissions", from December/2003, as a reference to determine the global uncertainty level in the Emissions calculation. All emissions data is extracted from Braskem's GHG Inventory. Braskem develops its Inventory every year, audited by an independent third party. The results are published annually in external reports, such as Annual Report (GRI Standard), CDP Climate Change, Dow Jones Sustainability Index and Bovespa/ICO2.*

(7.26.14) Where published information has been used, please provide a reference

Our total annual emissions are disclosed in our Annual Integraed Report

Row 13

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Facility

(7.26.5) Allocation level detail

The GHG emissions were calculated taking into account the industrial site intensity of GHG emissions tCO2et and the quantity of product t acquired by customer through a mass allocation method.

(7.26.6) Allocation method

Select from:

☑ Allocation based on mass of products purchased

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Metric tons

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

2350

(7.26.9) Emissions in metric tonnes of CO2e

300.23

(7.26.10) Uncertainty (±%)

5

(7.26.11) Major sources of emissions

Emissions from all Scope 1 emissionscategories applicable for the unit stationary sources mobile sources industrial processes fugitive emissions and wastewater treatment plant.

(7.26.12) Allocation verified by a third party?

Select from:

☑ Yes

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

*Braskem monitors the quantity and the industrial site that provides product for each of its customers. Based on this data, it was possible to estimate the emissions associated with each customer through an allocation based on mass of product purchased. The emission intensity of each site that supplies customers was multiplied by the quantity of product purchased to obtain the total emissions. E_client jΣ (i1 -; n) [emission intensity_industrial site i (tCO2e/t) * quantity of product purchased by client j from industrial site i (t)] Where: E_client j is the total emissions (tCO2e) associated with client j, and n is equal to the number of industrial sites that supply client j. By using the emission intensity in the calculation, it is assumed that the plant emits the same amount per ton of product sold, although this indicator varies (in theory) for each type of product produced by the plant. Braskem adopts the oil & gas sector's publication (IPIECA, OGP and API) "Oil Industry Guidelines for the communication of Greenhouse Effect Gas Emissions", from December/2003, as a reference to determine the global uncertainty level in the Emissions calculation. All emissions data is extracted from Braskem's GHG Inventory. Braskem develops its Inventory every year, audited by an independent third party. The results are published annually in external reports, such as Annual Report (GRI Standard), CDP Climate Change, Dow Jones Sustainability Index and Bovespa/ICO2.*

(7.26.14) Where published information has been used, please provide a reference

Our total annual emissions are disclosed in our Annual Integraed Report

Row 14

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Facility

(7.26.5) Allocation level detail

The GHG emissions were calculated taking into account the industrial site intensity of GHG emissions tCO2et and the quantity of product t acquired by customer through a mass allocation method.

(7.26.6) Allocation method

Select from:

☑ Allocation based on mass of products purchased

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Metric tons

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

0

(7.26.9) Emissions in metric tonnes of CO2e

0

(7.26.10) Uncertainty (±%)

0

(7.26.11) Major sources of emissions

Emissions from all Scope 1 emissionscategories applicable for the unit stationary sources mobile sources industrial processes fugitive emissions and wastewater treatment plant.

(7.26.12) Allocation verified by a third party?

Select from:

☑ Yes

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

*Braskem monitors the quantity and the industrial site that provides product for each of its customers. Based on this data, it was possible to estimate the emissions associated with each customer through an allocation based on mass of product purchased. The emission intensity of each site that supplies customers was multiplied by the quantity of product purchased to obtain the total emissions. E_client jΣ (i1 -; n) [emission intensity_industrial site i (tCO2e/t) * quantity of product purchased by client j from industrial site i (t)] Where: E_client j is the total emissions (tCO2e) associated with client j, and n is equal to the number of industrial sites that supply client j. By using the emission intensity in the calculation, it is assumed that the plant emits the same amount per ton of product sold, although this indicator varies (in theory) for each type of product produced by the plant. Braskem adopts the oil & gas sector's publication (IPIECA, OGP and API) "Oil Industry Guidelines for the communication of Greenhouse Effect Gas Emissions", from December/2003, as a reference to determine the global uncertainty level in the Emissions calculation. All emissions data is extracted from Braskem's GHG Inventory. Braskem develops its Inventory every year, audited by an independent third party. The results are published annually in external reports, such as Annual Report (GRI Standard), CDP Climate Change, Dow Jones Sustainability Index and Bovespa/ICO2.*

(7.26.14) Where published information has been used, please provide a reference

Our total annual emissions are disclosed in our Annual Integraed Report

Row 15

(7.26.1) Requesting member

Select from:

(7.26.2) Scope of emissions

Select from:

☑ Scope 1

(7.26.4) Allocation level

Select from:

☑ Facility

(7.26.5) Allocation level detail

The GHG emissions were calculated taking into account the industrial site intensity of GHG emissions tCO2et and the quantity of product t acquired by customer through a mass allocation method.

(7.26.6) Allocation method

Select from:

☑ Allocation based on mass of products purchased

(7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

☑ Metric tons

(7.26.8) Market value or quantity of goods/services supplied to the requesting member

1066

(7.26.9) Emissions in metric tonnes of CO2e

23.376

(7.26.10) Uncertainty (±%)

5

(7.26.11) Major sources of emissions

Emissions from all Scope 1 emissionscategories applicable for the unit stationary sources mobile sources industrial processes fugitive emissions and wastewater treatment plant.

(7.26.12) Allocation verified by a third party?

Select from:

☑ Yes

(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

*Braskem monitors the quantity and the industrial site that provides product for each of its customers. Based on this data, it was possible to estimate the emissions associated with each customer through an allocation based on mass of product purchased. The emission intensity of each site that supplies customers was multiplied by the quantity of product purchased to obtain the total emissions. E_client jΣ (i1 -; n) [emission intensity_industrial site i (tCO2e/t) * quantity of product purchased by client j from industrial site i (t)] Where: E_client j is the total emissions (tCO2e) associated with client j, and n is equal to the number of industrial sites that supply client j. By using the emission intensity in the calculation, it is assumed that the plant emits the same amount per ton of product sold, although this indicator varies (in theory) for each type of product produced by the plant. Braskem adopts the oil & gas sector's publication (IPIECA, OGP and API) "Oil Industry Guidelines for the communication of Greenhouse Effect Gas Emissions", from December/2003, as a reference to determine the global uncertainty level in the Emissions calculation. All emissions data is extracted from Braskem's GHG Inventory. Braskem develops its Inventory every year, audited by an independent third party. The results are published annually in external reports, such as Annual Report (GRI Standard), CDP Climate Change, Dow Jones Sustainability Index and Bovespa/ICO2.*

(7.26.14) Where published information has been used, please provide a reference

Our total annual emissions are disclosed in our Annual Integraed Report
[Add row]

(7.27) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?

Row 1

(7.27.1) Allocation challenges

Select from:

☑ Diversity of product lines makes accurately accounting for each product/product line cost ineffective

(7.27.2) Please explain what would help you overcome these challenges

Braskem is able to track emissions to the customer level, and also know exactly which product was sold to each client and which was the industrial site that produced that specific product. By using the industrial site emission intensity in the calculation, it is assumed that the industrial site emits the same amount per ton of product sold, although this indicator varies (in theory) for each type of product produced by the site. In the case of polymers, it also does not consider emissions from the upstream production of raw material (from the crackers).
[Add row]

(7.28) Do you plan to develop your capabilities to allocate emissions to your customers in the future?

(7.28.1) Do you plan to develop your capabilities to allocate emissions to your customers in the future?

Select from:

☑ Yes

(7.28.2) Describe how you plan to develop your capabilities

Braskem is developing an internal tool to calculate product carbon footprint data (PCF) based on WBCSD TfS Chemical Sector Guidelines (Specification for product Carbon Footprint and Corporate Scope 3.1 Emission Accounting and Reporting). Results are expected for 2025 and shall be specific for product type and location, but full disclosure to clients is not defined yet. In addition, updates for specific product Life Cycle Assessment (LCA) studies are performed every year. For example, Im green bio-based Polyethylene (PE) LCA was updated in December 2023 and results are publicly available on Braskems website: https://www.braskem.com.br/imgreen/carbon-footprint.

[Fixed row]

(7.29) What percentage of your total operational spend in the reporting year was on energy?

Select from:

☑ More than 5% but less than or equal to 10%

(7.30) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	*Select from:*

	Indicate whether your organization undertook this energy-related activity in the reporting year
	☑ Yes
Consumption of purchased or acquired electricity	*Select from:* ☑ Yes
Consumption of purchased or acquired heat	*Select from:* ☑ No
Consumption of purchased or acquired steam	*Select from:* ☑ Yes
Consumption of purchased or acquired cooling	*Select from:* ☑ No
Generation of electricity, heat, steam, or cooling	*Select from:* ☑ Yes

[Fixed row]

(7.30.1) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

Consumption of fuel (excluding feedstock)

(7.30.1.1) Heating value

Select from:

☑ LHV (lower heating value)

(7.30.1.2) MWh from renewable sources

24740.77

(7.30.1.3) MWh from non-renewable sources

42667244.98

(7.30.1.4) Total (renewable and non-renewable) MWh

42691985.76

Consumption of purchased or acquired electricity

(7.30.1.1) Heating value

Select from:

☑ Unable to confirm heating value

(7.30.1.2) MWh from renewable sources

3544802.21

(7.30.1.3) MWh from non-renewable sources

902155.54

(7.30.1.4) Total (renewable and non-renewable) MWh

4446957.75

Consumption of purchased or acquired steam

(7.30.1.1) Heating value

Select from:

☑ LHV (lower heating value)

(7.30.1.2) MWh from renewable sources

0

(7.30.1.3) MWh from non-renewable sources

1498608.14

(7.30.1.4) Total (renewable and non-renewable) MWh

1498608.14

Consumption of self-generated non-fuel renewable energy

(7.30.1.1) Heating value

Select from:

☑ Unable to confirm heating value

(7.30.1.2) MWh from renewable sources

0

(7.30.1.4) Total (renewable and non-renewable) MWh

0

Total energy consumption

(7.30.1.1) Heating value

Select from:

☑ LHV (lower heating value)

(7.30.1.2) MWh from renewable sources

3569542.99

(7.30.1.3) MWh from non-renewable sources

45068008.66

(7.30.1.4) Total (renewable and non-renewable) MWh

48637551.65
[Fixed row]

(7.30.3) Report your organization's energy consumption totals (excluding feedstocks) for chemical production activities in MWh.

Consumption of fuel (excluding feedstocks)

(7.30.3.1) Heating value

Select from:
☑ LHV (lower heating value)

(7.30.3.2) MWh consumed from renewable sources inside chemical sector boundary

24740.77

(7.30.3.3) MWh consumed from non-renewable sources inside chemical sector boundary (excluding recovered waste heat/gases)

42667244.98

(7.30.3.4) MWh consumed from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary

0

(7.30.3.5) Total MWh (renewable + non-renewable + MWh from recovered waste heat/gases) consumed inside chemical sector boundary

42691985.76

Consumption of purchased or acquired electricity

(7.30.3.1) Heating value

Select from:
☑ Unable to confirm heating value

(7.30.3.2) MWh consumed from renewable sources inside chemical sector boundary

3544802.21

(7.30.3.3) MWh consumed from non-renewable sources inside chemical sector boundary (excluding recovered waste heat/gases)

902155.54

(7.30.3.4) MWh consumed from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary

0

(7.30.3.5) Total MWh (renewable + non-renewable + MWh from recovered waste heat/gases) consumed inside chemical sector boundary

4446957.75

Consumption of purchased or acquired steam

(7.30.3.1) Heating value

Select from:

☑ LHV (lower heating value)

(7.30.3.2) MWh consumed from renewable sources inside chemical sector boundary

0

(7.30.3.3) MWh consumed from non-renewable sources inside chemical sector boundary (excluding recovered waste heat/gases)

1498608.14

(7.30.3.4) MWh consumed from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary

0

(7.30.3.5) Total MWh (renewable + non-renewable + MWh from recovered waste heat/gases) consumed inside chemical sector boundary

1498608.14

Consumption of self-generated non-fuel renewable energy

(7.30.3.1) Heating value

Select from:

☑ Unable to confirm heating value

(7.30.3.2) MWh consumed from renewable sources inside chemical sector boundary

0

(7.30.3.5) Total MWh (renewable + non-renewable + MWh from recovered waste heat/gases) consumed inside chemical sector boundary

0

Total energy consumption

(7.30.3.1) Heating value

Select from:
☑ Unable to confirm heating value

(7.30.3.2) MWh consumed from renewable sources inside chemical sector boundary

3569542.99

(7.30.3.3) MWh consumed from non-renewable sources inside chemical sector boundary (excluding recovered waste heat/gases)

45068008.66

(7.30.3.4) MWh consumed from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary

0

(7.30.3.5) Total MWh (renewable + non-renewable + MWh from recovered waste heat/gases) consumed inside chemical sector boundary

48637551.65
[Fixed row]

(7.30.6) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	*Select from:* ☑ Yes
Consumption of fuel for the generation of heat	*Select from:* ☑ No
Consumption of fuel for the generation of steam	*Select from:* ☑ Yes
Consumption of fuel for the generation of cooling	*Select from:* ☑ No
Consumption of fuel for co-generation or tri-generation	*Select from:* ☑ Yes

[Fixed row]

(7.30.7) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Sustainable biomass

(7.30.7.1) Heating value

Select from:
☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

22397.14

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

0

(7.30.7.5) MWh fuel consumed for self-generation of steam

22397.14

(7.30.7.6) MWh fuel consumed for self-generation of cooling

0

(7.30.7.7) MWh fuel consumed for self- cogeneration or self-trigeneration

0

(7.30.7.8) Comment

In 2023, Braskem started the biomass consumption project in the Q2 RS boiler.

Other biomass

(7.30.7.1) Heating value

Select from:

☑ Unable to confirm heating value

(7.30.7.2) Total fuel MWh consumed by the organization

0

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

0

(7.30.7.5) MWh fuel consumed for self-generation of steam

0

(7.30.7.6) MWh fuel consumed for self-generation of cooling

0

(7.30.7.7) MWh fuel consumed for self- cogeneration or self-trigeneration

0

(7.30.7.8) Comment

Not applicable.

Other renewable fuels (e.g. renewable hydrogen)

(7.30.7.1) Heating value

Select from:
☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

2343.64

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

0

(7.30.7.5) MWh fuel consumed for self-generation of steam

2343.64

(7.30.7.6) MWh fuel consumed for self-generation of cooling

0

(7.30.7.7) MWh fuel consumed for self- cogeneration or self-trigeneration

0

(7.30.7.8) Comment

Other renewable fuel is basically from the ethanol sump derived from our green PE production process.

Coal

(7.30.7.1) Heating value

Select from:
☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

1412799.74

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

0

(7.30.7.5) MWh fuel consumed for self-generation of steam

1412799.74

(7.30.7.6) MWh fuel consumed for self-generation of cooling

0

(7.30.7.7) MWh fuel consumed for self- cogeneration or self-trigeneration

0

(7.30.7.8) Comment

No additional comments.

