

W0. Introduction

W0.1

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

"Health for all, hunger for none" – putting an end to hunger and helping everyone lead a healthy life, while at the same protecting ecosystems. That's what we aspire to achieve, guided by our corporate purpose "Science for a better life." The major issues of our time can only be addressed if we work together. Our campaigns #voranbringen in Germany and "This is why we science" in the United States underscore our approach. We are a life science company and a global leader in health care and nutrition. Our innovative products support efforts to overcome the major challenges presented by a growing and aging global population. We help prevent, alleviate and treat diseases. We also aim to ensure the world has a reliable supply of high-quality food, feed and plant-based raw materials. As part of this endeavor, the responsible use of natural resources is always a top priority.

We aim to enhance our company's earning power and create value for customers, patients, shareholders, employees and society. Growth and sustainability are integral parts of our strategy, guided by our corporate values of Leadership, Integrity, Flexibility and Efficiency, or LIFE for short.

This culture ensures a common identity throughout the Bayer Group.

The management structure of the Bayer Group comprises three divisions – Pharmaceuticals, Consumer Health and Crop Science – which are also our reporting segments. We operate sites around the world, and some are used by multiple segments. As of December 31, 2019, the Bayer Group comprised 392 consolidated companies in 87 countries.

On June 7, 2018, Bayer completed the acquisition of the Monsanto Company, St. Louis, Missouri, United States (Monsanto). In 2019, the newly acquired agricultural business was thus reported for the full year. The portfolio and structural measures announced in late 2018 led to the following changes in the corporate structure: (1) The sale of our Animal Health business unit, was agreed in August 2019. As a result, it no longer constitutes a reportable segment and has been accounted for retroactively for 2018 and 2019 as a discontinued operation. (2) The service company Currenta, which operates the Chempark sites in Leverkusen, Dormagen and Krefeld-Uerdingen, is no longer part of the Bayer Group after the sale of our majority stake closed in November 2019. Currenta's business activities are reported retroactively for 2018 and 2019 under discontinued operations. (3) The services previously performed by Business Services are gradually being transferred to the enabling functions and divisions as part of the Group restructuring.

As in our previous CDP reports, we are reporting according to the operational control approach to provide an accurate picture of Bayer's life science businesses.

**Forward-Looking Statements**

This report may contain forward-looking statements based on current assumptions and forecasts made by Bayer management. Various known and unknown risks, uncertainties and other factors could lead to material differences between the actual future results, financial situation, development or performance of the company and the estimates given here. These factors include those discussed in Bayer's public reports which are available on the Bayer website at www.bayer.com. The company assumes no liability whatsoever to update these forward-looking statements or to conform them to future events or developments.

W-CH0.1a

**(W-CH0.1a) Which activities in the chemical sector does your organization engage in?**

Please select

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 2019	December 31 2019

W0.3

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

- Chile
- China
- Germany
- India
- Mexico
- Peru
- South Africa
- Spain

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	DIRECT USE: The PRIMARY USE of FRESH WATER is for cooling purposes, the production process and irrigation of field and greenhouses for seed production. Clean water is a limiting factor for our production and THUS considered essential. E.g. if the water has a high concentration of salts, it will not be appropriate for cooling purposes due to its corrosive characteristics to pipes. INDIRECT USE: The PRIMARY USE IN THE SUPPLY CHAIN is for raw material/ product supply, incl. seeds produced by contracted growers. Looking downstream, e.g. at Crop Science's customers, FRESHWATER is PRIMARILY USED for irrigation in agriculture. It is THUS considered vital since it could impede raw material / product supply and/or hamper the use of our crop science products. We expect our FUTURE DEPENDENCY IN DIRECT AND INDIRECT OPERATIONS to remain the same BECAUSE freshwater will remain vital for our production and the irrigation of fields with our current strategy, to ensure the provision of raw materials and products and the use of our products by our customers.
Sufficient amounts of recycled, brackish and/or produced water available for use	Important	Not very important	DIRECT USE: The PRIMARY USE of NON-FRESH WATER i.e. recycled water is for cooling purposes, through the reuse of treated wastewater or steam condensate recovery as process water and irrigation of fields and greenhouses for our seeds production. In general, it has neutral importance for our direct use. However, we selected "IMPORTANT" BECAUSE some of our sites are located in water scarce regions: Here the reuse of water is gaining importance. We also encourage our sites to efficiently utilize resources, including water. Through water recycling we reduced our water withdrawals in our operations. This is another reason WHY we consider the use of non-fresh water in direct operations as important. INDIRECT USE: Usually surface or municipal water is used along the value chain e.g. for irrigation in agriculture and THUS NON-FRESH WATER is NOT PRIMARILY USED and considered "not very important". Moreover, brackish and produced water are not material for Bayer. We expect our FUTURE DEPENDENCY IN DIRECT AND INDIRECT OPERATIONS to remain the same BECAUSE we are expecting a similar water availability situation across our sites as today based on current forecasts and we expect our suppliers and customers to continue using surface or municipal water.

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%	METHOD AND FREQUENCY: This aspect is monitored ANNUALLY via our central BAYER SITE INFORMATION SYSTEM "BaySIS". BaySIS is a company-wide monitoring tool with direct access for the individual sites. The system encompasses automated controls and different workflows that have to be followed to ensure data quality. In BaySIS, all sites that are considered environmentally relevant according to pre-defined parameters ANNUALLY report water-related key performance indicators BECAUSE we consider them important for our environmental management. Therefore we regularly monitor these indicators, which allow us to set respective targets in sites with relevant water parameters and to initiate corrective actions.
Water withdrawals – volumes by source	100%	METHOD AND FREQUENCY: This aspect is monitored ANNUALLY via our central BAYER SITE INFORMATION SYSTEM "BaySIS". BaySIS is a company-wide monitoring tool with direct access for the individual sites. The system encompasses automated controls and different workflows that have to be followed to ensure data quality. In BaySIS, all sites that are considered environmentally relevant according to pre-defined parameters ANNUALLY report water-related key performance indicators BECAUSE we consider them important for our environmental management. Therefore we regularly monitor these indicators, which allow us to set respective targets in sites with relevant water parameters and to initiate corrective actions.
Entrained water associated with your metals & mining sector activities - total volumes [only metals and mining sector]	<Not Applicable>	<Not Applicable>
Produced water associated with your oil & gas sector activities - total volumes [only oil and gas sector]	<Not Applicable>	<Not Applicable>
Water withdrawals quality	26-50	METHOD AND FREQUENCY: We do not monitor the quality of our water withdrawals via our central Bayer Site Information System "BaySIS", BECAUSE the relevant regulations related to water withdrawal quality requirements differ widely. Therefore, this aspect is monitored directly at our sites. According to GMP (Good Manufacturing Practice), all of our Health Care sites (26-50% of sites) have to analyze the incoming water. Therefore, all water withdrawals are CONTINUOUSLY analyzed whenever water is withdrawn to decide whether there needs to be a treatment before it can be used. Usually, water parameters are measured via online measurements. Adherence to legal regulations is checked regularly e.g. through our internal HSE Audits which take place every 3 years.
Water discharges – total volumes	100%	METHOD AND FREQUENCY: This aspect is monitored ANNUALLY via our central BAYER SITE INFORMATION SYSTEM "BaySIS". BaySIS is a company-wide monitoring tool with direct access for the individual sites. The system encompasses automated controls and different workflows that have to be followed to ensure data quality. In BaySIS, all sites that are considered environmentally relevant according to pre-defined parameters ANNUALLY report water-related key performance indicators BECAUSE we consider them important for our environmental management. Therefore we regularly monitor these indicators, which allow us to set respective targets in sites with relevant water parameters and to initiate corrective actions.
Water discharges – volumes by destination	100%	METHOD AND FREQUENCY: This aspect is monitored ANNUALLY via our central BAYER SITE INFORMATION SYSTEM "BaySIS". BaySIS is a company-wide monitoring tool with direct access for the individual sites. The system encompasses automated controls and different workflows that have to be followed to ensure data quality. In BaySIS, all sites that are considered environmentally relevant according to pre-defined parameters ANNUALLY report water-related key performance indicators BECAUSE we consider them important for our environmental management. Therefore we regularly monitor these indicators, which allow us to set respective targets in sites with relevant water parameters and to initiate corrective actions.
Water discharges – volumes by treatment method	100%	METHOD AND FREQUENCY: This aspect is monitored ANNUALLY via our central BAYER SITE INFORMATION SYSTEM "BaySIS". BaySIS is a company-wide monitoring tool with direct access for the individual sites. The system encompasses automated controls and different workflows that have to be followed to ensure data quality. In BaySIS, all sites that are considered environmentally relevant according to pre-defined parameters ANNUALLY report water-related key performance indicators BECAUSE we consider them important for our environmental management. Therefore we regularly monitor these indicators, which allow us to set respective targets in sites with relevant water parameters and to initiate corrective actions.
Water discharge quality – by standard effluent parameters	100%	METHOD AND FREQUENCY: This aspect is monitored ANNUALLY via our central BAYER SITE INFORMATION SYSTEM "BaySIS". BaySIS is a company-wide monitoring tool with direct access for the individual sites. The system encompasses automated controls and different workflows that have to be followed to ensure data quality. In BaySIS, all sites that are considered environmentally relevant according to pre-defined parameters ANNUALLY report water-related key performance indicators BECAUSE we consider them important for our environmental management. Therefore we regularly monitor these indicators, which allow us to set respective targets in sites with relevant water parameters and to initiate corrective actions.
Water discharge quality – temperature	76-99	METHOD AND FREQUENCY: As the local regulations differ widely, in general, water discharge temperatures are monitored directly at our sites via CONTINUOUS ONLINE MONITORING, each time that water is discharged. Often, the online monitoring system is directly connected to the monitoring system of the local authorities. Control measurements are conducted by the local authorities at least TWICE PER YEAR. Internally, adherence to legal regulations is checked regularly in our internal HSE Audits which take place every 3 years. As we are not able to guarantee 100% coverage without annual monitoring at global level, we selected 76-99 % of sites.
Water consumption – total volume	100%	METHOD AND FREQUENCY: This aspect is monitored ANNUALLY via our central BAYER SITE INFORMATION SYSTEM "BaySIS". BaySIS is a company-wide monitoring tool with direct access for the individual sites. The system encompasses automated controls and different workflows that have to be followed to ensure data quality. In BaySIS, all sites that are considered environmentally relevant according to pre-defined parameters ANNUALLY report water-related key performance indicators BECAUSE we consider them important for our environmental management. Therefore we regularly monitor these indicators, which allow us to set respective targets in sites with relevant water parameters and to initiate corrective actions.
Water recycled/reused	100%	METHOD AND FREQUENCY: This aspect is monitored ANNUALLY via our central BAYER SITE INFORMATION SYSTEM "BaySIS". BaySIS is a company-wide monitoring tool with direct access for the individual sites. The system encompasses automated controls and different workflows that have to be followed to ensure data quality. In BaySIS, all sites that are considered environmentally relevant according to pre-defined parameters ANNUALLY report water-related key performance indicators BECAUSE we consider them important for our environmental management. Therefore we regularly monitor these indicators, which allow us to set respective targets in sites with relevant water parameters and to initiate corrective actions.
The provision of fully-functioning, safely managed WASH services to all workers	76-99	Health and safety of our employees are very important aspects for Bayer. As highlighted in our Water Position, we use our local presence to support projects providing access to clean water and sanitation to our employees and the communities in which we operate. Bayer is committed to the UN CEO Water Mandate and from 2020 onward actively participating in the Human Rights and WASH Working Group. METHOD AND FREQUENCY: We constantly monitor and assess our HSE performance including the existence of fully-functioning WASH services through our audits worldwide, according to ANNUAL HSE Audit programs as defined on a risk-based approach. All our production sites provide fully-functioning WASH services to all workers, and we estimate these sites to represent over 95% of Bayer's total water usage. Since our operations include many small Crop Science farming sites worldwide and audits are conducted on a random basis, we are not able to guarantee 100% coverage.

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	58526	About the same	In 2019 total water withdrawal was about the same as last year. In 2019, the agriculture business acquired in June 2018 was reported for the full year for the first time. Due to this change in scope, we retrospectively adjusted our water data for 2018 to allow for a real comparison. For this reason, 2018 data was calculated on a pro forma basis assuming a full inclusion of the agricultural business as if the acquisition of Monsanto had already taken place as of January 1, 2018. Compared with this data, 2019 water withdrawals are about the same as 2018. Water volumes from all sources are expected to stay about the same IN THE FUTURE, as no significant changes are expected. Please note that differences between volumes of water consumed and water discharged can be explained, for example, by quantities of water used as raw materials in products, unquantified losses due to evaporation, leaks and volumes of condensate generated through the use of steam as a source of energy. This is why total water consumption does not equal total water withdrawals minus discharges (C (26,254) ≠ W (58,526) - D (25,584).
Total discharges	25584	About the same	In 2019 total water discharges were about the same as last year. In 2019, the agriculture business acquired in June 2018 was reported for the full year for the first time. Due to this change in scope, we retrospectively adjusted our water data for 2018 to allow for a real comparison. For this reason, 2018 data was calculated on a pro forma basis assuming a full inclusion of the agricultural business as if the acquisition of Monsanto had already taken place as of January 1, 2018. Compared with this data, 2019 water discharges are about the same as 2018. Water discharges are expected to decrease IN THE FUTURE because Bayer works continuously on reducing the discharges. Please note that differences between volumes of water consumed and water discharged can be explained, for example, by quantities of water used as raw materials in products, unquantified losses due to evaporation, leaks and volumes of condensate generated through the use of steam as a source of energy. This is why total water consumption does not equal total water withdrawals minus discharges (C (26,254) ≠ W (58,526) - D (25,584).
Total consumption	26254	Much lower	In 2019 total water consumption was much lower compared to last year due to a change in methodology. Water used for irrigation has been specially designated since 2019 and is therefore no longer part of consumption. In 2019, the agriculture business acquired in June 2018 was reported for the full year for the first time. Due to this change in scope, we retrospectively adjusted our water data for 2018 to allow for a real comparison. For this reason, 2018 data was calculated on a pro forma basis assuming a full inclusion of the agricultural business as if the acquisition of Monsanto had already taken place as of January 1, 2018. Water consumption is expected to stay about the same IN THE FUTURE as no significant changes are expected. Please note that differences between volumes of water consumed and water discharged can be explained, for example, by quantities of water used as raw materials in products, unquantified losses due to evaporation, leaks and volumes of condensate generated through the use of steam as a source of energy. This is why total water consumption does not equal total water withdrawals minus discharges (C (26,254) ≠ W (58,526) - D (25,584).

**W1.2d**

**(W1.2d) Indicate whether water is withdrawn from areas with water stress and provide the proportion.**

	Withdrawals are from areas with water stress	% withdrawn from areas with water stress	Comparison with previous reporting year	Identification tool	Please explain
Row 1	Yes	1-10	Much lower	WRI Aqueeduct	APPLICATION OF TOOL TO EVALUATE WHETHER WATER HAS BEEN WITHDRAWN FROM STRESSED AREAS: To identify the sites in water-scarce regions we have applied the Overall Water Risk Indicator and the Baseline Water Stress Indicator from the WRI Aqueeduct Water Tool (thresholds: "high" and "extremely high" in the overall water risk indicator or "extremely high" in the baseline water stress indicator). We analyzed all sites worldwide which are considered environmentally relevant and thus monitored in our central BAYER SITE INFORMATION SYSTEM "BaySIS". From BaySIS, we mapped the total water use to each site that was located in a water-scarce region according to the WRI Aqueeduct analysis and defined those sites as "large user", which used more than 0.1% of our total water use. In this process 12 Bayer sites were identified based on 2019 data which are located in a water-scarce region and are relevant for our water-risk analysis. These sites have the potential to have a substantive impact on the business as they are located in a region considered at water risk according to WRI Aqueeduct ("high" and "extremely high" in the overall water risk indicator or "extremely high" in the baseline water stress indicator) and are defined as "large water users" (>0.1% of Bayer's total water use). REASON FOR CHANGE TO PREVIOUS YEAR: The change of water withdrawn from areas with water stress compared to 2018 is partly due to a revision of the WRI Aqueeduct tool, itself, leading to a re-evaluation, which Bayer sites are considered at risk.

