# Welcome to your CDP Water Security Questionnaire 2019

# W0. Introduction

## W0.1

**(W0.1) Give a general description of and introduction to your organization.**

With 181,000 employees, Saint-Gobain is present in 67 countries and holds more than 100 brands. The Group is a worldwide leader in the habitat and construction markets, providing comfort, performance and safety while addressing the challenges of sustainable construction, resource efficiency and climate change all over the world.

As a growing number of countries pass new regulations in favor of more energy-efficient buildings, it encourages the introduction of innovative construction techniques for new buildings along with new insulation standards for renovation projects. At the same time, urbanization is a major trend that is affecting the construction market in both developed and emerging countries. The rapid exponential growth in infrastructure needs and increasing demand for energy-efficient solutions represent valuable opportunities for Saint-Gobain. With its unique positioning, Saint-Gobain is among the first to benefit from the environmentally led growth in the construction market.

Innovation is at the heart of Saint-Gobain’s strategy. To support that vision and continuously improve its processes and products, Saint-Gobain invests heavily in R and D. For the past eight years, the Group has been ranked in the Top 100 Innovators by Clarivate.

Over 80% of the Group’s sales occur in the construction markets, including new construction, renovation, civil engineering and infrastructure. Considerable change is on the way in interior and exterior insulation solutions. The major part of our products (flat glass, glass wool, plasterboard, exterior wall and floor coating mortars) already helps to make buildings more energy efficient for the end user and we intend to further improve their performance in the future.

The Group has announced in 2018 a new organization, effective from 2019. Saint-Gobain's previous structure relied on a matrix-based system with three Sectors of activity (Innovative Materials, Construction Products, Building Distribution) and 14 General Delegations coordinating the Group's actions and representing it in its various countries.

The new structure is as follows:
- Activities in regional markets (activities from the former Building Distribution and Construction Products, as well as building glass) are now organized by country and consolidated into four regions (Northern Europe; Southern Europe, Middle-East, Africa; Americas; Asia-Pacific). In markets where products and services are supplied locally and mostly have short distances to

cover, the structure per country and region will leverage Saint-Gobain's strengths to meet the specific needs of each local market.
- A High Performance Solutions entity is responsible for global market activities (corresponding to the former High-Performance Materials Sector as well as the automotive glazing activities). These are products and services with a high unit value that can be shipped over long distances and whose value is often created through co-innovation with customers and bespoke technologies. The High Performance Solutions BUs provide the best service to the various markets with three market-oriented BUs (Mobility, Life sciences, Construction Industry) and two BUs serving industry more generally (one channel-oriented Abrasives and Composite Systems BU and one product-oriented Ceramics BU).

To showcase and monitor its strong engagement towards sustainability, Saint-Gobain has set for itself a number of ambitious targets in the areas of environment including water consumption. Those targets are set up for the plants being representative of the impact of the Group. In 2018, around 500 plants are concerned.

In the area of sustainable development and corporate social responsibility, Saint-Gobain is included on the MSCI World ESG Leaders, STOXX® Global ESG Leaders, Euronext-Vigeo Europe 120, Euronext Vigeo Eurozone 120, Ethibel ESI Excellence Global, Ethibel ESI Excellence Europe, FTSE4Good indices and Dow Jones Sustainability Index.

We strongly recommend the reader to check our 2018 registration document before reading this full CDP document, particularly the pages: 63 to 65, 74 to 77 and 104-105

Link to the document: https://www.saint-gobain.com/sites/sgcom.master/files/ddr_2018_-_saint-gobain_-_va.pdf

# W0.2

### (W0.2) State the start and end date of the year for which you are reporting data.

| | Start date | End date |
|---|---|---|
| Reporting year | January 1, 2018 | December 31, 2018 |

# W0.3

### (W0.3) Select the countries/regions for which you will be supplying data.

Albania
Algeria
Argentina
Australia
Austria
Belgium
Bhutan
Botswana
Brazil
Bulgaria

Canada
Chile
China
Colombia
Czechia
Denmark
Egypt
Estonia
Finland
France
Germany
Ghana
Greece
Hungary
India
Indonesia
Ireland
Italy
Japan
Jordan
Kuwait
Latvia
Lebanon
Lithuania
Luxembourg
Malaysia
Mexico
Morocco
Netherlands
New Zealand
Norway
Oman
Peru
Poland
Portugal
Qatar
Republic of Korea
Romania
Russian Federation
Saudi Arabia
Serbia
Singapore
Slovakia
Slovenia
South Africa
Spain
Sweden

Switzerland
Thailand
Turkey
United Arab Emirates
United Kingdom of Great Britain and Northern Ireland
United Republic of Tanzania
United States of America
Venezuela (Bolivarian Republic of)
Viet Nam
Zimbabwe

## W0.4

**(W0.4) Select the currency used for all financial information disclosed throughout your response.**

EUR

## W0.5

**(W0.5) Select the option that best describes the reporting boundary for companies, entities, or groups for which water impacts on your business are being reported.**

Companies, entities or groups over which operational control is exercised

## W0.6

**(W0.6) Within this boundary, are there any geographies, facilities, water aspects, or other exclusions from your disclosure?**

No

# W1. Current state

## W1.1

**(W1.1) Rate the importance (current and future) of water quality and water quantity to the success of your business.**

| | Direct use importance rating | Indirect use importance rating | Please explain |
|---|---|---|---|
| Sufficient amounts of good quality freshwater available for use | Vital | Vital | Water is used as a raw material in some of our processes. For instance, in the gypsum activity, water is used in the production process of plasterboards in which the water purity is a key to obtain a good quality product. Moreover, an access to good quality freshwater, that is drinking water, is absolutely vital for all our employees, |

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| | | | and as such directly links with the success and the sustainability of our direct operations. We have examples of raw material or energy suppliers for which this category of water is vital. In the future, the importance will not change but possible scarcity shall have an influence on greenfield projects location and increase of water recycling projects. |
| Sufficient amounts of recycled, brackish and/or produced water available for use | Vital | Vital | Cooling water is vital for our business and the sustainability of our activities and represents the major use of water. Both the flat glass and the pipe activities use furnaces at very hot temperature, and need sufficient amounts of accessible water to cool them. If water is no longer available, the equipment could be damaged and the activity interrupted. For this reason, water recycling is strongly encouraged. We have examples of raw material or energy suppliers for which this category of water is vital. In the future, the importance will not change but possible scarcity shall have an influence on greenfield projects location and increase of water recycling projects. |

# W1.2

**(W1.2) Across all your operations, what proportion of the following water aspects are regularly measured and monitored?**

| | % of sites/facilities/operations | Please explain |
|---|---|---|
| Water withdrawals – total volumes | 100% | Each facility of the Group which is part of the environmental concerned perimeter (perimeter involving facilities representing more than 95% of our impact) monitors its water withdrawals. All withdrawal installations must be equipped with a meter, the readings being recorded in a log, possibly computerized. Withdrawals monitoring is essential as they have environmental and economic impacts. All our production facilities report their water withdrawals. |
| Water withdrawals – volumes from water stressed areas | 100% | It's requested by the Group water standard that all withdrawal installations must be equipped with a meter, the readings being recorded in a log, possibly computerized. Withdrawals monitoring is essential as they have |

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|---|---|---|
| | | environmental and economic impacts. All our production facilities report their water withdrawals. The water withdrawals from water stressed areas are given for the sites located in high-risk or very high-risk areas according to WRI Aqueduct. |
| Water withdrawals – volumes by source | 100% | Each facility of the Group which is part of the environmental concerned perimeter (perimeter involving facilities representing more than 95% of our impact) monitors its water withdrawals. All withdrawal installations must be equipped with a meter, the readings being recorded in a log, possibly computerized. Water withdrawals per type of source is an environmental indicator in accordance with the EHS reporting rules. Withdrawal monitoring by sources is essential to ensure that withdrawals have a minimal environmental impact. All our production facilities report their water withdrawals by sources. |
| Water withdrawals quality | Not relevant | Water withdrawals quality is out of scope of our water standards. Water withdrawals quality control is done by our water suppliers. |
| Water discharges – total volumes | 100% | Each facility of the Group which is part of the environmental concerned perimeter (perimeter involving facilities representing more than 95% of our impact) monitors its water discharges. All discharge points must be equipped with a meter, the readings being recorded in a log, possibly computerized. Reducing the amount of discharge points is thus recommended. Discharges volume monitoring is essential to avoid accidental discharges or discharges that are too important, and to detect potential leakages to avoid an overconsumption of water. Indeed our objective is to reduce water discharge by 80% by 2025 at iso-production, compared to 2010. All our production facilities report their water discharges. |
| Water discharges – volumes by destination | 100% | The Water standard, which has been applied since 2012, requires sites to limit the number of discharge points and ensure discharge quality before channeling effluent into the municipal sewage system, surrounding environment, or |

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|---|---|---|
| | | other outlet. All our production facilities report their water discharges by destination. |
| Water discharges – volumes by treatment method | Not relevant | Saint-Gobain does not report globally on the treatment methods of its water discharges. |
| Water discharge quality – by standard effluent parameters | 76-99 | A discharge analysis (temperature, acidity, suspended solids, Biological Oxygen Demand, Chemical Oxygen Demand and Total Hydrocarbon), whether in the natural environment or in the municipal network, is requested at least once a year (more if requested by regulation) by a recognized body. Samplings shall be made, over at least 24 hours and be representative of the yearly average quality of discharged water. Monitoring discharge quality is essential to avoid polluting the external environment. |
| Water discharge quality – temperature | 76-99 | Each facility of the Group which is part of the environmental concerned perimeter (perimeter involving facilities representing more than 95% of our impact) monitors its water discharges. A discharge analysis (temperature, acidity, suspended solids, Biological Oxygen Demand, Chemical Oxygen Demand and Total Hydrocarbon), whether in the natural environment or in the municipal network, must be made at least once a year (more if requested by regulation) by a recognized body. Samplings shall be made, over at least 24 hours and be representative of the yearly average quality of discharged water. Monitoring discharge quality is essential to avoid polluting the external environment. |
| Water consumption – total volume | 100% | Each facility of the Group which is part of the environmental concerned perimeter (perimeter involving facilities representing more than 95% of our impact) monitors its water consumption. All our production facilities report their water consumption. |
| Water recycled/reused | 100% | Each facility of the Group which is part of the environmental concerned perimeter (perimeter involving facilities representing more than 95% of our impact) monitors its water reuse. All our production facilities report their water reuse. |

| | | |
|---|---|---|
| The provision of fully-functioning, safely managed WASH services to all workers | Not relevant | Saint-Gobain does not report globally on the WASH services. |

