



Water 2017 Information Request Associated British Foods

Module: Introduction

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W0.1

Introduction

Please give a general description and introduction to your organization

Associated British Foods is a diversified international food, ingredients and retail group with sales of £13.4bn, 130,000 employees and operations in 50 countries across Europe, southern Africa, the Americas, Asia and Australia. The group operates through five strategic business segments: Grocery, Sugar, Agriculture, Ingredients and Retail. We aim to achieve strong, sustainable leadership positions in markets that offer potential for profitable growth and deliver quality products and services that are central to people's lives. Each business in the group enjoys a high degree of autonomy in the running of their operations but at the heart of the way we operate is a principle of 'value together' – the benefit the group gains from each business being part of the larger organisation.

Grocery comprises consumer-facing businesses that manufacture and market a variety of food brands. Twinings Ovaltine has the broadest geographical reach, selling premium teas and malted beverages in more than 100 countries. In Europe, our brands include Silver Spoon and Billington's sugars, Jordans and Dorset cereals, Ryvita, Kingsmill, Patak's and Blue Dragon. In the Americas, Mazola is the leader in corn oil and Capullo is a premium canola oil in Mexico. In Australia, ham, bacon and smallgoods are produced and Tip Top Bakeries produce a range of well-known breads and baked goods.

AB Sugar is a leading business in the international markets for sugar and sugar derived co-products, with operations in the UK, Spain, southern Africa and north China. In the EU, Azucarera is the major producer in Iberia and British Sugar is the sole processor of the UK sugar beet crop, and is one of Europe's most efficient processors. Illovo Sugar is the biggest sugar processor in Africa, and is one of the world's foremost low-cost producers. We also have a beet sugar business in north China. AB Sugar operates in ten countries and has 24 factories with the capacity to produce 4.5m tonnes of sugar and 600m litres of ethanol annually. We also have the capacity to generate power sufficient to meet most of our internal needs and, in a number of locations, we export power to the national grid.

AB Agri operates at the heart of the agricultural industry. Its unique breadth and experience enable it to add value all along the food, drink and biofuel industry supply chains. AB Agri supplies products and services to farmers, feed and food manufacturers, processors and retailers. It also buys grain from farmers and supplies crop inputs through its joint venture arable operation, Frontier Agriculture. The business employs more than 2,300 people in the UK and China and market products in more than 65 countries

worldwide.

Ingredients comprises a number of businesses that supply a range of ingredients to food and non-food manufacturers. They employ 8,000 people in more than 70 plants in 33 countries. AB Mauri has a global presence in bakers' yeast with operations in The Americas, Europe and Asia, and is a technology leader in, and supplier of, bread improvers, dough conditioners and bakery mixes. ABF Ingredients comprises businesses focusing on high-value ingredients for food, feed, pharmaceutical and industrial applications: AB Enzymes; ABITEC (speciality lipids and surfactants); Ohly (yeast extracts and seasoning powders); PGP International (extruded ingredients and speciality rice flours); and SPI Pharma (pharmaceutical excipients and antacids).

Primark is one of the largest clothing retailers in Europe. It offers customers up-to-the-minute fashion at value-for-money prices. At the financial year end, 2016, it had 315 stores, and employed 68,000 people. It operates stores in the UK, Republic of Ireland, Spain, Portugal, Germany, the Netherlands, Belgium, Austria, France, Italy and the northeast of the USA. Primark was founded in 1969 in the Republic of Ireland. It opened its first store in continental Europe in 2006 and now operates from over 12m sq ft of selling space in 11 countries. It opened its first US store in September 2015.

In 2014 we took our culture of decentralised priority setting and applied it to corporate responsibility (CR). We identified material risks and opportunities with our businesses focusing on areas of greatest importance. These sit under ABF's five CR pillars of our environment, our people, our supply chain, our neighbours and our customers.

W0.2

Reporting year

Please state the start and end date of the year for which you are reporting data

Period for which data is reported

Sat 01 Aug 2015 - Sun 31 Jul 2016

W0.3

Reporting boundary

Please indicate the category that describes the reporting boundary for companies, entities, or groups for which water-related impacts are reported

Companies, entities or groups over which operational control is exercised

W0.4

Exclusions

Are there any geographies, facilities or types of water inputs/outputs within this boundary which are not included in your disclosure?

