

# Welcome to your CDP Water Security Questionnaire 2021

## W0. Introduction

### W0.1

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

Established in 1956, Tekfen Group operates in five main areas: Engineering & Contracting, Chemical Industry (formerly reported as Agri-Industry), Agricultural Production, Services, and Investments. Tekfen Holding is the umbrella company for all of the firms and subsidiaries in the Tekfen Group. Its shares are traded in İstanbul Stock Exchange (Borsa İstanbul) and are quoted in BIST 30 Index. The Tekfen Group's founding partners have served as the originators, benefactors, and directors of many environmental, educational, and social NGOs. Those roles kept people, social welfare, and environmental wellbeing at the focal point of the Tekfen Group's business culture and charitable activities since the very outset.

Tekfen Group has 38 companies and 13 subsidiaries. In 2020, the Group had USD 1.598 billion in revenues and assets of USD 1.896 billion. With 18.444 skilled employees and 65 years of experience, it is exemplary within the business world in terms of quality standards and ways of doing business.

Engineering and Contracting Group, with extensive experience especially in oil, gas, and petrochemical facilities, provides turnkey-delivery EPC (Engineering, Procurement & Construction) projects and Design & Build solutions in such areas as pipelines, oil and gas terminals, tank farms, oil refineries, pumping and compressor stations, power plants, industrial facilities, highway and rail system projects, sports complexes, and infrastructure and superstructure projects. Engineering and Contracting Group has generated 60.6% of total revenue In the reporting year, 16.719 employees worked in the Group.

As the flagship company of the Engineering & Contracting Group, Tekfen Construction is a solution partner preferred by leading employers around the world. Tekfen Construction is an internationally recognized leader of the Turkish contracting sector, operating in many countries. To date, it has completed nearly 400 projects, demonstrating its accumulated expertise. As of the end of 2020, Tekfen Construction's active projects portfolio had a contract value of USD 1.353 billion. In Engineering News-Record's 2020 list of the World's 250 biggest international contractors based on their 2019 operations, Tekfen Construction ranked 65th (2019 list: 69th).

Tekfen Engineering provides engineering design, procurement and project management services for group and non-group projects. Tekfen Engineering's human resources and their knowledge and experience as well as its use of innovative technology make it one of the leading firms in its sector in Turkey.

Tekfen Manufacturing provides engineering, manufacturing, and installation services related especially to the storage and process equipment needed in the oil, petrochemical, and chemical industries and by industrial facilities such as gas plants, iron & steel mills, and power stations.

Chemical Industry Group operates in classic, organic & organomineral fertilizer production and distribution. Toros Agri has been at the service of Turkish agriculture for the last 40 years. In the Istanbul Chamber of Industry’s 2020 list of the five hundred business concerns in Turkey, Toros Agri ranked in 57th place. In fertilizers, Toros Agri controls a 38% share of Turkey’s total installed production capacity and in terms of overall output and market share, it is Turkey’s biggest fertilizer producer. It has 1.228 dealers and authorized sales points throughout Turkey, enabling it to distribute its products to every corner of the country. Toros Agri, who introduced its first organo-mineral fertilizers to the market in 2017, considers its investments in the organic and organo-mineral segment not only from a commercial perspective but also as a contribution to the sustainability of the country’s agriculture. Toros Agri carries out its production activities in this field through Gonen and Meram Renewable Energy. Chemical Industry Group has generated 33.1% of total revenue. In the reporting year, 903 employees worked in the Group.

Agricultural Production Group operates in the production of agricultural inputs such as seeds, seedlings, and saplings and its fruit grower operations, and they are carried out through Tekfen Agri, the group’s agricultural research, production, and marketing company. Tekfen Agri’s Agripark complex is one of only a very few high-tech agricultural R&D centres in Turkey. Exploiting Turkey’s rich biodiversity, the centre engages in the production of disease-free seeds and seedlings using the plant tissue-culture method. Agricultural Production Group has generated 1.7% of total revenue. In the reporting year, 328 employees worked in the Group.

Services Group operates in Terminal services, Free zone operations, insurance, and facility management. Investment Group incorporates Tekfen Ventures’ innovative entrepreneurship investments and holding activities. Services and Investment Groups have generated 4.5% of total turnover. In the reporting year, 494 employees worked in these two Groups.

## W-CH0.1a

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

Bulk inorganic chemicals

## W0.2

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

	Start date	End date
Reporting year	January 1, 2020	December 31, 2020

## W0.3

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

Azerbaijan

- Iraq
- Kazakhstan
- Qatar
- Russian Federation
- Saudi Arabia
- Turkey

## 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?**

No

## W1. Current state

### W1.1

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

	Direct use importance rating	Indirect use importance rating	Please explain
Sufficient amounts of good quality freshwater available for use	Vital	Vital	Good quality freshwater, which is vital for our direct operations, is used intensively at Chemical Industry Group for mainly cooling of fertilizer plants and Agricultural Production Group for fresh fruit production, and Engineering & Contracting Group for construction of big scale projects (mainly in hydro testing of piping equipment) and we also need fresh water to provide WASH services to all our employees. As part of our indirect operations, our suppliers and customers (especially farmers) require

			<p>sufficient amounts of good quality freshwater for their operations. If there is water scarcity, farmers can not grow their crops and in return, this may curtail our fertilizer sales. Considering the share of Chemical Industry Operations in our overall revenue (33.1%) the importance of freshwater for our indirect operations is rated as vital as well. A lack of freshwater can have a considerable impact on both our direct and indirect operations hence the rating is “vital” for both. For example, our Engineering and Contracting Group has oil&amp;gas construction projects which constitute around 33% of the overall project portfolio. Freshwater is vital for the oil&amp;gas projects to perform the piping and equipment (e.g. pipelines, storage tanks) tests.</p> <p>For future scenarios, we considered IPCC RCP 4.5 as a realistic scenario for the impacts of climate change on precipitation patterns and projected change in water stress in Turkey. We also base our analyses on the “Climate Change Projections for Turkey” report published by Turkey’s General Directorate of Meteorology. According to the report, Turkey will face 2 to 3 degrees increase in mean temperature during 2013-2040 and up to 4 degrees in later periods. Reductions in mean precipitation are also expected. We consider these impacts especially significant in our Chemical Industry and Agricultural Production operations. Therefore, the importance rating for both our direct and indirect operations will remain the same in the future.</p>
<p>Sufficient amounts of recycled, brackish and/or produced water available for use</p>	<p>Important</p>	<p>Neutral</p>	<p>We use seawater in the Toros Agri Samsun Plant. Seawater is being used in the Sulphuric Acid Unit for cooling, production of demineralized water, and washing in the Phosphoric Acid Unit. 85.96 % of our total Holding-wide water withdrawal is from seawater used in our Samsun facility. If sufficient amounts of brackish water are not available, this will directly impact our production capacity, resulting in a financial impact as the Samsun Plant has 35,48% of Toros Agri's total fertilizer production capacity. Because of an increase in water stress, the reuse</p>

			<p>and recycle of wastewater is also important for Tekfen.</p> <p>Therefore, both brackish and recycled water is “important” for our direct operations.</p> <p>We don't consider the importance of current recycled water in our indirect operations to be as important as our direct operations as most needs in our value chain are met through freshwater.</p> <p>Therefore, we consider the impact on our indirect operations to be neutral currently.</p> <p>We foresee an increase along with our growth rate in the direct use of recycled water in the future, therefore direct use rating will become “vital” for us.</p> <p>From a quality perspective, the availability of a decent temperature and quality seawater is also important. In line with the climate change scenarios, if the seawater temperatures rise, we might need to further cool down the seawater used. Therefore we can say that the quality of brackish water will remain important and can even increase the magnitude of impact and become vital in the future.</p> <p>Both our agricultural production suppliers and customers of the fertilizers need water either to produce or use our products (stone fruit and fertilizers respectively), it can be expected that, with the foreseen increase in water stress in Turkey, they may need to recycle water or withdraw recycled water at an increasing ratio in the future. Therefore, we consider the impact on our indirect operations to become important in the long term.</p>
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## W1.2

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

	% of sites/facilities/operations	Please explain
Water withdrawals – total volumes	100%	<p>We monitor water withdrawals at all our operations. Our operations cover all our production facilities, offices, and project construction sites that we operate.</p> <p>Water withdrawals are therefore monitored at the</p>

		operational level through monthly bills from suppliers in our commercial operations. As part of our production operations, we monitor our water withdrawals through both bills issued by our suppliers as well as internal water meter readings. Moreover, at Agricultural Production Group, we have an addition of fresh surface water withdrawal measured by pump flow rates and rainwater calculated using meteorological data (average precipitation rate mm per region was multiplied by the total area (m2) at relevant regions) and the UN Food and Agriculture Organisation's (FAO) method was used to calculate the effective rainfall by the plants annually. Water withdrawal volume is followed up and reported to Holding HSE&Q Coordinatorship monthly.
Water withdrawals – volumes by source	100%	<p>We monitor water withdrawals at all our operations including their sources. Our operations cover all our production facilities, offices, and project construction sites.</p> <p>Water withdrawals from 3rd party sources are monitored at the operational level through monthly bills from suppliers.</p> <p>As part of our production operations, we monitor our water withdrawals through monthly bills issued by our suppliers as well as internal water meter readings per source (i.e. groundwater, seawater, etc).</p> <p>Moreover, at Agricultural Production Group, we have an addition of fresh surface water withdrawal measured by pump flow rates and rainwater calculated using meteorological data (average precipitation amount mm per region multiplied by the total area (m2) at relevant regions) and the UN FAO method was used to calculate the rainwater withdrawal annually. Our companies monitor their water withdrawal amounts and Report them to the Holding HSEQ Coordinatorship on a monthly basis.</p>
Water withdrawals quality	100%	We monthly and/or more frequently monitor the quality of water, used for all of our operations. We periodically get samples and send them for microbiological and chemical analysis to

		<p>accredited laboratories in the periods set by legal criteria and regulations (e.g. analyses are conducted in monthly and/ or bimonthly periods). Our Chemical Industry operations conduct internal lab analyses daily and weekly to make sure the water is at a certain quality to be used as process water. The parameters analyzed include but are not limited to pH, conductivity, suspended solids, silisium, active chlorine, P2O5, etc.</p> <p>Therefore in 100% of our sites, the quality of the water withdrawals is monitored.</p> <p>However, we can only monitor the quality of water under our control, and although we include the rainfall in our volumetric calculations, we cannot monitor the quality of rainwater which represents 1.16% of our total withdrawal.</p>
Water discharges – total volumes	100%	<p>We monitor water discharges at all our operations. Our operations cover all our production facilities, offices, and project construction sites that we operate.</p> <p>Our water discharge volume is monitored in real-time due to regulatory requirements by sensors at our Samsun Plant (96.15 % of our Holding-wide water discharge for the reporting period), which has a continuous wastewater monitoring system that is directly connected to the Ministry of Environment and Urbanization's system. The discharge volume and quality parameters are monitored by legal authorities in real-time at our Samsun Plant.</p> <p>For all other facilities that supply water from third parties, the amount of water discharged is monitored via water bills as well as meter readings on a monthly basis.</p> <p>At Alanar Fruit orchards, 25% of the freshwater used for drip irrigation, was estimated as the discharge rate of the plants, since the plants can't absorb all the freshwater supplied.</p>
Water discharges – volumes by destination	100%	<p>We monitor volumes of water discharges by destination at all our operations. %100 of water discharges to sea is monitored at our fertilizer production plant located in Samsun in real-time due to regulatory requirements. The amount of</p>

		<p>water discharged from Samsun facility represents 96.15 % of our Holding-wide water discharge for the reporting period. For all other facilities that supply water from third parties, the amount of water discharged is monitored via water bills as well as meter readings on a monthly basis. At Alanar Fruit orchards, 25% of the freshwater used for drip irrigation, was estimated as the discharge rate of the plants as they cannot absorb all water supplied. Therefore, we measure/ monitor/ calculate all our water discharges per volume and destination.</p>
Water discharges – volumes by treatment method	100%	<p>We monitor volumes of water discharges by treatment method at all our operations. Our water discharge volume is monitored continuously at our fertilizer production plant located in Samsun in real-time by sensors due to regulatory requirements, and in Ceyhan and Mersin plants through monthly meter readings.</p> <p>For almost all activities we either use our own wastewater treatment facilities or discharge directly to third parties' wastewater treatment facilities. At Tekfen Agri's orchards, we discharge the irrigation water without any treatment to groundwater or surface water (1.35 % of Holding-wide total water discharge for the reporting period). As per expert statements, we calculate that 25% of irrigation water can't be absorbed by the plants and discharged to groundwater or surface water.</p> <p>Overall, we monitor/ calculate/ measure all our water discharge per treatment method at least monthly for each facility/project.</p>
Water discharge quality – by standard effluent parameters	100%	<p>Our 3 fertilizer plants (source of 97,1% of our total water discharge for the reporting period) have wastewater treatment units and water discharge quality is monitored as per the Turkish Water Pollution Control Regulation. The analyses are conducted on bi-monthly periods. The analyzed parameters are; BOD, COD, Suspended Solids, Oil, and grease, P, Cr, Pb, CN, Cd, Fe, F, Cu, Hg, SO4, Total Kjeldahl Nitrates, TDF, pH.</p> <p>Our Toros Agri Samsun Plant uses a considerable amount of seawater and the resulting discharge</p>



		<p>represents 96,15 % of the total water discharges in the reporting period.</p> <p>There is a Monitoring Station that monitors standard effluent parameters of wastewater in real-time and reports to the Ministry of Environment and Urbanisation in Samsun Plant. The real-time reports can be reached 24/7 via the web.</p> <p>We do not monitor the discharge water quality for Tekfen Agri orchard operations as they are directly discharged as a result of irrigation.</p>
Water discharge quality – temperature	100%	<p>Toros Agri Samsun Plant has a water discharge measuring and monitoring station that monitors standard effluent parameters of wastewater continuously. The station is controlled and followed up by the Ministry of Environment and Urbanisation (MoEU) and determined water discharge quality parameters are monitored and recorded in real-time by the MoEU. One of the parameters being monitored continuously is the temperature of discharged water. Samsun Plant represents 96,15 % of the total water discharges reported Holding-wide in this reporting period. The majority of water is discharged into the sea.</p> <p>We do not monitor the discharge water temperature for Tekfen Agri orchard operations as they are directly discharged as a result of irrigation and the water temperature doesn't change.</p> <p>We also don't monitor the water temperature in our construction and other operations as this parameter is not relevant and the water temperature does not change in those operations.</p>
Water consumption – total volume	100%	<p>We calculate all of our water consumption volume. As stated in the above section we monitor our total water withdrawal volumes either continuously through meters or through monthly meter readings depending on the type of facility. The discharge volumes are also monitored continuously through meter readings and/or through monthly water bills.</p> <p>Therefore, the water consumption in total volume is calculated using the formula  <math display="block">\text{Withdrawal (Total Volume)} - \text{Discharge (Total Volume)} = \text{Water Consumption (Total Volume)}</math> </p>

		<p>Volume)</p> <p>As part of our Tekfen Agri orchard agricultural practices, we calculate our rainwater consumption (plant rainwater intake/absorption) by using the UN FAO effective rainfall calculation using national (regional) rainfall data. As per regular irrigation practices, we estimated an average 25% plant water absorption rate based on expert opinion. Therefore, we monitor/calculate/measure 100% of our water consumption either annually (only rainwater) or monthly (for all other water sources).</p>
Water recycled/reused	100%	<p>We monitor the amount of water recycled/reused at all our facilities mostly via meters (monthly) where recycling/reusing takes place. We demineralize and reuse water in our Chemical Industry fertilizer production operations and monitor this data in real-time in one of the facilities, Samsun. The 94,37% of water recycling takes place at our 3 fertilizer production facilities. The remainder (5,63 %) of our water reusing activities take place as part of Tekfen Construction operations and the amount is measured via volume calculation based on water truck capacity.</p>
The provision of fully-functioning, safely managed WASH services to all workers	100%	<p>The Health and safety of our employees is our top priority. Therefore, all our employees/workers are provided with fully functioning and safely managed WASH services at all times. Especially during the COVID-19 outbreak, this issue became an utmost priority for Tekfen Holding. The quality of drinking/ potable water provided is being monitored and analyzed monthly and bi-monthly periods to ensure compliance with regulatory limits.</p>

## W1.2b

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

	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Total withdrawals	119,217.43	Higher	<p>We compile the data via meter readings and water bills in all operations except rainwater withdrawals for Tekfen Agri, which we calculate based on national meteorological data using UN FAO effective rainfall calculation formula.</p> <p>In 2020, 3 important developments affected the amount of water withdrawal:</p> <ol style="list-style-type: none"> <li>1. Approximately 90% of the total withdrawal is in our Toros Agri Samsun Plant and 85.96% of the total water withdrawal is seawater. Seawater is being used in the Sulp. Acid Unit for cooling, production of demineralized water &amp; washing in the Phosphoric Acid Unit. In 2020, seawater withdrawal increased by 27.62% compared to the previous year. This increase was an expected one because in 2019 there was a planned stop in Samsun Plant &amp; due to this stop, the plant worked at 89% of its capacity, using less seawater. This year the plant worked in full capacity (98%), which increased the total withdrawal volume by 20.65%</li> <li>2. In one of the projects of Tekfen Construction, micro tunneling activity decreased, resulting in a 9.88% decrease in total water withdrawals.</li> <li>3. In the reporting period, we have acquired new orchards which increased the total area of our orchards by 15%. This increased our total water withdrawals by 1,23%.</li> </ol> <p>The remaining 0,19% decrease resulted from water efficiency projects in our other operations. As a result, our withdrawal volumes have increased by 11,81%.</p> <p>We expect our future water withdrawals to remain the same if there are no planned stops in Toros Agri plants, especially in Samsun Plant.</p> <p>On the other hand, serious efforts are being made to reduce the amount of freshwater</p>

			<p>withdrawn which in long term may result in a slight decrease in total withdrawal amounts. While classifying the magnitude of change from previous year data, we consider the change up to +/- 5% as “about the same”, 5% to 20% as “higher/lower” and above 20% as “much higher/lower”.</p> <p>As the increase in withdrawal amounts was calculated to be 11,81% it is classified as “Higher”.</p>
Total discharges	107,004.24	Higher	<p>Our total discharge volumes have increased by 10,8%.</p> <p>We compile the water discharge data via real-time monitoring (Samsun Fertilizer Plant), meter readings, and water bills (in all other operations). Additionally, only for Tekfen Agri orchards, we calculate plant water intake (and therefore the discharge) based on national meteorological data together with the UN FAO effective rainfall calculation formula.</p> <p>In 2020, 3 important developments affected the amount of water discharged:</p> <ol style="list-style-type: none"> <li>1. 96,14% of the total water discharge comes from the Toros Agri Samsun Plant. In 2020, discharge in Samsun plant increased by 24,6% which translates as a 21.03% increase in total discharge volumes compared to 2019. This increase was an expected one because in 2019 there was a planned stop in Samsun Plant and due to this stop, the plant worked at a lower capacity, using and discharging less seawater. This year the plant worked in full capacity (98%), which increased the discharge volume by 20,311 ML</li> <li>2. In one of the projects of Tekfen Construction, micro tunneling activity decreased, resulting in a 10.5% decrease in discharge.</li> <li>3. In the reporting period, we have acquired new orchards which increased the total area of our orchards by 15%. This increased our total water discharges by 0,27%</li> </ol>

			<p>As a result, our discharge volumes have increased by 10,8%.</p> <p>We expect our future water discharges to remain the same if there are no planned stops in Toros Agri plants, especially in Samsun Plant.</p> <p>On the other hand, serious efforts are being made to reduce the amount of water discharged, which in the long term may result in a slight decrease in total discharge amounts.</p> <p>While classifying the magnitude of change from previous year data, we consider the change up to +/- 5% as "about the same", 5% to 20% as "higher/lower", and above 20% as "much higher/lower". As the increase in discharge amounts was calculated to be 10.8% it is classified as "Higher".</p>
Total consumption	12,213.18	Much higher	<p>Our water consumption has increased by 21.36%.</p> <p>In 2020, 3 important developments affected our water consumption amounts:</p> <ol style="list-style-type: none"> <li>1. Our fertilizer production plant in Samsun worked at 98% capacity, which resulted in about a 15.15% increase in consumption of brackish surface water. In 2019 there was a planned stop at the plant and the production levels were lower due to this planned stop.</li> <li>2. In Tekfen Agri operations, our total area of orchards increased by 15% which resulted in a 10.45% increase in our total consumption figure</li> <li>3. In Tekfen construction operations micro tunneling activities decreased also resulting in a decrease in consumption of about 4.24%.</li> </ol> <p>All of these changes resulted in a 21.36 % increase in our total water consumption figure.</p> <p>To calculate total water consumed by our organization we use the water balance;</p>

