Welcome to your CDP Water Security Questionnaire 2021

W0. Introduction

W0.1

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

At BASF, we create chemistry for a sustainable future. We combine economic success with environmental protection and social responsibility. Approx. 110,000 employees in the BASF Group work on contributing to the success of our customers in nearly all sectors and almost every country in the world.

BASF's activities are grouped into six segments: Chemicals, Materials, Industrial Solutions, Surface Technologies, Nutrition & Care and Agricultural Solutions. In 2020, BASF posted sales of €59.2 billion and income from operations before special items of approx. €3.6 billion. BASF shares are traded on the stock exchange in Frankfurt (BAS) and as American Depositary Receipts (BASFY) in the U.S. Further information on BASF is available at www.basf.com.

We have defined sustainability focus areas in our corporate strategy to position ourselves in the market while meeting the growing challenges along the value chain: We source responsibly; We produce safely for people and environment; We produce efficiently; We value people and treat them with respect; We drive sustainable products and solutions.

BASF is also committed to the Sustainable Development Goals of the United Nations, which comprise the goal to ensure availability and sustainable management of water and sanitation for all (SDG 6 – Clean Water and Sanitation). To promote water stewardship and to increase BASF's resilience towards this resource we pursue the goal of establishing sustainable water management at all sites in water stress areas and at all Verbund sites by 2030 by applying the European Water Stewardship (EWS) standard. After introducing the standard at our European sites in 2013, we started the global implementation and in 2020 we introduced the standard at six additional sites.

In order to prevent unanticipated emissions and the pollution of surface or groundwater, we create water protection strategies for our production sites as part of the Responsible Care initiative. The wastewater protection plans involve evaluating wastewater in terms of risk and drawing up suitable monitoring approaches. We use audits to check that these measures are being implemented and complied with.

Based on the findings of IPCC AR5 (and subsequent studies e.g. Aqueduct Water Risk Atlas by WRI), we analyzed all BASF Verbund sites worldwide in terms of future water stress. Consequential, we do not expect climate change to have a significant impact on the water supply at these sites in the near future. We use our eco-efficiency analysis to evaluate products and processes with respect to their emissions to water and their consumptive water use. We have implemented the AWARE (Available WAter REmaining) Water Assessment methodology into our eco-efficiency analysis. The Aware Methodology is the WULCA consensus characterization model for water scarcity footprints: assessing impacts of water consumption based on available water remaining (AWARE). BASF assesses its value to society - economic, social and environmental benefits and costs - in monetary terms using PwC's TIMM method. The scope includes the supply chain (tier 1 to tier n), own operations and customer industries. With regard to water, emissions and consumption are integrated. Using the Sustainable Solution Steering® method BASF conducted sustainability assessments of its entire product portfolio. Products and solutions related to € 1.6 billion in sales make a particular contribution to water improvements in the value chain. With these initiatives and projects, among others, BASF is able to use its expertise and innovation to find sustainable solutions to growing water related issues, such as scarcity or quality, worldwide.

Forward-Looking Statements: This document may contain forward-looking statements. These statements are based on current estimates and projections and currently available information. Future statements are not guaranteeing future developments and results outlined therein. These are dependent on several factors; they involve various risks and uncertainties; and they are based on assumptions that may not prove to be accurate. We do not assume any obligation to update the forward-looking statements contained in this report.

W-CH0.1a

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

Bulk organic chemicals
Bulk inorganic chemicals
Specialty organic chemicals
Specialty inorganic chemicals

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, 2020	December 31, 2020

W0.3

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

Argentina
Australia
Bahrain
Belgium

Brazil
Canada
Chile
China
Denmark
Finland
France
Germany
India
Indonesia
Ireland
Italy
Japan
Malaysia
Mexico
Netherlands
New Zealand
Norway
Peru
Poland
Puerto Rico
Republic of Korea
Russian Federation
Singapore
Slovakia
South Africa
Spain
Switzerland
Taiwan, Greater China
Thailand
Turkey
United Kingdom of Great Britain and Northern Ireland
United States of America
Viet Nam

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.

Other, please specify

Worldwide production sites of BASF SE, its fully consolidated subsidiaries (emissions included in full), and proportionally consolidated joint operations (emissions disclosed pro rata according to BASF's interest

W0.6

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

Yes

W0.6a

(W0.6a) Please report the exclusions.

Exclusion	Please explain
Administrative sites (e.g. sales offices)	BASF only reports water inputs/outputs for its production sites. The water inputs/outputs from its various administrative sites are not collected since their contribution to BASF's total water inputs/outputs is not significant (<0.1%). Also, wastewater from these sites typically consists of sanitary wastewater and does not represent industrial wastewater.
Associated/affiliated companies over which BASF has significant influence but does not have financial control (so-called B-companies) or from subsidiaries that are considered to be immaterial from a BASF point of view (so-called C-companies)	The contribution of the water inputs/outputs from BASF's B- and C- companies to BASF's total water inputs/outputs is not significant (< 2%). Thus, they are not collected and reported.

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	Important	Primary use in direct operations: Coolant (87%), also as solvent or cleaning agent, and product input. Rationale: Many of our products rely on freshwater as product or process input, with strict quality parameters. With impure water, product quality is severely affected/efforts for water pre-treatment

			rise. 2020, 82% of water withdrawal was from surface water/freshwater sources. Hence, freshwater availability is considered vital for operations. Future: At this time, we expect no significant changes in importance, as core processes and product lines will remain. Future shifts in product portfolio could alter this status. Primary use in indirect operations: Many suppliers are chemical factories and use water as coolant and solvent. Rationale: Water use heavily depends on sector/product. For instance, hydrocarbons require lots of process steam and cooling water. Other products are less dependent on freshwater. Therefore, the availability is important, but not in all cases vital for operations in our supply chain. Future: At this time, we expect no significant changes of dependency in our supply chain, as core groups of procured materials will remain. Future shifts in product portfolio could alter this status.
Sufficient amounts of recycled, brackish and/or produced water available for use	Vital	Important	Primary use in direct operations: Mainly cooling purposes. Rationale: 13% of withdrawal was from brackish/seawater in 2020: a significant share that cannot be readily replaced by other sources. We recirculate water as much as possible, to withdraw less. Future: At this time, we expect no significant changes, as use of brackish water depends on availability/local conditions. Use of recycled water may be increased to decrease freshwater dependency. Primary use in indirect operations: Mainly coolant (brackish) and solvent (recycled). Rationale: Use and importance of brackish/recycled water depends on process, availability and local conditions. Therefore, this aspect is important, but not in all cases vital for operations. Future trends: At this time, we expect no significant changes in water dependency in our supply chain, as core groups of procured materials

			will remain in place. However, future shifts in the product portfolio could alter this status. Use of recycled water or reuse of wastewater may be increased due to limited freshwater supply.

W1.2

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

	% of sites/facilities/operations	Please explain
Water withdrawals – total volumes	100%	Method of measurement: BASF collects data on water supply, water use, and water discharge at site level in a global database, named REHSA (Reporting EHS Application). Data entry and maintenance have precise reporting requirements. Training sessions are conducted to ensure that the same data standards are implemented around the world. Withdrawn water volumes are either determined continuously or updated on a regular basis with various methods depending on the withdrawal method and specific applicability, e.g., pump characteristics, dynamic pressure measurements, ultrasound or magneto-inductive measurements. The measuring equipment is monitored and regularly maintained. We publicly report the information for the entire company in the annual BASF report and the database is audited externally. 100% of BASF production sites are monitored for total volumes of water withdrawals. Frequency: Data in the REHSA data base is updated annually.
Water withdrawals – volumes by source	100%	Method of measurement: Each withdrawal source is an individual measurement point. Withdrawal volumes are either determined continuously or updated on a regular basis with various methods depending on withdrawal method and specific applicability, e.g., pump characteristics, dynamic pressure measurements, ultrasound or magneto-inductive measurements. Measuring equipment is monitored and regularly maintained. BASF aggregates source data on water supply, water use, and water discharge at site level in a global

		database, named REHSA (Reporting EHS Application). Data entry and maintenance have precise reporting requirements. We conduct raining sessions to ensure that the same data standards are implemented around the world. We publicly report the information for the entire company in BASF's annual report and the database is audited externally. 100% of BASF production sites are monitored for volumes of water withdrawals by sources. Frequency: Data in the REHSA data base is updated annually.
Water withdrawals quality	76-99	Method of measurement: BASF collects quality data on local site level. The measuring equipment is monitored and regularly maintained. Measurements are carried out according to site-specific processes and guidelines, where required.. Depending on the use of the withdrawn water, salinity may be monitored to control corrosion of the cooling system or contamination with bacteria for drinking water and product purposes. Withdrawals' quality is monitored taking into account the type of withdrawal, e.g. there are specific criteria for sea water withdrawals (e.g. chlorine content, turbidity, temperature, pH) etc. Frequency: The frequency of monitoring varies according to local requirements for the production process – in some cases, a continuous monitoring is in place. In other cases, monitoring is updated in regular intervals, e.g. annually.
Water discharges – total volumes	100%	Method of measurement: BASF collects data on water supply, water use, and water discharge at site level in a global database, named REHSA (Reporting EHS Application). Data entry and maintenance have precise reporting requirements. Training sessions are conducted to ensure that the same data standards are implemented around the world. Discharge volumes are either determined continuously or updated on a regular basis with various methods depending on specific applicability, e.g., mass balance, pump characteristics, dynamic

		pressure measurements, ultrasound or magneto-inductive measurements. The measuring equipment is monitored and regularly maintained. We publicly report the information for the entire company in the annual BASF report and the database is audited externally. 100% of BASF production sites are monitored for total volumes of water discharges. Frequency: Data in the REHSA data base is updated annually.
Water discharges – volumes by destination	100%	Method of measurement: BASF collects data on water supply, water use, and water discharge at site level in a global database, named REHSA (Reporting EHS Application). Data entry and maintenance have precise reporting requirements. Training sessions are conducted to ensure that the same data standards are implemented around the world. For each discharge point, the discharge volumes are either determined continuously or updated on a regular basis with various methods depending on specific applicability, e.g., mass balance, pump characteristics, dynamic pressure measurements, ultrasound or magneto-inductive measurements. The measuring equipment is monitored and regularly maintained. We publicly report the information for the entire company in the annual BASF report and the database is audited externally. 100% of BASF production sites are monitored for volumes of water discharges by destination. Frequency: Data in the REHSA data base is updated annually.
Water discharges – volumes by treatment method	100%	Method of measurement: BASF collects data on water supply, water use, and water discharge at site level in a global database, named REHSA (Reporting EHS Application). Data entry and maintenance have precise reporting requirements. Training sessions are conducted to ensure that the same data standards are implemented around the world. For each discharge point, the discharge volumes are either determined continuously or updated on a regular basis with various methods depending

		specific applicability, e.g., mass balance, pump characteristics, dynamic pressure measurements, ultrasound or magneto-inductive measurements. The measuring equipment is monitored and regularly maintained We publicly report the information for the entire company in the annual BASF report and the database is audited externally. 100% of BASF production sites are monitored for volumes of water discharges by treatment method. Frequency: Data in the REHSA data base is updated annually.
Water discharge quality – by standard effluent parameters	100%	Method of measurement: BASF collects data on water supply, water use, and water discharge at site level in a global database, named REHSA (Reporting EHS Application). Data entry and maintenance have precise reporting requirements. Training sessions are conducted to ensure that the same data standards are implemented around the world. We publicly report the information for the entire company in the annual BASF report and the database is audited externally. 100% of BASF production sites are monitored for quality by standard effluent parameters, e.g. COD, TOC, Nitrogen, Phosphorus, heavy metals. The measuring equipment is monitored and regularly maintained. Frequency: Data in the REHSA data base is updated annually.
Water discharge quality – temperature	76-99	Method of measurement: BASF collects discharge temperature data on a local site level. It is not part of the REHSA (Reporting EHS Application) but carried out according to site specific processes and requirements. Frequency: Time intervals vary depending on requirements and can also be continuous. In some cases, we also monitor/calculate not only temperature amounts but also heat input to e.g. surface water bodies. Therefore, we assume coverage of 100% of relevant sites (i.e. all sites with discharges of cooling water), or a slightly

		lesser coverage if all sites are taken into account.
Water consumption – total volume	100%	Method of measurement: BASF collects data on water consumption at each site in a global database named REHSA (Reporting EHS Application). Data entry and maintenance have precise reporting requirements. Training sessions are conducted to ensure that the same data standards are implemented around the world. 100% of BASF production sites are monitored for total volumes of water consumption. Frequency: Data in the REHSA data base is updated annually.
Water recycled/reused	100%	Method of measurement: BASF collects data on water supply, water use, and water discharge at site level in a global database, named REHSA (Reporting EHS Application). Data entry and maintenance have precise reporting requirements. Training sessions are conducted to ensure that the same data standards are implemented around the world. We publicly report the information for the entire company in the annual BASF report and the database is audited externally. 100% of BASF production sites are monitored for water recycled and reused. Frequency: Data in the REHSA data base is updated annually.
The provision of fully-functioning, safely managed WASH services to all workers	100%	Method of measurement: BASF is committed to provide access to water, sanitation and hygiene at the workplace at an appropriate level of standard for all employees. The Department Corporate Health Management is responsible for the management of occupational health and general Health topics of BASF employees, and the coordination and auditing of occupational medicine in 100 % of BASF production sites worldwide. Part of this responsibility are the topics sanitation and hygiene at the workplace. Frequency: Sites are audited on a regular basis - 5-year interval if no negative findings were

		identified, or more frequently in case of findings. Audit results and action items are tracked in an audit database. We only performed 1 site audit on occupational medicine and health protection in 2020 due to Corona pandemic travel restrictions and medical personnel concentrating on organizing the pandemic response. All Health Performance Control visits were postponed to 2021.

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	1,728,000	About the same	Total amount of water withdrawn was about the same. A lower abstraction of surface water was compensated by a somewhat higher withdrawal of brackish water at our Verbund site in Antwerp due to variation in production. In addition, produced/entrained water is newly included. Future trends: At this time, we expect no significant changes in total water withdrawal, as core groups of procured materials will remain in place. However, further extension of our facilities or a future change in product portfolio could alter this status.
Total discharges	1,429,000	Lower	Total amount of water discharged was lower due to lower withdrawals and due to uncertainties in measurement of once through cooling water discharge in open channels at site Ludwigshafen. Future trends: At this time, we expect no significant changes in total water discharges, as core groups of procured materials will remain in place. However, higher production, further extension of our facilities or a future change in product portfolio could alter this status.
Total consumption	63,000	About the same	Water consumption is the sum of all water that has been withdrawn and incorporated into

			products, waste, evaporated, consumed by humans or livestock, polluted to a point of being unusable by others, and therefore not released back to surface water, groundwater, third party over the course of the reporting period. At BASF water consumption is mainly due to evaporation in recirculating cooling processes. A smaller fraction is incorporated into products or consumed by other processes. Water consumption in 2020 is about the same as in 2019. Water evaporated in cooling processes and water consumed in production processes is aggregated from local measurements whereas water in products on group level is calculated from the average water content of the volume sales. The figures do not balance using basic calculation “Withdrawals = Consumption + discharges” due to measurement uncertainties for discharged cooling water in open channels. Future trends: At this time, we expect no significant changes in total water consumption, as core groups of procured materials will remain in place. However, higher production / further extension of our facilities or a future change in product portfolio could alter this status.

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	About the same	WRI Aqueduct	In 2020, around 25% of our production sites were located in water stress areas. We define water stress areas as regions in which 40% or more of available water is used by industry, household, and agriculture, as defined by Aqueduct 3.0 (WRI 2019). Amongst others, important sites are Port Arthur, USA and

					Shanghai, China. All sites in water stress areas accounted for 1% of BASF's total water abstraction. Water consumption in water stress areas accounted for around 11% of our total water consumption (2019: 14%) and was primarily attributable to evaporation in cooling processes. All our sites have to report their water withdrawal or supply (see question W1.2). Based on the results, we can filter water data to show only withdrawals/supply for the sites in water stress areas. The evaluation of sites located in water stress areas is updated at the end of each calendar year. The evaluation is conducted centrally for all sites by water experts in our corporate Environmental Protection unit. Explanation of change: In 2020 water withdrawal by the sites in water stress areas was about the same as in 2019 (1% in 2019) of BASFs total withdrawal.