## W1.2b

**(W1.2b) What are the total volumes of water withdrawn, discharged, and consumed across all your operations, and how do these volumes compare to the previous reporting year?**

| | Volume (megaliters/year) | Comparison with previous reporting year | Please explain |
|---|---|---|---|
| Total withdrawals | 52,784,695 | Lower | The decrease of -3,3 % is linked to two main factors: from one hand the scope has changed since last year in the piping activity with the closure of some factory .(Piping activity is the mostly contributing activity within the Group). On the other hand several investments have been made in our different businesses to change or improve water cooling equipment like in Poland and Germany. In France a major investment has been made to allow the recovery of the cooling water use by 3 furnaces in order to save 80 000 m3 of water per year. We expect our withdrawals to continue to decrease in the future, in relationship with our water target discharge of -80% at iso-production between 2025 and 2010, for sites belonging to the environment concerned perimeter (sites representing more than 95% of our impact) |
| Total discharges | 27,580,582 | About the same | The increase of +0.2% is mainly due to failure on some old equipment or process in our most contributing site like in France or US. For example in Kansas City the water usage has increased because of the failure of the cullet handling systems on K11, K12, and K21. In addition, the water softening system failed and a temporary water softening system that was not sized properly, was used, resulting in high |

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|---|---|---|---|
| | | | usage. We had also in 2018 some technical issues during ramp up of one big furnace in Mexico . We expect our discharges to decrease in the future, in relationship with our water target discharge of -80% at iso-production between 2025 and 2010, for sites belonging to the environment concerned perimeter (sites representing more than 95% of our impact) |
| Total consumption | 25,204,113 | Lower | The reasons are the ones given for withdrawals and discharges, as consumption is the balance between both parameters. We expect our consumption to decrease in the future, in relationship with our water target discharge of -80% at iso-production between 2025 and 2010, for sites belonging to the environment concerned perimeter (sites representing more than 95% of our impact) |

# W1.2d

**(W1.2d) Provide the proportion of your total withdrawals sourced from water stressed areas.**

| | % withdrawn from stressed areas | Comparison with previous reporting year | Identification tool | Please explain |
|---|---|---|---|---|
| Row 1 | 11 | Lower | WRI Aqueduct | Those data are given for the sites located in high-risk or very high-risk areas according to WRI Aqueduct. Two sites are in very high-risk areas, one in India and the other in South Africa.<br>Our % withdrawn from stressed area has decreased from 15 to 11% between 2017 and 2018.This decrease is due to better performance on sites from stressed areas (going from 0.013m3 per unit produced in 2017 to 0.007m3 per unit produced in 2018) |

# W1.2h

**(W1.2h) Provide total water withdrawal data by source.**

| | Relevance | Volume (megaliters/year) | Comparison with previous | Please explain |
|---|---|---|---|---|

| | | | reporting year | |
|---|---|---|---|---|
| Fresh surface water, including rainwater, water from wetlands, rivers, and lakes | Relevant | 15,063,063 | Lower | Fresh surface water is an important source of withdrawal, as explained in W1.1.<br>Compared to previous year, it has decreased by 19,7% . The decrease is linked to two main factors: from one hand the scope has changed since last year in the piping activity with the closure of some factory .(Piping activity is the mostly contributing activity within the Group). On the other hand several investments have been made in our different businesses to change or improve water cooling equipment like in Poland and Germany. In France a major investment has been made to allow the recovery of the cooling water use by 3 furnaces in order to save 80 000 m3 of water per year. We expect our withdrawals to continue to decrease in the future, in relationship with our water target discharge of -80% at iso-production between 2025 and 2010, for sites belonging to the environment concerned perimeter (sites representing more than 95% of our impact) |
| Brackish surface water/Seawater | Relevant but volume unknown | | | Our monitoring system does not allow us to differentiate between withdrawals in fresh surface water and in brackish surface water/seawater. But it is |

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|---|---|---|---|---|
| | | | | clear that these withdrawals are non-significant. |
| Groundwater – renewable | Relevant | 19,018,543 | About the same | Groundwater is an important source of withdrawal, as explained in W1.1.<br><br>Compared to previous year, it has decreased by 0,8% . The general decrease of withdrawals has impacted surface water compared to groundwater.<br><br>We expect our withdrawals to decrease in the future, in relationship with our water target discharge of -80% at iso-production between 2025 and 2010, for sites belonging to the environment concerned perimeter (sites representing more than 95% of our impact) |
| Groundwater – non-renewable | Relevant but volume unknown | | | Our reporting system does not allow us to differentiate between renewable and non-renewable groundwater withdrawals. This aspect is managed at local level. |
| Produced/Entrained water | Not relevant | | | We do not use any produced water. However, we do reuse water in closed-loop systems on site whenever possible. |
| Third party sources | Relevant | 16,225,889 | Lower | Water from third parties is an important source of withdrawal, as explained in W1.1 (=municipal water). Compared to previous year, we have lower value (-2,5%).<br><br>This main increase can be |

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| | | | | explained by some important leakage or water recycling equipement failure solved during the year and the ramp up of a new industrial equipment (furnace) that took more time than expected ( Mexico) due to industrial constraint.<br><br>We expect our withdrawals to decrease in the future, in relationship with our water target discharge of -80% at iso-production between 2025 and 2010, for sites belonging to the environment concerned perimeter (sites representing more than 95% of our impact) |

# W1.2i

**(W1.2i) Provide total water discharge data by destination.**

| | Relevance | Volume (megaliters/year) | Comparison with previous reporting year | Please explain |
|---|---|---|---|---|
| Fresh surface water | Relevant | 18,888,305 | Higher | Fresh surface water is an important source of withdrawal, as explained in W1.1.<br>Compared to previous year, it has increased by 2,7%. The increase is mainly due to failure in water recycling equipment in France and US.<br>We expect our discharges to decrease in the future, in relationship with our water target discharge of -80% at iso-production between 2025 and 2010, for sites belonging to the environment concerned perimeter (sites representing more than 95% of our impact) |

| | | | | |
|---|---|---|---|---|
| Brackish surface water/seawater | Relevant but volume unknown | | | Our monitoring system does not allow us to differentiate between discharges in fresh surface water and in brackish surface water/seawater. But it is clear that these discharges are non-significant |
| Groundwater | Not relevant | | | Discharges in groundwater and wells are prohibited – even after treatment –according to our water standard, unless expressly authorized by the legal authorities (in order to replenish the aquifer). |
| Third-party destinations | Relevant | 8,168,737 | Lower | Fresh surface water is an important source of withdrawal, as explained in W1.1.<br>Compared to previous year, it has decreased by 10,6 %. The decrease is mainly due to the increased reliability of water discharge monitoring in our pipe activity.<br>We expect our discharges to decrease in the future, in relationship with our water target discharge of -80% at iso-production between 2025 and 2010, for sites belonging to the environment concerned perimeter (sites representing more than 95% of our impact) |

# W1.2j

### (W1.2j) What proportion of your total water use do you recycle or reuse?

| | % recycled and reused | Comparison with previous reporting year | Please explain |
|---|---|---|---|
| Row 1 | 76-99% | About the same | Our water needs are made of our withdrawals and our water re-use. The reuse rate is almost the same between 2017 |

| | | | |
|---|---|---|---|
| | | | (84,93%) and 2018 (85,92%). We expect our reuse rate to increase in the future, in relationship with our water target discharge of -80% at iso-production between 2025 and 2010, for sites belonging to the environment concerned perimeter (sites representing more than 95% of our impact). |

# W1.4

### (W1.4) Do you engage with your value chain on water-related issues?

Yes, our suppliers

Yes, our customers or other value chain partners

# W1.4a

### (W1.4a) What proportion of suppliers do you request to report on their water use, risks and/or management information and what proportion of your procurement spend does this represent?

#### Row 1

#### % of suppliers by number

1-25%

#### % of total procurement spend

76-100

#### Rationale for this coverage

Saint-Gobain's performance is linked to our suppliers' performance, whether they operate upstream or downstream. The Responsible Purchasing Department of our industrial operations is currently working on a Water Action Plan which aims to ensure that our existing suppliers identified as presenting high CSR risk acknowledge the Group's Suppliers Charter and go through a CSR assessment to state their corporate policies, actions and results. New suppliers must also acknowledge the Group's Suppliers Charter and go through a CSR assessment. We evaluate that the 46,679 that signed our responsible Purchasing Charter represent 76,7% of our spent.

#### Impact of the engagement and measures of success

In total, at the end of 2018, 47,305 contacts of suppliers are registered on our online platform, 52,047 suppliers' subsidiaries are covered by a fulfilled questionnaire. Our Responsible Purchasing E-tool, the R-net platform, requests suppliers to answer to the question "Has your company adopted a policy in order to reduce its water consumption? About 70% of suppliers which have answered to the questionnaire have notified that they have adopted a policy in order to reduce its water consumption.

