

W0. Introduction

W0.1

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

International Flavors & Fragrances Inc. is a leading global creator of flavors and fragrances for consumer products.

W-CH0.1a

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

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

W0.2

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

	Start date	End date
Reporting year	January 1 2018	December 31 2018

W0.3

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

- Argentina
- Australia
- Brazil
- Chile
- China
- Colombia
- Egypt
- Germany
- India
- Indonesia
- Israel
- Japan
- Mexico
- Netherlands
- Philippines
- Republic of Korea
- Singapore
- South Africa
- Spain
- Turkey
- United Kingdom of Great Britain and Northern Ireland
- United States of America

W0.4

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

USD

W0.5

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

Companies, entities or groups over which operational control is exercised

W0.6

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

Yes

W0.6a

(W0.6a) Please report the exclusions.

Exclusion	Please explain
Acquisitions	Our most recent completed acquisitions are excluded as well as they are being integrated into the company now. We expect this to be a small fraction of our total water consumption and provide little exposure to water risk.
Small leased offices	Small leased office spaces (fewer than 50 employees) where water is provided through the lease and is managed by our landlords.

W1. Current state

W1.1

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

	Direct use importance rating	Indirect use importance rating	Please explain
Sufficient amounts of good quality freshwater available for use	Vital	Important	Good quality freshwater is vital to IFF's operations. It is a component in our fragrance and flavor ingredients and is essential to various stages of manufacturing, especially product operations. Our quality standards continue to increase as we produce a great variety of products. The primary use of fresh water in our operations is for cleaning and cooling processes. Freshwater is of importance for indirect operations because it is used for agricultural processes, which is its primary use in our indirect operations. In our value chain, water quality and water quantity are important to our supply chain but not important to the other stages of our value chain. Future freshwater quality will remain vital for direct operations and important for indirect operations as water demand continues to increase and consumer awareness becomes more prevalent.
Sufficient amounts of recycled, brackish and/or produced water available for use	Important	Neutral	It is important that sufficient amounts of recycled, brackish and/or produced water be available for use across our own operations because it will help reduce the consumption of freshwater. The primary use of non-fresh water in our operations is for cleaning and cooling processes. Recycled, brackish, and produced water is of neutral importance for indirect operations because they rely on fresh water for agricultural processes. The primary use of non-fresh water in our indirect operations is generally for cleaning and cooling purposes, but this is not as significant a use of water generally as agriculture. Future recycled, brackish and/or produced water quality will remain important for direct operations as we have committed to increasing the amount of recycled water used. Future recycled, brackish and/or produced water quality will remain neutral for indirect operations because they rely on fresh water for agricultural processes and this is not anticipated to change.

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%	IFF tracks water withdrawal for 100% of manufacturing facilities and larger offices. The data is collected and tracked monthly using a global web-based software application. To manage and drive performance, we use this software to internally track and report individual facilities while we eternally report global usage. We use per metric ton of production to report the water intensity of each site.
Water withdrawals – volumes from water stressed areas	100%	We systematically track and map our plant water usage at 100% of manufacturing facilities with a comprehensive water tool. IFF uses WBCSD Aqueduct Tool to identify which areas are considered water stress (less than 1700 m3/(person*year)). IFF tracks water withdrawal for 100% of manufacturing facilities and larger offices. The data is collected and tracked monthly using a global web-based software application. To manage and drive performance, we use this software to internally track and report individual facilities while we eternally report global usage. We use per metric ton of production to report the water intensity of each site.
Water withdrawals – volumes by source	100%	IFF tracks water withdrawal for 100% of manufacturing facilities and larger offices by source. The data is collected and tracked monthly using a global web-based software application. To manage and drive performance, we use this software to internally track and report individual facilities while we eternally report global usage. We use per metric ton of production to report the water intensity of each site.
Entrained water associated with your metals & mining sector activities - total volumes [only metals and mining sectors]	<Not Applicable>	<Not Applicable>
Produced water associated with your oil & gas sector activities - total volumes [only oil and gas sector]	<Not Applicable>	<Not Applicable>
Water withdrawals quality	100%	IFF monitors water quality at each manufacturing facility and tracks, at a minimum, TSS, COD, and BOD. Each site measures the data based on local regulation which may include using monitoring methods that incorporate sensors, the colorimetric method, or a winkler titration. Data is collected and tracked annually at the corporate level.
Water discharges – total volumes	100%	IFF tracks water discharge for 100% of manufacturing facilities and larger offices. The data is collected and tracked monthly using a global web-based software application. To manage and drive performance, we use this software to internally track and report individual facilities while we eternally report global usage. We use per metric ton of production to report the water intensity of each site.
Water discharges – volumes by destination	100%	IFF tracks water discharge by destination for 100% of manufacturing facilities and larger offices. The data is collected and tracked monthly using a global web-based software application. To manage and drive performance, we use this software to internally track and report individual facilities while we eternally report global usage. We use per metric ton of production to report the water intensity of each site.
Water discharges – volumes by treatment method	100%	IFF tracks water discharge volume by treatment method for 100% of manufacturing facilities and larger offices. The data is collected and tracked monthly using a global web-based software application. To manage and drive performance, we use this software to internally track and report individual facilities while we eternally report global usage. We use per metric ton of production to report the water intensity of each site.
Water discharge quality – by standard effluent parameters	100%	Tracked by specific facility and local parameters for 100% of manufacturing facilities. Each site measures the data based on local regulation which may include using monitoring methods that incorporate sensors, the colorimetric method, or a winkler titration. The data is collected and tracked annually at the corporate level.
Water discharge quality – temperature	Not monitored	IFF currently does not monitor water discharge quality temperature at a corporate level but has plans to report it within 2 years.
Water consumption – total volume	100%	IFF tracks water consumed for 100% of manufacturing facilities and larger offices. The data is collected and tracked monthly using a global web-based software application.
Water recycled/reused	Not monitored	IFF currently does not monitor recycled/reused water at a corporate level but has plans to report it within 2 years. As part of our 2025 water goals, we aim to use recycled water for at least 50% of our non-product operations.
The provision of fully-functioning, safely managed WASH services to all workers	100%	WASH services implemented and consistently maintained for 100% of manufacturing facilities and larger offices. The data is collected and tracked monthly. This is a corporate policy implemented and monitored by EHS managers on a site-by-site basis.

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	3388	Higher	Overall water withdrawals increased from last year due to a shift in product mix to more water-intensive products. We also faced large supply chain disruptions that led IFF to bring some materials in house to manufacture, rather than sourcing them from our usual suppliers. Moreover, smaller batch sizes require more frequent cleaning cycles which then drive water use higher. We anticipate future total withdrawals to decrease. This anticipation is supported by our new water target to use recycled water for more than 50% of our non-product operations.
Total discharges	2754	Higher	Overall water discharge increased from last year due to a shift in product mix to more water-intensive products. We also faced large supply chain disruptions that led IFF to bring some materials in house to manufacture, rather than sourcing them from our usual suppliers. Moreover, smaller batch sizes require more frequent cleaning cycles which then drive water use higher. We anticipate future total discharges to decrease. This anticipation is supported by our new water target to use recycled water for more than 50% of our non-product operations.
Total consumption	634	Higher	Water consumption is the difference between withdrawals and discharges (using the formula $C = W - D$ we calculate consumption as $3,388 - 2,754 = 634$ megaliters/year). The majority of water withdrawn is used for cleaning and cooling. However, with a change in the mix of products this year and making more intermediate products in IFF facilities due to supply chain disruptions, our total water consumption increased. Despite this, we anticipate future total water consumption to decrease. This anticipation is supported by our new water target to use recycled water for more than 50% of our non-product operations.

W1.2d

(W1.2d) Provide the proportion of your total withdrawals sourced from water stressed areas.

	% withdrawn from stressed areas	Comparison with previous reporting year	Identification tool	Please explain
Row 1	88	About the same	WBCSD Global Water Tool	We systematically track and map our plant water usage with the WBCSD Global Water Tool, which defines water-stressed as less than 1700 m3 / (person*year). Our % withdrawn from stressed areas is based on the total volume withdrawn in water-stressed areas defined by the tool divided by our total withdrawal volume. The percent withdrawn from water stressed areas is about the same as last year because there were no significant changes in production or water usage intensity in our facilities in water stressed areas. The supply chain disruptions and smaller batch sizes that resulted in higher water withdrawals overall across the company did not impact the facilities in these regions. We anticipate future percentage withdrawn from stressed areas to decrease as our new water goal will help us set the framework to target and improve facilities in water stressed regions.

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	Not relevant	<Not Applicable>	<Not Applicable>	In 2018, we had no facilities able to withdraw from fresh surface water. This may change in the future as new facilities are acquired or opened.
Brackish surface water/Seawater	Not relevant	<Not Applicable>	<Not Applicable>	In 2018, we had no facilities able to withdraw from brackish surface water or seawater. This may change in the future as new facilities are acquired or opened.
Groundwater – renewable	Relevant	527	Much higher	Renewable groundwater is relevant to IFF because we use it in our operations. Good quality freshwater is a component in our fragrance and flavor ingredients and is essential to various stages of manufacturing, especially product operations. In 2018, withdrawals from third party sources increased in tandem with the increase of production of intermediary materials in IFF facilities due to supply change disruptions. The increase in renewable groundwater withdrawals can also be attributed to a change in product mix that led to smaller batch sizes that require more frequent cleaning cycles. We anticipate this trend of increasing withdrawals from renewable groundwater sources to reverse in the near future as we implement new water reduction goals.
Groundwater – non-renewable	Relevant	723	Lower	Non-renewable groundwater is relevant to IFF because we use it in our operations. Good quality freshwater is a component in our fragrance and flavor ingredients and is essential to various stages of manufacturing, especially product operations. Withdrawal of non-renewable groundwater decreased in 2018 due to the change of a major manufacturing site switching to renewable groundwater rather than non-renewable. Additionally, other sites made efforts to use third-party sources rather than a non-renewable source. We anticipate this trend of decreasing withdrawals in IFF legacy facilities from non-renewable groundwater to continue in the near future as facilities continue to make efforts to use third-party sources and we implement new water reduction goals. This may change in the future as new facilities are acquired or opened.
Produced/Entrained water	Not relevant	<Not Applicable>	<Not Applicable>	In 2018, we had no facilities able to withdraw produced/entrained water. This may change in the future as new facilities are acquired or opened.
Third party sources	Relevant	2138	Higher	Third-party sources of water are relevant to IFF because we use water from these sources, such as municipal water suppliers, in our operations. Good quality freshwater is a component in our fragrance and flavor ingredients and is essential to various stages of manufacturing, especially product operations. In 2018, withdrawals from third-party sources increased in tandem with the increase of production of intermediary materials in IFF facilities due to supply change disruptions. The increase in third-party withdrawals can also be attributed to a change in product mix that led to smaller batch sizes that require more frequent cleaning cycles. We anticipate this trend of increasing withdrawals from third-party sources to reverse in the near future as we implement new water reduction goals.

