

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. Our divisions together with our enabling functions represent all units and functions across the organization. We operate sites around the world, and some are used by multiple segments. As of December 31, 2021, the Bayer Group comprised 375 consolidated companies in 83 countries.

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?

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 2021	December 31 2021

W0.3

(W0.3) Select the countries/areas in which you operate.

- Algeria
- Argentina
- Australia
- Austria
- Bangladesh
- Belgium
- Bermuda
- Bolivia (Plurinational State of)
- Brazil
- British Virgin Islands
- Bulgaria
- Burkina Faso
- Canada
- Chile
- China
- Colombia
- Costa Rica
- Côte d'Ivoire
- Croatia

Curaçao
Cyprus
Czechia
Denmark
Dominican Republic
Ecuador
Egypt
El Salvador
Finland
France
Germany
Greece
Guatemala
Honduras
Hong Kong SAR, China
Hungary
India
Indonesia
Ireland
Israel
Italy
Japan
Kazakhstan
Kenya
Lithuania
Luxembourg
Malawi
Malaysia
Mexico
Morocco
Netherlands
New Zealand
Nicaragua
Norway
Pakistan
Panama
Paraguay
Peru
Philippines
Poland
Portugal
Puerto Rico
Republic of Korea
Romania
Russian Federation
Saudi Arabia
Serbia
Singapore
Slovakia
Slovenia
South Africa
Spain
Sweden
Switzerland
Taiwan, China
Thailand
Turkey
Ukraine
United Arab Emirates
United Kingdom of Great Britain and Northern Ireland
United States of America
Uruguay
Viet Nam
Zambia

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

W0.7

(W0.7) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization.	Provide your unique identifier
Yes, an ISIN code	DE000BAY0017

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	<p>DIRECT OPERATIONS:</p> <p>1) PRIMARY USE: The PRIMARY USE of FRESHWATER is for cooling purposes (~35% of water used), the production process (~45% of water used) and irrigation of field and greenhouses for seed production (~20% of water used).</p> <p>2) SELECTED IMPORTANCE: Clean water is a limiting factor for our production and THUS considered VITAL. 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.</p> <p>3) FUTURE DEPENDENCY: We expect our FUTURE DEPENDENCY IN DIRECT OPERATIONS to remain the same BECAUSE freshwater will remain vital for our production and the irrigation of fields with our current strategy.</p> <p>INDIRECT OPERATIONS:</p> <p>1) PRIMARY 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.</p> <p>2) SELECTED IMPORTANCE: It is THUS considered VITAL since it could impede raw material/product supply and/or hamper the use of our Crop Science products.</p> <p>3) FUTURE DEPENDENCY: We expect our FUTURE DEPENDENCY IN INDIRECT OPERATIONS to remain the same BECAUSE freshwater will remain vital to ensure the provision of raw materials and products and the use of our products by our customers.</p>
Sufficient amounts of recycled, brackish and/or produced water available for use	Important	Important	<p>DIRECT OPERATIONS:</p> <p>1) PRIMARY 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. Moreover, brackish and produced water are not material for Bayer.</p> <p>2) SELECTED IMPORTANCE: 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-freshwater in direct operations as important.</p> <p>3) FUTURE DEPENDENCY: We expect our FUTURE DEPENDENCY IN DIRECT OPERATIONS to remain the same BECAUSE we are expecting a similar water availability situation across our sites as today based on current forecasts.</p> <p>INDIRECT OPERATIONS:</p> <p>1) PRIMARY USE: The PRIMARY USE IN THE VALUE CHAIN is identical to Bayer, i.e. recycled water is used for cooling purposes.</p> <p>2) SELECTED IMPORTANCE: In general, it has neutral importance for our value/supply chain. However, we selected "IMPORTANT" BECAUSE we encourage our supply chain to efficiently utilize resources, including water.</p> <p>3) FUTURE DEPENDENCY: We expect the FUTURE DEPENDENCY IN INDIRECT OPERATIONS to remain the same BECAUSE we expect our suppliers and customers to continue using non-fresh water in the current limited manner.</p>

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%	<p>METHOD AND FREQUENCY:</p> <p>1) ON-SITE: Through the WATER MANAGEMENT SYSTEMS (WMS), which are installed at ALL environmentally relevant SITES, water-related key performance indicators are REGULARLY measured and monitored. Due to widely varying local situations (esp. with regards to water scarcity), each WMS is designed individually on the basis of a risk analysis that takes into account local circumstances and the main parameters of our water supply and disposal. Monitoring INTERVALS range from continuous to daily, monthly to annually, depending on the indicator and type of site. Key figures are monitored directly at our sites via CONTINUOUS ONLINE MONITORING. Often, our online monitoring system is directly connected to monitoring systems of local authorities.</p> <p>2) CENTRAL: Total water withdrawals are monitored ANNUALLY via "BaySIS". See also W-FI. Regular monitoring allows us to set respective targets in sites with relevant water parameters and to initiate corrective actions.</p>

	% of sites/facilities/operations	Please explain
Water withdrawals – volumes by source	100%	METHOD AND FREQUENCY: 1) ON-SITE: Through the WATER MANAGEMENT SYSTEMS (WMS), which are installed at ALL environmentally relevant SITES, water-related key performance indicators are REGULARLY measured and monitored. Due to widely varying local situations (esp. with regards to water scarcity), each WMS is designed individually on the basis of a risk analysis that takes into account local circumstances and the main parameters of our water supply and disposal. Monitoring INTERVALS range from continuous to daily, monthly to annually, depending on the indicator and type of site. Key figures are monitored directly at our sites via CONTINUOUS ONLINE MONITORING. Often, our online monitoring system is directly connected to monitoring systems of local authorities. 2) CENTRAL: Water withdrawal volumes by source are monitored ANNUALLY via "BaySIS". See also W-Fi. Regular monitoring allows 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	76-99	METHOD AND FREQUENCY: 1) ON-SITE: Through the WATER MANAGEMENT SYSTEMS (WMS), which are installed at ALL environmentally relevant sites, water-related key performance indicators are REGULARLY measured and monitored. Due to widely varying local situations, each WMS is designed individually. Monitoring INTERVALS have a range, depending on indicator and type of site. All health care sites have to analyze the incoming water. Parameters are measured to determine water quality as needed, e.g. quality is highly relevant to prevent unnoticed effects on the breeding results. Sites with own wells monitor groundwater salinization. When dependent from third party supply, we rely on the contractually agreed quality controls by them. As we are not able to guarantee 100% coverage, we selected 76-99 % of sites. Adherence to legal regulations is checked regularly e.g. through our internal (HSE) audits. 2) CENTRAL: We do not monitor this aspect via "BaySIS", due to local specifics of the topic.
Water discharges – total volumes	100%	METHOD AND FREQUENCY: 1) ON-SITE: Through the WATER MANAGEMENT SYSTEMS (WMS), which are installed at ALL environmentally relevant SITES, water-related key performance indicators are REGULARLY measured and monitored. Due to widely varying local situations (esp. with regards to water scarcity), each WMS is designed individually on the basis of a risk analysis that takes into account local circumstances and the main parameters of our water supply and disposal. Monitoring INTERVALS range from continuous to daily, monthly to annually, depending on the indicator and type of site. Key figures are monitored directly at our sites via CONTINUOUS ONLINE MONITORING. Often, our online monitoring system is directly connected to monitoring systems of local authorities. 2) CENTRAL: Total water discharges are monitored ANNUALLY via "BaySIS". See also W-Fi. Regular monitoring allows 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: 1) ON-SITE: Through the WATER MANAGEMENT SYSTEMS (WMS), which are installed at ALL environmentally relevant SITES, water-related key performance indicators are REGULARLY measured and monitored. Due to widely varying local situations (esp. with regards to water scarcity), each WMS is designed individually on the basis of a risk analysis that takes into account local circumstances and the main parameters of our water supply and disposal. Monitoring INTERVALS range from continuous to daily, monthly to annually, depending on the indicator and type of site. Key figures are monitored directly at our sites via CONTINUOUS ONLINE MONITORING. Often, our online monitoring system is directly connected to monitoring systems of local authorities. 2) CENTRAL: Water discharges by destination are monitored ANNUALLY via "BaySIS". See also W-Fi. Regular monitoring allows 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: 1) ON-SITE: Through the WATER MANAGEMENT SYSTEMS (WMS), which are installed at ALL environmentally relevant sites, water-related key performance indicators are REGULARLY measured and monitored. Due to widely varying local situations (esp. with regards to water scarcity), each WMS is designed individually on the basis of a risk analysis that takes into account local circumstances and the main parameters of our water supply and disposal. Monitoring INTERVALS range from continuous to daily, monthly to annually, depending on the indicator and type of site. Key figures are monitored directly at our sites via CONTINUOUS ONLINE MONITORING. Often, our online monitoring system is directly connected to monitoring systems of local authorities. 2) CENTRAL: Water discharges by treatment method are monitored ANNUALLY via "BaySIS". See also W-Fi. Regular monitoring allows 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: 1) ON-SITE: Through the WATER MANAGEMENT SYSTEMS (WMS), which are installed at ALL environmentally relevant SITES, water-related key performance indicators are REGULARLY measured and monitored. Due to widely varying local situations (esp. with regards to water scarcity), each WMS is designed individually on the basis of a risk analysis that takes into account local circumstances and the main parameters of our water supply and disposal. Monitoring INTERVALS range from continuous to daily, monthly to annually, depending on the indicator and type of site. Key figures are monitored directly at our sites via CONTINUOUS ONLINE MONITORING. Often, our online monitoring system is directly connected to monitoring systems of local authorities. 2) CENTRAL: Water discharge quality is monitored ANNUALLY via "BaySIS". See also W-Fi. Regular monitoring allows 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: 1) ON-SITE: Through the WATER MANAGEMENT SYSTEMS (WMS), which are installed at ALL environmentally relevant sites, water-related key performance indicators are REGULARLY measured and monitored. Due to widely varying local situations (esp. with regards to water scarcity), each WMS is designed individually on the basis of a risk analysis that takes into account local circumstances and the main parameters of our water supply and disposal. Discharge temperatures are monitored directly at our sites via CONTINUOUS ONLINE MONITORING each time that water is discharged. Often, our online monitoring system is directly connected to monitoring systems of 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. 2) CENTRAL: We do not monitor this aspect via "BaySIS", due to local specifics of the topic.
Water consumption – total volume	100%	METHOD AND FREQUENCY: 1) ON-SITE: Through the WATER MANAGEMENT SYSTEMS (WMS), which are installed at ALL environmentally relevant SITES, water-related key performance indicators are REGULARLY measured and monitored. Due to widely varying local situations (esp. with regards to water scarcity), each WMS is designed individually on the basis of a risk analysis that takes into account local circumstances and the main parameters of our water supply and disposal. Monitoring INTERVALS range from continuous to daily, monthly to annually, depending on the indicator and type of site. Key figures are monitored directly at our sites via CONTINUOUS ONLINE MONITORING. Often, our online monitoring system is directly connected to monitoring systems of local authorities. 2) CENTRAL: Total water consumption is monitored ANNUALLY via "BaySIS". See also W-Fi. Regular monitoring allows us to set respective targets in sites with relevant water parameters and to initiate corrective actions.