#### Comment

# W1.4b

## (W1.4b) Provide details of any other water-related supplier engagement activity.

### Type of engagement

Onboarding & compliance

### Details of engagement

Requirement to adhere to our code of conduct regarding water stewardship and management

### % of suppliers by number

1-25

### % of total procurement spend

76-100

### Rationale for the coverage of your engagement

For the period 2018-2021, the Group has set the objective to assess the CSR performance of almost all suppliers deemed to comprise a CSR risk and achieving annual consolidated net sales of more than €100,000 with the Group. With regard to social audits, the objective is to conduct around 100 audits per year, for low initial CSR performance. We can state that 903 suppliers have been concerned by documentation review by third party. We evaluate that the Saint-Gobain suppliers' subsidiaries selling over € 100 000 and with whom we are engaging represents about 87 % of our total spend.

### Impact of the engagement and measures of success

About 70% of suppliers which have answered to the questionnaire have notified that they have adopted a policy in order to reduce its water consumption

### Comment

# W1.4c

## (W1.4c) What is your organization’s rationale and strategy for prioritizing engagements with customers or other partners in its value chain?

*We pay a particular attention to limiting our withdrawals in water stressed areas and in not competing for access to drinking water with the local populations. Saint-Gobain uses the World Resources Institute’s “Aqueduct” atlas of the world, which allows each of the sites to classify its water risk from “low” to “extremely high”. This atlas is based not only on qualitative and quantitative physical risks (such as water stress or flood risk), but also on stakeholder risk (like access to water).*

*To support the application of its Water policy on the industrial sites, Saint-Gobain has defined a Water standard that describes the minimum requirements that the sites must observe in future.*

*It makes it possible to structure the improvement of the performance of sites in water management and the prevention of risks of water constraints, pollution and flooding. Its application aims to reduce the risks connected with water and the quantities of water withdrawn and of liquid water discharged, to favor the least sensitive sources of withdrawal and discharges, to control the quality of the water and to prevent accidental pollution. Saint-Gobain regularly evaluates the level of exposure of all its industrial sites to the water risk. The Water standard is applied as a priority on the sites with the highest water risks.*

*Success is measured through the percentage of achievement of the following target : to reduce water discharge by 80% by 2025 at iso-production, compared to 2010.In 2018, we have achieved a 35% reduction. The long-term objective is to withdraw as little water as possible and to aim for "zero discharge" of industrial water in liquid form, while avoiding generating new impacts for other natural environments and/or for other parties involved.*

*Customers of our pipe activities systematically get from us a TCO (Total Cost of Ownership) analysis showing their future water consumption improvement (including future water leakage rate) by using our pipe products.*

# W2. Business impacts

## W2.1

**(W2.1) Has your organization experienced any detrimental water-related impacts?**

Yes

## W2.1a

**(W2.1a) Describe the water-related detrimental impacts experienced by your organization, your response, and total financial impact.**

**Country/Region**

United States of America

**River basin**

Not known

**Type of impact driver**

Physical

**Primary impact driver**

Declining water quality

**Primary impact**

Closure of operations

**Description of impact**

During a walk of the grounds, it was noticed that a holding pond toward the edge of the property had turned white. It was originally thought to be latex from a burst pipe during a recent winter storm. After pumping out the pond and the pond being refilled with white water, it was discovered that a break in the sewer line was contaminating the storm water system. The sewer line was fixed and the pond pumped again. There was no contamination outside of the property.

### Primary response

Adopt water efficiency, water re-use, recycling and conservation practices

### Total financial impact

127,000

### Description of response

It was originally thought to be latex from a burst pipe during a recent winter storm. After pumping out the pond and the pond being refilled with white water, it was discovered that a break in the sewer line was contaminating the storm water system. The sewer line was fixed and the pond pumped again. There was no contamination outside of the property.

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### Country/Region

United States of America

### River basin

Not known

### Type of impact driver

Physical

### Primary impact driver

Declining water quality

### Primary impact

Closure of operations

### Description of impact

Truck tank was damaged by the Driver and he lost diesel on our plant premise. Approx. 10 Liter were flown into the rain water discharge pipe

### Primary response

Adopt water efficiency, water re-use, recycling and conservation practices

### Total financial impact

5,000

### Description of response

The pipe was cleaned by an authorised special company and no contamination of other areas is given. Plant premise was also cleaned by an authorised company. Authority was checking the accident and gave approval after cleaning.

## W2.2

**(W2.2) In the reporting year, was your organization subject to any fines, enforcement orders, and/or other penalties for water-related regulatory violations?**

No

# W3. Procedures

## W3.3

**(W3.3) Does your organization undertake a water-related risk assessment?**

Yes, water-related risks are assessed

## W3.3a

**(W3.3a) Select the options that best describe your procedures for identifying and assessing water-related risks.**

### Direct operations

#### Coverage

Full

#### Risk assessment procedure

Water risks are assessed in an environmental risk assessment

#### Frequency of assessment

Annually

#### How far into the future are risks considered?

>6 years

#### Type of tools and methods used

Tools on the market
International methodologies
Other

#### Tools and methods used

WRI Aqueduct
Environmental Impact Assessment
Internal company methods
External consultants

#### Comment

Saint-Gobain uses the WRI “Aqueduct” atlas of the world, which allows each of the sites to classify its water risk from “low” to “extremely high”. WRI aqueduct can simulate effect on the long-term up to 2040. Environment impact assessment is a common tool used at our sites, in relationship with exploitation permits update. The degree of exposure and

vulnerability of the sites to natural events is updated regularly through adapted audits and self-assessments through an internal risk grading tool.

## Supply chain

### Coverage

Partial

### Risk assessment procedure

Water risks are assessed as part of an enterprise risk management framework

### Frequency of assessment

Annually

### How far into the future are risks considered?

>6 years

### Type of tools and methods used

Other

### Tools and methods used

Internal company methods

### Comment

The sites' individual Business Continuity Planning (BCP) that aim to minimize human, business and financial consequences of risks –including water risks- take into account risks linked to suppliers. Risks are analyzed from 3 main criteria :
- Risk of strategic supply interruption of a single supplier due to flooding of that supplier
- Risk of supply (and shipment) interruption due to the flooding of the site or its access
- Risk of utility cuts (electricity, gas, water) due to site flooding

## Other stages of the value chain

### Coverage

Partial

### Risk assessment procedure

Water risks are assessed in an environmental risk assessment

### Frequency of assessment

Annually

### How far into the future are risks considered?

>6 years

### Type of tools and methods used

Tools on the market
International methodologies
Other

### Tools and methods used

WRI Aqueduct
Life Cycle Assessment
Internal company methods

**Comment**

Saint-Gobain uses the WRI “Aqueduct” atlas of the world, which allows each of the sites to classify its water risk from “low” to “extremely high”. This atlas also includes stakeholder risk (like access to water). WRI aqueduct can simulate effect on the long-term up to 2040. The R and D EHS checklist allows for the reduction of EHS impacts associated with product life cycles. We have set up an internal methodology for that Priority lines of action for eco-innovation.

# W3.3b

**(W3.3b) Which of the following contextual issues are considered in your organization’s water-related risk assessments?**

| | Relevance & inclusion | Please explain |
|---|---|---|
| Water availability at a basin/catchment level | Relevant, always included | Saint-Gobain uses the World Resources Institute’s “Aqueduct” atlas of the world, which allows each of the sites to classify its water risk from “low” to “extremely high”. This atlas is based not only on qualitative and quantitative physical risks (such as water stress or flood risk), but also on stakeholder risk (like access to water). All our sites with withdrawal > 10,000m3/year or with a withdrawal >5,000m3/year with a risk>medium are part of the environment concerned perimeter which targets a -80% discharge between 2025 and 2010 at iso-production. The environment concerned perimeter is updated every 3 years and each time an entity leaves the Group. As illustration, in India, a highly water-stressed region, 2 of our plants have invested in rainwater retention ponds in order to reduce their withdrawal consumption. |
| Water quality at a basin/catchment level | Relevant, always included | Saint-Gobain uses the World Resources Institute’s “Aqueduct” atlas of the world, which allows each of the sites to classify its water risk from “low” to “extremely high”. This atlas is based not only on qualitative and quantitative physical risks (such as water stress or flood risk), but also on stakeholder risk (like access to water). Regarding water quality, Aqueduct identifies areas of concern regarding water quality that may impact short or long term water availability.<br>All our sites with withdrawal >10,000m3/year or with a |

| | | |
|---|---|---|
| | | withdrawal >5,000m3/year with a risk>medium are part of the environment concerned perimeter which targets a -80% discharge between 2025 and 2010 at iso-production. The environment concerned perimeter is updated every 3 years and each time an entity leaves the Group.<br>Each facility of the Group which is part of the environmental concerned perimeter (perimeter involving facilities representing more than 95% of our impact) monitors its water discharges. A discharge analysis (temperature, acidity, suspended solids, Biological Oxygen Demand, Chemical Oxygen Demand and Total Hydrocarbon), whether in the natural environment or in the municipal network, must be made at least once a year (more if requested by regulation) by a recognized body. Samplings shall be made, over at least 24 hours and be representative of the yearly average quality of discharged water.<br>Monitoring discharge quality is essential to avoid polluting the external environment. |
| Stakeholder conflicts concerning water resources at a basin/catchment level | Relevant, always included | As a responsible company, Saint-Gobain ensures that value creation is shared locally. The Group's actions integrate long-term local development, and its presence is combined with respect for local communities, and a continuous dialogue with all stakeholders.<br>Particular attention is paid to limiting the Group's withdrawals in water stressed areas and in not competing for access to drinking water with the local populations. To this end, the list of priority sites within the framework of the Water policy is based on both the water withdrawals and the water stressed areas. In this regard, Saint-Gobain uses the World Resources Institute's "Aqueduct" atlas of the world, which allows each of the sites to classify its water risk from "low" to "extremely high". This atlas is based not only on qualitative and quantitative physical risks (such as water stress or flood risk), but also on stakeholder risk (like access to water).<br>Production facilities engage at local level discussion with concerned stakeholders in order to ensure appropriate sharing of the water resources. |
| Implications of water on your key commodities/raw materials | Relevant, sometimes included | The Group uses Life Cycle Assessments to assess water impacts upstream of the production process, notably on the extraction of raw materials.<br>About 70% of suppliers which have answered to the CSR questionnaire have notified that they have adopted a policy |