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	1,417,000	Lower	Rationale for relevance: Fresh surface water is the most important source for water supply. All our sites are either metering the abstracted volume of water or the supplied volume of water. The most important type of used freshwater is river water for

				once-through cooling at our site in Ludwigshafen. Water is taken from the river and discharged back into it after use, without having contact to chemicals. Changes: The decrease in freshwater withdrawal was mainly for decreased once-through and increased recirculating cooling at our Ludwigshafen site (last year: 1,433,000 megaliters). Future trends: Since the proportion of once-through cooling and recirculating cooling flow is dependent on weather situation and influenced by the water energy nexus, volumes of abstracted surface water may vary from year to year. Also, water withdrawal in our operations is affected by production output due to cooling water use, it may decrease also to a certain extent with changing production.
Brackish surface water/Seawater	Relevant	218,000	Higher	Rationale for relevance: Abstracted brackish water is measured, and brackish water has a relevant share within BASF's overall water withdrawals. Most of the brackish water is withdrawn and discharged at our site in Antwerp, located near the sea. The brackish water is taken from the harbor and discharged back after use in a recirculating cooling system. Changes: The increase in

				brackish water withdrawal was mainly for increased cooling purposes (last year: 192,000 megaliters). Future trends: Since water withdrawal in our operations is affected by production output due to cooling water use, it may increase to a certain extent with growing production.
Groundwater – renewable	Relevant	62,000	Lower	Rationale for relevance: Abstracted groundwater is measured. The groundwater water has a rather small, but relevant share within BASF's overall water withdrawals, especially for higher quality water requirements. Changes: The amount is lower as last year, which was at 68,000 megaliters, mainly due to the divestiture of a site. Future trends: At this time, we expect no significant changes in groundwater water withdrawal in our operations, as core groups of procured materials will remain in place. However, future shifts in the product portfolio could alter this status.
Groundwater – non-renewable	Not relevant			Rationale for relevance: Non-renewable groundwater occurs in arid regions. According to Aqueduct 3.0 arid regions are e.g. in Northern Africa, Arabian Peninsula, Australia, etc. BASF does not abstract non-renewable groundwater. E.g., BASF site Whyalla, which is located in an arid region in

				Australia, uses mainly seawater for production.
Produced/Entrained water	Relevant	5,000	About the same	Rationale for relevance: On group level we calculated the volume of produced/entrained water (5,000 megaliters) from the water content of our raw materials and imported steam in 2020. This is less than 0.3% of total water supply of BASF globally and can therefore be neglected. Since volumes are included in withdrawal volumes we report in our integrated report, we added the volumes here. Changes: The amount is virtually constant compared to the 2019 figure. Future trends: Currently, we expect no significant changes in withdrawal from Produced/Entrained water. Since water withdrawal in our operations is affected by production output due to cooling water use, it may increase to a certain extent with growing production.
Third party sources	Relevant	26,000	About the same	Rationale for relevance: A relevant third-party source is drinking water from municipal suppliers (23,000 megaliters). Wastewater from other organizations accounts for about 3,000 megaliters. Supplied volumes are measured. Changes: The amount is virtually constant compared to the 2019 figure (24,000 megaliters).

				Future trends: Currently, we expect no significant changes in withdrawal from third party sources regarding drinking water. The amount of wastewater from other organizations is expected to increase.

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	1,205,000	Lower	Rationale for relevance: Fresh surface water is the most important source for water supply. Most of the water is used for once-through cooling at our site in Ludwigshafen. The water is taken from the river and is given back to it after use without having contact to chemicals. The volume of discharged water is measured. By volume, fresh surface water is the most important destination of discharge. Changes: The decrease in discharge was mainly due to measurement uncertainties of cooling water discharge in open channels at our Ludwigshafen site (last year: 1,309,000 megaliters). Future trends: Since water discharge in our operations is affected by production output due to cooling water use, it may increase to a certain extent with growing production.

Brackish surface water/seawater	Relevant	203,000	Higher	Rationale for relevance: Some sites are located near the coast and brackish water or the sea is the destination for discharge. The volume of discharged water is measured. By volume, brackish water and sea water are the second most important destinations of discharge. Changes: The higher discharge into brackish water is the result of higher cooling water discharge at the site in Antwerp (last year: 178,000 megaliters). Future trends: Since water discharge in our operations is affected by production output due to cooling water use, it may increase to a certain extent with growing production.
Groundwater	Relevant	1,000	About the same	Rationale for relevance: Water discharge via soil to water beneath the soil surface or water discharge into isolated geological formations. This represents a rather small share of our overall discharges, but the relevance is constituted by the potential ecological implications. The volume of discharged water is measured. Changes: The level is about the same than the previous year (1,000 megaliters). Future trends: At this time, we expect no significant changes in discharges to groundwater.
Third-party destinations	Relevant	20,000	About the same	Rationale for relevance: This includes mainly water treated in a wastewater treatment plant (WWTP) which is not operated by BASF - municipal and private

				owned WWTP and a small fraction (<1%) of water send to others for further use. Third party destinations represent a rather small share of our overall discharges, but the relevance is constituted by the dependence on and interrelations with external stakeholders. The volume of water discharged to third parties is measured. Changes: The amount is within the same range as the 2019 figures (21,000 megaliters). Future trends: At this time, we expect no significant changes in discharges to third party sources.

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	122,000	Lower	1-10	The vast majority (84%) of production wastewater of BASF sites has been treated on tertiary level in our own wastewater treatment plants. The sites have established a

					biological wastewater treatment with additional steps for removal of nutrients (nitrification and P-elimination). Compared to 2020 the volume is slightly lower to reduced production because of Covid-19 crisis.
Secondary treatment	Relevant	8,000	Lower	11-20	Most BASF operated wastewater treatment plants (WWTPs) treat wastewater biologically to remove the organic load. Compared to 2020 the volume is slightly lower to reduced production because of Covid-19 crisis.
Primary treatment only	Relevant	16,000	Lower	1-10	Primary wastewater treatment is only predominantly done at our

					kaolin mining and processing site in Georgia, US. Kaolin is a naturally occurring mineral. Compared to 2020 the volume is slightly lower to reduced production because of Covid-19 crisis.
Discharge to the natural environment without treatment	Relevant	1,269,000	Lower	31-40	Most of BASFs water supply is used for cooling purposes. In once through cooling systems the water has no contact to products and no treatment is necessary before it is discharged back to its source. About one third of BASFs production sites is operating once-through cooling systems. The highest volumes are

					discharged at our Verbund sites in LU and Antwerp. The decrease in discharge compared to last year was mainly due to measurement uncertainties of cooling water discharge in open channels at our Ludwigshafen site (last year: 1,336,000 megaliters). Future trends: Since water discharge in our operations is affected by production output, it may increase to a certain extent with growing production.
Discharge to a third party without treatment	Relevant	20,000	Lower	71-80	About 3/4 of BASF sites discharge wastewater to a third-party treatment plant. Before discharging this wastewater is pre-treated at

					the production sites depending on local regulations. Comparison to last year: The volume is slightly lower as the 2019 figures (21,000 megaliters), due to lower production because of Covid-19 crisis. Future trends: At this time, we expect no significant changes in discharges to third party sources.
Other	Not relevant				No other treatment methods reported.

W-CH1.3

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

Yes

W-CH1.3a

(W-CH1.3a) For your top five products by production weight/volume, provide the following water intensity information associated with your activities in the chemical sector.

Product type

Bulk organic chemicals

Product name

Ethylene

Water intensity value (m3)

0.39

Numerator: water aspect

Freshwater consumption

Denominator

Ton

Comparison with previous reporting year

About the same

Please explain

Why volumes change/anticipated future trends: We define water consumption as water not returned to its original environment (includes evaporated water, water contained in products and consumed as part of chemical reactions). Water intensities at BASF plants are vastly different depending on location (even for the same product). Our largest sites in Ludwigshafen and Antwerp were chosen as examples for 5 major products. Hot summers can lead to less fresh water available and higher river water temperatures. In such periods, re-cooled water volume is increased, which results in higher consumption + water intensities. Shutdowns + testing of equipment can also lead to higher water consumption. Hence, volumes change continuously and cannot be anticipated.

Use of metrics /strategy to manage intensities: The more water is recirculated (and partially evaporated/consumed), the more electricity for pumping is needed, representing a cost factor, and causing GHG emissions. The recirculated water portion of the cooling water cycle is continuously monitored to maintain an optimum of emissions, water consumption and once-through cooling mode. The main parameters determining the optimum are regulatory constraints (max. effluent temp., receiving water body temp., max. freshwater intake), electricity prices and pumping capacity. We seek to limit re-cooling + save energy, thus also reduce calculated water intensities. On site level, the recirculation rate/water intensity is a central parameter to plan future demand of cooling capacities and is part of the long-term development strategy of the sites. Our central environmental goal is to reduce CO2 emissions. Since 87% of the water withdrawn is used for cooling purposes, a reduction of re-cooling with reduced power demand for pumps reduces water intensities (lower evaporation from cooling towers) and CO2 emissions. These optimization criteria are integrated in daily operations and part of the strategy of reaching BASF’s climate goal.

Product type

Bulk organic chemicals

Product name

Propylene

Water intensity value (m3)

0.39

Numerator: water aspect

Freshwater consumption

Denominator

Ton

Comparison with previous reporting year

About the same

Please explain

Why volumes change/anticipated future trends: We define water consumption as water not returned to its original environment (includes evaporated water, water contained in products and consumed as part of chemical reactions). Water intensities at BASF plants are vastly different depending on location (even for the same product). Our largest sites in Ludwigshafen and Antwerp were chosen as examples for 4 major products. Hot summers can lead to less fresh water available and higher river water temperatures. In such periods, re-cooled water volume is increased, which results in higher consumption + water intensities. Shutdowns + testing of equipment can also lead to higher water consumption. Hence, volumes change continuously and cannot be anticipated.

Use of metrics /strategy to manage intensities: The more water is recirculated (and partially evaporated/consumed), the more electricity for pumping is needed, representing a cost factor, and causing GHG emissions. The recirculated water portion of the cooling water cycle is continuously monitored to maintain an optimum of emissions, water consumption and once-through cooling mode. The main parameters determining the optimum are regulatory constraints (max. effluent temp., receiving water body temp., max. freshwater intake), electricity prices and pumping capacity. We seek to limit re-cooling + save energy, thus also reduce calculated water intensities. On site level, the recirculation rate/water intensity is a central parameter to plan future demand of cooling capacities and is part of the long-term development strategy of the sites. Our central environmental goal is to reduce CO2 emissions. Since 87% of the water withdrawn is used for cooling purposes, a reduction of re-cooling with reduced power demand for pumps reduces water intensities (lower evaporation from cooling towers) and CO2 emissions. These optimization criteria are integrated in daily operations and part of the strategy of reaching BASF’s climate goal.

Product type

Bulk organic chemicals

Product name

Benzene

Water intensity value (m3)

0.09

Numerator: water aspect

Freshwater consumption

Denominator

Ton

Comparison with previous reporting year

Lower

Please explain

Why volumes change/anticipated future trends: We define water consumption as water not returned to its original environment (includes evaporated water, water contained in products and consumed as part of chemical reactions). Water intensities at BASF plants are vastly different depending on location (even for the same product). Our largest sites in Ludwigshafen and Antwerp were chosen as examples for 4 major products. Hot summers can lead to less fresh water available and higher river water temperatures. In such periods, re-cooled water volume is increased, which results in higher consumption + water intensities. Shutdowns + testing of equipment can also lead to higher water consumption. Hence, volumes change continuously and cannot be anticipated.

Use of metrics /strategy to manage intensities: The more water is recirculated (and partially evaporated/consumed), the more electricity for pumping is needed, representing a cost factor, and causing GHG emissions. The recirculated water portion of the cooling water cycle is continuously monitored to maintain an optimum of emissions, water consumption and once-through cooling mode. The main parameters determining the optimum are regulatory constraints (max. effluent temp., receiving water body temp., max. freshwater intake), electricity prices and pumping capacity. We seek to limit re-cooling + save energy, thus also reduce calculated water intensities. On site level, the recirculation rate/water intensity is a central parameter to plan future demand of cooling capacities and is part of the long-term development strategy of the sites. Our central environmental goal is to reduce CO2 emissions. Since 87% of the water withdrawn is used for cooling purposes, a reduction of re-cooling with reduced power demand for pumps reduces water intensities (lower evaporation from cooling towers) and CO2 emissions. These optimization criteria are integrated in daily operations and part of the strategy of reaching BASF’s climate goal.

Product type

Bulk organic chemicals

Product name

Ammonia

Water intensity value (m3)

1.38

Numerator: water aspect

Freshwater consumption

Denominator

Ton

Comparison with previous reporting year

Higher

Please explain

Why volumes change/anticipated future trends: We define water consumption as water not returned to its original environment (includes evaporated water, water contained in products and consumed as part of chemical reactions). Water intensities at BASF plants are vastly different depending on location (even for the same product). Our largest sites in Ludwigshafen and Antwerp were chosen as examples for 4 major products. Hot summers can lead to less fresh water available and higher river water temperatures. In such periods, re-cooled water volume is increased, which results in higher consumption + water intensities. Shutdowns + testing of equipment can also lead to higher water consumption. Hence, volumes change continuously and cannot be anticipated.

Use of metrics /strategy to manage intensities: The more water is recirculated (and partially evaporated/consumed), the more electricity for pumping is needed, representing a cost factor, and causing GHG emissions. The recirculated water portion of the cooling water cycle is continuously monitored to maintain an optimum of emissions, water consumption and once-through cooling mode. The main parameters determining the optimum are regulatory constraints (max. effluent temp., receiving water body temp., max. freshwater intake), electricity prices and pumping capacity. We seek to limit re-cooling + save energy, thus also reduce calculated water intensities. On site level, the recirculation rate/water intensity is a central parameter to plan future demand of cooling capacities and is part of the long-term development strategy of the sites. Our central environmental goal is to reduce CO2 emissions. Since 87% of the water withdrawn is used for cooling purposes, a reduction of re-cooling with reduced power demand for pumps reduces water intensities (lower evaporation from cooling towers) and CO2 emissions. These optimization criteria are integrated in daily operations and part of the strategy of reaching BASF’s climate goal.

Product type

Bulk organic chemicals

Product name

Butadiene

Water intensity value (m3)

2.55

Numerator: water aspect

Freshwater consumption

Denominator

Ton

Comparison with previous reporting year

About the same

Please explain

Why volumes change/anticipated future trends: We define water consumption as water not returned to its original environment (includes evaporated water, water contained in products and consumed as part of chemical reactions). Water intensities at BASF plants are vastly different depending on location (even for the same product). Our largest sites in Ludwigshafen and Antwerp were chosen as examples for 4 major products. Hot summers can lead to less fresh water available and higher river water temperatures. In such periods, re-cooled water volume is increased, which results in higher consumption + water intensities. Shutdowns + testing of equipment can also lead to higher water consumption. Hence, volumes change continuously and cannot be anticipated.

Use of metrics /strategy to manage intensities: The more water is recirculated (and partially evaporated/consumed), the more electricity for pumping is needed, representing a cost factor, and causing GHG emissions. The recirculated water portion of the cooling water cycle is continuously monitored to maintain an optimum of emissions, water consumption and once-through cooling mode. The main parameters determining the optimum are regulatory constraints (max. effluent temp., receiving water body temp., max. freshwater intake), electricity prices and pumping capacity. We seek to limit re-cooling + save energy, thus also reduce calculated water intensities. On site level, the recirculation rate/water intensity is a central parameter to plan future demand of cooling capacities and is part of the long-term development strategy of the sites. Our central environmental goal is to reduce CO2 emissions. Since 87% of the water withdrawn is used for cooling purposes, a reduction of re-cooling with reduced power demand for pumps reduces water intensities (lower evaporation from cooling towers) and CO2 emissions. These optimization criteria are integrated in daily operations and part of the strategy of reaching BASF's climate goal.