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	75	Lower	This destination is relevant to IFF because we discharge water from our operations to fresh surface water bodies at some facilities. Good quality freshwater is a component in our fragrance and flavor ingredients and is essential to various stages of manufacturing, especially product operations. In 2018, the amount of water discharged into fresh surface water decreased due to our only site discharging in this destination, our Garin site, decreased its overall water usage. This was due to a corresponding decrease in production for the site as a whole. We anticipate future trends to remain the same, as currently, only one facility discharges to fresh surface water after anaerobic treatment and we implement new water reduction goals and reduce overall consumption.
Brackish surface water/seawater	Not relevant	<Not Applicable>	<Not Applicable>	In 2018, we had no facilities able to withdraw or discharge to brackish surface water/seawater. This may change in the future as new facilities are acquired or opened.
Groundwater	Relevant	315	Much higher	This destination is relevant to IFF because we discharge water from our operations to groundwater at some facilities. Good quality freshwater is a component in our fragrance and flavor ingredients and is essential to various stages of manufacturing, especially product operations. In 2018, the significant increase in groundwater discharge comes from our Benicarlo site, which refined its water discharge tracking system to acknowledge its use of renewable groundwater both in withdrawal and discharge. We anticipate levels to be lower in the near future as we implement new water reduction goals and reduce overall consumption.
Third-party destinations	Relevant	2364	About the same	This destination is relevant to IFF because we discharge water from our operations to third-party destinations, such as municipal wastewater plants and public utilities, at some facilities. Good quality freshwater is a component in our fragrance and flavor ingredients and is essential to various stages of manufacturing, especially product operations. In 2018, the third-party source water discharge was about the same (2% increase) due to similar levels of production at sites that rely on third-party discharge destinations. In the near future we anticipate discharges to third-party destinations to decrease as we reduce overall consumption and implement our new goal to use more recycled water.

W-CH1.3

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

Yes

W-CH1.3a

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

Product type

Specialty organic chemicals

Product name

Standard Compounded Fragrance and Flavor

Water intensity value (m3)

10.12

Numerator: water aspect

Total water withdrawals

Denominator: unit of production

Ton

Comparison with previous reporting year

Higher

Please explain

In 2018, water intensity for specialty organic chemical production was greater than 2017 due to a shift in product mix to more water-intensive products. We also faced large supply chain disruptions that led IFF to bring some materials in house to manufacture, rather than sourcing them from our usual suppliers. Moreover, smaller batch sizes require more frequent cleaning cycles which then drive water use higher. We anticipate water intensity levels to be lower in the near future as we implement new water reduction goals and reduce overall consumption. This intensity metric is tracked at a site-level and aggregated for a corporate total. The corporate intensity value is tracked annually and used as part of water reduction goals, including reducing company-wide water withdrawals 50% per metric ton of production by 2020. In 2018, despite a 6.9% year-over-year increase in water usage intensity due to reasons described above, we achieved our 2020 target of a 50% reduction in 2018 by achieving a 66% reduction against our 2010 baseline. This intensity covers all products and reflects water reduction efforts. "Standard Compounded Fragrance and Flavor" is the finest level of product differentiation at which this intensity metric is tracked. This is the reason that one product is disclosed in this table rather than five. Our water intensity targets are the cornerstone of our strategy to reduce water intensity. In addition to our corporate targets, each facility also has a 3% annual reduction target to help us achieve our 2020 goal. To meet these targets, our strategy includes an annual \$1-2M commitment for sustainability capital projects that include improving water efficiency. Examples of these projects include improving cleaning processes and improving operational behaviors. An additional example is that in 2018 we approved an optimization of our waste water treatment plant at our Tlalnepantla, Mexico site that will save the site 4,300 cubic meters of water per year.

W1.4

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

Yes, our suppliers

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

76-100%

% of total procurement spend

76-100

Rationale for this coverage

While IFF has more than 2,200 suppliers, we focus on the largest ones, which account for approximately 90% of our global spend. We use the Supplier Ethical Data Exchange (Sedex) program to ask them questions, including reporting on their water use, risks and management. All major suppliers are requested to answer these questions as a part of doing business with our company. Our vendor code of conduct incentivizes suppliers by requiring them to register on Sedex or EcoVadis and to report on this information.

Impact of the engagement and measures of success

We use the Supplier Ethical Data Exchange (Sedex), EcoVadis, SMETA audits and the TfS audit program to ask suppliers various questions, including reporting on their water management programs. We specifically ask if the supplier has a water management policy, trains employees on proper water and wastewater management, has set water reduction targets, and if the supplier can identify the source of water at its facilities. The overall Sedex score is used within the company to evaluate and assess suppliers. If an issue is identified through this assessment process, we create corrective action plans to improve the supplier's Sedex score. In 2018, 34% of suppliers had corrective action plans created. The impact of engagement on our suppliers could include improved water management systems, water reductions and/or improved water risk mitigation strategies, including target setting. Success is measured by percent of suppliers engaged and responding to our requests via Sedex or EcoVadis.

Comment

If an issue is identified through this assessment process, we create corrective action plans to improve the supplier's Sedex score. In 2018, 34% of suppliers had corrective action plans created and we continue to monitor performance for improvement. For example, this year after completing a SMETA audit one of our suppliers found out that their waste water treatment management system could use improvements. They then used the recommendations of the auditor to remediate the issues.

W1.4b

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

Type of engagement

Incentivizing for improved water management and stewardship

Details of engagement

Water management and stewardship is integrated into supplier evaluation processes

% of suppliers by number

76-100

% of total procurement spend

76-100

Rationale for the coverage of your engagement

While IFF has more than 2,200 suppliers, we focus on the largest ones, which account for approximately 90% of our global spend. We use the Supplier Ethical Data Exchange program to ask them various questions, including reporting on their water management programs. We specifically ask if the supplier has a water management policy, trains employees on proper water and wastewater management, has set water reduction targets, and if the supplier can identify the source of water at its facilities. All major suppliers are requested to answer these questions as a part of doing business with our company. The information is used within the company to evaluate and assess the suppliers.

Impact of the engagement and measures of success

Beneficial outcomes of engagement with our suppliers could include improved water management systems, water reductions and/or improved water risk mitigation strategies including target setting. For example, this year after completing a SMETA audit one of our suppliers in Brazil found out that their waste water treatment management system was not up to code. They then used the recommendations of the auditor to remediate the issues. In addition, in 2018, 34% of suppliers had corrective action plans created based on their Sedex, EcoVadis, and TfS audit responses, and we continue to monitor performance for improvement. Success is measured by percent of suppliers engaged and responding to our requests via Sedex, EcoVadis, or TfS.

Comment

W2. Business impacts

W2.1

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

No

W2.2

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

No

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?

Water is one of the most precious resources to the world and our business. As global water demand grows, water scarcity will be an increasingly important issue.

Our pollution prevention plans identify, evaluate and monitor the products we handle and produce in our plants to identify potential water pollutants. We follow specific standards, including ISO 14001, and we have met our goal of expanding ISO 14001 certification to all of our major manufacturing facilities and are evaluating certification for newly acquired facilities. Our discharge water conforms to standards set by the local municipality for each site and managed locally by EHS managers. This involves the control of physical and chemical parameters such as pH, BOD, COD, TSS and other pollutants as dictated by their local regulation. We consider water-related impacts on ecosystems, such as algae blooms and toxic effects on local aquatic life, and human health, such as risk of toxin exposure, caused by and/or associated with these pollutants in our assessments and monitoring. Each site measures these pollutants and other relevant parameters based on local regulations, which may include using monitoring methods that incorporate sensors, the colorimetric method, or a winkler titration. The data is collected and tracked annually at the corporate level.

BOD (Biological Oxygen Demand) is the amount of dissolved oxygen needed for aerobic digestion. It is used as a gauge for wastewater treatment and is listed as a conventional pollutant. BOD must remain with an acceptable range for that region to support proper water quality. A high BOD indicates high pollution or aerobic activity. COD (Chemical Oxygen Demand) is the amount of oxidizable organic material in the water stream. It is used as a gauge for wastewater treatment and is listed as a conventional pollutant. COD must remain with an acceptable range for that region to support proper water quality. A high COD indicates high pollution. TSS (Total Suspended Solids) is suspended particles that are not dissolved, in the water stream. It is used as a gauge for wastewater treatment and is listed as a conventional pollutant. Suspended solids can carry metals and pathogens into the water stream.

All new products undergo a comprehensive environment, health and safety review that includes testing when necessary. Our products comply with standards including:

- European REACH Substances of Very High Concern (SVHC) Authorization, Candidate, or Restriction Lists: 0.8% (ie, <1%) of all selling formulas contain a SVHC material at a percentage above .1%
- Prop 65: 10.5% of all selling formulas contain a Prop65 material at a percentage above .1%

Our portfolio of products do not contain substances (i.e. 0% concentration) listed on the following list of products:

- Persistent Organic Pollutants (POPs) under the Stockholm Convention
- Substances subject to prior informed consent under the Rotterdam Convention
- Hazardous pesticides classified as WHO Class I (only 1 constituent in recent selling formulas = negligible % of products)

The water-related impacts from these products and the other pollutants we consider do not vary across our value chain. The pollutants discussed would cause similar environmental and human-health impacts upstream as well as downstream, which is why we have implemented a stringent monitoring and control process.