Oil

(7.30.7.1) Heating value

Select from:
☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

2499210.91

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

0

(7.30.7.5) MWh fuel consumed for self-generation of steam

2499210.91

(7.30.7.6) MWh fuel consumed for self-generation of cooling

0

(7.30.7.7) MWh fuel consumed for self- cogeneration or self-trigeneration

0

(7.30.7.8) Comment

Fuel and waste oil.

Gas

(7.30.7.1) Heating value

Select from:
☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

38663991.88

(7.30.7.3) MWh fuel consumed for self-generation of electricity

5400643.15

(7.30.7.4) MWh fuel consumed for self-generation of heat

8505559.68

(7.30.7.5) MWh fuel consumed for self-generation of steam

24757789.05

(7.30.7.6) MWh fuel consumed for self-generation of cooling

0

(7.30.7.7) MWh fuel consumed for self- cogeneration or self-trigeneration

0

(7.30.7.8) Comment

Gas is for natural gas purchased and residual fuel gas from the process.

Other non-renewable fuels (e.g. non-renewable hydrogen)

(7.30.7.1) Heating value

Select from:
☑ Unable to confirm heating value

(7.30.7.2) Total fuel MWh consumed by the organization

91242.45

(7.30.7.3) MWh fuel consumed for self-generation of electricity

0

(7.30.7.4) MWh fuel consumed for self-generation of heat

0

(7.30.7.5) MWh fuel consumed for self-generation of steam

91242.45

(7.30.7.6) MWh fuel consumed for self-generation of cooling

0

(7.30.7.7) MWh fuel consumed for self- cogeneration or self-trigeneration

0

(7.30.7.8) Comment

No additional comments.

Total fuel

(7.30.7.1) Heating value

Select from:
☑ LHV

(7.30.7.2) Total fuel MWh consumed by the organization

42691985.76

(7.30.7.3) MWh fuel consumed for self-generation of electricity

5400643.15

(7.30.7.4) MWh fuel consumed for self-generation of heat

8505559.68

(7.30.7.5) MWh fuel consumed for self-generation of steam

28785782

(7.30.7.6) MWh fuel consumed for self-generation of cooling

0

(7.30.7.7) MWh fuel consumed for self- cogeneration or self-trigeneration

0

(7.30.7.8) Comment

No additional comments.
[Fixed row]

(7.30.9) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

Electricity

(7.30.9.1) Total Gross generation (MWh)

1547398.64

(7.30.9.2) Generation that is consumed by the organization (MWh)

1547398.64

(7.30.9.3) Gross generation from renewable sources (MWh)

0

(7.30.9.4) Generation from renewable sources that is consumed by the organization (MWh)

0

Heat

(7.30.9.1) Total Gross generation (MWh)

8505559.68

(7.30.9.2) Generation that is consumed by the organization (MWh)

8505559.68

(7.30.9.3) Gross generation from renewable sources (MWh)

0

(7.30.9.4) Generation from renewable sources that is consumed by the organization (MWh)

0

Steam

(7.30.9.1) Total Gross generation (MWh)

22369780.41

(7.30.9.2) Generation that is consumed by the organization (MWh)

22369780.41

(7.30.9.3) Gross generation from renewable sources (MWh)

0

(7.30.9.4) Generation from renewable sources that is consumed by the organization (MWh)

0

Cooling

(7.30.9.1) Total Gross generation (MWh)

0

(7.30.9.2) Generation that is consumed by the organization (MWh)

0

(7.30.9.3) Gross generation from renewable sources (MWh)

0

(7.30.9.4) Generation from renewable sources that is consumed by the organization (MWh)

0
[Fixed row]

(7.30.11) Provide details on electricity, heat, steam, and cooling your organization has generated and consumed for chemical production activities.

Electricity

(7.30.11.1) Total gross generation inside chemicals sector boundary (MWh)

1547398.64

(7.30.11.2) Generation that is consumed inside chemicals sector boundary (MWh)

1547398.64

(7.30.11.3) Generation from renewable sources inside chemical sector boundary (MWh)

0

(7.30.11.4) Generation from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary (MWh)

0

Heat

(7.30.11.1) Total gross generation inside chemicals sector boundary (MWh)

8505559.68

(7.30.11.2) Generation that is consumed inside chemicals sector boundary (MWh)

8505559.68

(7.30.11.3) Generation from renewable sources inside chemical sector boundary (MWh)

0

(7.30.11.4) Generation from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary (MWh)

0

Steam

(7.30.11.1) Total gross generation inside chemicals sector boundary (MWh)

22369780.41

(7.30.11.2) Generation that is consumed inside chemicals sector boundary (MWh)

22369780.41

(7.30.11.3) Generation from renewable sources inside chemical sector boundary (MWh)

0

(7.30.11.4) Generation from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary (MWh)

0

Cooling

(7.30.11.1) Total gross generation inside chemicals sector boundary (MWh)

0

(7.30.11.2) Generation that is consumed inside chemicals sector boundary (MWh)

0

(7.30.11.3) Generation from renewable sources inside chemical sector boundary (MWh)

0

(7.30.11.4) Generation from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary (MWh)

0
[Fixed row]

(7.30.14) Provide details on the electricity, heat, steam, and/or cooling amounts that were accounted for at a zero or near-zero emission factor in the market-based Scope 2 figure reported in 7.7.

Row 1

(7.30.14.1) Country/area

Select from:

☑ Brazil

(7.30.14.2) Sourcing method

Select from:

☑ Physical power purchase agreement (physical PPA) with a grid-connected generator

(7.30.14.3) Energy carrier

Select from:

☑ Electricity

(7.30.14.4) Low-carbon technology type

Select from:

☑ Renewable energy mix, please specify :Wind and Solar

(7.30.14.5) Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

853490

(7.30.14.6) Tracking instrument used

Select from:

☑ I-REC

(7.30.14.7) Country/area of origin (generation) of the low-carbon energy or energy attribute

Select from:

☑ Brazil

(7.30.14.8) Are you able to report the commissioning or re-powering year of the energy generation facility?

Select from:

☑ No

(7.30.14.10) Comment

No additional comment.

Row 2

(7.30.14.1) Country/area

Select from:
☑ Brazil

(7.30.14.2) Sourcing method

Select from:
☑ Unbundled procurement of energy attribute certificates (EACs)

(7.30.14.3) Energy carrier

Select from:
☑ Electricity

(7.30.14.4) Low-carbon technology type

Select from:
☑ Renewable energy mix, please specify :Hydropower

(7.30.14.5) Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

219270

(7.30.14.6) Tracking instrument used

Select from:
☑ I-REC

(7.30.14.7) Country/area of origin (generation) of the low-carbon energy or energy attribute

Select from:

☑ Brazil

(7.30.14.8) Are you able to report the commissioning or re-powering year of the energy generation facility?

Select from:

☑ No

(7.30.14.10) Comment

No additional comment.

Row 3

(7.30.14.1) Country/area

Select from:

☑ United States of America

(7.30.14.2) Sourcing method

Select from:

☑ Unbundled procurement of energy attribute certificates (EACs)

(7.30.14.3) Energy carrier

Select from:

☑ Electricity

(7.30.14.4) Low-carbon technology type

Select from:

☑ Renewable energy mix, please specify :Wind and Solar

(7.30.14.5) Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

100000

(7.30.14.6) Tracking instrument used

Select from:

☑ I-REC

(7.30.14.7) Country/area of origin (generation) of the low-carbon energy or energy attribute

Select from:

☑ United States of America

(7.30.14.8) Are you able to report the commissioning or re-powering year of the energy generation facility?

Select from:

☑ No

(7.30.14.10) Comment

No additional comment.

Row 4

(7.30.14.1) Country/area

Select from:

☑ United States of America

(7.30.14.2) Sourcing method

Select from:

☑ Default delivered electricity from the grid (e.g. standard product offering by an energy supplier) from a grid that is 95% or more low-carbon and where there is no mechanism for specifically allocating low-carbon electricity

(7.30.14.3) Energy carrier

Select from:

☑ Electricity

(7.30.14.4) Low-carbon technology type

Select from:

☑ Nuclear

(7.30.14.5) Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

75540

(7.30.14.6) Tracking instrument used

Select from:

☑ Other, please specify :EFEECs

(7.30.14.7) Country/area of origin (generation) of the low-carbon energy or energy attribute

Select from:

☑ United States of America

(7.30.14.8) Are you able to report the commissioning or re-powering year of the energy generation facility?

Select from:

☑ No

(7.30.14.10) Comment

No additional comment.

Row 5

(7.30.14.1) Country/area

Select from:

☑ Germany

(7.30.14.2) Sourcing method

Select from:

☑ Unbundled procurement of energy attribute certificates (EACs)

(7.30.14.3) Energy carrier

Select from:

☑ Electricity

(7.30.14.4) Low-carbon technology type

Select from:

☑ Renewable energy mix, please specify :Wind and Solar

(7.30.14.5) Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

137060

(7.30.14.6) Tracking instrument used

Select from:

☑ I-REC

(7.30.14.7) Country/area of origin (generation) of the low-carbon energy or energy attribute

Select from:

☑ Germany

(7.30.14.8) Are you able to report the commissioning or re-powering year of the energy generation facility?

Select from:
☑ No

(7.30.14.10) Comment

No additional comment.
[Add row]

(7.30.16) Provide a breakdown by country/area of your electricity/heat/steam/cooling consumption in the reporting year.

Brazil

(7.30.16.1) Consumption of purchased electricity (MWh)

3536213.43

(7.30.16.2) Consumption of self-generated electricity (MWh)

935357.1

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

1135102.27

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

893702.49

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

6500375.29

Germany

(7.30.16.1) Consumption of purchased electricity (MWh)

137059

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

94427.06

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

231486.06

Mexico

(7.30.16.1) Consumption of purchased electricity (MWh)

69107.77

(7.30.16.2) Consumption of self-generated electricity (MWh)

612041.54

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

0

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

145330.06

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

826479.37

United States of America

(7.30.16.1) Consumption of purchased electricity (MWh)

685654

(7.30.16.2) Consumption of self-generated electricity (MWh)

0

(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)

269078.8

(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)

0

(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)

954732.80
[Fixed row]

(7.31) Does your organization consume fuels as feedstocks for chemical production activities?

Select from:
☑ Yes

(7.31.1) Disclose details on your organization’s consumption of feedstocks for chemical production activities.

Row 1

(7.31.1.1) Fuels used as feedstocks

Select from:

☑ Naphtha

(7.31.1.2) Total consumption

7879637.59

(7.31.1.3) Total consumption unit

Select from:

☑ metric tons

(7.31.1.4) Inherent carbon dioxide emission factor of feedstock, metric tons CO2 per consumption unit

0.73

(7.31.1.5) Heating value of feedstock, MWh per consumption unit

0

(7.31.1.6) Heating value

Select from:

☑ Unable to confirm heating value

(7.31.1.7) Comment

Naphtha is the sum of all naphtha and condensate feedstock that is used in our chemical process in the crackers units in Brazil.

Row 3

(7.31.1.1) Fuels used as feedstocks

Select from:

☑ Propane gas

(7.31.1.2) Total consumption

3872962.35

(7.31.1.3) Total consumption unit

Select from:

☑ metric tons

(7.31.1.4) Inherent carbon dioxide emission factor of feedstock, metric tons CO2 per consumption unit

0.77

(7.31.1.5) Heating value of feedstock, MWh per consumption unit

0.0

(7.31.1.6) Heating value

Select from:

☑ Unable to confirm heating value

(7.31.1.7) Comment

Sum of propane and propylene feedstock use in our chemical process.

Row 4

(7.31.1.1) Fuels used as feedstocks

Select from:

☑ Ethane

(7.31.1.2) Total consumption

1601402.29

(7.31.1.3) Total consumption unit

Select from:
☑ metric tons

(7.31.1.4) Inherent carbon dioxide emission factor of feedstock, metric tons CO2 per consumption unit

0.79

(7.31.1.5) Heating value of feedstock, MWh per consumption unit

0.0

(7.31.1.6) Heating value

Select from:
☑ Unable to confirm heating value

(7.31.1.7) Comment

Ethane is the sum of all ethane and ethene feedstock that is used in our chemical process.

Row 5

(7.31.1.1) Fuels used as feedstocks

Select from:
☑ Liquid biofuel

(7.31.1.2) Total consumption

427157.74

(7.31.1.3) Total consumption unit

Select from:
☑ metric tons

(7.31.1.4) Inherent carbon dioxide emission factor of feedstock, metric tons CO2 per consumption unit

0.33

(7.31.1.5) Heating value of feedstock, MWh per consumption unit

0.0

(7.31.1.6) Heating value

Select from:
☑ Unable to confirm heating value

(7.31.1.7) Comment

Ethanol feedstock used in our chemical process at Q1 and Q2 industrial sites in Brazil.
[Add row]

(7.31.2) State the percentage, by mass, of primary resource from which your chemical feedstocks derive.

Oil

(7.31.2.1) Percentage of total chemical feedstock (%)

57.18

(7.31.2.2) Direction of change in percentage of total chemical feedstock from previous year

Select from:
☑ Decreased

Natural Gas

(7.31.2.1) Percentage of total chemical feedstock (%)

39.72

(7.31.2.2) Direction of change in percentage of total chemical feedstock from previous year

Select from:
☑ Increased

Coal

(7.31.2.1) Percentage of total chemical feedstock (%)

0

(7.31.2.2) Direction of change in percentage of total chemical feedstock from previous year

Select from:
☑ No change

Biomass

(7.31.2.1) Percentage of total chemical feedstock (%)

3.1

(7.31.2.2) Direction of change in percentage of total chemical feedstock from previous year

Select from:
☑ Decreased

Waste (non-biomass)

(7.31.2.1) Percentage of total chemical feedstock (%)

0

(7.31.2.2) Direction of change in percentage of total chemical feedstock from previous year

Select from:

☑ No change

Fossil fuel (where coal, gas, oil cannot be distinguished)

(7.31.2.1) Percentage of total chemical feedstock (%)

0

(7.31.2.2) Direction of change in percentage of total chemical feedstock from previous year

Select from:

☑ No change

Unknown source or unable to disaggregate

(7.31.2.1) Percentage of total chemical feedstock (%)

0

(7.31.2.2) Direction of change in percentage of total chemical feedstock from previous year

Select from:

☑ No change

[Fixed row]

(7.39) Provide details on your organization’s chemical products.

Row 1

(7.39.1) Output product

Select from:
☑ High Value Chemicals (Steam cracking)

(7.39.2) Production (metric tons)

8644563.07

(7.39.3) Capacity (metric tons)

10718000

(7.39.4) Direct emissions intensity (metric tons CO2e per metric ton of product)

0.971

(7.39.5) Electricity intensity (MWh per metric ton of product)

0.068

(7.39.6) Steam intensity (MWh per metric ton of product)

0.086

(7.39.7) Steam/ heat recovered (MWh per metric ton of product)

0

(7.39.8) Comment

HVC includes ethylene, propene, butadiene, aromatics and others.

Row 2

(7.39.1) Output product

Select from:

☑ Polymers

(7.39.2) Production (metric tons)

6020482.15

(7.39.3) Capacity (metric tons)

7193390

(7.39.4) Direct emissions intensity (metric tons CO2e per metric ton of product)

0.112

(7.39.5) Electricity intensity (MWh per metric ton of product)

0.486

(7.39.6) Steam intensity (MWh per metric ton of product)

0.125

(7.39.7) Steam/ heat recovered (MWh per metric ton of product)

0

(7.39.8) Comment

Polymers include polyvinyl chloride, polyethylene and polypropylene.