| | | |
|---|---|---|
| | | in order to reduce its water consumption |
| Water-related regulatory frameworks | Relevant, always included | The introduction of stricter regulations or more diligent enforcement of existing regulations may affect the conditions under which the Group operates its businesses, The Legal Department anticipates and monitors new environmental regulations. As we are present in 67 countries, current regulation related risks are assessed and manage locally by EHS team at country or business level. Regulatory risks are included in the Aqueduct analysis of water-related risks. |
| Status of ecosystems and habitats | Relevant, always included | Saint-Gobain has published in 2018 its biodiversity policy aiming to preserve, restore, increase and enhance biodiversity, managing to involve all parties concerned. A mapping study of all the sites was conducted in 2016 using geographical tools to evaluate their sensitivity to the ecosystems based on their proximity to areas of high biodiversity value. The protected areas considered are areas recognized by the UICN or more locally defined as Natura 2000, RAMSAR areas or other national areas. As such, of<br>more than 6,000 sites (quarries, factories or selling points), 79 have been identified as being within a protected area and will be priority sites for the management of biodiversity.<br><br>Another input is coming from the use of Aqueduct through the percentage of freshwater amphibian species that are classified by IUCN as threatened in an area. |
| Access to fully-functioning, safely managed WASH services for all employees | Relevant, always included | To abide by our four principles of action - which include worker health and safety as well as employee rights – we make sure than all of our sites offer fully-functioning WASH services to all workers. |
| Other contextual issues, please specify | Not considered | Excepted the one listed above no other contextual issues are considered . |

# W3.3c

**(W3.3c) Which of the following stakeholders are considered in your organization's water-related risk assessments?**

| | Relevance & inclusion | Please explain |
|---|---|---|

| | | |
|---|---|---|
| Customers | Relevant, always included | Our solutions are tailored to respond to today needs and at the same time be sustainable to manage tomorrow's challenges. To ensure the sustainability of our products we developed two initiatives :<br><br>-The EHS (Environment, Industrial Hygiene, Safety) checklist introduced in 2008 has been incorporated into our R and D processes. It allows for the qualitative assessment of substances integrated into product formulations and the identification and reduction of EHS impacts associated with product life cycles.<br><br>-Develop the eco-innovation culture and solutions that anticipate market trends. Priority lines of action for eco-innovation have been defined, in line with the Group's policies and market expectations, in terms of new sustainable solutions or improvements in existing solutions: health and well-being, energy and climate, water, resources and the circular economy.<br><br>Our pipe activity develops specific actions for its customers: as illustration, customers of our pipe activities systematically get from us a TCO (Total Cost of Ownership) analysis showing their future water consumption improvement (including future water leakage rate) by using our pipe products. |
| Employees | Relevant, always included | It is necessary to ensure that employees have satisfactory access to water in compliance with international standards in force. Saint-Gobain management takes into account employee's expectations and needs, at site level. Saint-Gobain also seeks to engage with its employees, especially on sites exposed to substantial risks, to ensure awareness of said risks and encourage best practices. |
| Investors | Relevant, always included | Saint-Gobain takes into account investors suggestions and expectations regarding water risk assessment and management. We ensure a maximum transparency on our water risks and disclose them to investors. |
| Local communities | Relevant, always included | It is necessary to ensure that communities close to the site and to withdrawal sites have satisfactory access to water in compliance with international standards in force. Saint-Gobain management takes into account local communities expectations and needs, at site level.<br>Our Water policy pays particular attention to limiting the Group's withdrawals in water stressed areas to not compete for access to drinking water with the local populations. To this end, the list of priority sites within the framework of the Water policy |

| | | |
|---|---|---|
| | | is based on both the water withdrawals and the water stressed areas. In this regard, Saint-Gobain uses the World Resources Institute's "Aqueduct" atlas of the world, which allows each of the sites to classify its water risk from "low" to "extremely high". |
| NGOs | Relevant, always included | Saint-Gobain takes into account NGOs suggestions and expectations regarding water risk assessment, at site level. |
| Other water users at a basin/catchment level | Relevant, always included | As for local communities, Saint-Gobain takes into account other water users regarding water risk assessment, at site level. |
| Regulators | Relevant, always included | Compliance to regulation is part of the principle of conduct and Action of Saint Gobain. All our sites have to comply with any requests coming from the regulator. |
| River basin management authorities | Relevant, always included | In accordance with our Management of Water and Associated Risks standard, sites must have an updated regulatory watch and identify local authorities in charge of water. |
| Statutory special interest groups at a local level | Relevant, always included | Saint-Gobain takes into account statutory special interest groups regarding water risk assessment, at site level. |
| Suppliers | Relevant, always included | Saint-Gobain Water Purchasing Action Plan identifies critical SIC (Standard Industrial Classification) categories and high water risk countries to evaluate the CSR risks linked to our suppliers.<br>The sites' individual Business Continuity Planning (BCP) that aim to minimize human, business and financial consequences of risks –including water risks- take into account risks linked to suppliers. Risks are analyzed from 3 main criteria :<br>- Risk of strategic supply interruption of a single supplier due to flooding of that supplier<br>- Risk of supply (and shipment) interruption due to the flooding of the site or its access<br>- Risk of utility cuts (electricity, gas, water) due to site flooding |
| Water utilities at a local level | Relevant, sometimes included | Saint-Gobain takes into account water utilities/suppliers regarding water risk assessment, at site level.<br>A worldwide master agreement has been signed with the supplier of water utilities Nalco to develop cost-saving projects through water consumption reduction and/or the improvement of water discharges quality. |
| Other stakeholder, please specify | | |

## W3.3d

**(W3.3d) Describe your organization's process for identifying, assessing, and responding to water-related risks within your direct operations and other stages of your value chain.**

The long-term objective is to withdraw as little water as possible and to aim for "zero discharge" of industrial water in liquid form, while avoiding generating new impacts for other natural environments and/or for other parties involved.

Particular attention is paid to limiting the Group's withdrawals in water stressed areas and in not competing for access to drinking water with the local populations. To this end, the list of priority sites within the framework of the Water policy is based on both the water withdrawals and the water stressed areas. In this regard, Saint-Gobain started in 2017 to use the World Resources Institute's "Aqueduct" atlas of the world

We take into account any local stakeholder suggestions and expectations regarding water risk assessment at site level and we engage with local authorities to comply with local regulations.

The Risk and Insurance department manages risks of property damage and related business interruption. The degree of exposure and vulnerability of the sites to natural events is updated regularly through adapted audits and self-assessments and leads to update of actions plan with a view to improving the level of prevention and protection.

Then, the assessment of water-related risks is also included in the responsible purchasing policy through a Suppliers Charter explaining Saint-Gobain's requirements and suppliers' obligations in the area of corporate social responsibility. The whole process is part of a dialogue with the supplier and gives rise to the establishment of action plans and CSR performance improvement, focusing on suppliers at risk.

We also engage with customers on water-related issues to ensure the sustainability of our products; we developed two initiatives:
-The R&D EHS checklist : it allows for the reduction of EHS impacts associated with product life cycles.
-Development of the eco-innovation culture and solutions that anticipate market trends, using since 2017 an internal methodology.

# W4. Risks and opportunities

## W4.1

**(W4.1) Have you identified any inherent water-related risks with the potential to have a substantive financial or strategic impact on your business?**

Yes, only within our direct operations

# W4.1a

## (W4.1a) How does your organization define substantive financial or strategic impact on your business?

*Saint-Gobain's internal control and risk management system is in charge of considering whether a risk has or not an impact on our business, including possible impacts on our business coming from the value chain (the impact being assessed from a financial, human, environmental and reputational perspectives). We use the internal control and risk management framework defined by the French securities regulator (Autorité des marchés financiers - AMF), as updated in July 2010, and on the 2013 update to the framework from the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The system complies with the legal requirements applicable to companies listed on the Euronext Paris regulated market.*

*Each year, a mapping analysis of the Groups' potential risks is made by the Internal Audit and Business Control Department. All the material risks that the Board of directors must be aware of are included into the mapping analysis. The map is being reviewed by the Audit and Risks Committee and then validated by the board of directors. In that context, the threshold of 50 million euros is considered as a substantial financial impact threshold.*

*The Group has identified its water-related risks in order to be able to manage them. The modification to the water systems and, in particular, the development of water stressed areas, which give rise to production risks and penalize local populations, are incorporated into the Water Management policy. We also face physical water risks like flooding, rainfall or storm, which are more and more frequent due to climate change, and are managed at local level with the support of the Risk and Insurance Department.*

*Because of the nature and the extent of our activities, we consider that it is unlikely that the water risks to which some of our sites are exposed could generate a substantive change in our business, operations, revenue or expenditure at company level. From an operational standpoint, water being a local issue, water risks are managed at facility level. At facility level, we take water risks management very seriously as consequences may be vital for some processes, and want to be proactive when it comes to the mitigation of these risks. We notably invest in closed water circuit systems, which have an impact on our expenditure, but not on our business or revenue.*

# W4.1b

## (W4.1b) What is the total number of facilities exposed to water risks with the potential to have a substantive financial or strategic impact on your business, and what proportion of your company-wide facilities does this represent?

| | Total number of facilities exposed to water risk | % company-wide facilities this represents | Comment |
|---|---|---|---|

| | | | |
|---|---|---|---|
| Row 1 | 3 | Less than 1% | Those 3 factories, despite not leading to a substantive financial impact at Group level may impact some of our activities. They were defined according to their level of risk from Aqueduct Water Risk Atlas together with their level of withdrawals. |

## W4.1c

**(W4.1c) By river basin, what is the number and proportion of facilities exposed to water risks that could have a substantive impact on your business, and what is the potential business impact associated with those facilities?**

**Country/Region**

Mexico

**River basin**

Panuco

**Number of facilities exposed to water risk**

1

**% company-wide facilities this represents**

Less than 1%

**% company's total global revenue that could be affected**

Less than 1%

**Comment**

No substantive financial impact is expected at Group level.