**W1.2h**

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

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Fresh surface water, including rainwater, water from wetlands, rivers, and lakes	Relevant	19124	Much higher	i) Water withdrawal from FRESH SURFACE WATER IS RELEVANT as it is VITAL for cooling purposes, production processes as well as irrigation of fields and greenhouses for seed production. Clean water is a limiting factor for our production and THUS considered essential. E.g. if the water has a high concentration of salts, it will not be appropriate for cooling purposes due to its corrosive characteristics to pipes. ii) In 2019, total water withdrawal from fresh surface water was MUCH HIGHER compared to 2018 DUE TO the newly acquired agriculture business being reported for the full year for the first time.
Brackish surface water/Seawater	Not relevant	<Not Applicable>	<Not Applicable>	As in previous years, brackish surface water was NOT RELEVANT in 2019 BECAUSE we did not use brackish surface water in our operations. As described above, brackish water is not suitable for our production. E.g. if the water has a high concentration of salts, it will not be appropriate for cooling purposes due to its corrosive characteristics to pipes. This is also the reason WHY (non-) usage is consistent with the previous year and is expected to stay the same for our operations IN THE FUTURE.
Groundwater – renewable	Relevant	21143	Much higher	i) Groundwater is RELEVANT BECAUSE we have own deep wells in many sites for our own water supply. ii) In 2019, total water withdrawal from groundwater was MUCH HIGHER compared to 2018 DUE TO the newly acquired agriculture business being reported for the full year for the first time.
Groundwater – non-renewable	Not relevant	<Not Applicable>	<Not Applicable>	As in previous years, non-renewable groundwater was NOT RELEVANT in 2019 BECAUSE we do not use non-renewable groundwater in our operations. We do not have any sites in regions with non-renewable groundwater aquifers. This is also the reason WHY (non-) usage is consistent with the previous year and is expected to stay the same for our operations IN THE FUTURE.
Produced/Entrained water	Relevant	675	This is our first year of measurement	i) Water from produced water / process water is RELEVANT BECAUSE we extract produced water from our raw materials and from production processes. ii) As this is our first year of measurement, we REPORT A FIGURE FOR THE FIRST TIME; taking into account the newly acquired agriculture business for the full year for the first time.
Third party sources	Relevant	17584	Much higher	i) Water from third party sources is RELEVANT BECAUSE we withdraw water from third parties for drinking water in most sites. In addition, water from third party sources is used for production. ii) In 2019, total water withdrawal from third party sources was MUCH HIGHER compared to 2018 DUE TO the newly acquired agriculture business being reported for the full year for the first time.

**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	15982	Much higher	i)These discharges are RELEVANT in sites where water can be directly returned to the natural water cycle without treatment (after being carefully tested and categorized as environmentally safe acc. to official provisions) or after treatment in our own water treatment plants. All wastewater is subject to strict controls before it is discharged. In 2019, 81.9% of Bayer’s industrial and mixed wastewater worldwide was purified in wastewater treatment plants. Following careful analysis, the remaining volume was evaluated as not environmentally hazardous acc. to official provisions and returned to the natural water cycle. 36% of water used by Bayer is cooling water that does not come into contact with products. It can be returned to the water cycle without further treatment in line with official permits. ii)In 2019 total water discharges to fresh surface water were MUCH HIGHER compared to 2018 DUE TO the newly acquired agriculture business being reported for the full year for the first time.
Brackish surface water/seawater	Relevant	84	This is our first year of measurement	i) Discharges to brackish surface water/seawater are RELEVANT BECAUSE we have sites located at the coast which discharge some of their used water into the sea (after careful analysis, during which it is categorized as environmentally safe according to official provisions and returned to the natural water cycle). ii) In 2019, total water discharges to brackish surface water/seawater are being REPORTED FOR THE FIRST TIME; taking into account the newly acquired agriculture business for the full year for the first time.
Groundwater	Relevant	4789	This is our first year of measurement	i) These volumes also include other discharges, of which parts go into the ground and parts dissolve into the air. Discharges to groundwater are RELEVANT BECAUSE in some sites there are absorption wells via which used water is pumped back into the ground or seeps into the ground. ii) In 2019, total water discharges to groundwater are being REPORTED FOR THE FIRST TIME; taking into account the newly acquired agriculture business for the full year for the first time.
Third-party destinations	Relevant	4729	Much lower	i) Water discharges to third-party destinations are RELEVANT as the water is discharged to treatment plants before it can be led back to the environment. All wastewater is subject to strict controls before it is discharged into the various disposal channels. In 2019, 81.9% of Bayer’s industrial and mixed wastewater worldwide was purified in wastewater treatment plants (Bayer or third-party facilities). Following careful analysis, the remaining volume was categorized as not environmentally hazardous according to official provisions and returned to the natural water cycle. ii) In 2019 total water discharges to third party destinations were MUCH LOWER compared to 2018 DUE TO a different methodology to assign discharges by destination. Discharges from our own treatment plants are now assigned to the other categories. In the past these discharges were included here.

**W-CH1.3**

**(W-CH1.3) Do you calculate water intensity for your activities in the chemical sector?**

Please select

**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**

26-50

**Rationale for this coverage**

i) **WHY THEY WERE SELECTED:** Bayer has requested over the past years more than 4% of its suppliers (ca 3,775 out of 86,400), representing ca. 38.4 % of the total procurement spend, to report on water management. **BECAUSE IT IS NOT FEASIBLE** to assess all 86,400 suppliers, they are selected based on **COUNTRY AND BUSINESS CATEGORY SUSTAINABILITY RISKS AND STRATEGIC IMPORTANCE** (e.g. in terms of procurement spend and long-term collaboration prospects). ii) **HOW SUPPLIERS ARE INCENTIVIZED TO REPORT:** A Special clause in our standard supply contracts requests suppliers to comply with the sustainability requirements defined in our Supplier Code of Conduct. Suppliers receive access to trainings and extensive information material, e.g. on responsible use of water, as offered by capability building conferences and information platforms from the "Pharmaceutical Supply Chain Initiative" (PSCI), where Bayer is a member and the TFS initiative, which is testing a collaboration platform.

**Impact of the engagement and measures of success**

The **TYPE OF INFORMATION** requested includes HSE and sustainability aspects, e.g. water consumption or water reduction programs. During on-site audits the suppliers' water management is also checked. Wherever evaluation results are unsatisfactory, the **INFORMATION IS USED** to develop improvement measures. In the event of critical results, Bayer requests the suppliers to rectify the identified weaknesses within an appropriate period of time based on specific action plans. To **MEASURE THE SUCCESS**, we set ambitious targets and measure success in terms of target fulfillment, e.g. our target is to continue to evaluate all relevant suppliers by the end of 2020. **SUCCESS IS** also **MEASURED** through re-assessments or follow-up audits. Our regular monitoring shows that in 2019 332 of our 712 suppliers evaluated have improved their sustainability performance.

**Comment**

The TFS initiative is testing the introduction of a collaboration platform involving Bayer suppliers as another element of supplier development. It provides users with numerous best practice examples and dialogue opportunities, as well as activities, tips, case studies and expert suggestions on the topics of water, energy and waste.

**W1.4b**

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

**Type of engagement**

Incentivizing for improved water management and stewardship

**Details of engagement**

Water management and stewardship is integrated into supplier evaluation processes

**% of suppliers by number**

1-25

**% of total procurement spend**

26-50

**Rationale for the coverage of your engagement**

RATIONALE: Bayer regards adherence to sustainability standards within its supply chain as an important lever for minimizing risks. This is WHY sustainability clauses are in our electronic ordering systems and standard supply contracts. The sustainability clause requests all suppliers to comply with the sustainability requirements defined in our Supplier Code of Conduct and authorizes Bayer to conduct EVALUATIONS AND ON-SITE AUDITS, if necessary. BECAUSE it is not feasible to assess all 86,400 suppliers, suppliers are selected based on country and business category sustainability risks and strategic importance. TO FURTHER INCENTIVIZE suppliers to participate in the engagement, suppliers receive access to trainings and extensive information material, e.g. on responsible use of water, as offered by capability building conferences and information platforms from PSCI. The TFS initiative is testing a collaboration platform involving Bayer suppliers as another element of supplier development.

**Impact of the engagement and measures of success**

OUTCOMES OF THE ENGAGEMENT: In the event of a critical sustainability performance, Bayer requests suppliers to rectify identified weaknesses within an appropriate period of time based on specific action plans. We do not only build supplier capabilities, but also minimize procurement-specific risks and ensure smooth production processes through these requirements. To MEASURE THE SUCCESS, we set ambitious targets and measure success in terms of target fulfillment, e.g. our target is to continue to evaluate all relevant suppliers by the end of 2020. SUCCESS IS ALSO MEASURED through re-assessments or follow-up audits. Our regular monitoring shows that in 2019 332 of our 712 suppliers evaluated have improved their sustainability performance.

**Comment**

The TFS initiative is testing the introduction of a collaboration platform involving Bayer suppliers as another element of supplier development. It provides users with numerous best practice examples and dialogue opportunities, as well as activities, tips, case studies and expert suggestions on the topics of water, energy and waste.

**Type of engagement**

Innovation & collaboration

**Details of engagement**

Educate suppliers about water stewardship and collaboration

**% of suppliers by number**

Less than 1%

**% of total procurement spend**

1-25

**Rationale for the coverage of your engagement**

RATIONALE: We offer our suppliers a wide range of development and dialogue opportunities on sustainability. Within the scope of our supplier sustainability evaluations, we have identified a country risk particularly for China and India. DESCRIPTION OF ENGAGEMENT: In 2019, we conducted supplier training and workshops in China and India in cooperation with PSCI. The PSCI Sustainability webinar offers additional advanced training modules for our suppliers. One PSCI sustainability webinar deals with the management of antimicrobial drugs in wastewater and another one with water stress management. Through Bayer's Health, Safety and Environment (HSE) audits, suppliers are also educated regarding specific findings, among others about water stewardship. Furthermore, the PSCI website also provides a resource library with water-related information for suppliers.

**Impact of the engagement and measures of success**

OUTCOMES OF THE ENGAGEMENT: Through the supplier capability trainings and audits, Bayer improves the suppliers' awareness and know-how regarding water-related activities. Through this kind of education, suppliers get an improved understanding of Bayer's sustainability requirements and thereby are able to better carry out their water management. HOW SUCCESS IS MEASURED: Bayer is keeping track of the suppliers' sustainability performance. In the event of a critical sustainability performance, Bayer requests suppliers to rectify identified weaknesses within an appropriate period of time based on specific action plans. 198 suppliers from member companies participated at the Supplier Capability Training of PSCI in China and 179 suppliers attended the event in India in September 2019. In addition, the PSCI webinar on how to manage antimicrobial drugs in wastewater was received by 160 attendees.

**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?**

**PARTNERS & RATIONALE:** Crop Science (CS) engages with participants in the food chain such as farmers, the processing industry, exporters and dealers to ensure the safe handling of crop protection products, esp. in countries without statutory requirements or certification for users, to protect water bodies and to promote sustainable agriculture.

**METHOD:** The central element is the BayG.A.P. program: Bayer TRAINS growers to successfully implement good agricultural practices. Our TRAININGS enable farmers to use crop protection products effectively and safely, as part of customer events, through courses in cooperation with partners e.g. associations, or online training. CS is DIRECTLY COOPERATING with farmers and the food value chain to develop tailored solutions for sustainable agriculture to safeguard and increase yields and to improve the quality of harvested produce. Bayer also reinforces its support for sustainable agriculture with Bayer ForwardFarming: a knowledge platform to demonstrate sustainable agriculture in practice. We advise our customers and recommend biological remediation systems such as [Phytobac™](#) to prevent discharges into water bodies of crop protection active ingredients. We also collaborate with external partners on the development of a digital geo information system for water protection in agriculture. Bayer supports grower's education in the area of sustainable use of water resources to decrease our seed production water consumption footprint.

**MEASURES:** We track the reach of our trainings and partnerships. In 2019, >1 mio farmers worldwide received safety training from Bayer.

CS has initiated about 350 food chain partnership initiatives in 25 countries and 70 crops. >2900 growers worldwide have been trained with BayG.A.P. and additional >1900 participants followed the BayG.A.P. Online Training Platform. 30 growers from India obtained the G.A.P. Letter of Conformance. Phytobac is tested in numerous EU countries with >4,600 systems installed.

**W2. Business impacts**

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**W2.1**

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

No

**W2.2**

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**(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**

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**W-CH3.1**

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**(W-CH3.1) How does your organization identify and classify potential water pollutants associated with its activities in the chemical sector that could have a detrimental impact on water ecosystems or human health?**

**W-CH3.1a**

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**(W-CH3.1a) Describe how your organization minimizes adverse impacts of potential water pollutants on water ecosystems or human health. Report up to ten potential pollutants associated with your activities in the chemical sector.**

Potential water pollutant	Value chain stage	Description of water pollutant and potential impacts	Management procedures	Please explain
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**W3.3**

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

Yes, water-related risks are assessed

**W3.3a**

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**(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 as part of an enterprise risk management framework

### Frequency of assessment

More than once a year

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

More than 6 years

### Type of tools and methods used

Tools on the market  
Enterprise Risk Management  
International methodologies  
Databases  
Other

### Tools and methods used

WRI Aqueduct  
ISO 31000 Risk Management Standard  
IPCC Climate Change Projections  
FAO/AQUASTAT  
Internal company methods  
External consultants  
Other, please specify (EcoVadis, On-site audits)

### Comment

Water is integrated into our company-wide risk management process together with other non-financial risks. We assess risks using a long-term perspective, e.g. likelihood of occurrence based on a period of 10 years. Risks are monitored continuously by the risk owners while the risk portfolio is reviewed regularly by the Bayer Assurance Committee. Environmental risks are reviewed as part of the HSE management system and internal audits. Water KPIs are monitored in our central site database BaySIS.

## Supply chain

### Coverage

Full

### Risk assessment procedure

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

### Frequency of assessment

More than once a year

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

More than 6 years

### Type of tools and methods used

Tools on the market  
Enterprise Risk Management  
International methodologies  
Databases  
Other

### Tools and methods used

WRI Aqueduct  
ISO 31000 Risk Management Standard  
IPCC Climate Change Projections  
FAO/AQUASTAT  
Internal company methods  
External consultants  
Other, please specify (EcoVadis, On-site audits)

### Comment

We verify our suppliers' adherence to Bayer's Code of Conduct through continuous supplier assessments and audits. Among others, this allows us to identify water-related supply chain risks. We receive additional results via audits and assessments of suppliers which are shared with us via the "Together for Sustainability" initiative and the "Pharmaceutical Supply Chain Initiative".

#### Other stages of the value chain

##### Coverage

Partial

##### Risk assessment procedure

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

##### Frequency of assessment

More than once a year

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

More than 6 years

##### Type of tools and methods used

Enterprise Risk Management

Databases

Other

##### Tools and methods used

ISO 31000 Risk Management Standard

Regional government databases

Other, please specify (Decision Support Tool to reduce runoff from agricultural fields)

##### Comment

Our ERM also includes downstream risks e.g. Active ingredients in the environment including water. The risks are integrated into our company-wide ERM using the same process and time horizon stated in the first row. In addition, an internal Stewardship (STW) tool is used to identify areas of concern related to water quality. STW is developing water protection tools in order to promote Best Management Practices in Agriculture. Major goal is to reduce non target transport of pesticides (valid for a broad range of product categories) into water bodies. The implementation of STW tools, like Phytobac and the digital runoff analyzer/field advisor support us in achieving the goals set by our corporate transformational commitments (i.e. environmental impact reduction).