Row 3

(7.39.1) Output product

Select from:

☑ Other base chemicals

(7.39.2) Production (metric tons)

1147061.3

(7.39.3) Capacity (metric tons)

1380000

(7.39.4) Direct emissions intensity (metric tons CO2e per metric ton of product)

0.121

(7.39.5) Electricity intensity (MWh per metric ton of product)

0.861

(7.39.6) Steam intensity (MWh per metric ton of product)

0

(7.39.7) Steam/ heat recovered (MWh per metric ton of product)

0

(7.39.8) Comment

Other base chemicals include caustic soda, chlorine and others.
[Add row]

(7.45) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Row 1

(7.45.1) Intensity figure

0.013

(7.45.2) Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

9876777

(7.45.3) Metric denominator

Select from:
☑ metric ton of product

(7.45.4) Metric denominator: Unit total

15812107

(7.45.5) Scope 2 figure used

Select from:
☑ Market-based

(7.45.6) % change from previous year

3.4

(7.45.7) Direction of change

Select from:
☑ Decreased

(7.45.8) Reasons for change

Select all that apply

☑ Change in renewable energy consumption

☑ Other emissions reduction activities

☑ Change in physical operating conditions

(7.45.9) Please explain

Scopes 12 emissions decreased 7.8% from year 2022 to 2023, where Scope 1 represented a 7.7% reduction and Scope 2, a 9% reduction. The Scope 2 emissions reduction was achieved mainly by the renewability of the Brazilian matrix, as well as the purchase of renewable electricity. Scope 1 emissions reduced more than the production reduction (4.6% lower than previous year), thus the indicator per tons of product produced also decreased. The chemical sector is facing a current downcycle, impacting in production and demand.

[Add row]

(7.52) Provide any additional climate-related metrics relevant to your business.

Row 1

(7.52.1) Description

Select from:

☑ Other, please specify **:**Water Safety Index

(7.52.2) Metric value

65.9

(7.52.3) Metric numerator

Percentage of water use from safe sources (%)

(7.52.4) Metric denominator (intensity metric only)

Not applicable.

(7.52.5) % change from previous year

0.9

(7.52.6) Direction of change

Select from:

☑ Increased

(7.52.7) Please explain

Among our goals for this topic is the use in our operations of 100% of water from safe sources by 2030. In 2023, the global water security index was 65.9%, a increase of 0.9% when compared to 2022 (65.3%), given the implementation of internal water reuse initiatives. One of the most important initiatives is the water reuse project in the Rio de Janeiro region, in Brazil, which is in the final design phase. The project is aligned with the climate adaptation objectives, with a focus on achieving 100% water security for its industrial units by the year 2030. The achievement of the sustainable macro objectives disclosed by the Company (within the projected costs and expected timelines) is also subject to uncertainties and risks, including but not limited to: the advancement, availability, development, and financial feasibility of the technology required to achieve these objectives

Row 2

(7.52.1) Description

Select from:

☑ Energy usage

(7.52.2) Metric value

174821.25

(7.52.3) Metric numerator

Total Energy Consumption (GJ)

(7.52.4) Metric denominator (intensity metric only)

Not applicable.

(7.52.5) % change from previous year

4

(7.52.6) Direction of change

Select from:

☑ Decreased

(7.52.7) Please explain

In 2023, total energy consumption was 4.0% lower than in 2022 due to a decrease in total production and also because of some energy efficiency projects implemented during the year.
[Add row]

(7.53) Did you have an emissions target that was active in the reporting year?

Select all that apply

☑ Absolute target

(7.53.1) Provide details of your absolute emissions targets and progress made against those targets.

Row 1

(7.53.1.1) Target reference number

Select from:

☑ Abs 1

(7.53.1.2) Is this a science-based target?

Select from:

☑ No, but we are reporting another target that is science-based

(7.53.1.5) Date target was set

12/31/2020

(7.53.1.6) Target coverage

Select from:

☑ Organization-wide

(7.53.1.7) Greenhouse gases covered by target

Select all that apply

☑ Methane (CH4)

☑ Nitrous oxide (N2O)

☑ Carbon dioxide (CO2)

☑ Perfluorocarbons (PFCs)

☑ Hydrofluorocarbons (HFCs)

☑ Sulphur hexafluoride (SF6)

☑ Nitrogen trifluoride (NF3)

(7.53.1.8) Scopes

Select all that apply

☑ Scope 1

☑ Scope 2

(7.53.1.9) Scope 2 accounting method

Select from:

☑ Market-based

(7.53.1.11) End date of base year

12/31/2020

(7.53.1.12) Base year Scope 1 emissions covered by target (metric tons CO2e)

9988101.89

(7.53.1.13) Base year Scope 2 emissions covered by target (metric tons CO2e)

766314.79

(7.53.1.31) Base year total Scope 3 emissions covered by target (metric tons CO2e)

0.000

(7.53.1.32) Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

10754416.680

(7.53.1.33) Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

100

(7.53.1.34) Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

100

(7.53.1.53) Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

100

(7.53.1.54) End date of target

12/31/2030

(7.53.1.55) Targeted reduction from base year (%)

15

(7.53.1.56) Total emissions at end date of target covered by target in all selected Scopes (metric tons CO2e)

9141254.178

(7.53.1.57) Scope 1 emissions in reporting year covered by target (metric tons CO2e)

9323773

(7.53.1.58) Scope 2 emissions in reporting year covered by target (metric tons CO2e)

553004

(7.53.1.77) Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

9876777.000

(7.53.1.78) Land-related emissions covered by target

Select from:

☑ No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

(7.53.1.79) % of target achieved relative to base year

54.40

(7.53.1.80) Target status in reporting year

Select from:

☑ Underway

(7.53.1.82) Explain target coverage and identify any exclusions

Braskem's climate-related targets are divided into two main steps: (i) a short-term to reduce greenhouse gas emissions in scopes 1 and 2 by 15% by 2030, and (ii) achieve carbon neutrality by 2050. Our short-term target covers 100% of our Scopes 1 and 2 emissions (market-based), thus no exclusions considering the boundaries of these scopes are applicable. Braskem currently uses as baseline the average of Scope 12 emissions from the period between 2018 and 2020. Scopes 12 emissions from base years are as follows: 2018 (10,924,277 tCO2e), 2019 (10,552,495 tCO2e) and 2020 (10,786,478 tCO2e). Our short-term target does not *include any Scope 3 emissions since there are some methodological uncertainties related to the most appropriate method to estimate possible reduction/removal scenarios considering our bio-based products. We expect to start a more in-depth analysis on Scope 3 target set as soon as the Removal Guidance from GHG Protocol is officially published (expected in 2024). But Braskem is committed to the constant improvement of Scope 3 calculations and working on the engagement of its value chain (up and downstream). An example is the ECO2 Tracking, an online platform integrated to the control of inputs (purchases) and outputs (sales) of Braskem products, per transportation mode, that allows for a real-time emissions calculation. This data is being used in Scope 3 categories 4 and 9 calculations.*

(7.53.1.83) Target objective

Be a reference in the global chemical and plastics sector in sustainable development.

(7.53.1.84) Plan for achieving target, and progress made to the end of the reporting year

To achieve its 2030 reduction goal (15% of Scopes 12), Braskem is focusing in energy, competitiveness, reliability and sustainability efficiency. The 2030 Roadmap for global decarbonization totaled more than 50 initiatives at different levels of maturity, with the potential to reduce almost 2.3 million tCO_2e/year by 2030 - which represents a potential reduction of around 21% in emissions compared to the base period. The initiatives focus on Braskem's assets currently in operation and use the MACC - Marginal Carbon Abatement Curve and the Industrial Decarbonization Roadmap - a Portfolio of Prioritized Decarbonization Initiatives as methodological tools to guide the descarbonization process. 29 initiatives from our Industrial Decarbonization Program have already come into operation or are in the execution phase, after a final decision to move forward, representing a reduction of around 910 thousand tons of CO_2e. These initiatives involved investments made, either by Braskem or by partner companies, in the order of BRL 3.7 billion. Overall, the achievement of the emissions reduction target increased 24% in 2023. The achievement of the sustainable macro objectives disclosed by the Company (within the projected costs and expected timelines) is also subject to uncertainties and risks, including but not limited to: the advancement, availability, development, and financial feasibility of the technology required to achieve these objectives.

(7.53.1.85) Target derived using a sectoral decarbonization approach

Select from:

☑ No

[Add row]

(7.54) Did you have any other climate-related targets that were active in the reporting year?

Select all that apply

☑ Net-zero targets

(7.54.1) Provide details of your targets to increase or maintain low-carbon energy consumption or production.

Row 2

(7.54.1.1) Target reference number

Select from:

☑ Low 1

(7.54.1.3) Target coverage

Select from:

☑ Organization-wide

(7.54.1.4) Target type: energy carrier

Select from:

☑ Electricity

(7.54.1.5) Target type: activity

Select from:

☑ Consumption

(7.54.1.6) Target type: energy source

Select from:

☑ Renewable energy source(s) only

(7.54.1.8) Consumption or production of selected energy carrier in base year (MWh)

3374729.7

(7.54.1.9) % share of low-carbon or renewable energy in base year

73.0

(7.54.1.16) Is this target part of an emissions target?

Yes, it is part of target 'Abs1' as of our commitment to reduce Scopes 12 emissions by 15% by 2030. More specifically, our scope 2 market-based emissions.

(7.54.1.17) Is this target part of an overarching initiative?

Select all that apply

☑ No, it’s not part of an overarching initiative

(7.54.1.19) Explain target coverage and identify any exclusions

The target covers all electricity consumption of our operations in Brazil, Mexico, USA and Germany. No exclusions are applicable considering our operation boundaries.
[Add row]

(7.54.3) Provide details of your net-zero target(s).

Row 1

(7.54.3.1) Target reference number

Select from:

☑ NZ1

(7.54.3.2) Date target was set

12/31/2020

(7.54.3.3) Target Coverage

Select from:

☑ Organization-wide

(7.54.3.4) Targets linked to this net zero target

Select all that apply

☑ Abs1

(7.54.3.5) End date of target for achieving net zero

12/31/2050

(7.54.3.6) Is this a science-based target?

Select from:

☑ No, but we are reporting another target that is science-based

(7.54.3.8) Scopes

Select all that apply

☑ Scope 1

☑ Scope 2

(7.54.3.9) Greenhouse gases covered by target

Select all that apply

☑ Methane (CH4)

☑ Nitrous oxide (N2O)

☑ Carbon dioxide (CO2)

☑ Perfluorocarbons (PFCs)

☑ Hydrofluorocarbons (HFCs)

☑ Sulphur hexafluoride (SF6)

☑ Nitrogen trifluoride (NF3)

(7.54.3.10) Explain target coverage and identify any exclusions

Braskem considers this target equivalent to SBT since the percentage of annual emission reduction to reach the target will be higher than the 2.1% required by the SBTi to limit average temperature rise by 2C. Over the years, Braskem has implemented several actions to foster energy efficiency and expand the use of renewable energy sources to achieve our goal of carbon neutrality by 2050. Our strategy to face climate change is divided into three pillars. In terms of reducing emissions, we are working on expanding the use of renewable energy in our operations while constantly improving our energy efficiency. As a result, in 2022 we have reached the mark of 82% of renewable electricity consumption worldwide. This effort will help us achieve our intermediate target of reducing direct emissions (scopes 1 and 2) by 15% by 2030. The second front is carbon removal with product storage, that we have committed to a target of 1 billion tons of bio-based polymers production by 2030. On the third front, carbon capture storage and use, 15 initiatives are being developed, becoming research already at various stages of development. The *execution and achievement of these goals within currently projected costs and timeframes expectations are also subject to risks and uncertainties that include, but are not limited to: progress, availability, development and accessibility of the technology necessary to achieve these commitments. tem menu de contexto*

(7.54.3.11) Target objective

To define its business strategy, Braskem built its materiality matrix to identify the sustainability attributes relevant to the business strategy. In the materiality matrix, the topic of Climate Change was identified among the most relevant aspects, which was included in the business strategy, with short and long-term objectives, with the long-term objective being to achieve carbon neutrality in 2050.

(7.54.3.12) Do you intend to neutralize any residual emissions with permanent carbon removals at the end of the target?

Select from:

☑ Yes

(7.54.3.13) Do you plan to mitigate emissions beyond your value chain?

Select from:

☑ No, and we do not plan to within the next two years

(7.54.3.14) Do you intend to purchase and cancel carbon credits for neutralization and/or beyond value chain mitigation?

Select all that apply

☑ Yes, we plan to purchase and cancel carbon credits for neutralization at the end of the target

(7.54.3.15) Planned milestones and/or near-term investments for neutralization at the end of the target

In order to achieve the target, the company's strategy is divided in three main pillars: i. investing to reduce emissions with a focus on energy efficiency, as well as increasing the use of renewable energy in current operations, establishing partnerships aimed at innovation and technology; ii. removal of CO2 emissions with product storage via investments in the production of biopolymers from bio-based sources and iii. capture of CO2 emissions through research and development to use carbon as a raw material for chemical production. In the removal pillar, our target is to produce 1 million tons of bio-based polymers by 2030. We believe in this strategy for neutralization.

(7.54.3.17) Target status in reporting year

Select from:

☑ Underway

(7.54.3.19) Process for reviewing target

NA
[Add row]

(7.55) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.

Select from:
☑ Yes

(7.55.1) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	*9*	*`Numeric input*
To be implemented	*13*	*414000*
Implementation commenced	*6*	*311000*
Implemented	*23*	*599000*
Not to be implemented	*0*	*`Numeric input*

[Fixed row]

(7.55.2) Provide details on the initiatives implemented in the reporting year in the table below.

Row 1

(7.55.2.1) Initiative category & Initiative type

Energy efficiency in production processes

☑ Process optimization

(7.55.2.2) Estimated annual CO2e savings (metric tonnes CO2e)

386000

(7.55.2.3) Scope(s) or Scope 3 category(ies) where emissions savings occur

Select all that apply

☑ Scope 1

(7.55.2.4) Voluntary/Mandatory

Select from:

☑ Voluntary

(7.55.2.5) Annual monetary savings (unit currency – as specified in C0.4)

19300000

(7.55.2.6) Investment required (unit currency – as specified in C0.4)

56000000

(7.55.2.7) Payback period

Select from:

☑ 4-10 years

(7.55.2.8) Estimated lifetime of the initiative

Select from:
☑ 6-10 years

(7.55.2.9) Comment

Our Energy Efficiency Program was created in 2019 to accelerate energy initiatives and boost our competitiveness while reducing our CO2e emissions.

