

W0. Introduction

W0.1

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

Syngenta is one of the world's leading science-based agtech companies with about 28,000 employees in some 90 countries dedicated to our purpose: Bringing plant potential to life. Syngenta plays a vital role in enabling the food chain to feed the world safely and take care of our planet. Our ambition is to be the most collaborative and trusted team in agriculture, providing leading seeds and crop protection innovations to enhance the prosperity of farmers, wherever they are.

Syngenta innovates with world-class science to protect crops and improve seeds. Our two core businesses, Crop Protection (2019: USD 10.6 billion sales) and Seeds (2019: USD 3.1 billion sales), support farmers with technologies, knowledge and services so they can sustainably provide the world with better food, feed, fibre, and fuel.

Whether they grow corn or rice, vegetables or flowers, farmers trust Syngenta to help them produce healthy, premium crops and minimize the use of precious natural resources. We accelerate our innovation and invest to advance a more sustainable agriculture which is good for nature, farmers and society. We contribute to addressing the global challenge of food security by increasing yields through technology, improving crop quality, helping farmers use natural resources more efficiently and creating benefits for rural communities. We also encourage farmers to adopt climate-smart farming practices that help them to optimize inputs, reduce soil-based carbon emissions and build crop resilience to changing weather patterns.

We are committed to helping farmers and fighting climate change, making agriculture more resilient and sustainable. At the heart of our contribution is the Good Growth Plan, which includes bold commitments to reduce agriculture's carbon footprint and help farmers deal with extreme weather patterns caused by climate change. Our business – and the world's food security – depend on sustainable natural resources, healthy ecosystems and thriving rural communities. Which is why we cooperate with industry partners, governments, academia and NGOs to support the achievement of the United Nations Sustainable Development Goals (SDGs).

PLEASE NOTE: This submission is for Syngenta AG Group and not for Syngenta Group. Launched in June 2020, the Syngenta Group encompasses four business units. Under this new structure, the scope of this submission includes the Syngenta Crop Protection and Syngenta Seeds business units, as well as the former Syngenta AG Group's operations of Syngenta Group China business unit. More information about the newly launched Syngenta Group can be found here: <https://www.syngenta.com/company/media/syngenta-news/year/2020/launch-syngenta-group-creating-global-agtech-market-leader>

W-CH0.1a

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

- Specialty organic chemicals
- Other, please specify (Seed production)

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	October 1 2018	September 30 2019

W0.3

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

- Albania
- Algeria
- Andorra
- Argentina
- Armenia
- Australia
- Austria
- Azerbaijan
- Bangladesh
- Belarus

Belgium  
Belize  
Bolivia (Plurinational State of)  
Bosnia & Herzegovina  
Brazil  
Bulgaria  
Burkina Faso  
Cameroon  
Canada  
Chile  
China  
China, Hong Kong Special Administrative Region  
Colombia  
Costa Rica  
Côte d'Ivoire  
Croatia  
Cuba  
Cyprus  
Czechia  
Denmark  
Dominican Republic  
Ecuador  
Egypt  
El Salvador  
Estonia  
Eswatini  
Ethiopia  
Finland  
France  
French Guiana  
French Polynesia  
Gabon  
Georgia  
Germany  
Ghana  
Greece  
Guadeloupe  
Guatemala  
Honduras  
Hungary  
India  
Indonesia  
Iran (Islamic Republic of)  
Iraq  
Ireland  
Israel  
Italy  
Jamaica  
Japan  
Jordan  
Kazakhstan  
Kenya  
Kuwait  
Kyrgyzstan  
Latvia  
Lebanon  
Libya  
Lithuania  
Luxembourg  
Malawi  
Malaysia  
Mali  
Malta  
Mauritius  
Mexico  
Morocco  
Mozambique  
Myanmar  
Namibia  
Netherlands  
New Caledonia  
New Zealand  
Nicaragua  
Nigeria  
Norway  
Oman  
Pakistan  
Panama  
Paraguay  
Peru  
Philippines

Poland  
 Portugal  
 Puerto Rico  
 Qatar  
 Republic of Korea  
 Republic of Moldova  
 Réunion  
 Romania  
 Russian Federation  
 Saudi Arabia  
 Senegal  
 Serbia  
 Singapore  
 Slovakia  
 Slovenia  
 South Africa  
 Spain  
 Sri Lanka  
 State of Palestine  
 Sudan  
 Sweden  
 Switzerland  
 Taiwan, Greater China  
 Tajikistan  
 Thailand  
 Tunisia  
 Turkey  
 Turkmenistan  
 Uganda  
 Ukraine  
 United Arab Emirates  
 United Kingdom of Great Britain and Northern Ireland  
 United Republic of Tanzania  
 United States of America  
 Uruguay  
 Uzbekistan  
 Viet Nam  
 Yemen  
 Zambia  
 Zimbabwe

#### W0.4

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

USD

#### W0.5

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

Companies, entities or groups over which operational control is exercised

#### W0.6

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

Yes

#### W0.6a

**(W0.6a) Please report the exclusions.**

Exclusion	Please explain
Very small sites and office activities	The water consumption is insignificant (< 0.1 % of the total water consumption).

#### 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	Important	Important	DIRECT OPERATIONS: * Use in production of certain seeds and flowers: important as water is essential to grow seeds and flowers * Use in sites manufacturing crop protection products: not as important as water is mainly used for cleaning or cooling INDIRECT OPERATIONS: * Seed supply farms: important for the production of seeds in contracted field production * Chemical suppliers: not as important as water is mainly used for cleaning or cooling FUTURE OUTLOOK: Based on the current business model and observed trends, we don't expect the importance of our use of freshwater to change in direct and indirect operations in the near future. In the medium term, we will continue to expand the implementation of water management practices among our seed supply networks, mainly through the training of growers, and we will prioritize the use of water management practices in the selection criteria of growing areas.
Sufficient amounts of recycled, brackish and/or produced water available for use	Not very important	Not very important	DIRECT OPERATIONS: We have no or only very limited use of recycled, brackish and/or produced water. We do not use brackish water because we have no supply of brackish water (no Syngenta site is located near a sea). Further, brackish water cannot be used to produce seeds. We only use recycled water in specific processes, for instance in cleaning processes or as formulation agents which are mixed with the final product. Our activities do not produce water, so we have no produced water. INDIRECT OPERATIONS: We have no or only very limited use of recycled, brackish and/or produced water as surface or underground water is typically used for irrigation purposes along the value chain. FUTURE OUTLOOK: Based on the current business model and observed trends, we don't expect the importance of our use of recycled, brackish and/or produced water to change in the near future in direct and indirect operations.

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	76-99	METHOD AND FREQUENCY: Large sites and sites deemed as large water users (i.e. those considered environmentally significant because they account for more than 0.1% of our total annual energy and water consumption) report total volumes of water withdrawal in our company-wide SERAM system (Syngenta Environmental Reporting And Management) annually. Data that sites enter into SERAM are formally validated by a regional environmental manager.
Water withdrawals – volumes by source	76-99	METHOD AND FREQUENCY: Large sites and sites deemed as large water users (i.e. those considered environmentally significant because they account for more than 0.1% of our total annual energy and water consumption) report water withdrawals by source in our company-wide SERAM system (Syngenta Environmental Reporting And Management) annually. Data that sites enter into SERAM are formally validated by a regional environmental manager.
Entrained water associated with your metals & mining sector activities - total volumes [only metals and mining sector]	<Not Applicable>	<Not Applicable>
Produced water associated with your oil & gas sector activities - total volumes [only oil and gas sector]	<Not Applicable>	<Not Applicable>
Water withdrawals quality	51-75	METHOD AND FREQUENCY: Across Syngenta operations, the quality of water withdrawals is controlled at site level as necessary using standard parameters depending on water destination. Frequency varies from site to site based on type of use and local regulations. This covers more than 90% of water withdrawals.
Water discharges – total volumes	76-99	METHOD AND FREQUENCY: Large sites and sites deemed as large water users (i.e. those considered environmentally significant because they account for more than 0.1% of our total annual energy and water consumption) report total volumes of water discharges in our company-wide SERAM system (Syngenta Environmental Reporting And Management) annually. Data that sites enter into SERAM are formally validated by a regional environmental manager. For small sites, water discharge is done through municipal sewer systems, meaning that precise measurement is not possible, but the total quantity is negligible.
Water discharges – volumes by destination	76-99	METHOD AND FREQUENCY: Large sites and sites deemed as large water users (i.e. those considered environmentally significant because they account for more than 0.1% of our total annual energy and water consumption) report volumes of water discharges by destination in our company-wide SERAM system (Syngenta Environmental Reporting And Management) annually. Data that sites enter into SERAM are formally validated by a regional environmental manager.
Water discharges – volumes by treatment method	76-99	METHOD AND FREQUENCY: Large sites and sites deemed as large water users (i.e. those considered environmentally significant because they account for more than 0.1% of our total annual energy and water consumption) report volumes of water discharges by treatment method in our company-wide SERAM system (Syngenta Environmental Reporting And Management) annually. Data that sites enter into SERAM are formally validated by a regional environmental manager.
Water discharge quality – by standard effluent parameters	1-25	METHOD AND FREQUENCY: Covering about 75% of total discharge, our large sites and sites deemed as large water users control the quality of water discharges using standard effluent parameters such as BOD, suspended solids, etc. on a continuous basis in accordance with local water regulations. The majority of Syngenta sites discharge their wastewater to effluent treatment plants (ETPs) operated by third parties, for instance municipal ETPs, and therefore standard effluent parameters are controlled by those third parties. Frequency varies from site to site – from daily to annually – based on type of use and local regulations.
Water discharge quality – temperature	1-25	METHOD AND FREQUENCY: Covering about 75% of total discharge, our large sites and sites deemed as large water users monitor the temperature of water discharge quality on an ongoing basis. The majority of Syngenta sites discharge their wastewater to effluent treatment plants (ETPs) operated by third parties, for instance municipal ETPs, and therefore temperature is controlled by those third parties.
Water consumption – total volume	76-99	METHOD AND FREQUENCY: Large sites and sites deemed as large water users (i.e. those considered environmentally significant because they account for more than 0.1% of our total annual energy and water consumption) report their total volume of water consumption in our company-wide SERAM system (Syngenta Environmental Reporting And Management) annually. Data that sites enter into SERAM are formally validated by a regional environmental manager.
Water recycled/reused	76-99	METHOD AND FREQUENCY: Large sites and sites deemed as large water users (i.e. those considered environmentally significant because they account for more than 0.1% of our total annual energy and water consumption) report the volume of water they recycle/reuse in our company-wide SERAM system (Syngenta Environmental Reporting And Management) annually. Data that sites enter into SERAM are formally validated by a regional environmental manager.
The provision of fully-functioning, safely managed WASH services to all workers	100%	METHOD AND FREQUENCY: We provide access to clean water and sanitation to all our employees around the world on a constant basis. The provision of fully-functioning, safely managed WASH services to all workers is an integral part of our HSE policy, and we use management audits to monitor implementation of our policy.