**Country/Region**

United Kingdom of Great Britain and Northern Ireland

**River basin**

Trent

**Number of facilities exposed to water risk**

1

**% company-wide facilities this represents**

Less than 1%

**% company's total global revenue that could be affected**

Less than 1%

**Comment**

No substantive financial impact is expected at Group level.

**Country/Region**

United Kingdom of Great Britain and Northern Ireland

**River basin**

Other, please specify

Humber RBD

**Number of facilities exposed to water risk**

1

**% company-wide facilities this represents**

Less than 1%

**% company's total global revenue that could be affected**

Less than 1%

**Comment**

No substantive financial impact is expected at Group Level

# W4.2

**(W4.2) Provide details of identified risks in your direct operations with the potential to have a substantive financial or strategic impact on your business, and your response to those risks.**

**Country/Region**

**River basin**

Other, please specify

More risky river basins

**Type of risk**

Physical

**Primary risk driver**

Flooding

**Primary potential impact**

Reduction or disruption in production capacity

**Company-specific description**

Floods may cause important damages to installations and cost a lot to renovate and repair the damages. Floods can also lead to production disruption, significant financial and market losses, threats to employment, and human and environmental safety.
In 2018 one of the plant of our glass activity in Egypte has suffered from an exceptional

strong rain that leads to the flooding of the bottom of the glass furnace. Estimated cost covered by the insurance around of 50 M€.

**Timeframe**

Current up to 1 year

**Magnitude of potential impact**

Medium-high

**Likelihood**

Very likely

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

50,000,000

**Potential financial impact figure - minimum (currency)**

**Potential financial impact figure - maximum (currency)**

**Explanation of financial impact**

This is given as illustration of the last important flooding we faced in 2018 in Egypt. Cost cover installation damages and production stoppages.

**Primary response to risk**

Develop flood emergency plans

**Description of response**

The Risk and Insurance department manages the physical risks that may occur at facility level. The Group deals with increased risks of loss due to climate change (flooding, rainfall or storm) within the scope of its industrial and distribution risks prevention policy. This takes into account the increase in extreme climate events, which specifically lead both to damage that may be caused to the facilities or stock and to interruptions in production or supplies. The degree of exposure and vulnerability of the sites to natural events is updated regularly through adapted audits, some of them led by external consultants, and self-assessments. We are also currently working with Axa to use a flood risk mapping tool. The mapping tool will give a more precise idea of the most exposed sites so we can be more specific in the requirement of the action plans. Each exposed site has to establish a Business continuity plan. The purpose of Saint-Gobain's Business Continuity Plan is to safeguard supplies to customers, limit the closing time and limit the loss of revenue

**Cost of response**

50,000

**Explanation of cost of response**

The indicated cost is linked to the contract that we have with Axa for improving our risk mapping

**Country/Region**

**River basin**

Other, please specify

with high and extremely high risks

**Type of risk**

Physical

**Primary risk driver**

Increased water stress

**Primary potential impact**

Reduction or disruption in production capacity

**Company-specific description**

As some of our activities are water-intensive –notably for the cooling of industrial processes -increased water stress may cause production disruption.

**Timeframe**

More than 6 years

**Magnitude of potential impact**

Medium-high

**Likelihood**

More likely than not

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

6,100,000

**Potential financial impact figure - minimum (currency)**

**Potential financial impact figure - maximum (currency)**

**Explanation of financial impact**

This amount illustrates the cost of a major investment that we have achieved for re-using water and decreasing the Group withdrawal by 12%,

**Primary response to risk**

Adopt water efficiency, water re-use, recycling and conservation practices

### Description of response

Particular attention is paid to limiting the Group's withdrawals in water stressed areas. Saint-Gobain uses the World Resources Institute's "Aqueduct" atlas of the world, which allows each of the sites to classify its water risk from "low" to "extremely high". This atlas is based not only on qualitative and quantitative physical risks (such as water stress or flood risk), but also on stakeholder risk (like access to water).
Moreover, the Group aims at reducing water discharges by 80% between 2010 and 2025 at iso-production. In-house water recycling is encouraged, particularly through the use of closed-loops, as it considerably limits withdrawals from natural resources. Our Water standard also requires that all sites identify the sources of water affected by withdrawals and discharges. Where natural sources are significantly affected, a detailed environmental impact study must be available.

### Cost of response

600,000

### Explanation of cost of response

The cost is linked to the management of the project illustrating the potential financial impact. It is estimated at around 10%.

### Country/Region

### River basin

Other, please specify

All basins in which we operate

### Type of risk

Physical

### Primary risk driver

Pollution incident

### Primary potential impact

Fines, penalties or enforcement orders

### Company-specific description

We may face pollution incident for several reasons, for example mal-functioning of a wastewater treatment plant.

### Timeframe

Current up to 1 year

### Magnitude of potential impact

Medium-low

### Likelihood

About as likely as not

### Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

### Potential financial impact figure (currency)

400,000

### Potential financial impact figure - minimum (currency)

### Potential financial impact figure - maximum (currency)

### Explanation of financial impact

This amount represents what we have paid as fines for environment in 2018, despite not being related to water.

### Primary response to risk

Pollution abatement and control measures

### Description of response

The Water standard, which has been applied since 2012, requires sites to limit the number of discharge points and ensure discharge quality before channeling effluent into the municipal sewage system, surrounding environment, or other outlet. Each facility of the Group which is part of the environmental concerned perimeter (perimeter involving facilities representing more than 95% of our impact) monitors its water discharges by destination. All discharge points must be equipped with a meter, the readings being recorded in a log, possibly computerized.

### Cost of response

4,550

### Explanation of cost of response

Considered as 10% of the time/cost of one full-time equivalent for managing the Water Standard in each production site.

---

### Country/Region

### River basin

Other, please specify

All basins in which we operate

### Type of risk

Physical

### Primary risk driver

Severe weather events

### Primary potential impact

Reduction or disruption in production capacity

### Company-specific description

The Group deals with increased risks of loss due to climate change (rainfall, storm,…) within the scope of its industrial and distribution risks prevention policy. This takes into account the increase in extreme climate events, which specifically lead both to damage that may be caused to the facilities or stock and to interruptions in production or supplies.

### Timeframe

Current up to 1 year

### Magnitude of potential impact

Medium

### Likelihood

Very likely

### Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

### Potential financial impact figure (currency)

8,000,000

### Potential financial impact figure - minimum (currency)

### Potential financial impact figure - maximum (currency)

### Explanation of financial impact

This is given as illustration as a roof collapse in one of our distribution center (Brie-Comte-Robert, France). The roof collapse after accumulation of big quantities of water after an intensive rain because the roof's drain gutters have been obstructed by the hail that happen few minutes earlier. Cost including logistics disruption .

### Primary response to risk

Amend the Business Continuity Plan

### Description of response

The Risk and Insurance department manages the physical risks that may occur at facility level. The Group deals with increased risks of loss due to climate change (rainfall, storm,…) within the scope of its industrial and distribution risks prevention policy. This takes into account the increase in extreme climate events, which specifically lead both to damage that may be caused to the facilities or stock and to interruptions in production or supplies. The degree of exposure and vulnerability of the sites to natural events is updated regularly through adapted audits, some of them led by external consultants, and self-assessments. We are also currently working with Axa to assess our sites through a risk mapping. Each exposed site has to establish a Business

continuity plan. The purpose of Saint-Gobain's Business Continuity Plan is to safeguard supplies to customers, limit the closing time and limit the loss of revenue.

### Cost of response

50,000

### Explanation of cost of response

The indicated cost is linked to the contract that we have with Axa for improving our risk mapping

---

### Country/Region

### River basin

Other, please specify

All basins in which we operate

### Type of risk

Reputation & Markets

### Primary risk driver

Negative media coverage

### Primary potential impact

Brand damage

### Company-specific description

Environmental events such as accidental discharge into the water and into the soil and non-compliance with the regulations in relation to the Group's environmental management system can lead to negative media coverage and brand damage

### Timeframe

Current up to 1 year

### Magnitude of potential impact

Medium-low

### Likelihood

Unlikely

### Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

### Potential financial impact figure (currency)

400,000

### Potential financial impact figure - minimum (currency)

### Potential financial impact figure - maximum (currency)

### Explanation of financial impact

This amount represents what we have paid as fines for environment in 2018, despite not being related to water.

### Primary response to risk

Engage with local communities

### Description of response

The Group developed a corporate Environmental Events standard, launched in 2013, that sets up a common framework and enables the sites to identify, characterize, analyze and record environmental events in accordance with ISO 14001. Saint-Gobain is thus developing for the environment the same type of feedback tools as those used for safety.

The aim is to ensure that all our sites progress towards the zero environmental accidents objective.

### Cost of response

4,500

### Explanation of cost of response

Considered as 10% of the time/cost of one full-time equivalent for managing the Environment Incident Standard in each production site.