#### W3.3b

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**(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	i) Relevance: As described above, Bayer uses water for cooling purposes, the production process and irrigation of field and greenhouses for seed production. Clean water is a limiting factor for our production and THUS considered essential. THEREFORE, water availability at a basin level is relevant for us and included in our water-related risk assessments. ii) Assessment: Water withdrawals, use and discharges (including quality parameters) are measured at site level and monitored annually in our central Bayer Site Information System "BaySIS" (TOOL/METHOD: internal company methods). BaySIS allows analyses across several dimensions, e.g. water use, withdrawals and discharges by geography or divisions/sites. Additionally, we have identified the sites in water-risk regions applying the water risk framework of the WRI, included in the AQUEDUCT WATER RISK ATLAS. In addition we develop appropriate measures to manage our water-related risks.
Water quality at a basin/catchment level	Relevant, always included	i) Relevance: As described above, clean water is a limiting factor for our production and THUS considered essential. E.g. if the water has a high concentration of salts, it will not be appropriate for cooling purposes due to its corrosive characteristics to pipes. THEREFORE, water quality at a basin level is relevant for us and included in our water-related risk assessments. ii) Assessment: Water withdrawals and use including quality parameters as well as discharge quality are measured at site level and monitored annually in our central Bayer Site Information System "BaySIS" (TOOL/METHOD: internal company methods). BaySIS allows analyses across several dimensions, e.g. water use, withdrawals and discharges by geography or divisions/sites. Additionally, we have identified the sites in water-risk regions applying the water risk framework of the WRI, included in the AQUEDUCT WATER RISK ATLAS. In addition we develop appropriate measures to manage our water-related risks.
Stakeholder conflicts concerning water resources at a basin/catchment level	Not relevant, included	i) Relevance: We consider this issue not relevant BECAUSE in the last years no relevant stakeholder conflicts concerning water resources at local level have been identified. ii) Assessment: We assess environmental incidents via our Bayer Site Information System (BaySIS), which requests information from all sites on incidents, including e.g. community complaints (TOOL/METHOD: internal company methods). As we are consciously managing and monitoring our water use and quality parameters at site level, we currently do not expect this issue to become relevant in the future.
Implications of water on your key commodities/raw materials	Not relevant, included	i) Relevance: This issue is not relevant BECAUSE at the moment water quantity and quality meet our current demands without materially impacting the environment. However, we are conscious of the importance of water for our business and, with a preventive approach, we analyze in detail the most relevant water-related aspects for our business. ii) Assessment: Regarding the supply of raw materials, our Supplier Code of Conduct (SCoC) and our Sustainability Contract Clause are the main strategy to protect us against sustainability related supplier risks, e.g. it contains aspects related to water management and responsible water use. The SCoC is an important component for supplier selection and evaluation like sustainability online assessments and on-site audits. In 2019, Bayer requested more than 2% (ca. 1838 out of 86,400) suppliers, representing ca. 28.5% of the total procurement spend, to report on water management. Through partnerships, we further drive those topics. Supplier evaluation was conducted by a leading web-based service provider of sustainability performance evaluations (TOOL/METHOD: OTHER: EcoVadis) for sustainability performance monitoring. Besides, the main initiatives in which we foster the engagement with suppliers and their evaluation in relation to sustainability topics are "Together for Sustainability" and the "Pharmaceutical Supply Chain Initiative". Based on these regular evaluations and projections, we currently do not expect this issue to become relevant in the future.
Water-related regulatory frameworks	Relevant, always included	i) Relevance: With its business focus and a water use of 59 million m3, Bayer operates in a water-intensive industry. This is why water-related regulatory frameworks are relevant for our business as we have to comply with various water-related regulations, e.g. the Water Framework Directive in Europe. Compliance with regulatory frameworks is essential for our long-term economic success. We do not tolerate any violation of laws, codes of conduct or internal regulations. Compliant and lawful conduct also factors into the performance evaluations of all managerial employees. ii) Assessment: The regulatory framework and changes in regulation are taken into account in our risk management system, as well as in the analysis made by our HSE and sustainability managers (TOOL/METHOD: INTERNAL COMPANY METHODS, ERM). Potential compliance risks are entered into a global compliance risk management database that we use to develop suitable measures for specific processes, business activities or countries, for example. At a local level, these aspects are also factored in our internal assessments at the production sites (e.g. in the context of their ISO 14001 certifications) and included in HSE audits. Compliance with the relevant wastewater thresholds at our production sites worldwide is reviewed by supervisory authorities and external assessors and also at regular intervals through on-site audits by internal experts.
Status of ecosystems and habitats	Relevant, always included	i) Relevance: Biodiversity is an important asset to us, which we aim to protect and preserve in the scope of all our activities. As crop management practices are one of the main drivers for biodiversity loss, biodiversity is of particular relevance for the activities of Bayer's Crop Science Division. An example of the relevance of the status of ecosystems and habitats for our business is shown by the importance of insects. Insects are the dominant pollinators in agricultural systems, providing pollination services for many of our crops. It is estimated that five to eight percent of global crop production is directly attributable to animal pollination. ii) Assessment: Our goal is to develop products that have the least possible side effects on biodiversity. This is ensured by sophisticated and thorough environmental safety testing and risk assessment. Furthermore Bayer is investing in innovative sustainable solutions, like integrated crop management and precision application technology, to reduce the environmental impact of crop protection. Bayer provides collaborative support to farmers and promotes biodiversity friendly practices, with training programs such as BayGAP or Better Life Farming. With regard to our sites, the assessment of ecosystems and habitats is an important task of the environmental managers at our sites (TOOL/METHOD: INTERNAL COMPANY METHODS). When planning new production sites, Bayer takes into account that they must not be set up in areas that are statutorily protected with regard to their natural characteristics, biodiversity or other factors. Due to our portfolio changes, we have begun an updated comparison of the geographical coordinates of our production sites against those of internationally recognized protected areas.
Access to fully-functioning, safely managed WASH services for all employees	Relevant, always included	i) Relevance: Providing employees with access to fully-functioning, safely managed WASH services is relevant because clean water, sanitation and hygiene are important for us as mentioned in our water position and we consider it as relevant for employee satisfaction. For example, satisfaction could be impacted if the access to safe water, sanitation and hygiene (WASH) was not provided at certain sites, thus cutting across Bayer's commitment to the UN CEO Water Mandate. From 2020 onward Bayer is actively participating in the Human Rights and WASH Working Group. In the past, we've invested significantly in clean water, sanitation and hygiene projects both at our facilities and in surrounding communities. Our majority of sites provide safe and clean drinking water for all employees, contractors, and visitors. ii) Assessment: HSE and sustainability managers constantly assess our HSE performance incl. water related aspects and fully-functioning WASH services through our audits at our sites worldwide (TOOL/METHOD: INTERNAL COMPANY METHODS). With Bayer's commitment to the UN CEO Water Mandate, Bayer has committed itself to implementing access to safe water, sanitation and hygiene at the workplace at an appropriate level of standard for all employees in all premises under our control. Our analysis shows a high level of alignment with the WASH guiding principles. However, wherever we detected performance gaps, we continue to close them.
Other contextual issues, please specify	Please select	

**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	We consider customers as relevant in our water risk assessments BECAUSE they have a significant impact on the success of our business. The water-related RISK considered is water shortage in agriculture. Many of our customers (farmers) are reliant on irrigation water in using our product (seeds) to grow their agricultural products. Another risk is a potential decrease in customer satisfaction, for example if product delivery was delayed due to water-related issues. Such a delay could be due to a shut-down of production due to an extreme water scarcity or if the quality of the water withdrawn is not high enough for our production. METHOD OF ENGAGEMENT: In 2019, our everyday business once again included dialogue with our customers – especially with respect to their satisfaction with our products and services. We analyze needs and satisfaction as well as complaints by our customers, and thus foster partnership-based cooperation and dialogue with them. For example, every two years Crop Science conducts customer surveys through their country organizations according to a standardized process, aiming to make the dialogue more target-group- and region-specific. Another dialogue example is Bayer's Water Utilization Learning Center located in Nebraska, which focuses on better understanding water and its role in growing food. The Learning Center is located on one of the most important water resources for agriculture in the United States – the Ogallala Aquifer. This location is ideal for studying water issues, irrigation systems, water use efficiency and overall irrigation management. Scientists at the Learning Center conduct research and demonstrations year-round to provide farmers with information about how to increase their annual crop yields through better, more efficient water management.

	Relevance & inclusion	Please explain
Employees	Relevant, always included	Employees are relevant in water risk assessment BECAUSE clean water, sanitation and hygiene are important for us as mentioned in our water position. Furthermore they play a crucial role in determining our overall water consumption. The key employee-related RISK factor considered in our water-related risk assessments is a potential decline in employee satisfaction. E.g. satisfaction could be impacted if the access to safe water, sanitation and hygiene (WASH) was not provided at certain sites, thus cutting across Bayer's commitment to the UN CEO Water Mandate, which reflects our commitment to ensure WASH access for all employees in all premises under our control. From 2020 onward Bayer is actively participating in the Mandate's Human Rights and WASH Working Group, METHOD OF ENGAGEMENT: We assess employee satisfaction with the help of institutionalized feedback discussions and regular employee surveys. This enables us to monitor the effectiveness of our initiatives and implement any necessary improvements. At Crop Science and Consumer Health, employee surveys involving spot checks were implemented. The approval rate for employee engagement was 73% at Crop Science and 75% at Consumer Health. We engage in open and trustful dialogue with employee representatives worldwide. The main dialogue formats are regular employee assemblies and information events for managers, as well as the European Forum, at which employee representatives from all European sites engage in discussion with the Board of Management on issues of overarching relevance to the company. It is part of our management in water scarce regions to train employees for sustainable use of the resource of water. For example, we have several initiatives to create awareness for water use and consumption among employees. E.g. our site in Ansong, South Korea, has conducted employee awareness campaigns about water use in order to reduce water consumption. Within this awareness campaign, employees were trained in the sustainable use of water. At the site Belford Roxo, Brazil, annual courses took place for all employees regarding environmental topics incl. water and wastewater management. Every new employee is trained about water management and reuse of water.
Investors	Relevant, always included	We consider investors as relevant in our risk assessment BECAUSE water related risks and opportunities could have an impact on their investment decisions as the main RISK considered. For example, our investor base comprises investors that require Bayer to report on its sustainability performance, incl. topics such as water. Not meeting our investors' expectations could negatively impact their investment decision. METHOD OF ENGAGEMENT: We include investors in our internal monitoring and assessments and we disclose the relevant information on water topics in our Annual Report and in our CDP Water Report. Furthermore, we have regular dialogues with investors, analysts and rating agencies, and conduct roadshows and investor conferences as well as stockholder forums. We explain our strategy and implementation of our nonfinancial targets, and provide information on the most important fields of our sustainability activities, including water-related topics. An important investor relations event in 2019 was the "2019 Summer Technology Showcase" with almost 70 analysts and investors from all over the world. The main focus of the two-day event was on our Crop Science activities. In addition, we took part in a large number of conferences in Germany and abroad and took roadshows to many of our current and potential investors. The conferences and roadshows focused mostly on Europe and North America. Members of the Board of Management were frequently part of these events. The capital market's growing interest in sustainability issues was also reflected in our discussions with investors and rating agencies in 2019. The integration of Monsanto, the impact of our products on the environment and subjects such as climate change and human rights were the key topics addressed. The announcement of our ambitious sustainability targets for 2030 on December 10, 2019, marked another key event. The clear and measurable targets we have set ourselves will also be integrated into the compensation systems for the Board of Management and managerial employees.
Local communities	Relevant, always included	We consider local communities as relevant in our risk assessment BECAUSE the acceptance of the local community is key for the successful operation and the reputation of Bayer. Furthermore, local communities play a decisive role in the success of any investment project. The key RISK we consider is a potential loss of reputation and acceptance within the community, e.g. due to water withdrawals beyond annually renewable levels in the watershed or exceeded water pollution limits. METHOD OF ENGAGEMENT: Local communities are one of the stakeholder groups included in our regulatory and internal assessment through various methods of engagement. An important part of our stakeholder dialogue takes place in the direct vicinity of our sites. We are working on being recognized everywhere as a reliable partner and attractive employer that is aware of its social responsibility. In the case of investment projects for example, the involvement of the local community plays a decisive role in ensuring their success. In the communities near our production sites in particular, we keep an open dialogue between community members and local management, which is supported by the respective country organization. This dialogue includes personal discussions with citizens' initiatives, representatives of church communities and the regional press. This community dialogue is anchored in a globally valid corporate policy on site management.
NGOs	Relevant, always included	We consider NGOs as relevant in our risk assessment BECAUSE they publicly comment on certain company matters which might impact our reputation and therefore potentially our business growth as the main RISK considered. E.g., the topic of active ingredients in the (aquatic) environment is a key water-related issue discussed by NGOs. METHOD OF ENGAGEMENT: NGOs play a role in forming public opinions. For this reason, we have internally systemized collaboration with this stakeholder group. To this end, we look to understand the interests of NGOs, take their perspectives on board and enter into dialogue with the relevant experts. Exchange with different NGOs is communicated to the Board of Management and its content is thereby incorporated into our considerations. Bayer is also actively engaged in the U.N. Global Compact and its initiatives, the CEO Water Mandate and local networks. We are a member of the CEO Water Mandate and actively participate in two work streams of the Mandate's Water Steward Action Platform. In 2020 we will actively participate in all (4) workstreams and expand our commitment. All Bayer segments maintain open dialogue with the societal stakeholders of relevance to them and develop individual dialogue formats for this purpose. NGOs are INCLUDED in our risk assessment for specific topics such as pharmaceuticals in the environment. Here, an exchange among companies and NGOs is taking place in forums, industry initiatives (e.g. Pharmaceutical Supply Chain Initiative) and other exchange platforms. One example of a multi-stakeholder dialogue in which Bayer is actively involved in is the national dialogue on trace substances in Germany under the patronage of the German environmental ministry. Round tables involving all relevant stakeholder representatives (environmental associations, water utilities and industry) are seeking for solutions on issues. A social initiative where we worked with the NGO "EFFORT" is Water, Agriculture, Sanitation and Hygiene (WASH), targeted at uplifting rural farmers across several regions in India. From 2020 onward Bayer is extending its engagement as Member of the CEO Water Mandate and is also actively participating in the work group for WASH & Human Rights.
Other water users at a basin/catchment level	Relevant, always included	We consider other water users at a local level as relevant in our risk assessment BECAUSE they could have an impact on the water quality and quantity in a shared river basin as the main RISKS considered. For instance, if the water does not meet our quality requirements, e.g. having a high concentration of salts, it will not be appropriate for cooling purposes due to its corrosive characteristics to pipes. Moreover, if withdrawal rates from other water users go beyond annually renewable levels in the watershed, this could have an impact on the availability of water for our manufacturing purposes. METHOD OF ENGAGEMENT: We include other water users at a local level in our risk assessment and we continuously conduct comprehensive benchmarking and best practice analyses including other companies and competitors to identify risks and opportunities at a global and a local level. It is essential to Bayer to maintain an open and active dialogue with all our stakeholders, including water users that share the same water source. One example of a multi-stakeholder dialogue in which Bayer is actively involved in is the national water dialogue in Germany under the patronage of the German environmental ministry. The dialogue involves stakeholder representatives from environmental associations, politics at local and national level, water utilities, farmers and industry. The goal is to develop a proposal for measures that ensure drinking water quality and a good ecological standard beyond 2030.
Regulators	Relevant, always included	We consider regulators as relevant BECAUSE regulatory changes can have a significant impact on our business strategy. RISKS considered include e.g. a change in withdrawal limits that could pose a risk to our investment decisions or a change in emission limits in wastewater which could result in higher operating costs. METHOD OF ENGAGEMENT: The regulatory framework and changes in regulation are INCLUDED in our risk management system, as well as in the analysis made by our HSE and sustainability managers. At a local level, these aspects are also factored in our internal assessments at the production sites and included in HSE audits. At some sites, we also maintain periodical meetings with the authorities in order to follow potential changes in regulation. For example, in California / U.S. Bayer is active in organizations such as the East Bay Economic Development Alliance, Bay Area Council and Biocom, addressing water access and quality issues. In Thailand, we are a Member of the Federation of Thai Industries engaged in water-related topics in Thailand. Bayer is also engaging with the EU Commission on the topic of active pharmaceutical ingredients in the environment. Other examples of multi-stakeholder dialogues in which Bayer is actively involved in is the national dialogue on trace substances and the water dialog in Germany under the patronage of the German environmental ministry. Both dialogues involve stakeholder representatives from environmental associations, politics at local and national level, water utilities and industry.
River basin management authorities	Relevant, always included	We consider river basin management authorities as relevant for all our sites BECAUSE authorities set thresholds for the quantity of water withdrawal and discharge and monitor water quality. With water being crucial for our production, a change in water withdrawal-, discharge- and emission limits could pose a RISK for our sites. METHOD OF ENGAGEMENT: The framework for the company's operations is determined by authorities, legislators and politicians through statutory regulations and licensing, for example. The dialogues Bayer is currently pursuing with authorities and ministries at local, national and international level include targeted discussions with political decision-makers and active involvement in specialist workshops and cooperation projects. Furthermore Bayer is contributing in the River Basin Management Boards at the EU sites, in line with the Water Framework Directive and in Irrigation Boards, e. g. in Chile. Bayer's active participation in political decision-making processes is explicitly sought by the key players involved. This also applies to river basin management authorities where we work, for instance, on the river basin management board of Jucar (Valencia/Spain).
Statutory special interest groups at a local level	Relevant, always included	We consider statutory special interest groups at a local level as relevant BECAUSE they have statutory RISKS aligned to ours such as a decline in water availability or quality. METHOD OF ENGAGEMENT: They are INCLUDED in our regulatory and internal assessments. Our collaboration with these interest groups is important for best practice sharing for water-related issues and for the follow-up of regulations and lobbying activities. For example, in California/ U.S. Bayer is active in organizations such as the East Bay Economic Development Alliance, Bay Area Council and Biocom, addressing water access and quality issues. In Thailand, we are a Member of the Federation of Thai Industries engaged in water-related topics in Thailand. In Germany, we actively participate in environmentally-related working groups of the German Chemical Industry Association (VCI), as we also do on a European level with the European Chemical Industry Council (CEFIC), EFPIA or ECPA, e.g. on the topic of active ingredients in the environment. Another example is econsense, a German business network, which provides a dialogue platform and think tank to advance sustainable development in business, i.a. for the resource-efficient use of water. Bayer is an active member of econsense.
Suppliers	Relevant, always included	We consider suppliers as relevant in our risk assessment BECAUSE they can strongly impact our operations. Bayer aims at ensuring a sustainable supply chain management. Therefore our suppliers have to comply with the Supplier Code of Conduct that also addresses a responsible water management. For example, key RISKS considered in our Supplier assessments include their adherence to water-related regulation, for example with regard to discharge parameters and withdrawal limits and reputational aspects. METHOD OF ENGAGEMENT: Water use, risks and management aspects are covered through suppliers' sustainability performance monitoring and by HSE audits. For example, this is achieved through on-site audits by external independent audit partners, Bayer auditors as well as online assessments carried out by a leading web-based platform for sustainability monitoring (EcoVadis). Wherever the evaluation results, e.g. related to water topics, are unsatisfactory, corrective measures are defined together with our suppliers, thus ensuring they observe environmental standards in the future. Regularly conducted follow-up audits and re-assessments enable Bayer to continually observe the environmental development of our suppliers and to initiate appropriate countermeasures in a timely manner. In 2019, Bayer requested more than 2% of our suppliers (ca. 1838 out of 86,400 suppliers worldwide), representing ca. 28% of the total procurement spend, to report on water management. Through partnerships, we further drive those topics. Supplier evaluation was conducted by the leading web-based service provider of sustainability performance evaluations (EcoVadis) for sustainability performance monitoring. Besides, the main initiatives in which we foster the engagement with suppliers and their evaluation in relation to sustainability topics are "Together for Sustainability" and the "Pharmaceutical Supply Chain Initiative".