Row 2

(7.55.2.1) Initiative category & Initiative type

Low-carbon energy consumption
☑ Low-carbon electricity mix

(7.55.2.2) Estimated annual CO2e savings (metric tonnes CO2e)

213000

(7.55.2.3) Scope(s) or Scope 3 category(ies) where emissions savings occur

Select all that apply
☑ Scope 2 (market-based)

(7.55.2.4) Voluntary/Mandatory

Select from:
☑ Voluntary

(7.55.2.5) Annual monetary savings (unit currency – as specified in C0.4)

10650000

(7.55.2.6) Investment required (unit currency – as specified in C0.4)

2000000

(7.55.2.7) Payback period

Select from:

☑ No payback

(7.55.2.8) Estimated lifetime of the initiative

Select from:

☑ 21-30 years

(7.55.2.9) Comment

In 2018, we initiated a sequence of long-term agreements for the purchase of renewable energy. Since then, we signed agreements with an average term of 20 years, for the supply of electric energy from wind and solar sources.
[Add row]

(7.55.3) What methods do you use to drive investment in emissions reduction activities?

Row 1

(7.55.3.1) Method

Select from:

☑ Compliance with regulatory requirements/standards

(7.55.3.2) Comment

Braskem follows climate related regulatory developments closely and in a recurrent manner.

Row 3

(7.55.3.1) Method

Select from:

☑ Internal price on carbon

(7.55.3.2) Comment

Aiming to benefit from projects that present a reduction in GHG emissions, Braskem has developed a tool to calculate the virtual cost of carbon in its investments. The tool calculates the virtual cost of carbon as an anticipatory way for future impact regulation, identifying the positive and negative contributions to projects. In this way, the economic values, positive or negative, corresponding to the environmental impact caused by the emissions are calculated for those projects that reduce or generate emissions. This process now enters the monitoring phase to evaluate the effectiveness of the defined price in relation to changing the eligibility of projects in the decision-making process.

Row 4

(7.55.3.1) Method

Select from:

☑ Dedicated budget for energy efficiency

(7.55.3.2) Comment

In 2021, Braskem created a specific investment group entitled "Decarbonization" with funds allocated to energy efficiency and emissions-reduction initiatives. In this case, initiatives are considered that become more attractive when evaluated regarding economic aspects and the reduction of CO2e emissions.

Row 5

(7.55.3.1) Method

Select from:

☑ Dedicated budget for low-carbon product R&D

(7.55.3.2) Comment

Braskem allocates budget in its research and technology area for the development of low-carbon products. An example of the success of the decision is the introduction of products such as Green PE, Green Isoprene, Green Butadiene and ETBE.

Row 6

(7.55.3.1) Method

Select from:

☑ Other :Qualitative criteria for ESG investments

(7.55.3.2) Comment

Braskem created a new type of investment called ESG to consider and prioritize projects related to aspects related to Environment, Social and Governance, including Climate Change aspects.
[Add row]

(7.73) Are you providing product level data for your organization's goods or services?

Select from:

☑ No, I am not providing data

(7.74) Do you classify any of your existing goods and/or services as low-carbon products?

Select from:

☑ Yes

(7.74.1) Provide details of your products and/or services that you classify as low-carbon products.

Row 1

(7.74.1.1) Level of aggregation

Select from:

☑ Product or service

(7.74.1.2) Taxonomy used to classify product(s) or service(s) as low-carbon

Select from:

☑ No taxonomy used to classify product(s) or service(s) as low carbon

(7.74.1.3) Type of product(s) or service(s)

Chemicals and plastics

☑ Physical absorption of CO2

(7.74.1.4) Description of product(s) or service(s)

Braskem has in its portfolio many products and groups of products that allow for lower emissions. These are briefly described below: Im green bio-based: the products from the Im green bio-based brand are all produced with segregated renewable sources (ex. sugarcane ethanol) and have either a carbon negative footprint (like Im green bio-based HDPE or Im green bio-based EVA) or reduced carbon footprint when compared to equivalent fossil-based products. The products' carbon footprint were measured through a comprehensive LCA (life cycle assessment) study covering from raw material production until Braskem's gate. WENEW: the recycled products under the WENEW brand have also gone through LCA (life cycle assessment) studies and have a reduced carbon footprint calculated. The reduction can vary according to each grade, but can represent over 30% reduction when compared to fossil-based counterparts. MAXIO: these products allow for emission reductions during their application, in Braskems client facilities, by demanding less energy in the transformation process. This allows for Scope 2 reductions for the client and Scope 3 reductions for Braskem.

(7.74.1.5) Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

Select from:

☑ Yes

(7.74.1.6) Methodology used to calculate avoided emissions

Select from:

☑ Other, please specify **:**Other methodology.

(7.74.1.7) Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Select from:

☑ Cradle-to-gate

(7.74.1.8) Functional unit used

Total product sold.

(7.74.1.9) Reference product/service or baseline scenario used

Fossil-based counterpart. Ex: fossil-HDPE x Im green bio-based HDPE. Fossil PP x recycled PP. Fossil-based carbon footprint data were adopted from lifecycle databases like ecoinvent, a specific version according to each LCA study year (most recent ecoinvent data available at the moment).

(7.74.1.10) Life cycle stage(s) covered for the reference product/service or baseline scenario

Select from:

☑ Cradle-to-gate

(7.74.1.11) Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

652407

(7.74.1.12) Explain your calculation of avoided emissions, including any assumptions

Only avoided emissions of the products from the Im green bio-based brand were estimated. The total avoided emissions so far was 7.13 million tCO2e since 2010. For 2023, the total emissions avoided was 652.407 tCO2e.

(7.74.1.13) Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

4.5

Row 2

(7.74.1.1) Level of aggregation

Select from:

☑ Group of products or services

(7.74.1.2) Taxonomy used to classify product(s) or service(s) as low-carbon

Select from:

☑ No taxonomy used to classify product(s) or service(s) as low carbon

(7.74.1.3) Type of product(s) or service(s)

Power

☑ Other, please specify :CO2 removal during sugarcane growth for ethanol production with product storage. Ethanol from sugarcane is used as feedstock for green PE production.

(7.74.1.4) Description of product(s) or service(s)

Today, Braskem is the largest global producer of biopolymers, with an annual production capacity of 200,000 tons of I'm green Polyethylene produced from sugarcane ethanol, a source that is 100% renewable. These Bio-based products do not directly sequester carbon from the atmosphere, instead they serve as a pool to where carbon from biogenic removal processes on land can be transferred. Storing removed carbon in products can contribute to slowing down the rate of global warming and delaying accumulation of emissions in the atmosphere. The industrial unit where Green PE is produced is currently being expanded and the production capacity will be up to 260,000 tons by 2030. Considering its lifecycle, Braskem's Green PE has a potential to store 3.09 tCO2e per ton of product. Braskem does not release the revenue of individual products, therefore, the % of revenue generated reported in this form corresponds to the sum of revenue from green PE and ETBE additive, another bio-based product produced by Braskem.

(7.74.1.5) Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

Select from:

☑ Yes

(7.74.1.6) Methodology used to calculate avoided emissions

Select from:

☑ Other, please specify :Addressing the Avoided Emissions Challenge - ICCA (https://icca-chem.org/wp-content/uploads/2020/05/Addressing-the-Avoided-Emissions-Challenge.pdf)

(7.74.1.7) Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Select from:

☑ Cradle-to-gate

(7.74.1.8) Functional unit used

ton of green PE produced

(7.74.1.9) Reference product/service or baseline scenario used

PE produced from fossil feedstock

(7.74.1.10) Life cycle stage(s) covered for the reference product/service or baseline scenario

Select from:

☑ Cradle-to-gate

(7.74.1.11) Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

3.09

(7.74.1.12) Explain your calculation of avoided emissions, including any assumptions

I'm green PE life cycle includes all stages, from harvesting to PE production. The sugarcane bagasse is used to generate heat and power and supply the mill's energy demands. The surplus electricity is sold to the Brazilian integrated electrical system to supply the operational margin of this system. The ethanol is then transported by rail (a small amount can also be delivered by truck) to the Braskem facilities in Triunfo, Brazil where it will be dehydrated to produce ethylene. This ethylene is then polymerized to produce the I'm green PE. As for the Fossil PE, the life cycle begins with oil extraction and refining. Naphtha, which is one of the derivatives produced in the refineries, is transported by ducts to the petrochemical complexes where it will be cracked to produce ethylene and many co-products. The ethylene is then polymerized to produce PE. Since there is no surplus electricity generated in this system, it is assumed that surplus electricity will be supplied by a thermoelectric power plant, making both product systems comparable. More information regarding emission factors and other methodology can be found at: https://www.braskem.com.br/portal/imgreen/arquivos/LCA%20PE%20I%27m%20green%20bio-based_FINAL%20EN.pdf

(7.74.1.13) Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

4.5
[Add row]

(7.79) Has your organization canceled any project-based carbon credits within the reporting year?

Select from:

☑ No

C9. Environmental performance - Water security

(9.1) Are there any exclusions from your disclosure of water-related data?

Select from:
☑ No

(9.2) Across all your operations, what proportion of the following water aspects are regularly measured and monitored?

Water withdrawals – total volumes

(9.2.1) % of sites/facilities/operations

Select from:
☑ 100%

(9.2.2) Frequency of measurement

Select from:
☑ Daily

(9.2.3) Method of measurement

The volume is obtained through a meter inserted directly into the pipe, which transports the water, measuring and sending the result through a transmitter to the centralized control system.

(9.2.4) Please explain

Braskem measures and monitors 100% of its operations. The total volume of water collection refers to the consumption of 40 industrial units located in Brazil (29), the United States (5), Germany (2) and Mexico (4), measured monthly and recorded in the SAP system. Monitored daily and consolidated monthly onsite by the HSE focal point.

Water withdrawals – volumes by source

(9.2.1) % of sites/facilities/operations

Select from:

☑ 100%

(9.2.2) Frequency of measurement

Select from:

☑ Daily

(9.2.3) Method of measurement

The volume is obtained through a meter inserted directly into the pipe, which transports the water, measuring and sending the result through a transmitter to the centralized control system.

(9.2.4) Please explain

Braskem measures and monitors 100% of its operations. The total volume of water collection per source is calculated once a year for the report of annual results. Monitored daily and consolidated monthly onsite by the HSE focal point.

Water withdrawals quality

(9.2.1) % of sites/facilities/operations

Select from:

☑ 100%

(9.2.2) Frequency of measurement

Select from:

☑ Daily

(9.2.3) Method of measurement

The volume is obtained through a meter inserted directly into the pipe, which transports the water, measuring and sending the result through a transmitter to the centralized control system.

(9.2.4) Please explain

Braskem measures and monitors 100% of its operations. The total volume of water collection per source is calculated once a year for the report of annual results. Monitored daily and consolidated monthly onsite by the HSE focal point.

Water discharges – total volumes

(9.2.1) % of sites/facilities/operations

Select from:

☑ 100%

(9.2.2) Frequency of measurement

Select from:

☑ Daily

(9.2.3) Method of measurement

The volume is obtained through a meter inserted directly into the pipe, which transports the water, measuring and sending the result through a transmitter to the centralized control system.

(9.2.4) Please explain

Braskem measures and monitors 100% of its operations. The total volume of water collection refers to the consumption of 40 industrial units located in Brazil (29), the United States (5), Germany (2) and Mexico (4), measured monthly and recorded in the SAP system. Monitored daily and consolidated monthly onsite by the HSE focal point.

Water discharges – volumes by destination

(9.2.1) % of sites/facilities/operations

Select from:

☑ 100%

(9.2.2) Frequency of measurement

Select from:

☑ Daily

(9.2.3) Method of measurement

The volume is obtained through a meter inserted directly into the pipe, which transports the water, measuring and sending the result through a transmitter to the centralized control system.

(9.2.4) Please explain

Braskem measures and monitors 100% of its operations. The total of effluents generated per source is calculated once a year for the report of annual results. Monitored daily to meet environmental standards and consolidated monthly onsite by the HSE focal point. Braskem uses two types of disposal for its effluents: Surface fresh water and disposal by third parties. The destination is chosen according to operational and economic viability, and by obtaining legal authorizations.

Water discharges – volumes by treatment method

(9.2.1) % of sites/facilities/operations

Select from:

☑ 100%

(9.2.2) Frequency of measurement

Select from:

☑ Monthly

(9.2.3) Method of measurement

The total treated waste is assessed monthly by measuring four different waste sources: inorganic, organic, sanitary effluent (domestic waste) and uncontaminated rainwater.

(9.2.4) Please explain

BBraskem measures and monitors 100% of its operations. An annual assessment of effluent disposal is carried out according to the treatments: Separation of oil and water, physical, neutralization, biological, chlorination, etc. Volumes are monitored and consolidated onsite by the HSE focal point.

Water discharge quality – by standard effluent parameters

(9.2.1) % of sites/facilities/operations

Select from:

☑ 100%

(9.2.2) Frequency of measurement

Select from:

☑ Monthly

(9.2.3) Method of measurement

Quality is measured by chemical laboratory analyses to verify parameters such as Chemical Oxygen Demand and Biological Organic Load, which are measured monthly.

(9.2.4) Please explain

Braskem measures and monitors 100% of its operations. The quality of the measured wastewater varies for each of the manufacturing facilities, taking into account local operational requirements and the local legislation where the facilities are located. Some industrial units perform chemical analyses in their own laboratory or in an external laboratory. The volume is obtained through a meter inserted in the effluent drainage channel, measuring and sending the result through a transmitter to the centralized control system. The results are monitored monthly and consolidated onsite by the HSE focal point.

Water discharge quality – emissions to water (nitrates, phosphates, pesticides, and/or other priority substances)

(9.2.1) % of sites/facilities/operations

Select from:

☑ 100%

(9.2.2) Frequency of measurement

Select from:

☑ Monthly

(9.2.3) Method of measurement

For effluents sent to third parties, effluent quality monitoring is carried out by the third party company itself, which is responsible for treatment and must maintain established effluent quality standards – Braskem constantly monitors the results.

(9.2.4) Please explain

At all our units, effluent management is based on disposal standards defined in accordance with local legislation and internal procedures. Some industrial plants also have laboratories capable of analyzing effluents and creating internal standards for assessing environmental quality. Braskem has internal documents that standardize the matter, such as Work Instructions (Instruções de Trabalho, IT), which locally address the management and monitoring of effluents at the company. At Braskem, the liquid effluents have four general destinations: discharge into surface water bodies, discharge into the ocean, sending to third parties, and ground spraying. For each of the allocations, there are specific standards for the quality of the effluent discharged that take into account the receiving body. In the case of ground spraying, effluent treatment is carried out by the third party.

Water discharge quality – temperature

(9.2.1) % of sites/facilities/operations

Select from:

☑ 100%

(9.2.2) Frequency of measurement

Select from:

☑ Monthly

(9.2.3) Method of measurement

The temperature measurement is obtained through a sensor inserted in the effluent drainage channel, measuring and sending the result through a transmitter to the centralized control system.

(9.2.4) Please explain

Braskem currently measures and monitors the water temperature in 100% of its operations, in accordance with legal requirements.

Water consumption – total volume

(9.2.1) % of sites/facilities/operations

Select from:

☑ 100%

(9.2.2) Frequency of measurement

Select from:

☑ Daily

(9.2.3) Method of measurement

The volume is obtained through a meter inserted directly into the pipe that transports the water, at the main entrance of the pipe that feeds the industrial unit, measuring and sending the result through a transmitter to the centralized control system.

(9.2.4) Please explain

Braskem measures and monitors 100% of its operations. The total volume of water collection refers to the consumption of 40 industrial units located in Brazil (29), the United States (5), Germany (2) and Mexico (4), measured monthly and recorded in the SAP system. Monitored daily and consolidated monthly onsite by the HSE focal point.