## 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	30900	About the same	CHANGE VS. PREVIOUS YEAR: Total withdrawals remained constant due to a reduction in irrigation and process water which compensated for the small increase in cooling water due to a production increase. FUTURE OUTLOOK: Based on observed trends, we do not expect material changes to our total water withdrawals in the near future.
Total discharges	28000	About the same	CHANGE VS. PREVIOUS YEAR: As water withdrawals remained constant, total discharges remained stable as well. FUTURE OUTLOOK: Based on observed trends, we do not expect material changes to our total water discharges in the near future.
Total consumption	2900	Lower	We define consumption as withdrawals minus discharges. CHANGE VS. PREVIOUS YEAR: Our total water consumption decreased in 2019 vs. 2018 due to a decrease in water usage in processing and washing, as well as in irrigation on our sites linked to climatic conditions in 2019. Further, irrigation also depends on the product mix, some seeds requiring more water than others. FUTURE OUTLOOK: Based on observed trends, we do not expect material changes to our total water consumption in the near future.

## 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	26-50	About the same	Other, please specify ((Maplecroft water risk mapping tool))	DESCRIPTION OF TOOL TO DEFINE AND IDENTIFY STRESSED AREAS: Syngenta uses the Maplecroft water risk mapping tool to identify sites located in water-scarce areas. Sites in areas of high or extreme stress are required to develop a water use assessment, including a minimization plan. DEFINITION: Sites are considered to be in a water-stressed area if the tool classifies this area as having "high" or "extreme" water stress. CHANGE VS. PREVIOUS YEAR: The location and number of sites in water-scarce areas is about the same as last year, thus the volume of water withdrawn in 2019 is about the same as in 2018 (27% in 2019 vs. 27% in 2018).

## 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	20500	About the same	RELEVANCE: Fresh surface water is relevant because our major sites are located alongside major rivers (i.e. Mississippi or Rhône). Water is mainly used for cooling purposes and sent back to the river uncontaminated. 100% of collected rainwater are included in the reported value (i.e. 100 megaliters/year). CHANGE VS. PREVIOUS YEAR: In 2019, withdrawal from fresh surface water was about the same compared to 2018. Although production increased, the product mix required less fresh surface water in 2019. FUTURE OUTLOOK: Based on observed trends, we do not expect material changes in fresh surface water withdrawal in the near future.
Brackish surface water/Seawater	Not relevant	<Not Applicable>	<Not Applicable>	RELEVANCE: Brackish surface water/Seawater are not relevant as we do not have sites located close to a sea. FUTURE OUTLOOK: We do not expect to use brackish surface water/Seawater in the near future.
Groundwater – renewable	Relevant	7800	Lower	RELEVANCE: Renewable groundwater is mainly relevant for irrigation purposes and the quantity depends on the level of rain. CHANGE VS. PREVIOUS YEAR: In 2019, withdrawal from renewable groundwater was lower compared to 2018 because less irrigation was needed in 2019 due to climatic conditions and the product mix. FUTURE OUTLOOK: Volume of renewable groundwater depends on the level of rain and agricultural needs, but we do not expect material changes in the near future.
Groundwater – non-renewable	Not relevant	<Not Applicable>	<Not Applicable>	RELEVANCE: Non-renewable groundwater is not relevant as we do not use it in our operations. Further, none of our sites is located in regions with non-renewable aquifers. FUTURE OUTLOOK: We do not expect to use non-renewable groundwater in the near future.
Produced/Entrained water	Not relevant	<Not Applicable>	<Not Applicable>	RELEVANCE: Produced/Entrained water is not relevant because we do not use it in our operations. FUTURE OUTLOOK: We do not expect to use produced/entrained water in the near future.
Third party sources	Relevant	2600	Lower	RELEVANCE: Water from third-party sources (coming from the public network) is relevant because we use it both as sanitary water and production water. CHANGE VS. PREVIOUS YEAR: In 2019, withdrawal from third-party sources was lower compared to 2018 because there was less activity on some of the sites using water from third-party sources. FUTURE OUTLOOK: Based on observed trends, we do not expect material changes to water from third-party sources in the near future.

## 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	18300	About the same	RELEVANCE: Discharge to fresh surface water is relevant because this represents our main water discharge, essentially made of uncontaminated cooling water sent back to the river where it is drawn from. CHANGE VS. PREVIOUS YEAR: In 2019, total water discharges to fresh surface water were about the same compared to 2018 because withdrawal from fresh surface water was about the same compared to 2018. FUTURE OUTLOOK: Based on observed trends, we do not expect material changes to total discharges to fresh surface water in the near future.
Brackish surface water/seawater	Not relevant	<Not Applicable>	<Not Applicable>	RELEVANCE: Discharge to brackish surface water/seawater is not relevant because we do not use, nor discharge effluents to brackish surface water/seawater. FUTURE OUTLOOK: We do not expect changes to discharges to brackish surface water/seawater in the near future.
Groundwater	Not relevant	<Not Applicable>	<Not Applicable>	RELEVANCE: Discharge to groundwater is not relevant because we do not discharge effluents to groundwater. FUTURE OUTLOOK: We do not expect changes to discharges to groundwater in the near future.
Third-party destinations	Relevant	9700	About the same	RELEVANCE: Discharge to third-party destinations is relevant because many sites send water back to external wastewater treatment plants (e.g., municipal effluent treatment plants). CHANGE VS. PREVIOUS YEAR: In 2019, total water discharges to third-party destinations were about the same compared to 2018 because there was no significant change in the level of activity of sites that discharged water to third-party destinations in 2019. FUTURE OUTLOOK: Based on observed trends, we do not expect material changes to discharges to third-party destinations in the near future.

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**

Specialty organic chemicals

**Product name**

Herbicides, fungicides, insecticides

**Water intensity value (m3)**

0.63

**Numerator: water aspect**

Freshwater consumption

**Denominator**

Ton

**Comparison with previous reporting year**

Lower

**Please explain**

Syngenta produces dozens of specialty chemicals, therefore it is not possible to extract data for the 5 main products. Instead, we have included the total metric tons of active ingredients or intermediates as finished products only from our Active Ingredient sites as a metric. Fresh water consumption is defined as the quantity of water consumed in our finished products. Non-contact cooling water is excluded from this calculation. As part of this year's calculation, we found an error in our 2018 CDP submission. The intensity metric for 2018 should have been 0.87. The production volumes have decreased slightly from 2018 to 2019, however, with the launch of our internal targets on water reduction, there have been some efficiency gains at some of our larger facilities. In Syngenta, there has been a targeted effort to be more efficient with wash-down procedures during change-over of formulation lines. The lines need to be flushed with water to remove the previous formulation to ensure the correct quality of the next formulation. This results in a reduction in water use, waste generation and energy used. In addition, there have been programs at larger facilities to identify and repair leaks in infrastructure. The intensity metrics are used internally to help drive resource efficiency and to achieve our 2030 internal targets on water efficiency. We expect Syngenta will have a 20% gain in efficiency by 2030. In addition to the programs mentioned above, Syngenta is looking at options to reuse water which will result in decreased use of water and decreased waste generation.

W1.4

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

Yes, our customers or other value chain partners

W1.4c

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

**RATIONALE OF ENGAGEMENT**

Agriculture uses about 70% of the world's fresh water. Shortages and changes in water availability affect growing seasons, pests and crop productivity, hindering farmers' ability to produce food. Syngenta has an important role to play to help farmers and players in the food value chain address these challenges.

**PARTNERS**

We partner with farmers (i.e. our customers) and value chain companies to further research and promote innovative solutions for water protection. Associations and NGOs support us with these activities.

**STRATEGY WITH FARMERS**

We encourage farmers to adopt conservation agriculture practices, which help them optimize water use, increase soil water holding capacity, reduce water runoff and build crop resilience to changing weather patterns. We have products that improve the water productivity of plants and increase tolerance to drought and heat. We engage with customers to provide tools and knowledge through our commercial teams and through associations such as CropLife International.

**STRATEGY WITH VALUE CHAIN**

Our global and regional Value Chain teams engage with players in the food chain to help them address sustainability challenges, including water conservation. For example, in Vietnam, we are working to improve soil management on coffee plantations with Louis Dreyfus Company, Jacobs Douwe Egberts and IDH The Sustainable Trade Initiative. Using 24 demonstration plots and direct action on farms, the project aims to develop sustainable landscapes that reduce soil degradation, combat deforestation, conserve irrigation water and improve climate change resilience. So far, we have trained up to 2,500 farmers and agronomists.