			<p>Consumption (C) = Withdrawal (W) - Discharge (D).</p> <p>We expect our future water consumption level to increase in line with our agricultural business growth plans.</p> <p>While classifying the magnitude of change from previous year data, we consider the change up to +/- 5% as “about the same”, 5% to 20% as “higher/lower”, and above 20% as “much higher/lower”.</p> <p>As the increase in consumption amounts was calculated to be 21.36% it is classified as “Much Higher”.</p>
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## W1.2d

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

	Withdrawals are from areas with water stress	% withdrawn from areas with water stress	Comparison with previous reporting year	Identification tool	Please explain
Row 1	Yes	1-10	Much lower	WRI Aqueduct	<p>We use the WRI Aqueduct Water Risk Atlas tool to identify overall water risks, baseline water stress, the projected change in water stress, flood occurrence, drought severity, groundwater stress in locations where our facilities/sites/ operations at.</p> <p>By using the tool, we assessed the Water Stress level for all of our locations by entering their coordinates on the tool and identifying the basin they are located at. Areas with High (40-80%) or Extremely High (&gt;80%) Baseline Water Stress as</p>

				<p>evaluated by WRI Aqueduct are classified as Water-Stressed Areas.</p> <p>The water stress level is very important data for us. Water stress measures the ratio of total water withdrawals to available renewable surface and groundwater supplies. (Water withdrawals include domestic, industrial, irrigation, and livestock consumptive and nonconsumptive uses. Available renewable water supplies include the impact of upstream consumptive water users and large dams on downstream water availability.) And higher values indicate more competition among users.</p> <p>According to the tool, although most of our operations (51 out of 59 locations) are listed as having High (40-80%) to Extremely High (&gt;80%) Water Stress Levels, volume-wise our withdrawal from areas with water stress have reduced by 43.57% (From 21,657 ML in 2019 to 12,222 ML in 2020).</p> <p>Our total corporate-wide water withdrawals have increased by 11.81% in comparison with the previous reporting period. In 2019 our water withdrawals from water-stressed areas made up 20.31% of our total water withdrawals. This year this value is down to 10.25%.</p> <p>There are two main reasons for this decrease:</p> <ol style="list-style-type: none"> <li>1. In one of the projects of Tekfen Construction, micro</li> </ol>
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				<p>tunneling activity decreased, resulting in a 9.88% decrease in water withdrawals (10,531 ML decrease in withdrawal). This project was located in a high water stress area.</p> <p>2. Our withdrawal volumes have increased in our Samsun plant, which uses a considerable amount of seawater. The Samsun plant is in a Low-Risk area according to WRI Aqueduct Water Risk Atlas Tool. Samsun plant makes up 89.45% of our total water withdrawal in the reporting year. In the previous year, this value was around 79% due to a planned stop in this plant. Although most of our operations are in High water stress areas, as Samsun plant is in a low-stress area, a very small percentage of our total withdrawals by volume is from water-stressed areas.</p> <p>As a result of this analysis, we can say that our water withdrawals from water-stressed areas decreased by 43.57 % with respect to the previous reporting year.</p> <p>According to WRI Aqueduct Water Risk Atlas Tool, although our Samsun Plant is currently in a low-stress area, in the future analysis (2030), this plant will fall under the “Extremely High Risk” category. Therefore, it is reported under W4.1a and W4.1b of this report.</p>
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## W1.2h

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



	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Fresh surface water, including rainwater, water from wetlands, rivers, and lakes	Relevant	1,527.95	Much lower	<p>During the reporting year, 99.99% of fresh surface water was used in Tekfen Agri orchards.</p> <p>Withdrawal from this source has decreased by 22.61% although the area of our orchards has increased by 15%. The increase in the orchard area resulted in an extra need for freshwater for irrigation purposes. But the freshwater use decreased from 1,974.35 ML to 1,527.95 ML due to a decrease in rainwater, as a result of reduced rainfall, so the amount of rainwater available for use in our orchards decreased by 430 ML.</p> <p>Withdrawals are measured with flow meters. Rainwater constitutes 90.18% of total freshwater withdrawals for 2020 &amp; the amount of rainwater is estimated using meteorological data &amp; UN FAO's effective rainfall calculation methods.</p> <p>Classification: +/- 5% about the same, 5%-20% higher/lower, &gt;20% much higher/lower. 22.61% decrease is classified as Much Lower. Freshwater usage depends highly on precipitation regimes, so we</p>

				expect a decrease with decreasing precipitation in the long term.
Brackish surface water/Seawater	Relevant	102,476.1	Much higher	<p>Brackish surface water/ seawater withdrawal has increased by 27.59% (much higher).</p> <p>We use seawater only in the Toros Agri Samsun Plant. Seawater is being used in the Sulphuric Acid Unit for cooling, production of demineralized water, and washing in the Phosphoric Acid Unit. Seawater data is obtained via direct measurement. The reason for the stated increase, by 27.59% from the previous year, is because the Sulphuric Acid Plant was not operational for one month during 2019 and in 2020 it worked all year with full capacity. In the reporting period, 96,1% of total water at Samsun Plant is withdrawn from seawater.</p> <p>While classifying the magnitude of change from the previous year, we consider the change up to +/- 5% as “about the same”, 5% to 20% as “higher/lower, and above 20% as much higher/lower. Therefore, a decrease of 27.59% is classified as “Much Higher”.</p> <p>In the future we expect this value to be about the same as the plant was fully operational in 2020.</p>
Groundwater – renewable	Relevant	9,945.8	Much lower	Renewable groundwater is used in Tekfen Construction

				<p>Projects, Toros Agri Mersin &amp; Ceyhan Facilities, Alanar Fruit orchards &amp; is measured via meter readings or calculations by using pump flow rates. Major uses include irrigation, cooling, cleaning, fire water &amp; dust suppression in coal stock areas.</p> <p>Our groundwater withdrawals decreased from 18,519.88 ML to 9,945.80 ML.</p> <p>Major reasons:</p> <ol style="list-style-type: none"> <li>1.End of microtunneling activities in one of the projects of Tekfen Construction (10,314 ML decrease-55,69%)</li> <li>2. Operations of Toros Agri (197 ML decrease-1,06%)</li> </ol> <p>During the reporting period there was also some increase in groundwater withdrawals in Tekfen Agri operations (1,936 ML increase-10.45%)</p> <p>Overall our renewable groundwater withdrawal amounts decreased by 46.30%.Classification: +/-5% about the same, 5-20% higher/lower, &gt;20% much higher/lower. A decrease of 46.30% is classified as Much Lower. In line with the predicted growth in the orchards area, we expect the trend to be an increase in the future.</p>
Groundwater – non-renewable	Not relevant			<p>We do not use non-renewable groundwater in any of our operations. Therefore, water withdrawal from this source is currently not relevant for our business and will remain as not relevant in the future.</p>

Produced/Entrained water	Relevant	67.71	Much lower	<p>Produced water amount has decreased by 20.98%.</p> <p>Tekfen Construction is contracted to build a pipeline project for an oil and gas producer company. In this project, we use produced water which is a by-product of the oil drilling process. The withdrawal data is obtained via meter readings.</p> <p>The amount of produced water used decreased from 85.69 ML in 2019 to 67.71 ML in 2020, which is about 20.98%. The reason for this decrease is due to the decrease in project activities as the project is in the completion phase.</p> <p>Classification: +/-5% about the same, 5-20% higher/lower, &gt;20% much higher/lower. A decrease of 20.98% is classified as Much Lower. In the future, we expect withdrawals to decrease after the completion of the construction project.</p>
Third party sources	Relevant	5,199.86	Lower	<p>80% of water from 3rd parties is used in our Samsun plant to produce steam, 13% is used in Tekfen Agri operations, the remaining 7% is used in almost all of our operations. Compared to 2019, there is a 9.29% decrease in withdrawals from 3rd parties. The reasons are:</p> <ul style="list-style-type: none"> <li>• Use of groundwater instead of water from 3rd party sources in Tekfen Agri operations (4%).</li> </ul>

				<ul style="list-style-type: none"> <li>• Changes in physical operating conditions in Toros Agri's Samsun Plant (2.75%)</li> <li>• Some projects of Tekfen Construction are coming to an end so they need less water(2.26%).</li> <li>• The rest of the decrease is due to less working hours spent in the offices due to Covid-19 measures.</li> </ul> <p>All of the volumes of water withdrawn from third-party sources are sourced from direct measurements.</p> <p>Classification: +/-5% about the same, 5-20% higher/lower, &gt;20% much higher/lower.</p> <p>Therefore a 9.29% decrease is classified as "Lower". We constantly launch water management initiatives, so we expect a decrease in withdrawal from 3rd party sources in the future.</p>
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## 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	90.1	Much lower	<p>Fresh surface water discharge is present in Gonen Renewable Energy, Tekfen Construction, and Tekfen Manufacturing. All of the volumes reported under this section are sourced from direct measurements.</p> <p>The discharge volume has decreased from 704.73 ML to 90.10 ML, which translates to a decrease of 87.22%. The major</p>

				<p>reason behind this decrease is the finalization of some projects of Tekfen Construction.</p> <p>Classification: +/-5% about the same, 5-20% higher/lower, &gt;20% much higher/lower. As the discharge figure decreased by 87.22% we classify this decrease as much lower. We expect this amount to remain about the same in the future.</p>
Brackish surface water/seawater	Relevant	104,886.64	Higher	<p>We discharge to seawater in Samsun, Mersin &amp; Ceyhan Plants, TAYSEB &amp; in 2 projects of Tekfen Construction. In the reporting period, 98.08% of discharges to seawater came from the operations in Samsun Plant, which uses seawater in the Sulph. Acid Unit for cooling, production of demineralized water &amp; washing in the Phosp.Acid Unit. The data is obtained via real-time measurement.</p> <p>The reason for the increase in seawater discharge, from 94,638.56ML to 104,886.64ML by 10.83% is the shutdown of the Sulphuric Acid plant for a whole month in 2019, therefore in the previous year, the Samsun plant didn't work at full capacity. In the reporting year, there were no shut-downs, hence the plant worked more which led to an increase in water discharges.</p> <p>Classification: +/-5% about the same, 5-20% higher/lower, &gt;20% much higher/lower. An increase of 10.83% is classified as "Higher". We can expect this value to remain about</p>

				the same as the Samsun Plant was fully operational in the reporting period.
Groundwater	Relevant	1,615.35	Much higher	<p>We mainly discharge to groundwater in Tekfen Agri, Tekfen Construction &amp; Toros Agri. There has been an increase of 109% in the amount of discharge to groundwater. The main reason for this increase is Tekfen Agri's discharge, which makes up 89.2% of the total discharge to groundwater.</p> <p>An average of 75% of the irrigation water used in the orchards is consumed by fruit trees, while the remaining amount is added to the groundwater without being used.</p> <p>In 2020, the areas of orchards increased by 15%, and different crops were planted which required more water, which led to an increase in our groundwater discharge volumes by 89 %. Another reason for the increase is the use of water for dust suppression in the projects of Tekfen Construction resulting in an increase of 20%.</p> <p>Classification: +/-5% about the same, 5-20% higher/lower, &gt;20% much higher/lower. An increase of 109% is classified as "Much Higher".</p> <p>We expect this amount to increase slightly in the future if we acquire new orchards.</p>
Third-party destinations	Relevant	412.16	Lower	We discharge to 3rd parties in almost all of our operations but 86.10% of our discharge to 3rd parties comes from Tekfen

				<p>Construction operations. In 2020 Tekfen Construction mostly used 3rd parties (such as the Client's wastewater treatment plants- WWTP) for discharge due to the Client's requests. In the highway project, the wastewater is collected &amp; sent to a nearby 3rd party WWTP. The volumes reported are obtained via direct measurement.</p> <p>The volume has decreased by 8.35%. This is due to the changes in the projects of Tekfen Construction, as some projects are coming to an end they are also discharging less water to 3rd parties.</p> <p>Classification: +/-5% about the same, 5-20% higher/lower, &gt;20% much higher/lower. An increase of 45% is classified as "Much Higher". A decrease of 8.35% is classified as "Lower".</p> <p>We expect this amount to decrease in the future as we are currently looking for ways to increase re-used/ recycled water amount that can be performed by using our own WWTPs.</p>
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## W1.2j

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

	Relevance of treatment level to discharge	Volume (megaliters/year)	Comparison of treated volume with previous	% of your sites/facilities/operations this volume applies to	Please explain



			reporting year		
Tertiary treatment	Not relevant				<p>Tertiary treatment is the “treatment” process used to remove polluting agents, like nitrogen, phosphorus, heavy metals, toxic organic substances, etc., which can not be sufficiently removed via physical or biological treatment methods. However, the results of wastewater analysis in our plants, show that pollutants like ammonium nitrogen, nitrate, sulphate, phosphorus, copper, mercury, iron, cadmium, lead, chromium, etc. are always under the limits set in Table 19 of Water Pollution Control Regulation. As our analysis results are always under legal limits, we do not require further treatment of our wastewater.</p>

					<p>Although there is no need for advanced treatment, we have included an advanced wastewater treatment and recovery plant in our investment plans in Toros Agri's Mersin plant. This investment is planned especially in order to recover the ammonia and nitrate in wastewater to be used as products and also to produce demineralized water.</p>
Secondary treatment	Relevant	323.19	Much lower	11-20	<p>Secondary treatment water has decreased by 45.92%.</p> <p>We have secondary treatment in one facility of Tekfen Manufacturing, 6 projects of Tekfen Construction, and 5 facilities of Toros Agri.</p> <p>For Tekfen Construction projects, the wastewater treated is domestic</p>

					<p>sewage water.</p> <p>The discharge water is treated to be in line with the local legislation. Due to the completion of some projects the discharge volumes have decreased drastically. Future trends depend on the scope of new projects to be awarded for the upcoming years.</p> <p>Around 82% of the water volume reported in this section belongs to Toros Agri Facilities. Water treated in these facilities is mainly domestic sewage water and process water. For domestic sewage water we have biological treatment, whereas, for industrial process wastewater, we apply biological and chemical treatment in our facilities.</p> <p>The discharge water is treated to be in line with the local legislation in all Toros Agri Facilities which</p>
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					<p>have a wastewater treatment plant.</p> <p>There is a decrease of 45.92% in the volume treated due to the completion of some projects of Tekfen Construction. We expect this value to fluctuate according to the project portfolio of Tekfen Construction.</p> <p>Classification: +/- 5% about the same, 5-20% higher/lower, &gt;20% much higher/lower.</p>
Primary treatment only	Relevant	104,828.02	Higher	1-10	<p>Primary treatment water has increased by 9.89%.</p> <p>We have primary treatment in Toros Agri Samsun Plant, discharge volume of which makes up 96.14% of our total water discharges, this facility uses seawater for cooling purposes and prior to discharge to the sea, the seawater</p>

					<p>used is collected in ponds for sedimentation purposes.</p> <p>We also have primary treatment in one project of Tekfen Construction where groundwater received from microtunneling shafts collected in open-air huge ponds to precipitate the solids in the water. In the reporting period, the treated water volume has increased by 9.89%. In 2019, the Sulphuric Acid plant was shut down for a whole month, therefore in the previous year, Samsun plant didn't work at full capacity, producing less discharge. In the reporting year, there were no shut-downs, hence the plant worked more which led to an increase in water discharges and treatment.</p> <p>There is a 9.89% increase in the volume of primary</p>
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					<p>treated water. We can expect this value to remain about the same as the Samsun Plant was fully operational in the reporting period.</p> <p>The discharge water is treated to be in line with the local legislation.</p> <p>Classification: +/- 5% about the same, 5-20% higher/lower, &gt;20% much higher/lower. 9.89% increase is classified as "Higher"</p>
Discharge to the natural environment without treatment	Relevant	1,440.88	Higher	21-30	<p>Discharge to the natural environment without treatment has increased by 17.83%.</p> <p>We discharge to groundwater without treatment only in the plantations of Tekfen Agri. 25% of irrigation water was estimated as the discharge rate of the plantation since the plants can't absorb all the water. This year the discharge</p>

					<p>volume increased by 17.83%, because we have invested in new plantations increasing the total area that is irrigated. In the future we expect this volume to increase slightly with new investments.</p> <p>Classification: +/- 5% about the same, 5-20% higher/lower, &gt;20% much higher/lower. 17.83% increase is classified as "Higher"</p>
Discharge to a third party without treatment	Relevant	412.16	Lower	51-60	<p>Discharge to the third party without treatment has decreased by 9.11%.</p> <p>In headquarters, district offices and almost all of the permanent facilities of Tekfen Group Companies there is discharge to 3rd parties (i.e. domestic wastewater is usually discharged to municipality sewage system).</p> <p>Depending on the</p>

					<p>location the 3rd parties usually have secondary or tertiary treatment facilities.</p> <p>In the reporting period discharge to 3rd parties has decreased by 9.11% due to the temporary shut-down of some offices because of Covid-19 related measures.</p> <p>In the future we expect this volume to become higher as we will return to normal working conditions.</p> <p>Classification: +/- 5% about the same, 5-20% higher/lower, &gt;20% much higher/lower. 9.11% decrease is classified as "Lower"</p>
Other	Not relevant				We don't have any other type of treatment/dischARGE.

### 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.**

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**Product type**

Bulk inorganic chemicals

**Product name**

Ammonium Nitrate+ Calcium Ammonium Nitrate

**Water intensity value (m3)**

5.55

**Numerator: water aspect**

Freshwater withdrawals

**Denominator**

Ton

**Comparison with previous reporting year**

Lower

**Please explain**

AN + CAN fertilizers account for 34% of Toros Agri's total fertilizer production. For this reason, they are the fertilizers that have the most impact on our revenue compared to other fertilizer types. AN and CAN fertilizers are produced only in Mersin Plant. Compared to the previous year, water density has decreased by 7.19%.

We only use renewable groundwater in our Mersin Plant, therefore we are using "Total water withdrawal" as the water aspect (numerator) when calculating the water intensity. In the reporting period total AN+ CAN fertilizer production was 602,830 tonnes and total freshwater withdrawal was 3,347,177 m3. That means the water intensity of AN+CAN fertilizers is 5.55 m3/ton (3,347,177/ 602,830) in 2020. The water intensity was 5.98 m3/ton in 2019.

In the reporting period, our CAN+AN production increased by 2.29% while our total water withdrawal decreased by 5.06%.

The main reason behind this decrease is the organization of planned maintenance activities in July and August which are the hottest months in the year, if the plant is operational we consume more water in these two months. Planning the maintenance activities in these two months has presented us with a strategic advantage of reducing our water withdrawal amounts.

The metric is used within our organization to set the targets relating to water efficiency. We expect the water intensity of CAN and AN fertilizers to decrease in the medium term. The first steps have been taken for the investment in establishing a wastewater treatment and recycling unit in Mersin. We foresee a decrease in the amount of freshwater withdrawal when the project is completed.

While classifying the magnitude of change from the previous year, we consider the change up to +/- 5% as “about the same”, 5% to 20% as “higher/lower”, and above 20% as “much higher/lower”. Therefore, an increase of 7.19% is classified as “Lower”.

The water intensities for the other fertilizer types (e.g., DAP, NP, NPK, Organomineral, MAP, etc.) are not yet monitored due to the complexity of operations. On the other hand, our short-term target is the installation of metering devices in the related production units which enable us to measure and monitor each units' water withdrawals. Therefore, we can calculate the other fertilizer types' water intensities accurately.

## W1.4

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

Yes, our suppliers

Yes, our customers or other value chain partners

## W1.4a

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

#### Row 1

##### % of suppliers by number

26-50

##### % of total procurement spend

26-50

#### Rationale for this coverage

Tekfen Group of Companies work with numerous suppliers. All of our suppliers are expected to comply with Tekfen's Code of Conduct and their compliance is audited. From the water security point of view, the effects of our suppliers are not equal. 60.6% of Tekfen's total revenue is realized by the Engineering and Contracting Group and Tekfen Construction assesses the suppliers to be critical and non-critical. For example, Tekfen Construction focuses on suppliers of structural steel, reinforcing bar, concrete, asphalt, etc.

In 2020 we have identified 98 critical suppliers, and our supplier assessment questionnaire was shared with all of them. 36 of our critical suppliers responded to the

questionnaire, which made up 28.5% of Tekfen Construction's total procurement spend in the reporting period.

We engage our supplier through our Supply Chain Policy, Contracts, and Supplier Sustainability Assessment Questionnaire. Tekfen purchases goods/services from suppliers on the Approved Supplier List (ASL). Being on the ASL is one of the most important incentives for our suppliers.

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

Tekfen requests information about suppliers' sustainability performance, including their water management practices. We request information from our suppliers about their company quality systems (ISO 9001, ISO 14001, etc.) and their product certifications and water management methods by requesting them to respond to the online questionnaires.

We have found this collaboration has helped us to maintain our level of production across the value chain. Suppliers' responses to the assessment questionnaire show us their disclosure, awareness, and management levels which, in turn, impact their evaluation results.

Suppliers may be excluded from participating in tenders because of poor evaluation results. If we identify the potential for improvement, we support suppliers in developing measures to fulfill our standards, such as providing training on environmental topics. We conduct another review according to a defined timeframe to measure their progress.