	% of sites/facilities/operations	Please explain
Water recycled/reused	100%	<p>METHOD AND FREQUENCY:</p> <p>1) ON-SITE: Through the WATER MANAGEMENT SYSTEMS (WMS), which are installed at ALL environmentally relevant SITES, water-related key performance indicators are REGULARLY measured and monitored. Due to widely varying local situations (esp. with regards to water scarcity), each WMS is designed individually on the basis of a risk analysis that takes into account local circumstances and the main parameters of our water supply and disposal. Monitoring INTERVALS range from continuous to daily, monthly to annually, depending on the key performance indicator and type of site. Key figures are monitored directly at our sites via CONTINUOUS ONLINE MONITORING. Often, our online monitoring system is directly connected to monitoring systems of local authorities.</p> <p>2) CENTRAL: Water recycled or reused is monitored ANNUALLY via "BaySIS". See W-FI. Regular monitoring allows us to set respective targets in sites with relevant water parameters and to initiate corrective actions.</p>
The provision of fully-functioning, safely managed WASH services to all workers	76-99	<p>Health and safety of 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 in 2021 actively participated in the Human Rights and WASH Working Group.</p> <p>METHOD AND FREQUENCY:</p> <p>1) ON-SITE: 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.</p> <p>2) CENTRAL: 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.</p>

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	54961	About the same	<p>In 2021, total water withdrawal was ABOUT THE SAME as last year DUE TO the fact that there were no significant changes in business activities and the number of sites remained unchanged.</p> <p>Water volumes from all sources are expected to stay about the same IN THE FUTURE, as no significant changes are expected.</p> <p>Total withdrawals comprise groundwater, surface water, drinking water supply, rainwater, externally purified wastewater and third parties.</p> <p>Volumetric data have been compiled from our central BAYER SITE INFORMATION SYSTEM "BaySIS". BaySIS is a company-wide measurement and monitoring tool with both data supply and direct access for the individual sites as well as centralized controlling. Thresholds applied for comparison with previous reporting year: About the same: <5% Lower / Higher: 5%<15% Much lower / higher: >=15%</p> <p>Please note that differences between volumes of water withdrawn, consumed and 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 exactly equal total water withdrawals minus discharges (C (18,236) ≠ W (54,961) - D (36,799), the deviation is less than 0.2%.</p>
Total discharges	36799	About the same	<p>In 2021, total water discharges from production were ABOUT THE SAME as last year DUE TO the fact that there were no significant changes in business activities and the number of sites remained unchanged.</p> <p>Please note: We further align our water reporting with CDP requirements and are reporting for 2021 once-through and circulation cooling water as discharge.</p> <p>Water discharges are expected to decrease IN THE FUTURE because Bayer works continuously on reducing the discharges.</p> <p>Total discharges comprise process wastewater as well as once-through and circulation cooling water. All discharge categories are differentiated between with and without subsequent treatment.</p> <p>Volumetric data have been compiled from our central BAYER SITE INFORMATION SYSTEM "BaySIS". BaySIS is a company-wide measurement and monitoring tool with both data supply and direct access for the individual sites as well as centralized controlling. Thresholds applied for comparison with previous reporting year: About the same: <5% Lower / Higher: 5%<15% Much lower / higher: >=15%</p> <p>Please note that differences between volumes of water withdrawn, consumed and 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 exactly equal total water withdrawals minus discharges (C (18,236) ≠ W (54,961) - D (36,799), the deviation is less than 0.2%.</p>
Total consumption	18236	About the same	<p>In 2021, total water consumption was ABOUT THE SAME as last year DUE TO the fact that there were no significant changes in business activities and the number of sites remained unchanged.</p> <p>Please note: We further align our water reporting with CDP requirements and are reporting for 2021 once-through and circulation cooling water as discharge and include evaporation losses as consumption.</p> <p>Water consumption is expected to stay about the same IN THE FUTURE as no significant changes are expected.</p> <p>Total consumption comprises irrigation activities and water used in utility processes on site (e.g. evaporation loss in cooling tower, water for steam generation, water in product sold, blow down losses).</p> <p>Volumetric data have been compiled from our central BAYER SITE INFORMATION SYSTEM "BaySIS". BaySIS is a company-wide measurement and monitoring tool with both data supply and direct access for the individual sites as well as centralized controlling. Thresholds applied for comparison with previous reporting year: About the same: <5% Lower / Higher: 5%<15% Much lower / higher: >=15%</p> <p>Categories of consumption are mostly based on aggregation of local measurements or based on local calculations depending on individual infrastructure of reporting sites. All sites are required to report a water balance in equilibrium with a tolerance range of +/- 5 % in order to account for potential inaccuracy of measurement devices.</p> <p>Please note that differences between volumes of water withdrawn, consumed and 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 and the above described tolerance range for reported water balances. This is why total water consumption does not exactly equal total water withdrawals minus discharges (C (18,236) ≠ W (54,961) - D (36,799), the deviation is less than 0.2%.</p>

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	Lower	WRI Aqueduct	<p>APPLICATION OF TOOL TO EVALUATE WHETHER WATER HAS BEEN WITHDRAWN FROM STRESSED AREAS:</p> <p>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 Aqueduct 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 Aqueduct analysis and defined those sites as "large user", which used more than 0.1% of our total water use. In this process 14 Bayer sites were identified based on 2021 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 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).</p> <p>REDUCTION OF WITHDRAWALS FROM AREAS WITH WATER STRESS:</p> <p>In 2021, water withdrawals of the five largest sites (as reported 2020) located in water-scarce regions DECREASED 12.0%.</p> <p>We aim to identify potential for improvement particularly at sites located in water-scarce areas or in areas identified as being threatened by water scarcity, and use as little water there as possible.</p> <p>By the end of 2020, we had already established water management systems at all relevant sites in regions threatened by water scarcity. We are aware that climate change will further exacerbate the problem of water scarcity in the future. To avert future risks for our production capacities and the local communities, we will establish by 2023 suitable water management systems at all relevant sites that will be threatened by water scarcity by 2030.</p>

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	16104	Much lower	<p>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.</p> <p>ii) In 2021, total water withdrawal from fresh surface water was MUCH LOWER compared to 2020. This is DUE TO the fact that significant water-saving measures were undertaken at one site in Mexico.</p> <p>iii) All volumes are measured and monitored in our central BAYER SITE INFORMATION SYSTEM "BaySIS". It is a company-wide measurement and monitoring tool with both data supply and direct access for the individual sites as well as centralized controlling. Thresholds applied for comparison with previous reporting year: About the same: <5% Lower / Higher: 5%<15% Much lower / higher: >=15%</p>
Brackish surface water/Seawater	Not relevant	<Not Applicable>	<Not Applicable>	<p>As in previous years, brackish surface water was NOT RELEVANT in 2021 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.</p>
Groundwater – renewable	Relevant	20631	About the same	<p>i) Groundwater is RELEVANT BECAUSE we have own wells in many sites for our own water supply.</p> <p>ii) In 2021, total water withdrawal from groundwater was ABOUT THE SAME compared to 2020. This is DUE TO the fact that there were no significant changes of business activities and the number of sites remained unchanged.</p> <p>iii) All volumes are measured and monitored in our central BAYER SITE INFORMATION SYSTEM "BaySIS". BaySIS is a company-wide measurement and monitoring tool with both data supply and direct access for the individual sites as well as centralized controlling. Thresholds applied for comparison with previous reporting year: About the same: <5% Lower / Higher: 5%<15% Much lower / higher: >=15%</p>
Groundwater – non-renewable	Not relevant	<Not Applicable>	<Not Applicable>	<p>As in previous years, non-renewable groundwater was NOT RELEVANT in 2021 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.</p>
Produced/Entrained water	Relevant	701	Lower	<p>i) Water from produced water / process water is RELEVANT BECAUSE we extract produced water from our raw materials and from production processes.</p> <p>ii) In 2021, total water withdrawal from produced water / process water was LOWER compared to 2020 DUE TO several individual process reviews of production sites.</p> <p>iii) All volumes are measured and monitored in our central BAYER SITE INFORMATION SYSTEM "BaySIS". BaySIS is a company-wide measurement and monitoring tool with both data supply and direct access for the individual sites as well as centralized controlling. Thresholds applied for comparison with previous reporting year: About the same: <5% Lower / Higher: 5%<15% Much lower / higher: >=15%</p>
Third party sources	Relevant	17525	Higher	<p>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.</p> <p>ii) In 2021, total water withdrawal from third party sources was HIGHER compared to 2020. This is DUE TO recovery after the impact of the pandemic situation in the water consumption of selected sites and products.</p> <p>iii) All volumes are measured and monitored in our central BAYER SITE INFORMATION SYSTEM "BaySIS". BaySIS is a company-wide measurement and monitoring tool with both data supply and direct access for the individual sites as well as centralized controlling. Thresholds applied for comparison with previous reporting year: About the same: <5% Lower / Higher: 5%<15% Much lower / higher: >=15%</p>

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	28711	About the same	<p>i) Discharges to fresh surface water are RELEVANT in sites where water can be directly returned to the natural water cycle after treatment in our own treatment plants or without treatment (after being carefully tested and categorized as environmentally safe according to official provisions). All wastewater is subject to strict controls before it is discharged. 33.2% of water discharged 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.</p> <p>ii) In 2021, total water discharges to fresh surface water were ABOUT THE SAME compared to 2020. This is DUE TO the fact that there were no significant changes of business activities and the number of sites remained unchanged.</p> <p>Note: We further align our water reporting with CDP requirements and are reporting for 2021 once-through and circulation cooling water as discharge to fresh surface water.</p> <p>iii) Monitoring and threshold definition see W-FI.</p>
Brackish surface water/seawater	Relevant	267	Much higher	<p>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 treatment in our own water treatment plants or after careful analysis, during which it is categorized as environmentally safe according to official provisions and returned to the natural water cycle.</p> <p>ii) In 2021, total water discharges to brackish surface water/seawater were MUCH HIGHER compared to 2020. This is DUE TO the fact that the share of release to brackish or sea surface water is consistently on a very low level and the shift from only one minor site has a relative large effect on the previous reporting year. There were no significant changes of business activities and the number of sites remained unchanged.</p> <p>iii) Monitoring and threshold definition see W-FI.</p>
Groundwater	Relevant	2017	Much lower	<p>i) Discharges to groundwater are RELEVANT because in some sites we operate absorption wells. After being carefully tested and categorized as environmentally safe according to official provisions, the water seeps into the ground, permeates the soil and finally refills the groundwater. For the sake of balanced reporting the stated volume of 2,017 megaliters/year includes other discharge categories that did not match any other listed category such as groundwater formations, absorption wells, seepage and others.</p> <p>ii) In 2021, total water discharges to groundwater were MUCH LOWER compared to 2020 DUE TO reduction of activity of relevant sites.</p> <p>iii) Monitoring and threshold definition see W-FI.</p>
Third-party destinations	Relevant	5804	About the same	<p>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 2021, 78.0% of Bayer's industrial wastewater were treated within direct operations and 22.0% were treated by third parties. Discharges to third parties include wastewater that after treatment may be used in other organizations or is re-entering the water use in Bayer facilities.</p> <p>ii) In 2021, total water discharges to third party destinations were ABOUT THE SAME compared to 2020 DUE TO the fact that there were no significant changes of business activities and the number of sites remained unchanged.</p> <p>iii) Monitoring and threshold definition see W-FI.</p>

W1.2j

(W1.2j) Within your direct operations, indicate the highest level(s) to which you treat your discharge.

	Relevance of treatment level to discharge	Volume (megaliters/year)	Comparison of treated volume with previous reporting year	% of your sites/facilities/operations this volume applies to	Please explain
Tertiary treatment	Relevant	6245	About the same	1-10	<p>i) RATIONALE FOR TREATMENT LEVEL: Several Bayer facilities have to meet strict water quality targets, thus requiring tertiary treatment within Bayer operated water treatment plants. At all those sites, we apply biological denitrification /nitrification to remove nitrogen and phosphorus. Many sites apply additional treatment steps such as coagulation, sedimentation, activated carbon adsorption and ion exchange. All wastewater is subject to strict controls before it is discharged into the various disposal channels.</p> <p>ii) COMPLIANCE WITH REGULATORY AND/OR VOLUNTARY STANDARDS: Adherence to legal regulations is checked regularly e.g. through our internal HSE audits and internal audits from the site which take place every 1-3 years. Furthermore, in an ongoing project, Bayer has established voluntary internal standards for active ingredients (AI). Around 90% of AI emissions are already below these internal standards. We will work towards meeting the internal standards for all emissions in the next years.</p> <p>iii) Tertiary treatment is RELEVANT because our wastewater contains contaminants that have to be removed before discharge.</p> <p>iv) In 2021, tertiary treatment water discharges were ABOUT THE SAME compared to 2020. This is DUE TO the fact that there were no significant changes of business activities and the number of sites remained unchanged and no major changes in the infrastructure of sites occurred.</p> <p>Thresholds applied for comparison with previous reporting year: About the same: <5% Lower / Higher: 5%<15% Much lower / higher: >=15%</p> <p>v) Water discharges from tertiary treatment are expected to stay about the same IN THE FUTURE as no significant changes are expected in the production processes.</p>