**MEASURING SUCCESS**

We measure progress through our Good Growth Plan. We committed to increase the average productivity of the world's major crops by 20% by 2020 without using more land, water or inputs. We report on progress annually (2019: 18.8% since baseline 2014).

**W2. Business impacts**

---

**W2.1**

---

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

Yes

**W2.1a**

---

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

**Country/Area & River basin**

United States of America	Mississippi River
--------------------------	-------------------

**Type of impact driver & Primary impact driver**

Physical	Flooding
----------	----------

**Primary impact**

Reduced revenues from lower sales/output

**Description of impact**

Syngenta's results could be affected negatively by extreme weather events such as flood and droughts affecting farmers. We provide inputs to farmers, and these events can influence the demand for certain products over the course of a season or affect the ability to collect revenues from them. In 2019, severe floods due to record rainfall delayed planting of corn and soy crops in the southeast and Midwest of the USA. The National Oceanic and Atmospheric Administration reported that the 12-month period ending in May 2019 was the wettest 12 months on record in the USA. The US Department of Agriculture reported that farmers were not able to plant more than 19.4 million acres of cropland in 2019. These floods in the USA negatively impacted our sales in 2019 in North America due to a reduced demand for products in the first part of the growing season because of the delay in the start of the season and a reduced planting area. As stated in our Financial Report 2019, North American sales of crop protection products decreased by 3% and sales of seeds by 5% mainly driven by this event.

**Primary response**

Increase investment in new technology

**Total financial impact**

250000000

**Description of response**

Extreme weather events mainly impact our sales at territory/country level and the overall risk for the global business is mitigated by geographical differences. Although in the long term, climate change and associated extreme weather event such as floods may make growing certain crops more or less viable in different geographic areas, it is not likely to reduce overall demand for food and feed. As demonstrated in 2019, with the flood in the USA and extreme drought in Australia (see next row below), farmers must have the right tools and skills to tackle climate change. Syngenta has products available – and in the pipeline – that improve the water productivity of plants and increase tolerance to drought and heat. As climate change brings less predictable and more extreme weather, we offer growers solutions such as AGRISURE ARTESIAN® corn, which delivers strong performance in both drought and excessively wet conditions. In 2019, Syngenta announced that it will accelerate its innovation to address the increasing challenges faced by farmers around the world and the changing views of society. We have committed to delivering technological breakthroughs to market to reduce agriculture's contribution to climate change, harness its mitigation capacity, and help the food system stay within planetary boundaries. The value reported is an estimate and is derived mainly from loss of sales.

**Country/Area & River basin**

Australia	Murray - Darling
-----------	------------------

**Type of impact driver & Primary impact driver**

Physical	Drought
----------	---------

**Primary impact**

Reduced revenues from lower sales/output

**Description of impact**

Syngenta's results could be affected negatively by extreme weather events such as flood and droughts affecting farmers. We provide inputs to farmers, and these events can influence the demand for certain products over the course of a season or affect the ability to collect revenues from them. In 2019, Australia experienced severe droughts due to record-low rainfall in some regions and above-average temperatures in vast areas of crop land in south-eastern Australia. The drought negatively impacted our 2019 sales in Australia due to a decrease in the demand of products. As stated in our Financial Report 2019, Asia Pacific (APAC) sales of crop protection products decreased by 1% partially driven by this event. The sales drop was offset by increased sales in other APAC countries.

**Primary response**

Increase investment in new technology

**Total financial impact**

300000000

**Description of response**

Extreme weather events mainly impact our sales at territory/country level and the overall risk for the global business is mitigated by geographical differences. Although in the long term, climate change and associated extreme weather event such as floods may make growing certain crops more or less viable in different geographic areas, it is not likely to reduce overall demand for food and feed. As demonstrated in 2019, with the extreme drought in Australia and the floods in the USA (see row above), farmers must have the right tools and skills to tackle climate change. Syngenta has products available – and in the pipeline – that improve the water productivity of plants and increase tolerance to drought and heat. As climate change brings less predictable and more extreme weather, we offer growers solutions such as AGRISURE ARTESIAN® corn, which delivers strong performance in both drought and excessively wet conditions. In 2019, Syngenta announced that it will accelerate its innovation to address the increasing challenges faced by farmers around the world and the changing views of society. We have committed to delivering technological breakthroughs to market to reduce agriculture's contribution to climate change, harness its mitigation capacity, and help the food system stay within planetary boundaries. The value reported is an estimate and is derived mainly from loss of sales.

**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?**

**IDENTIFICATION AND CLASSIFICATION**

Syngenta uses standard and custom analytical methods to identify and classify potential water pollutants. This starts with water pollutants governed by regulatory requirements, including parameters such as pH, temperature, COD, BOD, TSS, VOCs, SVOCs and inorganic compounds. Additionally, we monitor potential water pollutants associated with our active ingredients, degradation by-products, metabolites and/or specific components of a formulation or a product of interest. In some cases, these are part of a regulatory requirement, however, in most cases they are beyond regulatory requirements. Syngenta has hundreds of sites with many different product mixes and it is not possible to list every variant herein, however, each site takes a similar approach. The volumes of products used, their relative toxicity and the times of the year when they are used are evaluated to design a rational monitoring program. Regional environmental specialists and global specialists help develop these programs.

**MEASUREMENT**

Syngenta works with externally certified laboratories to conduct the standard analyses required by regulations. For beyond regulatory and activity-specific analyses, Syngenta also works with externally certified laboratories to complete the analyses. In addition, Syngenta validates these laboratories using known methodologies and standards. Where allowed by law, Syngenta conducts analyses using internally validated laboratories. Syngenta also conducts internal and external audits of laboratories to ensure data quality.

**IMPACT ASSESSMENT**

We use the World Health Organization's Guidelines for Drinking-Water Quality. Water-related impacts on ecosystems from Syngenta activities should be negligible as we are looking at acute and chronic exposure scenarios for PNECs. We do not evaluate these impacts on human health on a regular basis as an exposure is not expected. Currently, we are looking at Syngenta sites globally and considering expanding the program to other parts of the value chain. For sites within the European Union (EU), we derive Predicted No Effect Concentrations (PNEC) based on the European Commission's Technical Guidance For Deriving Environmental Quality Standards (Guidance Document No. 27), Common Implementation Strategy for the Water Framework Directive (2000/60/EC). We use this guidance as a basis but apply additional scientific evidence where available to provide a more robust understanding.

Approximately 60% of total water usage at our sites is used for non-contact cooling, of which about 99% is released as uncontaminated water back into rivers and lakes. Before release and according to local permits, quality parameters are checked to ensure there are no adverse impacts on the receiving water environment. For example, in our Monthey site (Switzerland), which represents about 80% of total non-contact cooling water usage, we test for pH, temperature, COD, N, P, solvents and micropollutants.

For the monitoring program described above, the regulatory monitoring is conducted in accordance with the permit. The beyond regulatory component is conducted on a quarterly basis, with impacts assessed on a continuous basis.

**VALUE CHAIN**

Syngenta is currently working to expand its assessment and monitoring program to include key suppliers. Syngenta is a member of Together for Sustainability, an initiative that evaluates the environmental performance of suppliers with audits, also taking into account wastewater prevention and treatment. Further, for supplier sites considered of significant risk, we also conduct our own audits, which include the review of their water management practices.

**MANAGEMENT PROCEDURES**

Regulatory and beyond regulatory monitoring programs for water ecosystems and human health are implemented globally. Syngenta has developed global requirements in its HSE Management System for monitoring drinking water and wastewater discharges at our sites. Syngenta has a support network of internal and external experts on ecological fate and transport as well as human health to support these efforts.

Environmental and health aspects are also considered throughout our R&D processes. We undertake comprehensive assessments that cover human and environmental risks at all stages of development – from concept through to final use and consumption. Our human safety assessments address potential risks to product users and consumers of food and feed, while our environmental safety programs seek assurance that the product will not adversely affect soil, water, air, flora or fauna.

We also provide customers with support to promote good practice, ensure safe handling and minimize environmental impacts. We carry out extensive programs to understand and track the impact of our products, as well as provide solutions that keep unwanted products out of the environment, such as farm-scale residual pesticide treatment solutions, container take-back schemes and obsolete stock removal.

**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
Traces of active ingredients	Direct operations Supply chain	This water pollutant could impact soils, waterways or groundwater if an accidental release of traces of active ingredients occurred. Syngenta has direct control over hundreds of sites globally and interacts with thousands of suppliers. Each scenario has a different potential pollutant and impact. Each scenario and potential impact are managed in an environmentally responsible and appropriate fashion.	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages Providing best practice guidance to suppliers Auditing supplier compliance to industry standards Other, please specify (Standards beyond regulation)	PROCEDURES: For our direct operations, our HSE Policy and Standards and associated HSE Management System establish minimum requirements that must be followed to reduce potential soil, surface water and groundwater contamination. Syngenta has developed internal requirements and standards for the discharge of wastewater and management of unplanned releases. For our supply chain, we provide technical support on the identification and classification of potential pollutants. Syngenta works to continuously upskill the performance of our suppliers through industry groups such as CropLife International and Together for Sustainability as well as through direct relationship management and audits. Additionally, for our seed supplier network, requirements on the use of good water management practices are included in farmers' contracts and part of our regular engagement with them. MEASUREMENT AND EVALUATION: For our direct operations, we track performance through internal monitoring systems. Incidents are investigated and corrective actions are put in place. We report on the number of significant unplanned releases externally on an annual basis. For our supply chain, we measure and evaluate performance through our Supplier Sustainability Program, which includes HSE audits. We report externally on the percentage of suppliers covered by this program on an annual basis. For our seed supply network, we also conduct audits that include the assessment of water-related practices such as trickle irrigation. We aim to have 50% of our seed suppliers using good water management practices by 2022.
Agrochemicals	Product use	If an agrochemical is not adequately selected (e.g., right crop, soil) or applied, this could lead to potential runoff or leaching. Runoff is the movement of water and any pollutants across a soil surface. It occurs when irrigation or rain adds water to a surface faster than it can enter the soil. Water running off the land toward rivers and lakes can also move chemicals, such as pesticides and fertilizers. Leaching is the movement of pollutants carried by water downward through permeable soils. The quantity of run-off or leaching will depend on the chemical's characteristics, soil properties, weather conditions, site features and agriculture practices.	Providing best practices instructions on product use	PROCEDURES: In our Principles for Sustainable and Responsible Agriculture, we outline our commitment to working with our stakeholders and providing products and services that help farmers optimize water use and protect water quality. We encourage farmers to adopt conservation agriculture practices, which include water management actions that reduce runoff and leaching. We do this through our interactions with customers, training, detailed risk analysis and provision of use recommendations, including sales restrictions in vulnerable areas. We also use digital tools to communicate with farmers. MEASUREMENT AND EVALUATION: We measure the number of farmers and farm workers trained per year by our sales and stewardship teams on the ground. We collect information about the type of training (e.g., safe use, good agriculture practices, application technology) and duration. We evaluate training practices and look for better ways to provide advice. The number of people trained is reported annually in our Sustainable Business Report. We also collect feedback from farmers through our direct interaction with farmers, retailers and other actors.