Therefore, Tekfen has set a goal to establish and effectively implement the supply chain assessment to all critical suppliers in all Tekfen Group Companies by 2023. Our measure of success is reaching this ambitious goal. In the reporting year, 36 of our 98 critical suppliers responded to our questionnaire, which translates to 36.7% (status 2019: 10.8%) of our critical suppliers. This means we have achieved 36.7 % of our goal, which we see as a success as our goal is set for 2023. We have set ourselves the goal to increase this percentage to 100% by 2023.

### **Comment**

Tekfen has started applying sustainability scores using a supplier scorecard. Tekfen Holding has set a company-wide goal to establish and effectively implement the supply chain assessment system in all our Group Companies.

Therefore we intend to cover 100% of our suppliers by 2023.

## **W1.4b**

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

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### **Type of engagement**

Innovation & collaboration

### **Details of engagement**

Educate suppliers about water stewardship and collaboration

### **% of suppliers by number**

76-100

### **% of total procurement spend**

76-100

### **Rationale for the coverage of your engagement**

Our greatest challenge in responsible water stewardship, as well as our biggest opportunity, lies in addressing impacts within our supply chains. Significant improvements in water efficiency can be made through better agricultural techniques at a farm level. These help our suppliers to be more productive and resilient.

Farmland is often well-drained and natural drainage is often enhanced by land drains. Water from excessive rainfall and irrigation cannot always be held within the soil structure. Therefore, pesticides and residues (also nitrates and phosphates) can be quickly transported to contaminate groundwater and freshwater supplies over a large geographical area.

Irrigation increases the chance that pesticides will migrate to groundwater and surface water. Irrigating saturated soils or irrigating at a rate that exceeds the infiltration rate of soil promotes runoff that can carry pesticides with it. Proper irrigation management is critical to minimize the risk of pesticides infiltrating groundwater.

An Integrated Pest Management (IPM) program combines the best techniques to prevent pests, keep them below economically damaging threshold levels, and ensure that pesticides are used appropriately. If a pesticide is prone to reach surface or groundwater, suitable IPM tactics can reduce or eliminate the risk of surface or groundwater contamination.

In 2020, Alanar Fruit has launched a new P.U.M.A (Pesticide Usage Minimisation Application) project aims to minimize the usage of pesticides in agriculture. We train farmers on several sustainability issues, such as water use, water quality, and soil moisture, while our research and development teams develop drought-resistant seeds by the P.U.M.A project.

In 2020, we provided these trainings to 100% of the suppliers we buy fruit from at Tekfen Agri. Since this project started in 2020, no comparison can be made with 2019.

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

An Integrated Pest Management (IPM) program combines the best techniques to prevent pests, keep them below economically damaging threshold levels, and ensure that pesticides are used appropriately. If a pesticide is prone to reach surface or groundwater, suitable IPM tactics can reduce or eliminate the risk of surface or groundwater contamination.

The IPM program also facilitates the selection of a pesticide to be delivered precisely on target and at the proper time. Crop scouting, or monitoring, correctly identifies the pest and collects information needed so that applications are made only when needed and only when the pest is vulnerable, allowing for a more effective pesticide application. Reducing the need for multiple applications of pesticides reduces the chance that pesticides may reach and contaminate water.

In 2020, in the Mediterranean, Aegean, Marmara, and Central Anatolia Regions, 71 different trainings were given to 2863 farmers/ fruit producers on the right pesticide use. All our direct fruit suppliers were trained on the right use of pesticide use without exception. Alanar Fruit has prepared recommendations in the form of a list, containing how and when to use specific pesticides. On the list, growers can find the name of the pest or disease they are dealing with and how to counter the problem without the use of pesticides. The P.U.M.A. truck has a set route that can be found online. Farmers can then sign up for the program and visit when the truck is closest to their location. We have also issued leaflets, demonstrations, and experts explaining the methods to them. Alanar can potentially buy all these fruits, so we want to make sure it is of the best quality and grown by using as the minimum amount of pesticides as possible. The participation of fruit producers in this training was used as a prerequisite for purchasing fruit from them.

The success is measured via several metrics, such as the number of P.U.M.A. trainings given, number of fruit producers trained, number of P.U.M.A. training days, etc. In addition, the decrease in the amount of fruit returned by customers due to excessive pesticide use is an important indicator of success for us.

The number of trainings is an indicator of how many farmers can be reached. The amount of returned fruits due to excessive pesticide use is important in terms of monitoring the effectiveness of the trainings.

#### **Comment**

The given %of suppliers and %of procurement spent figures are for Alanar Fruit, which is one of our Agricultural Production Group Companies. However, this engagement activity has a considerable impact on the protection of groundwater resources in Turkey, that is why we included this activity in this section.

### **W1.4c**

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

Our fertilizer producer company Toros Agri, engages with its dealers, sales points as well as farmers (customers) directly to increase awareness on the correct application of fertilizers. We are using several engagement methods that include:

- Toros farmer app
- One-on-one meetings with the distributors and authorized dealers
- Giving training to farmers

By the end of 2020, 11,751 plantations were included in the Toros Farmer database, including the distributors & authorized dealers, the app has 11,938 active users. Suggestions for “Bread Wheat” plantations were created and we have reached around 10% of wheat plants in Turkey.

In 2020 we have performed:

- 4,960 visits to distributors,
- 5,286 interviews with farmers,
- 369 visits to agricultural institutions,
- 12 meetings with farmers.

We have also interviewed and educated 801 farmers about correct fertilization applications within the scope of Toros Agriculture Education Bus programme, which visited 35 locations and 60 different points in the Aegean and Western Mediterranean regions.

In addition to engagements held with customers, Toros Agri also engages and actively collaborates with universities as part of its R&D activities focusing on water-soluble fertilizer development with great potential to reduce water pollution and avoid excess water consumption due to conventional agricultural practices. By engaging and working closely with universities, we aim to turn the know-how shared into new and more sustainable products positively affecting the whole value chain. This engagement will enable multi-dimensional water-related benefits once these products are commercialized in the medium to long term. Accordingly, we define the measure of success for these engagement/collaborations as the commercialization of new, water-soluble fertilizers.

To measure the success, we consider the number of users of the Toros Farmer Application; meetings held with dealers; trainings, presentations, meetings performed; and R&D projects completed.

## 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.**

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### Country/Area & River basin

Turkey

Other, please specify

Gediz River

### Type of impact driver & Primary impact driver

Physical

Severe weather events

### Primary impact

Reduction or disruption in production capacity

### Description of impact

In Tekfen Agri's orchards, the crop yield was estimated as 2588 tons, but the realized crop yield was 1911 tons. This was due to severe weather events like hail storms, heavy rains, and freezing temperatures or heat waves.

This impact is very important in terms of future risks. We expect an increase in the frequency and severity of these kinds of climate events.

The financial impact of this event was above our substantive impact threshold.

### Primary response

Increase capital expenditure

### Total financial impact

950,000

### Description of response

The total impact of the severe weather events was calculated using the estimated value of the crops lost.

Due to the nature of farming, there are not many measures to implement to be resilient to such acute and severe physical events. However, we make sure our employees and facilities are well equipped to take immediate action to protect and maintain our business-as-usual operations.

While this response is not directly linked to water security, it is caused by the changing climate/precipitation patterns and is considered a chain in the water cycle. Our response to all incidents is to secure our operations with minimum or if possible, no disruption, which includes maintaining our water security & resilience. As an example of these preventive measures, we have installed hail nets to protect our products (stone fruit) against a potential hail covering 330 decares of our Tekfen Agri orchard. By doing so we

minimized the risk of heavy precipitation-related detrimental impact. We are planning to install hail nets over 3000 decares of orchards until 2026.

We have installed frost protection wind machines in Canakkale and Afyon Orchards, which partially protects our 350 decares of orchards (effective until -2 degrees).

For heatwaves, the most crucial thing is our water reserves. We are also planning on shadow covers, but this project has not started yet.

In our orchards, we are using METOS meteorological stations and soil moisture sensors to use water as efficiently as possible.

## 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?**

**Details of our policies and processes to identify potential water pollutants:**

Toros Agri, being the major company in our Chemical Industry Group, produces chemical fertilizers, which are sold to both domestic and international markets.

Toros Agri has sold 2.12 M tons of chemical fertilizers in 2020, 78.55% of which is sold to domestic markets. Toros Agri is a market leader in Turkey with a 29% market share.

All of the operations of Toros Agri are ISO 14001:2015 Environmental Management System and IFA (International Fertilizer Association) Protect & Sustain Certified. Within the scope of these standards, we have implemented a water pollution control management system across our operations in the fertilizer production processes.

In accordance with our Water Policy & Regulation on Prevention of Pollution, pollutants originating from chemical fertilizer production are determined, parameters related to the determined pollutants are monitored, measured & the results are analyzed.

In all of our fertilizer production facilities:

- The hazardous chemicals
- Their CAS codes,
- Max. amount of these chemicals in the facility,
- Hazardous substance categories,
- Measures to be taken against accidental spill,
- Handling & storage conditions,



- Major accident scenarios & preventive actions
- Ecotoxicological properties of these chemicals including acute toxicity, mobility, biodegradability, persistence & degradability, bioaccumulation potential

have all been determined.

The Turkish Ministry of Environment & Urbanization (MoEU) has revised the Regulation on Classification, Labeling & Packaging (CLP) of Dangerous Substances and Preparations which is also known as SEA regulation in Turkish. This regulation is aligned with EU CLP Regulation (1272/2008 EC) and is in force since 01.06.2016.

The regulation sets detailed rules & principles for chemical classification, labeling & packaging in Turkey & brings GHS concepts to Turkey. Similar to EU CLP regulation, it also requires manufacturers & importers to notify the classification & labeling of hazardous substances & mixtures to Turkish C&L Inventory ("C&L Notification").

There are wastewater treatment plants (WWTPs) in our fertilizer production facilities & these plants are operated within the framework of the legislative provisions. Our facilities have both domestic and industrial WWTPs.

On a monthly basis, an accredited company authorized by the MoEU, takes samples from the outlets of both industrial and domestic wastewater pools & conducts analyses to check the compatibility of the wastewater samples with the Water Pollution Control Regulation Tables 14.7 b and 21.1. We monitor the pH, nitrate nitrogen, ammonium nitrogen, suspended solids (SSM) & chemical oxygen demand (COD). In addition, our Samsun facility is connected to the Waste Water Monitoring Network of the MoEU. The pH, conductivity, dissolved oxygen, temperature, and flow rate of the wastewater discharged into the sea are monitored continuously with this system.

In addition, there are groundwater observation wells in our phosphogypsum storage areas. We also take samples and perform analysis from these wells upon request of the Provincial Directorate of Environment and Urbanization.

Our pollution prevention plans identify, evaluate and monitor the products we handle & produce in our plants. Our policy is based on the principles of avoidance, reduction, and mitigation, including the waste minimization principle, and sets specific targets. This policy and plans are signed by the CEO and supported by the Group Companies' General Managers.

Company-specific pollution prevention procedures are developed by the Companies' HSE Managers or Sustainability Directors and are annually reviewed and approved by the Group Companies' General Managers.

We categorize key substances as those that can have severe toxic and ecotoxic effects, have high persistence in the natural environment, and have the potential to bioaccumulate.

**Details on how we follow up the established standards:**

In order to ensure all of our facilities are in line with the identified requirements of the applied standards and regulations, we have daily controls performed by our Environmental Engineers, monthly and annual audits performed by the Environmental Auditors. On top of all these controls, Tekfen Holding Health, Safety, Environment, and Quality Coordinatorship performs regular environmental audits at the production facilities.

**Information on how our policies and processes vary across our value chain:**

Although our environmental policies do not vary across our value chain, sometimes the discharge limits and the parameters to be analyzed in discharged water may vary. For example, the parameters determined by Turkish Ministry of Environment and Urbanization may differ from the parameter determined by IFC, World Bank, etc. In such a case, the more stringent limit values are complied with.

### 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
Phosphate  Nitrogen	Direct operations	These pollutants are related to the Phosphoric Acid Unit and the other fertilizer production units. Phosphate will stimulate the growth of plankton and aquatic plants which provide food for fish. This may cause an increase in the fish population and improve the overall water quality. However, if an excess of phosphate enters the waterway, algae, and aquatic plants will grow wildly, choke up the waterway and use up large amounts of oxygen. This condition is known as eutrophication or over-fertilization of receiving	Compliance with effluent quality standards  Measures to prevent spillage, leaching, and leakages  Other, please specify  Compliance with standard operating procedures for control and production in facilities. Compliance with legal regulations. Periodic measurements performed online and/or by accredited companies. Planned and unplanned audits.	The best possible technologies are used in our Phosphoric Acid Unit and other fertilizer production units which are the sources of specified pollutants.  It is not possible to use a different raw material at the production process. However, the properties of the raw materials are inspected and controlled in every purchase order.  The pollutant parameters of the discharged water are followed by the facility and the relevant public units, via samples taken both online and

		<p>waters. This rapid growth of aquatic vegetation eventually dies and as it decays it uses up oxygen. This process in turn causes the death of aquatic life because of the lowering of dissolved oxygen levels.</p> <p>Nitrogen is a common chemical element found in many molecules used in the chemical industry, e.g. ammonia, a building block of many chemical products (e.g. plastics, fertilizer). As such, traces of Nitrogen are typically contained in chemical industry wastewater. Nitrogen levels in wastewater can be reduced biologically (De-Nitrification) to meet regulatory standards. High nitrogen concentrations in aquatic ecosystems raise the level of nutrients, can cause algal blooms, and lead to oxygen depletion. This eutrophication process may pose a threat to biodiversity and diminish life in aquatic environments. Loss of biodiversity can cause spiraling negative effects on interconnected ecosystems, e.g. bird populations depending</p>	<p>manually, against compliance with the limit values in the Water Pollution Control Regulation.</p> <p>There are instructions prepared for each production process and the possibility of going beyond these instructions is followed by automatic control systems and periodic inspections and audits.</p> <p>The discharge water is always tested and the measure of success is compliance with regulatory limits. These tests are performed by either accredited laboratories and/or online measurement and monitoring system which is directly linked to Ministry of Environment and Urbanization.</p> <p>All kinds of hazardous chemicals are stored in impermeable bunded areas to prevent spillage and leakages to the ground.</p> <p>We also have targets like “% of tests/samples compliant with determined standards for effluent discharge” to ensure compliance with the discharge</p>
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		on fish for food.		limits.
pH	Direct operations	<p>Discharged water's pH is important for the destination environment. If the discharge water is polluted with acidic or basic materials, the pH of the discharge water may change. The changes in the water pH have a negative impact on all living organisms in the water of the destination environment.</p> <p>If the pH of water is too high or too low, the aquatic organisms living within it will die. pH can also affect the solubility and toxicity of chemicals and heavy metals in the water. The majority of aquatic creatures prefer a pH range of 6.5-9.0, though some can live in water with pH levels outside of this range.</p>	<p>Compliance with effluent quality standards</p> <p>Measures to prevent spillage, leaching, and leakages</p> <p>Other, please specify</p> <p>Compliance with standard operating procedures for control and production in facilities.</p> <p>Compliance with legal regulations.</p> <p>Periodic measurements performed online and/or by accredited companies. Planned and unplanned audits.</p>	<p>Ocean/ sea acidification is already impacting many ocean/sea species, especially organisms like oysters and corals that make hard shells and skeletons by combining calcium and carbonate from seawater. Therefore, we measure and monitor the pH of wastewater before discharge to receiving environment.</p> <p>We issue Environmental Monitoring Plans that describe all preventive measures against these kinds of environmental aspects.</p> <p>The pH of the discharged water is followed by the facility and the relevant public units, via samples taken both online and manually, against compliance with the limit values in the Water Pollution Control Regulation. In our Samsun Plant, there is a Monitoring Station that monitors standard effluent parameters including pH of wastewater in real-time, and reports to the Ministry of Environment</p>

				<p>and Urbanisation. The real-time reports can be reached 24/7 via the web.</p> <p>There are instructions prepared for each production process and the possibility of going beyond these instructions is followed by automatic control systems and periodic controls.</p> <p>The discharged water is always tested and the measure of success is compliance with regulatory limits.</p> <p>We also have targets like “% of tests/samples compliant with determined standards for effluent discharge” to ensure compliance with the discharge limits.</p>
Temperature	Direct operations	<p>The temperature of water increases due to the cooling water used in the facilities. The temperature of the wastewater is higher than that of the water supply.</p> <p>The temperature of the water is a very important parameter because of its effect on chemical reactions and reaction rates, aquatic</p>	<p>Compliance with effluent quality standards</p> <p>Measures to prevent spillage, leaching, and leakages</p> <p>Other, please specify</p> <p>Compliance with standard operating procedures for control and production in facilities.</p> <p>Compliance with legal regulations.</p> <p>Periodic measurements</p>	<p>The best possible technologies are used in our fertilizer and acid plants, which are the sources of the specified pollutants. For example, we have started to change our cooling process and the air-cooled system started to be used instead of water-cooled systems.</p> <p>We issue Environmental</p>

		<p>life, and the suitability of the water for beneficial uses.</p> <p>Increased temperature, for example, can cause a change in the species of fish that can exist in the receiving water body. In addition, oxygen is less soluble in warm water than in cold water. The increase in the rate of biochemical reactions that accompanies an increase in temperature, combined with the decrease in the quantity of oxygen present in surface waters, can often cause serious depletion in dissolved oxygen concentrations in the summer months.</p>	<p>performed online and/or by accredited companies. Planned and unplanned audits.</p>	<p>Monitoring Plans that describe all preventive measures against these kinds of environmental aspects.</p> <p>In our Samsun Plant, there is a Monitoring Station that monitors standard effluent parameters including the temperature of wastewater in real-time, and reports to the Ministry of Environment and Urbanisation. The real-time reports can be reached 24/7 via the web.</p> <p>The other pollutant parameters in the discharged water are followed by the facility and the relevant public units, via samples taken both online and manually, against compliance with the limit values in the Water Pollution Control Regulation.</p> <p>There are instructions prepared for each production process and the possibility of going beyond these instructions is followed by automatic control systems and periodic controls.</p> <p>The discharge water is always tested and the measure of success is compliance with</p>
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				<p>regulatory limits.</p> <p>We also have targets like “% of tests/samples compliant with determined standards for effluent discharge” to ensure compliance with the discharge limits.</p>
Cadmium	Direct operations	<p>Cadmium comes from the phosphate rock that is used in phosphoric acid production. Cadmium is a heavy metal with high toxicity. Cadmium is toxic at very low exposure levels and has acute and chronic effects on health and the environment. Cadmium is not degradable in nature and will thus, once released to the environment, stay in circulation. New releases added to the already existing deposits of cadmium in the environment.</p> <p>Therefore Cadmium is a toxic material for all living organisms.</p>	<p>Compliance with effluent quality standards</p> <p>Measures to prevent spillage, leaching, and leakages</p> <p>Other, please specify</p> <p>Compliance with standard operating procedures for control and production in facilities.</p> <p>Compliance with legal regulations.</p> <p>Periodic measurements performed online and/or by accredited companies. Planned and unplanned audits</p>	<p>The best possible technologies are used in our fertilizer and acid plants, which are the sources of the specified pollutants.</p> <p>It is not possible to use a different raw material to avoid these parameters. However, product properties in the raw materials are controlled in every order.</p> <p>The pollutant parameters in the discharged water are followed by the facility and the relevant public units, via samples taken both online and manually, against compliance with the limit values in the Water Pollution Control Regulation.</p> <p>There are instructions prepared for each production process and the possibility of going beyond these</p>

				<p>instructions is followed by automatic control systems and periodic controls.</p> <p>The discharge water is always tested and the measure of success is the compliance with regulatory limits.</p> <p>We also have targets like “% of tests/samples compliant with determined standards for effluent discharge” to ensure compliance with the discharge limits.</p>
Nitrate pollution	Product use	<p>Nitrogen from a variety of sources can make its way into groundwater and waterways. A certain level of nitrogen is naturally present in the environment and nitrate in low quantities are necessary nutrients. However, the high levels of nitrate found in major anthropogenic contributors such as agricultural runoff, nitrogen-based fertilizers, animal manure, and sewage pose a problem. High concentrations of nutrients in the water table can cause drinking water to become toxic. Nitrate is one of the most common groundwater</p>	Providing best practices instructions on product use	<p>We have launched the “Correct and Balanced Fertilizer Use Project” via which we aim to communicate with farmers on what can be achieved through the correct use of fertilizers compared to their regular fertilizing methods. This engagement has a number of benefits as it directly enables efficient use of water as well as avoiding the application of fertilizer, this also helps reduce water and land pollution.</p> <p>We are using several engagement methods that include:</p> <ul style="list-style-type: none"> <li>• Toros farmer app</li> </ul>



		<p>contaminants in rural areas.</p> <p>Nitrates-related pollution is caused by the introduction of excessive amounts of nitrogen to surface and ground waters, mainly as a result of agricultural practices. About 50-70% of nitrogen input to water came from agriculture and nitrate pollution may increase in the coming years (medium-term).</p> <p>One of the leading agri-environmental indicators is the nitrate pollution of groundwater. Due to the wrong/over-application of fertilizers, along with environmental characteristics such as average temperature and precipitation as co-factors, there is a risk of nitrate pollution in groundwater sources that are likely to get higher over the medium term.</p> <p>Based on the EU Directive, Turkey has a regulation in place for the Protection of Water Against Agricultural Nitrate Pollution. If the nitrate concentration levels get higher, there is a risk of compliance</p>	<ul style="list-style-type: none"> <li>• One-on-one meetings with the Toros Agri distributors and authorized dealers</li> <li>• Presentations / Meetings / Joining Agricultural Expo's</li> <li>• Giving training to farmers</li> </ul> <p>By the end of 2020, 11,751 plantations belonging to 10,674 farmers were included in the Toros Farmer database. When the number of distributors (1,264) and authorized dealers are taken into account a total of 11,938 members actively use this app.</p> <p>In 2020, 4,960 visits to distributors across Turkey, 5,286 interviews with farmers, 369 visits to agricultural institutions, and 12 meetings with farmers were made. Although two rounds of programmes with the Toros Agriculture Education Bus had been planned in all regions of Turkey, one in spring and the other in autumn, activities had to be terminated after the second week of the spring leg due to the pandemic. In the meetings, which could be held only in 35 locations and 60</p>
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		cost to be introduced as part of encouraging farmers and fertilizer producers to adopt sustainable agriculture practices.		<p>different points in the Aegean and Western Mediterranean regions, 801 farmers were interviewed and provided information about Toros Agri products and right fertilization.</p> <p>All these above-mentioned awareness-raising activities help us reduce the nitrate pollution that may be caused via excess use of our products. The continuous increase in these numbers compared to the previous year is an indicator of success for us.</p>
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### W3.3

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

Yes, water-related risks are assessed

### W3.3a

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

#### Direct operations

##### Coverage

Full

##### Risk assessment procedure

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

##### Frequency of assessment

More than once a year

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

More than 6 years

**Type of tools and methods used**

Tools on the market  
Enterprise Risk Management  
International methodologies  
Databases  
Other

**Tools and methods used**

WRI Aqueduct  
WWF Water Risk Filter  
ISO 31000 Risk Management Standard  
IPCC Climate Change Projections  
Regional government databases  
Internal company methods  
External consultants  
Other, please specify  
ISO 14001 Environmental Management System Standard.