	Relevance & inclusion	Please explain
Water utilities at a local level	Relevant, always included	We consider water utilities/suppliers at a local level as relevant in our risk assessment BECAUSE they can strongly impact our operations e.g. through supply bottlenecks or major price fluctuations. As water is a limiting factor for our production, these RISKS are always factored in to our assessments. METHOD OF ENGAGEMENT: Bayer minimizes procurement-specific risks for goods and services of strategic importance, such as supply bottlenecks or major price fluctuations, through long-term contracts and active supplier management. In this way we ensure both the company's global competitiveness and smooth production processes. For example, Bayer verifies the observance of sustainability requirements by our suppliers through online assessments and on-site audits. Water utilities/suppliers at a local level are also included into water-related questions in the risk assessments. Furthermore, our sites are in regular contact with their water suppliers. One example of a multi-stakeholder dialogue in which Bayer was actively involved in was the national dialogue on trace substances in Germany under the patronage of the German environmental ministry. The dialogue involved stakeholder representatives from environmental associations, politics at local and national level, water utilities and industry.
Other stakeholder, please specify	Please select	

### 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.

1) APPLICATION OF TOOLS: In the past, we used the WBCSD Tool, Ceres or AQUASTAT to help us identify sites with water risks. Following the acquisition of our new Crop Science business, we reviewed our water risk procedures and tested several water tools including WRI Aqueduct, the WBCSD Global Water Tool, Pfister et al. and the Global Flood Hazard Frequency and Distribution Dataset. Ultimately, we chose Aqueduct to identify sites at water risk BECAUSE it is a state-of-the-art tool, providing a broad range of indicators, especially the Composite Indicator "Overall Water Risk". To intersect the Aqueduct layers with our sites, we used the geographic information system tool ArcGIS.

THE TOOLS ARE USED BECAUSE they help us identifying sites with water risks. Internal methods e.g. discussions with the sites and experts are used IN ORDER TO control the relevance of the results for Bayer.

Whenever water risks are identified with these tools and deemed material to our company, they are integrated into OUR ENTERPRISE RISK MANAGEMENT. Our company-wide ERM covers non-financial risks related to our direct operations and the value chain. We also integrate audits and web-based monitoring in our SUPPLY CHAIN MANAGEMENT BECAUSE it offers a standardized assessment for an extensive scope of suppliers.

The tools are APPLIED COMPANY-WIDE e.g. the WBCSD tool and WRI Aqueduct were applied to ALL environmentally-relevant SITES. In this process, 12 sites at risk, with the potential to have a substantive impact on the business (additional threshold: >0.1% of total Bayer water use), were identified in 2019.

Looking at our suppliers, we have requested >4% (ca. 38% of total procurement spend) during the past years to report on water management. Because it is not feasible to assess all 86,400 suppliers, suppliers are selected based on country and business category sustainability risks and strategic importance. In addition to the assessments of EcoVadis, on-site audits are conducted by external auditors.

Water is integrated into our risk assessment using a LONG-TERM PERSPECTIVE, e.g. likelihood of occurrence is calculated based on a period of up to 10 YEARS.

2) HOW OUTCOMES ARE USED TO INFORM INTERNAL DECISION-MAKING: As mentioned above, whenever water risks are identified and deemed material to our company, they are integrated into Bayer's ERM. The risk owners decide on a targeted risk level based on a cost-benefit analysis and define a risk management strategy as well as risk management measures. These include risk avoidance, risk reduction, risk transfer and risk acceptance. We address site-level risks e.g. flooding through our local crisis organization. We have implemented early warning systems, ensure continuous reporting and carry out regular crisis simulation exercises. The Risk Owners assess such risks and define appropriate measures together with Business Continuity Management and the responsible specialist units. Supplier online assessments and audits are analyzed and documented in order to define improvement measures in case of unsatisfactory results. Bayer requests the suppliers to rectify the identified weaknesses based on specific action plans.

### 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, both in direct operations and the rest of our value chain

#### W4.1a

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

i. Bayer defines a risk as having a substantive financial impact, if the identified risk is relevant for the respective risk owner and/or function. E.g. with regard to our Product Supply Function, a potential impact of €7 million Cash Flow is regarded to be substantive and monitored in the database.

##### INDICATORS/THRESHOLDS:

Risks are classified as high, medium or low to assess their materiality regarding the overall risk portfolio. Impact is rated according to quantity and/or quality. The quantitative assessment reflects the possible loss of cash flows. Risks are evaluated with regard to their potential impact and likelihood of occurrence, taking into account established mitigation measures, in a 5x5 matrix.

1) The likelihood of occurrence is assessed on a scale ranging from very unlikely (<10%), unlikely (10%-30%), possible (30-50%), likely (50-70%), very likely (>70%) over a period of 10 years.

2) The potential impact is determined on a scale from moderate (>€150-250 mio), medium (>€250-750 mio), significant (>€750-1,500 mio), major (>€1,500-2,500 mio) to severe (>€2,500 mio).

The qualitative assessment is based on criteria such as the impact on our strategy or reputation, the potential loss of stakeholder confidence, and the potential violation of sustainability principles. The higher rating, qualitatively or quantitatively, determines the overall assessment.

Risks with a potential impact of >€5,000 million are separately examined by the Bayer Assurance Committee to determine their potential to endanger the company's continued existence. A report on the risk portfolio is submitted to the Board of Management and the Audit Committee of the Supervisory Board at least once a year.

The DEFINITION APPLIES to our direct operations and to our value chain. Risks are REVIEWED in our risk management system, incl. risks from seasonal fluctuations, natural disasters or actives in the environment.

For EXAMPLE, actives in the environment have been assessed qualitatively with regard to sustainability principles and stakeholder confidence.

ii. In addition, sites that are located in regions considered at water risk according to WRI Aqueduct and are "large water users" are DEFINED to have the potential to have a substantive impact on the business with regard to water-related risks.

##### INDICATORS/THRESHOLDS:

1) The Baseline Water Stress Indicator (BWS) and the Overall Water Risk Score (OWR) from the WRI Aqueduct Water Tool have been used to measure if a site is located in a water-scarce region. Thresholds: BWS: "extremely high" = total annual water withdrawal >80% of average annual available blue water; OWR = "high" and "extremely high" = Default weighting>3 (computed out of 12 water risk indicators in WRI Aqueduct e.g. BWS, Inter-annual and seasonal variability, Upstream storage, Flood occurrence, Drought severity, Groundwater stress, Access to water, Threatened amphibians).

2) In BaySIS, we monitor the annual water use of all environmentally-relevant sites. We define them as "large user" when they use >0.1% of our total water use.

The DEFINITION also APPLIES to our direct operations. Metrics and thresholds are REVIEWED continuously, incl. external resources/research, internal discussions with experts and an internal review process at site/divisional level.

EXAMPLE: Applying these thresholds to all environmentally-relevant sites worldwide, 12 Bayer sites were identified based on 2019 data as having the potential to have a substantive impact on the business as they are located in a region considered at water risk according to WRI Aqueduct ("high" and "extremely high" in the overall water risk indicator or "extremely high" in the baseline water stress indicator) and are defined as "large water users" (>0.1% of Bayer's total water use).

iii. Suppliers have the potential to have a SUBSTANTIVE IMPACT on the business if they are classified as strategically important or potential high-risk suppliers.

##### INDICATORS/THRESHOLDS:

1) Strategically important suppliers are defined as suppliers that have a major influence on business, incl. procurement spend and long-term collaboration prospects (3-5 years).

2) The risk definition for potential high-risk suppliers is based on country and business category sustainability risks.

The DEFINITION APPLIES to our entire supply chain. Data are REVIEWED and updated continuously. Strategically important and potentially high-risk suppliers' sustainability performance, incl. water-related aspects, is evaluated via assessments and on-site audits.

EXAMPLE: By 2020, Bayer aims to continue to evaluate all suppliers with a significant procurement spend (> €0.5 million p.a.) that are regarded as potentially high-risk suppliers due to their combined country and category sustainability risk. Within the scope of our supplier sustainability evaluations, we have identified a country risk particularly for China and India. In this respect, we conducted supplier trainings and workshops in China and India in cooperation with PSCI.

#### W4.1b

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**(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	12	1-25	The Overall Water Risk Indicator and the Baseline Water Stress Indicator from the WRI Aqueduct Water Tool have been used to measure if a site is located in a water-scarce region (threshold: "high" and "extremely high" in the overall water risk indicator or "extremely high" in the baseline water stress indicator). In BaySIS, we monitor the annual water use of all environmentally-relevant sites. We define them as "large user" when they use >0.1% of our total water use. Applying these thresholds to all environmentally-relevant sites worldwide, 12 Bayer sites were identified based on 2019 data as having the potential to have a substantive impact on the business as they are located in a region considered at water risk according to WRI Aqueduct ("high" and "extremely high" in the overall water risk indicator or "extremely high" in the baseline water stress indicator) and are defined as "large water users" (>0.1% of Bayer's total water use).

**W4.1c**

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

**Country/Area & River basin**

China	Other, please specify (Ziya He, Interior)
-------	---

**Number of facilities exposed to water risk**

1

**% company-wide facilities this represents**

1-25

**Production value for the metals & mining activities associated with these facilities**

<Not Applicable>

**% company's annual electricity generation that could be affected by these facilities**

<Not Applicable>

**% company's global oil & gas production volume that could be affected by these facilities**

<Not Applicable>

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

Unknown

**Comment**

The Overall Water Risk Indicator and the Baseline Water Stress Indicator from the WRI Aqueduct Water Tool have been used to measure if a site is located in a water-scarce region (threshold: "high" and "extremely high" in the overall water risk indicator or "extremely high" in the baseline water stress indicator). In BaySIS, we monitor the annual water use of all environmentally-relevant sites. We define them as "large user" when they use >0.1% of our total water use. Applying these thresholds to all environmentally-relevant sites worldwide, 12 Bayer sites were identified based on 2019 data as having the potential to have a substantive impact on the business as they are located in a region considered at water risk according to WRI Aqueduct ("high" and "extremely high" in the overall water risk indicator or "extremely high" in the baseline water stress indicator) and are defined as "large water users" (>0.1% of Bayer's total water use). Bayer divisions operate global production networks with multiple production steps for a single product across different sites (internal and external). We operate sites around the world. As of December 31, 2019, the Bayer Group comprised 392 consolidated companies in 87 countries. Depending on market and customer demands productions have individual back up and flexibility strategies. Revenue contribution of individual sites can therefore not directly be allocated.

**Country/Area & River basin**

Peru	Other, please specify (GHAAS Basin3150)
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**Number of facilities exposed to water risk**

1

**% company-wide facilities this represents**

1-25

**Production value for the metals & mining activities associated with these facilities**

<Not Applicable>

**% company's annual electricity generation that could be affected by these facilities**

<Not Applicable>

**% company's global oil & gas production volume that could be affected by these facilities**

<Not Applicable>

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

Unknown

**Comment**

The Overall Water Risk Indicator and the Baseline Water Stress Indicator from the WRI Aqueduct Water Tool have been used to measure if a site is located in a water-scarce region (threshold: "high" and "extremely high" in the overall water risk indicator or "extremely high" in the baseline water stress indicator). In BaySIS, we monitor the annual water use of all environmentally-relevant sites. We define them as "large user" when they use >0.1% of our total water use. Applying these thresholds to all



environmentally-relevant sites worldwide, 12 Bayer sites were identified based on 2019 data as having the potential to have a substantive impact on the business as they are located in a region considered at water risk according to WRI Aqueduct ("high" and "extremely high" in the overall water risk indicator or "extremely high" in the baseline water stress indicator) and are defined as "large water users" (>0.1% of Bayer's total water use). Bayer divisions operate global production networks with multiple production steps for a single product across different sites (internal and external). We operate sites around the world. As of December 31, 2019, the Bayer Group comprised 392 consolidated companies in 87 countries. Depending on market and customer demands productions have individual back up and flexibility strategies. Revenue contribution of individual sites can therefore not directly be allocated.

**Country/Area & River basin**

China	Yangtze River (Chang Jiang)
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**Number of facilities exposed to water risk**

1

**% company-wide facilities this represents**

1-25

**Production value for the metals & mining activities associated with these facilities**

<Not Applicable>

**% company's annual electricity generation that could be affected by these facilities**

<Not Applicable>

**% company's global oil & gas production volume that could be affected by these facilities**

<Not Applicable>

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

Unknown

**Comment**

The Overall Water Risk Indicator and the Baseline Water Stress Indicator from the WRI Aqueduct Water Tool have been used to measure if a site is located in a water-scarce region (threshold: "high" and "extremely high" in the overall water risk indicator or "extremely high" in the baseline water stress indicator). In BaySIS, we monitor the annual water use of all environmentally-relevant sites. We define them as "large user" when they use >0.1% of our total water use. Applying these thresholds to all environmentally-relevant sites worldwide, 12 Bayer sites were identified based on 2019 data as having the potential to have a substantive impact on the business as they are located in a region considered at water risk according to WRI Aqueduct ("high" and "extremely high" in the overall water risk indicator or "extremely high" in the baseline water stress indicator) and are defined as "large water users" (>0.1% of Bayer's total water use). Bayer divisions operate global production networks with multiple production steps for a single product across different sites (internal and external). We operate sites around the world. As of December 31, 2019, the Bayer Group comprised 392 consolidated companies in 87 countries. Depending on market and customer demands productions have individual back up and flexibility strategies. Revenue contribution of individual sites can therefore not directly be allocated.

**Country/Area & River basin**

Mexico	Other, please specify (Rio Lerma)
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**Number of facilities exposed to water risk**

1

**% company-wide facilities this represents**

1-25

**Production value for the metals & mining activities associated with these facilities**

<Not Applicable>

**% company's annual electricity generation that could be affected by these facilities**

<Not Applicable>

**% company's global oil & gas production volume that could be affected by these facilities**

<Not Applicable>

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

Unknown

**Comment**

The Overall Water Risk Indicator and the Baseline Water Stress Indicator from the WRI Aqueduct Water Tool have been used to measure if a site is located in a water-scarce region (threshold: "high" and "extremely high" in the overall water risk indicator or "extremely high" in the baseline water stress indicator). In BaySIS, we monitor the annual water use of all environmentally-relevant sites. We define them as "large user" when they use >0.1% of our total water use. Applying these thresholds to all environmentally-relevant sites worldwide, 12 Bayer sites were identified based on 2019 data as having the potential to have a substantive impact on the business as they are located in a region considered at water risk according to WRI Aqueduct ("high" and "extremely high" in the overall water risk indicator or "extremely high" in the baseline water stress indicator) and are defined as "large water users" (>0.1% of Bayer's total water use). Bayer divisions operate global production networks with multiple production steps for a single product across different sites (internal and external). We operate sites around the world. As of December 31, 2019, the Bayer Group comprised 392 consolidated companies in 87 countries. Depending on market and customer demands productions have individual back up and flexibility strategies. Revenue contribution of individual sites can therefore not directly be allocated.

**Country/Area & River basin**

Mexico	Other, please specify (Rio Lerma)
--------	-----------------------------------

**Number of facilities exposed to water risk**

1

**% company-wide facilities this represents**

1-25



**Production value for the metals & mining activities associated with these facilities**

<Not Applicable>

**% company's annual electricity generation that could be affected by these facilities**

<Not Applicable>

**% company's global oil & gas production volume that could be affected by these facilities**

<Not Applicable>

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

Unknown

**Comment**

The Overall Water Risk Indicator and the Baseline Water Stress Indicator from the WRI Aqueduct Water Tool have been used to measure if a site is located in a water-scarce region (threshold: "high" and "extremely high" in the overall water risk indicator or "extremely high" in the baseline water stress indicator). In BaySIS, we monitor the annual water use of all environmentally-relevant sites. We define them as "large user" when they use >0.1% of our total water use. Applying these thresholds to all environmentally-relevant sites worldwide, 12 Bayer sites were identified based on 2019 data as having the potential to have a substantive impact on the business as they are located in a region considered at water risk according to WRI Aqueduct ("high" and "extremely high" in the overall water risk indicator or "extremely high" in the baseline water stress indicator) and are defined as "large water users" (>0.1% of Bayer's total water use). Bayer divisions operate global production networks with multiple production steps for a single product across different sites (internal and external). We operate sites around the world. As of December 31, 2019, the Bayer Group comprised 392 consolidated companies in 87 countries. Depending on market and customer demands productions have individual back up and flexibility strategies. Revenue contribution of individual sites can therefore not directly be allocated.