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
BOD	Direct operations	BOD (Biological Oxygen Demand) is the amount of dissolved oxygen (DO) needed for aerobic digestion. It is used as a gauge for wastewater treatment and is listed as a conventional water pollutant. A high BOD indicates a greater amount of organic matter, which will consume oxygen and will reduce DO levels in the water body. A reduction in DO can potentially impact water bodies by reducing available oxygen for fish and plant life. IFF direct operations at our manufacturing sites can impact BOD levels via discharges of effluent resulting from the manufacturing process. The scale and magnitude of impact varies by site but is generally low.	Compliance with effluent quality standards	In order to minimize adverse impacts of BOD on the region, we monitor levels and maintain levels in compliance with local regulations. This approach manages the risks of the potential negative impacts because local regulations generally require BOD be maintained at levels that minimize harm to bodies of water. Success is measured and evaluated by following local effluent quality standards.
COD	Direct operations	COD (Chemical Oxygen Demand) is the amount of oxidizable organic material in a water stream. It is used as a gauge for wastewater treatment and is listed as a conventional water pollutant. Higher COD levels mean a greater amount of oxidizable organic material, which will reduce dissolved oxygen (DO) levels. A reduction in DO can potentially impact water bodies by reducing available oxygen for fish and plant life. IFF direct operations at our manufacturing sites can impact COD levels via discharges of effluent resulting from the manufacturing process. The scale and magnitude of impact varies by site but is generally low.	Compliance with effluent quality standards	In order to minimize adverse impacts of COD on the region, we monitor levels and maintain levels in compliance with local regulations. This approach manages the risks of the potential negative impacts because local regulations generally require COD be maintained at levels that minimize harm to bodies of water. Success is measured and evaluated by following local effluent quality standards.
TSS	Direct operations	TSS (Total Suspended Solids) is suspended solids that are not dissolved, in the water stream. It is used as a gauge for wastewater treatment and is listed as a conventional water pollutant. The suspended solids absorb light, causing increased water temperature and decreased oxygen which creates an unfavorable environment for fish and plant life. IFF direct operations at our manufacturing sites can impact TSS levels via discharges of effluent resulting from the manufacturing process. The scale and magnitude of impact varies by site but is generally low.	Compliance with effluent quality standards	In order to minimize adverse impacts of TSS on the region, we monitor levels and maintain levels in compliance with local regulations. This approach manages the risks of the potential negative impacts because local regulations generally require TSS be maintained at levels that minimize harm to bodies of water. Success is measured and evaluated by following local effluent quality standards.

W3.3

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

Yes, water-related risks are assessed

W3.3a

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

Direct operations

Coverage

Full

Risk assessment procedure

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

Frequency of assessment

Annually

How far into the future are risks considered?

>6 years

Type of tools and methods used

Tools on the market
Enterprise Risk Management
International methodologies
Databases

Tools and methods used

Ecolab Water Risk Monetizer
WBCSD Global Water Tool
WRI Aqueduct
Alliance for Water Stewardship Standard
Other, please specify (Maplecroft Global Water Security Risk)

Comment

We use the WRI Aqueduct water evaluation tool to evaluate and assess our water footprint of our operations globally. We selected the WRI Aqueduct Tool because it is a publicly available, global database that gives regional assessments on water risk using 12 indicators of physical, regulatory, and reputational risk for all of our manufacturing facilities. The Aqueduct tool provides projected changes in water stress for 2020, 2030, and 2040.

Supply chain

Coverage

Partial

Risk assessment procedure

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

Frequency of assessment

Annually

How far into the future are risks considered?

3 to 6 years

Type of tools and methods used

Tools on the market
Enterprise Risk Management
International methodologies
Databases
Other

Tools and methods used

Ecolab Water Risk Monetizer
WBCSD Global Water Tool
WRI Aqueduct
Alliance for Water Stewardship Standard
Maplecroft Global Water Security Risk Index
Internal company methods
Other, please specify (• Sedex and EcoVadis)

Comment

We engage with our suppliers and ask them to report on their water performance through SEDEX and EcoVadis which specifically ask if the supplier has a water management policy, trains employees on proper water and wastewater management, has set water reduction targets, and if the supplier can identify the source of water at its facilities. Because of our large supply chain, we are selecting our larger suppliers to assess first, which covers the majority of our spend.

Other stages of the value chain

Coverage

None

Risk assessment procedure

<Not Applicable>

Frequency of assessment

<Not Applicable>

How far into the future are risks considered?

<Not Applicable>

Type of tools and methods used

<Not Applicable>

Tools and methods used

<Not Applicable>

Comment

As noted in W1.1, in our value chain, water quality and water quantity are important to our supply chain but not important to the other stages of our value chain. As a result, our procedures for identifying and assessing water-related risks focus on our direct operations and supply chain.

W3.3b

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

	Relevance & inclusion	Please explain
Water availability at a basin/catchment level	Relevant, always included	Water is vital to IFF’s operations. It is a component in our fragrance and flavor ingredients and is essential to various stages of manufacturing. The current water availability parameters at the basin/catchment level are always factored into our water risk assessments. Globally the WRI Aqueduct Tool was used for our water risk assessment. The WRI Aqueduct Water Risk Atlas Tool is a customizable global map, based on 12 indicators of physical, regulatory, and reputational risk. We also use the other tools identified in W3.3a under “Tools and methods used” to complement the WRI Aqueduct Tool as part of our procedures for identifying and assessing water-related risks related to water availability at a basin/catchment level.
Water quality at a basin/catchment level	Relevant, always included	Water is vital to IFF’s operations. It is a component in our fragrance and flavor ingredients and is essential to various stages of manufacturing. The current water withdrawal and discharge quality parameters at the basin/catchment level are always factored into our water risk assessments. Globally the WRI Aqueduct Tool was used for our water risk assessment. The WRI Aqueduct Water Risk Atlas Tool is a customizable global map, based on 12 indicators of physical, regulatory, and reputational risk. We also use the other tools identified in W3.3a under “Tools and methods used” to complement the WRI Aqueduct Tool as part of our procedures for identifying and assessing water-related risks related to water quality at a basin/catchment level.
Stakeholder conflicts concerning water resources at a basin/catchment level	Relevant, always included	Current stakeholder conflicts concerning water resources at a basin/catchment level are relevant to IFF because we monitor stakeholder issues associated with water through media reviews and social media. Site managers maintain good working relationships with local authorities, communities and other stakeholders. Under ISO14001 our manufacturing sites are required to track changes in regulations and work with regulators and local communities to drive continuous improvement – these requirements are then evaluated on a regular basis. The WRI Aqueduct Tool was used for our water risk assessment. The WRI Aqueduct Water Risk Atlas Tool is a customizable global map, based on 12 indicators of physical, regulatory, and reputational risk, including potential stakeholder conflicts. We also use the other tools identified in W3.3a under “Tools and methods used” to complement the WRI Aqueduct Tool as part of our procedures for identifying and assessing water-related risks related to stakeholder conflicts concerning water resources at a basin/catchment level.
Implications of water on your key commodities/raw materials	Relevant, always included	Water is vital to IFF’s operations. It is a component in our fragrance and flavor ingredients and is essential to various stages of manufacturing. Adequate water supply and quality is also of vital importance to growing natural ingredients we procure from suppliers for use in our products. As a result, the implications of water on our key commodities/raw materials is always factored into our water risk assessments. Globally the WRI Aqueduct Tool was used for our water risk assessment. The WRI Aqueduct Water Risk Atlas Tool is a customizable global map, based on 12 indicators of physical, regulatory, and reputational risk. We also use the other tools identified in W3.3a under “Tools and methods used” to complement the WRI Aqueduct Tool as part of our procedures for identifying and assessing water-related risks related to key commodities/raw materials.
Water-related regulatory frameworks	Relevant, always included	IFF manages water regulatory frameworks and tariffs at the local level. These regulations are relevant to IFF because all sites must ensure compliance. Each manufacturing facility is ISO14001 certified which helps coordinate these efforts and relationships. Site managers maintain good working relationships with local authorities to ensure they are up to date with changing legislation or licensing. Globally the WRI Aqueduct Tool was used for our water risk assessment. The WRI Aqueduct Water Risk Atlas Tool is a customizable global map, based on 12 indicators of physical, regulatory, and reputational risk. We also use the other tools identified in W3.3a under “Tools and methods used” to complement the WRI Aqueduct Tool as part of our procedures for identifying and assessing water-related regulatory risks.
Status of ecosystems and habitats	Relevant, always included	The status of ecosystems and habitats is relevant to IFF’s business because we use water from these local systems and any damage to them would harm our environmental commitments, our reputation, and our ability to operate. Water is vital to IFF’s operations. It is a component in our fragrance and flavor ingredients and is essential to various stages of manufacturing. Globally the WRI Aqueduct Tool was used for our water risk assessment. As a result, the status of ecosystems and habitats is always factored into our water risk assessments. Globally the WRI Aqueduct Tool was used for our water risk assessment. The WRI Aqueduct Water Risk Atlas Tool is a customizable global map, based on 12 indicators of physical, regulatory, and reputational risk. Specifically, the Aqueduct tool assesses the water supply that originates from protected ecosystems for regions IFF operates. We also use the other tools identified in W3.3a under “Tools and methods used” to complement the WRI Aqueduct Tool as part of our procedures for identifying and assessing water-related risks for ecosystems and habitats.
Access to fully-functioning, safely managed WASH services for all employees	Relevant, always included	IFF has embraced and actively supports the UN Sustainable Development Goals and has worked to identify how these goals relate to our sustainability strategy and business. IFF has identified Clean Water and Sanitation as a key SDG and will work to embed it within our sustainability strategy. We partnered with the World Business Council for Sustainable Development to pilot the SDG Compass Tool, which provides guidance to companies on how to properly align their strategies to the SDGs. We have included WASH services within our vendor code of conduct as well. Globally the WRI Aqueduct Tool was used for our water risk assessment. The WRI Aqueduct Water Risk Atlas Tool is a customizable global map, based on 12 indicators of physical, regulatory, and reputational risk. We also use the other tools identified in W3.3a under “Tools and methods used” to complement the WRI Aqueduct Tool as part of our procedures for identifying and assessing water-related risks stemming from access to fully-functioning, safely managed WASH services for all employees.
Other contextual issues, please specify	Not considered	