**Comment**

**Supply chain**

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**Coverage**

Full

**Risk assessment procedure**

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

**Frequency of assessment**

More than once a year

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

More than 6 years

**Type of tools and methods used**

Tools on the market  
Enterprise Risk Management  
Databases  
Other

**Tools and methods used**

WRI Aqueduct  
WWF Water Risk Filter  
ISO 31000 Risk Management Standard  
Regional government databases  
Internal company methods  
External consultants  
Other, please specify

ISO 14001 Environmental Management System Standard.

**Comment**

**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?**

More than 6 years

**Type of tools and methods used**

- Tools on the market
- Enterprise Risk Management
- Databases
- Other

**Tools and methods used**

- WRI Aqueduct
- WWF Water Risk Filter
- ISO 31000 Risk Management Standard
- Regional government databases
- Internal company methods
- External consultants
- Other, please specify  
ISO 14001 Environmental Management System Standard.

**Comment**

**W3.3b**

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

	<b>Relevance &amp; inclusion</b>	<b>Please explain</b>
Water availability at a basin/catchment level	Relevant, always included	Relevance:  Our projects/ workplaces withdraw the necessary amount of water, which is deemed crucial for the continuation of our

	<p>operations, from the nearest and suitable basins/ catchments.</p> <p>In case of no water supply, the production will stop immediately at fertilizer plants of Toros Agri, fruit production will severely be affected at orchards of Tekfen Agri, performance tests of equipment can't be conducted at Tekfen Construction and WASH facilities will be disrupted at most of our operations. Therefore, water availability at a basin/catchment level is always included in our risk assessments.</p> <p>Tools used in assessment:</p> <p>In order to conduct a thorough water risk assessment, we assess both current and future water availability and changes at a basin/catchment level through the use of regional government databases and the WRI Aqueduct Water Risk Atlas Tool. Moreover, we also analyze IPCC Climate Change RCP 4.5 scenario projections for Turkey and its probable emerging impact on precipitation patterns as well as water availability over the long term. This element of risk assessment covers all aspects of our value chain and both current and future issues.</p> <p>Explanation of the assessment:</p> <p>"Water Stress", "Water Depletion", "Groundwater Table Decline" &amp; "Seasonal Variability" data under the "Physical Risk Quantity" section of WRI Aqueduct Water Risk Atlas are evaluated on the basis of each basin, and the acquired data is used in risk assessments.</p> <p>As an example, our biggest orchards are in Manisa-Salihli and Koprubasi. According to this analysis, baseline water stress for our orchards is rated "Extremely High (&gt;80%)", however for "Pessimistic", "Optimistic" and "BAU" Scenarios in 2030 the stress level for this region is rated as "High (40-80%)". As a result of this analysis, it is obvious that there will be a potential decrease in water stress levels. This potential decrease was seen as an opportunity and prompted a further investment decision where we have invested in 99 decares of new orchards at Manisa Salihli and Koprubasi in 2020.</p> <p>In 2020 Tekfen Agri has conducted a study on the risks that its plantations may face as a result of climate change. As a result of this study, it was decided that new well and pool</p>
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		<p>investments are needed in order to have enough water for irrigation of the plantations.</p>
<p>Water quality at a basin/catchment level</p>	<p>Relevant, always included</p>	<p>Relevance:                  Withdrawn &amp; discharged water quality at the basin/catchment level is always taken into consideration during water risk assessments. In order to maintain a certain level of operational excellence, both water to be consumed/recycled &amp; wastewater quality is analyzed in our projects &amp; plants. Especially for our fertilizer production plants the quality of water (i.e. hardness, brackishness), is of utmost importance.</p> <p>We conduct microbiological &amp; chemical analyses periodically (monthly and/or bimonthly) as specified in local regulation and/or project requirements.</p> <p>On the other hand, we always monitor the quality of our discharged water in order to prevent environmental pollution &amp; stakeholder concerns. That is why we always build &amp; operate our own wastewater treatment plants in our facilities &amp; in project areas where there is no sufficient water treatment available.</p> <p>We always store our hazardous materials in watertight containers &amp; have spill response plans ready to prevent issues at all costs. Potable water quality in camps and offices is also analyzed periodically according to legal requirements. We also have wastewater treatment facilities in our camps where wastewater discharge parameters are measured, monitored, and analyzed periodically.</p> <p>Tools used in assessment:                  We use internal company methods (Environmental Risk Assessment in parallel to ISO 14001 Standard) to assess both current &amp; possible future risks regarding water quality at a basin/ catchment level as well as tools available on the market such as WRI Aqueduct. This element of risk assessment covers all aspects of our value chain and both current and future issues.</p> <p>Explanation of the assessment:                  During the risk analysis carried out within the scope of ISO14001, the quality of the water withdrawn and discharged is evaluated on the basis of the facility/project. While evaluating the environmental impacts, the negative</p>

		<p>consequences of water quality and the possibility of occurrence are also taken into consideration.</p> <p>Company-based impacts are evaluated within the scope of Corporate Risk Management.</p> <p>One of the most important quality-related aspects included in our risk assessments is the discharge quality because if we are unable to comply with the legal requirements, we can have both legal and reputational implications. To manage this risk, we always monitor our discharge quality and make sure 100% of our discharge is within the limits of local Water Pollution Control Regulations.</p>
<p>Stakeholder conflicts concerning water resources at a basin/catchment level</p>	<p>Relevant, always included</p>	<p>Relevance: Problems that may arise from stakeholders in the basin/ catchment level are taken into account within the scope of Corporate Risk Management (CRM). Due to the increased water stress in recent years, the water demands of nearby facilities, upstream and downstream stakeholders are evaluated. While the excess water that will be attracted by the stakeholders in the upstream affects our facilities and orchards, the excess water we will withdraw may cause serious problems between the stakeholders downstream. Therefore, possible water conflicts with stakeholders are taken into consideration in the medium to long term, where we expect water crisis/water wars to occur.</p> <p>Tools used in assessment: These risks are evaluated within the scope of CRM. Also, more detailed risk assessments are included within the scope of Environmental Risk Assessments made on some of the facilities and orchards. Basin/catchment level data such as water stress, water supply, and water demand are obtained from WRI Aqueduct Tool as an input to better assess the potential conflicts. Also, the Community Conflict data of WWF Water Risk Filter is used to determine stakeholder conflict probability.</p> <p>Explanation of the assessment: We evaluate the current water stress in the basin with the amount of water facility/ site's water needs, and the future water stresses in the location as per different scenarios. There are 3 scenarios; the optimistic scenario (SSP2 RCP4.5), the business as usual scenario (SSP2 RCP8.5), and the pessimistic scenario (SSP3 RCP8.5).</p>

		<p>In 2020, 10.25% of Tekfen's total water withdrawals were from water-stressed areas according to WRI Aqueduct Tool. In the future, water stress will increase as the population increases, and there is a high probability that water use conflicts with the stakeholders in the basin will increase.</p> <p>We use WWF Water Risk Filter's Conflict Risk Scores to identify water-related conflict risks that indicate whether there has been documented negative news that can affect Tekfen's reputational risk as well as historical political conflicts due to competition over limited water resources. For example, in the Ceyhan region, the risk score is between 3.4-3.8. This shows that the level of water-related conflict risk is high in Ceyhan.</p> <p>Final assessments are conducted by Holding Risk Management Directorate and the score of risk is determined. If the risk score is 16 and higher, the risk is informed to Holding Board of Directors</p>
<p>Implications of water on your key commodities/raw materials</p>	<p>Relevant, always included</p>	<p>Relevance: We work with suppliers from different industries around the world. They supply us with raw materials, chemicals, goods, and consumables, perform a range of services. Water has to be used as an input in the production process of many raw materials. So, water-related risks may adversely impact our raw material suppliers and therefore us. Therefore, we consider the impacts of water on our raw material suppliers.</p> <p>Tools used in assessment: Implications of water on our key commodities are assessed by using our Corporate Risk Management system. During the assessment, we use also regional government databases, as well as tools on the market like WRI Aqueduct. This element of risk assessment covers all aspects of our value chain and both current and emerging issues.</p> <p>Explanation of the assessment: We use WRI Aqueduct to see the current and future magnitude and change of water stress in regions where critical raw materials are produced. The information obtained is used in the studies carried out within the scope of Enterprise Risk Management.</p>



		<p>For example, ammonia is one of the most vital raw materials of fertilizer manufacturing. Unfortunately, it takes 2.3 tons of water to produce a ton of ammonia.</p> <p>With the increase in water stress, the fact that the suppliers of ammonia cannot reach enough water is an important risk for Toros Agri's fertilizer production plants. Using the WRI Aqueduct tool, we predict how the future water stress and thus ammonia production will change in the areas where ammonia is produced.</p> <p>Final assessments are conducted by Holding Risk Management Directorate and the score of risk is determined. If the risk score is 16 and higher, the risk is informed to Holding Board of Directors.</p>
<p>Water-related regulatory frameworks</p>	<p>Relevant, always included</p>	<p>Relevance: Compliance with legal regulations is among Tekfen's main principles. Therefore, compliance with legal regulations is always taken into account during risk assessments.</p> <p>Tekfen identifies and complies with the local regulatory and legislative requirements applicable to all its operations and business areas. The updates of existing legal and other requirements are closely followed and relevant parties are informed about changes and their implications on our operations. We periodically evaluate our compliance with applicable legal as well as other requirements and keep records of the results of periodic evaluations. Compliance with the regulatory framework is our priority that is stated on our Policies. Moreover, we are aware that there is an increasing concern about nitrate pollution on the soil as well as water sources as a result of excess fertilizer use. Therefore, water-related regulatory frameworks, as well as rising concerns, are always considered in our facilities.</p> <p>Tools used in assessment: Compliance with water-related regulatory framework is assessed by using internal company methods (Environmental Risk Assessment in parallel to ISO 14001 Standard). This element of risk assessment covers all aspects of our value chain and both current and emerging issues.</p>

		<p>Explanation of the assessment: Compliance with legal legislation on the water is constantly evaluated. In addition to legal regulations, risks that will affect brand value are also evaluated. During the evaluations, risk assessment tools within the scope of ISO 14001 are used for the facility/orchard/project, while Corporate Risk Management is used for company-based evaluations</p> <p>As an example, according to Turkish regulations, facilities with a daily discharge capacity over 10.000 m3, shall install a continuous discharge monitoring system (CDMS). We have installed a CDMS in our Toros Agri Samsun plant, and this system is directly connected to the systems of the Ministry of Environment. Therefore we continuously monitor our water discharges in terms of volume, temperature, and quality in order to stay within the thresholds set by regulations.</p>
<p>Status of ecosystems and habitats</p>	<p>Relevant, always included</p>	<p>Relevance: Protecting the ecosystem &amp; habitat is vital for Tekfen. Therefore, Tekfen has issued Water and Biodiversity Policies. Before initiating investments and projects in international protected areas, Tekfen develops Biodiversity Action Plans (BAP), identifies the potential impacts of investments and projects during the planning, operation, and post-operation stages, &amp; engages in efforts to minimize such impacts.</p> <p>We are aware that our water withdrawal &amp; discharge affect the ecosystems and organisms found in the drainage basins. We investigate the ecosystems and organisms found in the areas near our facilities, paying close attention to biodiversity.</p> <p>In addition, our companies, which make up 97% of Tekfen's total turnover, have ISO 14001 EMS.</p> <p>Tools used in assessment: ISO 14001 Environmental Impact Assessments (EIA) WRI Aqueduct WWF Water Risk Filter</p> <p>Explanation of the assessment: During the risk analysis carried out within the scope of ISO14001, EIA, and/or BAP the status of ecosystems &amp; habitats is evaluated on the basis of the facility/project. For new projects &amp; production sites, EIA &amp; BAP are</p>

		<p>conducted to assess the impact of construction &amp; production activities on ecosystems &amp; habitats. These EIAs &amp; BAPs are conducted by an external independent third party. We also use World Database on Protected Areas (WDPA) to identify potential critical flora &amp; fauna.</p> <p>As an example, we assess the whole area for the pipeline projects of Tekfen Construction &amp; take the necessary precautions about the critical flora &amp; fauna that exists on the route of the project. This element of risk assessment covers all aspects of our value chain and both current and emerging issues.</p> <p>In addition to those tools, we also use WRI Aqueduct and WWF Water Risk Filter tools. The data obtained from all these tools are used both in field-based risk analysis within the scope of ISO 14001 &amp; within the scope of Enterprise Risk Management according to the size of the impact.</p> <p>We take into consideration quantity &amp; quality of water withdrawals &amp; discharges, upstream and downstream stakeholders' dependency on water, water stress level in the basin, the projected change in drought occurrence, surface water quality, catchment ecosystem, freshwater biodiversity, groundwater, access to safe drinking water, media coverage, stakeholder conflict in the basin, etc.</p> <p>We also consider future water-related impacts on the ecosystem.</p> <p>EIA &amp; BAP compliance is ensured by HSE audits.</p>
<p>Access to fully-functioning, safely managed WASH services for all employees</p>	<p>Relevant, always included</p>	<p>Relevance: The availability of WASH services at premises is of critical importance to us. WASH services at our project sites and workplaces are important in preventing infections and other diseases. In addition, the availability of WASH facilities at the workplace is fundamental to provide our employees a healthy and safe working environment.</p> <p>We have a documented and certified Health and Safety Management System in parallel to ISO 45001 Occupational Health and Safety Management System Standard. One of our goals is to provide healthy and safe premises for all our employees and other value chain partners such as sub-contractors.</p> <p>Tools used in assessment: Access to fully functioning and safely managed WASH services at all times are taken into consideration in water-</p>

		<p>related risk assessments by using internal company methods (Health and Safety Risk Assessments in parallel to ISO 45001 Standard) and includes both current and possible future risks. WRI Aqueduct and regional government databases are being used to assess the accessibility of WASH facilities in the future. Therefore, this element of risk assessment covers all aspects of our value chain and both current and emerging issues.</p> <p>Explanation of the assessment: Tekfen has a Water Policy undersigned by our CEO. Tekfen commits to ensure that its operations do not compromise the right to water as well as sanitation of local communities and employees. Tekfen also commits to align with international standards, widely-recognized water initiatives, and public policy initiatives (such as SDG Goal No:6 Clean Water and Sanitation).</p> <p>The water we use in our camps and offices is monitored and analyzed periodically and compliance to regulatory limits is assessed by Health and Safety teams. It is very important for us to provide our employees with fully functioning and safely managed WASH services at all times.</p> <p>We use WRI Aqueduct to get information about baseline water stress levels, and future water stresses, water supply, and water demand indicators. In addition, we use WWF Water Risk Filter to get information about access to safe drinking water indicators.</p> <p>Within the scope of ISO 45001 Occupational Health and Safety Management System, compliance to water management requirements is evaluated by certified internal auditors of Group Companies using internal audits twice a year. In addition to Company's internal audits, Holding HSE audits are being conducted to ensure compliance.</p>
Other contextual issues, please specify		

### 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	<p>Farmers are among the most vulnerable to the impacts of the water crisis. Their vulnerability to water-related impacts also affects our Chemical Industry operations as they are our major customer group. This is one of the main reasons why our customers (especially farmers) are included in our organization's water-related risk assessments.</p> <p>As a method of engagement, we give training to our customers (farmers) on the most appropriate uses of the fertilizers and making sure they can grow their crops with maximal potential while using optimal amounts of water. We have also developed Toros Farmer App that gives suggestions for the correct and optimal fertilizer use.</p> <p>For our Contracting operations, we consider the users' access to clean and adequate water in the design process. While assessing water-related risks for our customers, we include both current as well as potential customers covering all aspects of our value chain.</p>
Employees	Relevant, always included	<p>Employees are always included in our risk assessments, there are two main aspects that are related to employees:</p> <ol style="list-style-type: none"> <li>1. Through our internal feedback system, our employees help us identify water-related risks and opportunities that may lie in our operations.</li> <li>2. It is very important for us to provide our employees with fully functioning and safely managed WASH services at all times. The water we use in our camps and offices is monitored and analyzed periodically. Wastewater in our camps is treated and discharge quality is continuously monitored. We also place importance on the protection of natural resources and we are taking measures such as converting to waterless urinals.</li> </ol> <p>As a method of engagement with our employees, we provide internal feedback forms which they can use to inform us about the risks, opportunities, and actions that lead to continual improvement. We also provide trainings and posters about water consumption. This way we can make sure our employees use water as efficiently as possible. While assessing water-related risks for our employees, we include both current as well as future risks covering all aspects of our value chain.</p>

		<p>We are constantly striving to ensure two-sided and effective communication. Opinion/suggestion/complaint systems are used. In addition, employees are requested to participate in risk assessment studies. Communication / Participation and Consultation is also a requirement of the ISO 14001 Environmental Management System. The majority of our Group Companies, which make up 97% of Tekfen's total turnover, have ISO 14001 Environmental Management System (EMS).</p>
Investors	Relevant, always included	<p>Investors and shareholders consist of the most important part of our stakeholder groups. 47.84% of the shares of Tekfen Holding are owned by investors. In addition to the company's financial performance, the investors also pay attention to how companies manage environmental risks. Therefore, the investors' expectations are always included in both risk and opportunity assessments.</p> <p>As a method of engagement with our stakeholders and investors, we report water risks and responses in our Annual Sustainability Reports that can be available to all stakeholders including our investors. Our water-related performance is also freely available on our website. This information is also provided to our CEO, who has direct oversight of water-related issues.</p> <p>While assessing water-related risks for our investors, we include both current as well as potential investors.</p>
Local communities	Relevant, always included	<p>In our water-related risk assessments, one of the main aspects is the local water stress and the impact of water withdrawal on local communities as our operations may impact them. Especially in the future increase in water stress levels increase, may result in difficulties in accessing sufficient amounts of water due to reactions from local communities. Therefore, local communities are one of the most important parts of our stakeholder groups and are always taken into consideration in our risk assessments.</p> <p>Environmental and Social Impact Assessments (ESIA) are conducted for projects in critical habitats. As an example, in our Pipeline Projects, we always consider the locals and do not withdraw water more than 10% of the river flow volumes. We do our best not to cut down any trees, but if needed we transplant them to different locations and maintain their well-being. Moreover, as we own orchards and also procure stone fruit from local farmers, we are in close connection with local farmers as</p>