**Country/Area & River basin**

Chile	Other, please specify (North Chile, Pacific Coast)
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**Number of facilities exposed to water risk**

1

**% company-wide facilities this represents**

1-25

**Production value for the metals & mining activities associated with these facilities**

<Not Applicable>

**% company's annual electricity generation that could be affected by these facilities**

<Not Applicable>

**% company's global oil & gas production volume that could be affected by these facilities**

<Not Applicable>

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

Unknown

**Comment**

The Overall Water Risk Indicator and the Baseline Water Stress Indicator from the WRI Aqueduct Water Tool have been used to measure if a site is located in a water-scarce region (threshold: "high" and "extremely high" in the overall water risk indicator or "extremely high" in the baseline water stress indicator). In BaySIS, we monitor the annual water use of all environmentally-relevant sites. We define them as "large user" when they use >0.1% of our total water use. Applying these thresholds to all environmentally-relevant sites worldwide, 12 Bayer sites were identified based on 2019 data as having the potential to have a substantive impact on the business as they are located in a region considered at water risk according to WRI Aqueduct ("high" and "extremely high" in the overall water risk indicator or "extremely high" in the baseline water stress indicator) and are defined as "large water users" (>0.1% of Bayer's total water use). Bayer divisions operate global production networks with multiple production steps for a single product across different sites (internal and external). We operate sites around the world. As of December 31, 2019, the Bayer Group comprised 392 consolidated companies in 87 countries. Depending on market and customer demands productions have individual back up and flexibility strategies. Revenue contribution of individual sites can therefore not directly be allocated.

**Country/Area & River basin**

South Africa	Orange
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**Number of facilities exposed to water risk**

1

**% company-wide facilities this represents**

1-25

**Production value for the metals & mining activities associated with these facilities**

<Not Applicable>

**% company's annual electricity generation that could be affected by these facilities**

<Not Applicable>

**% company's global oil & gas production volume that could be affected by these facilities**

<Not Applicable>

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

Unknown

**Comment**

The Overall Water Risk Indicator and the Baseline Water Stress Indicator from the WRI Aqueduct Water Tool have been used to measure if a site is located in a water-scarce region (threshold: "high" and "extremely high" in the overall water risk indicator or "extremely high" in the baseline water stress indicator). In BaySIS, we monitor the annual water use of all environmentally-relevant sites. We define them as "large user" when they use >0.1% of our total water use. Applying these thresholds to all environmentally-relevant sites worldwide, 12 Bayer sites were identified based on 2019 data as having the potential to have a substantive impact on the business as they

are located in a region considered at water risk according to WRI Aqueduct ("high" and "extremely high" in the overall water risk indicator or "extremely high" in the baseline water stress indicator) and are defined as "large water users" (>0.1% of Bayer's total water use). Bayer divisions operate global production networks with multiple production steps for a single product across different sites (internal and external). We operate sites around the world. As of December 31, 2019, the Bayer Group comprised 392 consolidated companies in 87 countries. Depending on market and customer demands productions have individual back up and flexibility strategies. Revenue contribution of individual sites can therefore not directly be allocated.

#### Country/Area & River basin

Chile	Rapel
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#### Number of facilities exposed to water risk

1

#### % company-wide facilities this represents

1-25

#### Production value for the metals & mining activities associated with these facilities

<Not Applicable>

#### % company's annual electricity generation that could be affected by these facilities

<Not Applicable>

#### % company's global oil & gas production volume that could be affected by these facilities

<Not Applicable>

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

Unknown

#### Comment

The Overall Water Risk Indicator and the Baseline Water Stress Indicator from the WRI Aqueduct Water Tool have been used to measure if a site is located in a water-scarce region (threshold: "high" and "extremely high" in the overall water risk indicator or "extremely high" in the baseline water stress indicator). In BaySIS, we monitor the annual water use of all environmentally-relevant sites. We define them as "large user" when they use >0.1% of our total water use. Applying these thresholds to all environmentally-relevant sites worldwide, 12 Bayer sites were identified based on 2019 data as having the potential to have a substantive impact on the business as they are located in a region considered at water risk according to WRI Aqueduct ("high" and "extremely high" in the overall water risk indicator or "extremely high" in the baseline water stress indicator) and are defined as "large water users" (>0.1% of Bayer's total water use). Bayer divisions operate global production networks with multiple production steps for a single product across different sites (internal and external). We operate sites around the world. As of December 31, 2019, the Bayer Group comprised 392 consolidated companies in 87 countries. Depending on market and customer demands productions have individual back up and flexibility strategies. Revenue contribution of individual sites can therefore not directly be allocated.

#### Country/Area & River basin

Mexico	Balsas
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#### Number of facilities exposed to water risk

1

#### % company-wide facilities this represents

1-25

#### Production value for the metals & mining activities associated with these facilities

<Not Applicable>

#### % company's annual electricity generation that could be affected by these facilities

<Not Applicable>

#### % company's global oil & gas production volume that could be affected by these facilities

<Not Applicable>

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

Unknown

#### Comment

The Overall Water Risk Indicator and the Baseline Water Stress Indicator from the WRI Aqueduct Water Tool have been used to measure if a site is located in a water-scarce region (threshold: "high" and "extremely high" in the overall water risk indicator or "extremely high" in the baseline water stress indicator). In BaySIS, we monitor the annual water use of all environmentally-relevant sites. We define them as "large user" when they use >0.1% of our total water use. Applying these thresholds to all environmentally-relevant sites worldwide, 12 Bayer sites were identified based on 2019 data as having the potential to have a substantive impact on the business as they are located in a region considered at water risk according to WRI Aqueduct ("high" and "extremely high" in the overall water risk indicator or "extremely high" in the baseline water stress indicator) and are defined as "large water users" (>0.1% of Bayer's total water use). Bayer divisions operate global production networks with multiple production steps for a single product across different sites (internal and external). We operate sites around the world. As of December 31, 2019, the Bayer Group comprised 392 consolidated companies in 87 countries. Depending on market and customer demands productions have individual back up and flexibility strategies. Revenue contribution of individual sites can therefore not directly be allocated.

#### Country/Area & River basin

India	Other, please specify (India West Coast)
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#### Number of facilities exposed to water risk

1

#### % company-wide facilities this represents

1-25

**Production value for the metals & mining activities associated with these facilities**

<Not Applicable>

**% company's annual electricity generation that could be affected by these facilities**

<Not Applicable>

**% company's global oil & gas production volume that could be affected by these facilities**

<Not Applicable>

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

Unknown

**Comment**

The Overall Water Risk Indicator and the Baseline Water Stress Indicator from the WRI Aqueduct Water Tool have been used to measure if a site is located in a water-scarce region (threshold: "high" and "extremely high" in the overall water risk indicator or "extremely high" in the baseline water stress indicator). In BaySIS, we monitor the annual water use of all environmentally-relevant sites. We define them as "large user" when they use >0.1% of our total water use. Applying these thresholds to all environmentally-relevant sites worldwide, 12 Bayer sites were identified based on 2019 data as having the potential to have a substantive impact on the business as they are located in a region considered at water risk according to WRI Aqueduct ("high" and "extremely high" in the overall water risk indicator or "extremely high" in the baseline water stress indicator) and are defined as "large water users" (>0.1% of Bayer's total water use). Bayer divisions operate global production networks with multiple production steps for a single product across different sites (internal and external). We operate sites around the world. As of December 31, 2019, the Bayer Group comprised 392 consolidated companies in 87 countries. Depending on market and customer demands productions have individual back up and flexibility strategies. Revenue contribution of individual sites can therefore not directly be allocated.

**Country/Area & River basin**

Spain	Other, please specify (Tagus)
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**Number of facilities exposed to water risk**

1

**% company-wide facilities this represents**

1-25

**Production value for the metals & mining activities associated with these facilities**

<Not Applicable>

**% company's annual electricity generation that could be affected by these facilities**

<Not Applicable>

**% company's global oil & gas production volume that could be affected by these facilities**

<Not Applicable>

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

Unknown

**Comment**

The Overall Water Risk Indicator and the Baseline Water Stress Indicator from the WRI Aqueduct Water Tool have been used to measure if a site is located in a water-scarce region (threshold: "high" and "extremely high" in the overall water risk indicator or "extremely high" in the baseline water stress indicator). In BaySIS, we monitor the annual water use of all environmentally-relevant sites. We define them as "large user" when they use >0.1% of our total water use. Applying these thresholds to all environmentally-relevant sites worldwide, 12 Bayer sites were identified based on 2019 data as having the potential to have a substantive impact on the business as they are located in a region considered at water risk according to WRI Aqueduct ("high" and "extremely high" in the overall water risk indicator or "extremely high" in the baseline water stress indicator) and are defined as "large water users" (>0.1% of Bayer's total water use). Bayer divisions operate global production networks with multiple production steps for a single product across different sites (internal and external). We operate sites around the world. As of December 31, 2019, the Bayer Group comprised 392 consolidated companies in 87 countries. Depending on market and customer demands productions have individual back up and flexibility strategies. Revenue contribution of individual sites can therefore not directly be allocated.

**Country/Area & River basin**

Spain	Other, please specify (Spain, South and East Coast)
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**Number of facilities exposed to water risk**

1

**% company-wide facilities this represents**

1-25

**Production value for the metals & mining activities associated with these facilities**

<Not Applicable>

**% company's annual electricity generation that could be affected by these facilities**

<Not Applicable>

**% company's global oil & gas production volume that could be affected by these facilities**

<Not Applicable>

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

Unknown

**Comment**

The Overall Water Risk Indicator and the Baseline Water Stress Indicator from the WRI Aqueduct Water Tool have been used to measure if a site is located in a water-scarce region (threshold: "high" and "extremely high" in the overall water risk indicator or "extremely high" in the baseline water stress indicator). In BaySIS, we monitor the annual water use of all environmentally-relevant sites. We define them as "large user" when they use >0.1% of our total water use. Applying these thresholds to all environmentally-relevant sites worldwide, 12 Bayer sites were identified based on 2019 data as having the potential to have a substantive impact on the business as they are located in a region considered at water risk according to WRI Aqueduct ("high" and "extremely high" in the overall water risk indicator or "extremely high" in the baseline

water stress indicator) and are defined as "large water users" (>0.1% of Bayer's total water use). Bayer divisions operate global production networks with multiple production steps for a single product across different sites (internal and external). We operate sites around the world. As of December 31, 2019, the Bayer Group comprised 392 consolidated companies in 87 countries. Depending on market and customer demands productions have individual back up and flexibility strategies. Revenue contribution of individual sites can therefore not directly be allocated.

## 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/Area & River basin

India	Other, please specify (GHAAS Basin3349)
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### Type of risk & Primary risk driver

Reputation & markets	Increased stakeholder concern or negative stakeholder feedback
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### Primary potential impact

Brand damage

### Company-specific description

Pollution due to chemical residues in water is a general problem in several countries, e.g. in India, and not a specific Bayer problem. This circumstance might be picked up by the media or NGOs, drawing public attention to the topic. EFFECT ON BAYER: With the zero liquid discharge strategy of the Indian government this risk is especially relevant in India. Not meeting the wastewater quality norms would lead to a stoppage of production by the State Pollution Control Board. Our facilities in India installed on-line analyzers for monitoring critical parameters at the final WWTP (waste water treatment plant) outlet, which are linked to the Pollution Control Board server with live data up-load and automatically shut off the discharge valve in case of exceeding the limits. Thus, we see no risk of discharging any waste water not meeting the norm. However, we believe that there is a reputational risk related to water pollution in India. If the topic receives high media coverage, this could affect our brand image, even if our own production wastewaters are not affected. METHOD TO IDENTIFY IMPACT: We thoroughly analyze Bayer's exposure to risks incl. water via our ERM, which reviews the risk portfolio twice a year. Pollution due to water discharges has not been identified as a risk. Based on internal discussions with the Corporate Health, Safety and Environment Dpt. (HSE) and our global water risk assessment, we identified a low reputational risk with brand damage as primary impact.

### Timeframe

More than 6 years

### Magnitude of potential impact

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)

71500000

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

<Not Applicable>

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

<Not Applicable>

### Explanation of financial impact

CALCULATION APPROACH: Brand damage could have an impact on our stock price. For example, we estimated an impact of a 0.1% decrease of our stock price, which would affect the company's market capitalization by around €71,5 million based on year-end 2019 market capitalization. TIMESCALE: As financial markets can react quickly, we assume a short-term timescale for this effect.

### Primary response to risk

Engage with local communities

### Description of response

Bayer is actively engaged in a continuous dialogue with stakeholders including e.g. employees, customers, neighbors, NGOs, politicians and the general public. We are actively participating in stakeholder panels e.g. at river-basin level or irrigation boards. In India, we are actively participating in the Industry forum of the Estate. Waste management incl. water and wastewater are part of the agenda points for various site level meetings and interactions. The site conducts trainings on the subject as part of the ISO 14001 activities. Every employee from each level takes part and contributes to the subject and improvement measures. To create awareness for water management, various boards are displayed at prominent locations across the site. Furthermore, we take action to ensure the correct application of our products. Other relevant actions are the comprehensive monitoring systems at this site to ensure appropriate reaction times and risk management responses. The entire volume of the generated industrial waste water is pumped to the WWTP for treatment through a ground pipeline. There is a holding capacity of several days between receipt of generated process waste water in the WWTP and discharge after biological treatment and final discharge. This provides ample scope for action even in worst case scenario of failure in treatment process.

### Cost of response

0

### Explanation of cost of response

There are no specific costs related to this response strategy as the above measures are part of the normal operating procedures and HSE management at our sites.

### Country/Area & River basin

Germany	Other, please specify (all EU basins)
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## Type of risk & Primary risk driver

Regulatory	Tighter regulatory standards
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### Primary potential impact

Constraint to growth

### Company-specific description

EXPLANATION: Increasing requirements for the use of crop protection, pharmaceutical or chemical products under existing and upcoming EU Directives may lead to restrictions in some uses and an increasing need for measures to reduce the concentration of respective active ingredients mainly in surface water. This might impact individual Bayer products. This discussion is especially relevant for Germany where Bayer's headquarter is located. EFFECT ON BAYER: In a worst-case scenario, active ingredients might be prohibited in certain uses representing a constraint to growth for Bayer. DETAILS ON METHOD FOR IDENTIFYING THE PRIMARY IMPACT: The risk was analyzed as part of our company-wide Enterprise Risk Management (ERM) evaluating the risk with regard to likelihood of occurrence (on a 5-step scale as described in question 4.1a) and impact. As the impact could not be evaluated financially, it was evaluated qualitatively in terms of reputation and sustainability and found to be low.

### Timeframe

4-6 years

### Magnitude of potential impact

Low

### Likelihood

Likely

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

Yes, an estimated range

### Potential financial impact figure (currency)

<Not Applicable>

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

0

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

149000000

### Explanation of financial impact

During our risk assessment, it was concluded that the primary potential impact cannot be evaluated financially. Following our risk analysis method, the risk was evaluated qualitatively with regard to reputational effects and sustainability and was classified as risk with low impact. For risks that can be evaluated quantitatively, risks with low impact are defined to have a financial impact of less than EUR 150 million. Therefore, we came up with an estimated financial impact between EUR 0 and 149 million for this risk. Timescale: Our ERM takes a long-term perspective e.g. likelihood of occurrence is calculated based on a period of 10 years.

### Primary response to risk

Engage with regulators/policymakers

### Description of response

Bayer was actively involved in the national dialogue on trace substances under the patronage of the German environmental ministry. The dialogue involved representatives from environmental associations, politics, water utilities and industry. Bayer is also engaging with the EU Commission on the topic. Active pharmaceutical ingredients (API) can enter the environment through human or animal excreta, improper disposal or during production. Surface waters are particularly relevant. Pharmaceuticals and Consumer Health carry out Eco toxicological investigations of pharmaceutical residues and degradation products to assess the potential environmental impact of these products. In connection with the approval process for human and veterinary pharmaceuticals in Europe and the US, an environmental risk assessment takes place for all new active ingredients. Furthermore, to our knowledge, the existing concentrations of individual API in drinking water do not have any relevant adverse effects on human health. On the basis of its report on mixtures of API in drinking water published in 2017, the WHO currently does not identify any immediate health risks and sees no need to act in the short term. To further guarantee the safety of drinking water resources partly against the background of a potential increase in the use of pharmaceuticals, the WHO recommends that this issue be observed comprehensively over a longer period of time. Bayer is actively participating in the stakeholder dialogue.

### Cost of response

5700000

### Explanation of cost of response

As Bayer's EU lobbying work also included water-related discussions, we added the costs incurred at our liaison offices in Europe in 2019 to estimate the costs of our engagement with policy makers in the EU: Including human resources, material and project expenses, the costs incurred at our liaison offices totaled approximately €1.7 million in Berlin, Germany and €4 million in Brussels, Belgium. The costs represent 2019 costs and are recurring each year.