**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

More than once a year

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

3 to 6 years

### Type of tools and methods used

Enterprise Risk Management  
International methodologies  
Databases

### Tools and methods used

ISO 31000 Risk Management Standard  
Environmental Impact Assessment  
Maplecroft Global Water Security Risk Index

### Comment

Syngenta considers water-related risks as part of the formal enterprise-wide risk process which is further integrated into the company's business planning and review processes. Environment is one of the framework dimensions to assess the impact of a risk. Identification and assessment of water-related risks take place both at the company and asset levels (i.e. sites). The time horizon for water-related risk assessments varies from 1-3 years typically, however for climate scenario-related analysis, we look beyond 6 years. Similarly, much of the work and analysis with our corporate insurer has a long-term time horizon. Every site is also required to undertake an annual water supply sustainability assessment as part of the HSE Management System (risk identification). Sites in areas of high or extreme stress as well as larger users are required to develop a water use assessment, including a minimization plan. In 2017, we completed an internal water stress assessment for all our sites globally with the support of Maplecroft. The assessment considers current and future water risk quantities and uncertainties in regulatory changes with regards to water issues. The results from the assessment form the basis of the HSE Management System water requirements, and sites with high and extreme water stress exposure are monitored via HSE audits.

## Supply chain

### Coverage

Full

### Risk assessment procedure

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

### Frequency of assessment

More than once a year

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

3 to 6 years

### Type of tools and methods used

Tools on the market  
Enterprise Risk Management  
Databases

### Tools and methods used

WRI Aqueduct  
ISO 31000 Risk Management Standard  
Maplecroft Global Water Security Risk Index

### Comment

Water risk assessment is part of our Enterprise Risk Management Framework and assurance processes undertaken at third parties. In 2013, we conducted a water scarcity strategic review. We assessed water availability/scarcity, flood risk and political risk to determine current risks and trends and long-term availability of water. In 2016, we completed a third-party footprint analysis of our water footprint across our seed production supply chain. In 2017, a complete risk review of all our production sites to natural catastrophe (including flooding and tsunamis) was done in collaboration with our corporate insurer. Also in 2017, we completed an internal water stress assessment for all our sites globally with the support of Maplecroft. The assessment considers current and future physical water risk such as water risk quantities (too much/too little water) globally and risks related to uncertainty in regulatory changes, as well as conflicts with the public regarding water issues. The results from the assessment form the basis of the HSE Management System water requirements, and sites with high and extreme water stress exposure are monitored via HSE audits. We have plans to expand the use of this assessment in the supply chain within the next 1-3 years.

**Other stages of the value chain**

**Coverage**

Full

**Risk assessment procedure**

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

**Frequency of assessment**

More than once a year

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

3 to 6 years

**Type of tools and methods used**

Enterprise Risk Management

**Tools and methods used**

ISO 31000 Risk Management Standard

**Comment**

Although some water risks could exist at site level (i.e. own operations) or in the supply chain, the largest potential impact would be downstream on our value chain. Changes in water availability directly affect agriculture in terms of growing seasons, pests and crop productivity, and thus the demand for our products. As a result, water risks mainly impact our sales at regional/country level and the overall risk for the global business is largely mitigated by geographical differences.

**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, sometimes included	RELEVANCE: Relevant and included for some facilities/suppliers in our risk management processes based on Syngenta's Enterprise Risk Management Framework and requirements set forth by the functions. Water availability is relevant mainly for daily operations at our production sites and especially for our field production (seed suppliers) activities where water is required to reproduce seeds. ASSESSMENT: We have conducted several assessments over the years, including a water scarcity strategic review, a third-party footprint analysis and a water stress assessment to evaluate water availability. Sites also monitor water availability. For key chemical suppliers, water availability is also checked during HSE audits.
Water quality at a basin/catchment level	Relevant, sometimes included	RELEVANCE: Relevant and included for some facilities/suppliers in our risk management processes based on Syngenta's Enterprise Risk Management Framework and requirements set forth by the functions. Water quality is relevant mainly for daily operations at our sites and field production (seed suppliers) activities where water is required to reproduce seeds. ASSESSMENT: We conducted a water scarcity strategic review and a third-party footprint analysis to assess water availability, and sites also monitor water quality. For key chemical suppliers, water quality is also checked during HSE audits.
Stakeholder conflicts concerning water resources at a basin/catchment level	Relevant, sometimes included	RELEVANCE: Relevant and included for some facilities/suppliers in our risk management processes based on Syngenta's Enterprise Risk Management Framework and requirements set forth by the functions. Ensuring there are no stakeholder conflicts concerning water resources is essential to maintain our license to operate, and our sites monitor stakeholder issues associated with water when relevant. Stakeholder management is part of our community engagement activities. Our Community Engagement Guide encourages open discussion on issues of concern to local communities. ASSESSMENT: We conducted a water scarcity strategic review and we monitor stakeholder concerns regarding water as part of a site's community engagement activities when relevant.
Implications of water on your key commodities/raw materials	Relevant, sometimes included	RELEVANCE: Relevant and included for some facilities/suppliers in our risk management processes based on Syngenta's Enterprise Risk Management Framework and requirements set forth by the functions. This issue is relevant to ensure we can source key supplies (both chemical and seeds) to maintain operations and grow our business. ASSESSMENT: We completed a third-party analysis of our water footprint across our seed production supply chain to better understand water use and hotspots in the seed supply chain.
Water-related regulatory frameworks	Relevant, sometimes included	RELEVANCE: Relevant and included for some facilities/suppliers in our risk management processes based on Syngenta's Enterprise Risk Management Framework and requirements set forth by the functions. This is relevant to ensure continuity of our operations and compliance with regulatory frameworks. ASSESSMENT: We conducted a water scarcity strategic review, which included an overview of water-related regulatory frameworks. Sites also monitor these frameworks.
Status of ecosystems and habitats	Relevant, sometimes included	RELEVANCE: Relevant and included for some facilities/suppliers in our risk management processes based on Syngenta's Enterprise Risk Management Framework and requirements set forth by the functions. This is relevant to maintain our license to operate and the longevity of our strategy and operations. ASSESSMENT: We conducted a water scarcity strategic review, which included an assessment of the status of ecosystems and habitats, and sites also monitor this.
Access to fully-functioning, safely managed WASH services for all employees	Relevant, sometimes included	RELEVANCE: Relevant to ensure the health and safety of employees and those working on behalf of Syngenta. ASSESSMENT: We evaluate access to these services during site HSE audits.
Other contextual issues, please specify	Relevant, sometimes included	Use of non-contact cooling water RELEVANCE: By volume, the most significant water use is within our chemical supply chain where water is abstracted for non-contact cooling water purposes. This includes water abstracted for energy generation for our suppliers. ASSESSMENT: While most of this water is returned to the local water catchment, we are placing greater emphasis on understanding the water-related risk in this sector of our operations. For this, we use the World Resources Institute's Aqueduct tool.