		<p>suppliers. Farmers being a part of local communities are also included in our risk assessments.</p> <p>As a method of engagement with local communities, we organize stakeholder consultation meetings before starting any project as a part of ESIA. We also keep in contact with the leaders of the local communities during the course of the projects through a grievance management system.</p> <p>In our permanent operations, we are also in close contact with the leaders of the local communities, for example in Toros Agri we have an online system for complaints, and upon receipt of any complaint from this system, our corporate communications department makes sure that the issue is resolved promptly. Therefore, while assessing water-related risks for local communities, we include both current as well as future risks covering all aspects of our value chain</p>
NGOs	Relevant, always included	<p>Tekfen follows NGOs' activities closely. We are both a founding member and a member of some NGOs and these memberships provide a reliable method of engagement with these NGOs. Therefore, we always consider NGOs in our risk assessments.</p> <p>As a method of engagement, we use direct communication via our memberships in the NGOs.</p> <p>We are a member of the Turkish Sustainable Development Business Council (SKD) and the founding member of the Turkish Industry and Business Association (TUSIAD) which are at the forefront when it comes to raising awareness and working with policymakers on climate change and water issues in Turkey. We are also the founding member of Turkish Foundation for Combating Soil Erosion, for Reforestation and the Protection of Natural Habitats (TEMA), and Environmentally Friendly Green Building Association (CEDBİK).</p> <p>It is very important for us to align our strategies when it comes to climate change and water with these institutions. As part of our water-related risk assessment, we consider NGOs and their current and future roles in all aspects of our value chain as well as keeping an open eye to constantly identify new NGOs that can be included in our water-related risk management engagements.</p>

<p>Other water users at a basin/catchment level</p>	<p>Relevant, always included</p>	<p>We consider other water users in the areas where we have operations as part of our water-related risk assessments.</p> <p>If we are working near a river or when we are discharging the wastewater to wetlands, we pay utmost attention to the discharged water quality and quantity. If we withdraw water from the river, the amount cannot be more than 10% above the river's flow volume. If we discharge the wastewater to the wetlands, every measure is taken so that the wastewater quality always complies with the discharge limits stated in the relevant regulation.</p> <p>In order to protect underground water quality, machinery and equipment repair and maintenance are carried out in suitable/impermeable areas. Hazardous chemicals are stored in bunded and impermeable areas against any leakage or spillage.</p> <p>As a method of engagement, we organize information-sharing meetings with water users at the basin/catchment level. Especially in Tekfen Construction's projects, there are Community Liason Officers who are responsible for public relations. We also have grievance mechanisms in place in order to act upon/reply to the complaints received from other water users and stakeholders.</p> <p>While assessing water-related risks for other users at a basin/catchment, we include both current as well as future risks covering all aspects of our value chain that can be affected by our direct and indirect operations.</p>
<p>Regulators</p>	<p>Relevant, always included</p>	<p>Policymakers, as well as current and potential future water-related regulations, are taken into account in our risk assessments. Groundwater is being used in Mersin and Ceyhan plants through wells and we have active well permit licenses for each well we operate. On the other hand renewal of the licenses is critical for the operations. In Samsun, we use a high amount of seawater and we draw necessary freshwater from a dam by the permit of the General Directorate of State Hydraulic Works (DSI). If we can't draw enough water from the dam, our Samsun operations might face disruption. Therefore, engagement with regulators is important to prevent this kind of risk in our fertilizer plants.</p> <p>Tekfen is also a member of Turkish Sustainable Development Business Council (SKD) and Turkish Industry and Business</p>



		<p>Association (TUSIAD) through which have active engagements with policymakers.</p> <p>As a method of engagement, we are in contact with the Ministry of Environment and Urbanization through our environmental permits, within the scope of these permits we are audited regularly by the Provincial Environmental Directorate.</p> <p>We are also participating in the water-related workshops of SKD and we also want to play an active role in TUSIAD's climate and water-related working groups. While assessing regulators related to water risks, we include all aspects of our value chain covering both current and possible future regulators.</p>
River basin management authorities	Relevant, sometimes included	<p>The legal background for river basin management authorities is relatively new in Turkey.</p> <p>Only in one of our facilities (Toros Agri Samsun Plant), there is an active river basin management authority (Yesilirmak Basin Management Board). In other locations where we perform our operations, although there are river basin management authorities, they are not as active as Yesilirmak Basin Management Board.</p> <p>The river basin management authorities are included in our risk assessments, because according to the "Regulation for establishment of basin management boards" they are responsible for the preparation and implementation of Basin Management Plans.</p> <p>As a method of engagement, we participate in the meetings organized by the river basin management authorities.</p>
Statutory special interest groups at a local level	Relevant, always included	<p>The General Directorate of State Hydraulic Works (DSI) is the current main authority for surface and groundwater of Turkey. Approval for withdrawal from and discharge to the points are obtained from the DSI Regional Branches. Moreover, Provincial Environmental Directorates are also included in water risk assessments as they need to be notified about hydrostatic test discharge points and approval letters for discharge.</p> <p>Methods of engagement include sending letters about hydrostatic test discharge points and approval letters of discharge to each directorate with proof of water quality analysis results if they require so.</p>

		<p>Ad-hoc meetings are performed with DSI regional branches. While assessing water risks covering this particular stakeholder group, we include all aspects of our value chain both for current and possible future groups.</p>
Suppliers	Relevant, always included	<p>We don't have any supplier that has been affected by water-related impacts yet. But according to WEF Global Risks Report, the water crisis is one of the top 10 risks in terms of likelihood and impact. Moreover, according to the WRI Aqueduct tool, we can see that Turkey will be subjected to increasing overall water risks in the medium to long-term horizon. Therefore, it is clear that some of our suppliers will be affected by the water crisis in the future. We are working to identify critical suppliers in terms of water and address this risk in our business continuity plans. While assessing supplier-related water risks, we include all aspects of our value chain covering both current and possible future suppliers and try to enhance our way of monitoring their performance as well as implementing awareness-raising activities to improve water management practices.</p> <p>As methods of engagement, we use Supply Chain Policy, Supplier Contracts, and Supplier Assessment Questionnaire.</p>
Water utilities at a local level	Relevant, always included	<p>Municipal, industrial and private water suppliers and water utilities that treat wastewater are always incorporated in our water risk assessment and are considered at a local level. In our facilities, we draw some of the water from municipal suppliers and some from private water suppliers. If there is any problem with the suppliers we can't provide enough and good quality water to our operations and employees. Therefore, local water resources are evaluated and we consider the risk of interruption of water supply. We have a Corporate-wide Water Policy. "Build and operate treatment plants, where municipal infrastructure is inadequate or insufficient" is stated on the Policy and this is an example of how we consider current water utilities at the local level covering all aspects of our value chain.</p> <p>As methods of engagement, we use compliance tests results, reports, water withdrawal and discharge permits issued by regulators, regular meetings, site audits, etc.</p>
Other stakeholder, please specify	Relevant, always included	<p>During withdrawal and discharge of water, Tekfen also considers downstream stakeholders in the same basin. As an example, in our pipeline projects, if we need to withdraw water from a river,</p>

		<p>the water withdrawal rate is set as 10% of the River's flow rate in order not to distort the hydrological regime or cause water stress in the basin that might affect other current or possible future water users from the same basin. No chemical treatment is used during the hydrostatic testing periods to avoid chemical release to the environment. Tekfen ecologist/environmental inspectors always attend the activities during water abstraction and discharge. Water is cascaded in order not to deteriorate the habitat integrity and not to cause surplus turbidity. The water discharge periods are prolonged in order to decrease the flow rate. Water is oxygenated by physical means before discharge. The physicochemical characteristics of the discharged water (i.e. temperature, pH, dissolved oxygen, conductivity, etc.) are measured by hand-held kits to make sure the discharged water quality is within the acceptable limits of the recipient environment.</p> <p>As methods of engagement, we use compliance tests results, reports, water withdrawal and discharge permits issued by regulators, regular meetings, site audits, etc.</p>
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### 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.**

Water-related risks are identified, assessed, and managed at an Asset Level, Company Level, and Holding (Consolidated) level.

For short-term water-related risks at the asset level, we use ISO 14001 Environmental Management System’s risk management approach.

Medium- and long-term water-related risks at Company and Holding levels are covered by Corporate Risk Management (CRM) which is parallel to ISO 31000 Risk Management Standard and COSO. CRM specifically classifies risks as strategic, operational, financial, compliance, and reputational risks.

We use WRI Aqueduct, WWF Water Risk Filter, and regional government databases to define risk probabilities and risk impact levels in the medium and long term.

The first step is to measure the water data (withdrawal, discharge, and consumption amounts) of each business facility. We utilize WRI-Aqueduct in order to ascertain fundamental information regarding the basins. The actual evaluations involve analyzing current and future water stress levels.

WRI Aqueduct gives us Physical Risk Quantities (e.g. water stress, water depletion, interannual variability, seasonal variability, groundwater table decline, riverine flood risk, coastal flood risk, drought risk, etc.). Facility sites that were evaluated by WRI Aqueduct as having a High (40-80%) or Extremely High (>80%) Baseline Water Stress while having total annual water withdrawal volumes over 1,000,000 m<sup>3</sup> (excluding rainwater) were defined as High-Risk facility sites. We use water stress data which shows the baseline data as well as future projections. We obtain the necessary data according to the different scenarios. We use 3 scenarios; the optimistic scenario (SSP2 RCP4.5), the business as usual scenario (SSP2 RCP8.5), and the pessimistic scenario (SSP3 RCP8.5). By using the water data obtained from WRI tools, the risk is identified and the risk score is determined.

We also use WWF Water Risk Filter's Conflict Risk Scores to identify water-related conflict risks that indicate whether there has been documented negative news that can affect Tekfen's reputational risk as well as historical political conflicts due to competition over limited water resources.

All risk management operations including actions and status tracking are followed by Group Company Risk Managers with the help of HSE Managers when it comes to climate/water-related risks.

Risks are graded based on a portfolio approach. Risk portfolio including risks with grades more than a certain threshold is reported to the BoD every two months. Therefore, these risks are also tracked by the BoD through the Early Detection of Risks Committee who consolidates the risk assessments conducted by each Group Company Board and makes decisions on management actions.

#### Company Level:

The top management of each Group company uses risk management actively in the decision-making process. CRM is integrated into main planning processes such as strategic planning, business planning, and operational management. Risks associated with important decisions are identified and graded. In addition, top management of companies make sure proper precautions are designed, applied and the process is run effectively. Tekfen Group Companies do regular risk assessments every 2 months and report to the Holding. Risk assessment of high-risk projects, activities, locations, tasks, and operational areas is done more frequently.

#### Asset Level:

Each asset has its own risk assessment. Site HSE Management identifies/assesses water-related risks and reports to Project/ Workplace Manager who notifies site-specific critical risks to Company Risk Manager. Projects/ workplaces also use CRM methods defined above. We identify, assess, and respond to our short-term water risks (up to 1 year) via ISO 14001 EMS. Our medium (1-5) and long-term (5-30 years) water risks are covered by our CRM.

## 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?**

We consider substantive financial impact as additional cost or loss of revenue arising out of a disaster, change in market conditions, failure of a product, or similar events.

We consider substantive strategic impact as impacts on management, planning, and important initiatives.

However, according to our Corporate Risk Management system, the effect of identified risk is assessed under 5 main impacts, namely:

- Financial impact
- Legal impact
- Reputational impact
- Operational impact, and
- Strategic impact

The risk is assessed to have a substantive impact if:

- Financially; if the risk impact is >1% EBITDA (singular impact, which equals 625.298 USD for the reporting period) or >0,5% of EBITDA (continuous impact, which equals 312.649 USD). EBITDA for the reporting period is 62.529.800 USD.
- Legally; due to legislative or contractual non-conformities medium level loss of business or fines (please see substantive financial impact definition above)
- Reputational; risk poses medium-level effects on our reputation. Some negative effects on clients or employees. Some bad press on local or national media. The situation is critical but can be kept under control.
- Operationally; 2 to 5 days of disruption in operations, events reducing the performance of employees. For construction projects 2-5% difference in planned and realized progress of projects.
- Strategically; Some mid-level impact on strategic plans and their execution. Strategies may need to be revised in some areas.

These definitions are applied to our direct operations and while assessing our value chain-related risks, we use the reputational, operational, and strategic impact definitions given above.

Good quality freshwater is especially vital for our direct operations and important for our value chain, that is why we use these substantive impact definitions on the assessment of our value chain-related operations as well.

For risk assessments related to brackish surface water, we only include our direct operations because we only use seawater in our Samsun facility, and the use of brackish surface water in our value chain is not assessed to be of major importance.

Our monitoring process for assets and operations that could generate substantive change is as follows: We identify plants indicated as high (40-80%) or extremely high (> 80%) in terms of projected change in water stress (value in the year 2030 business as usual) results by using the WRI-Aqueduct Water Risk Atlas. Then we cross-check whether these sites are considered strategic and/or if they account for more than >1% of EBITDA (singular impact) or >0.5% of EBITDA (continuous impact). If both criteria are met, then the risks faced by these plants can contribute to a substantive change in the business. In line with our company-wide risk assessment process, substantive risks/impacts with impact grades more than the above-mentioned thresholds are monitored and reported to the Board of Directors every two months for action determination.

We are using this approach to define substantive financial or strategic impacts on our business. As an example to explain the approach, our Mersin Plant is located in “Extremely High Risk (>80%)” area in terms of water stress that can affect Tekfen Holding’s EBITDA more the 2.5%. So we have decided that Mersin Plant might have a substantial financial impact in the future.

As another example, we have assessed all of Tekfen Agri’s locations using the WRI Aqueduct Water Risk Atlas. Tekfen Agri has operations in 19 locations, 15 of which are located in water-stressed areas with High to Extremely High-risk profiles. Out of these 15 plants, only 1 plantation has revenues that are over our substantive impact thresholds, Karaman plantation can affect Tekfen Holding’s EBITDA more than the identified substantive impact threshold. Therefore, although all of the operations of Tekfen Agri are monitored closely, only the plantation in Karaman is reported under facilities exposed to water risks with the potential to have a substantive financial impact category.

## 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	4	1-25	We consider our Agri-Industry operations to be exposed to water-related risks the most. In the analysis, we have used the WRI Aqueduct Water Risk Atlas Tool.

			<p>Two of our fertilizer plants are facing Extremely High (Mersin Plant) and High (Ceyhan Plant) risk in terms of water stress.</p> <p>Samsun Plant’s current risk rating is Low. However, as this plant is responsible for 89.45 % of our total water withdrawal and 96.14% of our total discharge for the reporting period, this plant is always assessed to have a potential of substantive impact. This plant is also rated as “Extremely High Risk” in future scenarios.</p> <p>The only plantation that was assessed to be over our substantive thresholds our plantation in Karaman. The annual revenue from this facility is over our substantive thresholds and it comprises 60.57% of water withdrawals within Tekfen Agri.</p> <p>At these facilities (especially Samsun), in the absence of an adequate amount of water, the production will directly be disrupted and the water need cannot be easily supplied from other sources as the amount is substantial. While this constitutes a small number of facilities (4 out of 59 in the reporting period), they represent approximately 23.67 % of our total global revenue.</p> <p>According to WRI Aqueduct Water Risk Atlas, most of our operations (51 out of 59 locations) are listed as having High to Extremely High water-stressed areas. However, the impact of these operations on Tekfen Holding is not assessed to be substantive, either because they comprise a very small percentage (below 0.05%) of our global revenue, or because they have a very small consumption figure with respect to our other operations.</p> <p>The contracting projects do not last longer than 3 years. Therefore they are not reported as risky facilities.</p>
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### 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**

Turkey

Other, please specify

Yesilirmak

**Number of facilities exposed to water risk**

1

**% company-wide facilities this represents**

1-25

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

1-10

**Comment**

This facility is our Toros Agri Samsun Fertilizer Plant. According to the WRI Aqueduct Water Risk Atlas tool Samsun Plant is classified as low-risk for Baseline Water-Stress but it is classified as Extremely High (>80%) in 2030 water stress. This facility is also responsible for 89.45 % of our total water withdrawal and 96.14% of our total discharge, therefore it is always assessed to have a potential of substantive impact.

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**Country/Area & River basin**

Turkey

Other, please specify

Tarsus/Goksu

**Number of facilities exposed to water risk**

1

**% company-wide facilities this represents**

1-25

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

1-10

**Comment**

This facility is our Toros Agri Mersin Fertilizer Plant.

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**Country/Area & River basin**

Turkey

Other, please specify

Ceyhan

**Number of facilities exposed to water risk**

1



**% company-wide facilities this represents**

1-25

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

1-10

**Comment**

This facility is our Toros Agri Ceyhan Fertilizer Plant.

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**Country/Area & River basin**

Turkey

Other, please specify

Beysehir Lake/Afyon

**Number of facilities exposed to water risk**

1

**% company-wide facilities this represents**

1-25

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

Less than 1%

**Comment**

This facility is our plantation in Karaman which was acquired in 2019. Our Karaman facility is responsible for 60.57% of our water withdrawal in our orchards and plantations. Karaman's revenue is %0.13 of Tekfen Holding's total global revenue.

## 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.**

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**Country/Area & River basin**

Turkey

Other, please specify

Yesilirmak, Ceyhan, Tarsus, Marmara, Akarcay, Akdeniz, Gediz, Beysehir Lake/Afyon

**Type of risk & Primary risk driver**

Regulatory

Higher water prices

**Primary potential impact**

Increased production costs

### **Company-specific description**

Along with basic WASH services provision needs, water is an indispensable raw material for our operations. Water is being used in fertilizer production plants in Samsun, Mersin, and Ceyhan. Water is also being used for producing stone fruit as well as saplings in Tekfen Agri premises spreading across Western Turkey.

As a result of the fact that water stress is increasing in Turkey, a potential increase in (or the introduction of) water prices are likely to be implemented. This will directly cause an increase in our before-mentioned companies' and locations' production costs as they make up around 98.36% of our total water withdrawal.

Therefore, increasing water stress in our production locations might impact our bottom line if water prices increase considerably.

### **Timeframe**

4-6 years

### **Magnitude of potential impact**

High

### **Likelihood**

Very likely

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

Yes, an estimated range

### **Potential financial impact figure (currency)**

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

3,449,940

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

13,799,760

### **Explanation of financial impact**

A large portion of Tekfen's total water withdrawal (98.36%) results from Toros Agri and Tekfen Agri activities. Both companies depend on water to carry on production.

The water withdrawn from a dam and wells in Toros Agri's three production facilities and freshwater and groundwater withdrawn at Tekfen Agri's locations equals 12.74 million m<sup>3</sup>.

We are currently not paying any fees for 8.846 million m<sup>3</sup> of this water. However, due to water stress, this may change in the future. In 2020 average water price for the workplaces in the countryside was 0.39 USD/m<sup>3</sup> and the average water price for the workplace in the city was 1.56 USD/m<sup>3</sup>.

The minimum and maximum financial impacts were calculated using these water prices.

The minimum impact of this risk is calculated as follows:

8.846 million m<sup>3</sup> x 0.39 USD/m<sup>3</sup> = 3,449,940

The maximum impact is calculated as follows:

8.846 million m<sup>3</sup> x 1.56 USD/m<sup>3</sup> = 13,799,760

While calculating the impact of this risk, we don't include the water withdrawal amounts from the sea in our Samsun plant, which make up 89.45% of our total withdrawal, as we don't predict an introduction of water prices in seawater in the foreseeable future.

### **Primary response to risk**

Increase investment in new technology

### **Description of response**

In the reporting period, we have conducted a number of projects to achieve higher water efficiency and maximize the water reuse/recycle rate both in Toros Agri and Tekfen Agri Facilities (asset level) in line with the vision stated in our Water Policy highlighting the alignment with international initiatives such as SDG 6.

In Toros Agri Mersin Plant we are implementing a new wastewater treatment and recovery plant which is planned to be operational in 2023. This plant aims to treat the wastewater by recycling ammonia and nitrates from the wastewater and rehabilitating the existing demineralization unit in the plant. With this project, we are planning to recycle 2.1 million USD worth of CAN/AN fertilizers per year and 171,430 m<sup>3</sup> of water per annum. This recycling plant will have also zero discharge.

As part of Tekfen Agri operations, maximized installation of efficient and new technology irrigation systems (drip clips with up to 50% water savings and smart filtering automated systems up to 15% water savings) to eligible orchards were completed.

We are installing soil humidity sensors and meteorology stations (METOS) that measure soil moisture in irrigation systems in our orchards to use less groundwater and fresh surface water resources (preventing excessive and unnecessary irrigation). While making the irrigation program, we ensure the most efficient use of limited water by taking daily rainfall records, air and plant water consumption forecasts, and soil moisture into account. We use drip irrigation and mini sprinkler systems. We had previously completed the installation of meteorology stations in all our orchards. In the reporting period, Tekfen Agri invested in humidity sensors in 6 orchards.

### **Cost of response**

10,415,000

### **Explanation of cost of response**

The new wastewater treatment and recovery plant investment which will be operational in 2023 will cost around USD 10,350,000.

The total cost of the smart irrigation system (Metos) and digital agricultural tool (Doktar) of Tekfen Agri until the end of the reporting period is around USD 65,000 (this value changes every year with new investments and also changes in the exchange rates).

USD 10,350,000 + USD 65,000= USD 10,415,000.

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### Country/Area & River basin

Turkey

Other, please specify

Yesilirmak, Ceyhan, Tarsus, Marmara, Akarcay, Akdeniz, Gediz

### Type of risk & Primary risk driver

Physical

Increased water stress

### Primary potential impact

Reduction or disruption in production capacity

### Company-specific description

IPCC RCP 4.5 scenario projections foresee a decrease in mean precipitation and WRI Aqueduct Water Risk Atlas foresees an increase in baseline water stress risk levels in Turkey. Our operations are located in High and Extremely High water-stressed areas described by WRI Aqueduct Tool.