## W4.2c

**(W4.2c) Why does your organization not consider itself exposed to water risks in its value chain (beyond direct operations) with the potential to have a substantive financial or strategic impact?**

| | Primary reason | Please explain |
|---|---|---|
| Row 1 | Risks exist, but no substantive impact anticipated | The Responsible Purchasing Department works on a Water Action Plan which aims to ensure that our existing suppliers identified as presenting high CSR risk acknowledge the Group's Suppliers Charter and go through a CSR assessment to state their corporate policies, actions and results. Suppliers have access to R-Net for acknowledge the receipt of the Saint-Gobain Suppliers Charter, electronically transmit essential proof (wood certificates, quality certificates, ISO standards), respond to self-assessment questionnaires, get all the information on the responsible purchasing directives of Saint-Gobain and access to the details of their CSR evaluations, or, where appropriate, social audits.<br><br>Although risks might exist at facility level, we do not consider that they could generate substantive negative impacts at company level as we have more than 250,000 active suppliers. We therefore consider that there is no substantive impact related to water risks in our value chain. |

# W4.3

**(W4.3) Have you identified any water-related opportunities with the potential to have a substantive financial or strategic impact on your business?**

Yes, we have identified opportunities, and some/all are being realized

# W4.3a

**(W4.3a) Provide details of opportunities currently being realized that could have a substantive financial or strategic impact on your business.**

**Type of opportunity**

Products and services

**Primary water-related opportunity**

Increased sales of existing products/services

**Company-specific description & strategy to realize opportunity**

Our Pipe activity, PAM, provides complete pipe systems offering long-term solutions, which responds to the major challenges of durability, sustainable resource management, and permanent innovation. PAM engineer's expertise in the fields of metallurgy, material strength, coatings and processes are focused on customers need to meet the challenge of water requirements. Through the potential increase of water stressed areas, we anticipate an increase of sales of our pipes for transporting water.

**Estimated timeframe for realization**

1 to 3 years

**Magnitude of potential financial impact**

Medium

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

57,890,000

**Potential financial impact figure – minimum (currency)**

**Potential financial impact figure – maximum (currency)**

**Explanation of financial impact**

The need for clean water and sewage are increasing in emerging and developing countries. The market drivers are mainly urbanization and water scarcity for emerging countries: due to climate change and urbanization, more than 3 billion people will face water scarcity in 48 countries according to an OECD prospective. Consequently, the

need for new water infrastructure in many parts of the world represents a potential increase in the sales of our Pipe Division.
The provided data for the potential impact corresponds to 1% increase of our 2018 sales of our “exterior products” activity which includes the pipe activity.

**Type of opportunity**

Efficiency

**Primary water-related opportunity**

Improved water efficiency in operations

**Company-specific description & strategy to realize opportunity**

We have the target to reduce our water discharges by 80% between 2025 and 2010 at iso-production.

**Estimated timeframe for realization**

>6 years

**Magnitude of potential financial impact**

Medium

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

25,400,000

**Potential financial impact figure – minimum (currency)**

**Potential financial impact figure – maximum (currency)**

**Explanation of financial impact**

By improving water efficiency and increasing water recycling, we will less depend to water in case of water scarcity in the most sensitive areas.
As illustration of the potential impact, we have saved ~12.7Mm3 per year of water withdrawals between 2015 and 2018 mainly thanks to water recycling projects. Using a 2€/m3 cost.

# W5. Facility-level water accounting

## W5.1

**(W5.1) For each facility referenced in W4.1c, provide coordinates, total water accounting data and comparisons with the previous reporting year.**

**Facility reference number**

Facility 1

**Facility name (optional)**

HOLWELL / SG PAM

**Country/Region**

United Kingdom of Great Britain and Northern Ireland

**River basin**

Trent

**Latitude**

52.77393

**Longitude**

-0.922718

**Total water withdrawals at this facility (megaliters/year)**

918,504

**Comparison of withdrawals with previous reporting year**

Higher

**Total water discharges at this facility (megaliters/year)**

834,367

**Comparison of discharges with previous reporting year**

Higher

**Total water consumption at this facility (megaliters/year)**

84,137

**Comparison of consumption with previous reporting year**

Higher

**Please explain**

Holwell is our biggest water consumer in UK and discharger with most water being used for cooling and being returned to natural environment . The increase in total water withdrawal 2017 vs 2018 is due to an increase in the number of operational days and the associated need for more cooling water. The increase in discharge is similar to the increase in withdrawal (approx. 5%).

**Facility reference number**

Facility 2

**Facility name (optional)**

XICOHTENCATL - Vetrotex / SG AMERICA SA de CV

**Country/Region**

Mexico

**River basin**

Panuco

**Latitude**

19.498676

**Longitude**

-98.06178

**Total water withdrawals at this facility (megaliters/year)**

712,032

**Comparison of withdrawals with previous reporting year**

Higher

**Total water discharges at this facility (megaliters/year)**

673,991

**Comparison of discharges with previous reporting year**

Higher

**Total water consumption at this facility (megaliters/year)**

38,041

**Comparison of consumption with previous reporting year**

Lower

**Please explain**

Production increase due to expansion of the furnace and other production areas. Some technical issue remains : process instability, low efficiency in reverse osmosis, use of cones in forming. They will be solved in 2019 with the new waste water treatment that will be installed in 2020

**Facility reference number**

Facility 3

**Facility name (optional)**

EAST LEAKE WORKS (PLASTERBOARD) / BRITISH GYPSUM

**Country/Region**

United Kingdom of Great Britain and Northern Ireland

**River basin**

Other, please specify

HUMBER RBD

**Latitude**

52.7739

**Longitude**

1.1777

**Total water withdrawals at this facility (megaliters/year)**

398,714

**Comparison of withdrawals with previous reporting year**

Higher

**Total water discharges at this facility (megaliters/year)**

4,855

**Comparison of discharges with previous reporting year**

Lower

**Total water consumption at this facility (megaliters/year)**

393,859

**Comparison of consumption with previous reporting year**

Higher

**Please explain**

Water Withdrawal: More products are being made with natural gypsum as opposed to DSG. Natural gypsum recipes require more water per unit production, so even though total production may be lower, total water use is higher. Water reduction projects are in progress this year.
Water discharge : Better understanding of the process meant that water entering the board plant was known to be captured within the product and not discharged to sewer.

## W5.1a

**(W5.1a) For each facility referenced in W5.1, provide withdrawal data by water source.**

**Facility reference number**

Facility 1

**Facility name**

HOLWELL / SG PAM

**Fresh surface water, including rainwater, water from wetlands, rivers and lakes**

906,997

**Brackish surface water/seawater**

0

**Groundwater - renewable**

0

**Groundwater - non-renewable**

0

**Produced/Entrained water**

0

**Third party sources**

11,507

**Comment**

Holwell is our biggest water consumer in UK and discharger with most water being used for cooling and being returned to natural environment . The increase in total water withdrawal 2017 vs 2018 is due to an increase in the number of operational days and the associated need for more cooling water. The increase in discharge is similar to the increase in withdrawal (approx. 5%).

**Facility reference number**

Facility 2

**Facility name**

XICOHTENCATL - Vetrotex / SG AMERICA SA de CV

**Fresh surface water, including rainwater, water from wetlands, rivers and lakes**

0

**Brackish surface water/seawater**

0

**Groundwater - renewable**

712,032

**Groundwater - non-renewable**

0

**Produced/Entrained water**

0

**Third party sources**

0

**Comment**

Production increase due to expansion of the furnace and other production areas. Some technical issue remains : process instability, low efficiency in reverse osmosis, use of cones in forming. They will be solved in 2019 with the new waste water treatment that will be installed in 2019/2020

**Facility reference number**

Facility 3

**Facility name**

EAST LEAKE WORKS (PLASTERBOARD) / BRITISH GYPSUM

**Fresh surface water, including rainwater, water from wetlands, rivers and lakes**

0

**Brackish surface water/seawater**

0

**Groundwater - renewable**

22,171

**Groundwater - non-renewable**

0

**Produced/Entrained water**

0

**Third party sources**

376,542

**Comment**

Water withdrawal is supplied by mine water from Marblaegis Mine. This has to be pumped out to keep the mine workable, and is used within the board plant instead of withdrawing water from the natural environment . In 2017 90.1% of the water we used on site was recovered from the mine, in 2018 this was 89.9%.

# W5.1b

**(W5.1b) For each facility referenced in W5.1, provide discharge data by destination.**

**Facility reference number**

Facility 1

**Facility name**

HOLWELL / SG PAM

**Fresh surface water**

825,367

**Brackish surface water/Seawater**

0

### Groundwater

0

### Third party destinations

9,000

### Comment

The increase in discharge is similar to the increase in withdrawal

---

### Facility reference number

Facility 2

### Facility name

XICOHTENCATL - Vetrotex / SG AMERICA SA de CV

### Fresh surface water

673,991

### Brackish surface water/Seawater

0

### Groundwater

0

### Third party destinations

0

### Comment

Production increase due to expansion of the furnace and other production areas. Some technical issue remains : process instability, low efficiency in reverse osmosis, use of cones in forming. They will be solved in 2019 with the new waste water treatment that will be installed in 2019/2020

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### Facility reference number

Facility 3

### Facility name

EAST LEAKE WORKS (PLASTERBOARD) / BRITISH GYPSUM

### Fresh surface water

0

### Brackish surface water/Seawater

0

### Groundwater

0

### Third party destinations

4,855

### Comment

The difference between the withdrawal and the discharge is related to the process: water entering the board plant is known to be captured within the product and not discharged to sewer. Main water incoming for welfare and other uses is still assumed to all go to sewer.