W1.4

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

Yes, our suppliers

Yes, our customers or other value chain partners

W1.4a

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

Row 1

% of suppliers by number

1-25

% of total procurement spend

26-50

Rationale for this coverage

Selection: Since our supplier base currently comprises more than 70,000 tier 1 suppliers which provide us with raw materials, chemicals, investment goods and consumables, and perform a range of services, focusing our third-party evaluations on the most relevant is crucial. We define relevant suppliers as Tier 1 suppliers showing an elevated sustainability risk potential. They are identified by applying our risk matrices (including country and industry-specific risks) and our purchasers' assessments with focus on responsible supply of goods and services as well as environmental and social standards. We also use further sources of information to identify relevant suppliers, such as evaluations from the Together for Sustainability initiative (TfS).

Incentivization: Suppliers are evaluated by independent experts either in on-site audits or online assessments. The latter are conducted by EcoVadis. Our buyers integrate the results of the evaluations into their supplier management. The sustainability results can be used in bonus malus schemes and as awarding criterion. Suppliers may be excluded from participating in tenders because of poor sustainability evaluation results.

Impact of the engagement and measures of success

Information requested: In the EcoVadis online assessments, suppliers are requested to report on water use, management procedures, wastewater handling and existence of a water policy. In on-site audits, water policies, reports, protection concepts for wastewater effluents, containment measures and water-related impact reduction practices are examined.

Use of information: Suppliers' performance in these areas impacts their evaluation result. If we identify deviations from our standards, we ask our suppliers to develop and implement corrective measures within a reasonable time frame. We support them in their efforts, for example by providing training on environmental topics. We review our suppliers' progress according to a defined timeframe based on the sustainability risk identified, or after five years at the latest.

Measure of success: We analyze the relevant spend we cover with evaluations (status 2020: 80%). Relevant spend comprises the procurement spend of all suppliers deemed relevant, as described under "Rationale for this coverage". In addition, we track the percentage of evaluated suppliers that improve their sustainability performance upon re-evaluation, according to their latest EcoVadis scorecard or follow-up TfS audit (status 2020: 68%). We have set ourselves the goal to increase this percentage to 80% by 2025.

Comment

Spend calculated according to International Financial Reporting Standards (IFRS).

W1.4b

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

Type of engagement

Incentivizing for improved water management and stewardship

Details of engagement

Water management and stewardship action is integrated into your supplier evaluation

% of suppliers by number

1-25

% of total procurement spend

26-50

Rationale for the coverage of your engagement

Our supplier base currently comprises more than 70,000 tier 1 suppliers which provide us with raw materials, chemicals, investment goods and consumables, and perform a range of services. Out of the total amount of suppliers in our portfolio in 2020, 8% had a valid sustainability evaluation. This represents a coverage of 47% of the spend, out of the total spend we had with these suppliers in 2020. Due to the high number of suppliers we work with, focusing our third-party evaluations on the most relevant is crucial. We define relevant suppliers as those showing an elevated sustainability risk potential as identified by our risk matrices (including both country and industry-specific risks) and our purchasers' assessments. We also use further sources of information to identify relevant suppliers, such as evaluations the Together for Sustainability initiative (TfS): Suppliers are evaluated by independent experts either in on-site audits or online assessments. The latter are conducted by EcoVadis. When analyzing alternative suppliers, buyers can access evaluation reports on the suppliers' sustainability performance. Employees with procurement responsibility receive ongoing training in sustainability-oriented supplier management and responsible procurement. Buyers are encouraged and trained to integrate available evaluation results into awarding processes and business decisions.

Impact of the engagement and measures of success

The sustainability third-party evaluations (EcoVadis assessments and TfS audits) are used as a tool for supplier risk management and continuous improvement. They provide a direct supplier performance indicator which can be positively influenced, e.g. by proving implementation of water management measures and policies, correct use of water and safe handling of wastewater, and by holding international certifications.

Beneficial Outcome:
In 2020,48% of assessed suppliers were certified by ISO 14001, and already 23% reported on measures taken to reduce water consumption. Apart from our supplier evaluation program, BASF engages in numerous initiatives to foster sustainable development. As an example, we established the Sustainable Castor Initiative – Pragati

in 2016 together with 3 partners, to improve the economic situation of castor oil farmers in India and raise awareness of sustainable farming methods. As part of the project, more than 4,500 smallholder farmers have already received training on topics like efficient water use.

Measure of success:
As a measure of success, we analyze the relevant spend we cover with evaluations (status 2020: 80%) and track the percentage of evaluated suppliers that improve their sustainability performance upon re-evaluation (status 2020: 68%). The supplier audits conducted in 2020 have identified some deviations with respect to wastewater management. According to our BASF-specific follow-up processes, we will conduct another review in a pre-defined timeframe which aims to confirm the improvement of the weak points discovered.

Comment

Spend calculated according to International Financial Reporting Standards (IFRS).

W1.4c

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

We integrate sustainability information in day-to-day business with **customers**.
Method/strategy: We use a range of sustainability tools to interact with customers: LCA tools (Eco-Efficiency Analysis, SEEBALANCE®, AgBalanceTM) or tools for systematic sustainability analysis in a value chain. Intensity and modus of interaction (e.g. one-to-one meetings, workshops, joint projects) is customer dependent.
Rationale/prioritization: We engage with customers in close partnerships to align our business optimally with customers' needs and contribute to their success with our solutions. Our engagement essentially covers our entire customer base. Findings from our sustainability tools allow us to identify hot spots; prioritization for working with specific customers is primarily driven by our divisions based on opportunities. We segmented our portfolio regarding contribution to sustainability (incl. reduction of water use), using the Sustainable Solution Steering® method. Products with substantial sustainability contribution in the value chain are classified as Accelerators.
We **measure success** by their sales volume (2020 sales of €16.7 billion, +10% from 2019).

We also undertake **sector specific engagements**: E.g., via our Agricultural Products division, we engage with selected agricultural customers, networks, initiatives and also **local water utilities.**
Method/strategy: Partnerships to jointly develop and spread best management practices to reduce water use and pollution. This can apply to optimized product use of e.g. herbicides, technical innovations like mulch films, optimized irrigation practices or alternative cultivation techniques like dry-seed rice.
Rationale/prioritization: Partners must be influencers in strategic value chains (crop-specific) and willing to cooperate with industry.

We **measure success** by number of touchpoints with value chain players (e.g. number of engaged farmers or advisors), as well as Agricultural Products product sales within these value chains.

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?

According to BASF requirements, all company sites have an inventory of handled substances, that includes a classification according to the GHS- System (Globally harmonized System of Classification, Labelling and Packaging of Chemicals). Substances are classified by H-Phrases distinguishing between physical, health and environmental hazards. We identified and classified pollutants of global relevance. These are heavy metals (due to toxicity for humans and other organisms), and substances causing eutrophication (organic carbon, nitrogen, phosphorus), leading to reduced oxygen availability in water bodies and therefore decimating water organisms and damaging ecosystems. We continuously collect data of these pollutants in our REHSA Database globally.

Policies and processes in place: The corporate EHS is responsible for defining BASF wide requirements and standards for handling and monitoring pollutants. Corporate EHS is connected via cross-divisional and cross-regional teams around the world to exchange on ongoing legislative activities.

Details of established standards: There is no common legal standard for wastewater pollutants on global level. Every BASF site discharging water has a specific permit defining local standards. Authorities set standards based on national or supranational regulation, e.g. European IED and BRefs, US CWA and NPDES Permits. Effluent standards are set considering pollutant properties (toxicity, persistence, bioaccumulation) and current situation of the receiving water body to avoid detrimental impacts on water ecosystems or human health.

BASF assesses impacts of wastewater discharge in accordance with applicable laws and regulations. Responsible local authorities regularly review our analyses and precautions in accordance with the relevant local requirements to prevent contaminants from entering water bodies.

How processes vary across value chain: BASF's Global Requirement "Environmental Protection" requires that all production facilities conduct a Water Risk Assessment (WRA) where applicable, including cooling water protection, firefighting water retention and management of spillages and leakages, process wastewater, surface water and steam condensate. Implemented protective measures are depending on probability of an event and severity of its impact.

On site level, environmental impact classes must be determined based on volume and properties of handled substances and local conditions of receiving water body. The site/plant manager is responsible for conducting a WRA. The WRA is intended to identify water risks in a globally consistent manner. This enables BASF to exchange experiences and share learnings, thus, to continuously improve environmental safety of its production sites. BASF's global audit team checks the WRA documentation of sites regularly. Regarding our products, documentation and classification is following legal requirements and standards on international and market level, among others the UN GHS-System. The basic water-related impacts mentioned above (toxicity to humans and natural ecosystems, eutrophication) are also considered when assessing potential pollutants in the value chain. BASF is a founding member of "Together for Sustainability" (TfS), an initiative of the leading chemical companies. TfS evaluates the environmental performance of suppliers with audits, also considering wastewater prevention and treatment. Additionally, the specific potential impacts of our products are assessed in relation to the context, e.g. in the case of herbicides in agricultural applications. This typically applies to products which are distributed to end-consumers.

The largest portion of BASF's product portfolio consists of industrial products which are distributed for further processing in virtually all industries. Here, the focus of potential impacts on water is on the safety of transport of these products to our customers. We want our products to be safely loaded, transported, handled and stored. Therefore, we depend on reliable logistics partners, global standards and an effective organization. Our goal is to minimize risks along the entire transportation chain. Some of our guidelines for transportation of goods which are hazardous to the aquatic environment go beyond national and international requirements. We have defined global guidelines and requirements for storage of our products and regularly monitor compliance with these. We assess environmental risks of transportation and storing raw materials and sales products with high hazard potential using our global guideline. This is based on the guidelines of the European Chemical Industry Council. We also have binding global standards for load safety. We stipulate worldwide requirements for our logistics service providers and assess them in terms of safety and quality, using own evaluation and monitoring tools and internationally approved schemes.

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
Nitrogen	Direct operations	Nitrogen is a common chemical element found in many molecules used in the chemical industry, e.g. ammonia, a building block of many chemical products (e.g. plastics, fertilizer). As such, traces of Nitrogen are typically contained in chemical industry wastewater. Nitrogen levels in wastewater can be reduced biologically (De-Nitrification) to meet regulatory standards. Total emissions of Nitrogen into the aquatic environment amounted to 2900 t in 2020 or about 90 g (value constant) of total Nitrogen per ton of sales product from the chemicals business. High nitrogen concentrations in aquatic ecosystems raise the level of nutrients, can cause algal blooms and lead to oxygen depletion. This eutrophication process may pose a threat to biodiversity and diminish life in aquatic environments. Loss of biodiversity can cause spiralling negative effects on interconnected ecosystems, e.g. bird	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages Other, please specify Responsible Care Management System	How the procedures selected manage the risks: The Responsible Care Management System (RCMS) triggers continuous improvements via many different measures in production plants and improvements in the wastewater treatment plants (WWTP). First steps of improvements are always taken on the plant level to reduce the emission of a pollutant. If this cannot be achieved, e.g. the production process has an intrinsic and unavoidable emission of the pollutant, end-of-pipe technologies are improved, e.g. by making changes to the wastewater treatment plant. Measurement of results/success: BASF measures total emission of nitrogen across the group. We define success being a reduction of pollutants. BASF group reduced nitrogen emission from 4600 (t/a) in 2008 to 2900 (t/a) in 2020.

		populations depending on fish for food.		
Heavy metals	Direct operations	The source of heavy metals in effluent are production processes using heavy metals as catalysts or raw materials (e.g. for the manufacture of battery materials, catalytic converters) and the production equipment itself. Steel is an alloy of iron and numerous metals to achieve certain properties (e.g. resistance to rust). Small amounts of these metals are released into the effluent through direct contact with process equipment, e.g. piping, pumps, distillation columns etc. These small releases added up to a total of 22 t in 2020, which translates into a heavy metal release into the aquatic environment of less than 750 mg per t of sales product from the chemicals business. Heavy metals can cause serious toxic effects on aquatic organisms, as they can absorb heavy metals directly from the water or indirectly from food chains.	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages Other, please specify Continuous improvement is an objective of the Responsible Care Management System (RCMS)	How the procedures selected manage the risks: The Responsible Care Management System (RCMS) triggers continuous improvements via many different measures in production plants and improvements in the wastewater treatment plants (WWTP). We have wastewater protection plans, in order to avoid unanticipated emissions in the environment, are introduced globally. Measurement of results/success: BASF measures total emission of heavy metals across the group. We define success being a reduction of pollutants. BASF group reduced heavy metal emission from 34 (t/a) in 2008 to 22 (t/a) in 2020.

W3.3

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

Yes, water-related risks are assessed

W3.3a

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

Direct operations

Coverage

Full

Risk assessment procedure

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

Frequency of assessment

Annually

How far into the future are risks considered?

More than 6 years

Type of tools and methods used

Tools on the market
Enterprise Risk Management
International methodologies
Databases

Tools and methods used

WRI Aqueduct
COSO Enterprise Risk Management Framework
Alliance for Water Stewardship Standard
Other, please specify

European Water Stewardship (EWS) standard; World Database on Protected Areas ; Community Advisory Panels; Environmental Impact Assessment; Sustainability Assessment &Statement; Water Risk Assessment/Water Protection Concept; Water stress Aqueduct

Comment

Most relevant risk fields that cover water-related risks for direct operations within the Enterprise Risk Management are “Plant availability”, “Change in production quality”, “Change in production cost”, “Regulation”, “Ecology and environmental protection”. The risk management is informed by the tools listed.

Supply chain

Coverage

Full

Risk assessment procedure

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

Frequency of assessment

Annually

How far into the future are risks considered?

More than 6 years

Type of tools and methods used

Tools on the market

Tools and methods used

Other, please specify

Risk matrix and Together for Sustainability Audits & EcoVadis assessments; Maplecroft Risk Indices; Procurement strategy template; investment decisions.; PwC TIMM Method

Comment

Since our supplier base currently comprises more than 70,000 tier 1 suppliers, which provide us with raw materials, chemicals, investment goods and consumables, and perform a range of services, focusing our third-party evaluations on the most relevant is crucial. We define relevant suppliers as those showing an elevated sustainability risk potential as identified by our risk matrices (including both country and industry-specific risks) and our purchasers' assessments with focus on responsible supply of goods and services as well as environmental and social standards. We also use further sources of information to identify relevant suppliers, such as evaluations from the Together for Sustainability initiative (TfS). Suppliers only have to complete an assessment process once. The results are then made available to all TfS members in a database and are mutually recognized. Suppliers are evaluated by independent experts either in on- site audits or online assessments. The latter are conducted by EcoVadis. In their 360° Watch, they provide us with ad-hoc information if any suppliers have been publicly observed in connection with negative sustainability incidents, including water-related aspects. Furthermore, the topic of water is an explicit component of BASF's sourcing strategies, because of its potential to drive sustainability. This means that, when elaborating a procurement strategy, Buyers are required to consider potential threats and opportunities related to water.

Other stages of the value chain

Coverage

Partial

Risk assessment procedure

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

Frequency of assessment

Annually

How far into the future are risks considered?

More than 6 years

Type of tools and methods used

Tools on the market

International methodologies

Tools and methods used

Environmental Impact Assessment

Life Cycle Assessment

Other, please specify

PwC TIMM Method, internal methods

Comment

Product safety risks are considered as a dedicated risk field within the Enterprise Risk Management. This area covers potential harmful impacts by products on people and the environment. The risk management is informed by risk assessment for products, eco-efficiency and environmental impact analyses etc.