According to WRI Aqueduct Water Risk Atlas projected change in water stress (value in the year 2020 business as usual) is high (40-80%) to extremely high (more than 80%) in areas where our Agri-Industry companies Toros Agri and Tekfen Agri operate. Due to the effect of this potential increase in water stress and resulting water scarcity (may even be an inability to have access to enough quality and quantity of water), our fertilizer and stone fruit production activities can be adversely affected.

A possible increase in water stress is considered a risk for production activities. Our fertilizer plants need water especially for the cooling of the systems. In case there is a lack of enough water, the production capacity can be reduced or stopped. According to the WRI Aqueduct Water Risk Atlas, Mersin and Ceyhan Plants are in a location in which the Baseline Water Stress is defined as "Extremely High" and "High". This may force us to take new measures for water efficiency. This may result in the need for costly investment in new technologies that provide more efficient water usage to ensure the continuity of production.

Increased water stress poses a risk for Tekfen Agri as the fruits being produced need a certain quality & quantity of water in a timely manner. In case of increased water stress,

not only the production capacity but also the quality of the products yielded will be negatively impacted, causing a further loss in revenue due to both reduced unit product price and less products being compliant with customer requirements.

**Timeframe**

4-6 years

**Magnitude of potential impact**

High

**Likelihood**

Likely

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

Yes, an estimated range

**Potential financial impact figure (currency)**

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

27,850,000

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

55,700,000

**Explanation of financial impact**

Availability of good quality freshwater is vital for both our Chemical Industry and Agricultural Production group operations.

If there is a lack of water supply our operations will directly be affected. Considering that there is a 5-10% decrease in production capacity we may face a loss of revenue between 27,850,000 USD to 55,700,00 USD.

In 2020, both companies' fertilizer and stone fruit production/sales-related total revenue was around USD 557 million. Estimating a 5%-10% loss in revenue due to this risk may result in a USD 27.85 to USD 55.7 million revenue loss.

**Primary response to risk**

Increase investment in new technology

**Description of response**

In 2020, we've conducted a number of projects to achieve higher water efficiency & maximize the water reuse/recycle rate both in Toros Agri and Tekfen Agri Facilities (asset level) in line with the vision stated in our Water Policy highlighting the alignment with international initiatives such as SDG 6.

In Toros Agri Mersin plant we have finalized the project design of our new wastewater treatment & recovery plant which works in a fully closed cycle & converts high ammonia

and nitrate-containing condensate waters into AN (18-25%) solution & low-conductivity ( $\leq 0.1 \mu\text{S}$ ) demineralized water. This recycling plant also has zero discharge. The facility is planned to be operational in 2023. This plant aims to treat the wastewater recycling ammonia & nitrates from the wastewater & rehabilitating the existing demineralization unit in the plant. With this project we are planning to recycle 2.1 million USD worth of CAN/AN fertilizers & 171,430 m<sup>3</sup> of water per annum.

As part of Tekfen Agri operations, installation of efficient & new technology irrigation systems (drip clips with up to 50% & smart filtering automated systems up to 15% water savings) to eligible orchards were completed.

Tekfen Agri's investments in the smart irrigation system have also continued. There are 3 phases of the investment:

- 1st phase: installation of fully sensed main meteorological stations in all of our plantations
- 2nd phase: parcel-based soil humidity sensor integration
- 3rd phase: plant protection applications monitoring

We're installing soil humidity sensors & meteorology stations (METOS) that measure soil moisture in irrigation systems in our orchards to use less groundwater & fresh surface water resources. While making the irrigation program, we ensure the most efficient use of limited water by taking daily rainfall records, air & plant water consumption forecasts & soil moisture into account. We use drip irrigation & mini sprinkler systems. We had previously completed the installation of meteorology stations in all our orchards & in 2020 we have invested in humidity sensors in 6 orchards. We have started to use Doktor, a digital agricultural tool. Digital agriculture has the potential to make agriculture more productive, more consistent & use time & resources more efficiently. This brings critical advantages for farmers & wider social benefits around the world. It also enables organizations to share information across traditional industry boundaries to open up new opportunities.

### **Cost of response**

10,415,000

### **Explanation of cost of response**

The new wastewater treatment and recovery plant investment which will be operational in 2023 will cost around USD 10,350,000.

The total cost of the smart irrigation system (Metos) and digital agricultural tool (Doktar) of Tekfen Agri until the end of the reporting period is around USD 65,000 (this value changes every year with new investments and also changes in the exchange rates).

USD 10,350,000 + USD 65,000= USD 10,415,000.

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### **Country/Area & River basin**

Turkey

Other, please specify

Yesilirmak, Ceyhan, Tarsus, Marmara, Akarcay, Akdeniz, Gediz and various other basins in Turkey where agricultural activities takes place

**Type of risk & Primary risk driver**

Physical  
Declining water quality

**Primary potential impact**

Increased compliance costs

**Company-specific description**

Nitrogen from a variety of sources can make its way into groundwater and waterways. A certain level of nitrogen is naturally present in the environment and nitrates in low quantities are necessary nutrients. However, high levels of nitrate found in major anthropogenic contributors such as agricultural runoff, nitrogen-based fertilizers, animal manure, and sewage pose a problem. High concentrations of nutrients in the water table can cause drinking water to become toxic. Nitrate is one of the most common groundwater contaminants in rural areas.

Nitrates-related pollution is caused by the introduction of excessive amounts of nitrogen to surface and ground waters, mainly as a result of agricultural practices. About 50-70% of nitrogen input to water comes from agriculture and nitrate pollution may increase in the coming years (medium-term).

One of the leading agri-environmental indicators is the nitrate pollution of groundwater. Due to the wrong/over-application of fertilizers, along with environmental characteristics such as average temperature and precipitation as co-factors, there is a risk of nitrate pollution in groundwater sources which are likely to get higher over the medium term. Based on the EU Directive, Turkey has a regulation in place for the Protection of Water Against Agricultural Nitrate Pollution. If the nitrate concentration levels get higher, there is a risk of compliance cost to be introduced as part of encouraging farmers and fertilizer producers to adopt sustainable agriculture practices.

Fertilizer production we undertake as part of Toros Agri operations has a high stake in managing nitrate pollution. Therefore, if such a compliance cost is introduced, we may be faced with an additional cost per tonne of nitrogen-containing fertilizer products we produce, and as all of the fertilizers that we produce contain Nitrogen, this means we may face a compliance cost for all of the products of Toros Agri. This will increase our indirect operational costs.

**Timeframe**

More than 6 years

**Magnitude of potential impact**

High

**Likelihood**

About as likely as not

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

Yes, an estimated range

**Potential financial impact figure (currency)**

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

5,296,642

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

10,593,284

**Explanation of financial impact**

Toros Agri revenue covering the sales of fertilizers (which all contain Nitrogen) was 529.66 Million USD in 2020. Assuming a min 1%, max. 2% additional compliance cost applied to these products; we would face an additional cost between USD 5.296 to USD 10.593 million.

**Primary response to risk**

Engage with customers

**Description of response**

Supporting agriculture as the biggest privately-owned concern in its industry, Toros Agri not only feels a responsibility to provide farmers with high-quality fertilizers but also undertakes social responsibility projects focused on the development of Turkish agriculture in general and improving the living standards of those whose livelihood is farming in particular.

With the aim of preventing nitrate pollution as well as supporting sustainable agricultural practices, Toros Agri launched a Mobile Training Bus (Toros Academy) & Mobile Technical Team project in 2018 covering Turkey's predominantly agricultural regions and which has begun spreading the "4R" (the four "rights" of good fertilizer practices: the right source, the right rate, the right time, and the right place) practices/awareness among farmers. By doing so, we aim to prevent nitrate pollution of water at the very focal point, farming practices.

Toros Agri also has developed an application for the use of farmers. "Toros Farmer Smart Agriculture and Fertilization Application", which was developed by Toros Agri specifically for smartphones and tablets and offered to the farmers for free, is an agricultural decision support application that combines weather forecasting, soil, and plant data and develops suggestions for the activities of farmers.

As part of our highest efforts to continuously work on developing new and more environmentally friendly products, we have invested in an R&D Center in Mersin as part of our fertilizer production practices. Within the scope of the project to develop fertilizers with controlled nitrogen release, it was aimed to reduce agricultural greenhouse gas



emissions and reduce nitrate pollution in groundwater by making urea, NPK, and Ultra Nitrogen fertilizers with slow release. Within the scope of this project, our product “Smart Urea” has been registered. We have also applied to TEYDEB 1501 for this project and the project was entitled to receive support from TÜBİTAK.

TÜBİTAK 1501 project - Development of Slow Release Urea Fertilizer for Reducing Greenhouse Gases and Nitrate Loss Caused by Washing and Field Efficiency Research studies are also carried out

### **Cost of response**

1,811,934

### **Explanation of cost of response**

The cost of the response to this risk includes the cost of Toros Farmer App (around 10,000 USD) and the cost of technologies, analysis and implementation supports for agricultural activities, meetings, trainings, joining expos, etc. (around 285,000 USD)

The initial investment cost of the R&D Center was USD 715,000, and the R&D budget dedicated to the Center was USD 811,934 in the reporting period.

Total cost of response is calculated as:  $10,000 + 285,000 + 715,000 + 811,934 = 1,811,934$  USD

## **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.**

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### **Country/Area & River basin**

Turkey

Other, please specify

Yesilirmak, Ceyhan, Tarsus, Marmara, Akarcay, Akdeniz, Gediz and various other basins in Turkey

### **Stage of value chain**

Use phase

### **Type of risk & Primary risk driver**

Physical

Drought

### **Primary potential impact**

Disruption to sales due to value chain disruption

### **Company-specific description**

According to WRI Aqueduct Water Risk Atlas, the projected change in water stress in 2030 (according to the optimistic scenario, SSP2 RCP 4.5) is high (40-80%) and extremely high (more than 80%) in many parts of Turkey. In addition, the majority of Turkey has a medium to high risk in terms of drought severity.

Therefore, Toros Agri's most important customers (farmers) will be affected severely because of water-related problems in the medium to long term. The impact on agriculture due to drought may result in a reduction of Toros Agri's sales in solid fertilizers.

### **Timeframe**

More than 6 years

### **Magnitude of potential impact**

High

### **Likelihood**

Likely

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

Yes, an estimated range

### **Potential financial impact figure (currency)**

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

26,483,210

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

52,966,419

### **Explanation of financial impact**

Toros Agri fertilizer sales are USD 529.66 million based on 2020 figures. When we use WRI Aqueduct Water Risk Atlas, the projected change in water stress in 2030 compared to 2020 will be 1.4 to 2 times higher. That means farmers will be adversely affected. Some of the farmers may stop farming because of water-related problems.

The impact on the water stress on the farmers may result in a reduction of sales in solid fertilizers. Therefore, a 5%- 10% reduction (around USD 26.48 million- USD 52.96 million) in Toros Agri revenues was considered based on 2020 figures.

### **Primary response to risk**

Direct operations  
Develop new products and/or markets

### **Description of response**

A Research and Development Center was established in Toros Agri. The aim is to develop new and innovative products that require less water and avoids water pollution.

Special fertilizers, developed by Toros Agri, are products that completely water-soluble and are being used in conjunction with modern irrigation techniques such as drip and rain irrigation. Drip irrigation is becoming more and more common due to the lack of enough water sources. Therefore we anticipate an increase in special fertilizer demand due to the increased adoption of modern irrigation techniques which will extend our existing market. Toros Agri considers them a high potential product group. We have increased special fertilizer sales by 40.7% with respect to 2019.

### **Cost of response**

1,526,934

### **Explanation of cost of response**

As part of our highest efforts to continuously work on developing new and more environmentally friendly products, we have invested in an R&D Center in Mersin as part of our fertilizer production practices. Having received its Ministry of Industry and Technology license in 2017, the Toros Agri Mersin Plant's R&D Center began working in the same year. 2018 was a year in which substantial progress was made by engaging in scientific efforts to meet the agricultural sector's demands and needs and giving priority to the development of new products that will help improve agricultural productivity. With 28 full-time employees, the center's goals include developing new products that will further diversify Toros Agri's plant nutrients portfolio as well as addressing issues such as improving existing products, water-soluble fertilizers, developing production processes, optimization, production-related energy conservation, and reducing environmental impact.

Within the scope of the project to develop fertilizers with controlled nitrogen release, it was aimed to reduce agricultural greenhouse gas emissions and reduce nitrate pollution in groundwater by making urea, NPK, and Ultra Nitrogen fertilizers with slow release. Within the scope of this project, our product "Smart Urea" has been registered. We have also applied to TEYDEB 1501 for this project and the project was entitled to receive support from TÜBİTAK.

TÜBİTAK 1501 project - Development of Slow Release Urea Fertilizer for Reducing Greenhouse Gases and Nitrate Loss Caused by Washing and Field Efficiency Research studies are also carried out.

In the reporting year, sales of these specialty fertilizers went up by 40.7 % with respect to 2019.

The total cost to realize opportunity covers the initial investment cost (USD 715,000) as well as the R&D budget dedicated to the Center (USD 811,934) in the reporting period.

715,000 + 811,934 = 1,526,934 USD.

## 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

An explanation of why this opportunity is considered strategic:

According to WRI Aqueduct Water Risk Atlas, the projected change in water stress between 2020 and 2030 (SSP2 RCP 4.5 scenario) is High (40-80%) and Extremely High (>80%) in many parts of Turkey. That means, existing and traditional products, production techniques will have to change soon. Therefore, as a leading company in the Agri-Industry business area, the development of new fertilizers is a strategic opportunity for Tekfen.

An explanation of the action to realize the opportunity:

To realize this strategic opportunity, Toros Agri authored a first in the country's fertilizer-manufacturing industry by opening an R&D center at its Mersin plant. This plant, which has been accredited by the Ministry of Industry and Technology, is the first center of its kind in Turkey devoted to developing more efficient and water-soluble liquid fertilizers which will help to improve agricultural productivity.

A case study or example of the strategy in action:

One of the first developments of the R&D Center is special fertilizers that are completely water-soluble and are being used in conjunction with modern irrigation techniques such as drip and rain irrigation. Drip irrigation is becoming more common due to the lack of enough water sources. Therefore we anticipate an increase in special fertilizer demand due to the increased adoption of modern irrigation techniques which will extend our existing market. Toros Agri considers them a high potential product group. In the reporting year, we have increased special fertilizer sales by 40.7% with respect to 2019.

### Estimated timeframe for realization

4 to 6 years

**Magnitude of potential financial impact**

High

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

Yes, an estimated range

**Potential financial impact figure (currency)**

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

34,400,000

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

42,600,000

**Explanation of financial impact**

Specialty fertilizers are water-soluble fertilizers that are preferred in agricultural lands where drip and sprinkler irrigation systems are used, especially in greenhouse farming.

The widespread use of advanced irrigation systems and soilless farming, due to the increasing importance of obtaining maximum efficiency per unit area in agriculture and the increasing water shortage on a global scale, have in parallel led to the growth of the water-soluble fertilizer market. The global specialty fertilizer market, which is thought to be worth 18.2 billion USD in 2019, is estimated to reach 21.1 billion USD by 2025, with a growth of 16%. This forecast directs the attention of major producers to this area and leads them to develop growth strategies for this promising product range.

In terms of greenhouse farming, the specialty fertilizer market in Turkey, which has a strong position within the Mediterranean climatic zone, is growing each day. In addition to the greenhouse production particularly concentrated in the Mediterranean and Aegean regions, the increase in drip irrigation systems in field crop cultivation ensures the steady growth of the water-soluble fertilizer market. The size of the water-soluble fertilizer market in Turkey, which is thought to be 129,000 tons in 2020, is estimated to reach 135,000 tons and an average value of 125 million USD in 2021, which translates to an increase of 5% per annum.

Toros Agri, the pioneer in the specialty fertilizer industry in Turkey, is one of the most remarkable players in the field. Considering a 5% to 10% increase per annum, we expect the specialty fertilizer sales of Toros Agri to reach a volume between 75,000 to 93,000 tons/annum by 2025. This translates to an increase of revenues between 34.4 to 42.6 million USD

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**Type of opportunity**

Efficiency

### **Primary water-related opportunity**

Improved water efficiency in operations

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

An explanation of why this opportunity is considered strategic:

With the increasing water stress, improving water efficiency in our operations is a strategic opportunity for us, since we have water-intensive production activities. (e.g. fertilizer production, fruit production, hydro test, etc.). If we can't access the necessary amount & quality water, our operations will be affected adversely. Any measure we implement to achieve greater reduction in water withdrawal levels has multi-benefits like actual & potential future operating cost savings & reduced environmental impact while increasing our water security.

An explanation of the action to realize the opportunity:

To realize this opportunity, as a responsible corporate citizen, we have issued our Water Policy that includes principles & commitments. We have defined the roles and responsibilities of Top Management, Group Companies, employees & our partners. We have established an Environmental Working Group to develop water-related projects & comply with the principles & commitments mentioned in our Water Policy. At the asset level, we have started to measure & monitor critical water consumption and started to develop water-related projects.

A case study or example of the strategy in action:

As an example, to improve water efficiency in our operations, we are installing soil humidity sensors & meteorology stations (METOS) that measure soil moisture in irrigation systems in our orchards to use less groundwater & fresh surface water resources (preventing excessive & unnecessary irrigation). While making the irrigation program, we ensure the most efficient use of limited water by taking daily rainfall records, air & plant water consumption forecasts & soil moisture into account. We use drip irrigation & mini sprinkler systems. We had previously completed the installation of meteorology stations in all our orchards & in 2020, we have invested in humidity sensors in 6 orchards. We have also started to use Doktor, a digital agricultural tool. Digital agriculture has the potential to make agriculture more productive, more consistent & to use time & resources more efficiently. This brings critical advantages for farmers & wider social benefits around the world. It also enables organizations to share information across traditional industry boundaries to open up new opportunities.

In addition, Toros Agri's investment in Mersin Plant's Waste Water Treatment & Recovery Unit is ongoing & will be finalized by 2023.

### **Estimated timeframe for realization**

1 to 3 years

### **Magnitude of potential financial impact**

Low

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

Yes, an estimated range

**Potential financial impact figure (currency)**

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

100,573

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

301,720

**Explanation of financial impact**

By installing smart irrigation systems (Metos- humidity sensors and meteorological stations) and using digital agricultural tools (Doktar Farm Management System) in Alanar Fruit's orchards and Tekfen Agri's fields we expect to achieve 5% to 15% water savings resulting in 259.038 m3 to 777.113 m3 / year of potential savings.

By avoiding this water consumption, we created a monetary savings of USD 100,573 to 301,720 based on the average 2020 water price (DSI- General Directorate of State Hydraulic Works unit irrigation water price was used in calculation; 0.388 USD/m3). Meanwhile, as a result of increased water stress, we expect irrigation water unit prices will increase much more in the medium and long term.

## 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)**

Toros Agri Samsun Plant

**Country/Area & River basin**

Turkey

Other, please specify

Yesilirmak

**Latitude**

41.241734

**Longitude**

36.457503

**Located in area with water stress**

Yes

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

106,636

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

Much higher

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

0

**Withdrawals from brackish surface water/seawater**

102,476

**Withdrawals from groundwater - renewable**

0

**Withdrawals from groundwater - non-renewable**

0

**Withdrawals from produced/entrained water**

0

**Withdrawals from third party sources**

4,160

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

102,874

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

Much higher

**Discharges to fresh surface water**

0

**Discharges to brackish surface water/seawater**

102,874

**Discharges to groundwater**

0

**Discharges to third party destinations**

0

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

3,762

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

Much higher



### Please explain

Water withdrawal data from all sources are obtained via direct measurements. 3rd party sources represent the municipal supplier and there is no withdrawal from fresh surface water or any groundwater sources.

Water is only discharged to the sea once it is used for; cooling - without any processing & for domestic use – after being treated at 2 biological WWTPs. The amount of water discharged is obtained via direct measurement from a continuous measurement system & reported to the MoEU. There is no discharge to 3rd parties, the water we discharge is not used by other organizations.

Data provided in MLs are obtained through direct measurement. The withdrawal amount has increased by 26%, the discharge has increased by 25% and the consumption has increased by 83%. The reason behind the increase is due to the systemic shut-down of our Sulphuric Acid Plant for 1 month in 2019. In 2020 the plant worked in full capacity (%98) therefore the water volumes have increased considerably (In 2019, Samsun Plant's capacity utilization rate was %82).

While classifying the magnitude of change from previous year data, we consider the change up to +/- 5% as "about the same", 5% to 20% as "higher/lower", and above 20% as "much higher/lower".

Regardless of the changes in capacity utilization and production rates, we anticipate that the amount of water needed in cooling systems will increase with the climate-change-driven increase in temperatures, which will result in an increase of all volumes.