	Relevance of treatment level to discharge	Volume (megaliters/year)	Comparison of treated volume with previous reporting year	% of your sites/facilities/operations this volume applies to	Please explain
Secondary treatment	Relevant	9895	About the same	11-20	<p>i) RATIONALE FOR TREATMENT LEVEL: Several Bayer facilities have to meet strict water quality targets, thus requiring secondary treatment within Bayer operated water treatment plants. All wastewater is subject to strict controls before it is discharged into the various disposal channels.</p> <p>ii) COMPLIANCE WITH REGULATORY AND/OR VOLUNTARY STANDARDS: Adherence to legal regulations is checked regularly e.g. through our internal HSE Audits and internal audits from the site which take place every 1-3 years. Furthermore, in an ongoing project, Bayer has established voluntary internal standards for active ingredients (AI). Around 90% of AI emissions are already below these internal standards. We will work towards meeting the internal standards for all emissions in the next years.</p> <p>iii) Secondary treatment is RELEVANT because our wastewater contains contaminants that have to be removed before discharge.</p> <p>iv) In 2021, secondary treatment water discharges were ABOUT THE SAME compared to 2020. This is DUE TO the fact that there were no significant changes of business activities and the number of sites remained unchanged and no major changes in the infrastructure of sites occurred. Thresholds applied for comparison with previous reporting year: About the same: <5% Lower / Higher: 5%<15% Much lower / higher: >=15%</p> <p>v) Water discharges from secondary treatment are expected to stay about the same IN THE FUTURE as no significant changes are expected in the production processes.</p>
Primary treatment only	Relevant	2490	About the same	11-20	<p>i) RATIONALE FOR TREATMENT LEVEL: Operations with primary treatment only represent a minor portion of Bayer sites because most wastewater streams are treated further.</p> <p>ii) COMPLIANCE WITH REGULATORY AND/OR VOLUNTARY STANDARDS: Adherence to legal regulations is checked regularly e.g. through our internal HSE Audits and internal audits from the site which take place every 1-3 years. Furthermore, in an ongoing project, Bayer has established voluntary internal standards for active ingredients (AI). Around 90% of AI emissions are already below these internal standards. We will work towards meeting the internal standards for all emissions in the next years.</p> <p>iii) Primary treatment is RELEVANT.</p> <p>iv) In 2021, primary treatment water discharges were ABOUT THE SAME compared to 2020. This is DUE TO the fact that there were no significant changes of business activities and the number of sites remained unchanged and no major changes in the infrastructure of sites occurred. Thresholds applied for comparison with previous reporting year: About the same: <5% Lower / Higher: 5%<15% Much lower / higher: >=15%</p> <p>v) Water discharges from primary treatment are expected to stay about the same IN THE FUTURE as no significant changes are expected in the production processes.</p>
Discharge to the natural environment without treatment	Relevant	169	Much lower	1-10	<p>i) RATIONALE FOR TREATMENT LEVEL: All wastewater is subject to strict controls before it is discharged into the various disposal channels. Following careful analysis this volume was categorized as not environmentally hazardous according to official provisions and returned to the natural water cycle.</p> <p>ii) COMPLIANCE WITH REGULATORY AND/OR VOLUNTARY STANDARDS: Adherence to legal regulations is checked regularly e.g. through our internal HSE Audits and internal audits from the site which take place every 1-3 years. Furthermore, in an ongoing project, Bayer has established voluntary internal standards for active ingredients (AI). Around 90% of AI emissions are already below these internal standards. We will work towards meeting the internal standards for all emissions in the next years.</p> <p>iii) Water discharges to the natural environment without treatment are less RELEVANT.</p> <p>iv) In 2021, water discharges to the natural environment without treatment were MUCH LOWER compared to 2020 DUE TO adjustments in our control and measurement systems in some sites, while operations remain the same. Thresholds applied for comparison with previous reporting year: About the same: <5% Lower / Higher: 5%<15% Much lower / higher: >=15%</p> <p>v) Water discharges to the natural environment without treatment are expected to stay about the same IN THE FUTURE as no significant changes are expected in the production processes.</p>
Discharge to a third party without treatment	Relevant	5782	About the same	81-90	<p>i) RATIONALE FOR TREATMENT LEVEL: Many sites do not have wastewater treatment within direct operations, but discharge their wastewater to third party facilities, e.g. wastewater treatment plants or incinerators. All wastewater is subject to strict controls before it is discharged into the various disposal channels.</p> <p>ii) COMPLIANCE WITH REGULATORY AND/OR VOLUNTARY STANDARDS: Adherence to legal regulations is checked regularly e.g. through our internal HSE Audits and internal audits from the site which take place every 1-3 years. Furthermore, in an ongoing project, Bayer has established voluntary internal standards for active ingredients (AI). Around 90% of AI emissions are already below these internal standards. We will work towards meeting the internal standards for all emissions in the next years.</p> <p>iii) Water discharges to third party destinations are RELEVANT.</p> <p>iv) In 2021, water discharges to third party destinations were ABOUT THE SAME compared to 2020. This is DUE TO the fact that there were no significant changes of business activities and the number of sites remained unchanged and no major changes in the infrastructure of sites occurred. Thresholds applied for comparison with previous reporting year: About the same: <5% Lower / Higher: 5%<15% Much lower / higher: >=15%</p> <p>v) Water discharges to third parties without treatment are expected to stay about the same IN THE FUTURE as no significant changes are expected in the production processes.</p>

	Relevance of treatment level to discharge	Volume (megaliters/year)	Comparison of treated volume with previous reporting year	% of your sites/facilities/operations this volume applies to	Please explain
Other	Relevant	12218	Lower	1-10	<p>i) RATIONALE FOR TREATMENT LEVEL: 33.2% of water discharged 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. Evaporation explains the difference between water withdrawn for cooling and cooling water returned as discharge.</p> <p>ii) COMPLIANCE WITH REGULATORY AND/OR VOLUNTARY STANDARDS: Adherence to legal regulations is checked regularly e.g. through our internal HSE Audits and internal audits from the site which take place every 1-3 years. Furthermore, in an ongoing project, Bayer has established voluntary internal standards for active ingredients (AI). Around 90% of AI emissions are already below these internal standards. We will work towards meeting the internal standards for all emissions in the next years.</p> <p>iii) Other discharges are RELEVANT.</p> <p>iv) In 2021, other water discharges were LOWER compared to 2020. This is DUE TO reduction of activity of relevant sites. Thresholds applied for comparison with previous reporting year: About the same: <5% Lower / Higher: 5%<15% Much lower / higher: >=15%</p> <p>v) Other water discharges are expected to stay about the same IN THE FUTURE as no significant changes are expected in the production processes.</p>

W1.3

(W1.3) Provide a figure for your organization's total water withdrawal efficiency.

	Revenue	Total water withdrawal volume (megaliters)	Total water withdrawal efficiency	Anticipated forward trend
Row 1	4408100000	54961	802041.447571915	Our withdrawal efficiency is expected to stay ABOUT THE SAME IN THE FUTURE as no significant changes are expected in our business activities.

W-CH1.3

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

W1.4

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

Yes, our suppliers

Yes, our customers or other value chain partners

W1.4a

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

Row 1

% of suppliers by number

1-25

% of total procurement spend

76-100

Rationale for this coverage

i) **WHY THEY WERE SELECTED:** With the BAYER SUPPLY CHAIN RISK SCORING FRAMEWORK we evaluate water risks considering countries/regions with water risk according to Aqueeduct tool assessment and suppliers belonging to activity segments being associated with water risk. In 2021, 95% of Bayer's total procurement spend had NO WATER RISKS, according to our continuous internal assessment and scoring, and therefore not requiring further water-related reporting requests from the related suppliers. From that 5% of procurement spend with potential water risks, approximately one third (34%) of the respective suppliers have done a sustainability evaluation in 2021, e.g. EcoVadis, TFS, CDP Water Security, CDP Supply Chain program, where it is asked to report their water stewardship incl. water withdrawals. Additionally, some suppliers with potential water risks in 2021 were also part of engagement activities, e.g., sites meetings with contractor growers in the US. Therefore, in 2021, around 97% OF OUR PROCUREMENT SPEND WAS ACTIVELY MANAGED REGARDING WATER-RELATED ISSUES: through internal assessments, specific water-related reporting requirements, water-related evaluations and engagement activities.

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. Already in 2020, we stipulated that all strategically important suppliers must present an EcoVadis assessment of at least 45 of 100 points ("green" assessment) or a comparable audit result. In addition, beginning in 2021, all potential new suppliers with a procurement spend of more than EUR 250,000 will be examined in advance with regard to sustainability aspects. Trainings and extensive information material, e.g. on responsible use of water, as offered by information platforms from the "Pharmaceutical Supply Chain Initiative" (PSCI) and the TFS Academy from the TFS Initiative are available for Suppliers. Bayer is part of the core team that developed and runs the TFS Academy. In 2021 and 2022 a Sustainability Supplier Development Framework was developed and is currently being rolled out that builds the infrastructure to bring specific sustainability topics to the supplier landscape in order to enhance their sustainability performance. This framework is interlinked and bases activities on the respective corrective action plans of sustainability evaluations.

Impact of the engagement and measures of success

i) 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.

ii) Wherever evaluation results are unsatisfactory, the INFORMATION IS USED to develop improvement measures. After the roll-out is complete this will happen via the described Sustainability Supplier Development Framework. 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. The Sustainability Supplier Development Framework foresees a strict consequence management in case of critical results and non-compliance of a supplier and besides milder measurements goes as far as phasing out suppliers. This Sustainability Supplier Development Process and consequence management are bound to strict timeframe and are interlinked with the evaluation cycle (1 year re-evaluation period for critical findings and 3 year re-evaluation period for milder findings).

iii) To MEASURE THE SUCCESS, we set ambitious targets and measure success in terms of target fulfillment, e.g. our target to evaluate all relevant suppliers by the end of 2021 was achieved to 97,5%. Due to pandemic situation 2.5% of relevant suppliers have postponed evaluation to 2022. In 2022, we will again aim to evaluate 100% of relevant supplier. SUCCESS IS also MEASURED through re-assessments or follow-up audits. Our regular monitoring shows that in 2021, 508 of our 879 suppliers evaluated have improved their sustainability performance.

Comment

After testing collaboration platforms until 2021, the TFS initiative developed and successfully rolled out the TFS Academy in 2022. Bayer is in the core team of the development and maintenance of this Academy. All Bayer suppliers have access to this unique learning environment that offers over 240 courses in 7 languages for all work levels from CPO to facility staff. It provides best practice examples, activities, e-learning, expert suggestions and more on the topics of water, energy and waste.

W1.4b

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

Type of engagement

Onboarding & compliance

Details of engagement

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

% of suppliers by number

76-100

% of total procurement spend

76-100

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 (SCoC). Bayer has developed a SCoC which sets forth key social, ecological and ethical standards that the Bayer Group expects 100% of its suppliers and subcontractors to share. The SCoC is based on the principles of the U.N. Global Compact and our Human Rights Position. Our human rights standards in procurement place particular value on the prevention of child labor and modern slavery. The SCoC is part of the supplier relationship and is included via the sustainability clause of the contract.

The Bayer SCoC takes into account the well-established principles of sustainability that have also been incorporated into some important internal regulations at the Bayer Group:

- Sustainability including water-related issues are a key element of Bayer's values and forms an integral part of our business strategy.
- With its Sustainable Development Policy, Bayer has clearly defined its commitment to the principles of sustainable development.

The principles expressed in our SCoC comprise an important component of supplier selection and evaluation. Moreover, we expect our suppliers to replicate these standards further down the supply chain. If a supplier is in breach of these principles and cannot agree on an improvement plan or does not implement it, Bayer reserves the right to redetermine the continuation of the commercial relationship. As a member of the Pharmaceutical Supply Chain Initiative (PSCI) and the Together for Sustainability (TfS) Initiative we fully support their principles in the areas of ethics, people and labor, health, safety and environment, quality and related governance and management systems.

Impact of the engagement and measures of success

i) **BENEFICIAL OUTCOMES OF THE ENGAGEMENT:** The SCoC is applied in the selection and evaluation of our suppliers and is integrated into electronic ordering

systems throughout the Bayer Group. As a result, suppliers must already commit to our core principles upon registration. Furthermore, our standard supply contracts contain a clause that authorizes us to verify suppliers' compliance with our sustainability requirements (see below).

ii) To MEASURE THE SUCCESS: Since the SCoC is already part of our supplier selection and evaluation process, we track approval in our electronic ordering system. Based on this onboarding requirement, we reserve the right to perform further evaluations and controls. These are part of our 4-step process to embed sustainability in the supply chain. You will find more information on this in the following rows.

Comment

N/A

Type of engagement

Incentivizing for improved water management and stewardship

Details of engagement

Water management and stewardship action is integrated into your supplier evaluation

% of suppliers by number

Less than 1%

% of total procurement spend

1-25

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 a dedicated sustainability clause is embedded in our electronic ordering systems and 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. This clause will be successively integrated into all new contracts and contracts that are up for renewal in 2022. BECAUSE it is not feasible to assess all 93,844 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 and the TFS Academy from the TFS Initiative are available for suppliers. Bayer is part of the core team that developed and runs the TFS Academy. In 2021 and 2022 a Sustainability Supplier Development Framework was developed and is currently being rolled out that builds the infrastructure to bring specific sustainability topics to the supplier landscape in order to enhance their sustainability performance. This framework is interlinked and bases activities on the respective corrective action plans of sustainability evaluations.