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## W4.2a

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

**Country/Area & River basin**

India	Other, please specify (Several basins in developing countries)
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**Stage of value chain**

Supply chain

**Type of risk & Primary risk driver**

Reputation & markets	Negative media coverage
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**Primary potential impact**

Company brand damage

**Company-specific description**

EXPLANATION: Undetected sustainability risks of one or more suppliers could potentially lead to a serious social, ethical or environmental issue with large negative media coverage. For example, low enforcement of wastewater standards for pharmaceutical or chemical suppliers especially in developing countries could potentially lead to incidences of increased respective concentrations of harmful substances in environmental water bodies and potentially in drinking water. Such an event took place in India in 2019, where there was a spill-over related to suppliers of several companies in the industry. After diligent investigations by Bayer, it was confirmed that Bayer suppliers were not affected. EFFECT ON BAYER: A sustainability issue at a supplier company may occur and lead to negative media coverage, affecting public opinion, Bayer image and perception by stakeholders. The main consequence would be a potential reputational impact resulting in increased organizational effort or interruption of supply as we can't use the supplier any longer. If such incidences occur and are picked up by (social) media or NGOs, they impose a reputational risk for the entire industry, including Bayer. Even if Bayer suppliers are not affected, Bayer could be made partially or fully responsible in the public opinion. DETAILS ON METHOD FOR IDENTIFYING THE IMPACT: The risk was analyzed as part of our company-wide Enterprise Risk Management (ERM) evaluating the risk with regard to likelihood of occurrence (on a 5-step scale as described in question 4.1a) and impact. As the impact could not be evaluated financially, it was evaluated qualitatively in terms of reputation and sustainability and found to be significant.

**Timeframe**

1-3 years

**Magnitude of potential impact**

Medium

**Likelihood**

Unlikely

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

Yes, an estimated range

**Potential financial impact figure (currency)**

<Not Applicable>

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

750000000

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

1500000000

**Explanation of financial impact**

During our risk assessment, it was concluded that the potential impact on reputation cannot be evaluated financially. Following our risk analysis method, the risk was evaluated qualitatively and was classified as risk with "significant" impact according to Bayer's risk methodology (=medium impact according to CDP drop down options). For risks that can be evaluated quantitatively, risks with significant impact are defined to have a financial impact of EUR 750 million to 1,500 million. Therefore, we came up with an equivalent financial impact between EUR 750 and 1,500 million for this risk. Timescale: Our risk management takes a long-term perspective e.g. likelihood of occurrence is calculated based on a period of 10 years.

**Primary response to risk**

Supplier engagement	Increase supplier reporting on water
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**Description of response**

Our Supplier Code of Conduct (SCoC) and our Sustainability Contract Clause are the main strategy to protect us against sustainability related supplier risks, e.g. it contains aspects related to water management and responsible water use. The SCoC is an important component for supplier selection and evaluation like sustainability online assessments and on-site audits. In 2019, Bayer requested more than 2% (ca. 1,838 out of 86,400 suppliers), representing ca. 28% of the total procurement spend, to report on water management. Through partnerships, we further drive those topics. Supplier evaluation was conducted by a leading web-based service provider of sustainability performance evaluations (EcoVadis) for sustainability performance monitoring. Besides, the main initiatives in which we foster the engagement with suppliers and their evaluation in relation to sustainability topics are "Together for Sustainability" and the "Pharmaceutical Supply Chain Initiative".

**Cost of response**

313000

**Explanation of cost of response**

To estimate the reported costs we summed up the membership fees for the two supplier initiatives and the interface to EcoVadis. In 2019 we spent more than 113,000 € for membership fees for supplier initiatives and EcoVadis and about € 200,000 on initiatives related to the engagement with suppliers and their assessment and audits in relation to sustainability topics, including water. In addition, we conduct internal HSE audits and supplier-paid TFS audits and EcoVadis assessments. As these are part of our regular HSE management or paid by suppliers, we do not include them as extra costs.

**(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**

The OPPORTUNITY is Crop Science's excellent position to offer products and services that support improved cultivation techniques and thus improve water management in agriculture. This opportunity is considered STRATEGIC BECAUSE the whole agricultural business is strongly tied to water and weather phenomena. ACTION TO REALIZE this opportunity: Crop Science is offering farmer trainings and promotes water-saving cultivation systems. For EXAMPLE, with the Digital Farming approach and our expanding Smallholder Farming Initiative we promote innovations, e.g. helping farmers to enhance their water efficiency in countries such as India and Ghana. Examples of Digital Farming solutions are spraying tools and auto-steering or GPS-controlled tractors. In July 2017, Bayer and the Israeli company Netafim Ltd. joined forces to enhance the application of crop protection products through drip irrigation systems. The new approach called DripByDrip focuses on tailored irrigation solutions enabling targeted use of crop protection products leading to increased yield with fewer resources and inputs. Bayer continues to use HydroBio, which uses satellite imagery, soil data and hyper-local weather data to deliver irrigation insights for farmers to help improve irrigation water-use efficiency and maximize yields. In 2019 we introduced Smart Center in Argentina providing irrigation recommendations to farmers in there.

**Estimated timeframe for realization**

More than 6 years

**Magnitude of potential financial impact**

High

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

Yes, a single figure estimate

**Potential financial impact figure (currency)**

93000000

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact**

FINANCIAL IMPLICATIONS apply to Crop Science as a whole with sales of EUR 19.8 billion in 2019 of which crop protection has a major impact with €9.3 billion. The global seed and crop protection market as a whole remained stable in 2019 (0%; 2018: +2%). For Crop Science, we expect sales growth of ~4% (Fx & portf. adj.) for FY 2020. A continued growth of the crop protection demand by 1 % (compared to 2019) would translate into EUR 93 million additional revenues. Our offerings of products/services helping farmers to use water more efficiently are contributing to this growth.

**W5. Facility-level water accounting**

**W5.1**

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

**Facility reference number**

Facility 1

**Facility name (optional)**

Beijing

**Country/Area & River basin**

China	Other, please specify (Ziya He, Interior)
-------	---

**Latitude**

39.79578

**Longitude**

116.50761

**Located in area with water stress**

Yes

**Primary power generation source for your electricity generation at this facility**

<Not Applicable>

**Oil & gas sector business division**

<Not Applicable>

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

67

**Comparison of total withdrawals with previous reporting year**

About the same

**Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes**

15

**Withdrawals from brackish surface water/seawater**

0

**Withdrawals from groundwater - renewable**

0

**Withdrawals from groundwater - non-renewable**

0

**Withdrawals from produced/entrained water**

0

**Withdrawals from third party sources**

52

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

22

**Comparison of total discharges with previous reporting year**

Higher

**Discharges to fresh surface water**

0

**Discharges to brackish surface water/seawater**

0

**Discharges to groundwater**

0

**Discharges to third party destinations**

22

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

22

**Comparison of total consumption with previous reporting year**

Higher

**Please explain**

In 2019, water discharges and consumption increased. The deviations from last year values still lie within the range which we consider as usual due to variations in production.

---

**Facility reference number**

Facility 2

**Facility name (optional)**

Ica

**Country/Area & River basin**

Peru	Other, please specify (GHAAS Basin3150)
------	---

**Latitude**

-14.0681

**Longitude**

-75.741904

**Located in area with water stress**

Yes

**Primary power generation source for your electricity generation at this facility**

<Not Applicable>

**Oil & gas sector business division**

<Not Applicable>

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

721

**Comparison of total withdrawals with previous reporting year**

Much higher

**Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes**

0

**Withdrawals from brackish surface water/seawater**

0



**Withdrawals from groundwater - renewable**

721

**Withdrawals from groundwater - non-renewable**

0

**Withdrawals from produced/entrained water**

0

**Withdrawals from third party sources**

0

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

106

**Comparison of total discharges with previous reporting year**

Much higher

**Discharges to fresh surface water**

0

**Discharges to brackish surface water/seawater**

0

**Discharges to groundwater**

106

**Discharges to third party destinations**

0

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

110

**Comparison of total consumption with previous reporting year**

Much lower

**Please explain**

In 2019, water withdrawals and discharges increased, because the newly acquired agriculture business is being reported for the full year for the first time. In 2018 numbers were only accounted since the day of acquisition (June 7, 2018).

**Facility reference number**

Facility 3

**Facility name (optional)**

Kumming MJP

**Country/Area & River basin**

China	Yangtze River (Chang Jiang)
-------	-----------------------------

**Latitude**

25.05873

**Longitude**

102.66227

**Located in area with water stress**

Yes

**Primary power generation source for your electricity generation at this facility**

<Not Applicable>

**Oil & gas sector business division**

<Not Applicable>

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

88

**Comparison of total withdrawals with previous reporting year**

About the same

**Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes**

0

**Withdrawals from brackish surface water/seawater**

0

**Withdrawals from groundwater - renewable**

0

**Withdrawals from groundwater - non-renewable**

0

**Withdrawals from produced/entrained water**

0

**Withdrawals from third party sources**

88

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

31

**Comparison of total discharges with previous reporting year**

Higher

**Discharges to fresh surface water**

0

**Discharges to brackish surface water/seawater**

0

**Discharges to groundwater**

0

**Discharges to third party destinations**

31

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

31

**Comparison of total consumption with previous reporting year**

Higher

**Please explain**

In 2019, water consumption and discharges increased. The deviations from last year values still lie within the range which we consider as usual due to variations in production.

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**Facility reference number**

Facility 4

**Facility name (optional)**

La Charca

**Country/Area & River basin**

Mexico	Other, please specify (Rio Lerma)
--------	-----------------------------------

**Latitude**

20.42381

**Longitude**

-101.05922

**Located in area with water stress**

Yes

**Primary power generation source for your electricity generation at this facility**

<Not Applicable>

**Oil & gas sector business division**

<Not Applicable>

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

97

**Comparison of total withdrawals with previous reporting year**

Much higher

**Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes**

0

**Withdrawals from brackish surface water/seawater**

0

**Withdrawals from groundwater - renewable**

97

**Withdrawals from groundwater - non-renewable**

0

**Withdrawals from produced/entrained water**

0

**Withdrawals from third party sources**

0

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

9

**Comparison of total discharges with previous reporting year**

Much higher

**Discharges to fresh surface water**

0

**Discharges to brackish surface water/seawater**

0

**Discharges to groundwater**

9

**Discharges to third party destinations**

0

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

9

**Comparison of total consumption with previous reporting year**

Much lower

**Please explain**

In 2019, water withdrawals and discharges increased, because the newly acquired agriculture business is being reported for the full year for the first time. In 2018 numbers were only accounted since the day of acquisition (June 7, 2018).

**Facility reference number**

Facility 5

**Facility name (optional)**

Lerma

**Country/Area & River basin**

Mexico	Other, please specify (Rio Lerma)
--------	-----------------------------------

**Latitude**

19.28872

**Longitude**

-99.535833

**Located in area with water stress**

Yes

**Primary power generation source for your electricity generation at this facility**

<Not Applicable>

**Oil & gas sector business division**

<Not Applicable>

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

72

**Comparison of total withdrawals with previous reporting year**

Higher

**Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes**

0

**Withdrawals from brackish surface water/seawater**

0

**Withdrawals from groundwater - renewable**

72

**Withdrawals from groundwater - non-renewable**

0

**Withdrawals from produced/entrained water**

0

**Withdrawals from third party sources**

0

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

69

**Comparison of total discharges with previous reporting year**

Higher

**Discharges to fresh surface water**

0

**Discharges to brackish surface water/seawater**

0

**Discharges to groundwater**

0

**Discharges to third party destinations**

69

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

69

**Comparison of total consumption with previous reporting year**

Higher

**Please explain**

In 2019, water consumption, withdrawals and discharges increased. The deviations from last year values still lie within the range which we consider as usual due to variations in production.

---

**Facility reference number**

Facility 6

**Facility name (optional)**

Melipilla

**Country/Area & River basin**

Chile	Other, please specify (North Chile, Pacific Coast)
-------	--

**Latitude**

-33.6771

**Longitude**

-71.151965

**Located in area with water stress**

Yes

**Primary power generation source for your electricity generation at this facility**

<Not Applicable>

**Oil & gas sector business division**

<Not Applicable>

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

353

**Comparison of total withdrawals with previous reporting year**

Much higher

**Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes**

156

**Withdrawals from brackish surface water/seawater**

0

**Withdrawals from groundwater - renewable**

185

**Withdrawals from groundwater - non-renewable**

0

**Withdrawals from produced/entrained water**

0

**Withdrawals from third party sources**

12

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

0

**Comparison of total discharges with previous reporting year**

Much lower

**Discharges to fresh surface water**

0

**Discharges to brackish surface water/seawater**

0

**Discharges to groundwater**

0

**Discharges to third party destinations**

0

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

12

**Comparison of total consumption with previous reporting year**

Much lower

**Please explain**

In 2019, water withdrawals increased, because the newly acquired agriculture business is being reported for the full year for the first time. In 2018 numbers were only accounted since the day of acquisition (June 7, 2018).

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**Facility reference number**

Facility 7

**Facility name (optional)**

Petit

**Country/Area & River basin**

South Africa	Orange
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**Latitude**

-26.1087

**Longitude**

28.3593

**Located in area with water stress**

Yes

**Primary power generation source for your electricity generation at this facility**

<Not Applicable>

**Oil & gas sector business division**

<Not Applicable>

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

210

**Comparison of total withdrawals with previous reporting year**

Much higher

**Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes**

0

**Withdrawals from brackish surface water/seawater**

0

**Withdrawals from groundwater - renewable**

210

**Withdrawals from groundwater - non-renewable**

0

**Withdrawals from produced/entrained water**

0

**Withdrawals from third party sources**

0

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

0

**Comparison of total discharges with previous reporting year**

Much lower

**Discharges to fresh surface water**

0

**Discharges to brackish surface water/seawater**

0

**Discharges to groundwater**

0

**Discharges to third party destinations**

0

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

1

**Comparison of total consumption with previous reporting year**

Much lower

**Please explain**

In 2019, water withdrawals increased, because the newly acquired agriculture business is being reported for the full year for the first time. In 2018 numbers were only accounted since the day of acquisition (June 7, 2018).

**Facility reference number**

Facility 8

**Facility name (optional)**

Santa Julia

**Country/Area & River basin**

Chile	Rapel
-------	-------

**Latitude**

-34.0611

**Longitude**

-70.75904

**Located in area with water stress**

Yes

**Primary power generation source for your electricity generation at this facility**

<Not Applicable>

**Oil & gas sector business division**

<Not Applicable>

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

301

**Comparison of total withdrawals with previous reporting year**

Much higher

**Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes**

0

**Withdrawals from brackish surface water/seawater**

0

**Withdrawals from groundwater - renewable**

301

**Withdrawals from groundwater - non-renewable**

0

**Withdrawals from produced/entrained water**

0

**Withdrawals from third party sources**

0

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

60

**Comparison of total discharges with previous reporting year**

Much higher

**Discharges to fresh surface water**

0

**Discharges to brackish surface water/seawater**

0

**Discharges to groundwater**

0

**Discharges to third party destinations**

60

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

60

**Comparison of total consumption with previous reporting year**

Much lower

**Please explain**

In 2019, water withdrawals and discharges increased, because the newly acquired agriculture business is being reported for the full year for the first time. In 2018 numbers were only accounted since the day of acquisition (June 7, 2018).

**Facility reference number**

Facility 9

**Facility name (optional)**

Tlaxcala

**Country/Area & River basin**

Mexico	Balsas
--------	--------

**Latitude**

19.3085

**Longitude**

-98.391946

**Located in area with water stress**

Yes

**Primary power generation source for your electricity generation at this facility**

<Not Applicable>

**Oil & gas sector business division**

<Not Applicable>

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

94

**Comparison of total withdrawals with previous reporting year**

About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

94

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

54

Comparison of total discharges with previous reporting year

Lower

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

54

Total water consumption at this facility (megaliters/year)

57

Comparison of total consumption with previous reporting year

About the same

Please explain

In 2019, water discharges decreased. The deviations from last year values still lie within the range which we consider as usual due to variations in production.

---

Facility reference number

Facility 10

Facility name (optional)

Vapi

Country/Area & River basin

India	Other, please specify (India West Coast)
-------	--

Latitude

20.36875

Longitude

72.93512

Located in area with water stress

Yes

Primary power generation source for your electricity generation at this facility

<Not Applicable>

Oil & gas sector business division

<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

544

Comparison of total withdrawals with previous reporting year

About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

12

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

**Withdrawals from third party sources**

532

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

225

**Comparison of total discharges with previous reporting year**

About the same

**Discharges to fresh surface water**

0

**Discharges to brackish surface water/seawater**

0

**Discharges to groundwater**

0

**Discharges to third party destinations**

225

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

219

**Comparison of total consumption with previous reporting year**

Lower

**Please explain**

In 2019, water consumption decreased. The deviations from last year values still lie within the range which we consider as usual due to variations in production.