W3.3b

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

	Relevance & inclusion	Please explain
Water availability at a basin/catchment level	Relevant, always included	Why this issue is relevant: Having sufficient amounts of good quality freshwater available for use is vital for our operations: We use water as a coolant, solvent and cleaning agent, as well as to produce our products. In areas with limited water availability, monitoring of availability and quality is especially important. In 2020, around 25% of our production sites were located in water stress areas., e.g. eastern China and western United States. By applying the European Water Stewardship (EWS) standard (See "Other: EWS" in question W3.3a) at all sites in water stress areas and all Verbund sites by 2025, BASF analyses water availability, quality and water management, as well as potential issues regarding water discharges at local level. Currently, EWS Standards are implemented at 46.2% of relevant sites (2020). Around 1% of BASF's total water supply was abstracted from these sites. How it is assessed/tools used: BASF collects data on a local site level according to site specific processes and guidelines and in cooperation with local authorities. Water availability and quality of withdrawals are monitored taking into account the type of withdrawal and specific criteria for e.g. sea water. The frequency of monitoring varies according to local requirements for the production processes and expected/typical fluctuations in quality and availability. At Ludwigshafen site for example, measuring stations take frequent readings of groundwater levels and determine sustainable withdrawal rates in cooperation with local authorities. At the same time, the quality of the groundwater is assessed for site specific parameters. At Ludwigshafen site, river water abstraction is continuously monitored by local authorities. As the main source for cooling water, river water quality parameters also include temperature to ensure a limited introduction of thermal energy into the river

		basin and limit withdrawals according to temperature and current water levels. Monitoring these parameters are critical to a continuous control process to satisfy process demands while observing environmental and sustainability requirements.
Water quality at a basin/catchment level	Relevant, sometimes included	Why this issue is relevant: Having sufficient amounts of good quality freshwater available for use is vital for operations: We use water as a coolant, solvent and cleaning agent, as well as to produce our products. How it is assessed/tools used: BASF collects data on a local site level according to site specific processes and guidelines and in cooperation with local authorities. Water availability and quality of withdrawals are monitored taking into account the type of withdrawal and specific criteria for e.g. sea water. The frequency of monitoring varies according to local requirements for the production processes and expected/typical fluctuations in quality and availability. At Ludwigshafen site for example, measuring stations take frequent readings of groundwater levels and determine sustainable withdrawal rates in cooperation with local authorities. At the same time, the quality of the groundwater is assessed for site specific parameters. At Ludwigshafen site, river water abstraction is continuously monitored by local authorities. As the main source for cooling water, river water quality parameters also include temperature to ensure a limited introduction of thermal energy into the river basin and limit withdrawals according to temperature and current water levels. Monitoring these parameters are critical to a continuous control process to satisfy process demands while observing environmental and sustainability requirements. Also, by applying the European Water Stewardship (EWS) standard (See “Other: EWS” in question W3.3a) at all sites in water stress areas and all Verbund sites by 2025 BASF analyses water availability, quality and water management, as well as potential issues regarding water discharges at local level. Currently, EWS Standards are implemented at 46.2% of relevant sites (2020).
Stakeholder conflicts concerning water resources at a basin/catchment level	Relevant, always included	Why this issue is relevant: In order to systematically detect the potential for stakeholder conflicts concerning water resources, we have identified all of our production sites within a water stressed area – We use WRI Aqueduct’s definition of water stress, which applies to that all areas in which more than 40% of available water is used by industry, households and agriculture. In 2020, around 25% of our production sites were located in water stress areas. Around 1% of BASF’s total water supply was abstracted from these sites. By 2030, we want to introduce sustainable water management at all sites in water

		stress areas and at our Verbund sites, covering 93% of BASF's entire water abstraction. We achieved 46.2% of this goal in 2020. In our sustainable water management, we consider the quantitative, qualitative, and social aspects of water use. How it is assessed/tools used: To be aware of conflicts we provide transparent communication about our activities and are open to critical questions. As we recognize our particular responsibility toward our production sites' neighbors, we discuss current issues with them e. g. in Community Advisory Panels (See Other: Community Advisory Panels (CAPs) in question W3.3a) which is e.g. also a requirement of the EWS. A Community Advisory Panel (CAP) consists of individuals who live near or around a production facility and who represent the fabric of a community which may be affected by a production site. BASF is represented with a member of site management. The CAP meets regularly to discuss issues of mutual interest. It is a forum for open dialogue between local citizens and plant management. By encouraging a two-way flow of information, we hope to enhance communication with the communities in which we operate. They address, among others, issues that may not be covered by regulatory procedures and go beyond legal issues. CAPs cover all concerns of BASF's stakeholders with the goal of timely information on current developments. In 2016/2017 we developed new globally applicable requirements for CAPs. The minimum requirements are oriented towards grievance mechanisms outlined in the U.N. Guiding Principles for business and human rights.
Implications of water on your key commodities/raw materials	Relevant, always included	Why this issue is relevant: Since our supplier base currently comprises more than 70,000 tier 1 suppliers, which provide us with raw materials, chemicals, investment goods and consumables, and perform a range of services, focusing our third-party evaluations on the most relevant is crucial. How it is assessed/tools used: We define relevant suppliers as those showing an elevated sustainability risk potential as identified by our risk matrices (including both country and industry-specific risks) and our purchasers' assessments with focus on responsible supply of goods and services as well as environmental and social standards. We also use further sources of information to identify relevant suppliers, such as evaluations from the Together for Sustainability initiative (TfS). Suppliers only have to complete an assessment process once. The results are then made available to all TfS members in a database and are mutually recognized. Suppliers are evaluated by independent experts either in on- site audits or online

		assessments. The latter are conducted by EcoVadis. In their 360° Watch, they provide us with ad-hoc information if any suppliers have been publicly observed in connection with negative sustainability incidents, including water-related aspects. Furthermore, the topic of water is an explicit component of BASF's sourcing strategies, because of its potential to drive sustainability. This means that, when elaborating a procurement strategy, Buyers are required to consider potential threats and opportunities related to water.
Water-related regulatory frameworks	Relevant, always included	Why this issue is relevant: Water withdrawals and wastewater discharges must comply with national, state and local regulations and permit authorizations. It is BASF's ground rule that the company is following all applicable laws and regulations. We closely monitor current and emerging regulations and issues in order to facilitate a timely adaption process to changing legal requirements and e.g. initiate necessary investments. How it is assessed/tools used: BASF's environmental and advocacy experts are engaged in constant dialogue with business associations and other stakeholders including local authorities (See "internal company methods" in question W3.3a) to be up to date regarding regulatory developments. Arrangements exist for specific situations. For example, contractual agreements with authorities on reduced abstractions during periods of extreme weather conditions (high temperatures) are in place. On the international level, BASF participates in partnerships at watershed level which focus on sustainable water management e. g. ICPR (International Commission for the Protection of the Rhine).
Status of ecosystems and habitats	Relevant, always included	Why this issue is relevant: Biodiversity is the foundation for numerous ecosystem services, for example air quality, climate, pollination, water purification and soil formation. We as a chemical company depend on ecosystem services and have an impact on them. How it is assessed/tools used: For new production sites, Environmental Impact Assessments (EIA) are conducted to assess the impact of construction and production activities on ecosystems and habitats. These EIAs are conducted by an external and independent third party. Part of our internal approval process for investment projects at BASF is a sustainability statement, which assesses the potential impacts of the project on ecosystems and habitats by sustainability experts within the company. We investigated our production sites in water risk areas and our integrated manufacturing sites

		(Verbund sites) to establish which of these are located near internationally protected areas. To do so, we used the World Database on Protected Areas (WDPA, https://www.iucn.org/theme/protected-areas/ourwork/qualityand-effectiveness/world-database-protected-areas-wdpa) to identify biodiversity risks (See “Other: WDPA” in W3.3a) We did not discover any impact of our activities on biodiversity in these protected areas. If there are indications of changing circumstances, we will re-assess these issues regularly on the individual site level. BASF expects its suppliers to assess the potential impact of site operations on designated protected areas or ecosystems and therefore considers these issues beyond direct operations also upstream (inter alia as measure of risk management). During TfS on-site audits, suppliers are therefore specifically required to evaluate their impact on the immediate environment by relying on external data or their own measurements. This includes water-related risks, such as groundwater contamination, leakages and wastewater disposal. Not having assessed impacts on ecosystems or having a detrimental impact on biodiversity can lead to a negative finding in the audit report and requires the supplier to implement corrective actions.
Access to fully-functioning, safely managed WASH services for all employees	Relevant, always included	Why this issue is relevant: BASF is committed to provide access to safe water, sanitation and hygiene at the Workplace” (WASH)at an appropriate level of standard for all employees. How it is assessed/tools used: The Department Corporate Health Management is responsible for the management of occupational health and general Health topics of BASF employees, and the coordination and auditing of occupational medicine in BASF group companies worldwide. Part of this responsibility are the topics sanitation and hygiene at the workplace. Sites are audited on a regular basis – 5-year interval if no negative findings were identified, or more frequently in case of findings. Audit results and action items are tracked in an audit database. Due to the coronavirus pandemic, medical personnel including auditors had to concentrate on monitoring and responding to the pandemic and on global pandemic preparedness. For this reason and due to the travel restrictions, only one site was audited on occupational medicine and health protection in 2020 (2019: 15).
Other contextual issues, please specify	Not considered	

W3.3c

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

	Relevance & inclusion	Please explain
Customers	Relevant, always included	Reason for inclusion: The trust of customers and consumers is essential for the success of BASF, which is why they are considered a very relevant stakeholder. We are obliged to safeguard their health when using our products. Safety of use instructions and precautionary measures must be aligned with local customs, application technologies and expertise available. BASF's customer portfolio ranges from major global customers and medium-sized regional businesses to local workshops. We align our business models and sales channels with the respective customer groups and market segments. Risk example: We consider potential water related risks from inappropriate product use by our customers. This could apply, for example, to products from our BASF Agriculture Solutions portfolio, like crop protection chemicals, that could affect freshwater bodies if used or disposed of improperly. Method of engagement: We ensure uniformly high standards for product stewardship worldwide and offer our customers training in the safe use of our products e.g. for several herbicides we developed instructions for water protection to enable our customers to easily and reliably optimize the use of our product. For example, for the herbicide Bentazon® we have developed instructions for water protection in the European Union, which enable our customers to optimize the use considering the respective composition of the ground and the time of application easily and reliably. Another example is the training of farmers: Typically, 50 to 90 percent of pesticide pollution in ground and surface water comes from point pollution sources in agriculture - for example, spillages, incorrect cleaning of spraying equipment or illegal disposal of leftover spray solutions. These incidents can be avoided by following Good Agricultural Practices. As a company, BASF continues to inform and train farmers on general best management practices for water protection by providing information and training material to advisors and farmers. In addition to general water protection measures, BASF defines and promotes specific use requirements for relevant products, such as reduced maximum application rates or use restrictions in vulnerable areas.

Employees	Relevant, always included	Reason for inclusion: Our employees are fundamental to achieving the goals of our “We create chemistry” strategy. They are therefore deemed a relevant stakeholder and included in our water-related risk assessment. In keeping with our corporate strategy, we integrate sustainability including water topics into our day-to-day business. Our employees work in interdisciplinary teams on innovative processes and products for a sustainable future. Our innovative strength lies in our global team of highly qualified employees with various specializations Production efficiency and/or quality, as well as production/employee safety at the BASF production sites may be affected by a lack of awareness regarding water related topics. That may include the improper handling of harmful substances, or the inefficient use of water resources. Method of engagement: The methods used to promote increasing awareness towards environmental topics and continuous improvement of operational management include trainings of our employees, and a rigid quality and process management, in which potential water-related risks for and through employees are identified in a systematic manner. Our Code of Conduct, which has to be acknowledged by all employees, specifies basic principles and rules for behavior also in the field of Protection of Environment, Health and Safety. We particularly encourage our employees to actively and promptly seek guidance if in doubt. They can consult their managers, dedicated specialist departments, such as the Legal department, and company compliance officers. We have also set up more than 50 external hotlines worldwide that our employees can use – including anonymously – to report potential violations of laws or company guidelines. All hotlines are also open to the public. Each concern is documented according to specific criteria, properly investigated in line with standard internal procedures and answered as quickly as possible. The outcome of the investigation as well as any measures taken are documented accordingly and included in internal reports.
Investors	Relevant, always included	Reason for inclusion: As a global industry leader, BASF is expected by investors to act proactively on the challenges of water-related issues. Including them in our water-related risk assessment is therefore crucial: If major investors perceive BASF business activities to be misaligned with the growing global momentum to act against water insecurity, this will pose a reputational risk to the company that can ultimately lead to a reduced market valuation. Moreover, there is potential risk of exclusion from thematic funds based on ESG criteria.

		Method of engagement: We are in close dialog with the capital market and rating agencies. We conduct roadshows and attend conferences across Europe to also meet with socially responsible investors (SRI). At these events, we discuss various sustainability topics including water and BASF´s approach towards these. BASF creates and updates a dedicated presentation for responsible investors. Furthermore, we embedded the most relevant ESG topics in BASF's capital market story as one of the three main chapters. In our communication material, we present a comprehensive range of KPIs with the corresponding goals, history, status, projects and the wider context to show links and interdependencies. Messages of our ESG communication are developed in a well-established collaboration of the Investor Relations (IR) team with the sustainability strategy unit. IR is closely involved in the implementation of the steering tools for the nonfinancial goals of BASF's corporate strategy. Furthermore, we have an SRI section on the IR website. We also use Twitter and Stocktwits to inform the financial community about sustainability topics, including water. Presentations are available on our website. Our corporate strategy aims to create long-term value. We support this strategy through regular and open communication with all capital market participants. In light of the Corona pandemic, we mainly used virtual formats such as video or conference calls for dialog in 2020. We engaged with institutional investors and rating agencies in numerous one-on-one meetings, as well as at roadshows and conferences worldwide, and give private investors an insight into BASF at informational events. In 2020, we offered special events aimed at investors who base their investment decisions on sustainability criteria. We put emphasis on our programs to reduce CO2 emissions and on the circular economy, both of which are closely connected to water issues.
Local communities	Relevant, always included	Reason for inclusion: As a company in the chemical industry, we are aware of the particular responsibility we have towards the local communities around our sites, due to which we consider them being a relevant stakeholder. Negative impacts on water security of local communities by BASF's facilities could arise, for example, through unsustainable water use practices or insufficient effluents management. In accordance with our sustainability strategy & environmental policies, we take appropriate measures to prevent any such impacts, and thus preserve BASF's license to operate. Method of engagement: We aim at engaging openly with our neighbors in various forms of neighborhood dialogs. Our

		different tools for community relations depend on the specific site context, among them Community Advisory Panels. Mostly used at larger production sites, a Community Advisory Panel is a continuous, long-term discussion forum for open dialog. It consists of a group of individuals who live near or around a chemical facility and who represent the fabric of their community. The CAP meets regularly to discuss issues of mutual interest. It is a forum for open and honest dialog between citizens and site management. Our global internal requirements for Community Advisory Panels have been developed based on the UN Guiding Principles for Business and Human Rights for grievance mechanisms. The goal is to provide the community with the opportunity for direct involvement, while allowing us to better address the local expectations. We can only be successful if we enjoy the trust and support of our neighbors. To be able to assess our impact on local communities, we keep track of our environmental data via our REHSA Database, including water discharges and water use at all production sites., In 2020, CAP was focused on the consequences of the Corona pandemic and therefore discussed no specific water relevant topics.
NGOs	Relevant, sometimes included	Reason for inclusion: If NGOs should come to believe that BASF is not fully transparent and cooperative about water-related issues, e.g. contamination events, this could lead to reputational damages for BASF, which is why they are considered a relevant stakeholder. Also, BASF selects the sustainability topics it publicly reports on based on the materiality principle. We include stakeholder feedback and concerns, a. o. from NGOs, into the materiality analyses which we conduct on a regular basis (every three to four years). Method of engagement: Continuous exchange with our stakeholders including NGOs is guided by a defined organizational unit within our sustainability management. Together with NGOs, namely the EWP (European Water Partnership) as well as the global AWS (Alliance for Water Stewardship), we developed criteria and indicators for sustainable water management. The membership in the Alliance for Water Stewardship also gives us the opportunity to better understand the other members' expectations, including NGOs, on a continuous basis. Example from our Ludwigshafen site (headquarter) for our transparency and dialogue with NGOs: We always publish a press release if an incident involving water contamination above a certain threshold happens. NGOs can subscribe to these press releases and are thus informed automatically.