Impact of the engagement and measures of success

i) BENEFICIAL 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. After the roll-out is complete this will happen via the described Sustainability Supplier Development Framework. In the event of critical results, The Sustainability Supplier Development Framework foresees a strict consequence management in case of critical results and non-compliance of a supplier and besides milder measurements goes as far as phasing out suppliers. This Sustainability Supplier Development Process and consequence management are bound to strict timeframe and are interlinked with the evaluation cycle (1 year re-evaluation period for critical findings and 3 year re-evaluation period for milder findings).

ii) To MEASURE THE SUCCESS, we set ambitious targets and measure success in terms of target fulfillment, e.g. our target to evaluate all relevant suppliers by the end of 2021 was achieved to 97.5%. Due to pandemic situation 2.5% of relevant suppliers have postponed evaluation to 2022. In 2022, we will again aim to evaluate 100% of relevant supplier. SUCCESS is also MEASURED through re-assessments or follow-up audits. Our regular monitoring shows that in 2021, 508 of our 879 suppliers evaluated have improved their sustainability performance.

Comment

After testing collaboration platforms until 2021, the TFS initiative developed and successfully rolled out the TFS Academy in 2022. Bayer is in the core team of the development and maintenance of this Academy. All Bayer suppliers have access to this unique learning environment that offers over 240 courses in 7 languages for all work levels from CPO to facility staff. It provides best practice examples, activities, e-learnings, expert suggestions and more 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: To focus more closely on supplier development, in 2020 we expanded our sustainability team in procurement. Procurement employees primarily in countries with an increased sustainability risk such as China, India and Brazil help to develop suppliers at the local level. The focus here is on local sustainability risks. In 2021 and 2022 a Sustainability Supplier Development Framework was developed and is currently being rolled out that builds the infrastructure to bring specific sustainability topics to the supplier landscape in order to enhance their sustainability performance. This framework is interlinked and bases activities on the respective corrective action plans of sustainability evaluations. 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. The Sustainability Supplier Development Framework foresees a strict consequence management in case of critical results and non-compliance of a supplier and besides milder measurements goes as far as phasing out suppliers. Furthermore, we conducted supplier training and workshops in China and India in cooperation with PSCI and TFS. The PSCI sustainability webinar offers additional advanced training modules for our suppliers. One PSCI sustainability webinar deals with wastewater treatment technologies. 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

i) BENEFICIAL 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. Via the consequence management process it will be ensured that supplier relationships will be phased out in case of non-compliance and remedy is taken care of.

ii) 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. The Sustainability Supplier Development Framework foresees a strict consequence management in case of critical results and non-compliance of a supplier and besides milder measurements goes as far as phasing out suppliers. Together with the TFS initiative, we developed a practically oriented learning environment for suppliers and purchasers in 2021, so as to further establish competencies as regards sustainability issues. The focus here is on ethical aspects, conflict minerals, waste management and anti-corruption measures, among other issues. The training courses were available as of March 2022. In 2021, we selected more than 200 suppliers to participate in TFS training courses based on their sustainability performance and Bayer's assessment plan. The training courses dealt with labor and human rights guidelines, whistleblower procedures, environmental reporting and sustainable procurement guidelines.

Comment

After testing collaboration platforms until 2021, the TFS initiative developed and successfully rolled out the TFS Academy in 2022. Bayer is in the core team of the development and maintenance of this Academy. All Bayer suppliers have access to this unique learning environment that offers over 240 courses in 7 languages for all work levels from CPO to facility staff. It provides best practice examples, activities, e-learning, expert suggestions and more on the topics of water, energy and waste.

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 and RATIONALE:

Crop Science (CS) engages with participants in the food value 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 and ENGAGEMENT STRATEGY:

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 quality of harvest. Bayer reinforces its support for sustainable agriculture with Bayer ForwardFarming: a knowledge platform in which CS partners with 26 farms to demonstrate sustainable agriculture. We are promoting the use of biological remediation systems such as Phytobac™ to prevent discharges of crop protection active ingredients into water bodies.

With the BayG.A.P. Service program we TRAIN & SUPPORT growers to successfully implement good agricultural practices. Bayer, through (online) TRAININGS & AGRONOMIC ADVICE at customer events and partner courses, enables farmers to use crop protection products effectively and safely and trains them on how to reduce the environmental footprint of farming. We support grower's education in sustainable water use to decrease their water consumption footprint and avoid water contamination.

MEASURING SUCCESS:

We track the reach of our trainings and partnerships. In 2021, we continued to offer virtual training activities, but also resumed on-site training wherever possible. The flexible approach and use of digital tools enabled us to reach more than 2.7 million external contacts. CS has initiated 382 food value chain partnership initiatives in 35 countries and 62 crops. 250,569 growers worldwide have been trained with BayG.A.P. 1,749 growers from India, Mali, and Thailand obtained the G.A.P. Letter of Conformance or local G.A.P. certification.

W2. Business impacts

W2.1

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

No

W2.2

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

No

W3. Procedures

W-CH3.1

(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

(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

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

Yes, water-related risks are assessed

W3.3a

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

Value chain stage

Direct operations

Coverage

Full

Risk assessment procedure

Water risks are assessed as part of an established 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 and standards

Databases

Other

Tools and methods used

EcoVadis

WRI Aqueduct

ISO 31000 Risk Management Standard

IPCC Climate Change Projections

FAO/AQUASTAT

Internal company methods

External consultants

Other, please specify (On-site audits, Scenario analysis)

Contextual issues considered

Water availability at a basin/catchment level

Water quality at a basin/catchment level

Stakeholder conflicts concerning water resources at a basin/catchment level

Implications of water on your key commodities/raw materials

Water regulatory frameworks

Status of ecosystems and habitats

Access to fully-functioning, safely managed WASH services for all employees

Stakeholders considered

Customers

Employees

Investors

Local communities

NGOs

Regulators

Suppliers

Water utilities at a local level

Other water users at the basin/catchment level

Comment

Water is integrated into our company-wide risk management process (ERM) 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 ERM relevant 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.

Value chain stage

Supply chain

Coverage

Full

Risk assessment procedure

Water risks are assessed as part of an established 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 and standards

Databases

Other

Tools and methods used

EcoVadis

WRI Aqueduct

ISO 31000 Risk Management Standard

IPCC Climate Change Projections

FAO/AQUASTAT

Internal company methods

External consultants

Other, please specify (On-site audits, Scenario analysis)

Contextual issues considered

Water availability at a basin/catchment level

Stakeholder conflicts concerning water resources at a basin/catchment level

Status of ecosystems and habitats

Access to fully-functioning, safely managed WASH services for all employees

Stakeholders considered

Local communities

NGOs

Regulators

Water utilities at a local level

Other water users at the basin/catchment level

Comment

We verify our suppliers' adherence to Bayer's Supplier 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".

Value chain stage

Other stages of the value chain

Coverage

Partial

Risk assessment procedure

Water risks are assessed as part of an established 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)

Contextual issues considered

Water availability at a basin/catchment level

Water regulatory frameworks

Status of ecosystems and habitats

Stakeholders considered

Customers

NGOs

Regulators

Other water users at the basin/catchment level

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 this context, a Stewardship (STW) tool has been developed to identify areas of concern based on water quality data from public monitoring. In consultation with external partners, STW has developed a digital water protection tool in order to identify agricultural areas prone to surface water runoff/erosion. Designed as a decision support system, the user can select among a number of risk mitigation measures offered in a toolbox approach. Major goal is to reduce the non-target transport of nutrients and pesticides 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

(W3.3b) 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.

Please note: due to the tight character limit, we provide overarching explanations instead of explaining the specific rationales for direct operations and the value chain.

Bayer has implemented a holistic and INTEGRATED RISK MANAGEMENT SYSTEM designed to ensure the continued existence and future target attainment of the Group through the early identification, assessment and treatment of risks. The risk management system is aligned to internationally recognized standards and principles.

i) APPLICATION OF TOOLS:

Coverage for own operation and supply chain is 'Full' BECAUSE water is integrated into our company-wide risk management process and we verify our suppliers' adherence to Bayer's Supplier Code of Conduct (SCoC). Risks are monitored and managed continuously by the risk owners while the ERM relevant risk portfolio is reviewed regularly by the Bayer Assurance Committee. Aqueduct is used to identify country water risks and subsequent sites and suppliers at water risk BECAUSE it is a state-of-the-art tool, providing a broad range of indicators. In addition, an internal Stewardship (STW) tool is used to identify areas of concern related to water quality. Internal methods including discussions with the sites and experts are used IN ORDER TO control the relevance of the results for Bayer. Suppliers' adherence to our SCoC is verified through continuous assessments and audits. This also allows us to identify water-related supply chain risks additionally to our own assessment of procurement category and country of the supplier. We receive additional results from the "Together for Sustainability" initiative and the "Pharmaceutical Supply Chain Initiative".

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.

ii) OUTCOMES USED TO INFORM THE INTERNAL DECISION MAKING PROCESS:

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 avoidance, reduction, transfer and acceptance. We address site-level risks e.g. flooding through an emergency response system based on a corresponding corporate policy that has been implemented at all our production sites.

Supplier online assessments and audits are analyzed and documented. The results are an integral criteria for the supplier segmentation process. To become and maintain a key supplier status with all its business related benefits it is required to hold a "green" sustainability rating. In 2021 and 2022 a Sustainability Supplier Development Framework (SSDF) was developed and is currently being rolled out. SSDF is interlinked and bases activities on the respective corrective action plans of sustainability evaluations. In the event of critical results, Bayer requests the suppliers to rectify the identified weaknesses within an appropriate period of time. The SSDF foresees a strict consequence management in case of critical results and non-compliance of a supplier and besides milder measurements goes as far as phasing out suppliers.

iii) WHY EACH CONTEXTUAL ISSUES SELECTED:

Water availability and **water quality** are limiting factors for our production and potentially also for our value chain.

Stakeholder conflicts could have detrimental impacts on our business, although in the last years no relevant conflicts have been identified.

Implications of water on our key commodities/raw materials are managed with a preventive approach, we analyze in detail the most relevant water-related aspects for our business.

Water regulatory frameworks refer with various regulations to our water-intensive industry (Bayer 55 million m³ in 2021).

Status of ecosystems and habitats concern in terms of biodiversity our own operations and value chain.

Access to WASH services is mentioned in our water position and a standard we strive to promote in our supply chain.

iv) WHY EACH STAKEHOLDERS SELECTED:

Customers in our agriculture value chain are strongly dependent on water- and climate-related parameters.

Employees play a crucial role in determining our overall water consumption.

Investors are increasingly integrating water aspects into their investment decisions.

Local communities are key for the successful investments, operations and the reputation of Bayer and its suppliers.

NGOs publicly comment on certain company matters which might impact our reputation and therefore potentially our business growth as well as affect our value chain.

Regulators could significantly impact our business and our value chain, e.g. with changes in withdrawal limits.

Suppliers can strongly impact our operations. Bayer aims at ensuring a sustainable supply chain management.

Water utilities at a local level can strongly impact our operations and our supply chain, e.g. through supply bottlenecks or major price fluctuations.

Other water users could have an impact on the water quality and quantity in a shared river basin.

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) OPERATIONS IN REGIONS WITH WATER RISKS:

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, 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 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, 14 Bayer sites were identified based on 2021 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 and are defined as "large water users".

ii) WATER-RELATED IMPACT ON OUR BUSINESS:

As part of the Enterprise Risk Management framework, 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 assessed on a net basis, taking into account the risk control measures in place to mitigate the potential impact and/or likelihood of occurrence.

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 effect on our strategy or reputation, the potential loss of stakeholder confidence, and the potential incomplete compliance with 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 activities in the environment.

For EXAMPLE, regulations on active ingredients in the environment have been assessed qualitatively with regard to sustainability principles and reputation/stakeholder confidence.

iii) WATER-RELATED IMPACT FROM OUR SUPPLY CHAIN:

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. We consider that a supplier has water risks if it is located in a country of water scarcity accordingly with WRI Aqueduct and belongs to a segment or specific subcategory activity that have a high-water impact (e.g. active ingredients).

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

EXAMPLE: In 2021, Bayer evaluated almost 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.

W4.1b

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

	Total number of facilities exposed to water risk	% company-wide facilities this represents	Comment
Row 1	14	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, 14 Bayer sites were identified based on 2021 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

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

1

% company-wide facilities this represents

Less than 1%

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, 14 Bayer sites were identified based on 2021 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, 2021, the Bayer Group comprised 375 consolidated companies in 83 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 2, Tagus)
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Number of facilities exposed to water risk

1

% company-wide facilities this represents

Less than 1%

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.