**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	RELEVANCE: Customers have high relevance to Syngenta and farmers' needs are at the core of our strategy. We include customers in our water-related risk assessments because they play a key role in our corporate strategy and have a significant impact on the success of our business. METHOD OF ENGAGEMENT: We listen to the grower community (i.e. our customer) through satisfaction surveys and direct contact between farmers and our sales teams on the ground. We also conduct market research studies and consult with food value chain companies, which engage with farmers on water issues. Water availability is essential for agriculture and for Syngenta's growth.
Employees	Relevant, always included	RELEVANCE: Employees are relevant for our water-related risk management, awareness and stewardship activities. As part of the HSE Management System and sustainability targets, all sites are required to understand water risks and effectively manage the exposure. This includes aspects of water quality supplied to employees, water supply sustainability, as well as any issues associated with water as part of emergency management, for example flooding. METHOD OF ENGAGEMENT: Water-related risks and topics feature in our corporate newsletters and social media. Public appearances and discussions on water risks help to support awareness and stewardship. Employees at sites are actively engaged in water-related risk assessments and provide input.
Investors	Not relevant, included	RELEVANCE: We are currently a privately-owned company with an international bond investor base. Given the increasing interest from investors on sustainable business practices, including water- and climate-related financial disclosures, this group remains currently only partially relevant. We include investors in our water-related risk assessments, also in the light of Syngenta's planned relisting. METHOD OF ENGAGEMENT: We disclose our water-related targets and performance in our annual Sustainable Business Report which can be accessed online. We also engage with ESG rating agencies and investors on specific topics of interest to them, which might include water-related questions, either through questionnaires or interviews.
Local communities	Relevant, always included	RELEVANCE: Relevant and always included in our risk management processes and in our water scarcity strategic review. Local communities remain relevant to maintain our license and freedom to operate within local communities. METHOD OF ENGAGEMENT: Our Community Engagement Guide encourages open discussion on issues of concern to local communities, including water-related issues. Every site manager is responsible for addressing local concerns – whether these relate to the impact of our operations or to community needs that we can help with. Approaches vary per site and include helplines, community meetings and open days.
NGOs	Relevant, sometimes included	RELEVANCE: Relevant and included for some facilities/suppliers in our risk management processes based on Syngenta's Enterprise Risk Management Framework and requirements set forth by the functions. NGOs are of current and future relevance to maintain our license and freedom to operate and the overall continuity of our operations. METHOD OF ENGAGEMENT: Syngenta engages in constructive dialogue with NGOs as they are an important stakeholder to raise water-related concerns and opportunities at corporate and local levels. For instance, Syngenta has partnered with The Nature Conservancy (TNC) in 2019. Our Innovation for Nature collaboration directly carries out projects to improve resilience and adaptation to climate change. As an example, Syngenta and TNC are working in peri-urban environments of Kenya, near Nairobi, to improve community water resources for off-season irrigation, thereby helping to prevent soil erosion and improve local resilience to drought and rainfall variability. We are also part of the UNGC CEO Water Mandate.
Other water users at a basin/catchment level	Relevant, sometimes included	RELEVANCE: Relevant and included for some facilities/suppliers in our risk management processes based on Syngenta's Enterprise Risk Management Framework and requirements set forth by the functions, and in our water scarcity strategic review. Relevant to ensure water availability and the continuity of our operations. We consider water supply sustainability at all sites as part of our HSE Management System which requires all operations to carry out an assessment of water supply sustainability. METHOD OF ENGAGEMENT: At locations where water supply sustainability is identified as a significant issue, Syngenta collaborates with other water users in the catchment and the authorities, through stakeholder groups and other collaborations.
Regulators	Relevant, always included	RELEVANCE: Relevant and included in our risk management processes based on Syngenta's Enterprise Risk Management Framework and requirements set forth by the functions, and in our water scarcity strategic review. Water-related regulations are monitored actively by our own facilities and at corporate level. Regulators are important stakeholders and remain relevant to ensure the continuity of our operations and our license to operate on a global basis. METHOD OF ENGAGEMENT: Syngenta proactively engages in dialogue with policy makers directly or through industry associations. For example, Syngenta has been the private-sector partner of the UN Convention to Combat Desertification (UNCCD) for the past six years. We support UNCCD in running the Soil Leadership Academy, which is designed to strengthen (inter)national policy processes and frameworks toward "a land-degradation neutral world."
River basin management authorities	Relevant, always included	RELEVANCE: Relevant and always included in our risk management processes based on Syngenta's Enterprise Risk Management Framework and requirements set forth by the functions. Relevant and assessed at site level by some sites based on location and size. This group is relevant to maintain our license to operate. METHOD OF ENGAGEMENT: Syngenta engages with local authorities either directly or through industry associations. For example, in our Seeds and Flowers sites in Brazil, Zambia, Kenya and Morocco, we are actively involved in water management discussions and plans with local communities, stakeholders and regulators to limit water use due to water stress.
Statutory special interest groups at a local level	Relevant, always included	RELEVANCE: Relevant and included in our water scarcity strategic review. This group is relevant to maintain our license to operate. METHOD OF ENGAGEMENT: Syngenta engages, usually at the site level, with statutory special interest groups either directly or through industry associations. For instance, we run community engagement programs that include local representatives from statutory special interest groups to identify water-related issues. In case issues arise as part of these dialogues, they are integrated into our business continuity planning process for ongoing monitoring.
Suppliers	Relevant, always included	RELEVANCE: Relevant and included in our risk management processes based on Syngenta's Enterprise Risk Management Framework and requirements set forth by the functions. Relevant to source key supplies (both chemicals and seeds) to maintain operations and grow our business. We completed a third-party analysis of our water footprint across our seed production supply chain and are using the results to better understand water use and hot spots in the seed supply chain. METHOD OF ENGAGEMENT: We engage with suppliers through our various supplier sustainability and fair labor programs. For example, chemical suppliers are (at a minimum) required to undergo a regular independent sustainability assessment conducted through the EcoVadis platform. Certain suppliers within the categories who are defined as high impact/high risk are required to undergo further on-site audits covering various topics including how policies, processes and targets are being implemented on sites. Audits and assessments generate findings, and suppliers subsequently establish corrective actions. Our buyers work with suppliers to ensure these corrective actions are completed.
Water utilities at a local level	Relevant, sometimes included	RELEVANCE: Relevant and included for some facilities/suppliers in the risk management processes based on Syngenta's Enterprise Risk Management Framework and requirements set forth by the functions, and in our water scarcity strategic review. Relevant to ensure water availability and the continuity of our operations. METHOD OF ENGAGEMENT: As part of a general risk management requirement, sites engage at site level directly with local water utilities in order to map potential water supply risks to business continuity and manage these.
Other stakeholder, please specify	Not considered	No other relevant stakeholder to consider

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.**

**APPROACH AND SCOPE**

The process of identifying, assessing and responding to water-related risks is integrated into the overall Enterprise Risk Management (ERM) Framework which is based on ISO 31000 Risk Management Standard and governed by the Syngenta Executive Team. Risk management is everyone's responsibility in Syngenta and water-related risk assessments and responses take place at corporate and asset level.

The Syngenta process to identify, assess and respond to water-related risks follows our overall ERM Framework consisting of:

1. Context: understanding the uncertainties surrounding the delivery of the strategy, setting the risk appetite and risk tolerance
2. Identification: identifying, recognizing and describing risks
3. Assessment: gaining a deeper understanding of risks by analyzing their likelihood and potential impact (environment, financial, people)
4. Treatment: actively addressing the risks identified leading to reduce or remove the uncertainty of outcomes
5. Monitoring: regularly reviewing risks to evaluate the effectiveness of treatment measures and changes within the risk landscape

**TOOLS USED**

Water-related risk assessments take place on a regular basis and have a time span of 1-3 and beyond 6 years. They are conducted at corporate and local level (e.g., sites).

We also conduct water-related deep dives and specialized risk programs. For instance, in 2013, we conducted a water scarcity strategic review to identify our vulnerability at site level. We assessed current and future water availability/scarcity, flood risks and political risk due to water competition. In 2016, we completed a third-party footprint analysis of our water footprint across our seed production supply chain. In 2017, we completed an internal water stress assessment for all our sites globally with the support of Maplecroft.

**CLASSIFICATION**

Water-related risk assessments combine both qualitative and quantitative aspects of the Enterprise Risk Management framework evaluating the impact in environmental, people and financial terms and the potential likelihood of the risk materializing. The severity of the risk is determined by our ERM Framework definitions. Outcomes of water-related risk assessments are collected and stored in a central risk repository.

**COVERAGE**

Water-related risks are viewed both from a strategic long-term business value impact perspective (e.g., opportunities associated with the need of drought-resistant seeds by customers) and a short-term, operational perspective at corporate and business unit levels (e.g., supply chain disruptions and contingencies due to flooding and other physical acute and chronic risks). Within our HSE Management System, we also have a requirement for all sites to assess their water-related risks and produce water reduction programs. These requirements are reviewed at a corporate level annually. Larger sites are also audited as part of our HSE assurance program, and compliance against these requirements is assessed and followed by corrective actions if necessary.

**OUTCOMES AND DECISIONS**

Decisions on water-related risk treatment plans (mitigate, transfer, accept or control) are based on factors such as risk severity, business case in investment for mitigation, relevant regulations and local conditions affected by such decisions. Once treatment plans have been identified and established, mitigation plans and progress are discussed and monitored on a continuous basis by the on-site management with functional/specialist support from Corporate. Adjustments to treatment plans reflect the potential changes within the business (e.g., regulations, extreme weather).

---

**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?**

According to our enterprise-wide framework definitions, a substantive impact has a major effect on the delivery of the objectives and the organizational strategy. The framework is dynamic for use both at corporate and asset level and reflects adjusted definitions.

In financial terms, a substantive impact may represent a gross profit impact of 5-10% (major) or 10% and more (critical) in a year. The thresholds apply both for corporate (Syngenta AG Group) and asset level (e.g. sites, countries).

In environmental terms, a substantive impact would typically mean any release to the environment which would merit media attention, regardless of the entity level in question. Environmental-related impacts would be escalated for assessment with regards to criticality and strategic impact on the 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	1	Less than 1%	As part of our insurance coverage analysis, we have identified one of our main sites exposed to flood risk. However, although some water risks could exist at site level in our own operations or in the supply chain, the largest potential substantive impact would be downstream on our value chain. Changes in water availability directly affect agriculture in terms of growing seasons, pests and crop productivity, and thus the demand for our products.

**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 Kingdom of Great Britain and Northern Ireland	Other, please specify (Humber)
--	--------------------------------

**Number of facilities exposed to water risk**

1

**% company-wide facilities this represents**

Less than 1%

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

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

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

Less than 1%

**Comment**

The Strategic Flood Risk Assessment records the site to be located in Flood Zone 3a (high risk) where the probability of a flood occurring is considered to be more than 1 in 100 years but less than 1 in 20 years.