W3.3c

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

	Relevance & inclusion	Please explain
Customers	Relevant, always included	Our customers' satisfaction is central to our business, and, as our customers, they are relevant to everything we do. Good quality freshwater is vital to IFF's operations, and it is a component in our fragrance and flavor ingredients and is essential to various stages of manufacturing, especially product operations. If there were a disruption in water supply or quality, there would be a risk this impact would carry over to our products and thus customer satisfaction. For this reason, customers are relevant and always included in our water-related risk assessments. Additionally, we have assessed the environmental performance of our products from cradle to consumer and beyond using our internally developed methods, including the water footprint, to assess how water intensive our products are. Our customers are increasingly interested in our policies and performance with respect to sustainability issues. There is a risk that our reputation among our customers would be harmed if we are not proactive in water stewardship. In 2018, we engaged with our customers via meetings, expos, presentations and formal and informal sustainability performance reviews. We responded to various customer requests for information regarding our environmental and social performance via customer-specific surveys and platforms such as EcoVadis and Sedex. Additionally, we attended and presented at industry events with dedicated sustainability agendas, such as the American Cleaning Institute® Annual Meeting and Cleaning Products US 2018 conference. IFF engages its customers through CDP supply chain, which is included on customers' scorecards evaluating IFF's sustainability strategy and performance.
Employees	Relevant, always included	Access to clean, potable water is vital to the performance of our employees on the job. Water is consumed by employees as well as used in lavatories and wash rooms at all locations, as well as kitchens in locations that have them. If a water-related risk, such as drought, impacted fresh water availability for employees this would directly impact the employees themselves and our operations. For this reason, employees are relevant and always included in our water-related risk assessments. IFF engages its employees by training them on the importance of water reduction and various techniques at facilities that use the most water and review this annually. Additionally, WASH services implemented and consistently maintained for 100% of manufacturing facilities and larger offices.
Investors	Relevant, always included	As a publicly traded company, investors are an important stakeholder for IFF. We recognize the importance of water stewardship as part of our reputation among investors, and the risk that damage to our reputation among investors could negatively impact our company's value and brand. For this reason, investors are relevant and always included in our water-related risk assessments. To engage with investors on water-related issues, IFF participates in the CDP Water Security questionnaire. CDP represents more than \$100 trillion in assets and helps engage companies to disclose water risks and water stewardship strategies to investors and other stakeholders. This information is also provided to our CEO and CFO annually.
Local communities	Relevant, always included	IFF is committed to protecting the local environment and communities where we operate. As water consumers, we recognize the importance of maintaining local support and goodwill. If our reputation for water stewardship were damaged in local communities, there is a risk it could harm our brand, reputation, and implicit license to operate in those communities, potentially impacting operations. For this reason, local communities are relevant and always included in our water-related risk assessments, including our global water risk assessment using the WRI Aqueduct Tool. The WRI Aqueduct Water Risk Atlas Tool is a customizable global map, based on 12 indicators of physical, regulatory, and reputational risk. We engage local communities through our site managers. Site managers maintain good working relationships with local communities and meet with them regularly to help include them in our water risk assessment and water stewardship program.
NGOs	Relevant, always included	NGOs are an important stakeholder for IFF. We recognize the importance of water stewardship as part of our company's brand, and we recognize the risk that damage to our reputation among NGOs could negatively impact our brand. Additionally, IFF works with NGOs to drive collective action for water stewardship in targeted communities where we source and operate. For these reasons, NGOs are relevant and always included in our water-related risk assessments, including our global water risk assessment using the WRI Aqueduct Tool. The WRI Aqueduct Water Risk Atlas Tool is a customizable global map, based on 12 indicators of physical, regulatory, and reputational risk. The tool factors other water users into the water demand and stress analysis at the local level for each facility. IFF conducts the assessment annually. IFF is committed to protecting the local environment and communities where we operate. Site managers maintain good working relationships with local NGOs and meet with them regularly to help include them in our water risk assessment and water stewardship program. NGOs are also engaged as part of a goal to drive collective action for water stewardship in targeted communities where we source and operate.
Other water users at a basin/catchment level	Relevant, always included	IFF is committed to protecting the local environment and communities where we operate. As water consumers, we recognize the importance of maintaining local support and goodwill, particularly from other water users. If our reputation for water stewardship were damaged in local communities, there is a risk it could harm our brand, reputation, and implicit license to operate in those communities, potentially impacting operations. For this reason, other water users at the basin/catchment level are relevant and always included in our water-related risk assessments, including our global water risk assessment using the WRI Aqueduct Tool. The WRI Aqueduct Water Risk Atlas Tool is a customizable global map, based on 12 indicators of physical, regulatory, and reputational risk. The tool factors other water users into the water demand and stress analysis at the local level for each facility. IFF conducts the assessment annually. We engage other water users at the basin/catchment level through our site managers. Site managers maintain good working relationships with local communities, including other water users, and meet with them regularly to help include them in our water risk assessment and water stewardship program.
Regulators	Relevant, always included	IFF complies with water related regulatory frameworks at the local level. There is a risk that non-compliance with local water regulations could damage our brand and reputation. Additionally, there is a risk that changes to regulations, requirements, or standards could affect our operations because water is a component in our fragrance and flavor ingredients and is essential to various stages of manufacturing, especially product operations. For this reason, regulators are relevant and always included in our water-related risk assessments, including our global water risk assessment using the WRI Aqueduct Tool. The WRI Aqueduct Water Risk Atlas Tool is a customizable global map, based on 12 indicators of physical, regulatory, and reputational risk. The tool factors other water users into the water demand and stress analysis at the local level for each facility. IFF conducts the assessment annually. In our engagement with regulators, we leverage ISO 14001 to help foster a working relationship with regulators to ensure they are updated with changing legislation. ISO 14001 is recertified every 3 years.
River basin management authorities	Relevant, always included	Good quality freshwater is vital to IFF's operations, and it is a component in our fragrance and flavor ingredients and is essential to various stages of manufacturing, especially product operations. For this reason, if river basin management authorities restricted access to our water supply or water rights, it would impact our ability to operate in that location. Because of this risk and other related risks, river basin management authorities are relevant and always included in our water-related risk assessments, including our global water risk assessment using the WRI Aqueduct Tool. The WRI Aqueduct Water Risk Atlas Tool is a customizable global map, based on 12 indicators of physical, regulatory, and reputational risk. The tool factors other water users into the water demand and stress analysis at the local level for each facility. IFF conducts the assessment annually. IFF engages with river basin management authorities due to ISO 14001 requirements and fosters a working relationship where needed to ensure we are updated with changing legislation or conditions. ISO 14001 is recertified every 3 years.
Statutory special interest groups at a local level	Relevant, always included	We recognize the importance of water stewardship as part of our company's brand, and we recognize the risk that damage to our reputation among statutory special interest groups at a local level could negatively impact our brand. For this reason, these groups are relevant and always included in our water-related risk assessments, including our global water risk assessment using the WRI Aqueduct Tool. The WRI Aqueduct Water Risk Atlas Tool is a customizable global map, based on 12 indicators of physical, regulatory, and reputational risk. The tool factors other water users into the water demand and stress analysis at the local level for each facility. IFF conducts the assessment annually. IFF is committed to protecting the local environment and communities where we operate. Site managers maintain good working relationships with local statutory special interest groups and meet with them regularly to help include them in our water risk assessment and water stewardship program.
Suppliers	Relevant, always included	In our value chain, water quality and water quantity are important to our supply chain. Our suppliers often rely on fresh water for agricultural processes. If disruptions to water supply or quality occur in our supply chain, such as a drought, there is a risk this could increase costs or limit availability of our raw materials. To ensure raw material availability, suppliers are relevant and always included in our water-related risk assessments, including our global water risk assessment using the WRI Aqueduct Tool. The WRI Aqueduct Water Risk Atlas Tool is a customizable global map, based on 12 indicators of physical, regulatory, and reputational risk. IFF conducts the assessment annually. We are working closely with our suppliers to align on sustainability requirements that benefit everyone in the value chain. We engage and assess our suppliers through Sedex and Ecovadis. We are working to use Sedex and Ecovadis to address suppliers that have any spend in each of the past two years, with a total sum of \$200,000 or above, and address any strategic business requirements. Sedex and Ecovadis assessments are conducted every 3 years.
Water utilities at a local level	Relevant, always included	Good quality freshwater is vital to IFF's operations, and it is a component in our fragrance and flavor ingredients and is essential to various stages of manufacturing, especially product operations. Some of our facilities source their water from local water utilities. As a result, there is a risk that an impact to a local water utility that disrupts water supply locally to one of our facilities could prevent us from operating at that location. Moreover, changes to water costs or local regulations would also impact our operations. For these reasons, water utilities at the local level are relevant and always included in our water-related risk assessments, including our global water risk assessment using the WRI Aqueduct Tool. The WRI Aqueduct Water Risk Atlas Tool is a customizable global map, based on 12 indicators of physical, regulatory, and reputational risk. The tool factors other water users into the water demand and stress analysis at the local level for each facility. IFF conducts the assessment annually. Most of our manufacturing facilities have water treatment plants to treat the discharged water before returning to the water supply. One of our larger water users is developing a water treatment cooperative. IFF complies with water related regulatory frameworks at the local level and works with local water utilities to better assess possible risk factors associated with supply of water and drainage to our facilities as well as risk mitigation opportunities.
Other stakeholder, please specify	Not considered	

(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.

Our CEO and other senior management oversee the day-to-day execution of the risk management process. The Board receives regular reports on IFF's ERM process and oversees and reviews with management the company's enterprise-wide risks and the policies and practices established to manage such risks. Management maintains the ERM program, which is designed to identify and assess our global risks and to develop steps to mitigate and manage risks. The Global Risk Committee, composed of key members of management, meets regularly to discuss critical risks, critique mitigation plans and review the gap analyses.

At the asset level, we have global and regional crisis-management plans and procedures, and we conduct training for members of our cross-functional global and regional crisis teams. In addition, each IFF facility assesses local risks and has a crisis management plan. Our regional and site level Eco-efficiency champions also play the role of conveying risks detected on the ground up through to corporate executives, who review risks annually.

Globally the WRI Aqueduct Tool was used for our water risk assessment for direct operations. It is the primary tool used for water-related risk assessment in our direct operations. We chose the tool because it is a customizable global map, based on 12 indicators of physical, regulatory, and reputational risk, and it can cover our operational footprint. The tool is used annually to update our risk assessment and risk-response decision making process.