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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

Less than 1%

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, 14 Bayer sites were identified based on 2021 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, 2021, the Bayer Group comprised 375 consolidated companies in 83 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

Less than 1%

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, 14 Bayer sites were identified based on 2021 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, 2021, the Bayer Group comprised 375 consolidated companies in 83 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 (Ameca / Ixtapa, Pacific Central Coast)
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Number of facilities exposed to water risk

1

% company-wide facilities this represents

Less than 1%

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, 14 Bayer sites were identified based on 2021 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, 2021, the Bayer Group comprised 375 consolidated companies in 83 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

Less than 1%

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, 14 Bayer sites were identified based on 2021 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, 2021, the Bayer Group comprised 375 consolidated companies in 83 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 (Lerma / Toluca, Rio Lerma)
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Number of facilities exposed to water risk

1

% company-wide facilities this represents

Less than 1%

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, 14 Bayer sites were identified based on 2021 data as having the potential to have a substantive

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Country/Area & River basin

Mexico	Balsas
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Number of facilities exposed to water risk

1

% company-wide facilities this represents

Less than 1%

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).

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Country/Area & River basin

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

1

% company-wide facilities this represents

Less than 1%

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).

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Country/Area & River basin

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

Number of facilities exposed to water risk

1

% company-wide facilities this represents

Less than 1%

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).

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Country/Area & River basin

Chile	Rapel
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Number of facilities exposed to water risk

1

% company-wide facilities this represents

Less than 1%

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).

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Country/Area & River basin

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

1

% company-wide facilities this represents

Less than 1%

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).

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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, 2021, the Bayer Group comprised 375 consolidated companies in 83 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

Brazil	Other, please specify (Rio de Janeiro Coast, Uruguay - Brazil, South Atlantic Coast)
--------	--

Number of facilities exposed to water risk

1

% company-wide facilities this represents

Less than 1%

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, 14 Bayer sites were identified based on 2021 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, 2021, the Bayer Group comprised 375 consolidated companies in 83 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 (Ica, Peru, Pacific Coast)
------	--

Number of facilities exposed to water risk

1

% company-wide facilities this represents

Less than 1%

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, 14 Bayer sites were identified based on 2021 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, 2021, the Bayer Group comprised 375 consolidated companies in 83 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)
-------	---

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 online 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 upload 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. If the case of brand damage occurs, this could lead to a decline in demand for our products. Depending on the extent of the reputational damage and the decline in demand, this could lead to a suboptimal workload at our production sites and thus to increased costs.

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)

46200000

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 EUR 46.2 million based on year-end 2021 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

RESPONSE STRATEGY:

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.

ACTIONS:

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.

TIMEFRAME OF IMPLEMENTATION:

This is an ongoing effort which is reviewed continuously to ensure an appropriate risk management.

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 the EU Green Deal for 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 relevant for whole Europe with specific aspects (like trace substances) for Germany where Bayer's headquarter is located.

EFFECT ON BAYER: Restrictive regulations for active ingredients might lead to limitation or even ban of use. A sorrow internal Bayer analysis came to the result that a prohibition on certain active ingredients would require the replacement or exchange of these active ingredients in our products. This would require, in most countries, a new registration of the product. The risk could have a significant impact on our product portfolio. Moreover, the risks could generate significant sales losses. To manage and minimize the risk an internal high level Steering Committee has been implemented.

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 significant (=medium impact according to CDP drop down options).

Timeframe

More than 6 years

Magnitude of potential impact

Medium

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)

750000000

Potential financial impact figure - maximum (currency)

1500000000

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 significant impact (=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 - EUR 1.500 million. Therefore, we came up with an estimated financial impact between EUR 750 million and 1,500 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

RESPONSE STRATEGY:

Bayer was actively involved in the national dialogue on trace substances under the patronage of the German environmental ministry. The process is now implemented with a German trace substance center defining in regular rhythm substances of concern with a follow up via round-table formats. Stakeholders from water management, environmental authorities and associations, health services providers and industry to develop measures that aim to reduce the discharge of relevant trace substances. The objective is to develop a strategy for preventing the water-impacting effects of selected chemicals. Bayer is also engaging with the EU Commission on the topic.

ACTIONS:

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 ecotoxicological investigations of pharmaceutical residues and degradation products to assess the potential environmental impact of these products. In connection with the approval process for human 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.

TIMEFRAME OF IMPLEMENTATION:

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

4900000

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 2021 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 EUR 3.0 million in Berlin, Germany and EUR 1.9 million in Brussels, Belgium. The costs represent 2021 costs and are recurring each year.

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)
-------	---

Stage of value chain

Supply chain

Type of risk & Primary risk driver

Reputation & markets	Increased stakeholder concern or negative stakeholder feedback
----------------------	--

Primary potential impact

Company brand damage

Company-specific description

EXPLANATION: From the perspective of the Bayer Group as a whole, there is a risk that our partners, such as suppliers, do not pay due attention to our requirements concerning ethics, compliance and sustainability. This risk is linked to the industry, Bayer forms part of and not specifically to Bayer alone (it is also a more global than country specific topic). Clear sustainability criteria and standards are in place for our supply chain on both a global and regional level. Nevertheless, materialized sustainability risks of one or more suppliers could potentially lead to a significant social, ethical or environmental impact with negative media coverage. For example, low enforcement of wastewater standards for pharmaceutical or chemical suppliers could potentially lead to incidences of increased respective concentrations of harmful substances in water bodies and potentially in drinking water. Such an event took place in India in 2019, 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 lead to negative media coverage, affecting public opinion, Bayer's image and perception by stakeholders. Consequences could be a potential reputational impact, increased organizational effort or interruption of supply as we can't use the supplier any longer and Bayer's customers could switch to competitors and subsequently don't switch back. If we are unable to meet demands, sales may undergo a structural decline because patients then receive alternative treatments and may not switch back to our Bayer products.

DETAILS ON METHOD FOR IDENTIFYING THE IMPACT: The risk was analyzed as part of our company-wide Enterprise Risk Management evaluating the risk with regard to likelihood of occurrence and impact. As the impact could not be evaluated financially, it was evaluated qualitatively in terms of reputation/stakeholder confidence, organizational effort and sustainability and found to be significant (=medium impact according to CDP).

Timeframe

1-3 years

Magnitude of potential impact

Medium

Likelihood

More likely than not

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 cannot be evaluated financially. Following our risk analysis method, the risk was evaluated qualitatively and was classified as risk with "significant" impact (scales "sustainability", "reputation/stakeholder confidence" and "organizational effort") 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 EUR 1,500 million. Therefore, we came up with an equivalent financial impact between EUR 750 million and EUR 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

RESPONSE STRATEGY:

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.

ACTIONS:

Via the 4-Step-Management Approach the adherence of the supplier to the SCoC is monitored. The sustainability clause in our procurement contracts and legal documents is embedded in our ordering system and contract center and made mandatory.

The Sustainability Supplier Development Framework foresees a strict consequence management in case of critical results and non-compliance of a supplier and besides milder measurements goes as far as phasing out suppliers. This Sustainability Supplier Development Process and consequence management are bound to strict timeframe and are interlinked with the evaluation cycle (1 year re-evaluation period for critical findings and 3 year re-evaluation period for milder findings).

TIMEFRAME OF IMPLEMENTATION:

In 2021, Bayer requested 0.94% (ca. 879 out of 93,844 suppliers), representing approx. 25% 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

305000

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 2021, we spent more than EUR 105,000 for membership fees for supplier initiatives and EcoVadis and about EUR 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

(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

i) STRATEGIC 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.

ii) ACTIONS TO REALIZE THIS OPPORTUNITY:

Intensive agriculture with high yields per hectare of farmland is a crucial factor for ensuring the continued availability of high-quality and affordable food. Bayer helps farmers cultivate more food for a growing population while at the same time reducing the environmental impact of agriculture. Crop Science offers farmer tailored products, trainings and promotes water-saving cultivation systems.

iii) EXAMPLES:

- We are putting together a pilot program to measure the sustainability impact of the Better Life Farming ecosystem on water, CO2 emissions and possibly soil health. We are looking at 10 Better Life Farming (BLF) farms and 10 non-BLF farms in Uttar Pradesh, India, to see how the solutions and trainings we provide will impact water consumption, as well as the other factors listed. We aim to start 2022 in the main tomato season in July/August and to measure water consumption and product application until end of harvest. It will be joint venture with the IFC India.

- Bayer is a key partner and contributor in the TELA Maize project introducing drought-tolerant maize for smallholder farmers in Africa. Under moderate drought conditions the TELA Maize improves the plant's water use efficiency to get more crop per drop and increase yields 5 to 9 percent. In irrigated fields, the improved water use efficiency enables the maize to maintain high yield potential while applying less water. Drought-tolerant TELA Maize helps farmers adapt to drier conditions caused by climate change and manage their risk of crop loss.

- 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 (regional adoption varies). In 2019, we introduced Smart Center in Argentina providing irrigation recommendations to farmers and learning opportunities around water conservation strategies. As result of this initiative, we have achieved irrigation efficiencies of 93% (resulting in less irrigation water usage) and an additional 2% yield increase.

Please see also W-FI.

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)

97000000

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 20.2 billion in 2021 of which crop protection has a major impact with EUR 9.7 billion. The global seed and crop protection market as a whole grew strongly in 2021 (Fx adj. +7%; 2020: +4%).

For Crop Science, we expect a growth forecast for the seeds and crop protection market for 2022 of ~5%.

A continued growth of the crop protection demand by 1 % (compared to 2021, 1 % is a conservative assumption given the market growth) would translate into EUR 97 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)

Viluco

Country/Area & River basin

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

Latitude

-33.797945

Longitude

-70.775807

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)

117

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

117

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)

1

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

1

Total water consumption at this facility (megaliters/year)

116

Comparison of total consumption with previous reporting year

Much higher

Please explain

TOOL USED TO CLASSIFY THE LOCATION OF THE FACILITY AS WATER STRESSED: 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.

Withdrawals (W=D+C):

2020: 65

2021: 117 (comparison with previous year: much higher, +80%)

Discharges:

2020: 0

2021: 1 (comparison with previous year: about the same, rounding differences)

Consumption:

2020: 0

2021: 116 (comparison with previous year: much higher, adjustments in our control and measurement systems)

Thresholds applied for comparison with previous reporting year:

About the same: <5%

Lower / Higher: 5%<15%

Much lower / higher: >=15%

Facility reference number

Facility 2

Facility name (optional)

Alcala de Henares

Country/Area & River basin

Spain	Other, please specify (Tagus 2, Tagus)
-------	--

Latitude

40.487748

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)

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

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

67

Total water discharges at this facility (megaliters/year)

45

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

45

Total water consumption at this facility (megaliters/year)

22

Comparison of total consumption with previous reporting year

About the same

Please explain

TOOL USED TO CLASSIFY THE LOCATION OF THE FACILITY AS WATER STRESSED: 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.

Withdrawals (W=D+C):

2020: 68

2021: 67 (comparison with previous year: about the same, -2%)

Discharges:

2020: 46
2021: 45 (comparison with previous year: about the same, -2%)
Consumption:
2020: 46
2021: 22 (comparison with previous year: about the same, adjustments in our control and measurement systems)

Thresholds applied for comparison with previous reporting year:
About the same: <5%
Lower / Higher: 5%<15%
Much lower / higher: >=15%

Facility reference number

Facility 3

Facility name (optional)

El Ejido

Country/Area & River basin

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

Latitude

36.724435

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)

74

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

74

Total water discharges at this facility (megaliters/year)

1

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

1

Total water consumption at this facility (megaliters/year)

73

Comparison of total consumption with previous reporting year

Higher

Please explain

TOOL USED TO CLASSIFY THE LOCATION OF THE FACILITY AS WATER STRESSED: 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.

Withdrawals (W=D+C):

2020: 71

2021: 74 (comparison with previous year: higher, 5%)

Discharges:

2020: 0

2021: 1 (comparison with previous year: about the same, rounding differences)

Consumption:

2020: 1

2021: 73 (comparison with previous year: higher, adjustments in our control and measurement systems)

Thresholds applied for comparison with previous reporting year:

About the same: <5%

Lower / Higher: 5%<15%

Much lower / higher: >=15%

Facility reference number

Facility 4

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)

99

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

99

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)

2

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

2

Total water consumption at this facility (megaliters/year)

97

Comparison of total consumption with previous reporting year

Much higher

Please explain

TOOL USED TO CLASSIFY THE LOCATION OF THE FACILITY AS WATER STRESSED: 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.