## W5.1c

**(W5.1c) For each facility referenced in W5.1, provide the proportion of your total water use that is recycled or reused, and give the comparison with the previous reporting year.**

### Facility reference number

Facility 1

### Facility name

HOLWELL / SG PAM

### % recycled or reused

Less than 1%

### Comparison with previous reporting year

About the same

### Please explain

We have made studies to install closed loop systems and we are planning to carry it out on the short term

### Facility reference number

Facility 2

### Facility name

XICOHTENCATL - Vetrotex / SG AMERICA SA de CV

### % recycled or reused

76-99%

### Comparison with previous reporting year

About the same

### Please explain

The water used to cool the furnace and the sizing is partially reused then treated in the waste water treatment plant.
We have a project to change the waste water treatment plant in 2020 in order to reuse it in the process with a target of -25% of water reduction.

**Facility reference number**

Facility 3

**Facility name**

EAST LEAKE WORKS (PLASTERBOARD) / BRITISH GYPSUM

**% recycled or reused**

None

**Comparison with previous reporting year**

About the same

**Please explain**

Water entering the board plant is known to be captured within the product and not discharged to sewer. Mains water incoming for welfare and other uses is still assumed to all go to sewer.

# W5.1d

**(W5.1d) For the facilities referenced in W5.1, what proportion of water accounting data has been externally verified?**

**Water withdrawals – total volumes**

**% verified**

76-100

**What standard and methodology was used?**

Review performed in compliance with the ISAE 3000 standard, including: - Risk analysis - Assessment of the suitability of the reporting Guidelines in terms of their relevance, completeness, reliability, impartiality and comprehensibility - Test of details at the level of a representative sample of sites selected by us - Review of the consolidated data - Expression of a limited assurance on the data published.

**Water withdrawals – volume by source**

**% verified**

76-100

**What standard and methodology was used?**

Review performed in compliance with the ISAE 3000 standard, including: - Risk analysis - Assessment of the suitability of the reporting Guidelines in terms of their relevance, completeness, reliability, impartiality and comprehensibility - Test of details at the level of a representative sample of sites selected by us - Review of the consolidated data - Expression of a limited assurance on the data published.

## Water withdrawals – quality

### % verified

Not verified

### What standard and methodology was used?

Our reporting system does not include quality of water withdrawals

## Water discharges – total volumes

### % verified

76-100

### What standard and methodology was used?

Review performed in compliance with the ISAE 3000 standard, including: - Risk analysis - Assessment of the suitability of the reporting Guidelines in terms of their relevance, completeness, reliability, impartiality and comprehensibility - Test of details at the level of a representative sample of sites selected by us - Review of the consolidated data - Expression of a limited assurance on the data published

## Water discharges – volume by destination

### % verified

76-100

### What standard and methodology was used?

Review performed in compliance with the ISAE 3000 standard, including: - Risk analysis - Assessment of the suitability of the reporting Guidelines in terms of their relevance, completeness, reliability, impartiality and comprehensibility - Test of details at the level of a representative sample of sites selected by us - Review of the consolidated data - Expression of a limited assurance on the data published.

## Water discharges – volume by treatment method

### % verified

Not verified

### What standard and methodology was used?

Our reporting system does not split the water discharge volume per treatment method.

## Water discharge quality – quality by standard effluent parameters

### % verified

Not verified

### What standard and methodology was used?

Our reporting system does not split the water discharge volume per standard effluent parameters.

## Water discharge quality – temperature

### % verified

Not verified

### What standard and methodology was used?

Our reporting system does not split the water discharge volume per standard effluent parameters.

## Water consumption – total volume

### % verified

76-100

### What standard and methodology was used?

Review performed in compliance with the ISAE 3000 standard, including: - Risk analysis - Assessment of the suitability of the reporting Guidelines in terms of their relevance, completeness, reliability, impartiality and comprehensibility - Test of details at the level of a representative sample of sites selected by us - Review of the consolidated data - Expression of a limited assurance on the data published.

## Water recycled/reused

### % verified

76-100

### What standard and methodology was used?

Review performed in compliance with the ISAE 3000 standard, including: - Risk analysis - Assessment of the suitability of the reporting Guidelines in terms of their relevance, completeness, reliability, impartiality and comprehensibility - Test of details at the level of a representative sample of sites selected by us - Review of the consolidated data - Expression of a limited assurance on the data published.

# W6. Governance

## W6.1

**(W6.1) Does your organization have a water policy?**

Yes, we have a documented water policy that is publicly available

## W6.1a

**(W6.1a) Select the options that best describe the scope and content of your water policy.**

| | Scope | Content | Please explain |
|---|---|---|---|
| Row 1 | Company-wide | Description of business impact on water<br>Description of water-related performance standards for direct operations<br>Description of water-related standards for procurement<br>Company water targets and goals<br>Commitments beyond regulatory compliance<br>Commitment to water stewardship and/or collective action<br>Recognition of environmental linkages, for example, due to climate change | Saint-Gobain's Water policy adopted in 2011 confirms the desire to reduce the quantitative and qualitative impact of Saint-Gobain's activities on water resources as much as possible.<br><br>The long-term objective is aim for "zero discharge" of industrial water in liquid form, while avoiding generating new impacts for other natural environments and/or for other parties involved. Saint-Gobain has also the target to decrease by 80% the discharges volumes between 2025 and 2010, at iso-production.<br><br>The list of priority sites within the framework of the Water policy is based on both the water withdrawals and the water stressed areas.<br><br>Saint-Gobain has also defined a Water standard that describes the minimum requirements that the industrial sites must observe for water management and the prevention of risks of water constraints, pollution and flooding. The policy also requires that all the stakeholders concerned through the value chain, including suppliers, have to be taken into consideration. |

## W6.2

**(W6.2) Is there board level oversight of water-related issues within your organization?**

Yes

## W6.2a

**(W6.2a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for water-related issues.**

| Position of individual | Please explain |
|---|---|
| Board-level committee | Water is a topic sometimes discussed at Board level and particularly the following issues :<br>• The status of our results vs our targets<br>• The strategy regarding our pipe activity |
| President | The Chairman and Chief Executive Officer and Member of the Board is also member of the Strategy and CSR Committee which is responsible for reviewing the strategic plan, its potential for improvement and the proposed strategic topics by its members and reports quarterly to the Executive Board. |
| Other, please specify<br>Executive committee | The Senior Vice President in charge of Human Resources who has the overall responsibility of the Sustainable Development department<br><br>The Corporate Secretary of the Group in charge of Corporate Social Responsibility |

# W6.2b

**(W6.2b) Provide further details on the board's oversight of water-related issues.**

| | Frequency that water-related issues are a scheduled agenda item | Governance mechanisms into which water-related issues are integrated | Please explain |
|---|---|---|---|
| Row 1 | Scheduled - some meetings | Reviewing and guiding business plans<br>Setting performance objectives | The board reviews our environment results vs targets , including water, on an annual basis. Business Plans of our pipe activity are also regularly reviewed. |

# W6.3

**(W6.3) Provide the highest management-level position(s) or committee(s) with responsibility for water-related issues (do not include the names of individuals).**

**Name of the position(s) and/or committee(s)**

Chief Sustainability Officer (CSO)

**Responsibility**

Both assessing and managing water-related risks and opportunities

**Frequency of reporting to the board on water-related issues**

Quarterly

**Please explain**

It is the responsibility of the CSO to propose specific water-related issues at board level . So far, it has not be the case, as our level of progress regarding our water recycling targets is as foreseen.

## W6.5

**(W6.5) Do you engage in activities that could either directly or indirectly influence public policy on water through any of the following?**

Yes, direct engagement with policy makers

Yes, trade associations

## W6.5a

**(W6.5a) What processes do you have in place to ensure that all of your direct and indirect activities seeking to influence policy are consistent with your water policy/water commitments?**

*All actions and activities seeking to influence policy are managed at top management level. They are in charge of ensuring that they are consistent with our water policy.*

*Saint-Gobain also acts through several trade associations. As illustration, Saint-Gobain is part of EpE (Enterprises for the Environment) which is a coalition of around 40 French and international companies committed to work together to improve the inclusion of environmental challenges into their strategy and day-to-day management. EpE addresses medium and long term policy. EpE gives its members a forum for discussion, within the business world itself, but also with NGOs, ministers, politicians, scientists and academics. Shared experience and practices lead to the publication of guides, books, methodologies and proposals for action.*

*If any inconsistency would be discovered between our activities seeking to influence policy and our own water policy, corrective actions would be led so that our actions are conform to our policy.*

## W6.6

**(W6.6) Did your organization include information about its response to water-related risks in its most recent mainstream financial report?**

Yes (you may attach the report - this is optional)

ddr_2018_-_saint-gobain_-_va.pdf

# W7. Business strategy

## W7.1

**(W7.1) Are water-related issues integrated into any aspects of your long-term strategic business plan, and if so how?**

| | Are water-related issues integrated? | Long-term time horizon (years) | Please explain |
|---|---|---|---|
| Long-term business objectives | Yes, water-related issues are integrated | > 30 | Saint-Gobain takes measures to limit its impact on ecosystems and to optimize its use of natural resources, especially water.<br>We have set medium and long term objectives for water-related issues.<br>Our medium term objective is to decrease water discharges by 80% between 2010 and 2025. This duration of 15 years is considered by us as medium-term. The long-term objective is to withdraw as little water as possible and to aim for “zero discharge” of industrial water in liquid form, while avoiding generating new impacts for other natural environments and/or for other parties involved. |
| Strategy for achieving long-term objectives | Yes, water-related issues are integrated | 21-30 | Once our 2025 target reached, we will need to focus on the 20% remaining discharges, using further recycling loops. The long term shall be zero discharge under liquid form with full recycling of discharge, withdrawals being limited to the process evaporation and water needs for the product.<br><br>To reach these objectives, we adopted a Water policy to reduce the quantitative and qualitative impact of our activities on water resources as much as possible, both on withdrawals and on discharges. We also use the World Resources Institute’s “Aqueduct” atlas of the world, which allows each of the sites to classify its water risk from “low” to “extremely high”. This atlas is based on qualitative and quantitative physical risks (such as water stress or flood risk), but also on stakeholder risk (like access to water). It helps managing the priorities according to the stressed areas |
| Financial planning | No, water-related issues were reviewed but not considered as strategically relevant/significant | 21-30 | We consider that even if capital expenditures will be needed on a long-term horizon, the total amount is not strategically significant at Group level. |