Water recycled/reused

(9.2.1) % of sites/facilities/operations

Select from:

☑ 100%

(9.2.2) Frequency of measurement

Select from:

☑ Monthly

(9.2.3) Method of measurement

The volume is obtained through a meter inserted directly into the pipe, which transports the water, measuring and sending the result through a transmitter to the centralized control system.

(9.2.4) Please explain

Braskem annually monitors 100% of the facilities that have water reuse/reuse technologies, 67% of the 40 facilities; the remaining 33% do not currently use recycled/reused water due to technological projects or financial viability. Monitored and consolidated monthly on site by the HSE focal point.

The provision of fully-functioning, safely managed WASH services to all workers

(9.2.1) % of sites/facilities/operations

Select from:

☑ 100%

(9.2.2) Frequency of measurement

Select from:

☑ Other, please specify :quarterly

(9.2.3) Method of measurement

Volumes are monitored and consolidated on site by the HSE focal point.

(9.2.4) Please explain

Braskem measures and monitors 100% of its operations. Water for personal hygiene is provided by the local water concessionaires, in accordance with the quality standards defined by the laws in force in the regions. We carry out semi-annual analyses on drinking fountains in all areas and on restaurant taps, analyzing the microbiological parameters of total coliforms and certain bacteria to verify the quality of drinking water supplied for human consumption in filters and drinking fountains.

[Fixed row]

(9.2.2) What are the total volumes of water withdrawn, discharged, and consumed across all your operations, how do they compare to the previous reporting year, and how are they forecasted to change?

Total withdrawals

(9.2.2.1) Volume (megaliters/year)

77131

(9.2.2.2) Comparison with previous reporting year

Select from:

☑ Lower

(9.2.2.3) Primary reason for comparison with previous reporting year

Select from:

☑ Investment in water-smart technology/process

(9.2.2.4) Five-year forecast

Select from:

☑ Lower

(9.2.2.5) Primary reason for forecast

Select from:

☑ Increase/decrease in efficiency

(9.2.2.6) Please explain

There was a 4% reduction in the volume captured in 2023 compared to 2022. Changes in the calculation methodology were responsible for a 2% reduction. Reduction in production demand, mainly in regional SP and the USA, and optimization of the concentration cycles of cooling towers in the BA region contributed to a *lower capture volume. Besides that, the forecast is for an increase in production and an increase in water consumption, however the value captured will be lower due to external reuse projects that will be in the implementation phase in RJ (sewage water) and AL. For medium-term definitions, the project in RJ was considered implemented.*

Total discharges

(9.2.2.1) Volume (megaliters/year)

20401

(9.2.2.2) Comparison with previous reporting year

Select from:
☑ Higher

(9.2.2.3) Primary reason for comparison with previous reporting year

Select from:
☑ Increase/decrease in business activity

(9.2.2.4) Five-year forecast

Select from:
☑ Higher

(9.2.2.5) Primary reason for forecast

Select from:
☑ Increase/decrease in efficiency

(9.2.2.6) Please explain

There was a 2% increase in the volume of effluents generated in 2023 compared to 2022. Higher generation in the BA region due to maintenance stoppage and in the AL region due to an increase in production. Besides that, the forecast is for an increase in production by increasing water consumption, and consequently the generation of effluents, however there will be changes in the calculation methodology involving water KPIs. In relation to the current absolute values, there will be a *reduction in the generation of effluents due to a change in methodology due to the elimination of rainwater effluents that are currently incorporated as process effluents.*

Total consumption

(9.2.2.1) Volume (megaliters/year)

56730.12

(9.2.2.2) Comparison with previous reporting year

Select from:

☑ Lower

(9.2.2.3) Primary reason for comparison with previous reporting year

Select from:

☑ Investment in water-smart technology/process

(9.2.2.4) Five-year forecast

Select from:

☑ Higher

(9.2.2.5) Primary reason for forecast

Select from:

☑ Increase/decrease in efficiency

(9.2.2.6) Please explain

There was a 6% reduction in the volume consumed in 2023 compared to 2022. Reduction in production demand, mainly from regional SP and the USA, and optimization of the concentration cycles of cooling towers in regional BA contributed to a lower volume of water consumed. Besides that, the forecast is for an increase in production and an increase in water consumption, however there will be changes in the calculation methodology involving water KPIs. In relation to the current absolute values, there will be a reduction due to a change in methodology due to the elimination of effluents as consumption, in alignment with the current GRI and CDP standards, as they are currently incorporated as process consumption.

[Fixed row]

(9.2.4) Indicate whether water is withdrawn from areas with water stress, provide the volume, how it compares with the previous reporting year, and how it is forecasted to change.

(9.2.4.1) Withdrawals are from areas with water stress

Select from:

☑ Yes

(9.2.4.2) Volume withdrawn from areas with water stress (megaliters)

40152

(9.2.4.3) Comparison with previous reporting year

Select from:

☑ Lower

(9.2.4.4) Primary reason for comparison with previous reporting year

Select from:

☑ Investment in water-smart technology/process

(9.2.4.5) Five-year forecast

Select from:

☑ Lower

(9.2.4.6) Primary reason for forecast

Select from:

☑ Investment in water-smart technology/process

(9.2.4.7) % of total withdrawals that are withdrawn from areas with water stress

52.06

(9.2.4.8) Identification tool

Select all that apply
☑ WRI Aqueduct

(9.2.4.9) Please explain

Braskem has been looking for new sustainable alternatives for withdrawn water from areas with water stress. There are already projects in the final evaluation phase for the two most critical areas – RJ and AL
[Fixed row]

(9.2.7) Provide total water withdrawal data by source.

Fresh surface water, including rainwater, water from wetlands, rivers, and lakes

(9.2.7.1) Relevance

Select from:
☑ Relevant

(9.2.7.2) Volume (megaliters/year)

19040

(9.2.7.3) Comparison with previous reporting year

Select from:
☑ Lower

(9.2.7.4) Primary reason for comparison with previous reporting year

Select from:

☑ Increase/decrease in efficiency

(9.2.7.5) Please explain

This source is relevant because it is the second source of water withdrawal at Braskem's units, more than 20% of the total volume. All operations follow the local operational requirements and legal standard defined in the operational license approved by the environmental agency. Compared to the previous year, there was a decrease due to changes in methodology and initiatives implemented in some units.

Brackish surface water/Seawater

(9.2.7.1) Relevance

Select from:

☑ Not relevant

(9.2.7.5) Please explain

Braskem doesn't withdraw water from this type of source.-

Groundwater – renewable

(9.2.7.1) Relevance

Select from:

☑ Relevant

(9.2.7.2) Volume (megaliters/year)

3552

(9.2.7.3) Comparison with previous reporting year

Select from:

☑ Higher

(9.2.7.4) Primary reason for comparison with previous reporting year

Select from:

☑ Increase/decrease in efficiency

(9.2.7.5) Please explain

The underground water withdrawal is relevant because it is the main source in the Alagoas region; other forms of water withdrawal have low availability. All operations meet the legal standard and the operating license requirements approved by the environmental agency. Compared to the previous year, there was an increase due to the increased production of CS1 AL. Despite the increase in water withdrawal in absolute terms, efficiency (consumption per ton of product produced) has improved.

Groundwater – non-renewable

(9.2.7.1) Relevance

Select from:

☑ Not relevant

(9.2.7.5) Please explain

Braskem doesn't withdraw water from this type of source.-

Produced/Entrained water

(9.2.7.1) Relevance

Select from:

☑ Not relevant

(9.2.7.5) Please explain

Braskem doesn't withdraw water from this type of source.-

Third party sources

(9.2.7.1) Relevance

Select from:

☑ Relevant

(9.2.7.2) Volume (megaliters/year)

54539

(9.2.7.3) Comparison with previous reporting year

Select from:

☑ Lower

(9.2.7.4) Primary reason for comparison with previous reporting year

Select from:

☑ Investment in water-smart technology/process

(9.2.7.5) Please explain

This source is relevant because it is the main source of water withdrawal at Braskem's units, more than 70% of the total volume. All operations follow the local operational requirements and legal standard defined in the operational license approved by the environmental agency. Comparing with the previous year, there was a reduction in the absolute volume captured by Q1 BA [Bahia] due to progress in the optimization of cycles in the unit's cooling towers.
[Fixed row]

(9.2.8) Provide total water discharge data by destination.

Fresh surface water

(9.2.8.1) Relevance

Select from:

☑ Relevant

(9.2.8.2) Volume (megaliters/year)

6351

(9.2.8.3) Comparison with previous reporting year

Select from:

☑ Lower

(9.2.8.4) Primary reason for comparison with previous reporting year

Select from:

☑ Increase/decrease in efficiency

(9.2.8.5) Please explain

This destination is relevant because it is the second destination of water discharge at Braskem units, almost 30% of the total volume. There was a change in the type of water release at the PP9 Markus Hook unit (USA), thus leading to a revision of the data reported in 2022 to 6,497 megalitres/year. So, compared to the previous year, there was a decrease in the generation of effluents due to the reduction in the absolute volume generated in some units, especially Q3 ABC.

Brackish surface water/seawater

(9.2.8.1) Relevance

Select from:

☑ Relevant

(9.2.8.2) Volume (megaliters/year)

3157

(9.2.8.3) Comparison with previous reporting year

Select from:

☑ Higher

(9.2.8.4) Primary reason for comparison with previous reporting year

Select from:

☑ Increase/decrease in efficiency

(9.2.8.5) Please explain

This destination is relevant because it is the main destination of water discharge in the Alagoas region. Comparing with the previous year, there was an increased production in CS1 AL and consequent increase in effluent generation. The efficiency (generation per ton of product produced) has improved.

Groundwater

(9.2.8.1) Relevance

Select from:

☑ Not relevant

(9.2.8.5) Please explain

'Braskem does not dispose of effluent in groundwater.

Third-party destinations

(9.2.8.1) Relevance

Select from:

☑ Relevant

(9.2.8.2) Volume (megaliters/year)

10894

(9.2.8.3) Comparison with previous reporting year

Select from:

☑ Higher

(9.2.8.4) Primary reason for comparison with previous reporting year

Select from:

☑ Increase/decrease in business activity

(9.2.8.5) Please explain

This destination is relevant because it is the main destination of water discharge at Braskem units, more than 50% of the total volume. Comparing with the previous year, there was an increased effluent generation due to the general shutdown maintenance of the petrochemical complex in Bahia.
[Fixed row]

(9.2.9) Within your direct operations, indicate the highest level(s) to which you treat your discharge.

Tertiary treatment

(9.2.9.1) Relevance of treatment level to discharge

Select from:

☑ Not relevant

(9.2.9.6) Please explain

Braskem eliminated this type of treatment as it was now carried out by third parties.

Secondary treatment

(9.2.9.1) Relevance of treatment level to discharge

Select from:

☑ Relevant

(9.2.9.2) Volume (megaliters/year)

15597

(9.2.9.3) Comparison of treated volume with previous reporting year

Select from:

☑ Higher

(9.2.9.4) Primary reason for comparison with previous reporting year

Select from:

☑ Increase/decrease in business activity

(9.2.9.5) % of your sites/facilities/operations this volume applies to

Select from:

☑ 71-80

(9.2.9.6) Please explain

Secondary treatment is relevant because it is the main form of treatment at the Braskem units. At all our units, effluent management is based on disposal standards defined in accordance with local legislation and internal procedures. Some industrial plants also have laboratories capable of analyzing effluents and creating internal standards for assessing environmental quality. Braskem has internal documents that standardize the matter, such as Work Instructions (Instruções de Trabalho, IT), which locally address the management and monitoring of effluent at the company. The management of industrial and administrative effluents is based on standards defined by local legislation and internal procedures in all our units, respecting the characteristics of each production process. Effluents are treated internally or by third parties and, in this case, they undergo quality tests to ensure the parameters required by Braskem. Comparing with the previous year, there was an increased production of CS1 and PVC2 AL increasing the generation of effluents, and the general shutdown maintenance of the petrochemical complex in Bahia. However the efficiency (effluent generation per ton of product produced) for the Alagoas units has improved.

Primary treatment only

(9.2.9.1) Relevance of treatment level to discharge

Select from:
☑ Not relevant

(9.2.9.6) Please explain

Braskem has a more complex effluent treatment flow, which includes secondary and/or tertiary treatments

Discharge to the natural environment without treatment

(9.2.9.1) Relevance of treatment level to discharge

Select from:
☑ Not relevant

(9.2.9.6) Please explain

All Braskem effluent receives treatment as stated in this question, therefore Braskem does not discharge to the natural environment untreated effluents.

Discharge to a third party without treatment

(9.2.9.1) Relevance of treatment level to discharge

Select from:
☑ Relevant

(9.2.9.2) Volume (megaliters/year)

4803

(9.2.9.3) Comparison of treated volume with previous reporting year

Select from:
☑ Lower

(9.2.9.4) Primary reason for comparison with previous reporting year

Select from:
☑ Increase/decrease in efficiency

(9.2.9.5) % of your sites/facilities/operations this volume applies to

Select from:
☑ 21-30

(9.2.9.6) Please explain

Disposal to third parties without treatment is relevant because it is the current method in the southern region of Brazil and the units in Germany. The management of industrial and administrative effluents is based on standards defined by local legislation and internal procedures in all our units, respecting the characteristics of each production process. Effluents are treated internally or by third parties and, in this case, they undergo quality tests to ensure the parameters required by Braskem. It is almost 25% of the total volume. The volume decreased 2.2% compared to the previous year. The efficiency (effluent generation per ton of product produced) has improved in Q2 RS.

Other

(9.2.9.1) Relevance of treatment level to discharge

Select from:
☑ Not relevant

(9.2.9.6) Please explain

Not aplicable
[Fixed row]

(9.2.10) Provide details of your organization's emissions of nitrates, phosphates, pesticides, and other priority substances to water in the reporting year.

(9.2.10.1) Emissions to water in the reporting year (metric tons)

62.84

(9.2.10.2) Categories of substances included

Select all that apply

☑ Nitrates

☑ Phosphates

(9.2.10.4) Please explain

Concentration limits are complied with and monitored as stipulated in the Operating License. It is important to point out that in addition to controlling concentrations, Braskem and the third-party companies involved have emergency basins that can contain a portion of effluents with potential for contamination, helping to minimize possible impacts.
[Fixed row]

(9.3) In your direct operations and upstream value chain, what is the number of facilities where you have identified substantive water-related dependencies, impacts, risks, and opportunities?

Direct operations

(9.3.1) Identification of facilities in the value chain stage

Select from:

☑ Yes, we have assessed this value chain stage and identified facilities with water-related dependencies, impacts, risks, and opportunities

(9.3.2) Total number of facilities identified

11

(9.3.3) % of facilities in direct operations that this represents

Select from:

☑ 26-50

(9.3.4) Please explain

The main potential risk is associated with severe droughts, as the company already has a plan to identify and implement new sources of water capture in these identified regions. Braskem has already identified a new sustainable source of water for the Rio de Janeiro region, the project is at an advanced stage to begin implementation. With this project, the region's water security index will be 100%.