Withdrawals (W=D+C):

2020: 70

2021: 99 (comparison with previous year: much higher, 41%)

Discharges:

2020: 0

2021: 2 (comparison with previous year: about the same, adjustments in our control and measurement systems)

Consumption:

2020: 3

2021: 97 (comparison with previous year: much higher, adjustments in our control and measurement systems)

Thresholds applied for comparison with previous reporting year:

About the same: <5%

Lower / Higher: 5%<15%

Much lower / higher: >=15%

Facility reference number

Facility 5

Facility name (optional)

San Juan de Abajo

Country/Area & River basin

Mexico	Other, please specify (Ameca / Ixtapa, Pacific Central Coast)
--------	---

Latitude

20.790748

Longitude

-105.204344

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)

65

Comparison of total withdrawals with previous reporting year

Lower

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

65

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)

1

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

1

Total water consumption at this facility (megaliters/year)

64

Comparison of total consumption with previous reporting year

Lower

Please explain

TOOL USED TO CLASSIFY THE LOCATION OF THE FACILITY AS WATER STRESSED: 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.

Withdrawals (W=D+C):

2020: 75

2021: 65 (comparison with previous year: lower, -13%)

Discharges:

2020: 0

2021: 1 (comparison with previous year: about the same, rounding differences)

Consumption:

2020: 1

2021: 64 (comparison with previous year: lower, adjustments in our control and measurement systems)

Thresholds applied for comparison with previous reporting year:

About the same: <5%

Lower / Higher: 5%<15%

Much lower / higher: >=15%

Facility reference number

Facility 6

Facility name (optional)

San Nicolas

Country/Area & River basin

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

Latitude

36.7853

Longitude

-2.707917

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)

58

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

1

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

57

Total water discharges at this facility (megaliters/year)

3

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

3

Total water consumption at this facility (megaliters/year)

55

Comparison of total consumption with previous reporting year

About the same

Please explain

TOOL USED TO CLASSIFY THE LOCATION OF THE FACILITY AS WATER STRESSED: 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.

Withdrawals (W=D+C):

2020: 56

2021: 58 (comparison with previous year: about the same, 4%)

Discharges:

2020: 2

2021: 3 (comparison with previous year: much higher, 50%)

Consumption:

2020: 55

2021: 55 (comparison with previous year: about the same, 0%)

Thresholds applied for comparison with previous reporting year:

About the same: <5%

Lower / Higher: 5%<15%

Much lower / higher: >=15%

Facility reference number

Facility 7

Facility name (optional)

Lerma

Country/Area & River basin

Mexico	Other, please specify (Lerma / Toluca, 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)

121

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

121

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)

114

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

46

Discharges to third party destinations

68

Total water consumption at this facility (megaliters/year)

7

Comparison of total consumption with previous reporting year

Much lower

Please explain

TOOL USED TO CLASSIFY THE LOCATION OF THE FACILITY AS WATER STRESSED: 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.

Withdrawals (W=D+C):

2020: 89

2021: 121 (comparison with previous year: much higher, 36%)

Discharges:

2020: 66

2021: 114 (comparison with previous year: much higher, 73%)

Consumption:

2020: 86

2021: 7 (comparison with previous year: much lower, -92%)

Thresholds applied for comparison with previous reporting year:

About the same: <5%

Lower / Higher: 5%<15%

Much lower / higher: >=15%

Facility reference number

Facility 8

Facility name (optional)

Tlaxcala

Country/Area & River basin

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

Latitude

19.308497

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)

131

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

131

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)

59

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

59

Total water consumption at this facility (megaliters/year)

72

Comparison of total consumption with previous reporting year

Higher

Please explain

TOOL USED TO CLASSIFY THE LOCATION OF THE FACILITY AS WATER STRESSED: 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.

Withdrawals (W=D+C):

2020: 122

2021: 131 (comparison with previous year: higher, 7%)

Discharges:

2020: 50

2021: 59 (comparison with previous year: higher, adjustments in our control and measurement systems)

Consumption:

2020: 54

2021: 72 (comparison with previous year: higher, adjustments in our control and measurement systems)

Thresholds applied for comparison with previous reporting year:

About the same: <5%

Lower / Higher: 5%<15%

Much lower / higher: >=15%

Facility reference number

Facility 9

Facility name (optional)

La Charca

Country/Area & River basin

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

Latitude

20.42381

Longitude

-101.059221

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)

140

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

140

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)

10

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

10

Total water consumption at this facility (megaliters/year)

130

Comparison of total consumption with previous reporting year

About the same

Please explain

TOOL USED TO CLASSIFY THE LOCATION OF THE FACILITY AS WATER STRESSED: 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.

Withdrawals (W=D+C):

2020: 136

2021: 140 (comparison with previous year: about the same, 3%)

Discharges:

2020: 10

2021: 10 (comparison with previous year: about the same, 0%)

Consumption:

2020: 10

2021: 130 (comparison with previous year: about the same, adjustments in our control and measurement systems)

Thresholds applied for comparison with previous reporting year:

About the same: <5%

Lower / Higher: 5%<15%

Much lower / higher: >=15%

Facility reference number

Facility 10

Facility name (optional)

Melipilla

Country/Area & River basin

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

Latitude

-33.677121

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)

160

Comparison of total withdrawals with previous reporting year

Much lower

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

68

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

79

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

13

Total water discharges at this facility (megaliters/year)

13

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

13

Total water consumption at this facility (megaliters/year)

147

Comparison of total consumption with previous reporting year

Much lower

Please explain

TOOL USED TO CLASSIFY THE LOCATION OF THE FACILITY AS WATER STRESSED: 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.

Withdrawals (W=D+C):

2020: 238

2021: 160 (comparison with previous year: much lower, -33%)

Discharges:

2020: 0

2021: 13 (comparison with previous year: about the same, adjustments in our control and measurement systems)

Consumption:

2020: 9

2021: 147 (comparison with previous year: much lower, adjustments in our control and measurement systems)

Thresholds applied for comparison with previous reporting year:

About the same: <5%

Lower / Higher: 5%<15%

Much lower / higher: >=15%

Facility reference number

Facility 11

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)

273

Comparison of total withdrawals with previous reporting year

Lower

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

273

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)

38

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

38

Total water consumption at this facility (megaliters/year)

235

Comparison of total consumption with previous reporting year

Lower

Please explain

TOOL USED TO CLASSIFY THE LOCATION OF THE FACILITY AS WATER STRESSED: 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.

Withdrawals (W=D+C):

2020: 314

2021: 273 (comparison with previous year: lower, -13%)

Discharges:

2020: 33

2021: 38 (comparison with previous year: higher, 15%)

Consumption:

2020: 26

2021: 235 (comparison with previous year: lower, adjustments in our control and measurement systems)

Thresholds applied for comparison with previous reporting year:

About the same: <5%

Lower / Higher: 5%<15%

Much lower / higher: >=15%

Facility reference number

Facility 12

Facility name (optional)

Vapi

Country/Area & River basin

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

Latitude

20.368748

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)

536

Comparison of total withdrawals with previous reporting year

Higher

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

9

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

527

Total water discharges at this facility (megaliters/year)

229

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

229

Total water consumption at this facility (megaliters/year)

307

Comparison of total consumption with previous reporting year

Higher

Please explain

TOOL USED TO CLASSIFY THE LOCATION OF THE FACILITY AS WATER STRESSED: 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.

Withdrawals (W=D+C):

2020: 510

2021: 536 (comparison with previous year: higher, 5%)

Discharges:

2020: 214

2021: 229 (comparison with previous year: higher, 7%)

Consumption:

2020: 203

2021: 307 (comparison with previous year: higher, adjustments in our control and measurement systems)

Thresholds applied for comparison with previous reporting year:

About the same: <5%

Lower / Higher: 5%<15%

Much lower / higher: >=15%

Facility reference number

Facility 13

Facility name (optional)

Belford Roxo

Country/Area & River basin

Brazil	Other, please specify (Rio de Janeiro Coast, Uruguay - Brazil, South Atlantic Coast)
--------	--

Latitude

-22.7665

Longitude

-43.392301

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)

624

Comparison of total withdrawals with previous reporting year

About the same

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

592

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

32

Total water discharges at this facility (megaliters/year)

173

Comparison of total discharges with previous reporting year

Much lower

Discharges to fresh surface water

173

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)

451

Comparison of total consumption with previous reporting year

Much higher

Please explain

TOOL USED TO CLASSIFY THE LOCATION OF THE FACILITY AS WATER STRESSED: 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.

Withdrawals (W=D+C):

2020: 594

2021: 624 (comparison with previous year: about the same, 4%)

Discharges:

2020: 261

2021: 173 (comparison with previous year: much lower, -34%)

Consumption:

2020: 261

2021: 451 (comparison with previous year: much higher, 73%)

Thresholds applied for comparison with previous reporting year:

About the same: <5%

Lower / Higher: 5%<15%

Much lower / higher: >=15%

Facility reference number

Facility 14

Facility name (optional)

Ica

Country/Area & River basin

Peru	Other, please specify (Ica, Peru, Pacific Coast)
------	--

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)

444

Comparison of total withdrawals with previous reporting year

Much lower

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

444

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)

44

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

44

Total water consumption at this facility (megaliters/year)

400

Comparison of total consumption with previous reporting year

Much lower

Please explain

TOOL USED TO CLASSIFY THE LOCATION OF THE FACILITY AS WATER STRESSED: 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.

Withdrawals (W=D+C):

2020: 659

2021: 444 (comparison with previous year: much lower, -33%)

Discharges:

2020: 108

2021: 44 (comparison with previous year: much lower, -59%)

Consumption:

2020: 112

2021: 400 (comparison with previous year: much lower, adjustments in our control and measurement systems)

Thresholds applied for comparison with previous reporting year:

About the same: <5%

Lower / Higher: 5%<15%

Much lower / higher: >=15%

(W5.1a) For the facilities referenced in W5.1, what proportion of water accounting data has been third party verified?

Water withdrawals – total volumes

% verified

76-100

Verification standard used

Standard: ISAE 3000; Methodology: The auditor Deloitte has verified water data as part of the reasonable assurance for the Bayer Sustainability Report 2021, 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.

Please explain

<Not Applicable>

Water withdrawals – volume by source

% verified

76-100

Verification standard used

Standard: ISAE 3000; Methodology: The auditor Deloitte has verified water data as part of the limited assurance for the Bayer Sustainability Report 2021, 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.

Please explain

<Not Applicable>

Water withdrawals – quality by standard water quality parameters

% verified

Not verified

Verification standard used

<Not Applicable>

Please explain

Water withdrawals quality is measured as needed at all sites, e.g. water withdrawals quality is highly relevant for our health care and our breeding sites. We do not monitor, and therefore also not verify, the quality of water withdrawals via our central Bayer Site Information System "BaySIS". This is BECAUSE the relevant regulations related to water withdrawal quality requirements differ widely. We do not plan to centrally verify water withdrawals quality in the next two years, as this is a very local topic.

Water discharges – total volumes

% verified

76-100

Verification standard used

Standard: ISAE 3000; Methodology: The auditor Deloitte has verified water data as part of the reasonable assurance for the Bayer Sustainability Report 2021, 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.

Please explain

<Not Applicable>

Water discharges – volume by destination

% verified

76-100

Verification standard used

Standard: ISAE 3000; Methodology: The auditor Deloitte has verified water data as part of the limited assurance for the Bayer Sustainability Report 2021, 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.

Please explain

<Not Applicable>

Water discharges – volume by final treatment level

% verified

76-100

Verification standard used

Standard: ISAE 3000; Methodology: The auditor Deloitte has verified water data as part of the limited assurance for the Bayer Sustainability Report 2021, 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.

Please explain

<Not Applicable>

Water discharges – quality by standard water quality parameters

% verified

76-100

Verification standard used

Standard: ISAE 3000; Methodology: The auditor Deloitte has verified water data as part of the limited assurance for the Bayer Sustainability Report 2021, 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.

Please explain

<Not Applicable>

Water consumption – total volume

% verified

76-100

Verification standard used

Standard: ISAE 3000; Methodology: The auditor Deloitte has verified water data as part of the limited assurance for the Bayer Sustainability Report 2021, 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.