**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 Kingdom of Great Britain and Northern Ireland	Other, please specify (Humber)
--	--------------------------------

**Type of risk & Primary risk driver**

Physical	Flooding
----------	----------

**Primary potential impact**

Reduction or disruption in production capacity

**Company-specific description**

The Strategic Flood Risk Assessment records the site to be located in Flood Zone 3a (high risk) where the probability of a flood occurring is considered to be more than 1 in 100 years but less than 1 in 20 years. Floods could cause disruption in the production of active ingredients and our product manufacturing. Like many businesses, other Syngenta sites could be indirectly exposed to climate-related events which temporarily limit production, through e.g., disruption of transport networks, or restrictions on water usage.

**Timeframe**

More than 6 years

**Magnitude of potential impact**

Medium-low

**Likelihood**

Very unlikely

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

Yes, a single figure estimate

**Potential financial impact figure (currency)**

70000000

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact**

A flood, with potential to occur once in 100 years at this site, could restrict operations and cause property damage. The value was calculated based on the probable maximum loss in property damage and business interruption, as per the insurance report for the site.

**Primary response to risk**

Develop flood emergency plans

**Description of response**

A written and proven emergency response plan exists. Flood resilience measures have also been implemented at the site, including: deployment of temporary flood defense to protect some buildings and equipment, concrete walls to protect Combined Heat and Power, and raising of some critical equipment. Response actions have been fully implemented and emergency plans regularly trained. We have recognized the likely increasing frequency and severity of extreme weather events due to man-made climate change, and we incorporate this into our business continuity plans.

**Cost of response**

500000

**Explanation of cost of response**

The cost of response to this risk is part of the operational costs and general contingency plans at the site and cannot easily be disaggregated and specified. We estimated this figure over 5 years: USD 100,000 in capital expenditure on plant protection measures, and USD 400,000 in revenue expenditure on clean-out of debris from the river.

**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**

Switzerland	Other, please specify (Several countries)
-------------	---

**Stage of value chain**

Use phase

**Type of risk & Primary risk driver**

Physical	Flooding
----------	----------

**Primary potential impact**

Reduced revenues from lower sales/output

#### Company-specific description

Agriculture uses about 70% of the world's fresh water. Shortages and changes in water availability (flooding but also droughts) pose significant challenges to farmers in terms of growing seasons, pests and crop productivity. Syngenta provides inputs to farmers and, as a result, changes in water availability directly affect the demand for our products.

#### Timeframe

1-3 years

#### Magnitude of potential impact

Medium

#### Likelihood

More likely than not

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

Yes, an estimated range

#### Potential financial impact figure (currency)

<Not Applicable>

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

20000000

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

300000000

#### Explanation of financial impact

Water risks mainly impact our sales at country and regional level and the overall risk for the global business is mitigated by geographical differences and Syngenta's global footprint. The values were estimated based on information gathered from extreme weather events in 2019. In particular, we assumed the financial impact on our annual sales to be similar to that of previous significant floods or droughts across the world, such as the floods more recently experienced in the USA and the droughts in Australia in 2019. Financial implications are derived mainly from loss of sales, ability to collect receivables or missed product delivery and high inventories.

#### Primary response to risk

Downstream	Other, please specify (Accelerating innovation to provide solutions to farmers)
------------	---

#### Description of response

Farmers must have the right tools and skills to prosper. Syngenta has products available – and in the pipeline – that improve the water productivity of plants and increase tolerance to drought and heat. Weed control using herbicides lowers the need for tillage, leaves roots in the soil and improves water absorption. Efficient irrigation systems deliver water to roots, and planting grass or wild flowers around fields helps keep water in the soil. In combination, these practices dramatically reduce surface evaporation and water runoff. Drought-tolerant seeds, such as our AGRISURE ARTESIAN® corn hybrids, can help produce reliable yields in drier and semi-arid conditions. Our HYVIDO® hybrid barley seeds offer farmers consistently higher yields. Their root systems form earlier, with bigger and more numerous roots leading to stronger hybrid vigor, better water and nutrient uptake and stronger growth under stressful conditions. When these products are combined with good management practices, agriculture is made more resilient to changes in climate and water availability.

#### Cost of response

#### Explanation of cost of response

Water risks mainly impact our sales at country and regional level, and the overall risk for the global business is mitigated by geographical differences and does not carry a cost estimate for mitigating this risk. Part of the cost of response is also accounted for in our investment in the research and development of abiotic stress-related products and thus cannot be disaggregated and specified. We annually invest about USD 1.3 billion in R&D.

#### Country/Area & River basin

Switzerland	Other, please specify (Several countries)
-------------	---

#### Stage of value chain

Supply chain

#### Type of risk & Primary risk driver

Physical	Severe weather events
----------	-----------------------

#### Primary potential impact

Reduction or disruption in production capacity

#### Company-specific description

Severe weather events such as floods could negatively impact our chemical supply chain, which represents a significant proportion of our business. We operate a comprehensive risk management process within our supply chain, and one of the risk elements we assess is natural catastrophe. We have analyzed the top 250 chemical supplier sites by business contribution to understand which of these sites may be exposed to natural risks. The location of each supplier site is analyzed to determine potential exposure to flood, storm, hail, tsunami and storm surge risks using external risk data. We adjust this analysis to consider the impact from climate change to determine the likelihood and severity of those risks.

#### Timeframe

1-3 years

#### Magnitude of potential impact

Medium-low

#### Likelihood

About as likely as not

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

Yes, a single figure estimate

**Potential financial impact figure (currency)**

120000000

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact**

We assess each site to determine the likelihood and impact of a 100-year risk event and of a 500-year risk event for severe weather events such as floods, tsunamis, etc. The impact provides us with a number of potential downtime days (i.e. the number of days the plant will be non-operational) for each risk. We then take the most severe downtime scenario and calculate the estimated days of business interruption considering: a) safety stock of the product held by Syngenta and b) the time taken to move to an alternative source. We then multiply these days proportionally to the manufacturing site's contribution to Syngenta's profit to estimate a potential overall business impact. We took the risk scenarios where we classify the likelihood of the risk occurring as 'possible', which according to our framework means within a decade or less, to estimate the potential financial impact figure above.

**Primary response to risk**

Direct operations	Include in Business Continuity Plan
-------------------	-------------------------------------

**Description of response**

Where considerable risk is identified, actions are taken such as identifying mitigation or emergency response plans with the supplier, increasing the safety stock we hold, and identifying additional sources for the product. The process enables us to gain greater visibility of risks and exposure, quantify the risks through a likelihood and impact analysis, prioritize the risks that require mitigation actions and ensure there is a clear owner responsible for taking action.

**Cost of response**

**Explanation of cost of response**

The cost of response for this risk cannot be disaggregated and specified as it is part of the overall cost of our supplier-related activities.

**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**

Sales of new products/services

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

Shortages and changes in water availability pose significant challenges to farmers. They affect growing seasons and crop productivity. These effects are compounded by the increasingly warm and wet climates that many growers are working in, allowing weeds, pests, and fungal diseases in crops to thrive. Farmers must have the right tools and skills to prosper. We have products available – and in the pipeline – that improve the water productivity of plants and increase tolerance to drought and heat. These include hybrid and genetically modified seeds, crop protection and seed treatment products, and growth regulators. These products form part of Syngenta's portfolio and create direct financial benefits to the company across all regions. In particular, we develop crops that tolerate drier conditions, including drought-tolerant corn. For example, AGRISURE ARTESIAN® in corn delivers improved yields on dryland and in land with limited irrigation or prone to drought stress. This corn hybrid has been built with scientifically selected genes that enable the plant to convert water to grain more effectively than other hybrids. ARTESIAN® corn hybrids consistently match or exceed comparable hybrid yields in optimal growing conditions or under moderate drought stress. Under severe and extreme drought stress, ARTESIAN® corn hybrids outperformed trial averages by nearly 12% over a period of five years. In cases of extreme drought stress, it produced 38.5% higher yields compared to the plot average. Our crop protection products also help conserve water by controlling weeds that threaten scarce water resources and protect crops from pests that reduce water use efficiency. Our seed treatment products help plants to develop stronger root systems to access water/nutrients in the soil. Plant regulator products also prevent plants from growing too tall and collapsing – they promote longer, finer roots that better reach water/nutrients in drought-prone areas.

**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?**

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

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

<Not Applicable>

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

<Not Applicable>

**Explanation of financial impact**

The potential financial impact of this opportunity is sensitive information and cannot be disclosed. We expect sales of solutions for shifting pest patterns, new drought-tolerant plants as well as nitrogen and water-efficient technologies to increase.

---

**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)**

UK site

**Country/Area & River basin**

United Kingdom of Great Britain and Northern Ireland	Other, please specify (Humber)
--	--------------------------------

**Latitude**

53.66

**Longitude**

-1.75

**Located in area with water stress**

No

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

<Not Applicable>

**Oil & gas sector business division**

<Not Applicable>

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

2338

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

Lower

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

1535

**Withdrawals from brackish surface water/seawater**

0

**Withdrawals from groundwater - renewable**

0

**Withdrawals from groundwater - non-renewable**

0

**Withdrawals from produced/entrained water**

0

**Withdrawals from third party sources**

803

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

2624

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

About the same

**Discharges to fresh surface water**

154

**Discharges to brackish surface water/seawater**

0

**Discharges to groundwater**

0

**Discharges to third party destinations**

2470

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

25

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

About the same

**Please explain**

"Total water discharge" includes rainwater collected (the quantity is not monitored) and sent to third-party wastewater treatment plants with process effluents. "Total water consumption" is the amount of water used as product ingredient.