# W7.2

**(W7.2) 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?**

**Row 1**

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

137

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

-4

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

0

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

0

**Please explain**

As illustration, CAPEX data evolution is provided in percentage for the former Innovative Material scope, meaning Glass and High Performance Solution activities. which represent about 30 % of Saint Gobain withdrawal. As an illustration, just for the Glass business, several projects are planned for 2019 like : revamping of Float cooling system to reduce water consumption (900k€), Piping and water pumping improvement (330 k€), Rainwater recovery (430 k€), Water metering (60k€)
OPEX are not reported and consolidated at Company level

# W7.3

**(W7.3) Does your organization use climate-related scenario analysis to inform its business strategy?**

| | Use of climate-related scenario analysis | Comment |
|---|---|---|
| Row 1 | No, but we anticipate doing so within the next two years | Saint Gobain's water related risks are mainly linked to climate change consequences. By setting climate-related scenarios, we can anticipate water risks for our production facilities and opportunities, for our Pipe activity.<br>We committed to Science Based Target in March 2018 and had our targets approved in April 2019. Nevertheless as current methodologies developed by the SBTi are not directly applicable to the Building and Construction value chain, the GABC (Global Alliance for Building and Construction) has decided to develop a specific methodology whilst continuing to work on the application of existing methodologies to the Business and Construction |

| | | |
|---|---|---|
| | | value chain. We are actively involved in this work, jointly with the WBCSD, the World Green Building Council, the International Energy Agency and other player of the value chain. This work has received a financial support by We Mean Business (CDP being a partner of this coalition). |

## W7.4

### (W7.4) Does your company use an internal price on water?

**Row 1**

**Does your company use an internal price on water?**

No, and we do not anticipate doing so within the next two years

**Please explain**

Our water results compared to our objectives, together with the awareness of our employees on water-related issues, do not justify the use at the present time of an internal price of water.

# W8. Targets

## W8.1

### (W8.1) Describe your approach to setting and monitoring water-related targets and/or goals.

| | Levels for targets and/or goals | Monitoring at corporate level | Approach to setting and monitoring targets and/or goals |
|---|---|---|---|
| Row 1 | Company-wide targets and goals<br>Business level specific targets and/or goals<br>Activity level specific targets and/or goals<br>Site/facility specific targets and/or goals<br>Country level targets and/or goals | Targets are monitored at the corporate level<br>Goals are monitored at the corporate level | We have set targets and goals to be coherent with our public engagements and our internal Water policy:<br>- our long-term target is to withdraw as little water as possible and to aim for “zero discharge” of industrial water in liquid form, while avoiding generating new impacts for other natural environments and/or for other parties involved. To do that we also have a medium-term target of 80% water discharge decrease between 2010 and 2025 at iso-production. We also work to manage priorities by identifying the development of water stressed areas, which give rise to production risks and penalize local populations. Our target is at corporate level and to be applied by activity and at country and facility level.<br>We also have goals for our suppliers, managed at corporate level. |

# W8.1a

**(W8.1a) Provide details of your water targets that are monitored at the corporate level, and the progress made.**

**Target reference number**

Target 1

**Category of target**

Water discharge

**Level**

Company-wide

**Primary motivation**

Reduced environmental impact

**Description of target**

Medium term target (2010-2025): -80% water discharge at iso-production for the environment concerned perimeter sites (sites with >95% of the environmental impact).

**Quantitative metric**

% reduction per unit of production

**Baseline year**

2010

**Start year**

2011

**Target year**

2025

**% achieved**

35

**Please explain**

We have achieved a 35% reduction by comparing 2018 at iso-production 2010 with 2010. Particularly, our pipe activity has carried out projects to increase closed circuits and recycle water.

# W8.1b

**(W8.1b) Provide details of your water goal(s) that are monitored at the corporate level and the progress made.**

**Goal**

Engagement with suppliers to reduce the water-related impact of supplied products

**Level**

Company-wide

**Motivation**

Reduced environmental impact

**Description of goal**

The Group has set a target 2017-2021 of having evaluated the CSR performance of almost all reputable suppliers with CSR risk and annual sales of more than 100,000€ with the Group. Regarding CSR audits, the goal is to achieve about 100 audits per year for low initial CSR performance. These audits may lead to de-references if the necessary corrective plans are not implemented within the agreed deadlines.
As measure of success, we can state that 903 suppliers have been concerned by documentation reviews by a third party. 31.9% of our suppliers by number, considered as potentially risky regarding CSR, have been concerned by documentaion reviews.
The suppliers with unsatisfactory grades to those CSR evaluations have to work to improve their overall performance according to the detailed scorecard evaluation recommendation.

**Baseline year**

2017

**Start year**

2018

**End year**

2021

**Progress**

31,9%

# W9. Linkages and trade-offs

## W9.1

**(W9.1) Has your organization identified any linkages or tradeoffs between water and other environmental issues in its direct operations and/or other parts of its value chain?**

Yes

## W9.1a

**(W9.1a) Describe the linkages or tradeoffs and the related management policy or action.**

### Linkage or tradeoff

Tradeoff

### Type of linkage/tradeoff

Increased energy use

### Description of linkage/tradeoff

Electric consumption of new cooling towers for new water recycling projects

### Policy or action

For example, one of our site in Germany has replaced in 2018 its existing centralized open water cooling system by a decentralized closed air cooling system.
Results obtains :
- Electricity : 243 MWh/year down to 92 MWh/year --> Saving of - 151 MWh/year = 79.6t CO2 per year / Reduction by 62%!
- Water: 3.500 m³/year down to 52 m³/year --> Saving of - 3.448 m³ /year / Reduction by 98%!
- Economical: Savings of 76 K€

### Linkage or tradeoff

Linkage

### Type of linkage/tradeoff

Other, please specify

Decreased GHG Emission

### Description of linkage/tradeoff

By reducing electricity consumption, some water projects have also some benefits regarding CO2eq emissions

### Policy or action

For example, in one of our site in France who is manufacturing refractories for glass furnaces by fusion. This process is using electricity as energy and requires a large amount of water to ensure cooling of the melting furnaces. This site is among the top 10 water consumers in the Saint-Gobain Group. Total Water consumption of the site is approximately 1,000,000 m3 per year.They have chosen to implement a solution consisting in the installation of a system of recovery of energy of the fusion equipment and the air cooling towers of furnaces to allow:
a- to supply a network of air heaters in a production hall of 9000 m2, previously heated by gas and oil.
b- to feed the sanitary hot water network (changing rooms, toilets, showers)
c- substantially reduce the water consumption of a furnace fed by an open circuit.
The cost of the investment was 277 k €uros,

The results obtain is the following :
1/ the stoppage of open cooling circuits of a furnace using the existing facilities of air-cooling towers, a reduction of the order of 8% of the total water consumption = 75000 m3 per year
2/ cost of heating; production building + sanitary water: 1760 MWh is a gain of 22 k €uros per year
3/ CO2 emission avoided: 327 tonnes
This solution will be deployed in another workshop inside the plant and the site has been awarded by the Group by an environmental prize. Their solution is going to be shared within the Group as a very good practice.

### Linkage or tradeoff

Linkage

### Type of linkage/tradeoff

Increased biodiversity

### Description of linkage/tradeoff

Having a better control of our discharge or avoiding discharge into the natural environmental helps to preserve biodiversity inside the environmental receptor and its surrounding

### Policy or action

In our water Policy, it's requested first to reduce quantity of the water discharge, Second to control the quality of the water discharge and finally to give preference to less sensitive withdrawal and discharge destination

### Linkage or tradeoff

Linkage

### Type of linkage/tradeoff

Environmental restoration

### Description of linkage/tradeoff

Develop forest on our industrial sites helps to improve environmental condition including increasing of the water table.
Indeed due to the presence of plants and their roots, when it rains or if the plants are watered, due to capillary fringe, the water better percolates through the soil and enters the water table, thereby increasing its level.

### Policy or action

For example, one of our plant in India, has developped since many years an urban forest on their site. The benefits of this project concern absorbtion of CO2, reduction of the ground temperature, increase of the water table, and restoration of the biodiversity (native trees + green area for birds) . In 2018, the site has been awarded by the Group

with an environmental prize to encourage other sites to implement similar good practices

# W10. Verification

## W10.1

**(W10.1) Do you verify any other water information reported in your CDP disclosure (not already covered by W5.1d)?**

Yes

## W10.1a

**(W10.1a) Which data points within your CDP disclosure have been verified, and which standards were used?**

| Disclosure module | Data verified | Verification standard | Please explain |
|---|---|---|---|
| W8. Targets | Targets | ISAE3000 | The external auditors also use the verification standard Compagnie Nationale des Commissaires aux Comptes (CNCC).<br>We ask from our auditors, in their mission statement, to verify as well our progress against our set of targets as well as the year on year variation of our emissions. See registration document 2018 page 330. |

# W11. Sign off

## W-FI

**(W-FI) 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.**

## W11.1

**(W11.1) Provide details for the person that has signed off (approved) your CDP water response.**

| | Job title | Corresponding job category |
|---|---|---|
| Row 1 | Senior Vice President in charge of Human Ressources, member of the executive board, who has the overall responsibilty of the Sustainable Development department | Board/Executive board |