Please explain

<Not Applicable>

W6. Governance

W6.1

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

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

W6.1a

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

Scope	Content	Please explain
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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) COMPANY-WIDE APPLICABILITY: 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 and crucial for our agriculture business and must be of suitable quality to irrigate crops. THIS IS WHY our Water Position covers the selected content company-wide securing our license to operate.</p> <p>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. with less environmental impact on e.g. aquatic ecosystems.</p> <p>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.</p> <p>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 outlines our commitment to align with PUBLIC POLICY INITIATIVES e.g. multi-lateral partnerships. The Water Policy adds to our efforts according to our vision "Health for all, Hunger for none". This commitment guides our actions to help achieve a high quality of life on a healthy planet. Accordingly, the protection of all natural resources – including water – is an integral part of Bayer's commitment to sustainable development. In end of 2022 or early 2023 we want to update our Water Position together with our divisions.</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.</p> <p>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.</p> <p>EXAMPLE: In 2021, the CSO decided to follow the invitation of the WMO Secretary-General and the UN Water Chair and send the Senior Vice President Public Affairs & Sustainability (PASS) as representative for the "Water and Climate Leaders". They pursue and advocate for changes leading towards sustainable water management and water-related climate adaptation, setting an integrated global agenda supporting both SDG 6 Global Accelerator Framework and national mitigation and adaptation actions.</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	<p>i) WHO BRIEFS ON WHAT: 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. 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 AR.</p> <p>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 EUR 10 million undergo an ecological assessment; CAPEX above EUR 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.</p>

W6.2d

(W6.2d) Does your organization have at least one board member with competence on water-related issues?

	Board member(s) have competence on water-related issues	Criteria used to assess competence of board member(s) on water-related issues	Primary reason for no board-level competence on water-related issues	Explain why your organization does not have at least one board member with competence on water-related issues and any plans to address board-level competence in the future
Row 1	Yes	<p>The top level of responsibility is held by the Chairman of the Board of Management in his role as Chief Sustainability Officer (CSO) together with the entire Board of Management. An external Sustainability Council provides the Board of Management with constructive criticism in all sustainability matters. The Public Affairs, Science, Sustainability & HSE Enabling Function helps the CSO and the Board of Management to identify risks and opportunities, develop strategies and define targets and guidelines for sustainability management, and ensures the governance of all sustainability issues.</p> <p>EXPERTISE: The Chief Sustainability Officer is CONTINUOUSLY INFORMED ABOUT THE STATUS OF WATER-RELATED TARGETS AND MEASURES during his regular meetings with the Head of Public Affairs, Science & Sustainability, who monitors all relevant topics in the field of sustainability and environment. He is an expert in the field of sustainability incl. WATER with 25 years of experience. Today he is part of the UN Climate- and Water Leaders of the World Meteorological Organization (WMO). Within our SUPERVISORY BOARD we have an expert within sustainability incl. WATER. She is former President of the UN World Food Program where she managed water deprived regions particular in focus of hunger and food insecurity crisis.</p> <p>ENGAGEMENT: i) As Bayer wants to help to bring water on the top of the global agenda and underline our commitment to fight water scarcity, the CSO decided together with our Head of Public Affairs, Science and Sustainability to support water advocate, adventurer and athlete Mina Gulli by her RUN BLUE campaign that aims to raise awareness and highlight that we can solve the water crisis by working together. Mina Gulli, Australian ultra-marathon runner and environmental activist, wants to run 200 marathons around the world until the start of the UN Water Conference in March 2023. She has an active role in helping fellow CEO colleagues to overcome their company’s water blindness. ii) Our CSO is also responsible for Bayer’s LEAPS (a movement to make paradigm-shifting advances in the life sciences – targeting the breakthroughs that could fundamentally change the world for the better) including Apollo Agriculture, a digital tool supporting smallholders to operate more water-efficient.</p>	<Not Applicable>	<Not Applicable>

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

Assessing future trends in water demand
 Assessing water-related risks and opportunities
 Managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues

More frequently than quarterly

Please explain

The CSO is the Chairman of the Board of Management (BoM). In this position, he reports to the Supervisory Board.

i) WATER-RELATED TOPICS REPORTED TO THE BOARD:

In REGULAR MEETINGS of the BoM, the Supervisory Board and the Sustainability Council the Group-wide sustainability strategy incl. water-related issues is discussed. Target achievement is reported ANNUALLY to the BoM in a REGULAR BOARD MEETING.

ii) WATER-RELATED RESPONSIBILITIES:

The CSO is responsible for the Group-wide sustainability program incl. water-related targets and measures. He is also responsible for fulfilling Bayer's commitment to the CEO Water Mandate. He signs off the CDP Water Security, the sustainability section in our Annual Report and our Sustainability Report incl. water KPIs and measures. Since 2021, furthermore, the CSO decided that Bayer is member of the Water Resilience Coalition (WRC), the goals of which substantiate and supplement the ambitions of the CEO Water Mandate at the private-sector level.

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	N/A

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) Other, please specify (Head of PASS)	Improvements in efficiency - direct operations Improvements in waste water quality - direct operations Implementation of employee awareness campaign or training program Increased access to workplace WASH Other, please specify (Suitable water management systems at all relevant sites that are or will be threatened by water scarcity by 2030)	i) DETAILS ON THE INDICATOR/S: Board members are incentivized on the attainment of sustainability KPIs. The variable compensation is based on the attainment of qualitative targets in areas such as innovation or safety, compliance and sustainability goals. As outlined in the Compensation Report, in 2021, sustainability targets for board members included to "Further drive implementation of sustainability strategy in divisions and enabling functions and accelerate progress on sustainability ambitions". Since 2021, sustainability is also 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. ii) RATIONALE FOR CHOSEN INDICATORS: In 2019, we announced our new sustainability strategy, pursuing our sustainability targets with the same vigor as our financial targets. These indicators were chosen to establish a sustainable water management (WM): a balance between consumption and availability, as well as the optimal conservation of water resources. Our WM SYSTEMS are designed individually on the basis of a detailed risk analysis that takes into account local circumstances. We aim to identify potential for improvement particularly at sites located in water-scarce areas or in areas identified as being threatened by water scarcity, and use as little water there as possible. We offer EMPLOYEE TRAINING IN WM and participate in round tables with regulatory authorities and residents.
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. ii) RATIONALE FOR CHOSEN INDICATORS TO MEASURE PERFORMANCE: Responsible water usage is a cornerstone of our commitment to sustainable development and is described in the Group Regulation on HSE Management and HSE Key Requirements. Clean water in sufficient quantities is essential for the health of people, animals and plants. That is why it is crucial that industrial water usage will continue not to lead to local problems such as water shortages for the people living in the catchment areas of our production sites. Bayer has introduced the worldwide innovation platform WeSolve 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.

ACTION IN CASE OF INCONSISTENCY:

This process including our available Position on Water 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-2021.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	<p>i) ISSUES: 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). We set the target to establish water management at all sites in water-scarce regions focusing on issues such as wastewater standards and water efficiency.</p> <p>ii) EXAMPLES: 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/groundwater 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.</p> <p>We are aware that climate change will further exacerbate the problem of water scarcity in the future. To avert future risks for our production capacities and the local communities, we will establish by 2023 suitable water management systems at all relevant sites that will be threatened by water scarcity by 2030.</p> <p>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.</p>
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	11-15	<p>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.</p> <p>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 communities in which we operate, impacting our local acceptance. We analyze potential impact of water scarcity on our global production network on a 2030 horizon.</p> <p>ii) EXAMPLES: By including water resource considerations into our innovation strategy they influence our product development and improvements in resource efficiency. The OUTCOME is new products and services and thus the realization of new sales potentials. Bayer developed hybrid rice seeds that withstand abiotic and biotic challenges and is developing a rice cropping system powered by direct seeding that not only reduces water requirements but also optimizes GHG emissions.</p> <p>The introduction of water KPIs has allowed us to implement improvement mechanisms, e.g. leading to cost saving opportunities due to improved resource efficiency. We take proactive actions by ensuring that all relevant sites in potentially water scarce areas by 2030 have effective water management in place.</p> <p>We commit to the CEO Water Mandate and are member of the Water Resilience Coalition (supplements CEO Water Mandate) and Water and Climate Leaders group.</p>
Financial planning	Yes, water-related issues are integrated	11-15	<p>i) ISSUES: Water issues integrated into financial planning, e.g. investment decisions, especially include water use and emissions into water.</p> <p>ii) EXAMPLES: 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 EUR 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.</p> <p>As mentioned above, water resource considerations are factored into new product development and have an IMPACT on the rollout of new products and services with new sales potentials. For instance, Bayer developed and offers hybrid rice seeds that withstand abiotic and biotic challenges like stress and submergence. This helps safeguarding and increasing yields significantly and consequently improving livelihoods in countries that are struck by weather-related calamities. Bayer is also developing a rice cropping system powered by direct seeding which reduces water requirements and promotes convenience for ageing farmers and optimizes GHG emissions, especially Methane.</p>

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)

60

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

0

Water-related OPEX (+/- % change)

0

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

0

Please explain

i) According to Bayer's Ecological Assessment of New Investments Guideline, all investments above EUR 10 million 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 project, considering specific conditions of the location and the facility (e.g. water use, emissions into water).

CAPEX increased by approx. 60% due to investments in e.g.

- renewal of wastewater treatment and cooling-tower facilities in the EU,

- construction of new production plants in the Americas.

CAPEX is anticipated to stay at this level in 2022 as CAPEX projects are still in progress.

ii) OPEX was primarily for

- sourcing water,

- operating cooling and process water systems and

- treating process wastewater incl. pre-treatment.

OPEX remained at the same level because changes in water consumption and treated wastewater canceled out increased unit prices. Same is anticipated in 2022.

W7.3

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

	Use of scenario analysis	Comment
Row 1	Yes	N/A

(W7.3a) Provide details of the scenario analysis, what water-related outcomes were identified, and how they have influenced your organization’s business strategy.

	Type of scenario analysis used	Parameters, assumptions, analytical choices	Description of possible water-related outcomes	Influence on business strategy
Row 1	Water-related Climate-related Socioeconomic	<p>We have chosen to build on the Assessment Report 6 of the IPCC, the “Green Road” SSP1-2.6 and the “Rocky Road” SSP3-7.0. The selected scenarios show high transitional impacts for us and in the business areas where we are active. We supplemented these with further sources relevant to our business and drafted our own scenario description. We have joined the Value Chain Risk to Resilience network hosted by Business for Social Responsibility (BSR).</p> <p>PARAMETERS AND KEY ASSUMPTIONS: Green Road assumes average global temperature will rise by 1.7°C between 2041 and 2060. From 2081 to 2100, temperature is likely to rise by 1.8°C. Green Road is characterized by rapid implementation of ambitious and globally coordinated climate-related laws and provisions, which could include short-term, intensified and transitory changes such as new regulations for enterprises. The rapid reduction in greenhouse gas emissions leads to less severe weather- and climate-related effects long term. Rocky Road assumes an average global temperature rise of around 2.1°C between 2041 and 2060, and a likely rise of 3.6°C between 2081 and 2100. We expect less ambitious laws and provisions that vary widely from one region to another. That leads to a slower pace of emissions reduction and thus more intensive weather- and climate-related changes in all regions of the world. The varying levels of ambition also lead to additional barriers that can be manifested in measures such as a Carbon Border Adjustment.</p> <p>ANALYTICAL CHOICES: Climate change already today has an impact on our business and our value chains. We have identified 9 different climate impact drivers of materiality for Bayer and prepared deep dive materials to evaluate impact and relevance: - Transitional: 1) laws, regulations, policies, 2) carbon taxation/pricing, carbon border adjustments & offsetting, 3) commodity prices, 4) end customer, costumer & markets, 5) food security - Acute physical: 6) extreme weather events - Chronic physical: 7) permanent water cycle, 8) diseases, 9) temperature Example: we use water scarcity models to see how water cycles change at our sites but also at our customers to generate actionable insights. We go beyond the customary Enterprise Risk Management time horizons and instead apply the following: short-term (2021–2025), mid-term (2026–2035), long-term (2036–2050). Furthermore, we used the Aqueduct Water Risk Atlas to identify all our sites that are located in areas threatened by water scarcity by 2030.</p>	<p>COMPANY-SPECIFIC DESCRIPTION: Climate change is already affecting water access for people around the world, causing more severe droughts, impacting food security, precipitation and surface water flows projected to become more variable over most land regions within seasons. We identified 9 different climate impact drivers of materiality for Bayer and prepared deep dive materials. One of them is the PERMANENT WATER CYCLE: Impacts on the water cycle incl. changes in precipitation patterns & water scarcity and droughts. Water and temperature changes are the core of climate impacts for the agricultural sector. The long-term natural and physical effects of climate change will impact particularly the permanent water cycle (for example through a transition to a wetter or a drier climate or a delay in the monsoon season), the spread of diseases or insect pests, and further coupling effects of temperature changes. Already today and increasingly in the next years we will experience the physical impacts. The impact of water cycle is higher in the Rocky Road both due to higher temperature increase and stronger impacts on the water cycle as well as due to stronger conflicts around water usage. These effects will become particularly relevant for our agricultural business. Due to the permanency of the challenges, risks and opportunities are balanced, as innovation can be adapted successfully. Already today we experience chronic changes in the water cycle and increased costs for water.</p>	<p>OPERATIONAL AND STRATEGIC RESPONSE: We are aware that climate change will further exacerbate the problem of water scarcity in the future. We have a Water Policy that adds to our efforts according to our vision “Health for all, Hunger for none”. This commitment guides our actions to help achieve a high quality of life on a healthy planet. Accordingly, the protection of all natural resources – including water – is an integral part of Bayer’s commitment to sustainable development. At the end of 2022 or early 2023 we want to update our Water Position together with our divisions. To avert future risks for our production capacities and the local communities, we will establish by 2023 suitable water management systems at all relevant sites that will be threatened by water scarcity by 2030. We identify such sites using the base scenario of the Aqueduct Water Risk Atlas. This ensures that all of these sites have implemented water management processes and develop site-specific measures and targets. Furthermore, we develop new resource-efficient products, e.g. direct seeded rice, a cropping system that not only reduces water requirements but also optimizes GHG emissions.</p> <p>ANTICIPATED TIMESCALE: We constantly develop and release new products. We will continue to expand, describe and quantify our scenario analysis in 2022 and beyond. Findings from these analyses will play a bigger role in our strategic, portfolio and operational processes.</p>

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.