For our water risk assessments for direct operations, we complement our use of the WRI Aqueduct Tool with additional tools listed in W3.3a. For example:

- Ecolab Water Risk Monetizer - is a financial modeling tool that provides a way for our business to factor water scarcity into decisions that support business growth and help ensure the availability of fresh water. We use the tool in our water-reduction project financial assessments to place a value on conserved water. In regions where the retail value of water does not account for scarcity and risk, this tool enables us to place an appropriate price on water savings in our analysis, which, along with our traditional financial and eco savings tools, help us to justify the setting of goals and implementation of water projects in these regions.
- WBCSD Global Water Tool - was the first publicly available resource to be developed for identifying corporate water risks and opportunities. We have used the tool to examine our manufacturing sites that are in highly stressed areas and to prioritize water management actions across our global operations. From the results, we prioritize specific sites to focus on annual water reduction targets.
- Alliance for Water Stewardship Standard - is a globally-applicable framework for major water users to understand their water use and impacts, and to work collaboratively and transparently for sustainable water management within a catchment context. The standard is one of several tools we use to assess water risk in our manufacturing. We use this standard to complement our other tools and use the results to validate and provide a different perspective in evaluating how shared catchment water challenges, risks and opportunities impact our sites.
- Maplecroft Global Water Security Risk Index – is an internationally recognized risk index that allows us to map global corporate exposure to water issues and regulatory challenges down to the asset-level. The index is one of several tools we use to assess water risk in our manufacturing. We use this index to complement our other tools, both for evaluations of vendors in our supply chain and our direct operations, particularly when forecasting dynamic shifts in the future operational environment.
- Internal Company Methods - we examine our sites' water usage on an annual and quarterly basis. From these results, we prioritize sites that use the most water and set reduction targets accordingly. We also recommend for sites to come up with water-related eco-effective projects that we can fund for the next year.

Each of these tools plays a complementary role in our risk assessment process. The outcomes of the process are reviewed through the ERM process and inform our risk-response decision making process.

IFF identifies and assesses risk throughout our supply chain using Sedex and Ecovadis. These are the primary tools used for our indirect operations risk-response decision making process. We use these tools because they allow us to ask suppliers various questions, including reporting on their water management programs. As part of our annual risk assessment, individual key strategic suppliers are audited at least every three years using these tools, which update our ERM program.

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?

No

W4.1a

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

We define substantive financial or strategic impact when identifying or assessing water-related risks in both our direct operations and our supply chain as any change that would significantly affect our business, operations, revenue or expenditure.

For our direct operations, we use the overall water risk as defined by WRI Aqueduct Tool as the metric to identify water-related risks that could cause 'substantive' change in our business, operations, revenue or expenditure. The threshold that indicates 'substantive change' are areas labeled as "High" or "Extremely High" by the Aqueduct tool for our strategic sites. Our strategic sites are those that are critical to operations such as our manufacturing facilities or corporate headquarters. Each site is reviewed annually through WRI Aqueduct and assessed in terms of overall water risk, business growth and strategy. To date, we have not identified a water-related risk for our strategic sites which could cause a substantive change in our business. For example, one substantive impact considered by the tool is the physical risk quantity which assesses reliable access to enough water to maintain operations.

In our value chain, water quality and water quantity are important to our supply chain. We measure substantive impact in our supply chain using an internal risk scorecard that incorporates multiple environmental datasets, including the Yale Environmental Performance Index (EPI), which ranks 180 countries on 24 performance indicators across ten issue categories covering environmental health and ecosystem vitality. The result is a risk score measured as high, medium or low, with a change from low to high indicating 'substantive change.' This assessment is updated and metrics are reviewed on a bi-annual basis by the Yale EPI and then updated into our program accordingly.

One example of a substantive supply-chain impact considered is the risk of reduced or disrupted raw material availability caused by precipitation extremes and droughts. Over the past several years, changes in precipitation extremes and droughts in Brazil, Madagascar, and Florida, USA, have affected the availability and cost of our key natural ingredients, such as orange oil and vanilla.

W4.2b

(W4.2b) Why does your organization not consider itself exposed to water risks in its direct operations with the potential to have a substantive financial or strategic impact?

	Primary reason	Please explain
Row 1	Risks exist, but no substantive impact anticipated	For our operations, we define water-related risks that could cause 'substantive' change in our business, operations, revenue or expenditure as those which could impact our strategic sites located in areas of "High" or "Extremely High" overall water risk as defined by WRI Aqueduct. Our strategic sites are those that are critical to operations such as our manufacturing facilities or corporate headquarters. By way of example, we use WRI Aqueduct annually to assess "overall water risk", a metric that evaluates water quantity risks (e.g., flood occurrence, drought severity and baseline water stress), water quality risks (e.g., upstream protected land) and regulatory/ reputational risks (e.g., media coverage). Site-level WRI Aqueduct results are assessed in the context of business growth and strategy. To date, we have not identified a water-related risk for our strategic sites which could cause a substantive change in our business.

W4.2c

(W4.2c) Why does your organization not consider itself exposed to water risks in its value chain (beyond direct operations) with the potential to have a substantive financial or strategic impact?

	Primary reason	Please explain
Row 1	Risks exist, but no substantive impact anticipated	Given IFF's global footprint, multitude of suppliers, and broad range of materials, it is difficult to determine specifically which materials come from regions subject to water-related risk that could generate substantive change in our business. To better understand environmental risks located within our supply chain, we engage with our suppliers and ask them to report on their water performance through the supplier ethical data exchange which asks if the supplier has a water management policy, trains employees on proper water and wastewater management, has set water reduction targets, and if the supplier can identify the source of water at its facilities. This assessment is conducted annually and so far we have assessed approximately 90% (representing approximately 300 suppliers) of our spend. To date, we have not identified a water-related risk for our strategic sites which could cause a substantive change in our business. However, other disruptions in our supply chain could adversely affect our business and financial results. For additional information, please see our 2018 Annual Report.

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

Efficiency

Primary water-related opportunity

Improved water efficiency in operations

Company-specific description & strategy to realize opportunity

From research to manufacturing, we're seizing the opportunity to develop new products that are green by design and require fewer resources. We're doing this by integrating green chemistry principles into product and process development, installing water efficiency projects and implementing behavioral changes to reduce their overall water consumption and improve water efficiency. This is a strategic opportunity for IFF because it meets the demand from our customers for these products while aligning with our triple bottom line philosophy to create environmental, social, and economic benefits. This strategy is being implemented to take advantage of the opportunity water presents and IFF has committed \$1-2M annually for sustainability capital projects that include improving water efficiency. Examples of these projects include improving cleaning processes as well as improving operational behaviors. An additional example of this strategy is that in 2018 we approved an optimization of our waste water treatment plant at our Tlalnepantla, Mexico site. This project will save the site 4,300 cubic meters of water per year. In 2018, despite a 6.9% year over year increase in water usage intensity due to supply change disruptions, changes in product mix, and more intermediary products being manufactured in house, we surpassed our water use intensity reduction goal by achieving a 66% reduction relative to our 2010 baseline.

Estimated timeframe for realization

Current - up to 1 year

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)

<Not Applicable>

Potential financial impact figure – minimum (currency)

100000

Potential financial impact figure – maximum (currency)

500000

Explanation of financial impact

The installation of water reducing activities across our operations is estimated to save approximately 0.1M USD to 0.5M USD in operating costs annually. This is relatively low compared to our annual revenue of \$4B in 2018 (less than 1%). The estimated savings are based on historical data and are expected to continue based on committed capital expenditure funds.

Type of opportunity

Efficiency

Primary water-related opportunity

Cost savings

Company-specific description & strategy to realize opportunity

Reducing water use through water efficiency, recycling or re-use of wastewater, provides us the opportunity for operational savings by reducing water costs. This is a strategic opportunity for IFF because it aligns with our triple bottom line philosophy to create environmental, social, and economic benefits. We're doing this by integrating green chemistry principles into product and process development, installing water efficiency projects and implementing behavioral changes to reduce their overall water consumption and improve water efficiency. This strategy is being implemented to take advantage of the opportunity water presents and IFF has committed \$1-2M annually for sustainability capital projects that include reducing water consumption and its related costs and taxes. A recent example of this strategy is that in 2018 we approved an optimization of our waste water treatment plant at our Tlalnepantla, Mexico site, which saves the site \$13,000 per year.

Estimated timeframe for realization

Current - up to 1 year

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)

<Not Applicable>

Potential financial impact figure – minimum (currency)

100000

Potential financial impact figure – maximum (currency)

500000

Explanation of financial impact

The installation of water reducing activities across our operations is estimated to save approximately 0.1M USD to 0.5M USD in operating costs annually. This is relatively low compared to our annual revenue of \$4B in 2018 (less than 1%). The estimated savings are based on historical data and are expected to continue based on committed capital expenditure funds.

W6. Governance

W6.1

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

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

W6.1a

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

	Scope	Content	Please explain
Row 1	Company-wide	Description of business dependency on water Description of business impact on water Description of water-related performance standards for direct operations Description of water-related standards for procurement Reference to international standards and widely-recognized water initiatives Company water targets and goals Commitment to align with public policy initiatives, such as the SDGs Commitments beyond regulatory compliance Commitment to water-related innovation Commitment to stakeholder awareness and education Commitment to water stewardship and/or collective action Acknowledgement of the human right to water and sanitation Recognition of environmental linkages, for example, due to climate change	IFF's water policy is company-wide because we recognize water as a precious resource. The company-wide scope of our water policy supports the company-wide scope of our targets. The aim of the policy components selected in the Content column is to affirm our recognition of water as a precious resource, frame the ambition and intent of our water stewardship strategy, and guide our implementation of the strategy to achieve our water goals. Our water strategy includes a 2020 water use intensity target. We include performance standards for direct operations to ensure we can achieve our global target, which we further surpassed in 2018 by achieving a 66% reduction of water use per metric ton of production. IFF acknowledges the human right to water, sanitation and hygiene and has aligned its strategy with UN SDG 6, which addresses access to clean water. IFF also committed to the CEO Water Mandate, a widely-recognized international water initiative beyond regulatory compliance.