Upstream value chain

(9.3.1) Identification of facilities in the value chain stage

Select from:

☑ Yes, we have assessed this value chain stage and identified facilities with water-related dependencies, impacts, risks, and opportunities

(9.3.2) Total number of facilities identified

11

(9.3.4) Please explain

All upstream suppliers, and located in the same region as our facilities, are exposed to the same physical risks, so we have engagement actions with these suppliers to mitigate the impact and risks
[Fixed row]

(9.3.1) For each facility referenced in 9.3, provide coordinates, water accounting data, and a comparison with the previous reporting year.

Row 1

(9.3.1.1) Facility reference number

Select from:

☑ Facility 11

(9.3.1.2) Facility name (optional)

PVC1

(9.3.1.3) Value chain stage

Select from:

☑ Direct operations

(9.3.1.4) Dependencies, impacts, risks, and/or opportunities identified at this facility

Select all that apply

☑ Dependencies

☑ Impacts

☑ Risks

☑ Opportunities

(9.3.1.5) Withdrawals or discharges in the reporting year

Select from:

☑ Yes, withdrawals and discharges

(9.3.1.7) Country/Area & River basin

Brazil

☑ Other, please specify :Reconcavo Norte/Inhambupe - Bahia

(9.3.1.8) Latitude

-12.652778

(9.3.1.9) Longitude

-38.316111

(9.3.1.10) Located in area with water stress

Select from:
☑ Yes

(9.3.1.13) Total water withdrawals at this facility (megaliters)

1794421

(9.3.1.14) Comparison of total withdrawals with previous reporting year

Select from:
☑ Higher

(9.3.1.15) Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

(9.3.1.16) Withdrawals from brackish surface water/seawater

0

(9.3.1.17) Withdrawals from groundwater - renewable

0

(9.3.1.18) Withdrawals from groundwater - non-renewable

0

(9.3.1.19) Withdrawals from produced/entrained water

0

(9.3.1.20) Withdrawals from third party sources

1794421

(9.3.1.21) Total water discharges at this facility (megaliters)

1202528

(9.3.1.22) Comparison of total discharges with previous reporting year

Select from:

☑ Lower

(9.3.1.23) Discharges to fresh surface water

0

(9.3.1.24) Discharges to brackish surface water/seawater

0

(9.3.1.25) Discharges to groundwater

0

(9.3.1.26) Discharges to third party destinations

1202528

(9.3.1.27) Total water consumption at this facility (megaliters)

1794421

(9.3.1.28) Comparison of total consumption with previous reporting year

Select from:

☑ Higher

(9.3.1.29) Please explain

Increase of 10.3% in water consumption compared to the previous year due to increased production, the planned maintenance stop (pit stop) that occurred in may/23 and blackout in august/23.

Row 2

(9.3.1.1) Facility reference number

Select from:

☑ Facility 2

(9.3.1.2) Facility name (optional)

PE 9

(9.3.1.3) Value chain stage

Select from:

☑ Direct operations

(9.3.1.4) Dependencies, impacts, risks, and/or opportunities identified at this facility

Select all that apply

☑ Dependencies

☑ Impacts

☑ Risks

☑ Opportunities

(9.3.1.5) Withdrawals or discharges in the reporting year

Select from:

☑ Yes, withdrawals and discharges

(9.3.1.7) Country/Area & River basin

Brazil

☑ Other, please specify :Guandu (Rio de Janeiro)

(9.3.1.8) Latitude

-22.713099

(9.3.1.9) Longitude

-43.242728

(9.3.1.10) Located in area with water stress

Select from:

☑ Yes

(9.3.1.13) Total water withdrawals at this facility (megaliters)

896388

(9.3.1.14) Comparison of total withdrawals with previous reporting year

Select from:

☑ Lower

(9.3.1.15) Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

(9.3.1.16) Withdrawals from brackish surface water/seawater

0

(9.3.1.17) Withdrawals from groundwater - renewable

0

(9.3.1.18) Withdrawals from groundwater - non-renewable

0

(9.3.1.19) Withdrawals from produced/entrained water

0

(9.3.1.20) Withdrawals from third party sources

896388

(9.3.1.21) Total water discharges at this facility (megaliters)

26271

(9.3.1.22) Comparison of total discharges with previous reporting year

Select from:
☑ Lower

(9.3.1.23) Discharges to fresh surface water

26271

(9.3.1.24) Discharges to brackish surface water/seawater

0

(9.3.1.25) Discharges to groundwater

0

(9.3.1.26) Discharges to third party destinations

0

(9.3.1.27) Total water consumption at this facility (megaliters)

896388

(9.3.1.28) Comparison of total consumption with previous reporting year

Select from:

☑ Lower

(9.3.1.29) Please explain

Decrease of 7.1% in water consumption compared to the previous year due to decrease production. The efficiency (consumption per ton of product produced) has improved.

Row 3

(9.3.1.1) Facility reference number

Select from:

☑ Facility 9

(9.3.1.2) Facility name (optional)

PE 2

(9.3.1.3) Value chain stage

Select from:

☑ Direct operations

(9.3.1.4) Dependencies, impacts, risks, and/or opportunities identified at this facility

Select all that apply

☑ Dependencies
☑ Impacts
☑ Risks
☑ Opportunities

(9.3.1.5) Withdrawals or discharges in the reporting year

Select from:
☑ Yes, withdrawals and discharges

(9.3.1.7) Country/Area & River basin

Brazil
☑ Other, please specify :Reconcavo Norte/Inhambupe - Bahia

(9.3.1.8) Latitude

-12.622391

(9.3.1.9) Longitude

-38.312467

(9.3.1.10) Located in area with water stress

Select from:
☑ Yes

(9.3.1.13) Total water withdrawals at this facility (megaliters)

401205

(9.3.1.14) Comparison of total withdrawals with previous reporting year

Select from:
☑ Higher

(9.3.1.15) Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

(9.3.1.16) Withdrawals from brackish surface water/seawater

0

(9.3.1.17) Withdrawals from groundwater - renewable

30379

(9.3.1.18) Withdrawals from groundwater - non-renewable

0

(9.3.1.19) Withdrawals from produced/entrained water

0

(9.3.1.20) Withdrawals from third party sources

370825

(9.3.1.21) Total water discharges at this facility (megaliters)

147484

(9.3.1.22) Comparison of total discharges with previous reporting year

Select from:
☑ Higher

(9.3.1.23) Discharges to fresh surface water

0

(9.3.1.24) Discharges to brackish surface water/seawater

0

(9.3.1.25) Discharges to groundwater

0

(9.3.1.26) Discharges to third party destinations

147484

(9.3.1.27) Total water consumption at this facility (megaliters)

401205

(9.3.1.28) Comparison of total consumption with previous reporting year

Select from:
☑ About the same

(9.3.1.29) Please explain

About the same water consumption, decrease only 0.7% in compared to the previous year and an decrease of production. There was a reduction in water efficiency per ton of product produced due to the low production load.

Row 4

(9.3.1.1) Facility reference number

Select from:
☑ Facility 3

(9.3.1.2) Facility name (optional)

PP 5

(9.3.1.3) Value chain stage

Select from:

☑ Direct operations

(9.3.1.4) Dependencies, impacts, risks, and/or opportunities identified at this facility

Select all that apply

☑ Dependencies

☑ Impacts

☑ Risks

☑ Opportunities

(9.3.1.5) Withdrawals or discharges in the reporting year

Select from:

☑ Yes, withdrawals and discharges

(9.3.1.7) Country/Area & River basin

Brazil

☑ Other, please specify :Guandu (Rio de Janeiro)

(9.3.1.8) Latitude

-22.713099

(9.3.1.9) Longitude

-43.242728

(9.3.1.10) Located in area with water stress

Select from:
☑ Yes

(9.3.1.13) Total water withdrawals at this facility (megaliters)

330802

(9.3.1.14) Comparison of total withdrawals with previous reporting year

Select from:
☑ Higher

(9.3.1.15) Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

(9.3.1.16) Withdrawals from brackish surface water/seawater

0

(9.3.1.17) Withdrawals from groundwater - renewable

0

(9.3.1.18) Withdrawals from groundwater - non-renewable

0

(9.3.1.19) Withdrawals from produced/entrained water

0

(9.3.1.20) Withdrawals from third party sources

330802

(9.3.1.21) Total water discharges at this facility (megaliters)

15201

(9.3.1.22) Comparison of total discharges with previous reporting year

Select from:

☑ Lower

(9.3.1.23) Discharges to fresh surface water

15201

(9.3.1.24) Discharges to brackish surface water/seawater

0

(9.3.1.25) Discharges to groundwater

0

(9.3.1.26) Discharges to third party destinations

0

(9.3.1.27) Total water consumption at this facility (megaliters)

330802

(9.3.1.28) Comparison of total consumption with previous reporting year

Select from:

☑ Higher

(9.3.1.29) Please explain

Increase of 12.2% in water consumption compared to the previous year due to increased production, greater consumption of steam and drinking water.

Row 5

(9.3.1.1) Facility reference number

Select from:

☑ Facility 1

(9.3.1.2) Facility name (optional)

Chemicals 4

(9.3.1.3) Value chain stage

Select from:

☑ Direct operations

(9.3.1.4) Dependencies, impacts, risks, and/or opportunities identified at this facility

Select all that apply

☑ Dependencies

☑ Impacts

☑ Risks

☑ Opportunities

(9.3.1.5) Withdrawals or discharges in the reporting year

Select from:

☑ Yes, withdrawals and discharges

(9.3.1.7) Country/Area & River basin

Brazil

☑ Other, please specify :Guandu (Rio de Janeiro)

(9.3.1.8) Latitude

-22.713099

(9.3.1.9) Longitude

-43.242728

(9.3.1.10) Located in area with water stress

Select from:

☑ Yes

(9.3.1.13) Total water withdrawals at this facility (megaliters)

4850612

(9.3.1.14) Comparison of total withdrawals with previous reporting year

Select from:

☑ About the same

(9.3.1.15) Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

4850612

(9.3.1.16) Withdrawals from brackish surface water/seawater

0

(9.3.1.17) Withdrawals from groundwater - renewable

0

(9.3.1.18) Withdrawals from groundwater - non-renewable

0

(9.3.1.19) Withdrawals from produced/entrained water

0

(9.3.1.20) Withdrawals from third party sources

0

(9.3.1.21) Total water discharges at this facility (megaliters)

535087

(9.3.1.22) Comparison of total discharges with previous reporting year

Select from:
☑ Higher

(9.3.1.23) Discharges to fresh surface water

535087

(9.3.1.24) Discharges to brackish surface water/seawater

0

(9.3.1.25) Discharges to groundwater

0

(9.3.1.26) Discharges to third party destinations

0

(9.3.1.27) Total water consumption at this facility (megaliters)

3591449

(9.3.1.28) Comparison of total consumption with previous reporting year

Select from:

☑ Higher

(9.3.1.29) Please explain

Increase of 1.3% in water consumption compared to the previous year due to increased production and the short planned maintenance stop (pit stop) that occurred in July/23.

Row 6

(9.3.1.1) Facility reference number

Select from:

☑ Facility 10

(9.3.1.2) Facility name (optional)

PE 3

(9.3.1.3) Value chain stage

Select from:

☑ Direct operations

(9.3.1.4) Dependencies, impacts, risks, and/or opportunities identified at this facility

Select all that apply

☑ Dependencies
☑ Impacts
☑ Risks
☑ Opportunities

(9.3.1.5) Withdrawals or discharges in the reporting year

Select from:
☑ Yes, withdrawals and discharges

(9.3.1.7) Country/Area & River basin

Brazil
☑ Other, please specify :Reconcavo Norte/Inhambupe - Bahia

(9.3.1.8) Latitude

-12.622391

(9.3.1.9) Longitude

-38.312467

(9.3.1.10) Located in area with water stress

Select from:
☑ Yes

(9.3.1.13) Total water withdrawals at this facility (megaliters)

686777

(9.3.1.14) Comparison of total withdrawals with previous reporting year

Select from:
☑ Lower

(9.3.1.15) Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

(9.3.1.16) Withdrawals from brackish surface water/seawater

0

(9.3.1.17) Withdrawals from groundwater - renewable

0

(9.3.1.18) Withdrawals from groundwater - non-renewable

0

(9.3.1.19) Withdrawals from produced/entrained water

0

(9.3.1.20) Withdrawals from third party sources

686777

(9.3.1.21) Total water discharges at this facility (megaliters)

198679

(9.3.1.22) Comparison of total discharges with previous reporting year

Select from:
☑ Higher

(9.3.1.23) Discharges to fresh surface water

0

(9.3.1.24) Discharges to brackish surface water/seawater

0

(9.3.1.25) Discharges to groundwater

0

(9.3.1.26) Discharges to third party destinations

198679

(9.3.1.27) Total water consumption at this facility (megaliters)

686777

(9.3.1.28) Comparison of total consumption with previous reporting year

Select from:
☑ Lower

(9.3.1.29) Please explain

Decrease of 20,7% in water consumption compared to the previous year due to decrease production and advances in water consumption management. There was an increase in water efficiency per ton of product produced.

Row 7

(9.3.1.1) Facility reference number

Select from:
☑ Facility 7

(9.3.1.2) Facility name (optional)

Chemicals 1

(9.3.1.3) Value chain stage

Select from:

☑ Direct operations

(9.3.1.4) Dependencies, impacts, risks, and/or opportunities identified at this facility

Select all that apply

☑ Dependencies

☑ Impacts

☑ Risks

☑ Opportunities

(9.3.1.5) Withdrawals or discharges in the reporting year

Select from:

☑ Yes, withdrawals and discharges

(9.3.1.7) Country/Area & River basin

Brazil

☑ Other, please specify :Reconcavo Norte/Inhambupe - Bahia

(9.3.1.8) Latitude

-12.660833

(9.3.1.9) Longitude

-38.326111

(9.3.1.10) Located in area with water stress

Select from:

☑ Yes

(9.3.1.13) Total water withdrawals at this facility (megaliters)

15992763

(9.3.1.14) Comparison of total withdrawals with previous reporting year

Select from:

☑ Lower

(9.3.1.15) Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

(9.3.1.16) Withdrawals from brackish surface water/seawater

0

(9.3.1.17) Withdrawals from groundwater - renewable

0

(9.3.1.18) Withdrawals from groundwater - non-renewable

0

(9.3.1.19) Withdrawals from produced/entrained water

0

(9.3.1.20) Withdrawals from third party sources

15992763

(9.3.1.21) Total water discharges at this facility (megaliters)

3901497

(9.3.1.22) Comparison of total discharges with previous reporting year

Select from:
☑ Higher

(9.3.1.23) Discharges to fresh surface water

0

(9.3.1.24) Discharges to brackish surface water/seawater

0

(9.3.1.25) Discharges to groundwater

0

(9.3.1.26) Discharges to third party destinations

3901497

(9.3.1.27) Total water consumption at this facility (megaliters)

14687875

(9.3.1.28) Comparison of total consumption with previous reporting year

Select from:
☑ Lower

(9.3.1.29) Please explain

Decrease of 9.7% in water consumption compared to the previous year due to tower concentration cycle optimizations.