Other water users at a basin/catchment level	Relevant, sometimes included	Reason for inclusion: BASF is highly interested in maintaining a cooperative relationship with other water users at basin/catchment level. This helps to address and avoid any potential conflicts regarding water use, pricing etc. Also, if water users act out of common interests, policy-related or technological improvements can be advanced quicker and more sustainably. Method of engagement: We do participate in partnerships at watershed level that focus on sustainable water management. The dialogue with different stakeholders helps us to learn their expectations. BASF employees are participating as industry representative e. g. in the ICPR (International Commission for the Protection of the Rhine). The ICPR consist of representatives of all the states along the course of river Rhine, of environmental organizations, drinking water producers, shipping, hydroelectric power generators etc. There is a yearly plenary meeting, regularly meetings of the strategy group (2 times a year) and meetings of the multiple working groups (about 2-5 times per year each of the groups) (see also www.iksr.org) Further we are engaged with CUACSA (Comunitat d'Usuaris d'Aigües de la Cubeta de Sant Andreu de la Barca). CUACSA is the group of water users in the “Sant Andreu de la Barca” river basin in Spain. A BASF employee is member of the “Junta de Govern”. The meeting of the “Junta General” is two times per year. There are additional meetings of the “Commisio Operativo” (see meeting calendar at www.cuacsa.org).
Regulators	Relevant, always included	Reason for inclusion: Water withdrawals and wastewater discharges have to comply with national, state and local regulations and permit authorizations. BASF is highly interested in maintaining a cooperative relationship with regulators. This helps to address and avoid any potential conflicts regarding water use, pricing etc. It also allows BASF to anticipate future trends and regulations, thus avoiding uncertainty in this area. Method of engagement: To identify and evaluate the future potential of regulatory changes of sustainability issues including water we are actively involved in external networks like business associations. We engage in constant dialogue with our stakeholders including local authorities. BASF is convinced that trust must be built through transparency and cooperation. This requires a long-term engagement with regulators to improve environmental conditions based on a consensus of priorities and taking into account the interests of each party. On a political level, BASF is active in all concerned associations to play an

		active role in the development of laws and rules. The political process (especially in Germany and the EU) depends on a constructive exchange between all stakeholders, including NGOs and industry with the goal of developing feasible compromises. BASF is typically in the role of a technical advisor to contribute possible measures within the framework of an industrial enterprise, while NGOs focus on protection goals to be achieved. This exchange is extremely important for BASF since NGOs typically reflect the expectations of large portions of the population. These expectations vis-à-vis our operations and products are to be analyzed and integrated in our business strategy, leading to the development of better technologies and solutions.
River basin management authorities	Relevant, sometimes included	Reason for inclusion: We do participate in partnerships at watershed level that focus on sustainable water management. The dialog with different stakeholders, including river basin management authorities, helps us to learn their expectations. This helps to address and avoid any potential conflicts regarding water use, volume allocation, pricing etc. It also allows BASF to anticipate future trends and regulations, thus avoiding uncertainty in this area. Method of engagement: BASF is highly interested in maintaining a cooperative relationship with river basin management authorities. BASF employees are participating as industry representatives e. g. in the ICPR (International Commission for the Protection of the Rhine). The ICPR consist of representatives of all the countries along the course of river Rhine, of environmental organizations, drinking water producers, shipping, hydroelectric power generators etc. There is a yearly plenary meeting, regular meetings of the strategy group (2 times a year) and meetings of the multiple working groups (about 2-5 times per year each of the groups) (see also www.iksr.org). A major issue of ICPR is the international coordination of pollution events caused by, e.g. ship accidents. BASF contributes expertise and hardware (vehicles, boats, trucks etc.) to work closely together with river authorities to mitigate negative impacts. BASF is part of a network of chemical companies which actively supports the authorities in case of accidents (TUIS.org). BASF is also a co-signatory of the German Federal Ministry of Transport's "Low water on the Rhine" action plan, which aims to improve shipping conditions on the Rhine over the coming next years with various measures. Further we are engaged with CUACSA (Comunitat d'Usuaris d'Aigües de la Cubeta de Sant Andreu de la Barca) which is the group of water users in the "Sant Andreu de la

		Barca" river basin in Spain. A BASF employee is member of the "Junta de Govern", which has regular meetings several times per year. These meetings of "river basin stakeholders" also address protection measures to be developed, e.g. areas to be dedicated for re-naturalization to serve as retention areas (flood control).
Statutory special interest groups at a local level	Relevant, sometimes included	Reason for inclusion: BASF is highly interested in maintaining a cooperative relationship with special interest groups. This helps to address and avoid any potential conflicts regarding water use, pricing etc. We can only be successful if we enjoy the trust and support of our neighbors. Negative impacts on water security of local stakeholders by BASF's facilities could arise, for example, through unsustainable water use practices or insufficient effluents management. In accordance with our sustainability strategy & environmental policies, we take appropriate measures to prevent any such impacts, and thus preserve BASF's license to operate. Method of engagement: We do participate in partnerships at watershed level that focus on sustainable water management. For instance, in Tarragona we work together with other companies in the industry industrial area, with a special interest group of local agricultural water users ("Irrigantes") and with the local community.
Suppliers	Relevant, always included	Reason for inclusion: In our holistic approach towards water-related risk management, our suppliers are one of the pillars of supply chain resilience and therefore an important building block of our operations. As a matter of fact, any risks emerging from the supply chain could potentially have negative impacts on our business. Risks likely to happen are e.g. potential supply interruptions due to insufficient water management that could ultimately affect BASF's business continuity. Another example is insufficient effluents protection at BASF's suppliers, which might pose a potential threat to local communities and ecosystems and could eventually put BASF's reputation for effective supply chain sustainability management at risk. In BASF´s Supplier Code of Conduct, we expect our suppliers to minimize their negative impact on biodiversity, climate change and water scarcity, and to reduce their emissions to water by using resources efficiently and applying environmentally friendly technologies. Suppliers´ engagement is key to integrate sustainability as a key topic in their long-term business relationship with us. Methods of engagement: Due to the size and scale of our supplier portfolio, suppliers are evaluated based on risk,

		including materiality and country and industry-specific risks. We define relevant suppliers as those showing an elevated sustainability risk potential as identified by our risk matrices and purchasers' assessments. We also use further sources of information to identify relevant suppliers such as evaluations from the Together for Sustainability (TfS) initiative. In the EcoVadis online assessments, suppliers are requested to report on water use, water management procedures and wastewater handling. Existence of a water policy is another important element of the assessment. In TfS on-site audits, suppliers' internal water policies, reports, protection concepts for wastewater effluents, containment measures and water-related impact reduction practices are examined against standard procedures for water and wastewater management. At the end of 2020, TfS had 29 members with a combined procurement spend of around €227 billion. A total of 258 audits and 4,675 online assessments were performed. TfS has developed trainings for suppliers that already have a sustainability rating but have potential for improvement e.g. in environmental topics. In 2020, more than 1,000 participants attended the sustainability training in China and Brazil.
Water utilities at a local level	Relevant, sometimes included	Reason for inclusion: Water providers at the local level are considered a relevant stakeholder as they often tap directly into the same water basin as BASF operations and may also be affected by BASF's wastewater in case of an accident or malfunction. If water withdrawal by one of our sites exceeds a sustainable volume on a local level, this could lead to direct risks through interruptions of water supply for BASF, and to indirect risks through long term depletion of water resources, stakeholder conflicts and reputational damages. BASF expects their suppliers to minimize their impact on biodiversity, climate change and water scarcity, according to the BASF Supplier Code of Conduct. Therefore, integrated in the procurement strategy is the sustainable water abstraction and discharge of third parties at local level. Method of engagement: The topic is addressed in dialogs with local water utilities. In addition, part of the European Water Stewardship Standard, which we implement at our Verbund sites and at sites in water-stressed regions, is the dialog with the water utilities regarding sustainable water supply: in the course of successfully implementing the standard at a location, it is required to assess the provenance of water with the local water utility to identify and act on possible risks. An example is our production site in Tarragona, Spain, where water management issues are crucial to discuss with the local water

		utility to prevent water shortages. This includes fair water distribution to all stakeholders and increasing water availability through wastewater recycling.
Other stakeholder, please specify	Not considered	Risk example: We consider potential water related risks from inappropriate product use by our customers. This could apply, for example, to products from our BASF Agriculture division.

W3.3d

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

BASF's primary tool is our Enterprise Risk Management (ERM). It serves as aggregation, assessment & monitoring framework for risks to corporate level, covering direct operations, upstream & downstream value chain. Most relevant risk fields that cover water-related risks for direct operations within the ERM are "Plant availability", "Change in production quality", "Change in production cost", "Regulation", "Ecology and environmental protection". The risk management is informed by other tools are used on operational level to determine & analyze risk factors, depending on value chain stage:

Direct operations:
Tools used: We use the Aqueduct tool developed by WRI (World Resources Institute) to determine which production sites are located in water stressed areas. In the planning of new sites and plant extensions, an Environmental Impact Assessment (EIA) is used to assess plant impacts on the environment.
Rationale: WRI tool provides a clear global data basis & is easily applied. EIA is an internationally accepted standard tool.
Coverage/implementation: WRI: Including all worldwide production sites, implemented centrally by Corporate EHS.
How outcome informs decision-making: Sites in risk areas need to adopt the European Water Stewardship Standard. Within this management system, appropriate responses to specific risks are derived and decided upon on facility level. EIA: Necessary infrastructure investments above a certain level have to be approved on corporate level. A sustainability assessment including water topics must be included.

Supply chain:
Tools used: We use the "Together for Sustainability" (TfS) evaluation program, which standardizes and simplifies supplier evaluations and audits globally. Suppliers are evaluated by independent experts either in on- site audits or online assessments. The latter are conducted by EcoVadis. In their 360° Watch, they provide us with ad-hoc information if any suppliers have been publicly observed in connection with negative sustainability incidents, including water-related aspects.
How risks are classified: For the composition of risk matrices that are used to identify our high-risk suppliers, we use, i.a., water-related risk indices from the service provider Verisk Maplecroft which offer a perspective on the complexities of the global risk landscape and the challenges it presents to businesses. When elaborating a procurement strategy, buyers are

required to consider potential threats and opportunities related to environmental topics including water.
Rationale and practical implementation: In the EcoVadis online assessments, suppliers are requested to report on water use, water management procedures and wastewater handling. Existence of a water policy is another important element of the assessment. In TfS on-site audits, suppliers' internal water policies, reports, protection concepts for wastewater effluents, containment measures and water-related impact reduction practices are examined against standard procedures for water and wastewater management. Subsequently a total of 50 raw material supplier sites were audited on sustainability standards on our behalf in 2020. We also received sustainability assessments for 628 suppliers from EcoVadis. We train our suppliers on sustainability topics and help them to improve (43 suppliers in 2020 as part of a local partnership with the East China University of Science and Technology in Shanghai).
Coverage: Our suppliers are evaluated based on risk, including materiality and country and industry-specific risks. We select them from our global supplier portfolio, consisting of more than 70,000 Tier 1 suppliers, out of all business units. We define relevant suppliers as those showing an elevated sustainability risk potential as identified by our risk matrices and our purchasers' assessments. We also use further sources of information to identify relevant suppliers, such as evaluations from TfS.
Timescale: We review our suppliers' progress according to a defined timeframe based on the sustainability risk identified, or after five years at the latest.
How outcome informs decision-making: If we identify deviations from our standards, we ask our suppliers to develop and implement corrective measures within a reasonable time frame. We support them in their efforts, e.g. by providing training on environmental topics. In the case of ongoing, serious violations of the standards defined in our Supplier Code of Conduct or international principles, we reserve the right to impose commercial sanctions. These can go as far as termination of the business relationship. In addition to the outcome of the process, negative news from EcoVadis' 360° watch can have an impact in supplier relationship management.

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?

Water is an element of BASF's risk management, which identifies and evaluates opportunities and risks as early as possible to take appropriate measures in order to seize opportunities and minimize risks. The aim is to avoid risks that pose a threat to BASF's continued existence and to make improved managerial decisions to create lasting value.

i) Definition: We understand risk to be any event that can negatively impact the achievement of our short-term operational or long-term strategic goals. We define opportunities as potential successes that exceed our defined goals. In order to effectively measure and manage identified opportunities and risks, we quantify these in terms of probability and economic impact in the event they occur. We use statistical methods to aggregate opportunities and risks into risk factors. This way, we achieve an overall view of opportunities and risks at a portfolio level, allowing us to take effective measures for risk.
ii) + iii) Metrics / thresholds: A specific risk or opportunity is considered as having a substantive impact if the resulting deviation from planned earnings exceeds €10 million. We have further defined the magnitude of impact to be linked to the following net financial implications for BASF's EBIT: High = more than €100 million, Medium = €10-100 million, Low= less than €10 million. If a new risk is identified that could have an impact on earnings of more than €10 million or bears reputational risks, it must be immediately reported to the Board of Executive Directors. **Probability of occurrence:** Financial impacts will only be considered where a risk or opportunity has a probability of occurrence of at least 1% or the potential to threaten BASF's license to operate. The method for estimation of probability depends on the nature of the risk or opportunity. In case that statistical data about the occurrence of the risk/opportunity are available (e.g. knowledge about return periods of weather events), such information will be the basis for calculation of likelihoods. If no such statistical relationship can be relied on (e.g. when assessing the probability of implementation of certain policy measures), likelihood will be subject to expert estimates. We classify probabilities as follows: low = less than 30%, medium = 30-70%, high = more than 70%.
Depending on the nature of the risk or opportunity, different methods for quantification are considered. In case of a clear understanding about the direction of change driven by the risk/opportunity, the effects will be quantified based on expert assessments about the potential level of change and cause-effect-relationships. If the direction of change is unclear, i.e. the effect can be positive or negative and thus represents a volatility/uncertainty, a case-specific probability distribution over the impact range is estimated.
iv) Scope: The mentioned definitions and thresholds apply regardless to where in the value chain the risk/event is located, i.e. direct operations, supply chain, customers etc.
v) Example: For BASF's direct operations, main causes for substantive change related to water are an interruption or a significant reduction of production. To identify sites that potentially have substantive change to their business due to water risks, we use a screening process as follows (reviewed annually):
- Identifying sites located in water stressed areas (59 sites globally in 2020, our assessment is based on Aqueduct 3.0 (WRI, 2019))
- Determining sites which are considered strategic and account for high sales volume (BASF's 5 Verbund (=integrated) sites in Freeport (USA), Geismar (USA), Antwerp (BE), Ludwigshafen (GE), and Kuantan (MY))
- Sites that satisfy both of these criteria are considered to face a risk and have the potential to cause substantive changes to our business.

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	2	Less than 1%	In total 25% of our production sites are located in water stress areas according to Aqueduct 3.0. The site in Freeport is associated with risks that have a potential substantive financial impact. The site in Ludwigshafen is exposed to supply chain related risks that have a potentially substantive financial impact.

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

United States of America
Brazos River

Number of facilities exposed to water risk

1

% company-wide facilities this represents

Less than 1%

% company's total global revenue that could be affected

1-10

Comment

The site in Freeport is associated with water stress related risks that have a potential substantive financial impact.

Country/Area & River basin

Germany
Rhine

Number of facilities exposed to water risk

1

% company-wide facilities this represents

Less than 1%

% company's total global revenue that could be affected

1-10

Comment

The site in Ludwigshafen is exposed to supply chain related risks that have a potential substantive financial impact.