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?  
ISAE 3000

**Water withdrawals – volume by source**

% verified  
76-100

What standard and methodology was used?  
ISAE 3000

**Water withdrawals – quality**

% verified  
Not verified

What standard and methodology was used?  
<Not Applicable>

**Water discharges – total volumes**

% verified  
76-100

What standard and methodology was used?  
ISAE 3000

**Water discharges – volume by destination**

% verified  
76-100

What standard and methodology was used?  
ISAE 3000

**Water discharges – volume by treatment method**

% verified  
76-100

What standard and methodology was used?  
ISAE 3000

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

% verified  
76-100

What standard and methodology was used?  
ISAE 3000

**Water discharge quality – temperature**

% verified  
Not verified

What standard and methodology was used?  
<Not Applicable>

**Water consumption – total volume**

% verified  
76-100

What standard and methodology was used?  
ISAE 3000

**Water recycled/reused**

% verified  
76-100

What standard and methodology was used?  
ISAE 3000

---

**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 Company water targets and goals Commitments beyond regulatory compliance Commitment to water-related innovation Commitment to stakeholder awareness and education Commitment to water stewardship and/or collective action Recognition of environmental linkages, for example, due to climate change	RATIONALE: Water is a critical input for agricultural production and plays an important role in food security. Currently, agriculture accounts for about 70% of the world's freshwater withdrawals. Shortages and changes in water availability affect growing seasons, pests and crop productivity, hindering farmers' ability to produce food. Due to population growth and climate change, demand and competition for water resources are expected to increase, with a particular impact on agriculture. As an agtech company, we have an important role to play by both helping farmers tackle water challenges and reducing water consumption in our own operations. CONTENT OVERVIEW: In our Principles for Sustainable and Responsible Agriculture, we outline our commitment to working with our stakeholders and providing products and services that help farmers to optimize water use and protect water quality and quantity. In our Good Growth Plan, we committed to increase the average productivity of the world's major crops by 20% by 2020 without using more land, water or inputs. This includes customer/grower education on conservation agriculture practices, which help them optimize water use, increase soil water holding capacity, reduce water runoff and build crop resilience to changing weather patterns. This is also communicated in our Public Policy Position: Syngenta and climate change. As outlined in our Sustainable Business Report, in 2019, we committed to dedicate USD 2 billion over five years to innovation targeted at delivering a step change in agricultural sustainability and, in particular, to help farmers prepare for and tackle the increasing threats posed by climate change such as changes in weather patterns and associated water challenges. We have also committed to reduce the water intensity of our operations by 20% by 2030. We have activities underway to help us to make our own operations more sustainable, including actions to reduce water use. Our Code of Conduct states our commitment to protect the environment and to ensure the health and safety of our employees and others potentially affected by our activities. Our HSE Policy and Standards state that actively promoting environmental protection is an integral part of how Syngenta conducts its business. This includes promoting water conservation in our direct operations and beyond. SYNGENTA_Principles_Sus_Resp_Ag.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	RESPONSIBILITIES OF BOARD OF DIRECTORS: As stated in Syngenta's "Regulations Governing the Internal Organization," the entire Board of Directors provides strategic direction regarding all sustainability matters – this includes water issues – and exercises oversight over the Syngenta Executive Team in this respect. In particular, the Board of Directors: * defines the Company's sustainability strategic priorities, policies and issues; * assesses the effectiveness of the implementation of sustainability-related internal policies; * reviews sustainability and HSE performance and improvement plans; and * assesses and advises on sustainability-related actions proposed by the Syngenta Executive Team. RESPONSIBILITIES OF NEW BOARD DIRECTOR: A new director, who brings extensive experience and expertise in sustainable food production, joined our Board of Directors in April 2019 reinforcing our commitment to sustainable and responsible agriculture. The company's efforts on conservation agriculture practices fall under the responsibility of this board member. Conservation agriculture practices include: optimize water use, increase soil water holding capacity, reduce water runoff and build crop resilience to changing weather patterns such as drought and floods. EXAMPLE: In 2019, Syngenta and its Board of Directors took the decision to dedicate USD 2 billion over five years to innovation targeted at delivering a step change in agricultural sustainability and, in particular, to help farmers prepare for and tackle the increasing threats posed by climate change such as increased floods and droughts. Additionally, they also committed to reducing water and waste intensity in our operations by 20%. Every year, the Board of Directors approves our non-financial performance summary, which includes water performance data and is published in our Sustainable Business Report. The Board of Directors approved the 2019 report on February 20, 2020 and the 2018 report on February 14, 2019.

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 Providing employee incentives 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	The Board of Directors meets several times a year to discuss sustainability issues, including those related to water. The Board of Directors provides strategic direction regarding these matters and exercises oversight over the Syngenta Executive Team. As stated in Syngenta’s “Regulations Governing the Internal Organization,” the board exercises oversight over the Syngenta Executive Team in this respect. In particular, the Board of Directors: * defines the Company’s sustainability strategic priorities, policies and issues; * assesses the effectiveness of the implementation of sustainability-related internal policies; * reviews sustainability and HSE performance and improvement plans; and * assesses and advises on sustainability-related actions proposed by the Syngenta Executive Team. Examples of the board’s oversight activities in 2019 include: At least once a year, the board reviews the business sustainability-related strategy and actions, including those related to water. Further discussions take place in additional meetings as needed. For example, in 2019 the board reviewed and approved our commitment to invest USD 2 billion over five years to innovation targeted at delivering a step change in agricultural sustainability and, in particular, to help farmers prepare for and tackle the increasing threats posed by climate change such as increased floods and droughts. The Board of Directors also approves our non-financial performance summary, which includes water performance data and is published in our Sustainable Business Report. The Board of Directors approved the 2019 report on February 20, 2020 and the 2018 report on February 14, 2019. The Board of Directors also discusses performance objectives and long-term incentive plans, which are put in place once a year. The long-term incentive plans include sustainability targets. The Chief Sustainability Officer (CSO) frequently briefs the board on all these sustainability matters, which include climate change and water-related issues.

**W6.3**

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

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

Chief Sustainability Officer (CSO)

**Responsibility**

Both assessing and managing water-related risks and opportunities

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

Quarterly

**Please explain**

The Chief Sustainability Officer, who reports to the CEO, leads the Business Sustainability function. This function coordinates and channels sustainability initiatives, performance management and policy engagements – including those related to water. It assesses and monitors the company’s performance in relation to climate change, water and the wider sustainability agenda. The CSO advises the company on conservation agriculture practices, which include: optimize water use, increase soil water holding capacity, reduce water runoff and build crop resilience to droughts and floods. The CSO briefs the Board of Directors quarterly on all sustainability matters, including water performance and actions. It also provides regular updates to the Syngenta Executive Team on the progress made regarding the company’s sustainability commitments. The Business Sustainability function has global, regional, territory and country representatives to ensure alignment across the organization.

**W6.4**

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

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

**W6.4a**

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

	Role(s) entitled to incentive	Performance indicator	Please explain
Monetary reward	Corporate executive team Chief Executive Officer (CEO) Chief Financial Officer (CFO) Chief Operating Officer (COO) Chief Sustainability Officer (CSO) Other C-suite Officer (Head Human Resources and Group General Counsel) Other, please specify (Management group)	Improvements in efficiency - product-use	The remuneration of the Syngenta Executive Team – which includes the CEO, CFO, COO Crop Protection, COO Seeds, Head Human Resources, and Group General Counsel – is linked to the overall company performance, including financial and sustainability performance (also efficiency improvements). The sustainability targets are set in Syngenta's Good Growth Plan – in which the company committed to increase the average productivity of the world's major crops by 20% without using more water, land and inputs by 2020. This target is accompanied by other targets related to sustainable agriculture, all of material importance to our business. Senior management's remuneration also includes sustainability performance associated with Syngenta's Good Growth Plan. As a member of the senior management group, the Chief Sustainability Officer's (CSO) remuneration also includes non-financial performance associated with Syngenta's Good Growth Plan. As the most senior employee directly responsible for sustainability, the CSO's annual performance goals and results are directly linked to sustainability topics, including climate change and water. The Good Growth Plan results are evaluated annually and long-term incentive plans (i.e. three-year cash incentive plans) are also put in place for the Syngenta Executive Team and the management group.
Non-monetary reward	Corporate executive team Chief Executive Officer (CEO) Chief Financial Officer (CFO) Chief Operating Officer (COO) Chief Sustainability Officer (CSO) Other C-suite Officer (Head Human Resources and Group General Counsel) Other, please specify (Management group)	Reduction in consumption volumes Improvements in efficiency - direct operations Improvements in waste water quality - direct operations Improvements in waste water quality - product-use	The Syngenta Executive Team, advised by the Chief Sustainability Officer, directs business sustainability related standards, strategy, objectives and partnerships. It reviews and advises on the effectiveness of implementation of internal policies to make our own operations more sustainable, including actions to reduce water use. Sustainability should be every employee's responsibility. Members of the Syngenta Executive Team and the management group are responsible for embedding sustainability in their area of responsibility.

**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?**

We coordinate and channel all our global policy engagements on water, directly or indirectly, through our global Business Sustainability function to ensure consistency across geographies and company functions.

Our local level policy engagements are carried out through our respective regional and country Business Sustainability teams in close collaboration with the global team. Regular communications (e.g., weekly Business Plan Review calls with leadership teams across regions and townhalls with all members of the function) and the development of policy positions ensure all our policy engagements are consistent with our company position as outlined in Syngenta's Principles for Sustainable and Responsible Agriculture.

Through such regular communication, we are able to identify and address potential inconsistencies. In case an inconsistency is discovered, actions would include internal realignment and education, correction of external messaging and engagement with policy makers to clarify our position.

This process ensures all our policy engagements are consistent with our water strategy and our Good Growth Plan.