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	Our Chairman of the Board and CEO chairs the Sustainability Business Council (SBC), which consists of cross-functional committees (Responsible Sourcing, Eco-Effectiveness, Corporate Sustainability and Product Design) which are in turn led by the appropriate Executive Committee (EC) member and supported by a member of the Global Sustainability team. Each of these committees drives sustainability throughout that function, raises potential issues and provides regular updates to the SBC on progress. Our Chairman of the Board and CEO has oversight and responsibility over water-related issues via the SBC because our governance model relies on functional integration of our sustainability strategy, which includes water-related issues, across IFF, including goal development, implementation, and progress toward goals. In addition, our operations team responsible for water management has implemented numerous projects to enable us to reach and surpass our 2020 water-related goals with a 66% reduction in water usage intensity from the 2010 baseline year.

W6.2b

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

	Frequency that water-related issues are a scheduled agenda item	Governance mechanisms into which water-related issues are integrated	Please explain
Row 1	Scheduled - some meetings	Monitoring implementation and performance Overseeing acquisitions and divestiture Overseeing major capital expenditures Reviewing and guiding major plans of action Reviewing and guiding strategy Reviewing and guiding corporate responsibility strategy Reviewing innovation/R&D priorities Setting performance objectives	Our Chairman of the Board and CEO chairs the Sustainability Business Council (SBC), which consists of cross-functional committees (Responsible Sourcing, Eco-Effectiveness, Corporate Sustainability and Product Design) which are in turn led by the appropriate EC member and supported by a member of the Global Sustainability team. Each of these committees drives sustainability throughout that function, raises potential issues and provides regular updates to the SBC on progress. This governance model relies on functional integration of our sustainability strategy, which includes water-related issues, across IFF, including goal development, implementation and progress toward goals. Our Chairman of the Board and CEO's position leading the SBC, combined with our company-wide functional integration of sustainability strategy, allows the board to continually monitor implementation and performance of objectives, thereby contributing to the board's oversight of water issues. Additionally, our Chief Scientific and Sustainability Officer and VP of Sustainability report annually to the board on progress against water goals and targets and seek guidance on water-related strategy. This annual briefing includes the elements selected in the "Governance mechanisms into which water-related issues are integrated" column, which allows the board to review and provide guidance on these processes.

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 Operating Officer (COO)

Responsibility

Both assessing and managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues

Annually

Please explain

The Executive Vice President (EVP) of Operations is the highest level Executive responsible for oversight of operations globally (note IFF does not have the title of COO). This role reports directly to the Chairman and CEO, and the position provides an annual briefing to the board on progress against goals and targets and to seek guidance on strategy. This position is responsible for water-related issues, risks and opportunities in operations and at our facilities. He manages these issues by overseeing the Eco-Effectiveness Leadership Team. The Eco-Effective Leadership Team has direct oversight for the achievement of our water -related goals.

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

Chief Sustainability Officer (CSO)

Responsibility

Both assessing and managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues

Annually

Please explain

The CSO is a key leader of the Sustainable Business Council, which reviews water targets and metrics quarterly. This position is also charged with driving low-carbon and circular-economy solutions into the R and D process.

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

Risk committee

Responsibility

Assessing water-related risks and opportunities

Frequency of reporting to the board on water-related issues

Half-yearly

Please explain

The Global Risk Committee is a management risk committee made up of key members of the Company's management to integrate global risk activities (including water-related issues) and to ensure appropriate prioritization of resources and alignment across the Company. The Global Risk Committee co-chaired by our CFO and EVP General Counsel and Corporate Secretary.

(W-FB6.4/W-CH6.4/W-EU6.4/W-OG6.4/W-MM6.4) Do you provide incentives to C-suite employees or board members for the management of water-related issues?

Yes

W-FB6.4a/W-CH6.4a/W-EU6.4a/W-OG6.4a/W-MM6.4a

(W-FB6.4a/W-CH6.4a/W-EU6.4a/W-OG6.4a/W-MM6.4a) 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)?

	Who is entitled to benefit from these incentives?	Indicator for incentivized performance	Please explain
Monetary reward	Chief Operating Officer (COO)	Reduction of water withdrawals Reduction in consumptive volumes Reduction of product water intensity Efficiency project or target – direct operations Effluent quality improvements	The Executive Vice President (EVP) of Operations is the highest level Executive responsible for oversight of operations globally (note IFF does not have the title of COO). This role reports directly to the Chairman and CEO. The EVP of Operations, who is ultimately responsible for our eco efficiency initiatives, has performance-based objectives that are aligned with organizational water use reduction target of 50% per metric ton of production by 2020. The rationale for the indicators selected in the "Indicator for incentivized performance" column is these metrics correlate with the achievement of this target, which is also the threshold for success. IFF tracks each of these indicators for 100% of manufacturing facilities and larger offices. The data is collected and tracked monthly using a global web-based software application. To manage and drive performance, we use this software to internally track and report individual facilities while we externally report global usage. Our organizational performance and the EVP of Operations' performance-based objectives related to these goals are linked to monetary incentives via an annual assessment during performance reviews and salary determination. The level of incentive varies based on performance during the previous year.
Recognition (non-monetary)	Other, please specify (All employees)	Efficiency project or target – direct operations	Employees are internally recognized locally and corporately for achieving results from water reducing projects on the company intranet's Top Story, which recognizes employees for exemplary performance. In 2015, we launched an eco-efficiency awards program to formally recognize facilities that have been the most effective at implementing a culture of sustainability and improving performance related to sustainability standards. In 2018, we use these awards and plaques to recognize the best overall site performances and the sites that have been most improved over the past year. There is a specific award to the facility with best overall water performance. The metrics for success include the reductions in water withdrawal per metric ton of production, absolute water withdrawals reduced, water recycling, and water stewardship.
Other non-monetary reward	Please select	Please select	

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, trade associations
- 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?

IFF actively engages a variety of organizations to influence policies that are consistent with our water policy and commitments. By supporting the work of external entities, such as industry associations and other organizations, we are able to monitor current and/or pending water-related legislation that may impact our business globally. IFF's Vice President of Global Sustainability along with the Sustainability Business Council (SBC), which is comprised of cross-functional business leaders, review all policies related to water to provide consistent alignment with our sustainability and business strategies.

Our process for ensuring engagement is consistent across different geographies and markets starts with the SBC. In addition to reviewing policies with the VP of Global Sustainability to ensure alignment with our sustainability principles and business objectives, members of this council are also frequently our representatives on or liaisons with trade organizations. They engage policymakers directly at a high level and relay information back to the VP of Global Sustainability to ensure consistency.

If direct or indirect activities that influence policy are discovered to be inconsistent with our water policy or commitments, our action depends on the subject and significance of the inconsistency. Many instances are handled at the local level by managers, notifying the source of the inconsistency. More significant cases are reviewed by the SBC.

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)

IFF Annual Report 2018 - FINAL.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	One of the enablers of our Vision 2020 business strategy is creating a sustainable future. A key part of our building of a sustainable future is having water stewardship strategy that is driven by long-term water targets. Reducing overall water withdrawal and improving water stewardship in communities are integrated in the long-term business objectives through our environmental targets. While we continue to monitor and report our progress toward our 2020 target of a 50% reduction in water use intensity, we will further reduce our fresh water consumption by using recycled water for more than half of our non-product operations. We will drive collective action in targeted communities where we source and operate. Another example of a water-related issue integrated into the long-term business objectives of our strategic plan is that IFF acknowledges the human right to water, sanitation and hygiene. We have aligned our long-term business objectives and strategy with the United Nations 2030 Sustainable Development Goal (SDG) #6 of access to clean water and sanitation. We partnered with the World Business Council for Sustainable Development to pilot the SDG Compass Tool, to provide guidance to companies on how to properly align their strategies to the SDGs. IFF's sustainability strategy was informed by this analysis and designed with these same important goals in mind. As the SDGs extend to 2030 and our water targets extend beyond 2025, we have elected an 11-15 year time horizon.
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	11-15	Achievement of our long-term business objectives is tied to our commitment to water stewardship. In our Vision 2020 business strategy, we developed a clear strategy to achieve a sustainable future and water stewardship is a major part of it. Reducing overall water withdrawal and improving water stewardship in communities are integrated in our strategy for achieving long-term objectives through our formalized capital-project approval process. For example, we've incorporated and formalized a capital-project approval process to promote water reduction projects and water stewardship company-wide. If a project can demonstrate sustainability benefits, the hurdle rate is relaxed as water risks are taken into consideration. By integrating sustainability criteria into project evaluation frameworks, we can reduce the hurdle rate and implement more water stewardship solutions. The achievement of our water targets through this capital-project approval process aligns with the achievement of our long-term business objectives. As the UN SDGs extend to 2030 and our water targets extend beyond 2025, we have elected an 11-15 year time horizon.
Financial planning	Yes, water-related issues are integrated	11-15	Our financial planning is integrated with our commitment to water stewardship. In our Vision 2020 business strategy, we developed a clear strategy to achieve a sustainable future and water stewardship is a major part of it. Reducing overall water withdrawal and improving water stewardship in communities are integrated in our financial planning through our formalized capital-project approval process. For example, we've incorporated and formalized a capital-project approval process to promote water reduction projects and water stewardship company-wide. If a project can demonstrate sustainability benefits, the hurdle rate is relaxed as water risks are taken into consideration. By integrating sustainability criteria into project evaluation frameworks, we can implement more water stewardship solutions. As the UN SDGs extend to 2030 and our water targets extend beyond 2025, we have elected an 11-15 year time horizon.

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)

1

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

1

Water-related OPEX (+/- % change)

1

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

0

Please explain

All water reduction projects are guided by our triple bottom line philosophy to create environmental, social, and economic benefits.

W7.3

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

	Use of climate-related scenario analysis	Comment
Row 1	Yes	We use Ecolab's Water Risk Monetizer for scenario analysis. The Water Risk Monetizer (WRM) is a financial modeling tool that provides a new way for businesses to factor water scarcity into decisions that support business growth and help ensure the availability of fresh water for future generations. The WRM charts a company's enterprise risk profile versus likelihood continuum by assessing each facility's risk based on projected output growth and location-specific water stress. The data provides valuable information to help assess different business models, determine how water costs related to the quantity and quality factors may affect growth plans and help inform business goals. The tool provides valuable information to drive informed, long-term business strategy for companies that rely on freshwater resources. The output is reviewed at the corporate level - it was used to develop our newly announced corporate water goal, which was reviewed and approved by the Executive Committee.