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

United States of America
Brazos River

Type of risk & Primary risk driver

Physical
Increased water scarcity

Primary potential impact

Increased operating costs

Company-specific description

BASF's Freeport site in the Brazos river basin is one of the largest sites the company operates in North America. The North-American region accounts for about a quarter of BASF's sales. Specific risk for our Freeport plant is constituted by several drivers: Higher municipal and industrial demand in the area is expected for the next decades. This could result in an increased competition of different users for the existing water sources (river water, ground water) and an increased price for water in the future. Production in 2020 was 5% lower than in 2019 and water demand decreased by about the same percentage. The changes are due to normal fluctuations in production. In the future, alternative sources for water may need to be considered as well as internal efficiency measures. Former analyses show that 5 % of annual withdrawal of the site might have to be substituted by desalinated water if other alternative sources are not sufficiently available. Using this option would result in significantly higher operating costs. Secondary effects: Besides higher operating costs, the increased use of desalination and therefore higher energy demand, would in turn have a potential negative impact on the carbon footprint of our Freeport plant and run against reaching BASF's climate goal. Method: 1) Assessment of current & future water demand vs. availability at the site (source e.g. Aqueduct). 2) Investigation of additional water sources and intensive internal re-use. 3) Economic assessment of alternative water supply options. Depending on global economic development we continuously update our expected water demand taking multiple options into consideration.

Timeframe

4-6 years

Magnitude of potential impact

Medium-low

Likelihood

Likely

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

400,000

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact

We calculated assumed additional operational costs for water desalination to cover a part of the site's water supply. Factors used to determine the relevant share of water supply are the higher water demand expected in the area in the future, as well as improved efficiency of existing facilities, not taking into account potential extensions of the site. In this scenario, 5 % of total annual water withdrawal volume of the site could be affected and might have to be substituted by desalinated water if we are not able to balance this using alternative sources. We estimated additional costs per m³ of desalinated water based on industry reference values. Time horizon: Yearly impact, will manifest after establishment of alternative water supply (i.e. within 4-6 years, as described above).

Primary response to risk

Secure alternative water supply

Description of response

We are optimizing our infrastructure planning to secure a reliable water supply (taking into account alternative water sources) while minimizing additional operational and investment costs. This involves the in-depth assessment of current and future water situation in the Freeport Area, of BASF's current and future water requirements to define the scale, and layout of required infrastructure. All options are evaluated, i.e. surface water, expanding existing supply contracts and/or sourcing municipal wastewater as a raw material, increased well water use, and seawater desalination. These evaluations are regular process steps in the course of assessing site development projects. BASF Freeport site continues long running community partnerships with our private and public utility providers, community organizations, regulatory agencies and neighbors. In the long run, the aforementioned measures are a significant step forward for long term freshwater supply security.

Further, BASF's Freeport site has already implemented one alternative reclaimed water source from the City of Clute and brackish ground water sourcing. Additional water can be sourced and secured from surface water, wells, and sea water (most abundant, but water desalination is the most energy intensive option). The BASF Freeport site has

sourced and contracted with Brazos River Authority (BRA) to secure an estimated 35% to 45% of the site current water supply volume. In addition, BASF has purchased a reservoir with senior water rights that has the potential to represent more than 100% of the current water supply for the Freeport Site. The site continues to maintain projections and options for other sourcing options. Due to the benefits of the new options for surface water supply, BASF has lowered the development priority for the desalination option. The site continues to pursue optimization opportunities to reduce water use on site. BASF Freeport site calculated assumed additional operational costs for the new surface water supply of the purchased raw water reserves from the Brazos River Authority and the new reservoir to be at a price well below the cost increases of current contract cost and below the cost of desalination project water supply estimates. This surface water solution also has a reduced CO2 impact due to the lower energy requirements for purification of the water supply.

Cost of response

150,000

Explanation of cost of response

The costs of the response strategy (infrastructure planning) were estimated at a moderate level. Infrastructure planning requires mainly personnel resources. We calculate the required resources as 1 FTE, at an estimated cost of 150 000 € per FTE. Infrastructure planning costs are not significant in relation to overall operational expenses at the facility. The surface water supply options provided above are secured at a more economical financial advantage than the estimated cost of the desalination option. Due to the competitive nature of water supply in the region, costs for additional sourced surface water supply are not detailed in this response. This is a recurring cost position.

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

Germany
Rhine

Stage of value chain

Supply chain

Type of risk & Primary risk driver

Physical
Drought

Primary potential impact

Supply chain disruption

Company-specific description

Production at BASF's largest site Ludwigshafen depends on the adjacent river Rhine in two ways: (a) withdrawal of water mainly for cooling purposes, (b) transportation of raw materials and final products via barges (about 40% of all raw materials that are transported to or from the location are transported over the river). Based on extreme weather / Rhine water level conditions experienced at the site over the last decades, like the drought and heatwave of 2003 and the flood in 2013, the robustness of site operations for such events was increased over the years by various measures (e.g. pump systems for low water level, adapted management plans, options to switch mode of transport, rebalance production across the global portfolio of assets). Additionally, BASF had assessed physical risks from climate change for the site in 2015 and concluded that significant changes in the risk of extreme weather events will materialize beyond 2050 and that the existing adaptation measures are therefore still appropriate. However, in 2018, the site experienced an exceptional drought and heat, which caused an extremely long and intense phase of low river water levels and very high water-temperatures during the peak of the heatwave. As a consequence, high water temperature was limiting cooling capacity and low water levels were limiting transport by barge. The existing measures were insufficient to mitigate all impacts, which ultimately led to decreased production capacity and a negative earnings impact of around €250 million mainly due to missing transport capacities for raw materials. The event raised the question whether global warming has already changed the likelihood of occurrence and/or intensity of extreme weather events at the site such that it has become vulnerable, even with the existing countermeasures designed to mitigate the impact of historically observed weather extremes at the site. The question is at the edge of current climate research and therefore results are subject to large uncertainties. For Ludwigshafen, extended analyses in cooperation with external partners indicated that an increased risk from more frequent and intense extreme weather events with the previously described impacts cannot be excluded.

Timeframe

1-3 years

Magnitude of potential impact

High

Likelihood

Very unlikely

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

250,000,000

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact

The quantification of the risk is based on the following assumptions: the figure represents the negative earnings impact due to limited production capacity (i.e. the delta between planned and realized production; further details regarding the figures are subject to confidentiality) at the Ludwigshafen site in 2018, which was triggered by extreme weather in the respective year (high water temperature limiting cooling capacity, low water level limiting transport) and is considered as an estimate for impact of similar future events (without any further adaptation).

Primary response to risk

Upstream

Other, please specify

Increase supply chain resilience (local storage, alternative transport modes)

Description of response

In 2019, we included Climate Resilience in the central strategic goals of the Ludwigshafen site (Zukunftsbild Werk Ludwigshafen). By this, major projects are challenged if they contribute to climate resilience. Under this umbrella, we initiated several targeted measures to increase the resilience of the Ludwigshafen site against potentially more frequent and prolonged phases of very high water-temperature and very low water levels. Progress and status of these projects are reported biannually directly to site management, which is located below the board-level. In addition, BASF is a co-signatory to the Federal Ministry of Transport's 'Low Water Rhine' action plan presented in 2019. The navigability of the Rhine is to be improved in the coming years with various measures. Case study: Situation: Low water level limits navigability of the river for standard shipping vessels and high-water temperature during heatwaves limits cooling capacity. Task: Work out measures to make the Ludwigshafen site more resilient against long-lasting low-water and high-temperature events of the river Rhine. Action: To master the logistical challenges, we have developed an early warning system for low water levels together with the Federal Institute of Hydrology, which enables more accurate long-term forecasts for our supply chains, we have chartered ships suitable for low water, and we have started to make loading/charging stations more flexible, which we will continue also in the next years. In addition, we have developed a BASF ship type with partners, which is designed for extreme low-water situations. Concerning high water temperatures, we have increased the cooling capacity for our production in 2019 and 2020. For this we optimized existing re-cooling systems, expanded re-cooling systems, and in addition changed the control of our cooling water network. Result: Longer usability of waterway as mode of transport during low water levels and increasing flexibility to switch between different modes of transport. The measures already taken in 2019 enable us on the cooling water side to master a weather scenario like in 2018.

Cost of response

20,000,000

Explanation of cost of response

The figure of €20,000,000 represents the total costs of immediate measures from 2019 until 2021, initiated to increase the resilience of the Ludwigshafen site and can be

attributed 50% each, to measures regarding logistics and expansion of cooling capacity mentioned above.

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

Other, please specify

Increase the proportion of products that contribute particularly to sustainability in the value chain, and are characterized by, on average, higher growth rates and profitability.

Company-specific description & strategy to realize opportunity

Using the Sustainable Solution Steering method BASF conducted sustainability assessments (also about water) of its entire product portfolio (origin of opportunity therefore company-wide). To identify products with a substantial sustainability contribution (=Accelerator products), solutions with no sustainability issues are subject to the Check for Sustainability Value Contribution. Within the check, the significance of solutions' sustainability contribution and the competitive environment are considered. A substantial contribution is established if the solution's performance is essential for enabling the sustainability benefit in the life cycle. Action to realize opportunity: We want to strengthen the sustainability focus of our product portfolio and significantly increase sales of Accelerator products. We achieved our previous goal of increasing the proportion of sales from Accelerator products to 28% by 2020 already at the end of 2019. Therefore, we launched our new goal in 2019: We aim to make sustainability an even greater part of our innovation power and achieve €22 billion in Accelerator sales by 2025. Why opportunity is strategic: Accelerator products make a substantial sustainability contribution in the value chain. Therefore, we are deeply integrating Sustainable Solution Steering into the R&D pipeline, in business strategies as well as in merger and acquisition projects. In 2020, we generated sales of €16.7 billion with Accelerator products (2019: €15.0 billion) making up for 30.9% of the evaluated relevant portfolio. In 2020 products and solutions related to €1.6 billion in sales made a particular contribution to water improvements in the value chain. This signifies that the potential of the Accelerator approach is already being realized. Example/Case Study: Situation: Classic runway and road de-icers, like urea or propylene glycol which are commonly

used e.g. at airports can have negative impacts on water (e.g. if washed into groundwater). Task: Develop solutions with lower environmental impact as existing products. Action: BASF developed a solution from formic acid, which is an example of an Accelerator product specifically in the “water” area. Here a global market was developed to replace other chemicals for runway and road de-icing. Result: Formic Acid features excellent biodegradability, reducing wastewater treatment costs and the environmental burden. A growing acceptance has the potential to positively impact water scarcity and pollution.

Estimated timeframe for realization

Current - up to 1 year

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)

1,600,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact

In 2020, we generated sales of €16.7 billion with Accelerator products. Products and solutions related to € 1.6 billion in sales per year make a particular contribution to water improvements in the value chain. This signifies that the opportunity is already being realized.

Type of opportunity

Products and services

Primary water-related opportunity

Sales of new products/services

Company-specific description & strategy to realize opportunity

Consideration and realization of opportunity: In 2019, BASF finalized the integration of its water chemicals business in a Joint Venture (JV) with SOLENIS. BASF owns 49% of the JV and is not marketing water chemicals directly anymore. However, the JV opens new opportunities for BASF with better market access and a broader range of technologies/products. BASF has mid- and longterm supply contracts with SOLENIS, which also cover (as an example) the Sokalan RO brands.

Example: Case study for water treatment product Sokalan® RO3500: Situation:

Growing demand of water reuse via reverse osmosis (RO) causing different scales and decreasing efficiency of RO systems. Task: Development of a multifunctional antiscalant performing at a variety of reused water qualities. Action: In 2016 BASF launched a multifunctional antiscalant with Sokalan® RO3500. Less scale formation leading to improved plant efficiencies, reduced cleaning cycles and enhanced overall performance of RO plants. Compared to commonly used phosphonate-based chemistry Sokalan® RO3500 is not causing eutrophication to water bodies. Result: BASF product portfolio further enhanced by addressing the need for differentiated chemistry to enable water reuse. With the launch BASF is fostering its position as a leading provider for water chemicals.

Estimated timeframe for realization

1 to 3 years

Magnitude of potential financial impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

50,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact

For 2020 we had prognosed €50 million of our annual turnover and €11 million of our annual EBITDA from innovations derived from BASF's Water Chemicals portfolio launched since 2015. This estimate was derived based on the previous development of the respective revenues, and an outlook regarding market potentials. This gives an idea of the business perspective for the new the Joint Venture with SOLENIS.

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)

Freeport/ TX/ BASF Corporation

Country/Area & River basin

United States of America
Brazos River

Latitude

29.004413

Longitude

-95.393282

Located in area with water stress

No

Total water withdrawals at this facility (megaliters/year)

9,575

Comparison of total withdrawals with previous reporting year

Lower

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

7,700

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

1,686

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

189

Total water discharges at this facility (megaliters/year)

6,072

Comparison of total discharges with previous reporting year

Lower

Discharges to fresh surface water

5,750

Discharges to brackish surface water/seawater

0

Discharges to groundwater

322

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

3,680

Comparison of total consumption with previous reporting year

Lower

Please explain

Water Supply, discharge and consumption were lower due to lower production.

Facility reference number

Facility 2

Facility name (optional)

Ludwigshafen SE

Country/Area & River basin

Germany
Rhine

Latitude

49.494739

Longitude

8.433164

Located in area with water stress

No

Total water withdrawals at this facility (megaliters/year)

1,336,660

Comparison of total withdrawals with previous reporting year

Lower

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

1,316,044

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

19,104

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

1,512

Total water discharges at this facility (megaliters/year)

1,097,034

Comparison of total discharges with previous reporting year

Lower

Discharges to fresh surface water

1,097,034

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)

9,819

Comparison of total consumption with previous reporting year

Higher

Please explain

Water abstraction and discharge were lower due to less cooling water abstraction and discharge and the operation of more recirculating cooling units. Water consumption is higher because of more evaporation from cooling systems.

W5.1a

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

Water withdrawals – total volumes

% verified

76-100

What standard and methodology was used?

BASF Management's Report was audited and approved free of qualification, also covering statements and figures pertaining to sustainability. Audit with limited assurance was conducted in accordance with ISAE 3000 and 3410. Auditor's procedures included detailed document audits of all water indicators reported by all worldwide locations for the purpose of composing aggregated company figures - including water withdrawals total and by source.

Water withdrawals – volume by source

% verified

76-100

What standard and methodology was used?

BASF Management's Report was audited and approved free of qualification, also covering statements and figures pertaining to sustainability. Audit with limited assurance was conducted in accordance with ISAE 3000 and 3410. Auditor's procedures included detailed document audits of all water indicators reported by all worldwide locations for the purpose of composing aggregated company figures - including water withdrawals total and by source.

Water withdrawals – quality

% verified

76-100

What standard and methodology was used?

BASF Management's Report was audited and approved free of qualification, also covering statements and figures pertaining to sustainability. Audit with limited assurance was conducted in accordance with ISAE 3000 and 3410. Auditor's procedures included detailed document audits of all water indicators reported by all worldwide locations for the purpose of composing aggregated company figures - including water withdrawals by quality (freshwater or not fresh water).

Water discharges – total volumes

% verified

76-100

What standard and methodology was used?

BASF Management's Report was audited and approved free of qualification, also covering Statements and figures pertaining to sustainability. Audit with limited assurance was conducted in accordance with ISAE 3000 and 3410. Auditor's procedures included detailed document audits of all water indicators reported by all worldwide locations for the purpose of composing aggregated company figures – including water discharges total and by destination/treatment method.

Water discharges – volume by destination

% verified

76-100

What standard and methodology was used?

BASF Management's Report was audited and approved free of qualification, also covering statements and figures pertaining to sustainability. Audit with limited assurance was conducted in accordance with ISAE 3000 and 3410. Auditor's procedures included detailed document audits of all water indicators reported by all worldwide locations for the purpose of composing aggregated company figures – including water discharges total and by destination.

Water discharges – volume by treatment method

% verified

76-100

What standard and methodology was used?

BASF Management's Report was audited and approved free of qualification, also covering statements and figures pertaining to sustainability. Audit with limited assurance was conducted in accordance with ISAE 3000 and 3410. Auditor's procedures included detailed document audits of all water indicators reported by all worldwide locations for the purpose of composing aggregated company figures – including water discharges total and treatment method.

Water discharge quality – quality by standard effluent parameters

% verified

76-100

What standard and methodology was used?

BASF Management's Report was audited and approved free of qualification, also covering statements and figures pertaining to sustainability. Audit with limited assurance was conducted in accordance with ISAE 3000 and 3410. Auditor's procedures included detailed document audits of all water indicators reported by all worldwide locations for the purpose of composing aggregated company figures - including quality by standard effluent parameters.