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### Facility reference number

Facility 2

### Facility name (optional)

Toros Agri Mersin Plant

### Country/Area & River basin

Turkey

Other, please specify

Tarsus/Goksu

### Latitude

36.819615

### Longitude

34.673121

### Located in area with water stress

Yes

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

3,347

### Comparison of total withdrawals with previous reporting year

Lower

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

0

**Withdrawals from brackish surface water/seawater**

0

**Withdrawals from groundwater - renewable**

3,347

**Withdrawals from groundwater - non-renewable**

0

**Withdrawals from produced/entrained water**

0

**Withdrawals from third party sources**

0

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

937

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

About the same

**Discharges to fresh surface water**

0

**Discharges to brackish surface water/seawater**

937

**Discharges to groundwater**

0

**Discharges to third party destinations**

0

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

2,410

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

Lower

**Please explain**

At our Mersin Plant, water withdrawal data is obtained via direct measurements. Water withdrawal only takes place from renewable groundwater sources.

Water is only discharged to the sea once it is treated at our wastewater treatment facility. The amount of water discharged is obtained via direct measurement. There is no discharge to third parties, nor is any water we discharge used by other organizations.

Data provided in megaliters are obtained through direct measurement. The withdrawal amount has decreased by 5.1%, the discharge amount has decreased by 2% and the consumption has decreased by 6.2%.

The main reason behind this decrease is the difference in scheduled maintenance activities between 2019 and 2020. The planned maintenance was performed in July and August of 2020, which are the months when we usually consume more water due to very high temperatures. Also, in 2020 the scheduled maintenance activity lasted longer than the one performed in 2019.

While classifying the magnitude of change from previous year data, we consider the change up to +/- 5% as "about the same", 5% to 20% as "higher/lower, and above 20% as much higher/lower.

Regardless of the changes in capacity utilization and production rates, we anticipate that the amount of water needed in cooling systems will increase with the climate-change-driven increase in temperatures, which will result in an increase of all volumes.

---

**Facility reference number**

Facility 3

**Facility name (optional)**

Toros Agri Ceyhan Plant

**Country/Area & River basin**

Turkey

Other, please specify

Ceyhan

**Latitude**

36.92355

**Longitude**

35.983394

**Located in area with water stress**

Yes

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

721

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

About the same

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

0

**Withdrawals from brackish surface water/seawater**

0

**Withdrawals from groundwater - renewable**

721

**Withdrawals from groundwater - non-renewable**

0

**Withdrawals from produced/entrained water**

0

**Withdrawals from third party sources**

0

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

108

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

About the same

**Discharges to fresh surface water**

0

**Discharges to brackish surface water/seawater**

108

**Discharges to groundwater**

0

**Discharges to third party destinations**

0

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

613

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

About the same

**Please explain**

Water withdrawal and discharge data are obtained via direct measurements. Water withdrawal only takes place from renewable groundwater sources.

Water is discharged to the sea once it is treated at our wastewater treatment facility. And some of the withdrawn water is given to third party neighboring coal storage facilities who recycle this water and use it for washing the storage area.

Water withdrawal, discharge, and consumption levels have all remained about the same with a slight decrease of 3.7 %. The reason for this slight decrease in all water aspects

is due to a reduction in the utilized capacity of the plant from 85% in 2019 to 82% in 2020.

While classifying the magnitude of change from previous year data, we consider the change up to +/- 5% as "about the same", 5% to 20% as "higher/lower, and above 20% as much higher/lower.

Regardless of the changes in capacity utilization and production rates, we anticipate that the amount of water needed in cooling systems will increase with the climate-change-driven increase in temperatures which will result in an increase in all volumes.

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**Facility reference number**

Facility 4

**Facility name (optional)**

Tekfen Agri's Karaman Plantation

**Country/Area & River basin**

Turkey

Other, please specify

Beysehir Lake

**Latitude**

37.448333

**Longitude**

33.415833

**Located in area with water stress**

Yes

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

3,972.54

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

Much higher

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

255.32

**Withdrawals from brackish surface water/seawater**

0

**Withdrawals from groundwater - renewable**

3,716.8

**Withdrawals from groundwater - non-renewable**

0

**Withdrawals from produced/entrained water**

0

**Withdrawals from third party sources**

0.42

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

993

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

Much higher

**Discharges to fresh surface water**

0

**Discharges to brackish surface water/seawater**

0

**Discharges to groundwater**

993

**Discharges to third party destinations**

0

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

2,980

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

Much higher

**Please explain**

This is the Karaman plantation of Tekfen Agri. The plantation area is 3,511 decares & 16,270 tons of potato & 1,440 tons of wheat were produced here in 2020.

This plantation is responsible for 60.6% of water withdrawals within Tekfen Agri operations.

When compared to the previous reporting year, withdrawal, discharge & consumption volumes have all increased by 85%. The 3 reasons for the increase are:

1. 47% increase in the plantation area compared to 2019, which resulted in more water use.
2. In 2019 this plantation was only used for potato farming, whereas in 2020 after potato crops were raised, wheat was planted in the same area, which resulted in more water use.
3. In November & December there was a dry season which resulted in more water consumption

The rainwater withdrawal value is calculated using meteorological data (average precipitation rate mm/region was multiplied by the total area at relevant regions) & UN FAO method was used to calculate the effective rainfall by the plants annually. 25% of irrigation water was estimated as the discharge rate of the plantation since the plants can't absorb all the water.

Classification: Up to +/- 5% "about the same", 5% to 20% "higher/lower, above 20% much higher/lower.

As we are using smart irrigation (Metos) & farm management (Doktar) systems, we expect our water withdrawal/decare to reduce in the future. However, if the plantation area increases, the volumes may also increase slightly.

## 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**

Not verified

### Water withdrawals – volume by source

---

**% verified**

Not verified

### Water withdrawals – quality

---

**% verified**

76-100

### What standard and methodology was used?

It is a legal obligation in Turkey to have all the water that is used for WASH services analyzed. This analysis is performed periodically according to the Regulation on Waters that Will be Used for Human Consumption. Therefore, the quality of all water that is used for WASH services is verified through 3rd party analyses.

Process water is also analyzed for the following parameter:

Daily analysis: pH, conductivity, temperature, silisium

Weekly analysis: Active Chlorine, P2O5, Florine, Dissolved Oxygen, Suspended Solids, and CO2

Seawater is also analyzed daily on the above-mentioned parameters plus total hardness and hydrazine.

In our fertilizer plants, routine controls are performed in our facility laboratories.

3rd party analyses are performed for environmental controls and environmental permits.

The analyses are performed according to the standards published by:

- US Environmental Protection Agency (EPA)
- Turkish Standards Institute (TSE)

We also use Hach Lange speed test kit methodologies.

## Water discharges – total volumes

---

### % verified

1-25

### What standard and methodology was used?

The wastewater discharged to the sea in Samsun, amounting to 96.14% of our total water discharge as a Group, is monitored in real-time by the Ministry of Environment and Urbanization (MoEU) through the Continuous Wastewater Monitoring System as per Continuous Wastewater Monitoring Tracking Systems Regulation.

This amount of discharge is due to Sulphuric Acid, STG, Ammonia Storage Unit, and Phosphoric Acid Units. All the discharge waters of the mentioned units are collected and delivered to the Deep Sea Discharge System. Discharge water is continuously pumped into the system. The water is continuously monitored by the MoEU. Continuous samples are taken on the final line where all the discharge waters of the facilities are collected. The parameters measured in the system are pH, conductivity, dissolved oxygen, flow rate, and temperature. Therefore, water discharge volume, destination, treatment method, quality parameters are continuously verified by MoEU.

The verification rate is 25% as only 1 out of 4 facilities has verified water data, however, this facility is responsible for 98.06% of total discharges of these 4 facilities.

## Water discharges – volume by destination

---

### % verified

1-25

### What standard and methodology was used?

The wastewater discharged to the sea in Samsun, amounting to 96.14% of our total water discharge as a Group, is monitored in real-time by the Ministry of Environment and Urbanisation (MoEU) through the Continuous Wastewater Monitoring System as per Continuous Wastewater Monitoring Tracking Systems Regulation.

This amount of discharge is due to Sulphuric Acid, STG, Ammonia Storage Unit, and Phosphoric Acid Units. All the discharge waters of the mentioned units are collected and delivered to the Deep Sea Discharge System. Discharge water is continuously pumped into the system. The water is continuously monitored by the MoEU. Continuous samples are taken on the final line where all the discharge waters of the facilities are collected. The parameters measured in the system are pH, conductivity, dissolved oxygen, flow



rate, and temperature. Therefore, water discharge volume, destination, treatment method, quality parameters are continuously verified by MoEU.

The verification rate is 25% as only 1 out of 4 facilities has verified water data, however, this facility is responsible for 98.06% of total discharges of these 4 facilities.

## Water discharges – volume by treatment method

---

### % verified

1-25

### What standard and methodology was used?

The wastewater discharged to the sea in Samsun, amounting to 96.14% of our total water discharge as a Group, is monitored in real-time by the Ministry of Environment and Urbanisation (MoEU) through the Continuous Wastewater Monitoring System as per Continuous Wastewater Monitoring Tracking Systems Regulation.

This amount of discharge is due to Sulphuric Acid, STG, Ammonia Storage Unit, and Phosphoric Acid Units. All the discharge waters of the mentioned units are collected and delivered to the Deep Sea Discharge System. Discharge water is continuously pumped into the system. The water is continuously monitored by the MoEU. Continuous samples are taken on the final line where all the discharge waters of the facilities are collected. The parameters measured in the system are pH, conductivity, dissolved oxygen, flow rate, and temperature. Therefore, water discharge volume, destination, treatment method, quality parameters are continuously verified by MoEU.

The verification rate is 25% as only 1 out of 4 facilities has verified water data, however, this facility is responsible for 98.06% of total discharges of these 4 facilities.

## Water discharge quality – quality by standard effluent parameters

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### % verified

51-75

### What standard and methodology was used?

The wastewater discharged to the sea in Samsun, amounting to 96.14% of our total water discharge as a Group, is monitored in real-time by the Ministry of Environment and Urbanisation (MoEU) through the Continuous Wastewater Monitoring System as per Continuous Wastewater Monitoring Tracking Systems Regulation.

This amount of discharge is due to Sulphuric Acid, STG, Ammonia Storage Unit, and Phosphoric Acid Units. All the discharge waters of the mentioned units are collected and

delivered to the Deep Sea Discharge System. Discharge water is continuously pumped into the system. The water is continuously monitored by the MoEU. Continuous samples are taken on the final line where all the discharge waters of the facilities are collected. The parameters measured in the system are pH, conductivity, dissolved oxygen, flow rate, and temperature. Therefore, water discharge volume, destination, treatment method, quality parameters are continuously verified by MoEU.

For Ceyhan and Mersin Plants, water discharge quality is monitored as per the Turkish Water Pollution Control Regulation. The analyses are conducted on bi-monthly periods. The analyzed parameters are; BOD, Suspended Solids, Oil, and grease, P, Cr, Pb, CN, Cd, Fe, F, Cu, Hg, SO<sub>4</sub>, Total Kjeldahl Nitrates, TDF, COD, pH, etc.

The verification rate is 75% as 3 out of 4 facilities have verified water data, however, these 3 facilities are responsible for 99.05% of total discharges of these 4 facilities.

### Water discharge quality – temperature

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#### % verified

1-25

#### What standard and methodology was used?

The wastewater discharged to the sea in Samsun, amounting to 96.14% of our total water discharge as a Group, is monitored in real-time by the Ministry of Environment and Urbanisation (MoEU) through the Continuous Wastewater Monitoring System as per Continuous Wastewater Monitoring Tracking Systems Regulation.

This amount of discharge is due to Sulphuric Acid, STG, Ammonia Storage Unit, and Phosphoric Acid Units. All the discharge waters of the mentioned units are collected and delivered to the Deep Sea Discharge System. Discharge water is continuously pumped into the system. The water is continuously monitored by the MoEU. Continuous samples are taken on the final line where all the discharge waters of the facilities are collected. The parameters measured in the system are pH, conductivity, dissolved oxygen, flow rate, and temperature. Therefore, water discharge volume, destination, treatment method, quality parameters are continuously verified by MoEU.

The verification rate is 25% as only 1 out of 4 facilities has verified water data, however, this facility is responsible for 98.06% of total discharges of these 4 facilities.

### Water consumption – total volume

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#### % verified

Not verified

### Water recycled/reused

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**% verified**

Not verified

## 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 Reference to international standards and widely-recognized water initiatives Company water targets and goals Commitment to align with public policy initiatives, such as the SDGs Commitments beyond regulatory compliance Commitment to water-related innovation Commitment to stakeholder awareness and education Commitment to water stewardship and/or collective action Acknowledgement of the human right to water and sanitation Recognition of environmental linkages,	Rationale for the scope selected: Water is used for cooling, production, irrigation, testing, cleaning, and hygiene purposes during Tekfen's activities. Due to the global importance of water, Tekfen Holding has published its Water Policy that binds Tekfen Group Companies. Therefore, Company-wide selection has been made. Defining water as the source of life itself, we operate in business areas such as agri-industry and contracting where water is a vital source for the continuation of our operations together with the need to maintain WASH service provision for all our employees. This is why we implement our water policy throughout our entire company including our construction projects. Overview of the policy content: Tekfen Holding has a company-wide Water Policy that defines the Group's water-related principles and commitments. On the Water Policy that is undersigned by our CEO, we are committed to identify and assess water-related risks; integrate water risks into its business strategy, manage and report water risks; set meaningful goals and targets at business units and implement innovative business solutions to achieve these goals and targets; monitor, measure and analyze water performances and continually reduce its water footprint. Our publicly available Water Policy can be found on our

		for example, due to climate change	<p>website and outlines our objective and lays out the path leading to fundamental water-related aspects such as setting long-term targets, supporting water stewardship at all our operational locations, enabling innovation that achieves water performance improvement, etc.</p> <p>Tekfen Holding takes climate change and water-related impacts very seriously and continuously updates its policies with relevant and up-to-date issues to become a leading sustainable company.</p> <p> 1</p>
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 1Tekfen Water Policy.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
Board Chair	<p>All of the final decisions related to water issues are approved by the Board of Directors, which is led by the Chairman of the Board. Some of the responsibilities of our Board Chairman include approval of targets and goals, strategies, management plans of identified risks and opportunities.</p> <p>Board Members are directly informed on water-related issues in Tekfen Holding Board Meetings. One of Tekfen's values stated by the Chairman of the Board is "the protection of nature and the environment". The Chairman of the Board follows water-related issues closely.</p> <p>Therefore, we can say that our Chairman of the Board is the highest responsible person for water-related issues.</p> <p>In 2020, one major water-related decision approved by our Board Chair is starting a cooperation with TUBITAK (Scientific and Technological Research Council of Turkey) to develop projects on sustainability issues like water management and climate change.</p> <p>Another decision is the approval of the investment in Doktor Farm Management Systems in Tekfen Agri. With the help of this system, Tekfen Agri is able to monitor the plantations closely. One of the benefits of this system is the use of compiled data for determining the water needs of the plantations to prevent excess irrigation thus</p>

	reducing water consumption.
Board-level committee	<p>Committees have been set up at the Company to assist the BoD with proper fulfillment of its duties and responsibilities.</p> <p>Established as per the legislation, two of these committees namely Early Detection of Risk Committee (RC) and Corporate Governance Committee (CGC) assist the BoD on water &amp; climate-related issues. BoD, RC, and CGC's water-related responsibilities include developing strategies and overseeing the management of water-related risks and opportunities.</p> <p>RC is led by an independent member of our board and another member of our board serves as the member of the RC. The RC meets every two months and, in these meetings, the CEO, Risk Director, Vice-Presidents, and Risk Managers of the Group Companies are also present. The RC identifies risks (including water-related risks) that may threaten the existence, development, and continuation of the Company and takes the measures necessary to prevent them and acts to manage the risks. Group Companies submit their periodic reports for monitoring the risks and RC reviews the risk documents every two months and refer the major risks and their own comments and assessments to the BoD. Risks are considered by the BoD, which may instruct Tekfen Group companies as to how particular risks are to be managed.</p> <p>The CGC consists of two independent Board Members and Investor Relations Director. CGC undertakes studies regarding in-house arrangements and changes concerning the understanding, adoption, and implementation of corporate governance principles by the Company employees and submits the results of these studies to the Board of Directors. Therefore, all of the water-related issues except risk management are within the scope of CGC.</p> <p>In order to make sustainability a part of the corporate governance concept, the Sustainability Committee was founded to serve under the CGC. The Committee's works and progress are reported to the BoD annually. Climate and water-related issues are also addressed by the BoD on a special agenda.</p>

## W6.2b

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

Frequency that water-related issues are a scheduled agenda item	Governance mechanisms into which water-related issues are integrated	Please explain
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<p>Row 1</p>	<p>Scheduled - some meetings</p>	<p>Monitoring implementation and performance Overseeing acquisitions and divestiture Overseeing major capital expenditures Providing employee incentives Reviewing and guiding annual budgets Reviewing and guiding business plans Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding strategy Reviewing and guiding corporate responsibility strategy Reviewing innovation/R&amp;D priorities Setting performance objectives</p>	<p>Board Members are informed regularly on climate- and water-related issues in the form of global trends as well as corporate performance, business plans, risks, and opportunities. CEO has the executive power for important issues such as strategy, risks/opportunities, targets, etc.</p> <p>Holding Risk Committee (RC), which is chaired by one of the independent Board Members, meets every two months. High risks evaluated and approved in the Risk Inventory by each Group Company's Board are also directly presented to the Holding Board for risk action determination after they are reviewed by the RC.</p> <p>In the reporting year, our climate and water-related risks were presented to the RC in several meetings and the risks which score higher than 16 according to our risk assessment procedure, were also presented to the BoD. In September 2017, the Sustainability Committee (SC) was established and is being chaired by the Deputy CFO who is also a member of the Top Management.</p> <p>In 2019 the Environment Working Group was established as one of the 5 working groups that report to the SC.</p> <p>The Sustainability Committee is also a subcommittee of the Corporate Governance Committee. Sustainability Committee reports critical issues at least once a year to the Corporate Governance Committee. The Corporate Governance Committee reviews the annual outcomes and recommendations presented by the Sustainability Committee and notifies the Board of Directors for reviewing and guiding strategy, major action plans, policies, etc. The Board of Directors reviews and guides business plans and approves annual budgets.</p> <p>Sustainability Committee sets performance targets and/or goals for climate change and water management while also monitoring the realization of climate change and water-related objectives on behalf of the Board of Directors. Changes in emissions &amp; water usage data are also reported to</p>
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			<p>the Board of Directors annually.</p> <p>The consolidated budget of Tekfen Holding is approved by the Board of Directors, hence the BoD also approves all of the investments of the Group Companies.</p> <p>One of these investment decisions was to build a new wastewater treatment and recovery plant at Toros Agri Mersin facility. This new plant will work in a fully closed cycle and convert high ammonia and nitrate-containing condensate waters into ammonium nitrate (18-25%) solution and low-conductivity (<math>\leq 0.1 \mu\text{S}</math>) demineralized water. This recycling plant also has zero discharge.</p> <p>This process is very effective in terms of ammonia removal and ammonium nitrate recycling and is a very trustworthy and secure system.</p>
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### 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 Executive Officer (CEO)

**Responsibility**

Both assessing and managing water-related risks and opportunities

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

More frequently than quarterly

**Please explain**

Corporate structure and reporting line:

Our CEO presides over management. The CEO reports to the Holding Board of Directors and the CEO's contact point in the Holding Board of Directors is the Board Chair. CEO has the highest management responsibility for water. The CEO is a permanent participant in BoD meetings which are held at least 4 times a year. Critical water-related issues are brought to the BoD agenda through the CEO.

Water-related responsibilities:

Water-related goals and strategic directions are determined by Board Chair with the collaboration of BoD. As the head of management, the CEO's main responsibility is to

turn these high-level goals and strategic decisions into reality. The CEO focuses on water-related risks& opportunities, investments in water stress, water intensive companies, water-related strategic topics, improvement options, etc. CEO's signature is also included in the Water Policy, where principles & commitments regarding water management are disclosed.

## 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	In 2019 we have introduced a new performance assessment system, in which we use software namely "Pi Performance Management System" which is developed for Tekfen. In this new system, water-related issues are also one of the KPI's of almost all white-collar employees. Details are given under question W6.4a.

## W6.4a

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

	Role(s) entitled to incentive	Performance indicator	Please explain
Monetary reward	Other C-suite Officer Vice President responsible for the Production of Fertilizer	Reduction of water withdrawals	<p>Water is vital for our direct operations and is used intensively at Chemical Industry Group for mainly cooling of fertilizer plants and process as well.</p> <p>In Toros Agri, the Vice President responsible for the Production of Fertilizer has a target to reduce water withdrawal by 3% in a year.</p> <p>The rate of achievement of this target directly affects the lower-level executives, as all of the targets are interconnected. The target and its level of achievement are controlled by a software program.</p> <p>Achievement of annually set/revised targets and the Company's success directly contribute to the Vice President's performance score, resulting in monetary reward in the form of an</p>



			increased salary or a bonus.
Non-monetary reward			

## 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, other

### 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?**

Tekfen Group's main strategy is determined by the Holding BoD. Group Companies prepare 10 and 3-year strategic plans, which are in line with this strategy. These strategic plans are approved by the Group Vice Presidents and CEO. The responsibility for the implementation of the approved plans lies with the General Managers. Therefore, all practices are consistent with Holding's strategy.