W7.3a

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

No

W7.4

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

Row 1

Does your company use an internal price on water?

No, but we are currently exploring water valuation practices

Please explain

We incorporated Ecolab's Water Risk Monetizer into our overall assessment in 2017. We use it to supplement discussions about long-term growth strategy to help identify high-risk facilities. These sites are then prioritized for capital funding for sustainability-related projects. Continuing into 2018, with a focus on our goal of using recycled water for more than 50% of our non-production operations, we have recommended the continual usage of the Ecolab Water Risk Monetizer to help sites prioritize water costs. Into 2019 and beyond, we will continue to explore how to incorporate an internal corporate price on water into our business strategy and planning.

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	Our approach to setting water-related targets and goals starts with our Vision 2020 business strategy. In order to embed a sustainable mindset deeper into our company and throughout our culture, we consider sustainability to be a key enabler of our business strategy, and we are executing on an ambitious sustainability vision and strategy, with water stewardship as a centerpiece. Our sustainability strategy is underpinned by the concept of a circular economy. Additionally, our water goals and targets are driven by our acknowledgement of the human right to water, sanitation and hygiene. We have aligned our long-term business objectives and strategy with the United Nations 2030 Sustainable Development Goals (SDGs), including SDG #6 of access to clean water and sanitation. We aim to embed the principle of water stewardship into our company and culture via our targets and goals. For example, we announced a water stewardship goal as part of our next-generation environmental goals, EcoEffective+. Our strategy addresses our direct water use and associated impacts in the context of local water stress and management strategies at the facility level. This context-based approach – “think globally, act locally” – led us to set a goal to use recycled water for more than half of our nonproduct operations, and to drive collective action for water stewardship in targeted communities where we source and operate. A first step in achieving the collective action goal will be for each of the identified sites to develop a water stewardship plan. Our CEO confirmed our commitment by signing the UN Global Compact CEO Water Mandate to advance water stewardship in partnership with the United Nations, governments, civil society and others. To prioritize our goals and targets, we map our water footprint and identify possible risks using several publicly available tools, including WRI's Aqueduct Tool. The insight gained from the use of these tools informed our context-based water stewardship strategy and goals. Globally, 80% of our water usage is from 10 of our facilities, which have varying risk profiles according to their location. These facilities will be the primary focus of our watershed management and community engagement efforts. To monitor targets, IFF tracks water withdrawal, among other metrics, for 100% of manufacturing facilities and larger offices. The data is collected and tracked monthly using a global web-based software application. To manage and drive performance, we use this software to internally track and report individual facilities while we externally report global usage. We use per metric ton of production to report the water intensity of each site. Since 2012, we have made significant strides in reducing our global water footprint – surpassing our 2020 goals twice to date. By 2018, we achieved a 66% reduction in water use intensity against our 2010 baseline. Each facility also has a 3% annual reduction target to help us achieve our 2020 goals.

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

Water stewardship

Description of target

In 2012, we set new goals to reduce company-wide water withdrawals by 25% per metric ton of production by 2020, using a 2010 baseline. By the end of 2014, we achieved a 35% reduction allowing us to state a more aggressive 50% reduction target by 2020. In 2018, we surpassed our water use reduction goal by achieving a 66% reduction. The target advances water security by further reducing our water withdrawals and impact on the communities in which we operate. To implement of this target, we set a 3% water usage reduction goal annually for sites who have high water usage rates. Additionally, in order to achieve these targets, we will also continue to fund water sustainability projects through our CAPEX projects.

Quantitative metric

% reduction per unit of production

Baseline year

2010

Start year

2012

Target year

2020

% achieved

100

Please explain

By the end of 2014, we achieved a 35% reduction allowing us to state a more aggressive 50% reduction target by 2020. In 2018, we surpassed our water use reduction goal by achieving a 66% reduction. While we continue to monitor and report our progress towards our 2020 targets, we will further reduce our fresh water consumption by using recycled water for more than half of our non-product operations, as described in W8.1b (water goals).

W8.1b

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

Goal

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

Level

Company-wide

Motivation

Commitment to the UN Sustainable Development Goals

Description of goal

IFF's water policy is company-wide because we recognize water as a precious resource. The company-wide scope of our water policy supports the company-wide scope of our goals. All of our water-related targets and goals are monitored at the corporate level by our corporate sustainability team. We intend to implement WASH services as part of our UN Water pledge. This goal is to be implemented and consistently maintained for 100% of manufacturing facilities and larger offices. We have implemented this goal company-wide, as this is a corporate policy implemented and monitored by EHS managers on a site-by-site basis. The importance of this goal to our company and water security stems from our active support of the UN Sustainable Development Goals and our work to relate these goals to our sustainability strategy and business. IFF has identified Clean Water and Sanitation as a key SDG and will work to embed it within our sustainability strategy. We believe the business sector is uniquely positioned to advance sustainable development and achieve real progress against these goals.

Baseline year

2015

Start year

2015

End year

2025

Progress

The indicator that is used to assess progress is that WASH services are implemented and consistently maintained for 100% of manufacturing facilities and larger offices. The threshold of success is 100%. The data is collected and tracked monthly, and we have maintained this since the goal launched publicly in 2015. This is a corporate policy implemented and monitored by EHS managers on a site-by-site basis.

Goal

Other, please specify (Use recycled water for more than 50% of our non-production operations)

Level

Business activity

Motivation

Water stewardship

Description of goal

After greatly surpassing our 2020 goals, in 2018 we launched the EcoEffective+ environmental initiative, which features our next-generation of water stewardship goals. These goals are important to IFF because they support our commitment to sustainable production patterns, the continued innovation of our products, and the shrinking of our water footprint by embedding a circular mindset through our company. This goal is to use recycled water for more than 50% of our non-production operations. This goal advances water security by further reducing our water withdrawals and impact on the communities in which we operate. We are implementing this goal across IFF legacy facilities at our non-production operations in a phased approach. 2018 was used as a year to introduce this goal for sites to begin planning for the implementation of new water management systems. Moving forward we will begin tracking site progress on this goal in the coming years. In addition to this recycled water goal, we will continue to implement a 3% water usage reduction goal annually for sites who have high water usage rates. In order to achieve these goals we will also continue to fund water sustainability projects through our CAPEX projects.

Baseline year

2018

Start year

2018

End year

2025

Progress

The indicator used to track progress on this goal will be the percentage of recycled water used for non-production operations, measured as the volume of recycled water consumed for non-production operations divided by total consumption for these operations. The threshold of success is using recycled water for more than 50% of our non-production operations company-wide. As many of our facilities do not currently have the capability to actively monitor recycled water use, we have not reported any progress against this goal in 2018. This year was used as a year to introduce this goal for sites to begin planning for the implementation of new water management systems. Moving forward we will begin tracking and reporting site progress on this goal in the coming years, as active monitoring systems are put in place.

W9. Linkages and trade-offs

W9.1

(W9.1) Has your organization identified any linkages or tradeoffs between water and other environmental issues in its direct operations and/or other parts of its value chain?

Yes

W9.1a

(W9.1a) Describe the linkages or tradeoffs and the related management policy or action.

Linkage or tradeoff

Linkage

Type of linkage/tradeoff

Decreased energy use

Description of linkage/tradeoff

For IFF's operations, a reduction in water use is usually followed by a reduction in energy use because there will be less water to heat, cool, pump, or treat – activities that all require energy. While precise energy impacts are difficult to measure, we estimate our water reduction projects correspond to an energy reduction of at least 30,000 kWh annually. For example in 2018, at our Tilburg, Netherlands facility, a project was developed to create a newly engineered dry vortex method of cleaning pipes used in production. This new cleaning system has helped reduce batch sizes and consequently reduced the amount of water, energy, and hazardous waste generated in the cleaning process. Preliminary results of the project's first month of operation showed 53 GJ reduction in energy, a 3 ton reduction in hazardous waste, and a 183 m3 reduction of water usage. This type of benefit was also experienced by our Hangzhou facility after switching from once-through-cooling to a water tower.

Policy or action

IFF manages the linkage between reductions in water use and decreased energy use through our 2020 goals of reducing energy use intensity by 20% and water use intensity by 50%. Additionally, in order to achieve these targets, we continue to fund water sustainability projects through our CAPEX projects. Green Teams are in place at all of our manufacturing facilities (excluding recent acquisitions) and several of our creative centers and offices. Green Teams are cross-functional groups of employees who have a demonstrated passion for sustainability. They identify and implement eco-effectiveness projects, including water-reduction projects, to drive progress at their locations, and they connect monthly with the other teams to share global best practices. By managing water reduction in this way, we expect it will have a positive impact and reduce energy consumption and costs. As a result of these management actions being integrated into the business strategy through our public commitments and targets, there is a strategic choice to fund more water reduction projects as part of the business strategy to help reduce water and energy costs. In 2018, the change in measured impact of this linkage was approximately 30,000 kWh based on the implementation of projects projected to reduce water withdrawals by 5,125 M3 annually. This includes the upgrade of a wastewater treatment plant at our facility in Tlalnepantla, Mexico.

W10. Verification

W10.1

(W10.1) Do you verify any other water information reported in your CDP disclosure (not already covered by W5.1d)?

Yes

W10.1a

(W10.1a) Which data points within your CDP disclosure have been verified, and which standards were used?

Disclosure module	Data verified	Verification standard	Please explain
W1. Current state	Global water withdrawal, consumption, and discharge are verified annually. These verified data points are included in W1.2b.	ISAE3000	Verification for water withdrawal, consumption, and discharge volumes is conducted annually as part of our sustainability management process and the results are also included in our annual sustainability report, which is publicly available.

W11. 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.

W11.1

(W11.1) Provide details for the person that has signed off (approved) your CDP water response.

	Job title	Corresponding job category
Row 1	Executive VP and Chief Financial Officer	Chief Financial Officer (CFO)

W11.2

(W11.2) Please indicate whether your organization agrees for CDP to transfer your publicly disclosed data on your impact and risk response strategies to the CEO Water Mandate's Water Action Hub [applies only to W2.1a (response to impacts), W4.2 and W4.2a (response to risks)].