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**Facility reference number**

Facility 11

**Facility name (optional)**

Alcala de Henares

**Country/Area & River basin**

Spain	Other, please specify (Tagus)
-------	-------------------------------

**Latitude**

40.48775

**Longitude**

-3.38913

**Located in area with water stress**

Yes

**Primary power generation source for your electricity generation at this facility**

<Not Applicable>

**Oil & gas sector business division**

<Not Applicable>

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

66

**Comparison of total withdrawals with previous reporting year**

Higher

**Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes**

0

**Withdrawals from brackish surface water/seawater**

0

**Withdrawals from groundwater - renewable**

0

**Withdrawals from groundwater - non-renewable**

0

**Withdrawals from produced/entrained water**

0

**Withdrawals from third party sources**

66

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

50

**Comparison of total discharges with previous reporting year**

Much higher

**Discharges to fresh surface water**

0

**Discharges to brackish surface water/seawater**



0

**Discharges to groundwater**

0

**Discharges to third party destinations**

50

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

50

**Comparison of total consumption with previous reporting year**

Much higher

**Please explain**

In 2019, water consumption and discharge were much higher. That increase was due to a water intense cleaning project and less recycled water being used for cooling.

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**Facility reference number**

Facility 12

**Facility name (optional)**

El Ejido

**Country/Area & River basin**

Spain	Other, please specify (Spain, South and East Coast)
-------	---

**Latitude**

36.72444

**Longitude**

-2.772505

**Located in area with water stress**

Yes

**Primary power generation source for your electricity generation at this facility**

<Not Applicable>

**Oil & gas sector business division**

<Not Applicable>

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

63

**Comparison of total withdrawals with previous reporting year**

Much higher

**Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes**

0

**Withdrawals from brackish surface water/seawater**

0

**Withdrawals from groundwater - renewable**

0

**Withdrawals from groundwater - non-renewable**

0

**Withdrawals from produced/entrained water**

0

**Withdrawals from third party sources**

63

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

6

**Comparison of total discharges with previous reporting year**

Much higher

**Discharges to fresh surface water**

6

**Discharges to brackish surface water/seawater**

0

**Discharges to groundwater**

0

**Discharges to third party destinations**

0

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

6

**Comparison of total consumption with previous reporting year**

Much lower

**Please explain**

In 2019, water withdrawals and discharges increased, because the newly acquired agriculture business is being reported for the full year for the first time. In 2018 numbers were only accounted since the day of acquisition (June 7, 2018).

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W5.1a

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**(W5.1a) 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?**

Standard: ISAE 3000; Methodology: The auditor Deloitte has verified water data as part of the limited assurance for the Bayer Sustainability Report 2019, incl. the following procedures: recording of systems and processes for collection, analysis, validation and aggregation of data and their documentation on a sample basis; site visits; analytical procedures. Scope: Global: Water data is measured at site level and monitored annually at global level in our central Bayer Site Information System.

**Water withdrawals – volume by source**

**% verified**

76-100

**What standard and methodology was used?**

Standard: ISAE 3000; Methodology: The auditor Deloitte has verified water data as part of the limited assurance for the Bayer Sustainability Report 2019, incl. the following procedures: recording of systems and processes for collection, analysis, validation and aggregation of data and their documentation on a sample basis; site visits; analytical procedures. Scope: Global: Water data is measured at site level and monitored annually at global level in our central Bayer Site Information System.

**Water withdrawals – quality**

**% verified**

Not verified

**What standard and methodology was used?**

<Not Applicable>

**Water discharges – total volumes**

**% verified**

76-100

**What standard and methodology was used?**

Standard: ISAE 3000; Methodology: The auditor Deloitte has verified water data as part of the limited assurance for the Bayer Sustainability Report 2019, incl. the following procedures: recording of systems and processes for collection, analysis, validation and aggregation of data and their documentation on a sample basis; site visits; analytical procedures. Scope: Global: Water data is measured at site level and monitored annually at global level in our central Bayer Site Information System.

**Water discharges – volume by destination**

**% verified**

76-100

**What standard and methodology was used?**

Standard: ISAE 3000; Methodology: The auditor Deloitte has verified water data as part of the limited assurance for the Bayer Sustainability Report 2019, incl. the following procedures: recording of systems and processes for collection, analysis, validation and aggregation of data and their documentation on a sample basis; site visits; analytical procedures. Scope: Global: Water data is measured at site level and monitored annually at global level in our central Bayer Site Information System.

**Water discharges – volume by treatment method**

**% verified**

76-100

**What standard and methodology was used?**

Standard: ISAE 3000; Methodology: The auditor Deloitte has verified water data as part of the limited assurance for the Bayer Sustainability Report 2019, incl. the following procedures: recording of systems and processes for collection, analysis, validation and aggregation of data and their documentation on a sample basis; site visits; analytical procedures. Scope: Global: Water data is measured at site level and monitored annually at global level in our central Bayer Site Information System.

**Water discharge quality – quality by standard effluent parameters**

**% verified**

76-100

**What standard and methodology was used?**

Standard: ISAE 3000; Methodology: The auditor Deloitte has verified water data as part of the limited assurance for the Bayer Sustainability Report 2019, incl. the following procedures: recording of systems and processes for collection, analysis, validation and aggregation of data and their documentation on a sample basis; site visits; analytical procedures. Scope: Global: Water data is measured at site level and monitored annually at global level in our central Bayer Site Information System.

**Water discharge quality – temperature**

**% verified**

Not verified

**What standard and methodology was used?**

<Not Applicable>

**Water consumption – total volume**

**% verified**

76-100

**What standard and methodology was used?**

Standard: ISAE 3000; Methodology: The auditor Deloitte has verified water data as part of the limited assurance for the Bayer Sustainability Report 2019, incl. the following procedures: recording of systems and processes for collection, analysis, validation and aggregation of data and their documentation on a sample basis; site visits; analytical procedures. Scope: Global: Water data is measured at site level and monitored annually at global level in our central Bayer Site Information System.

**Water recycled/reused**

**% verified**

76-100

**What standard and methodology was used?**

Standard: ISAE 3000; Methodology: The auditor Deloitte has verified water data as part of the limited assurance for the Bayer Sustainability Report 2019, incl. the following procedures: recording of systems and processes for collection, analysis, validation and aggregation of data and their documentation on a sample basis; site visits; analytical procedures. Scope: Global: Water data is measured at site level and monitored annually at global level in our central Bayer Site Information System.

**W6. Governance**

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**W6.1**

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

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

**W6.1a**

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

Scope	Content	Please explain
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	Scope	Content	Please explain
Row 1	Company-wide	<p>Description of business dependency on water</p> <p>Description of business impact on water</p> <p>Description of water-related performance standards for direct operations</p> <p>Description of water-related standards for procurement</p> <p>Reference to international standards and widely-recognized water initiatives</p> <p>Company water targets and goals</p> <p>Commitment to align with public policy initiatives, such as the SDGs</p> <p>Commitments beyond regulatory compliance</p> <p>Commitment to water-related innovation</p> <p>Commitment to stakeholder awareness and education</p> <p>Commitment to water stewardship and/or collective action</p> <p>Acknowledgement of the human right to water and sanitation</p> <p>Recognition of environmental linkages, for example, due to climate change</p> <p>Other, please specify (Water efficiency in agriculture)</p>	<p>(i) Rationale: The Bayer Water Position is COMPANY-WIDE BECAUSE water is a GLOBAL topic and one of our MAIN ENVIRONMENTAL ASPECTS. Bayer provides innovative solutions to global challenges. The availability of fresh water represents such a challenge. Also, water is essential for us as a manufacturing company. THIS IS WHY our Water Position covers the selected content company-wide securing our license to operate. (ii) Overview: Our Water Position includes a description of our BUSINESS DEPENDENCY ON WATER outlining that water is a major rate-limiting factor for agriculture and the importance of fresh water for our energy- and water-intensive operations (also recognizing their LINKAGE). The position includes our commitment to reduce our BUSINESS IMPACT ON WATER by improving WATER-RELATED PERFORMANCE IN DIRECT OPERATIONS AND BEYOND e.g. with our own WATER USE REDUCTION and SUPPLIER targets, our commitment to drive site-specific projects for water reuse/recycling/reduction or waste water treatment and our commitment to develop INNOVATIVE PRODUCTS AND TECHNOLOGIES for the market, e.g. for improved waste water treatment. WATER STEWARDSHIP and water efficiency in AGRICULTURE is included in our commitment to ensure the supply of food through water-efficient products and farming techniques. We also include customer EDUCATION e.g. skills building for farmers as part of our product stewardship responsibilities. BEYOND COMPLIANCE, we also support water-related community projects. The position outlines our focus on the HUMAN RIGHT TO WATER AND SANITATION: we use our local presence to provide access to clean water and sanitation to our employees and the communities in which we operate. It outlines our focus on AWARENESS AND SKILLS BUILDING, e.g. by working with farmers and supporting education and science. The position further outlines our commitment to align with PUBLIC POLICY INITIATIVES e.g. multi-lateral partnerships.</p>

## 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
Chief Sustainability Officer (CSO)	<p>RELATION TO WATER: The highest level of responsibility for water-related issues lies with Bayer's CEO who also functions as Bayer's Chief Sustainability Officer (CSO). As CSO he is responsible for the GROUP-WIDE SUSTAINABILITY PROGRAM INCL. WATER-RELATED TARGETS AND MEASURES. The position was selected to ensure that WATER-RELATED RISKS AND OPPORTUNITIES are identified AT GROUP-LEVEL and WATER-RELATED TARGETS AND MEASURES ARE DRIVEN GROUP-WIDE and integrated into Bayer's business strategy. EXAMPLE: Following the acquisition of the agriculture business in 2018, Bayer used the Aqueduct Water Risk Atlas to ascertain whether all our sites that are located in water-scarce areas or in areas threatened by water scarcity have a water management system. 95% of these sites already have a water management system. The CSO decided to set the target of achieving 100% coverage in 2020.</p>

## 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	Monitoring implementation and performance Overseeing acquisitions and divestiture Overseeing major capital expenditures Providing employee incentives Reviewing and guiding annual budgets Reviewing and guiding business plans Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding strategy Reviewing and guiding corporate responsibility strategy Reviewing innovation/R&D priorities Setting performance objectives	i) WHO BRIEFS ON WHAT: All relevant risks, including water-related risks, are monitored by our integrated risk management system and are regularly reviewed by the Bayer Assurance Committee. The Committee is chaired by the Chief Financial Officer and meets twice a year. The results are reported to the Board of Management and approved by the Board of Management for publication in Bayer's Annual Report. In addition, water-related strategic decisions are brought up in board discussions by the Head of Public Affairs, Science and Sustainability (PASS), the HSE Head or the CSO as needed. The HSE Head informs the board about environmental KPIs incl. water-related KPIs and target achievement in the context of the annual Board meeting dedicated to the approval of our Annual Report (AR). The CSO and the CFO are informed several times by the AR taskforce during the reporting cycle from Aug to Feb. The HSE Head monthly reports HSE KPIs to the Board. ii) CONTRIBUTION TO BOARD OVERSIGHT: The governance mechanisms selected contribute to an informed view of the Board on water-related issues and ensure a coherent and Group-wide response, if needed. Examples: Through the reporting of water-related KPIs, the Board can ensure a Group-wide response in case of any deviations of water parameters from the required values. Through the integration of water-related issues in major investment decisions, the regular review of water-related risks, and the integration of water-related issues in the review of strategic decisions or R+D priorities, the Board can ensure e.g. an adequate inclusion of water risks and opportunities in our business, sustainability or risk management strategy. E.g. all capital expenditures above €10 million undergo an ecological assessment; CAPEX above €20 million go into the Board. An example of a water-related Board decision was the decision to sign the WASH Pledge as part of our Sustainability strategy.

**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**

More frequently than quarterly

**Please explain**

POSITION: The CSO is the Chairman of the Board of Management. In this position, he reports to the Supervisory Board. He is the direct superior of the Head of PASS (PA, Science & Sustainability) who leads the Group-wide Sustainability function. REPORTING NATURE: In regular meetings (5 times in 2019) with the Board of Management, the Supervisory Board and the Head of PASS, the group-wide sustainability strategy incl. water issues was discussed. Target achievement is reported ANNUALLY to the Board in a REGULAR BOARD MEETING. In REGULAR JOUR FIXES, the CSO and PASS Head discuss operational topics in the field of sustainability, incl. water issues. DETAILS: The CSO is responsible for the Group-wide Sustainability Program incl. water-related targets and measures. The CSO is also responsible for fulfilling Bayer's commitment to the CEO Water Mandate. He signs off the CDP Water Request, the sustainability section in our Annual Report and our Sustainability Report incl. water KPIs and measures

**W6.4**

**(W6.4) Do you provide incentives to C-suite employees or board members for the management of water-related issues?**

	Provide incentives for management of water-related issues	Comment
Row 1	Yes	

**W6.4a**

**(W6.4a) What incentives are provided to C-suite employees or board members for the management of water-related issues (do not include the names of individuals)?**

	Role(s) entitled to incentive	Performance indicator	Please explain
Monetary reward	Board/Executive board Chief Sustainability Officer (CSO)	Improvements in waste water quality - direct operations	i) DETAILS ON THE INDICATOR/S: Board Members are incentivized on the attainment of sustainability KPIs, 30% OF THE DIVISIONAL COMPONENT WITHIN VARIABLE COMPENSATION is based on the attainment of qualitative targets including sustainability. As outlined in the Compensation Report of Bayer's Annual Report, in 2019 sustainability targets for Board members included to "Develop and activate a comprehensive sustainability strategy addressing the direct impact of Bayer and our broader contribution to the ecosystem". In addition, the Board member responsible for HSE is also incentivized on the target „quality assurance and safety in production". This includes adherence to regulations related to EMISSIONS INTO WATER. To ensure local water compliance, the responsibility is delegated through the direct reporting line down to the individual plant managers. ii) RATIONALE: These indicators were chosen because compliance is essential for our long-term economic success and sustainability is a key strategic lever for Bayer. In 2019, we announced a comprehensive package of measures and new sustainability targets, pursuing our sustainability targets with the same vigor as our financial targets. THIS IS WHY the above indicators were chosen. From 2021 onward sustainability will also be part of the long-term incentives for all board members. The Supervisory board defines those targets over a 4-year span, with a minimum, target and maximum value.
Non-monetary reward	Board/Executive board Other, please specify (all employees)	Reduction of water withdrawals Reduction in consumption volumes Improvements in efficiency - direct operations Improvements in efficiency - product-use Improvements in waste water quality - direct operations Implementation of employee awareness campaign or training program Supply chain engagement Increased access to workplace WASH Implementation of water-related community project	i) DETAILS ON THE INDICATOR/S: All Bayer employees globally can contribute to the worldwide innovation platform WeSolve to develop solutions, including those referring to water. Innovation coaches accompany the process starting from the submission of the idea until the finding of the solution. This process refers to all challenges, including water-related topics outlined in the performance indicator column. Another possibility for all Bayer employees is the Catalyst Box Program, where employees can get sponsorship and coaching to develop their business ideas. Innovation coaches accompany the process. During the 12-week-program the team with 2-4 members gets a physical box with tools and learning materials, a budget of up to EUR 1,500, access to online courses, 4.5 hours of 1:1 coaching with experienced Lean Startup Coaches and a pitch training. This program refers to all business ideas and challenges, including the water-related topics outlined in the performance indicator column. ii) RATIONALE: Bayer has introduced the worldwide innovation platform WeSolve and the Catalyst Box Program to strengthen the innovation culture in all business areas and to enhance worldwide collaboration.

**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
- Yes, funding research organizations

**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?**

PROCESS: Bayer's organizational processes are designed to ensure a common approach for all direct and indirect engagement activities, consistent with our Sustainability Strategy - across divisions and geographies.

Sustainability is a core element of our Group Strategy and is the direct responsibility of Bayer's CEO. In his role as CSO, he is supported by the Public Affairs, Science and Sustainability (PASS) function, which not only is responsible for the outreach to political stakeholders but also to develop strategies and identify areas of activity, targets, KPIs, management systems and corporate policies and compiles the Sustainability Report on behalf of the Board of Management.

The close interaction between Public Affairs and Sustainability ensure alignment and consistence with regard to our water commitments also in direct and indirect interactions with political stakeholders across the Globe.

We are currently working on our Water Stewardship Strategy and continue our work on water targets together with our divisions. Our core elements within this topic are Operation, Value chain and Partnering. Our plan is to set up a new overall water commitment, define targets and develop a water position based on our Water Stewardship Strategy.

ACTION FOR INCONSISTENCIES: This process ensures that there are no inconsistencies in our corporate advocacy actions. If the PASS function discovers inconsistency in local advocacy actions, the department would raise them with the country head.