Compliance with the strategy determined by the Holding is carried out by the Internal Audit Departments reporting to the BoD. Group Vice Presidents and CEO are also responsible for ensuring compliance.

Principles & commitments related to water are published in the Water Policy. Compliance with the Water Policy is the responsibility of each company's General Manager.

It is the responsibility of HSE Department Managers in the Company/Workplaces to ensure compliance with water-related policies, legal regulations & other conditions determined by Tekfen Holding. The Holding, periodically conducts HSE audits to ensure compliance. The result of the audit carried out by the Holding HSE Coordinator is also reported to the CEO. The follow-up of the actions determined after the audit is carried out by the Holding HSE Coordinator. The CEO is informed about the actions that are not completed on time.

If inconsistencies prevail, issues are escalated to Group Company GM's and Group VPs with proposals to resolve them. If the inconsistencies cannot be resolved at this level, the situation is reported to the CEO.

## 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)

 Tekfen\_Annual\_Report\_EN\_2020\_Web.pdf

## W7. Business strategy

### W7.1

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

	Are water-related issues integrated?	Long-term time horizon (years)	Please explain
Long-term business objectives	Yes, water-related issues are integrated	11-15	<p>Baseline water stress, flood occurrence, drought severity, groundwater stress, regulatory and reputational risks, current and future market opportunities are mainly used to determine long-term business objectives.</p> <p>We used the predictions of international tools (e.g. WRI Aqueduct Water Risk Atlas) and studies while setting our goals, strategies, and financial planning. We have determined that the development of new fertilizers suitable for future conditions is vital for us. Another concern is access to good quality and the necessary amount of water, stakeholder pressure, and brand value loss because of water-related issues. Therefore, water-efficient production, building environmentally friendly projects are other long-term objectives for us.</p> <p>For example, we have published Water Policy in 2017 which defines principles and commitments including water risk assessment, integration of risks into strategy, goal, and target setting for water management. We have set an objective to invest in R&amp;D projects and established an R&amp;D Center to facilitate the development of water-soluble fertilizers requiring less water in the usage phase. Commercialization of these products will provide us a new market. Moreover, Contracting Group has committed to develop all-new building projects with LEED Green Building certification to achieve value chain water efficiency.</p> <p>For this reason on average 11-15 years was chosen for</p>

			the time horizon for water-related issues affecting our business objectives.
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	11-15	<p>We developed our Sustainability Strategy in 2018 which includes water management &amp; published in the first Sustainability Report covering 2018 operations. Our Corporate Risk Management includes risks related to water security. We have established an HSEQ Coordination Group formed by company's HSE representatives. Head of HSEQ Coordination Group reports HSE related issues, including water security, regularly to the Sustainability Committee and critical issues are reported to the Board of Directors via Corporate Governance Committee for action.</p> <p>Water security issues are managed more systematically since the launch of our Water Policy. Water stressed areas are monitored and analyzed, new technology investments are made to minimize water consumption in the facilities and potential future fee liabilities (e.g. to increase water reuse in Samsun Facility, renewal of potable water system to prevent leakages in Ceyhan Facility, installation of humidity sensors and meteorological stations (METOS) in Tekfen Agri orchards etc.).</p> <p>We try to prevent loss in revenue due to anticipated higher water costs over longer term. We also made a large investment in an R&amp;D Center in our Mersin plant. We anticipate consumer behavior shift to more efficient fertilizers using less water. Our intention is to exploit this potential market via R&amp;D activities held in this center. We also aim to realize a positive linkage with long-term carbon emissions reductions by enabling energy efficiency in usage phase.</p>
Financial planning	Yes, water-related issues are integrated	11-15	<p>Water-related issues are always considered in our financial planning &amp; will continue to remain so. In our workplaces, we consider the costs of water quality analysis, wastewater treatment plants, wastewater quality analysis, and necessary WASH services. In our facilities, we make constant investments in new technology to minimize our water footprint. We do this because we anticipate higher water prices in the future.</p> <p>By replacing membrane at demi water facility, renewal of compressors, collection, and reuse of surrounding</p>

			<p>process waters in Samsun Plant, we will save around 1000 ML of water per year.</p> <p>In Tekfen Agri, we are investing in Metos TR Systems which involves, installation of fully sensed main meteorological stations in all of our plantations, parcel-based soil humidity sensor integration &amp; plant protection applications monitoring.</p> <p>All these efforts will decrease our water cost. We used the predictions of the calculation tools &amp; studies while setting our goals, strategies &amp; financial planning. The studies &amp; risk assessment tools give us a long-term perspective. This is why 11-15 years was chosen as the time horizon for water-related issues. The establishment of a new wastewater treatment plant in Mersin facility was also included in the investment plan of Toros Agri with the aim of maximizing our water recycling ratio &amp; therefore reducing withdrawal. This new plant is included in our financial planning with a CAPEX estimation of 10 M USD.</p>
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## 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)**

-11.95

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

7.34

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

282.2

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

15

**Please explain**

Water-related risks due to emerging regulation, financial impacts, climate change, stakeholder expectation and opportunities such as financial saving with water recycling are very important for Tekfen Holding operations.

The stated % change values are directly calculated based on our financial data. Our

water-related CAPEX has decreased by 11.95% due to the decrease in water-related investments in Tekfen Agri. In 2020 Tekfen Agri made less irrigation-related investments like water wells, irrigation ponds, etc.

The 282.20 % increase in our OPEX is due to new plantation investments of Tekfen Agri & reduced amount of rainfall which resulted in an increase in water purchased from 3rd parties. The increase in OPEX is also a result of increase in water prices.

We expect water-related CAPEX to increase by 7.34% due to planned investments.

Moreover, in line with our business strategy in Tekfen Agri agricultural operations, our water-related OPEX is also likely to increase by 15%.

### W7.3

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

	Use of climate-related scenario analysis	Comment
Row 1	Yes	

### W7.3a

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

Yes

### W7.3b

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

	Climate-related scenarios and models applied	Description of possible water-related outcomes	Company response to possible water-related outcomes
Row 1	Other, please specify RCP 4.5	We considered IPCC RCP 4.5 as a realistic scenario for the impacts of climate change in Turkey.  According to RCP 4.5. scenario, 2013-2040, 2041-2070, 2071-2099 are considered as 3 defining time periods. According to the scenario, Turkey will face a 2 to 3 degrees Celsius increase in mean temperature during 2013-2040 and up to 4 degrees Celsius in later	The projections of RCP 4.5 climate scenario & its possible implications especially in southern Turkey, have encouraged us to evaluate water risks & adjust our strategy over long term (5-30 years).  As a result, we have invested in an R&D Center in Mersin to develop water-soluble special fertilizers that can be used with modern irrigation methods such as drip & rain irrigation. Via this

		<p>periods. Reductions in mean precipitation are also expected.</p> <p>We consider these impacts especially important in our Agricultural Production Group and Chemical Industry Group. Our direct operations (Tekfen Agri orchards) and value chain (fruit suppliers and farmers who use our fertilizers) will be directly impacted as a limited amount of water resources available will need to be used more efficiently.</p> <p>According to the RCP 4.5 scenario, our Mersin and Ceyhan Plants are likely to face pressuring water stress beyond 2046.</p>	<p>investment, we are looking to capitalize on the impacts of climate change in Turkey.</p> <p>Climate change will have a considerable impact on agriculture. In order to support the resilience of the sector, as part of Tekfen Agri's first international collaboration under the EU Horizon 2020 Programme, we participate in PRIMA (Partnership For Research and Innovation in the Mediterranean Area) GENDIBAR Project, aiming to ensure sustainable agricultural practices in barley production. Increasing productivity while achieving energy &amp; water savings during production. Tekfen Agri is the only Turkish company engaged in this project. This project started in 2019 and will end in 2022.</p> <p>We evaluated only Turkish operations because our only overseas operations are the contracting projects of Tekfen Construction which last about 3 years. As our climate-related scenario analysis impacts our long-term strategies, we do not include Tekfen Construction projects under this assessment. However, these projects are assessed individually at the design phase against any climate-related impacts under the detailed EIA study.</p>
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## W7.4

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

Row 1

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

Yes

#### Please explain

We use an internal water price, especially for our water-related risk analysis. Along with basic WASH services provision needs, water is an indispensable raw material for our operations. Water is being used in fertilizer production plants in Samsun, Mersin, and Ceyhan. Water is also being used for producing stone fruit as well as saplings in Tekfen

Agri premises spreading across Western Turkey.

As a result of the fact that water stress is increasing in Turkey, a potential increase in (or the introduction of) water prices are likely to be implemented.

We use an internal water price of min 0.39 USD and max. 1.56 USD to calculate the potential impact of this risk. We revise our calculations annually using the prices published by ISKI (Istanbul Water and Sewerage Administration).

## W8. Targets

### W8.1

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

	Levels for targets and/or goals	Monitoring at corporate level	Approach to setting and monitoring targets and/or goals
Row 1	Company-wide targets and goals Business level specific targets and/or goals Activity level specific targets and/or goals Site/facility specific targets and/or goals	Targets are monitored at the corporate level Goals are monitored at the corporate level	<p>Tekfen Holding considers water as one of the most valuable resources on our planet. Water is being used for cooling, cleaning, manufacturing, irrigation, testing, sanitation &amp; hygiene purposes in our operations. Tekfen identifies &amp; assesses water-related risks &amp; opportunities, integrates water risks into its business strategy, sets meaningful goals &amp; targets at business units &amp; implements innovative business solutions to achieve these goals &amp; targets. The water management principles are publicly announced via our Company-wide Water Policy (WP) encouraging Tekfen Group Companies to set targets &amp; goals in line with the commitments &amp; principles.</p> <p>Monitoring, measuring &amp; analyzing water performances &amp; continually reducing the water footprint is requested on our WP. The goals &amp; commitments determined by the WP are followed by Group Companies. Tekfen sets policies &amp; goals which are supported by the business units' policies &amp; aim at reaching company-wide goals &amp; targets.</p> <p>Targets &amp; goals are set by individual businesses based on activity type, risks &amp; opportunities of the business units, activities, sites/ facilities.</p> <p>Depending upon their sectors &amp; geographical locations, the</p>

			<p>Group Companies have different sensitivity levels for each water-related aspect. Business units generally set targets &amp; goals in parallel to their specific risks &amp; opportunities, location, environment, regulatory requirements, etc. While identifying &amp; realizing water-related forward-looking strategic goals &amp; targets, we consider climate scenario projections (IPCC RCP 4.5), WRI Aqueduct Risk Atlas scenarios, Company/ Site-specific risks &amp; opportunities, etc.</p> <p>Company-wide goals and targets (e.g. provision of %100 safe-reliable potable water to all our employees including subcontractors, reduction of water withdrawals from groundwater) are proposed and elaborated by Environmental Working Group, making use of scenarios and risks identified with our risk analysis tools and decided upon by our CEO.</p> <p>Business level goals (e.g. prevention of nitrate pollution by raising awareness of fertilizer application to the soil) and targets (e.g. implementation of smart irrigation system to %100 of orchards) are determined by the Company's Management and approved by Company's General Manager. Site/facility level targets (e.g. % 3 reductions in total water withdrawal) are determined by the Site/Facility's interdisciplinary working group and approved by Site/Facility's top management. Important achievements are reported also to the CEO, and /or included in Tekfen's corporate communications, e.g. the annual report, sustainability report.</p> <p>All water-related goals &amp; targets are monitored at the corporate level (both Group Company &amp; Holding Headquarters).</p>
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## 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 withdrawals



**Level**

Company-wide

**Primary motivation**

Risk mitigation

**Description of target**

Target: To reduce withdrawals of renewable groundwater by 10% with respect to 2019.

Importance: Groundwater supports rivers, lakes, and wetlands, especially through drier months when there is little direct input from rainfall and it can be essential to the health of wildlife and plants that live in the water.

Rationale: 59% of the total amount of water withdrawn (excluding seawater) in Tekfen is renewable groundwater, which is used especially in the chemical industry and agricultural production. With increasing water stress, stakeholder pressure on renewable groundwater use is expected to increase in the future. Therefore, we have selected this target to reduce our impact on renewable groundwater.

This target is has been achieved via the implementation of smart irrigation systems in the plantations of Tekfen Agri and the use of reuse/recycled water in the chemical industry.

**Quantitative metric**

% reduction of water withdrawals from groundwater

**Baseline year**

2019

**Start year**

2019

**Target year**

2020

**% of target achieved**

100

**Please explain**

Although our target was to reduce groundwater withdrawals by 10%, we have reduced our groundwater withdrawal volumes by 46.3% which means we have over-achieved this target. The implementation of smart irrigation systems in the plantations of Tekfen Agri and the increase in the amount of reuse/recycled water in the chemical industry are among the reasons for this decrease in the amount of water withdrawn from the renewable groundwater.

**Target reference number**

Target 2

**Category of target**

Water use efficiency

**Level**

Business activity

**Primary motivation**

Recommended sector best practice

**Description of target**

Target: To implement smart irrigation systems in 100% of Tekfen Agri's orchards.

Importance: Tekfen has orchards in 11 different locations with a total area of 6576 decares, using 39% of the total water withdrawn (excluding seawater). Water, which is a major input in agriculture has vital importance for Tekfen, hence the efficient use of existing water is of utmost importance for us.

Monitoring weather & measuring soil moisture levels are key factors for the success of agricultural operations. Managing irrigation with the meteorological stations & humidity sensors gives us a greater insight into protecting our water resources. The weather stations predict the micro-climate in real-time by sensing moisture in the air, changes in temperature & wind speed amongst other indicators. Smart irrigation systems are a recommended sector best practice.

Rationale: Monitored at Tekfen orchards (business) since the target related to the completion of smart irrigation system at Tekfen's orchards.

**Quantitative metric**

Other, please specify

% of orchards that have implemented smart irrigation systems

**Baseline year**

2019

**Start year**

2019

**Target year**

2023

**% of target achieved**

82.18

**Please explain**

The above-mentioned orchards are operationally controlled by Tekfen Agri. The total area of Tekfen Agri's orchards is 6576 decares. In 5404 decares which makes 82.18% of the total orchard area, we have implemented smart irrigation systems.

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**Target reference number**

Target 3

**Category of target**

Water withdrawals

**Level**

Site/facility

**Primary motivation**

Increase freshwater availability for users/natural environment within the basin

**Description of target**

Target: To reduce water withdrawals by 3% with respect to 2019 in Toros Agri Mersin Plant.

Importance: Our Mersin plant uses groundwater for cooling, but in Mersin region with the increasing water stress, industrial facilities that have water-intensive production processes are facing reactions from local people especially when there is not enough freshwater for agricultural production. Therefore, it is of utmost importance to reduce the use of groundwater continuously.

Rationale: In order to achieve this target, we have increased the diameter of the cooling water return pipe from DN100 to DN150, increasing the amount of recycled water. Additionally, scheduled stops are scheduled during the hottest months in order to reduce the amount of cooling water

**Quantitative metric**

% reduction in total water withdrawals

**Baseline year**

2019

**Start year**

2019

**Target year**

2020

**% of target achieved**

100

**Please explain**

Total water withdrawn in Toros Agri Mersin Facility has reduced from 3,525.73 ML in 2019 to 3,347.18 ML in 2020, which translates to a decrease of 5.1%. With a decrease of 5.1%, we have over-achieved our target.

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**Target reference number**

Target 4

**Category of target**

Water recycling/reuse

**Level**

Company-wide

**Primary motivation**

Water stewardship

**Description of target**

Target: To increase the percentage of total reused/recycled water to 5% with respect to total withdrawals until the end of 2025.

Importance: With increased water stress levels in water basins, it is becoming more and more important for the water withdrawn to be used more than once. Especially in our fertilizer production plants and permanent facilities of Tekfen Agri, recycling/reusing the withdrawn water will help reduce the water stress in the basin.

Rationale: We are trying to reach this target by trying to increase the quality of discharge water of treatment units and categorizing the water in Tekfen construction as green-grey and blue water.

**Quantitative metric**

% increase in water use met through recycling/reuse

**Baseline year**

2019

**Start year**

2019

**Target year**

2025

**% of target achieved**

20

**Please explain**

In 2019 recycled-reused water to total withdrawal ratio was 2.75%. In 2020 this ratio was up to 3.2%.

The % of target achieved value is calculated as:  $((3.2-2.75)/(5-2.75)) \times 100=20\%$

## W8.1b

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

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### Goal

Providing access to safely managed Water, Sanitation and Hygiene (WASH) in workplace

### Level

Company-wide

### Motivation

Risk mitigation

### Description of goal

Goal: To provide 100% safe & reliable potable water to all our employees including subcontractors.

Importance: Our employees are the most valuable asset of Tekfen and we commit to provide good quality water for them. It is our responsibility to provide safe potable water to our employees as it is recognized as a basic human right and a cost-effective measure of reducing disease. Especially during the pandemic period, it has been proven once again how important WASH services are.

Implementation: This goal is monitored at the Holding level since the target is related to the entire plant/facilities/ sites. The water samples which are taken from different usage points are sent to the accredited laboratories & tested in terms of chemical & microbiological parameters. As a quantitative metric, we use the ratio of the tests in compliance with the legal regulations. To calculate the metric, we divide the number of tests in compliance with the legal requirements by the total number of tests.

### Baseline year

2019

### Start year

2019

### End year

2020

### Progress

This is a year-on-year rolling goal that was active in 2020. We monitor our performance monthly. To make sure that all of our employees use safely managed drinking water services, we test drinking water in all of our facilities regularly. In 2020, all potable water test results were in line with legal standards for potable water, meaning the achievement

rate was 100%, and all of our employees had access to safely managed drinking water services.

Tekfen has an HSE Management System. Providing good quality and sufficient amounts of drinking and utility water to employees is among our minimum responsibilities. We expect the same approach from all Tekfen Group Companies.

The quality of the water provided to the employees is evaluated by the results of the chemical and microbiological tests performed by accredited laboratories, where 100% compliance with legal limits is targeted.

Compliance with this requirement is checked through audits carried out by the Head Office or the Holding.

For this goal, our threshold of success is 100% compliance with the test results with legal limits, which we have reached in 2020.

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### **Goal**

Engaging with customers to help them minimize product impacts

### **Level**

Business

### **Motivation**

Reduced environmental impact

### **Description of goal**

Goal: To prevent nitrate pollution by raising awareness of fertilizer application to the soil.

Importance: Due to excess application of fertilizers, there is a risk of nitrate pollution in groundwater sources, which is likely to get higher over the medium term. High concentrations of nitrates in the water table can cause drinking water to become toxic.

Implementation: With the aim of preventing nitrate pollution as well as supporting sustainable agricultural practices, Toros Agri launched a Mobile Training Bus (Toros Academy) & Mobile Technical Team project in 2018 covering Turkey's predominantly agricultural regions and which has begun spreading the "4R" (the four "rights" of good fertilizer practices: the right source, the right rate, the right time, and the right place) practices/awareness among farmers. By doing so, we aim to prevent nitrate pollution of water at the very focal point, farming practices. "Toros Agri Smart Agriculture and Fertilization Application", which was developed by Toros Agri specifically for smartphones and tablets and offered to the farmers for free, is an agricultural decision support application that combines weather forecasting, soil, and plant data and develops suggestions for the activities of farmers. The goal is monitored by Toros Agri (Business level) Head Quarter since it is related to the right fertilizer use.

**Baseline year**

2019

**Start year**

2019

**End year**

2025

**Progress**

By the end of 2020, 11,751 plantations were included in the Toros Farmer database, including the distributors & authorized dealers, the app has 11,938 active users. Suggestions for “Bread Wheat” plantations were created and we have reached around 10% of wheat plants in Turkey.

In 2020 we have performed:

- 4,960 visits to distributors,
- 5,286 interviews with farmers,
- 369 visits to agricultural institutions,
- 12 meetings with farmers.

We have also interviewed and educated 801 farmers about correct fertilization applications within the scope of Toros Agriculture Education Bus programme, which visited 35 locations and 60 different points in the Aegean and Western Mediterranean regions.

To measure our progress we use indicators like the number of users of the Toros Farmer Application, the number of meetings held with dealers, the number of presentations/meetings performed, and training activities. The increase in these numbers is a good measure of our progress against our goal.

Due to Covid-19, it is normal for the number of training, visits, and meetings to decrease. Therefore, this year, the 5% increase in the number of fields registered in the Toros Farmer database was determined as a threshold of success for us. While 10,724 fields were registered in 2019, this number increased to 11,751 in 2020. There was an increase of 9.5%. An annual increase of more than 5% is a success for us.

## W9. Verification

### W9.1

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

No, but we are actively considering verifying within the next two years

## 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, Tekfen Group of Companies	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