Yes

SW. Supply chain module

SW0.1

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

	Annual revenue
Row 1	3977539000

SW0.2

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

No

SW1.1

(SW1.1) Have you identified if any of your facilities reported in W5.1 could have an impact on a requesting CDP supply chain member?

No, CDP supply chain members do not buy goods or services from facilities listed in W5.1

SW1.2

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

No, this is confidential data

SW2.1

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

Requesting member

KAO Corporation

Category of project

Relationship water assessment

Type of project

Aligning goals to feed into customers targets and ambitions

Motivation

As a leader in water stewardship and in support of our Circular Design strategy and new Eco Effective+ goals (for more information, please see our video at https://www.youtube.com/watch?v=J_UvuY-ZhhE), we are motivated to engage with our stakeholders to reduce water usage and drive collective action in water stressed regions where we source and operate.

Estimated timeframe for achieving project

Up to 1 year

Details of project

IFF is a leader in water stewardship. We have surpassed our 2020 goal of a 50 % reduction in water usage (66 % as of 2018) and have recently launched an industry leading context based water target to use recycled water for more than 50 % of our non-product operations and to drive multi-stakeholder collaboration for water stewardship. Potential opportunities to work together include installing wells to provide clean water and enhancing training programs for WASH for the small holder farmers on key natural ingredients in your products or improving water stewardship for a key ingredient in our shared value chain. We look forward to partnering with you to make a positive difference in the world. Please contact Kip.Cleverley@iff.com, VP Global Sustainability to advance these opportunities. For an in-depth overview of our capabilities see <http://www.iff.com/sustain>.

Projected outcome

Improving water stewardship for a key ingredient in our shared supply chain.

Requesting member

S.C. Johnson & Son, Inc.

Category of project

Relationship water assessment

Type of project

Aligning goals to feed into customers targets and ambitions

Motivation

As a leader in water stewardship and in support of our Circular Design strategy and new Eco Effective+ goals (for more information, please see our video at

https://www.youtube.com/watch?v=J_UvuY-ZhhE), we are motivated to engage with our stakeholders to reduce water usage and drive collective action in water stressed regions where we source and operate.

Estimated timeframe for achieving project

Up to 1 year

Details of project

IFF is a leader in water stewardship. We have surpassed our 2020 goal of a 50 % reduction in water usage (66 % as of 2018) and have recently launched an industry leading context based water target to use recycled water for more than 50 % of our non-product operations and to drive multi-stakeholder collaboration for water stewardship. Potential opportunities to work together include installing wells to provide clean water and enhancing training programs for WASH for the small holder farmers on key natural ingredients in your products or improving water stewardship for a key ingredient in our shared value chain. We look forward to partnering with you to make a positive difference in the world. Please contact Kip.Cleverley@iff.com, VP Global Sustainability to advance these opportunities. For an in-depth overview of our capabilities see <http://www.iff.com/sustain>.

Projected outcome

Improving water stewardship for a key ingredient in our shared supply chain.

Requesting member

Diageo Plc

Category of project

Relationship water assessment

Type of project

Aligning goals to feed into customers targets and ambitions

Motivation

As a leader in water stewardship and in support of our Circular Design strategy and new Eco Effective+ goals (for more information, please see our video at https://www.youtube.com/watch?v=J_UvuY-ZhhE), we are motivated to engage with our stakeholders to reduce water usage and drive collective action in water stressed regions where we source and operate.

Estimated timeframe for achieving project

Up to 1 year

Details of project

IFF is a leader in water stewardship. We have surpassed our 2020 goal of a 50 % reduction in water usage (66 % as of 2018) and have recently launched an industry leading context based water target to use recycled water for more than 50 % of our non-product operations and to drive multi-stakeholder collaboration for water stewardship. Potential opportunities to work together include installing wells to provide clean water and enhancing training programs for WASH for the small holder farmers on key natural ingredients in your products or improving water stewardship for a key ingredient in our shared value chain. We look forward to partnering with you to make a positive difference in the world. Please contact Kip.Cleverley@iff.com, VP Global Sustainability to advance these opportunities. For an in-depth overview of our capabilities see <http://www.iff.com/sustain>.

Projected outcome

Improving water stewardship for a key ingredient in our shared supply chain.

Requesting member

Unilever plc

Category of project

Relationship water assessment

Type of project

Aligning goals to feed into customers targets and ambitions

Motivation

As a leader in water stewardship and in support of our Circular Design strategy and new Eco Effective+ goals (for more information, please see our video at https://www.youtube.com/watch?v=J_UvuY-ZhhE), we are motivated to engage with our stakeholders to reduce water usage and drive collective action in water stressed regions where we source and operate.

Estimated timeframe for achieving project

Up to 1 year

Details of project

IFF is a leader in water stewardship. We have surpassed our 2020 goal of a 50 % reduction in water usage (66 % as of 2018) and have recently launched an industry leading context based water target to use recycled water for more than 50 % of our non-product operations and to drive multi-stakeholder collaboration for water stewardship. Potential opportunities to work together include installing wells to provide clean water and enhancing training programs for WASH for the small holder farmers on key natural ingredients in your products or improving water stewardship for a key ingredient in our shared value chain. We look forward to partnering with you to make a positive difference in the world. Please contact Kip.Cleverley@iff.com, VP Global Sustainability to advance these opportunities. For an in-depth overview of our capabilities see <http://www.iff.com/sustain>.

Projected outcome

Improving water stewardship for a key ingredient in our shared supply chain.

Requesting member

L'Oréal

Category of project

Relationship water assessment

Type of project

Aligning goals to feed into customers targets and ambitions

Motivation

As a leader in water stewardship and in support of our Circular Design strategy and new Eco Effective+ goals (for more information, please see our video at https://www.youtube.com/watch?v=J_UvuY-ZhhE), we are motivated to engage with our stakeholders to reduce water usage and drive collective action in water stressed regions where we source and operate.

Estimated timeframe for achieving project

Up to 1 year

Details of project

IFF is a leader in water stewardship. We have surpassed our 2020 goal of a 50 % reduction in water usage (66 % as of 2018) and have recently launched an industry leading context based water target to use recycled water for more than 50 % of our non-product operations and to drive multi-stakeholder collaboration for water stewardship. Potential opportunities to work together include installing wells to provide clean water and enhancing training programs for WASH for the small holder farmers on key natural ingredients in your products or improving water stewardship for a key ingredient in our shared value chain. We look forward to partnering with you to make a positive difference in the world. Please contact Kip.Cleverley@iff.com, VP Global Sustainability to advance these opportunities. For an in-depth overview of our capabilities see <http://www.iff.com/sustain>.

Projected outcome

Improving water stewardship for a key ingredient in our shared supply chain.

SW2.2

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

Yes

SW2.2a

(SW2.2a) Please select the requesting CDP supply chain member(s) that have driven collaborative water projects.

Requesting member

KAO Corporation

Category of project

Change to provision of goods and services

Type of project

Reduced water-related impacts

Description of project

Globally, 80% of our water usage is from 10 of our facilities, which have varying risk profiles according to their location. Green teams at these facilities have intensely focused their efforts on monitoring and reducing water use. The green teams worked to improve water controls, focusing on flow and temperature at each step of the process. In 2018, water-saving initiatives included eliminating once-through cooling; optimizing cleaning procedures, such as clean-in-place systems; and repairing or upgrading piping to prevent water leaks. Our Tilburg, Netherlands facility implemented an air vortex cleaning-in-place system to reduce the water required to achieve increasingly stringent product purity specifications.

Progress

We have reduced our Global water usage per metric ton of production by more than 66 percent since 2010. This ambitious goal will stretch our abilities but with our previous success in water management and the tools we are using to estimate our future impact, we are confident in our new commitment. These reductions are directly related to the products that we provide to you, our key customer.

Requesting member

S.C. Johnson & Son, Inc.

Category of project

Change to provision of goods and services

Type of project

Reduced water-related impacts

Description of project

Globally, 80% of our water usage is from 10 of our facilities, which have varying risk profiles according to their location. Green teams at these facilities have intensely focused their efforts on monitoring and reducing water use. The green teams worked to improve water controls, focusing on flow and temperature at each step of the process. In 2018, water-saving initiatives included eliminating once-through cooling; optimizing cleaning procedures, such as clean-in-place systems; and repairing or upgrading piping to prevent water leaks. Our Tilburg, Netherlands facility implemented an air vortex cleaning-in-place system to reduce the water required to achieve increasingly stringent product purity specifications.

Progress

We have reduced our Global water usage per metric ton of production by more than 66 percent since 2010. This ambitious goal will stretch our abilities but with our previous success in water management and the tools we are using to estimate our future impact, we are confident in our new commitment. These reductions are directly related to the products that we provide to you, our key customer.

Requesting member

Diageo Plc

Category of project

Change to provision of goods and services

Type of project

Reduced water-related impacts

Description of project

Globally, 80% of our water usage is from 10 of our facilities, which have varying risk profiles according to their location. Green teams at these facilities have intensely focused their efforts on monitoring and reducing water use. The green teams worked to improve water controls, focusing on flow and temperature at each step of the process. In 2018, water-saving initiatives included eliminating once-through cooling; optimizing cleaning procedures, such as clean-in-place systems; and repairing or upgrading piping to prevent water leaks. Our Tilburg, Netherlands facility implemented an air vortex cleaning-in-place system to reduce the water required to achieve increasingly stringent product purity specifications.

Progress

We have reduced our Global water usage per metric ton of production by more than 66 percent since 2010. This ambitious goal will stretch our abilities but with our previous success in water management and the tools we are using to estimate our future impact, we are confident in our new commitment. These reductions are directly related to the products that we provide to you, our key customer.

Requesting member

Unilever plc

Category of project

Change to provision of goods and services

Type of project

Reduced water-related impacts

Description of project

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Requesting member

L'Oréal

Category of project

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SW3.1

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

Product name

All IFF Products, includes intermediary and final products sold

Water intensity value

10.12

Numerator: Water aspect

Water withdrawn

Denominator: Unit of production

Metric Tons

Comment

The water intensity provided is a global average across all operations and river basins. This is for direct operations only and excludes all water withdrawn to grow raw ingredients and other materials for product, including packaging and transportation.

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

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

Please confirm below

I have read and accept the applicable Terms