Water discharge quality – temperature

% verified

Not verified

Water consumption – total volume

% verified

76-100

What standard and methodology was used?

BASF Management's Report was audited and approved free of qualification, also covering statements and figures pertaining to sustainability. Audit with limited assurance was conducted in accordance with ISAE 3000 and 3410. Auditor's procedures included detailed document audits of all water indicators reported by all worldwide locations for the purpose of composing aggregated company figures - including water consumption.

Water recycled/reused

% verified

76-100

What standard and methodology was used?

BASF Management's Report was audited and approved free of qualification, also covering statements and figures pertaining to sustainability. Audit with limited assurance was conducted in accordance with ISAE 3000 and 3410. Auditor's procedures included detailed document audits of all water indicators reported by all worldwide locations for the purpose of composing aggregated company figures - including amounts of water recycled/reused.

W6. Governance

W6.1

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

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

W6.1a

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

	Scope	Content	Please explain
Row 1	Company-wide	Description of business dependency on water Description of business impact on water Description of water-related performance standards for direct operations	BASF's company-wide water policy / position paper (WP) (demonstrates the commitment to responsible water use at all our production sites, water catchment areas as well as along the entire value chain. Rationale for scope: BASF's Responsible Care Management System (RCMS) encompasses environmental and health protection for direct operations and our value chain. It comprises global rules, standards, and procedures. Along with the

		Description of water-related standards for procurement Reference to international standards and widely-recognized water initiatives Company water targets and goals Commitment to align with public policy initiatives, such as the SDGs Commitments beyond regulatory compliance Commitment to water-related innovation Commitment to stakeholder awareness and education Commitment to water stewardship and/or collective action Commitment to safely managed Water, Sanitation and Hygiene (WASH) in the workplace Acknowledgement of the human right to water and sanitation Recognition of environmental linkages, for example, due to climate change	RCMS-EHS documents that apply throughout the group our WP covers, among others, the following water topics: (i) Dependency: Since water is needed for the chemical production, we are committed to its responsible use along the entire value chain. (ii) Impact: BASF's production sites impact water through the introduction of thermal energy (cooling water) and the emissions of pollutants. (iii) Performance standards: BASF's production sites adhere to local, regional / national laws and regulations. Internal global standards are set by our RCMS. (iv) Standards for procurement: Our Supplier Code of Conduct expects suppliers e.g. to use resources efficiently, apply energy-efficient, environmentally friendly technologies, reduce emissions to water, and minimize impacts on biodiversity and water scarcity. (v) International standards and (public policy) water initiatives: We set globally applicable standards according to the European Water Stewardship (EWS) initiative. Further we aligned the policy content with the UN SDGs, focusing on those issues where BASF can make a significant contribution (e.g. human right to water and sanitation, climate protection, sustainable consumption and production). We are also member of the global organization Alliance for Water Stewardship (AWS) and are committed to provide access to Safe Water, Sanitation and Hygiene at the Workplace (WASH). (vi) Beyond regulatory compliance: Our standards fulfil or exceed existing laws and regulations and take globally recognized principles into account (e.g. UNGC principles, Responsible Care Global Charter). (vii) Innovation: The RCMS includes the core requirement of constantly reviewing performance, improving processes, implementing measures, checking their effectiveness at production sites and links respective incentives to it. (viii) Environmental linkages/Climate change: We have set ourselves ambitious goals and are striving worldwide to achieve net zero CO2 emissions by 2050. Also, we want to reduce our greenhouse gas emissions worldwide by 25% by 2030 compared with 2018 1

[1]BASF Position on Water.pdf

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
Director on board	How responsibility is related to water issues: One member of our Board of Directors, responsible for Environment, Health and Safety, has the overall responsibility for water issues. The head of BASF's Environment, Health and Safety unit, who has oversight for water topics at BASF, reports directly to this Board member. BASF's Corporate Sustainability Board (CSB) is BASF's central steering committee for sustainable development, including water. It is comprised of selected heads of business and corporate and functional units as well as of the regions. The CSB monitors the implementation of the sustainability strategy and cross-divisional initiatives, defines sustainability goals and approves corporate position papers on sustainability topics – including the water policy/water position paper. Example for water-related decision: Board level decisions were previously made to further improve BASF's resilience to low water levels of the Rhine River, which significantly affected Ludwigshafen site in 2018. In 2020 the board was continuously informed about the progress of the measures. These included investments in unaffected logistics carriers and the possibility of falling back on unaffected sites within our global Verbund. BASF implemented a package of measures including the development of an early warning system for low water levels, making loading stations more flexible and time chartering ships with high load capacities in the case of low water. BASF strongly supports increasing the depth of the river Rhine. This federal project is under way (planned completion by 2030) and will facilitate a significant increase of freight via shipping vessels to and from Ludwigshafen site. Concerning high water temperatures, the cooling capacity for production at site Ludwigshafen has been significantly increased in 2019 and 2020 by optimizing existing re-cooling systems, the expansion of re-cooling systems, and an optimized control of the cooling water network.
Director on board	A Board member chairs BASF's Corporate Sustainability Board (CSB), which is BASF's central steering committee for sustainable development, including water. It is comprised of selected heads of business, corporate units as well as of the regions. The CSB monitors the implementation of the sustainability strategy and cross-divisional initiatives, defines sustainability goals and approves corporate position papers on sustainability topics including those related to water.

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 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	How Board oversight is constituted: Our Management Board reviews at least annually major water-related topics like, for instance: - Water-related risks and opportunities – Target performance - Budgets for functions and business units involved in water-related topics - Progress on specific measures supporting BASF's sustainability strategy In addition, depending on need, the following topics are addressed: - Investment decisions - Requests for approval of specific action plans, e.g. new R&D initiatives. This range of topics ensures that oversight over water issues are covered from both an operational and a market-driven perspective, that the appropriate strategic decisions are made, and that BASF meets its own commitments. Release of water-related information: The board also approves what is released regarding relevant water-related information, including to CDP. Extensive information on the use of water including data concerning emissions and sustainable water management are publicly available in our corporate report and approved by the board. Example of how selected mechanisms contribute to the board's oversight of water issues: Through the monitoring of implementation and performance against water-related targets like the establishment of EWS standards at all Verbund sites and sites in water stress areas (monitored in regular environmental audits), the Management Board can keep track of the progress of water stewardship efforts, and thus the company's efforts to tackle water-related challenges. In case of a clear underperformance, the Board is then able to initiate corrective measures or re-align operational priorities. Who briefs the Board: A Board member, responsible

			for Environment, Health and Safety, has the overall responsibility for water topics. This board member is briefed by the head of the corporate EHS unit (environment, health and safety), who is accountable for water issues. Another Board member chairs BASF's Corporate Sustainability Board (CSB), which is BASF's central steering committee for sustainable development, including water topics. It is comprised of selected heads of business and corporate units as well as of the regions. The CSB monitors the implementation of the sustainability strategy and cross-divisional initiatives, defines sustainability goals and approves corporate position papers on sustainability topics.

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)

Other C-Suite Officer, please specify

Member Board of Directors in charge of EHS

Responsibility

Both assessing and managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues

Quarterly

Please explain

Position in corporate structure/reporting line: The head of the Corporate Unit Environment, Health and Safety (EHS) has highest overall governance responsibility for water topics below Board of Directors (BoD) and reports directly to a member of the BoD.

Nature of reports: Reports focus e.g. on investments (spec. in water stress areas), strategic topics, improvement options etc. Meetings of the Corporate Sustainability Board (CSB) (chaired by another board member) and direct meetings with other BoD members ensure a regular reporting to Board level.

Water-related responsibility: Water issues are addressed regularly in context of immediate relevance, strategic implications and investment projects. The EHS unit defines requirements for the Responsible Care Management System (in agreement with BoD), oversees monitoring processes, and integrates major global functions in preparing decisions of the CSB on water topics, such as corporate environmental goal setting, controlling and reporting.

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	Incentives for members of Board of Directors are directly connected to target achievement. Specific Sustainable Water Management achievements are part of BASF's corporate goals, Accountability for target achievement lies with the member of the executive board who is in charge of corporate EHS.

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	Other C-suite Officer Member Board of Directors in charge of EHS	Other, please specify Implementation of European Water Stewardship standard	Linkage: BASF published a goal regarding Sustainable Water Management. Failure to reach the goal due to management oversight results in a lower bonus payout. The bonus reduction depends on many factors such as degree of direct accountability, total bonus value, reduction in relation to performance in other fields/achievement of other goals. For the water sustainability goal, target achievement is measured and published in the corporate report. Details on the indicator chosen: Our goal is to introduce sustainable water management at all production sites in water stress areas and at our major Verbund sites by 2030 (as described under W8.1a), covering 93% of BASF's total water abstraction. We pursue this by applying the European Water Stewardship (EWS) standard. Rationale for the indicator chosen/threshold of success: In total, around 25% of our production sites were located in water stress areas in 2020. To avoid any negative impacts and secure the future operations of our sites,

			we chose to implement a comprehensive water management following the EWS standard at 100% of these sites, plus our Verbund sites. We achieved 46.2% of this target in 2020 (2019: 35.8). BASF executives at all involved levels, including the production sites managers, are expected to contribute to this publicly announced target.
Non-monetary reward	Board/Executive board	Other, please specify Implementation of European Water Stewardship standard	Details on the indicator chosen: Our goal is to introduce sustainable water management at all production sites in water stress areas and at our major Verbund sites by 2030 (as described under W8.1a), covering 93% of BASF's total water abstraction. We pursue this by applying the European Water Stewardship (EWS) standard. Rationale for the indicator chosen/threshold of success: In total, around 25% of our production sites were located in water stress areas in 2020. To avoid any negative impacts and secure the future operations of our sites, we chose to implement a comprehensive water management following the EWS standard at 100% of these sites, plus our Verbund sites. We achieved 46.2% of this target in 2020 (2019: 35.8). BASF executives at all involved levels, including the production sites managers, are expected to contribute to this publicly announced target.

W6.5

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

Yes, direct engagement with policy makers

Yes, trade associations

W6.5a

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

Process: The **Board of Directors (BoD)** is regularly informed on status of topics or sustainability assessments, makes decisions on these with strategic relevance, and monitors the implementation of strategic plans and target achievement. As central steering committee for

sustainable development the **Corporate Sustainability Board** supports the Board and discusses operational matters. It is comprised of the heads of our business / corporate units and regions and a member of the BoD. In 2013 we established an external independent **Stakeholder Advisory Council**, comprising of international experts from academia and society who discuss issues with the Board to take into account expectations and demands of stakeholders.
Reporting directly to the Board, eight **Corporate Center units** are responsible for defining governance and developing steering processes of the Group. The **Corporate EHS** unit is responsible for monitoring and steering environmental performance, (e.g. global target on sustainable water management). This unit is connected to worldwide cross divisional and -regional teams to exchange on activities, align positions to ensure consistency and to engage with local / regional colleagues to ensure activities fit the corporate strategy.
Inconsistency management: Inconsistencies in positioning are discovered early through a multi-level approach of discussions and exchanges. If inconsistencies prevail, issues are escalated to a higher level along with proposals to resolve them.

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)

W7. Business strategy

W7.1

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

	Are water-related issues integrated?	Long-term time horizon (years)	Please explain
Long-term business objectives	Yes, water-related issues are integrated	> 30	Issues integrated: Enabling access to clean water for people, securing and reducing water requirements for food production and industry etc., reducing and avoiding water contamination, using water responsibly in water-stress areas, preserving ecosystems and biodiversity on land and under water. Why and how they are integrated: Our strategy provides direction for how we develop BASF and secure and extend our competitive position. To tackle the issues above, we constantly work on improving our products and processes. An integral part is improving water management at our production sites through the

			implementation of an incentivized investment initiative in efficiency projects on plant level (Operational Excellence Program - OPEX). Also, on the strategic level, we are committed to contribute to the achievement of the Sustainable Development Goals: More and more people need access to food, water, energy, raw materials, housing, and healthcare, while the Earth's resources are limited. Explanation of chosen time horizon: Our corporate purpose "We create chemistry for a sustainable future" indicates the long-term perspective that BASF takes on matters surrounding sustainability and is not limited to a defined time horizon but involves the livelihoods and well-being of all future generations, as well as the preservation of ecosystems in the long term. Strategies also cover investment into assets and sites which have >40-year time horizon in the Chemical Industry.
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	11-15	Issues integrated: Water use/stewardship and avoidance of pollution within our own operations/water risk management; water-related impacts of our products regarding water efficiency, possible contaminations (product stewardship); reduction of emissions to water and reduced impact on water scarcity within supply chain. Why and how they are integrated: We defined sustainability focus areas within our corporate strategy. These formulate the commitments with which BASF positions itself and how it aims to meet the growing challenges along the value chain: – We source responsibly – We produce safely for people and the environment – We produce efficiently – We value people and treat them with respect – We drive sustainable products and solutions. For sustainable water management (SWM), the long-term objective is apparent in the 2030 goal of introducing SWM at all water stressed production sites and all Verbund sites. This necessitates a continuous commitment to target achievement and regular tracking/reporting of key performance parameters. We integrate these factors into our long-term steering processes to ensure societal acceptance and realize business opportunities. Time horizon: Horizon of >10 years as it exceeds operational planning horizons within BASF. It gives

			strategic orientation on our goal and commitment to enhancing sustainability within our operations, the supply chain, industries and sectors we serve, and also contributes to the SDGs; with a time-horizon until 2030.
Financial planning	Yes, water-related issues are integrated	11-15	Water issues integrated: Revenue targets for products with a contribution to sustainability (e.g. enabling higher resource efficiency and water conservation / water resource protection in the value chain). Why and how they are integrated: We segmented our portfolio regarding contributions of our more than 57,000 specific product applications to sustainability (including reduction of water use), using the Sustainable Solution Steering method. Products with substantial sustainability contributions in the value chain are classified as Accelerators. We aim to achieve €22 billion in total Accelerator sales by 2025 (2020: €16.7 billion, 2019: €15 billion). In 2020, sales of Accelerator products related to water issues amounted to €1.6 billion. Across business segments, detailed planning exists regarding development of innovative products. We anticipate higher demand for products, which are e.g. directed towards water conservation Our innovation pipeline e.g. in the Agricultural Solutions segment comprises products with launch dates between 2020 and 2030. With a peak sales potential of €7.5 billion, the pipeline includes innovations from all business areas. Explanation of chosen time horizon: Horizon of >10 years as it exceeds operational planning horizons within BASF. It gives strategic orientation on our goal and commitment to enhancing sustainability within the industries and sectors we serve. Also, strategic planning on segment level usually encompasses these time horizons.

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)

-53

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

100

Water-related OPEX (+/- % change)

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

Please explain

We do not track water related OPEX on a group level. To strategically incentivize investments in efficiency improvements, water savings being among these, BASF set up the Operational Excellence Initiative “OPEX”. Here, business units can apply for corporate funds to support measures that may not be cost efficient without these. The corporate funds consist of mandatory payments by the business units, which can reclaim their contributions in the form of incentives for efficiency measures. This is part of the efficiency improvement strategy of BASF to continuously make better use of resources. The numbers provided here for CAPEX reflect investments in water-related projects, funded from this initiative. The Corona pandemic had an effect on investments in general compared to last year. This analysis is based on more than 700 water related projects since 2013 for forward trend and on more than 200 water related projects implemented in 2019 and 2020 for change compared to the previous year.

W7.3

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

	Use of climate-related scenario analysis	Comment
Row 1	Yes	Circular economy will become a key contributor to a low-carbon economy, transforming value chains and decoupling growth and resource consumption. The aim of the scenario analysis was to evaluate the impact in more detail. The three formulated scenarios differed in the level of international policy response and action on circular economy, driven by climate change. Scenarios were applied to three major customer industries of BASF (automotive, construction, consumer goods; ca. 50% of total sales). For each scenario, key drivers of change were identified and underpinned by assumptions about direction and magnitude of change. Considering the findings regarding the potential impact of circular economy on BASF business, we promoted the establishment of strategic partnerships in this area. BASF co-founded the Alliance to End Plastic Waste (AEPW) together with other value chain partners. The aim is to develop solutions that stop plastic waste from entering the environment, especially the ocean.