**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)  
Financial Report 2019.pdf

**W7. Business strategy**

**W7.1**

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

	Are water-related issues integrated?	Long-term time horizon (years)	Please explain
Long-term business objectives	Yes, water-related issues are integrated	11-15	Syngenta's ambition is to "... play a vital role in the food chain to safely feed the world and take care of our planet. We will be the most collaborative and trusted team in agriculture, providing leading seeds and crop protection innovations to enhance the prosperity of farmers, wherever they are." As climate, water is a key determinant for Syngenta's products and services. Shortages and changes in water availability affect growing seasons, pests and crop productivity, hindering farmers' ability to produce food, as a result altering demand for our products. Syngenta products – and those in the pipeline – and the guidance we provide to farmers aim to help them address these challenges (see more information on next row). On average, the registration of any new crop protection product takes 10 years before a product is commercially launched. Similarly, for a new biotech trait, it takes around 13 years from the point of discovery of a new genetic sequence through to the complex registration process.
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	5-10	Syngenta has products available – and in the pipeline – that help plants tolerate drought and conserve water. These include crop protection and seeds, for example: * Our crop protection products conserve water by controlling weeds that threaten scarce water resources and protect from pests and diseases that reduce water efficiency. * We develop crops that tolerate drier conditions, including drought-tolerant sunflower and corn. * Our seed treatment products help plants to develop stronger root systems to access water/nutrients in the soil. * Plant regulator products prevent plants from growing too tall and collapsing. They promote longer, finer roots that better reach water/nutrients in drought-prone areas. We also encourage growers to adopt conservation agriculture practices, which help them optimize water use, increase soil water holding capacity, reduce water runoff and build crop resilience to changing weather patterns.
Financial planning	Yes, water-related issues are integrated	5-10	A changing climate affects water availability for farmers (too much or too little). This creates the opportunity for Syngenta to develop solutions that help farmers mitigate and adapt to these changes. Capital allocation as well as decision on capital expenditure or potential acquisitions are thus influenced by our drive to address farmers' needs. As a result, in 2019, Syngenta committed to invest USD 2 billion over the next 5 years to reduce agriculture's contribution to climate change, harness its mitigation capacity, and help the food system stay within planetary boundaries. Our investment model will direct resources toward products, services, programs, partnerships and capital expenditures, that offer a clearly differentiated sustainability benefit or are breakthrough technologies enabling a step change in agricultural sustainability. On average, the research, development and registration of any new crop protection product takes 10 years and costs around USD 260 million before a product is commercially launched.

**W7.2**

**(W7.2) What is the trend in your organization's water-related capital expenditure (CAPEX) and operating expenditure (OPEX) for the reporting year, and the anticipated trend for the next reporting year?**

Row 1

Water-related CAPEX (+/- % change)

0

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

10

Water-related OPEX (+/- % change)

0

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

10

**Please explain**

These values are estimates as CAPEX and OPEX expenditures are included in day-to-day operations and cannot be accurately reported separately at this point. We estimate that water-related CAPEX and OPEX remained stable vs. last year since we continuously invest in water-related improvements, such as in R&D to develop products that support more efficient water use and projects to optimize water efficiency in manufacturing processes. For instance, in 2019, our site in Omaha, USA, reduced water use by over 50% in machinery cleaning. Other examples of water-related CAPEX include investments in irrigation methods in Brazil and improvements in drainage runs, containments and wastewater management across several sites. We are targeting a 20% reduction in water intensity by 2030. As such, we expect an increase in CAPEX and OPEX expenditure in the coming years. We will focus on water use and water stress – especially for irrigation – and form partnerships to develop more effective processes.

**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	We have conducted climate-related scenario analyses as part of the work currently underway associated with the implementation of the TCFD recommendations. Through the WEF's Alliance of CEO Climate Leaders and The Prince's Accounting for Sustainability Project (A4S), we have signaled our support for the recommendations of the TCFD.

**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	RCP 2.6 IEA Sustainable Development Scenario Other, please specify (RCP 8.5 and IES CPS)	Results are still being analyzed and further work might be needed to provide definitive results. However, preliminary results for the different deep dives show that: 1) The potential impact of extreme weather events on our chemical production activities does not differ significantly between the two chosen scenarios under both a <2°C and 4°C scenario in a 2030 horizon, with flooding being the most material risk. 2) The potential impact of extreme weather events on our customers will increase under both a <2°C and 4°C scenario, impacting our business more in the case of droughts than floods. 3) The impact of increased droughts could increase the demand for drought-resistant seeds under both scenarios but geographical shifts might be observed as impact of chronic changes to the climate will be different in different production areas.	The scenario analyses have recently been finalized and results still require further analysis. However, preliminary results seem to support our existing climate-related considerations in our business objectives and strategy development processes. Addressing climate change challenges in agriculture is and has been part of our business objective and strategy considerations. We made our commitment clearer in 2019, when we announced that we will invest USD 2 billion over the next five years to advance sustainable agriculture, including helping farmers mitigate and adapt to climate change. Among other areas, this investment covers research and development of products, services and programs for farmers to address weather events such as flood and droughts, addressing findings 2) and 3) outlined in the left column. This investment will be matched by a drive to reduce the carbon intensity of the company's operations by at least 50% by 2030, addressing finding 1) on the left. We have also committed to reduce our water intensity in our operations by 20% by 2030.

**W7.4**

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

Row 1

Does your company use an internal price on water?

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

**Please explain**

Given water carries an external price, we have not yet assessed the relevance of an internal price on water.

## W8. Targets

### W8.1

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

	Levels for targets and/or goals	Monitoring at corporate level	Approach to setting and monitoring targets and/or goals
Row 1	Company-wide targets and goals Business level specific targets and/or goals Activity level specific targets and/or goals	Targets are monitored at the corporate level	<p><b>TARGET SETTING APPROACH:</b> Our HSE Policy and Standards state that actively promoting environmental protection is an integral part of how Syngenta conducts its business. This includes promoting water conservation. As such, we have set ourselves a company-wide target of 20% reduction of water usage intensity across our operations and supply chain with a 2030 timeframe. Water is one of our main focus areas considered material in our sustainable operation strategy. This target applies to both business units, i.e. Crop Protection and Seeds - each defining their own activity level specific objectives and projects to contribute to achieving the company target. Our Principles for Sustainable and Responsible Agriculture also outline our commitment to help farmers to optimize water use and protect water quality and quantity. In our Good Growth Plan, we committed to increase the average productivity of the world's major crops by 20% by 2020 without using more land, water or inputs. This includes customer/grower education on conservation agriculture practices, which help them optimize water use, increase soil water holding capacity, reduce water runoff and build crop resilience to changing weather patterns. <b>PRIORITIZATION OF WATER-RELATED RISKS AND IMPACTS:</b> To set the target in our own operations and supply chain, we have completed an analysis of our overall water consumption footprint, including data from our own sites and questionnaire-based computation from third-party seed supply sites. Drawing on work at all our own sites to understand water stress, we have identified the most critical sites in water-scarce areas. For our seed suppliers, we have identified the irrigation and water management practices they use. This is essential to contribute to water security globally. We are now working on conservation programs to reduce consumption at our own sites and in cooperation with third-party seed producers. For the downstream target, we identified that shortages and changes in water availability pose significant challenges to farmers. They affect growing seasons and crop productivity. Farmers must have the right tools and skills to prosper. We research and develop products that improve the water productivity of plants and increase tolerance to drought and heat. <b>MONITORING:</b> Water targets are monitored at corporate and business unit level. Information is tracked at local level, reviewed at regional level and consolidated at global level. Progress is reported internally to the respective leadership teams and externally in our annual Sustainable Business Report.</p>

### W8.1a

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

**Target reference number**

Target 1

**Category of target**

Water use efficiency

**Level**

Company-wide

**Primary motivation**

Climate change adaptation and mitigation strategies

**Description of target**

In our Good Growth Plan, we committed to make crops more efficient by 2020, i.e. we committed to increase the average productivity of the world's major crops by 20% without using more land, water or inputs. The Good Growth Plan reflects our belief that agricultural productivity must increase in order to feed a global population. It includes specific commitments to address critical challenges, including water resources being under increasing pressure.

**Quantitative metric**

Other, please specify (% increase in land productivity)

**Baseline year**

2014

**Start year**

2014

**Target year**

2020

**% of target achieved**

94

**Please explain**

In 2019, we achieved a global average productivity increase of 18.8% compared to the 2014 baseline. We report on progress annually in our Sustainable Business Report.

---

**Target reference number**

Target 2

**Category of target**

Water use efficiency

**Level**

Company-wide

**Primary motivation**

Risk mitigation

**Description of target**

Syngenta has set a target of reducing water use intensity in our operations and supply chain by 20% by 2030. We have assessed and will continue to assess water stress across our portfolio and will prioritize areas that are under water stress. This target will not only address issues of water scarcity and competition but will also result in lower waste generation, lower energy use and lower CO2 emissions. Reducing use in general and reducing use in areas of scarcity will help contribute to water security. All these factors are monitored at a corporate level as they are key sustainability metrics.

**Quantitative metric**

Other, please specify (% reduction per revenue )

**Baseline year**

2016

**Start year**

2020

**Target year**

2030

**% of target achieved**

0

**Please explain**

This is a new target set in 2019. First year of reporting will be 2020, as such no progress can be provided for the 2019 reporting year.

---

**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	Water usage intensity Water usage by type and origin Industrial wastewater discharge intensity Industrial wastewater discharged volume and quality Average increase in land productivity on reference and benchmark farms	ISAE 3000	We assured externally the KPIs listed in the "data verified" field. These KPIs are reported in our Sustainable Business Report and undergo external assurance every year. PwC's Independent Assurance Report is on page 52 of our Sustainable Business Report 2019. As outlined in the assurance report, assurance was conducted on the information presented in the "Non-financial performance summary" on pages 48 to 51, which include these KPIs.

## 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.

### 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	CEO	Chief Executive Officer (CEO)

### 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

## Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I am submitting to	Public or Non-Public Submission
I am submitting my response	Investors	Public

Please confirm below

I have read and accept the applicable Terms