W7.5

(W7.5) Do you classify any of your current products and/or services as low water impact?

	Products and/or services classified as low water impact	Definition used to classify low water impact	Primary reason for not classifying any of your current products and/or services as low water impact	Please explain
Row 1	Yes	<p>Direct Seeded Rice (DSR) refers to establishing a rice crop from seeds directly sown in the field. The change in the cultivation practice from transplanting rice to direct seeding rice will reduce farm labor requirement significantly, improve soil health, REDUCE OVERALL WATER REQUIREMENT (no water flooding in rice field) and therefore less methane release in the environment. Amongst benefits generated by DSR there are: EFFICIENT WATER USAGE and reduced GHG emissions (by ~30%), low cost of cultivation, early crop maturity, potential carbon credit generation.</p> <p>CLASSIFICATION LOW-WATER IMPACT: The low-water impact applies to the use of our product (in the value chain). Focus is on the water usage for cultivation of rice (quantity and intensity of water usage especially in water-stressed regions). In conventional rice cultivation, the rice is transplanted and the fields are flooded. This is not necessary with DSR and therefore significantly reduces water consumption. We consider any improvement (threshold) in water consumption with DSR compared to conventional cultivation methods as a low-water impact/benefit.</p>	<Not Applicable>	<p>Bayer is engaged in developing a rice crop system powered by direct seeding. This will reduce labor requirement, optimize water use for growing rice and reduce GHG emissions especially methane. Field pilots covering Bayer solutions, planting services and agronomy package testing and further development as well as generation of carbon credits are well under way since last year in India. Bayer has been working with IRRI over past years in further developing agronomy advice for farmers for direct seeded rice.</p> <p>The rice crop system consists of e.g. Arize hybrid rice seeds, weed management solutions, seed growth, pest and disease management portfolio, digital services. While we lead this transformation, Bayer will collaborate and partner with other stakeholders covering strategic and operational elements. This entire approach will place Bayer in a unique position to truly shape and transform the future of rice cultivation into a more climate friendly, digitally savvy sustainable agriculture.</p>

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	<p>Targets are monitored at the corporate level</p> <p>Goals are monitored at the corporate level</p>	<p>APPROACH TO SETTING TARGETS AND GOALS: Bayer aims to protect water resources and improve water-use-efficiency both within the company and beyond. Since water issues materialize at a local level, we recognize the need to handle water targets locally. Responsible water usage is a cornerstone of our commitment to sustainable development and is described in the Group Regulation on HSE Management and HSE Key Requirements. Clean water in sufficient quantities is essential for the health of people, animals and plants. That is why it is crucial that industrial water usage will continue not to lead to local problems such as water shortages for the people living in the catchment areas of our production sites.</p> <p>In the context of setting its non-financial Group targets, Bayer assesses its water performance in a holistic way since 2013. This includes, inter alia, the analysis of water parameters such as water use, quality and discharge, the identification of sites exposed to water risks using the Aqueduct Tool as well as the analysis of site-specific water projects and initiatives in local communities.</p> <p>MOTIVATION: We aim to identify potential for improvement particularly at sites located in (future) water-scarce areas, and use as little water there as possible. Another motivation is the overarching cooperation to advance the topic of water: We support the CEO Water Mandate with the goal of working with key stakeholders to develop sustainable strategies for water usage. Since 2021, we are a member of the Water Resilience Coalition, which substantiate and supplement the ambitions of the CEO Water Mandate at the private-sector level. We also participate in the Water and Climate Leaders group of the World Meteorological Organization.</p> <p>IDENTIFICATION AND PRIORITIZATION: Our water management (WM) tools are based on BASIN SPECIFIC DATA. Based on this data, we set SITE-SPECIFIC TARGETS that fit to the individual water situation. Besides, we also set a GROUP-WIDE TARGET to ascertain whether all our sites that are located in (future) water-scarce areas have a WM system.</p> <p>Following individual functional analyses, dedicated company-wide supplier targets and goals were set, focusing on improving their sustainability management incl. water.</p> <p>CONSIDERATION OF CONTEXTUAL FACTORS: A sustainable WM is balancing water consumption and availability. Due to widely varying local situations, each WM system is designed individually on the basis of a risk analysis that takes into account local circumstances and the main parameters of our water supply and disposal. With our 'Ecological and Sustainability Assessment of New Investments Guideline', we assess the environmental impacts of new investment projects, considering specific conditions of the location and the facility (e.g. water use).</p> <p>IMPACT MONITORING: 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.</p>

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
Monitoring of water use
- 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.

We are aware that climate change will further exacerbate the problem of water scarcity in the future. To avert future risks for our production capacities and the local communities, we will establish by 2023 suitable water management systems at all relevant sites that will be threatened by water scarcity by 2030. We identify such sites using the base scenario of the WRI.

QUANTITATIVE WATER-RELATED TARGET:

We have set the global target to proactively establish suitable water management systems by 2023 at 100% of our sites threatened by water scarcity by 2030.

This ensures that all of these sites have implemented water management processes and develop site-specific measures and targets.

Quantitative metric

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

Baseline year

2020

Start year

2021

Target year

2023

% of target achieved

50

Please explain

In 2020, our target to establish water management at all sites in (current) water-scarce areas was achieved. As water is a local issue, our individual sites have set local targets.

In 2021, Bayer used the Aqueduct Water Risk Atlas to ascertain whether all our sites that are located in areas threatened by water scarcity by 2030 have a water management system. We set the target, that by 2023, 100% of these sites have established suitable water management systems.

Using a monitoring tool developed by Bayer, the corporate Public Affairs, Science and Sustainability (PASS) function annually analyzes the site data at corporate level including a site-specific risk review and progress analysis.

At the end of 2021, 50% of the relevant sites had an established water management system.

Target reference number

Target 2

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.

QUANTITATIVE WATER-RELATED TARGET:

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.

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. This target was achieved in 2021 at approx. 98%.

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

2021

Start year

2021

Target year

2022

% of target achieved

98

Please explain

As the overall coverage of our relevant high-risk suppliers through sustainability evaluations will continue to remain an important requirement for Bayer, Bayer will continue to strive for achieving 100% on this target. We have converted this target into a rolling review and aim to always have 100% of our potentially high-risk suppliers with significant spend evaluated also in future years

Due to pandemic situation some evaluations in 2021 have been postponed to 2022 and therefore 97.5% have been evaluated instead of 100%. It is furthermore planned to develop a new/additional KPI set regarding our sustainability activities. Furthermore, Bayer will as well focusing on raising the percentage of "green scores" with our relevant suppliers.

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 strives to extend COMPANY-WIDE pollution prevention, e.g. by implementing our procedure for the evaluation of Active Ingredients (AI) in manufacturing wastewater.

IMPORTANCE FOR BAYER: Water quality is very important for us as well as the achievement of water security, taking into consideration our total discharges of 36,799 megaliters in 2021. Due to different regional standards, Bayer sets its own targets for AI in manufacturing wastewater. This improved wastewater quality that goes beyond compliance protects Bayer from public discussions about water pollution.

IMPLEMENTATION:

We have successfully completed our pilot phase in 2019 and started to implement our AI procedure for all divisions in 2020. Our risk assessments are based on site-specific assumptions for AI emissions and PNECs (Predicted No Effect Concentrations derived from ecotoxicological studies), according to a guideline by AESGP, EFPIA and Medicines for Europe. These assessments are the basis for defining new threshold values of AI emissions and for enhancements of effluent treatment where needed, e.g. by applying alternative means of disposing of product-containing wastewater such as incineration, distillation or chemical treatment.

Additionally, Bayer experts are working on the "Pharmaceuticals in the Environment" topic and are collaborating with other companies and organizations e.g. the Eco-Pharmaco-Stewardship initiative.

Baseline year

2020

Start year

2020

End year

2023

Progress

i) INDICATORS: We track the progress in terms of the PERCENTAGE OF ACTIVE INGREDIENTS (AI) THAT HAVE PASSED THE RISK ASSESSMENT as key indicator for the progress of implementation.

ii) The THRESHOLD FOR SUCCESS is the establishment and company-wide implementation of the threshold values related to AI concentration levels. The goal is to complete assessments of effluent/wastewater of 90% of our manufactured and formulated AI by the end of 2023.

iii) PROGRESS: The global procedure implementing the new AI assessment requirements was issued in 2020 after completing a multi-year pilot effort at various operating sites in all divisions. All sites have until 2023 to complete their assessments from July 2020 on. As of June 2022, we had 72% of all evaluations done, with 90% of the results being positive. Re-evaluations must be done after 5 years or any major operation changes.

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 2021, 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 2021, which is verified by the auditor Deloitte. Thus, they are included in the verification process.

W10. Sign off

(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 W1.2:

2) CENTRAL: Relevant water aspects are 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.

Further information for W1.2i:

iii) All volumes are measured and monitored in our central BAYER SITE INFORMATION SYSTEM "BaySIS". BaySIS is a company-wide measurement and monitoring tool with both data supply and direct access for the individual sites as well as centralized controlling.

Thresholds applied for comparison with previous reporting year:

About the same: <5%

Lower / Higher: 5%<15%

Much lower / higher: >=15%

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.

Further information for W4.3a:

Additional examples of actions to realize the opportunity:

i) Our digital farming platform Climate FieldView™ enables farmers to improve their yields through data support. This takes place through the sensor-based collection and storage of large volumes of machine-generated agronomic data directly at the farmers' accounts. The data collected from Climate FieldView™ is being used to develop tools that could help farmers fine tune the operations and management of their farms in regard to precision use of crop protection products and seed placement. In addition, we are releasing in the summer of 2022 a new Data Manager feature that will help track on farm activities such as irrigation and adoption of regenerative agricultural practices such as cover crops and conservation tillage. The application of this data not only helps farmers, but also creates substantial advantages for the environment: thanks to precision agricultural machinery and digital tools, inputs such as seeds, water, fertilizer and crop protection products are only used when and where they are necessary. Climate FieldView™ is currently available in North America, South America, Turkey, South Africa and Europe.

ii) Through the Sustainable Rice Initiative and our work with partners supporting smallholders throughout India with the right technologies and agronomic & weed management support, farmers can reduce water consumption and also reduce the GHG emissions of their plot.

iii) We are partnering with irrigation agriculture companies and piloting different test & learn initiatives with the aim of improving water productivity (e.g. Goanna Ag). In Australia, Bayer has partnered with a local agriculture-tech firm, Goanna Ag, to bring the Water Use Efficiency program to cotton growers. The program provides access to the Go Field PLUS technology to growers, which enables them to optimize irrigation scheduling based on insights from a proprietary algorithm using data from a soil moisture probe and canopy temperature sensor.

iv) Insight from practice in the field is helping us gain the knowledge we need to understand how to get the best from seeds and water. Our Gothenburg Water Utilization Learning Center in Nebraska (GLC) is monitoring the impact that water, or lack of it, has on corn or soybean crops in order to develop easy-to-implement solutions and practical guidance for farmers on how to make water – or limited water – work for them. Our 324-acre farm showcases water utilization at every turn and our research evaluates all components of the cropping system as well as new technologies in our product pipeline.

v) 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.

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)	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	44081000000

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

(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

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

Requesting member

CVS Health

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 customer.

Projected outcome

Requesting member

Suzano Papel & Celulose

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 customer.

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 customer.

Projected outcome

SW2.2

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

No

SW3.1

(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.

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

The European Climate Pact Submission

Please indicate your consent for CDP to showcase your disclosed environmental actions on the European Climate Pact website as pledges to the Pact.

No, we do not wish to pledge under the European Climate Pact at this stage

Please confirm below

I have read and accept the applicable Terms