W7.3a

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

Yes

W7.3b

(W7.3b) What water-related outcomes were identified from the use of climate-related scenario analysis, and what was your organization's response?

	Climate-related scenarios and models applied	Description of possible water-related outcomes	Company response to possible water-related outcomes
Row 1	Other, please specify Internal climate-related scenarios	Circular economy will become a key contributor to a low-carbon economy, transforming value chains and decoupling growth and resource consumption. Customer industries of BASF will be affected by this trend to a variable extent, and consequently the impact on BASF's value generation will also vary. The aim of the scenario analysis was to evaluate the impact in more detail. The level of impact was assessed in three scenarios, for which the level of international policy response and action on circular economy, driven by climate change, is the central differentiator: (a) Base = business as usual, no change of regulation, (b) Moderate = known or expected changes of regulation lead to higher circularity, (c) Progressive = assuming more stringent regulation will force a much higher level of circularity. The scenarios were applied to three major customer industries of BASF (automotive, construction, consumer goods representing about 50% of total sales). Scenario results: Total BASF sales show significant upside potential in the moderate as well as in	Reporting of results: Results were shared internally with representatives from operating divisions, which manage the SBUs, and relevant corporate units in the context of regular group meetings dedicated to sustainability topics. Reporting was limited to internal stakeholders. Integration of results into business objectives / strategy: Results informed the next steps of the internal process for developing a BASF position and strategy regarding circular economy. The strategic approach, including the findings from the scenario analysis, was finally presented to, and approved by the Board of Directors. Operational / strategic response & anticipated timescale: Considering the findings regarding the potential impact of circular economy on BASF business, we promoted the establishment of strategic partnerships in this area. In January 2019, BASF co-founded the Alliance to End Plastic Waste (AEPW) together with other companies from along the value chain – from plastics producers and consumer goods manufacturers to waste disposal

		the progressive scenario. Construction trends have the strongest impact on BASF sales in the moderate scenario, whereas automotive trends have the strongest impact on sales in the progressive scenario. The topic of resource consumption covers a range of resources, including water use. Water demand from primary production may be reduced due to higher circularity. Also, increased circular use of water may be a direct outcome.	companies. The response could therefore be considered being short-term. The AEPW has around 50 members, who together aim to develop solutions that stop plastic waste from entering the environment, especially the ocean. We also kicked off an internal scouting project to investigate selected business opportunities in more detail.

W7.4

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

Row 1

Does your company use an internal price on water?

Yes

Please explain

Internal valuation/cost allocation: There is a site-specific BASF internal price for provision of water as well as disposal of wastewater depending on local conditions.

Cost calculation for new investments: We integrated a price for water and wastewater into our processes for investment decisions. It depends on current and future local situations based on a forecast of water availability and associated costs.

Valuation of external costs: BASF assesses its Value to Society in monetary terms using PwC's TIMM method. The scope includes supply chain (tier 1 to n), own operations and customer industries. With regard to water, emissions and consumption are integrated. To quantify and value the costs to society caused by emissions to water, inorganic and organic pollutants and nutrient discharges to water are taken into account. The calculated environmental impact depends on volume of corporate water consumption and respective local water stress level based on a water stress index (WSI).

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 Site/facility specific targets and/or goals Brand/product specific targets and/or goals Basin specific targets and/or goals	Targets are monitored at the corporate level Goals are monitored at the corporate level	Approach of targets setting and monitoring: Company-wide goals are proposed and elaborated by interdisciplinary working groups, making use of scenarios and risks identified with our risk analysis tools and decided upon by the BASF Board of Management. Monitoring of water-related goals and targets is carried out via an established reporting process within our Responsible Care Management System (RCMS). Within the RCMS we want to make sure that relevant contextual factors are included. For this matter we maintain a dialogue with government institutions, associations, and other international organizations to keep requirements up to date and include contextual factors like the needs of other users in a basin. These factors are considered when goals are defined. The progress for all company-wide targets and goals is reported in the BASF Annual Report. For instance, we report on our goal to introduce sustainable water management at 100% of our production sites in water stress areas and at all Verbund sites by 2030. Facility-level targets and goals regarding water (e.g. incident avoidance) are agreed upon by the relevant corporate functions and monitored via the company-wide RCMS and/or HSE audits on facility level. Monitoring results are reported to the respective corporate functions and escalated up to the executive or board level, if required. Product level targets and goals related to water (for example product performance or product characteristics) are defined by the business units as a response to internal agendas and/or external requirements. They are monitored via business-level reporting. Important achievements are reported also to the Board of Management, and /or included in BASF corporate communications, e.g. the annual report. Basin specific targets and goals are set by stakeholder organizations, e.g. ICPR (International commission for the protection of the Rhine river basin), Communidad de Irrigantes Tarragona (Ebro river basin), Programa Produtor de Agua Guarantingueta (Guaratingueta river basin). Strategies and improvement plans are developed in regular meetings. Targets, goals and KPIs are published on the respective websites.

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

Other, please specify

Assessing and implementing sustainable Water management

Level

Company-wide

Primary motivation

Water stewardship

Description of target

Introduction of sustainable water management at 100% of our production sites in water stress areas and all Verbund sites by 2030. This covers all production sites equally in water stress areas and all large integrated sites group wide. We pursue this by applying the European Water Stewardship (EWS) standard. In total, ca. 25% of our production sites were located in water stress areas in 2020. We introduced the standard at our European sites in 2013 and are fostering its implementation in China and North/South America. The Standard rests on 4 principles: sustainable water abstraction, maintaining good water quality, preserving conservation areas, ensuring continuous improvement processes. Implementation of the standard contributes to achieving water security, as it takes into account local conditions and aims to prevent and counter negative impacts on stakeholders and ecosystems (like increased water scarcity), by requesting detailed risk assessment and mandating appropriate responses.

Quantitative metric

Other, please specify

% of production sites implementing EWS

Baseline year

2019

Start year

2019

Target year

2030

% of target achieved

46.2

Please explain

We define water stress areas as regions in which more than 40% of available water is used by industry, household and agriculture. This definition is based on Aqueduct 3.0. In addition, our water target takes into account our Verbund sites. This increases the number of sites included in the water target accordingly. In 2020, BASF introduced sustainable water management at 6 additional sites (2019: 8). BASF is dealing with a shifting target, because production sites get sold or new locations are bought every year, which affects the basis of the calculation (number of sites in water stress areas; sites which have introduced sustainable water management). Numbers are calculated according to the status at the end of a year.

Target reference number

Target 2

Category of target

Product use-phase

Level

Company-wide

Primary motivation

Commitment to the UN Sustainable Development Goals

Description of target

A significant lever for steering of BASF's product portfolio is the Sustainable Solution Steering method. BASF has conducted sustainability assessments and ratings for 98.4 % of its company-wide product portfolio. We consider the products application in various markets and industries. Our so-called Accelerator products make a particular contribution to sustainability, as for instance enabling higher resource efficiency and water conservation / water resource protection in the value chain (and thus contributing to the overarching goal of achieving water security). We therefore aim to increase sales generated by Accelerator products to €22 billion by 2025.

Quantitative metric

Other, please specify

Sales volume of Accelerator products in Euro

Baseline year

2019

Start year

2018

Target year

2025

% of target achieved

76

Please explain

We have achieved sales of €16.7billion in 2020 (2019: €15 billion). In 2020, we achieved 76% of the target of reaching sales of Accelerator products of €22 billion by 2025. An active Accelerator portfolio management through acquisitions, divestitures and development of new products satisfying the Accelerator sustainability criteria is central to achieving our target.

W8.1b

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

Goal

Engagement with suppliers to help them improve water stewardship

Level

Company-wide

Motivation

Recommended sector best practice

Description of goal

Description and implementation: Our goal is to engage with our relevant suppliers (company-wide) by evaluating their sustainability practices, including water management, and developing action plans for any necessary improvements. The evaluation process is based on third-party online assessments and/or on-site audits. If we identify deviations from our standards, we ask our suppliers to develop and implement corrective measures within a reasonable time frame and support them in their efforts.

Rationale for level chosen: Since our supplier base currently comprises more than 70,000 Tier 1 suppliers company-wide, focusing our third-party evaluations on the most relevant is crucial. We define relevant suppliers as Tier 1 suppliers showing an elevated sustainability risk potential as identified by our risk matrices (including both country and industry-specific risks) and our purchasers' assessments. We use further sources of information such as evaluations from Together for Sustainability (TfS).

Importance: As shown in W1.1, water availability and quality play an important role in our supply chain. The BASF Supplier Code of Conduct expects suppliers, i.a., to use resources efficiently, reduce emissions to water, and minimize negative impacts on biodiversity and water scarcity. Our sustainability-oriented supply chain management helps to manage risks. We have defined our standards and processes in global guidelines and are constantly refining and optimizing these.

Baseline year

2020

Start year

2019

End year

2025

Progress

Indicator to assess progress/threshold for success: We track the coverage of our supplier sustainability evaluations and our suppliers' improvement. By 2025, we aim to have conducted sustainability evaluations for 90% of the BASF Group's relevant spend and will develop action plans where improvement is necessary. In addition, we are working toward having 80% of suppliers improve their sustainability performance upon re-evaluation by 2025.

Progress: We actively promote sustainability in the supply chain. In 2020, 80% of the relevant spend had been evaluated, which remains in the same range as in 2019. Of the suppliers re-evaluated in 2020, 68% had improved (compared to 52% in 2019). In order to foster continuous supplier development, if we identify deviations from our standards, we ask our suppliers to develop and implement corrective measures within a reasonable time frame. We support them in their efforts, for example by providing training on environmental topics, amongst others. We review our suppliers' progress according to a defined timeframe based on the sustainability risk identified, or after five years at the latest. In the case of ongoing, serious violations of the standards defined in our Supplier Code of Conduct or international principles, we reserve the right to impose commercial sanctions. These can go as far as termination of the business relationship. We are making good progress in our journey towards reaching our 2025 goals.

Goal

Promotion of sustainable agriculture practices

Level

Company-wide

Motivation

Corporate social responsibility

Description of goal

Description of goal and implementation: We aim to ensure that palm oil raw materials come from sustainable, certified sources, and actively support the Roundtable on Sustainable Palm Oil (RSPO). Our goal is to only source RSPO certified palm oil and palm kernel oil by 2020, provided it is available on the market. This goal applies uniformly to all company parts and activities that use palm oil and is driven by our central purchasing department. By 2025, this voluntary commitment will be expanded to include the most important intermediate products based on palm oil and palm kernel oil.

Rationale for coverage: Two of our key renewable raw materials are palm oil and palm kernel oil and their respective derivatives, which we mainly use to produce home and

personal care ingredients and, to a lesser extent, food ingredients.

Importance: Oil palm plantations can contribute significantly to deforestation, loss of biodiversity and climate change from the loss of peatland and may also affect local water resources. We share the widespread concern about these challenges and are committed to reducing environmental impacts. Consequently, our company-wide BASF Palm Sourcing Policy has requirements for protecting and preserving forests and peatland, along with involvement of local communities in decision-making processes. Sourcing RSPO certified palm oil products significantly reduces these risks. Hence, the described goal contributes to the overarching goal of achieving water security.

Baseline year

2011

Start year

2015

End year

2025

Progress

Indicator to assess progress: We look at the share of RSPO certified products within the total palm and palm kernel oil procurement. Threshold for success: In continuation of our commitment made in 2011, BASF's goal is to source 100% RSPO-certified sustainable palm oil and palm kernel oil and the most important intermediate products based on palm oil and palm kernel oil by 2025.

Progress: In 2020, we published our fourth progress report (BASF Palm Progress Report) for greater transparency in the value chain. Based on the voluntary commitment to sustainably source palm oil products that we expanded in 2015, we were able to purchase large volumes of certified palm kernel oil in 2020 (227,213 tons) despite a difficult market environment. We reached our goal of sourcing 100% RSPO-certified palm oil and palm kernel oil by 2020 (2019: 83,5%). We have worked together with The Estée Lauder Companies, the RSPO and Solidaridad in Indonesia since 2019 to strengthen smallholder structures and sustainable production methods at local level. The project in the province of Lampung supports around 1,000 independent smallholders in improving their livelihoods and the sustainable production of palm oil and palm kernel oil. The focus is on efficient and sustainable farming practices and health and safety standards. The goal is for at least one-third of program participants to become certified according to the RSPO Smallholder Standard in three years.

Goal

Promotion of sustainable agriculture practices

Level

Business

Motivation

Recommended sector best practice

Description of goal

Description and implementation: BASF established a European farm network, to help preserve biodiversity and natural resources using modern agriculture. We are developing biodiversity, soil health and modern sustainable agriculture promotion measures in it together with farmers, experts from science and nature conservation organizations. The goal is to grow the farm network into a global network by 2021.

Rationale for level chosen: This goal tackles issues touched by our Agricultural Solutions business segment, across all countries and activities within this segment.

Importance: Biodiversity is the foundation for numerous ecosystem services, for example air quality, climate, pollination, water purification & soil formation. As a chemical company we depend on ecosystem services like water availability and quality (see W1.1) and have impact on them. Protecting biodiversity is an important issue also addressed in the UN Sustainable Development Goals (SDGs). BASF contributes to achieving the SDGs and actively supports and implements projects to encourage protection of biodiversity at local level. Consequently, in 2016 we signed the Business and Biodiversity Pledge: We commit to deliver solutions for the conservation of biodiversity, its sustainable use, and the fair & equitable sharing of benefits from resources. That includes promoting awareness about values of biodiversity, acting as ambassadors for responsible stewardship of biodiversity, and regularly reporting on actions.

Baseline year

2008

Start year

2010

End year

2020

Progress

Indicator to assess progress: We monitor the participating farms and organizations in the network.

Progress: Currently, there are more than 20 farms in the Farm Network, located in Germany, France, the UK, Italy, Poland, Greece, the Netherlands and the Czech Republic showing how modern farming throughout Europe can help protect ecosystems and resources. Also, the network now includes more than 30 partner organizations in eight countries. Independent experts evaluate the progress of each farm in the Farm Network. Data tracked includes the number of birds, pollinators, and other beneficial insects living on the farm. Water management measures and sustainable soil treatments are also carefully monitored. A different model with the same objectives is currently being pursued with farmers in USA (“living acres”).

Threshold for success: We see every new member of the Farm Network as a success for the promotion of sustainable agriculture. The achievement of our goal to establish a global network will be marked by extension of our activities to other continents outside of Europe. On the individual farm level, we hope to see clear improvements on the indicators mentioned above and the incorporation of new indicators, such as soil health. The unique condition at each location contradicts the establishment of uniform thresholds.

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	Company-wide water accounting figures (withdrawals, discharges, consumption)	ISAE 3000	Statements and figures pertaining to sustainability in the Management's Report and Consolidated Financial Statements of BASF's Annual Report are audited. The audit with limited assurance was conducted in accordance with ISAE 3000 (Assurance Engagements other than Audits or Reviews of Historical Financial Information) and ISAE 3410 (Assurance Engagements on Greenhouse Gas Statements), the relevant international auditing standards for sustainability reporting.
W8 Targets	Target and status for European Water Stewardship implementation	ISAE 3000	Statements and figures pertaining to sustainability in the Management's Report and Consolidated Financial Statements of BASF's Annual Report are audited. The audit with limited assurance was conducted in accordance with ISAE 3000 (Assurance Engagements other than Audits or Reviews of Historical Financial Information) and ISAE 3410 (Assurance Engagements on Greenhouse Gas Statements), the relevant international auditing standards for sustainability reporting.

W10. Sign off

W-FI

(W-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

Forward-Looking Statements:

This document may contain forward-looking statements. These statements are based on current estimates and projections and currently available information. Future statements are not guarantees of the future developments and results outlined therein. These are dependent on a number of factors; they involve various risks and uncertainties; and they are based on assumptions that may not prove to be accurate. We do not assume any obligation to update the forward-looking statements contained in this report.

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	Member of the Board of Executive Directors, BASF SE	Director on board

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