**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)  
 Bayer Annual Report 2019.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	11-15	i) ISSUES INTEGRATED: Through the establishment of sustainability goals we included water-related topics into our long-term non-financial business objectives (e.g. in supplier management or resource efficiency). For instance, we set the target to establish a water management at all sites in water-scarce regions focusing on issues such as wastewater standards and water efficiency. ii) EXAMPLES HOW ISSUES ARE INTEGRATED: Within its Corporate Health, Safety and Sustainability Roadmap, Bayer sets specific goals to operationalize its objectives, including goals to assess and mitigate the risk of soil/ground water contamination at all sites worldwide, and standards for wastewater emissions. This way, sustainability is integrated into our long-term business objectives, leading to projects with sustainability and business relevance. The development of non-financial goals CHANGED the awareness of the importance of sustainability within the company for securing Bayer's license to operate. The Supplier Code of Conduct also addresses a responsible water management by Bayer's suppliers. By evaluating our suppliers we minimize potential risks in our supply chain and show our suppliers the importance of water in general, but also for Bayer in particular.
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	11-15	i) ISSUES: Water resource considerations such as the development of drought-tolerant plant varieties are factored into new product development and therewith have an IMPACT on our strategy for achieving long-term business objectives. Water-related issues to achieve our Water Position include e.g. KPIs on water emissions or projects, which provide access to clean water and sanitation to the communities in which we operate impacting our acceptance in the community. ii) HOW ISSUES ARE INTEGRATED: By including water resource considerations into our innovation strategy they influence our product development and improvements in resource efficiency. The OUTCOME is the rollout of new products and services and thus the realization of new sales potentials. E.g., Bayer developed and offers hybrid rice seeds that withstand abiotic and biotic stress like drought and salinity. This helps increasing yields significantly and consequently improving livelihoods in countries like Vietnam that are struck by weather-related calamities. Bayer is also engaged in developing dry seeded rice, a new cropping system that reduces water requirements where water availability is becoming limiting. The introduction of water KPIs has allowed us to implement improvement mechanisms, e.g. leading to cost saving opportunities due to improved resource efficiency. With our CEO Water Mandate commitment we commit to ensure access to safe water, sanitation and hygiene for all employees in all premises under our control.
Financial planning	Yes, water-related issues are integrated	11-15	i) ISSUES: Water issues integrated into financial planning, e.g. investment decisions, especially include water use and emissions into water. ii) EXAMPLES HOW ISSUES ARE INTEGRATED: Water resource considerations are factored into location planning for new operations IMPACTING our investment decisions. According to Bayer's Ecological Assessment of new Investments Guideline, all investments above €10 million must be evaluated with regard to their environmental impact. The assessment includes both a product and process evaluation. The process evaluation assesses the impacts of the new investment projects on organisms and the local environment which are specific to the location and the facility (e.g. water use and emissions into water). The OUTCOME is an improved risk assessment at site level to secure long-term investments. As mentioned above, water resource considerations are factored into new product development and have an IMPACT on the rollout of new products and services and therefore the realization of new sales potentials. For instance, Bayer developed and offers hybrid rice seeds that withstand abiotic and biotic stress like drought and salinity. This helps increasing yields significantly and consequently improving livelihoods in countries like Vietnam that are struck by weather-related calamities. Bayer is also engaged in developing dry seeded rice, a new cropping system that reduces water requirements where water availability is becoming limiting.

**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)**

0

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

0

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

0

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

0

**Please explain**

i) Explanation: According to Bayer's Ecological Assessment of New Investments Guideline, all investments above €10 mio must be evaluated with regard to their environmental impact. The assessment includes a product and process evaluation. The process evaluation assesses the impacts of new investment projects on organisms and the local environment which are specific to the location and the facility (e.g. water use, emissions into water). The water-related investments evaluated according to this guideline have stayed the same over the last years. This is why we assume that water-related CAPEX has stayed and will stay approximately the same. The same applies to our water-related OPEX. In 2019, we had water-related operating costs of approx. EUR 30 million, which are about the same as in the previous year. ii) Approx. EUR 25 million of water-related operating EXPENDITURE WERE FOR waste water treatment incl. pre-treatment and approx. EUR 5 million for Water incl. Cooling Tower Make-up Water.

**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	Yes	

**W7.3a**

**(W7.3a) Has your organization identified any water-related outcomes from your climate-related scenario analysis?**

No

**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, but we are currently exploring water valuation practices

**Please explain**

Bayer has analyzed the possibility to introduce an internal price of water as a possible tool to favor green investments. We came to the conclusion that an internal price on water is currently not meaningful for Bayer. Yet, WE CONSTANTLY REVISIT OUR ANALYSIS and conclusions in order to adapt to continuous developments and change. Rationale: Attributing financial value to the materiality of water risk is an emerging field. Upon make-or-buy assessments, internal water prices can bias the profitability of investments, thereby leading to unjustified outsourcing. In addition, due to specifics of our business, an internal price on water is not meaningful for Bayer and hence not a preferred tool to favor green investments.

**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 Business level specific targets and/or goals Activity level specific targets and/or goals Site/facility specific targets and/or goals Country level targets and/or goals Basin specific targets and/or goals	Targets are monitored at the corporate level Goals are monitored at the corporate level	In the context of setting its non-financial group targets, Bayer assesses its water performance in a holistic way since 2013. This includes, for example, the analysis of water parameters such as water use, quality and discharge, the identification of sites exposed to water risks using the World Resources Institute Aqueduct Tool as well as the analysis of site-specific water projects and accompanying initiatives in the local communities where we are active. As water is a local issue, we recognized the need to handle water targets at a local level. Our water management tools to identify site-specific water issues are based on BASIN SPECIFIC DATA. Based on this data, our sites set SITE-SPECIFIC TARGETS that fit to their individual water situation. Besides, we also set a GROUP-WIDE TARGET to ascertain whether all our sites that are located in water-scarce areas or in areas identified as being threatened by water scarcity have a water management system. 95% of these sites already have a water management system. We have set ourselves the target of achieving 100% coverage in 2020. Using a monitoring tool developed by Bayer, the corporate PASS function annually analyzes the site data at corporate level including a site-specific risk review and progress analysis. During the non-financial target setting process we also analyzed possibilities to set ACTIVITY SPECIFIC TARGETS or goals. Following individual functional analyses, dedicated company-wide supplier targets and goals were set related to our supplier engagement activities, focusing on improving their sustainability management including water. We are currently working on our Water Stewardship Strategy and continue our work on water targets together with our DIVISIONS. Our core elements within this topic are Operation, Value chain and Partnering. We will cover downstream and upstream activities. Our plan is to set up a new overall water commitment, define new targets and develop a new water position based on our Water Stewardship Strategy.

**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**

Supplier engagement

**Level**

Company-wide

**Primary motivation**

Water stewardship

**Description of target**

As pointed out in our Global Water Position, Bayer aims at protecting water resources and improving water-use-efficiency both within the company and beyond. As part of our supplier management we have set the global target to continue to evaluate 100% of potentially high-risk suppliers with significant spend by 2020. This target was defined to improve sustainability practices in our supply chain, to support us to define improvement measures together with our suppliers but also to help Bayer minimize risks beyond its own operations. Throughout 2019 we started to integrate legacy Monsanto suppliers into our 4-step management process. This integration will continue to take place until end of 2020. For Bayer, the minimization of reputational damage and costs as well as the risk of supply interruption play an important role and emphasizes the importance of this goal.

**Quantitative metric**

Other, please specify (% high-risk suppliers evaluated)

**Baseline year**

2013

**Start year**

2013

**Target year**

2020

**% of target achieved**

70

**Please explain**

By 2020, we aim to continue to evaluate all those suppliers with a significant procurement spend (more than €0.5 million p.a.) that are regarded as potentially high-risk suppliers due to their combined country and category risk. Throughout 2020 we will continue to integrate legacy Monsanto suppliers into our 4-step management process.

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**Target reference number**

Target 2

**Category of target**

Other, please specify (Water management )

**Level**

Company-wide

**Primary motivation**

Water stewardship

**Description of target**

As pointed out in our Global Water Position, Bayer aims at protecting water resources and improving water-use-efficiency both within the company and beyond. A very important step for Bayer regarding the systematic integration of water management into the business has been the definition of new Bayer targets in 2013, incl. the company-wide target of establishing a water management at 100% of sites in water-scarce areas by 2017. This ensured that all of these sites have implemented water management processes and develop site-specific measures and targets. Following the acquisition of the agriculture business in 2018, Bayer used the Aqueduct Water Risk Atlas to ascertain whether all our sites that are located in water-scarce areas or in areas threatened by water scarcity have a water management system, including the newly acquired business. 95% of these sites already have a water management system. We have set ourselves the target of achieving 100% coverage in 2020.

**Quantitative metric**

Other, please specify (% of sites with water management in scarce areas)

**Baseline year**

2013

**Start year**

2013

**Target year**

2020

**% of target achieved**

95

**Please explain**

In 2017, our target to establish water management at all sites in water-scarce areas was achieved. As water is a local issue, our individual sites have set local targets. Following the acquisition of the agriculture business in 2018, Bayer used the Aqueduct Water Risk Atlas to ascertain whether all our sites that are located in water-scarce areas or in areas threatened by water scarcity have a water management system, including the newly acquired business. Using a monitoring tool developed by Bayer, the corporate PASS function annually analyzes the site data at corporate level including a site-specific risk review and progress analysis. Our analysis showed that, at the end of 2019, 95% of these sites already have a water management system.

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**W8.1b**

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

**Goal**

Improve wastewater quality beyond compliance requirements

**Level**

Company-wide

**Motivation**

Risk mitigation

**Description of goal**

To underline the commitments in Bayer's GLOBAL Water Position, Bayer defined COMPANY-WIDE pollution prevention objectives: 1) We aim at setting global emission standards for wastewater and 2) at establishing one concept for the evaluation of Active Ingredients in manufacturing wastewater. IMPORTANCE FOR BAYER: With total discharges of 25,585 mega liters in 2019, water quality is very important for us and to achieve water security. IMPLEMENTATION: We aim to fulfill our company-wide goal by implementing local targets in accordance with the specific requirements of each division. E.g., the topic is very relevant in India due to the zero liquid discharge strategy of the government. Thus, our site has set local goals e.g. to improve the quality of effluent by reducing usage of acids and alkalis in the production process. We applied alternative means of disposing of product-containing wastewater such as incineration, distillation or chemical treatment. Bayer experts are working on the Pharmaceuticals in the Environment topic and are collaborating with other companies and organizations in external projects in this field, e.g. the Eco-Pharmaco-Stewardship initiative of European pharmaceutical associations. We have adopted the initiative's methods for the risk assessment of pharmaceutical traces in production wastewater as part of the concept.

**Baseline year**

2013

**Start year**

2013

**End year**

2019

**Progress**

i) INDICATORS: We track the progress in terms of concept development along predefined MILESTONES. We also set up global limit values for both goals: 1) We establish limit values ON EMISSION PARAMETERS for new investments, e.g. on nitrogen, TOC (total organic carbon) or phosphorous concentrations. 2) We measure the PERCENTAGE OF ACTIVE INGREDIENTS (AI) THAT HAVE PASSED THE RISK ASSESSMENT as key indicator to track the progress of the concept development. During the risk assessments we measure the AI CONCENTRATION LEVELS to decide on threshold values. ii) The THRESHOLD FOR SUCCESS is the successful establishment and company-wide implementation of the limit values related to emissions standards and AI concentration levels. iii) PROGRESS: We have finalized the concept development and the company-wide procedure to implement the concept. Furthermore, all sites except for the newly acquired agricultural business have conducted the AI risk assessment to decide on a threshold level. The next step for the newly acquired agricultural business sites is to conduct the AI risk assessment to decide on a threshold level as well. We are currently working on our Water Stewardship Strategy and continue our work on water targets together with our divisions. Our core elements within this topic are Operation, Value chain and Partnering. Our plan is to set up a new overall water commitment, define new targets and develop a new water position based on our Water Stewardship Strategy.

**W9. Verification**

**W9.1**

**(W9.1) Do you verify any other water information reported in your CDP disclosure (not already covered by W5.1a)?**

Yes

**W9.1a**

**(W9.1a) Which data points within your CDP disclosure have been verified, and which standards were used?**

Disclosure module	Data verified	Verification standard	Please explain
W1 Current state	Total water withdrawals, usage and discharges for all environmentally relevant sites worldwide; Water-related supplier engagement activities; Total recycled water for all environmentally relevant sites worldwide	ISAE 3000	Total water withdrawals, usage, discharges and the amount of recycled water as well as water-related supplier engagement activities are described within Bayer's Sustainability Report 2019, which is verified by the auditor Deloitte. Thus, they are included in the verification process.
W8 Targets	Water goals and targets	ISAE 3000	Water targets and their monitoring are included in Bayer's Sustainability Report, which is verified by the auditor Deloitte. Thus, they are included in the verification process.

**W10. 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.**

Further information for W2.2:

To identify and monitor water-related environmental or compliance issues, we reviewed answers provided by our sites for Bayer's Annual Report regarding the corresponding GRI indicators for environmental compliance as well as their answers in internal tools such as BaySIS, where we report compliance-related incidents such as "environmental incidents" and "transport incidents" with potential environmental impact. "Environmental incidents" are defined as incidents in the course of our business activities that result in the release of substances into the environment. Factors that determine whether there is a reporting obligation include, in particular, the nature and quantity of the substance, the amount of damage caused or any consequences for nearby residents. In accordance with our internal voluntary commitment, we report any leakage of substances with a high hazard potential from a quantity of 100 kg upward. "Transport incidents" include accidents that cause personal injury, significant damage to property, environmental impact through the release of substances, or leakage of hazardous materials. We record transport incidents using defined criteria. Assessment is based on the leaked load, graded according to the volume and hazardous material class, personal injury and blocked transportation routes. We take into account both our own chemical transport movements and those we commission and pay third parties to perform on our behalf. Based on this review, no relevant compliance incident related to water was identified. We further discussed this result with our HSE managers who confirmed the finding above.

### W10.1

**(W10.1) Provide details for the person that has signed off (approved) your CDP water response.**

	Job title	Corresponding job category
Row 1	Bayer AG Chairman of the Board of Management (CEO) and Chief Sustainability Officer (CSO) Chairman of the Board of Management (CEO) and Chief Sustainability Officer (CSO)	Board chair

### W10.2

**(W10.2) Please indicate whether your organization agrees for CDP to transfer your publicly disclosed data on your impact and risk response strategies to the CEO Water Mandate's Water Action Hub [applies only to W2.1a (response to impacts), W4.2 and W4.2a (response to risks)].**

Yes

### SW. Supply chain module

#### SW0.1

**(SW0.1) What is your organization's annual revenue for the reporting period?**

	Annual revenue
Row 1	43545000000

#### SW0.2

**(SW0.2) Do you have an ISIN for your organization that you are willing to share with CDP?**

Yes

#### SW0.2a

**(SW0.2a) Please share your ISIN in the table below.**

	ISIN country code	ISIN numeric identifier (including single check digit)
Row 1	DE	000BAY0017

#### SW1.1

**(SW1.1) Could any of your facilities reported in W5.1 have an impact on a requesting CDP supply chain member?**

This is confidential

SW1.2

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(SW1.2) Are you able to provide geolocation data for your facilities?

	Are you able to provide geolocation data for your facilities?	Comment
Row 1	No, this is confidential data	

SW2.1

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(SW2.1) Please propose any mutually beneficial water-related projects you could collaborate on with specific CDP supply chain members.

**Requesting member**

BMW AG

**Category of project**

Other

**Type of project**

Other, please specify

**Motivation**

**Estimated timeframe for achieving project**

Please select

**Details of project**

Customers are kindly asked to address their specific information requests directly to their respective contacts as information can only be provided directly to the custom

**Projected outcome**

---

**Requesting member**

California Department of General Services (DGS)

**Category of project**

Other

**Type of project**

Other, please specify

**Motivation**

**Estimated timeframe for achieving project**

Please select

**Details of project**

Customers are kindly asked to address their specific information requests directly to their respective contacts as information can only be provided directly to the custom

**Projected outcome**

---

**Requesting member**

S.C. Johnson & Son, Inc.

**Category of project**

Other

**Type of project**

Other, please specify

**Motivation**

**Estimated timeframe for achieving project**

Please select

**Details of project**

Customers are kindly asked to address their specific information requests directly to their respective contacts as information can only be provided directly to the custom

**Projected outcome**

---

**Requesting member**

Wal Mart de Mexico

**Category of project**

Other

**Type of project**

Other, please specify

**Motivation**

**Estimated timeframe for achieving project**

Please select

**Details of project**

Customers are kindly asked to address their specific information requests directly to their respective contacts as information can only be provided directly to the custom

**Projected outcome**

---

SW2.2

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(SW2.2) Have any water projects been implemented due to CDP supply chain member engagement?

No

SW3.1

---

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(SW3.1) Provide any available water intensity values for your organization's products or services.

**Product name**

**Water intensity value**

**Numerator: Water aspect**

Please select

**Denominator**

**Comment**

Diversity of product lines makes accurately accounting for each product / product line cost ineffective. Furthermore, doing so would require we disclose business sensitive / proprietary information.

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[Submit your response](#)

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**In which language are you submitting your response?**

English

**Please confirm how your response should be handled by CDP**

	I am submitting to	Public or Non-Public Submission	Are you ready to submit the additional Supply Chain Questions?
I am submitting my response	Investors Customers	Public	Yes, submit Supply Chain Questions now

**Please confirm below**

I have read and accept the applicable Terms