Row 8

(9.3.1.1) Facility reference number

Select from:

☑ Facility 5

(9.3.1.2) Facility name (optional)

PP3

(9.3.1.3) Value chain stage

Select from:

☑ Direct operations

(9.3.1.4) Dependencies, impacts, risks, and/or opportunities identified at this facility

Select all that apply

☑ Dependencies

☑ Impacts

☑ Risks

☑ Opportunities

(9.3.1.5) Withdrawals or discharges in the reporting year

Select from:

☑ Yes, withdrawals and discharges

(9.3.1.7) Country/Area & River basin

Brazil

☑ Other, please specify :Piracicaba, Capivari, Jundiaí (SP)

(9.3.1.8) Latitude

-22.7181

(9.3.1.9) Longitude

-47.1343

(9.3.1.10) Located in area with water stress

Select from:

☑ Yes

(9.3.1.13) Total water withdrawals at this facility (megaliters)

406393

(9.3.1.14) Comparison of total withdrawals with previous reporting year

Select from:

☑ About the same

(9.3.1.15) Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

406393

(9.3.1.16) Withdrawals from brackish surface water/seawater

0

(9.3.1.17) Withdrawals from groundwater - renewable

0

(9.3.1.18) Withdrawals from groundwater - non-renewable

0

(9.3.1.19) Withdrawals from produced/entrained water

0

(9.3.1.20) Withdrawals from third party sources

0

(9.3.1.21) Total water discharges at this facility (megaliters)

69539

(9.3.1.22) Comparison of total discharges with previous reporting year

Select from:
☑ Lower

(9.3.1.23) Discharges to fresh surface water

0

(9.3.1.24) Discharges to brackish surface water/seawater

0

(9.3.1.25) Discharges to groundwater

0

(9.3.1.26) Discharges to third party destinations

69539

(9.3.1.27) Total water consumption at this facility (megaliters)

406393

(9.3.1.28) Comparison of total consumption with previous reporting year

Select from:

☑ About the same

(9.3.1.29) Please explain

About the same water consumption, decrease only 0.3% in compared to the previous year and an increase of production. There was an increase in water efficiency per ton of product produced.

Row 9

(9.3.1.1) Facility reference number

Select from:

☑ Facility 6

(9.3.1.2) Facility name (optional)

CS1

(9.3.1.3) Value chain stage

Select from:

☑ Direct operations

(9.3.1.4) Dependencies, impacts, risks, and/or opportunities identified at this facility

Select all that apply

☑ Dependencies
☑ Impacts
☑ Risks
☑ Opportunities

(9.3.1.5) Withdrawals or discharges in the reporting year

Select from:
☑ Yes, withdrawals and discharges

(9.3.1.7) Country/Area & River basin

Brazil
☑ Other, please specify :Remédios (Alagoas)

(9.3.1.8) Latitude

-9.672095

(9.3.1.9) Longitude

-35.746608

(9.3.1.10) Located in area with water stress

Select from:
☑ Yes

(9.3.1.13) Total water withdrawals at this facility (megaliters)

3506841

(9.3.1.14) Comparison of total withdrawals with previous reporting year

Select from:
☑ Higher

(9.3.1.15) Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

(9.3.1.16) Withdrawals from brackish surface water/seawater

0

(9.3.1.17) Withdrawals from groundwater - renewable

3502726

(9.3.1.18) Withdrawals from groundwater - non-renewable

0

(9.3.1.19) Withdrawals from produced/entrained water

0

(9.3.1.20) Withdrawals from third party sources

4115

(9.3.1.21) Total water discharges at this facility (megaliters)

1505140

(9.3.1.22) Comparison of total discharges with previous reporting year

Select from:
☑ Higher

(9.3.1.23) Discharges to fresh surface water

0

(9.3.1.24) Discharges to brackish surface water/seawater

1505140

(9.3.1.25) Discharges to groundwater

0

(9.3.1.26) Discharges to third party destinations

0

(9.3.1.27) Total water consumption at this facility (megaliters)

3506841

(9.3.1.28) Comparison of total consumption with previous reporting year

Select from:

☑ Higher

(9.3.1.29) Please explain

Increase of 15.9% in water consumption compared to the previous year due to increased production. Despite the increase in consumption in absolute terms, efficiency (consumption per ton of product produced) has improved.

Row 10

(9.3.1.1) Facility reference number

Select from:

☑ Facility 4

(9.3.1.2) Facility name (optional)

PVC2

(9.3.1.3) Value chain stage

Select from:
☑ Direct operations

(9.3.1.4) Dependencies, impacts, risks, and/or opportunities identified at this facility

Select all that apply
☑ Dependencies
☑ Impacts
☑ Risks
☑ Opportunities

(9.3.1.5) Withdrawals or discharges in the reporting year

Select from:
☑ Yes, withdrawals and discharges

(9.3.1.7) Country/Area & River basin

Brazil
☑ Other, please specify :Remédios (Alagoas)

(9.3.1.8) Latitude

-9.669779

(9.3.1.9) Longitude

-35.824888

(9.3.1.10) Located in area with water stress

Select from:

☑ Yes

(9.3.1.13) Total water withdrawals at this facility (megaliters)

3989938

(9.3.1.14) Comparison of total withdrawals with previous reporting year

Select from:

☑ Lower

(9.3.1.15) Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

3989938

(9.3.1.16) Withdrawals from brackish surface water/seawater

0

(9.3.1.17) Withdrawals from groundwater - renewable

0

(9.3.1.18) Withdrawals from groundwater - non-renewable

0

(9.3.1.19) Withdrawals from produced/entrained water

0

(9.3.1.20) Withdrawals from third party sources

0

(9.3.1.21) Total water discharges at this facility (megaliters)

1651611

(9.3.1.22) Comparison of total discharges with previous reporting year

Select from:

☑ Lower

(9.3.1.23) Discharges to fresh surface water

0

(9.3.1.24) Discharges to brackish surface water/seawater

1651611

(9.3.1.25) Discharges to groundwater

0

(9.3.1.26) Discharges to third party destinations

0

(9.3.1.27) Total water consumption at this facility (megaliters)

3878364

(9.3.1.28) Comparison of total consumption with previous reporting year

Select from:

☑ Lower

(9.3.1.29) Please explain

Decrease of 1.7% in water consumption compared to the previous year due to increase production. There was an increase in water efficiency per ton of product produced.

Row 11

(9.3.1.1) Facility reference number

Select from:

☑ Facility 8

(9.3.1.2) Facility name (optional)

PE 1

(9.3.1.3) Value chain stage

Select from:

☑ Direct operations

(9.3.1.4) Dependencies, impacts, risks, and/or opportunities identified at this facility

Select all that apply

☑ Dependencies

☑ Impacts

☑ Risks

☑ Opportunities

(9.3.1.5) Withdrawals or discharges in the reporting year

Select from:

☑ Yes, withdrawals and discharges

(9.3.1.7) Country/Area & River basin

Brazil

☑ Other, please specify :Reconcavo Norte/Inhambupe - Bahia

(9.3.1.8) Latitude

-12.622391

(9.3.1.9) Longitude

-38.312467

(9.3.1.10) Located in area with water stress

Select from:

☑ Yes

(9.3.1.13) Total water withdrawals at this facility (megaliters)

252927

(9.3.1.14) Comparison of total withdrawals with previous reporting year

Select from:

☑ Higher

(9.3.1.15) Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

(9.3.1.16) Withdrawals from brackish surface water/seawater

0

(9.3.1.17) Withdrawals from groundwater - renewable

0

(9.3.1.18) Withdrawals from groundwater - non-renewable

0

(9.3.1.19) Withdrawals from produced/entrained water

0

(9.3.1.20) Withdrawals from third party sources

252927

(9.3.1.21) Total water discharges at this facility (megaliters)

55281

(9.3.1.22) Comparison of total discharges with previous reporting year

Select from:
☑ Lower

(9.3.1.23) Discharges to fresh surface water

0

(9.3.1.24) Discharges to brackish surface water/seawater

0

(9.3.1.25) Discharges to groundwater

0

(9.3.1.26) Discharges to third party destinations

55281

(9.3.1.27) Total water consumption at this facility (megaliters)

252927

(9.3.1.28) Comparison of total consumption with previous reporting year

Select from:

☑ Higher

(9.3.1.29) Please explain

Increase of 8.8% in water consumption compared to the previous year and an decrease of production. There was a reduction in water efficiency per ton of product produced.
[Add row]

(9.3.2) For the facilities in your direct operations referenced in 9.3.1, what proportion of water accounting data has been third party verified?

Water withdrawals – total volumes

(9.3.2.1) % verified

Select from:

☑ 76-100

(9.3.2.2) Verification standard used

Braskem plants are ISO 14.000 certified and thus pass through an auditing process where water and effluent parameters integrate the evaluation to maintain the certification. If any non-conformities in these parameters are found, they generate a report and a deadline to solve the issue. KPMG also verified data using ISAE 3000 standard yearly.

Water withdrawals – volume by source

(9.3.2.1) % verified

Select from:

☑ 76-100

(9.3.2.2) Verification standard used

Braskem plants are ISO 14.000 certified and thus pass through an auditing process where water and effluent parameters integrate the evaluation to maintain the certification. If any non-conformities in these parameters are found, they generate a report and a deadline to solve the issue. KPMG also verified data using ISAE 3000 standard yearly.

Water withdrawals – quality by standard water quality parameters

(9.3.2.1) % verified

Select from:

☑ 76-100

(9.3.2.2) Verification standard used

Braskem plants are ISO 14.000 certified and thus pass through an auditing process where water and effluent parameters integrate the evaluation to maintain the certification. If any non-conformities in these parameters are found, they generate a report and a deadline to solve the issue. KPMG also verified data using ISAE 3000 standard yearly.

Water discharges – total volumes

(9.3.2.1) % verified

Select from:

☑ 76-100

(9.3.2.2) Verification standard used

Braskem plants are ISO 14.000 certified and thus pass through an auditing process where water and effluent parameters integrate the evaluation to maintain the certification. If any non-conformities in these parameters are found, they generate a report and a deadline to solve the issue. KPMG also verified data using ISAE 3000 standard yearly.

Water discharges – volume by destination

(9.3.2.1) % verified

Select from:

☑ 76-100

(9.3.2.2) Verification standard used

Braskem plants are ISO 14.000 certified and thus pass through an auditing process where water and effluent parameters integrate the evaluation to maintain the certification. If any non-conformities in these parameters are found, they generate a report and a deadline to solve the issue. KPMG also verified data using ISAE 3000 standard yearly.

Water discharges – volume by final treatment level

(9.3.2.1) % verified

Select from:

☑ 76-100

(9.3.2.2) Verification standard used

Braskem plants are ISO 14.000 certified and thus pass through an auditing process where water and effluent parameters integrate the evaluation to maintain the certification. If any non-conformities in these parameters are found, they generate a report and a deadline to solve the issue. KPMG also verified data using ISAE 3000 standard yearly.

Water discharges – quality by standard water quality parameters

(9.3.2.1) % verified

Select from:

☑ 76-100

(9.3.2.2) Verification standard used

Braskem plants are ISO 14.000 certified and thus pass through an auditing process where water and effluent parameters integrate the evaluation to maintain the certification. If any non-conformities in these parameters are found, they generate a report and a deadline to solve the issue. KPMG also verified data using ISAE 3000 standard yearly.

Water consumption – total volume

(9.3.2.1) % verified

Select from:

☑ 76-100

(9.3.2.2) Verification standard used

Braskem plants are ISO 14.000 certified and thus pass through an auditing process where water and effluent parameters integrate the evaluation to maintain the certification. If any non-conformities in these parameters are found, they generate a report and a deadline to solve the issue. KPMG also verified data using ISAE 3000 standard yearly.
[Fixed row]

(9.4) Could any of your facilities reported in 9.3.1 have an impact on a requesting CDP supply chain member?

Select from:

☑ No, CDP supply chain members do not buy goods or services from facilities listed in 9.3.1

(9.5) Provide a figure for your organization's total water withdrawal efficiency.

(9.5.1) Revenue (currency)

14100000000

(9.5.2) Total water withdrawal efficiency

182805.88

(9.5.3) Anticipated forward trend

There are two types of reuse: internal current and domestic effluent through partnerships. The goal is to increase the safe capture of water, one of the options being the replacement of part of the uptake by reuse, improving the efficiency of uptake. Braskem has projects in an advanced stage of evaluation in Rio de Janeiro (reuse of sewage water) and Alagoas.
[Fixed row]

(9.6) Do you calculate water intensity for your activities in the chemical sector?

Select from:
☑ Yes

(9.6.1) For your top five products by production weight/volume, provide the following water intensity information associated with your activities in the chemical sector.

Row 1

(9.6.1.1) Product type

Bulk organic chemicals
☑ Polymers

(9.6.1.2) Product name

polyethylene

(9.6.1.3) Water intensity value (m3/denominator)

1.91

(9.6.1.4) Numerator: water aspect

Select from:

☑ Total water consumption

(9.6.1.5) Denominator

Select from:

☑ Ton

(9.6.1.6) Comparison with previous reporting year

Select from:

☑ About the same

(9.6.1.7) Please explain

Production increased, compared to the previous year, by 18%, thus resulting in an increase in water consumption, but the water intensity indicator was better due to initiatives and improvements implemented. About the same water intensity, it decreased only 1% compared to the previous year. The water intensity indicator is used by Process Engineering to identify internal performance references. Units that are below this reference are subjected to process improvement analyses, through initiatives and also process engineering studies to improve process performance and efficiency.Based on our Business Plan for the coming years 2024-2028 we expect a 4% decrease in this water intensity indicator, due to process improvements identified

Row 2

(9.6.1.1) Product type

Bulk organic chemicals

☑ Polymers

(9.6.1.2) Product name

polypropylene

(9.6.1.3) Water intensity value (m3/denominator)

1.33

(9.6.1.4) Numerator: water aspect

Select from:

☑ Total water consumption

(9.6.1.5) Denominator

Select from:

☑ Ton

(9.6.1.6) Comparison with previous reporting year

Select from:

☑ Lower

(9.6.1.7) Please explain

Production increased, compared to the previous year, by 18%, thus resulting in an increase in water consumption, but the water intensity indicator was better due to initiatives and improvements implemented. There was a change in procedure to restrict the use of water. The strategy in place to reduce water intensity is to implement initiatives to reuse internal effluents. Based on our Business Plan for the coming years (2024-2028), we expect a 6% increase in this water intensity indicator, due to an increase in production and an increase in water consumption. However, there will be changes in the calculation methodology involving water KPIs. In relation to the current absolute values, there will be a reduction due to a change in methodology due to the elimination of effluents as consumption, in alignment with the current GRI and CDP standards, as they are currently incorporated as process consumption. The water intensity indicator is used by Process Engineering to identify internal performance references. Units that are below this reference are subjected to process improvement analyses, through initiatives and also process engineering studies to improve process performance and efficiency.

Row 3

(9.6.1.1) Product type

Bulk organic chemicals

☑ Polymers

(9.6.1.2) Product name

PVC

(9.6.1.3) Water intensity value (m3/denominator)

5.69

(9.6.1.4) Numerator: water aspect

Select from:

☑ Total water consumption

(9.6.1.5) Denominator

Select from:

☑ Ton

(9.6.1.6) Comparison with previous reporting year

Select from:

☑ Lower

(9.6.1.7) Please explain

Production increased, compared to the previous year, by 4%, thus resulting in an increase in water consumption, but the water intensity indicator was better due to initiatives and improvements implemented. There was a change in procedure to restrict the use of water. The strategy in place to reduce water intensity is to implement initiatives to reuse internal effluents. Based on our Business Plan for the coming years (2024-2028), we expect a 10% decreasen increase in this water intensity indicator, due to andespite the increase in production,due to process improvements identified and an increase in water consumption. However, there will be changes in the calculation methodology involving water KPIs. In relation to the current absolute values, there will be a reduction due to a change in methodology due to the elimination of effluents as consumption, in alignment with the current GRI and CDP standards, as they are currently incorporated as process consumption. The water intensity indicator is used by Process Engineering to identify internal performance references. Units that are below this reference are subjected to process improvement analyses, through initiatives and also process engineering studies to improve process performance and efficiency.

Row 4

(9.6.1.1) Product type

Other chemicals

☑ Specialty organic chemicals

(9.6.1.2) Product name

Chlorine-soda

(9.6.1.3) Water intensity value (m3/denominator)

1.75

(9.6.1.4) Numerator: water aspect

Select from:

☑ Total water consumption

(9.6.1.5) Denominator

Select from:

☑ Ton

(9.6.1.6) Comparison with previous reporting year

Select from:

☑ Lower

(9.6.1.7) Please explain

Production increased, compared to the previous year, by 23%, thus resulting in an increase in water consumption, but the water intensity indicator was better due to initiatives and improvements implemented. There was a change in procedure to restrict the use of water. The strategy in place to reduce water intensity is to implement initiatives to reuse internal effluents. Based on our Business Plan for the coming years (2024-2028), we expect a 3% decreasen increase in this water intensity indicator, due to process improvements identified an increase in production and an increase in water consumption. However, there will be changes in the calculation methodology involving water KPIs. In relation to the current absolute values, there will be a reduction due to a change in methodology due to the elimination of effluents as consumption, in alignment with the current GRI and CDP standards, as they are currently incorporated as process consumption. The water *intensity indicator is used by Process Engineering to identify internal performance references. Units that are below this reference are subjected to process improvement analyses, through initiatives and also process engineering studies to improve process performance and efficiency.*

Row 5

(9.6.1.1) Product type

Bulk organic chemicals

☑ Lower olefins (cracking)

(9.6.1.2) Product name

Chemicals and specialities

(9.6.1.3) Water intensity value (m3/denominator)

5.2

(9.6.1.4) Numerator: water aspect

Select from:

☑ Total water consumption

(9.6.1.5) Denominator

Select from:

☑ Ton

(9.6.1.6) Comparison with previous reporting year

Select from:

☑ Higher

(9.6.1.7) Please explain

The water intensity indicator worsened due to Braskem production decreasing by 11% compared to the previous year, mainly impacted by the general maintenance stoppage in Q1 BA and higher water consumption in Q2 RS. However, comparing water consumption in Q1 BA with the previous year, there was a reduction in the absolute volume captured by Q1 BA [Bahia] due to progress in the optimization of cycles in the unit's cooling towers. The strategy in place to reduce water intensity is to implement initiatives to reuse internal effluents. Based on our Business Plan for the coming years (2024-2028), we expect a 1% increase in this water intensity indicator, due to an increase in production and an increase in water consumption. However, there will be changes in the calculation methodology involving water KPIs. In relation to the current absolute values, there will be a reduction due to a change in methodology due to the elimination of effluents as consumption, in alignment with the current GRI and CDP standards, as they are currently incorporated as process consumption. The water intensity indicator is used by Process Engineering to identify internal performance references. Units that are below this reference are subjected to process improvement analyses, through initiatives and also process engineering studies to improve process performance and efficiency.
[Add row]

(9.12) Provide any available water intensity values for your organization's products or services.

Row 1

(9.12.1) Product name

Polypropylene

(9.12.2) Water intensity value

1.33

(9.12.3) Numerator: Water aspect

Select from:
☑ Water consumed

(9.12.4) Denominator

tons

(9.12.5) Comment

The value presented refers to the m3/ton used by Braskem to measure its performance. Numbers are constantly updated 1,52 refers to 2022

Row 3

(9.12.1) Product name

Polyethylene

(9.12.2) Water intensity value

1.91

(9.12.3) Numerator: Water aspect

Select from:
☑ Water consumed

(9.12.4) Denominator

Tons

(9.12.5) Comment

The value presented refers to the m3/ton used by Braskem to measure its performance. Numbers are constantly updated, 1,92 refers to 2022.
[Add row]

(9.13) Do any of your products contain substances classified as hazardous by a regulatory authority?

	Products contain hazardous substances
	Select from: ☑ Yes

[Fixed row]

(9.13.1) What percentage of your company's revenue is associated with products containing substances classified as hazardous by a regulatory authority?

Row 1

(9.13.1.1) Regulatory classification of hazardous substances

Select from:

☑ Other, please specify :GHS Cat 1/2 GHS Classified Substances >0.1 %

(9.13.1.2) % of revenue associated with products containing substances in this list

Select from:

☑ Less than 10%

(9.13.1.3) Please explain

Some resins or products produced in South America and North America have these types of substances
[Add row]

(9.14) Do you classify any of your current products and/or services as low water impact?

(9.14.1) Products and/or services classified as low water impact

Select from:

☑ Yes

(9.14.2) Definition used to classify low water impact

The volume water consumption in the production phase of the product divided by the mass produced (m3/t). Braskem's water intensity is used as a parameter to analyze the impact of each product's production process. The ruler follows the following premise: the lower bound is 40% of Braskem's water efficiency and the upper bound is 60% of Braskem's water efficiency. Products that are below the lower limit are classified as "low water impact". Those above the upper limit pay special attention to the water efficiency strategy.

(9.14.4) Please explain

The company manufactures products with different technologies and water intensities, with the main products being: basic chemicals, PVC, PE, chlorine soda. As water is extremely relevant to our process, we use indicators associated with water resources to evaluate the eco-efficiency of the products and also the comparability between them. The water efficiency indicator is one of the most important indicators because it allows us to identify the industrial units with the best performance and the ones where improvements are needed. The PP production processes are classified as having low water impact when analyzed in comparison to Braskem's water efficiency index, following the assumptions established in column 2.
[Fixed row]

(9.15) Do you have any water-related targets?

Select from:
☑ Yes

(9.15.1) Indicate whether you have targets relating to water pollution, water withdrawals, WASH, or other water-related categories.

Water pollution

(9.15.1.1) Target set in this category

Select from:
☑ No, but we plan to within the next two years

(9.15.1.2) Please explain

Braskem has a Sustainable Development strategy supported by 7 Macro Objectives. One of these Macro Objectives is the Operational Eco-Efficiency (MO5) and medium and long-term objectives and goals are defined. The issue of water pollution/quality is being considered with the planning below: The main contributing units that are defined and in the process of definition: 1 – Mapping of the main contributing sources of the identified units; 2 – Survey of the main reduction opportunities; 3 – Development of engineering studies; 4 – Definition of the reduction target. The achievement of the sustainable macro objectives disclosed by the Company (within *the projected costs and expected timelines) is also subject to uncertainties and risks, including but not limited to: the advancement, availability, development, and financial feasibility of the technology required to achieve these objectives*

Water withdrawals

(9.15.1.1) Target set in this category

Select from:

☑ Yes

Water, Sanitation, and Hygiene (WASH) services

(9.15.1.1) Target set in this category

Select from:

☑ Yes

Other

(9.15.1.1) Target set in this category

Select from:

☑ Yes

[Fixed row]

(9.15.2) Provide details of your water-related targets and the progress made.

Row 1

(9.15.2.1) Target reference number

Select from:

☑ Target 1

(9.15.2.2) Target coverage

Select from:

☑ Organization-wide (direct operations only)

(9.15.2.3) Category of target & Quantitative metric

Water consumption

☑ Reduction per unit of production

(9.15.2.4) Date target was set

12/31/2022

(9.15.2.5) End date of base year

12/31/2022

(9.15.2.6) Base year figure

4.3

(9.15.2.7) End date of target year

12/31/2023

(9.15.2.8) Target year figure

3.61

(9.15.2.9) Reporting year figure

3.59

(9.15.2.10) Target status in reporting year

Select from:

☑ Achieved

(9.15.2.11) % of target achieved relative to base year

103

(9.15.2.12) Global environmental treaties/initiatives/ frameworks aligned with or supported by this target

Select all that apply

☑ Sustainable Development Goal 6

(9.15.2.13) Explain target coverage and identify any exclusions

The actual water consumption was 92% of the established target, which is a positive impact, as the resource consumption was lower.

(9.15.2.15) Actions which contributed most to achieving or maintaining this target

The defined target reflected an increase in water consumption due to increased production. However, due to the adequate production plan and the improvements implemented, there was a reduction in water consumption. Actions that contributed to this result: Water reuse projects, updating of equipment/process methods and optimization of the concentration cycles of the cooling towers.

(9.15.2.16) Further details of target

Non applicable

Row 2

(9.15.2.1) Target reference number

Select from:

☑ Target 2

(9.15.2.2) Target coverage

Select from:

☑ Organization-wide (direct operations only)

(9.15.2.3) Category of target & Quantitative metric

Water withdrawals

☑ Other water withdrawals, please specify **:**Water Security Index

(9.15.2.4) Date target was set

12/31/2020

(9.15.2.5) End date of base year

12/31/2021

(9.15.2.6) Base year figure

64.5

(9.15.2.7) End date of target year

12/31/2030

(9.15.2.8) Target year figure

100

(9.15.2.9) Reporting year figure

65.9

(9.15.2.10) Target status in reporting year

Select from:

☑ Underway

(9.15.2.11) % of target achieved relative to base year

4

(9.15.2.12) Global environmental treaties/initiatives/ frameworks aligned with or supported by this target

Select all that apply

☑ Water Resilience Coalition

☑ Other, please specify :Sustainable Development Goal 9

(9.15.2.13) Explain target coverage and identify any exclusions

The Water Security Index is advancing, reaching 66% of the projected target. A real increase of 0.6 percentage points.

(9.15.2.14) Plan for achieving target, and progress made to the end of the reporting year

In 2023, the Water Security Index increased by 0.6 percentage points, given the implementation of internal water reuse initiatives

(9.15.2.16) Further details of target

Non applicable

Row 3

(9.15.2.1) Target reference number

Select from:

☑ Target 3

(9.15.2.2) Target coverage

Select from:

☑ Organization-wide (direct operations only)

(9.15.2.3) Category of target & Quantitative metric

Water, Sanitation, and Hygiene (WASH) services

☑ Increase in the proportion of local population using safely managed drinking water services around our facilities and operations

(9.15.2.4) Date target was set

12/31/2022

(9.15.2.5) End date of base year

12/31/2022

(9.15.2.6) Base year figure

0

(9.15.2.7) End date of target year

07/30/2050

(9.15.2.8) Target year figure

1

(9.15.2.9) Reporting year figure

1

(9.15.2.10) Target status in reporting year

Select from:

☑ Achieved

(9.15.2.11) % of target achieved relative to base year

100

(9.15.2.12) Global environmental treaties/initiatives/ frameworks aligned with or supported by this target

Select all that apply

☑ Water Resilience Coalition

☑ Other, please specify **:** Sustainable Development Goal 12

(9.15.2.13) Explain target coverage and identify any exclusions

The Water Resilience Coalition (WRC) has the goal of achieving a net positive impact in 150 drainage basins at high risk of water stress around the world, together with all members. Braskem, for its contribution, has the goal of getting involved in a high-risk watershed and is already evaluating adherence to collective action initiatives in the Guandu watershed in Rio de Janeiro and/or the watershed of one of its operations in São Paulo. In 2023, the aquapolo initiative, a sewage reuse project in the state of São Paulo (Brazil), was considered a collective initiative by the WRC, thus achieving the voluntary commitment assumed by Braskem.

(9.15.2.15) Actions which contributed most to achieving or maintaining this target

The Water Resilience Coalition (WRC) has the goal of achieving a net positive impact in 150 drainage basins at high risk of water stress around the world, together with all members. Braskem, for its contribution, has the goal of getting involved in a high-risk watershed and is already evaluating adherence to collective action initiatives in the Guandu watershed in Rio de Janeiro and/or the watershed of one of its operations in São Paulo. In 2023, the aquapolo initiative, a sewage reuse project in the state of São Paulo (Brazil), was considered a collective initiative by the WRC, thus achieving the voluntary commitment assumed by Braskem.

(9.15.2.16) Further details of target

Non applicable
[Add row]

C13. Further information & sign off

(13.1) Indicate if any environmental information included in your CDP response (not already reported in 7.9.1/2/3, 8.9.1/2/3/4, and 9.3.2) is verified and/or assured by a third party?

	Other environmental information included in your CDP response is verified and/or assured by a third party
	Select from: ☑ Yes

[Fixed row]

(13.1.1) Which data points within your CDP response are verified and/or assured by a third party, and which standards were used?

Row 1

(13.1.1.1) Environmental issue for which data has been verified and/or assured

Select all that apply

☑ Climate change

☑ Water

(13.1.1.2) Disclosure module and data verified and/or assured

Environmental performance – Climate change

☑ Waste data

☑ Carbon removals

☑ Base year emissions

☑ Progress against targets

☑ Fuel consumption
☑ Methane emissions
☑ Product footprint
☑ Energy attribute certificates (EACs)
☑ Emissions breakdown by business division
☑ Electricity/Steam/Heat/Cooling generation
☑ Electricity/Steam/Heat/Cooling consumption
☑ Emissions reduction initiatives/activities
☑ Renewable fuel consumption
☑ Target-setting methodology
☑ Emissions breakdown by country/area
☑ Renewable Electricity/Steam/Heat/Cooling generation
☑ Year on year change in absolute emissions (Scope 3)
☑ Renewable Electricity/Steam/Heat/Cooling consumption
☑ Year on year change in absolute emissions (Scope 1 and 2)

(13.1.1.3) Verification/assurance standard

General standards

☑ Other general verification standard, please specify :- ISSO 14064-3 - Programa brasileiro GHG Protocol - GRI

Water-related standards

☑ Other water verification standard, please specify :GRI

Climate change-related standards

☑ ISO 14064-3

(13.1.1.4) Further details of the third-party verification/assurance process

KPMG verified the information of Braskem's integrated annual report. Therefore, all information concerning GHG emissions was observed. KPMG verified our energy contracts, renewable energy declarations from the provider and energy bills during the certification process of our Market-based calculations.

(13.1.1.5) Attach verification/assurance evidence/report (optional)

Braskem-2023-Integrated-Report (2)-part-2.pdf
[Add row]

(13.2) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

(13.2.1) Additional information

In addition to the CDP, Braskem reports its Climate Change strategy and results on its website, in the Integrated Report and in the Brazilian GHG Protocol Program.

(13.2.2) Attachment (optional)

Braskem-2023-Integrated-Report.pdf
[Fixed row]

(13.3) Provide the following information for the person that has signed off (approved) your CDP response.

(13.3.1) Job title

Vice President - Chief Financial Officer and Director of Investor Relations

(13.3.2) Corresponding job category

Select from:
☑ Chief Financial Officer (CFO)
[Fixed row]

(13.4) Please indicate your consent for CDP to share contact details with the Pacific Institute to support content for its Water Action Hub website.

Select from:
☑ Yes, CDP may share our Disclosure Submission Lead contact details with the Pacific Institute