No

Further Information

Data reported specifically for Illovo operations (W5.1 - 5.3) are for the reporting year 01 April 2015 to 31 March 2016. This facility level data has already been supplied and published in Illovo's 2015/16 CDP report.

Module: Current State

Page: W1. Context

W1.1

Please rate the importance (current and future) of water quality and water quantity to the success of your organization

Water quality and quantity	Direct use importance rating	Indirect use importance rating	Please explain
Sufficient amounts of good quality freshwater available for use	Vital for operations	Important	Sufficient and secure amounts of good quality freshwater are required by the majority of ABF companies especially those in agriculture and manufacturing. Water quality is critical for many operations which rely on pure fresh or potable water for their pharmaceutical or food related operations. Water is used throughout ABF's value chain e.g. by independent farmers or within suppliers' wet processing facilities. A reduction in either raw material supply or finished goods from our suppliers could significantly impact the output of our business e.g. Westmill and PGP depend on reliable sources of water for a consistent supply

Water quality and quantity	Direct use importance rating	Indirect use importance rating	Please explain
			of rice. Illovo's main water use is for irrigation in operations outside of South Africa. Insufficient water supply would impact production. Mills and downstream operations require water of a certain standard to support operations. Below specification water requires pre-treatment which impacts operating costs.
Sufficient amounts of recycled, brackish and/or produced water available for use	Important	Important	Sufficient and secure amounts of recycled water are used by a large proportion of ABF companies especially those in agriculture and manufacturing and most significantly across our sugar business. Illovo's mills operate primarily with recycled water generated from the sugar milling process. Water is recycled extensively through the mill in an 'open-loop' system, after which it is discharged to supplement irrigation water. Water is used throughout ABF's value chain e.g. by independent farmers or within suppliers wet processing facilities. A reduction in either raw material supply or finished goods from our suppliers could significantly impact the output of our business. Over half of the sugarcane processed by Illovo is cultivated by independent farmers or 'outgrowers'. A reduction in outgrower sugarcane supply could significantly impact Illovo's production. Illovo leads with the requirement that all outgrowers should have water supply agreements with the relevant national authorities.

W1.2

For your total operations, please detail which of the following water aspects are regularly measured and monitored and provide an explanation as to why or why not

Water aspect	% of sites/facilities/operations	Please explain
Water withdrawals- total volumes	76-100	All ABF companies are responsible for reporting their individual site data for water withdrawal on an annual basis to ABF. This data is verified by ABF and independently assured by external auditors (for the reporting year, Ernst & Young). For some of the businesses, this information is used to evaluate the performance of an operation and aids in the identification of potential water conservation opportunities.
Water withdrawals- volume by sources	76-100	In 2013/14, ABF supported our operating companies, those classified as material water users, to provide annual data on the source of water withdrawals using the WWF's Water Risk Filter Tool. This information and actual data provided by Illovo have been used to robustly estimate the group's water withdrawals by source, as provided in 1.2a. A significant proportion of our facilities monitor this data for their own management decisions. For example, Illovo monitor 100% of operations to evaluate the sustainability of their supply and legal compliance.
Water discharges- total volumes	76-100	ABF facilities report volume of water discharge to regulators as part of their water discharge permits. All ABF companies are required to report annually to ABF the volume of effluent discharged over the course of the reporting year. This data is verified by ABF. An objective of the Illovo Water Strategy is to decrease waste water discharge by increasing water reuse and recycling. Water discharge is therefore monitored at 100% of Illovo's

Water aspect	% of sites/facilities/operations	Please explain
		operations to aid in the identification of recycling opportunities and to inform the development of the operations' water footprint.
Water discharges- volume by destination	76-100	ABF facilities report volume of water discharge and destination to regulators as part of their water discharge permits. As well as legal compliance, our facilities can use this information to monitor and ensure minimal impact on surrounding natural and social environments. In 2013/14 ABF supported our companies, those classified as material water users, to provide annual data on the destination of water discharges using the WWF's Water Risk Filter Tool. This information and actual data provided by Illovo have been used to robustly estimate the group's water discharges by destination, as provided by 1.2b.
Water discharges- volume by treatment method	76-100	ABF companies measure, monitor and maintain records for water discharges by treatment method. ABF does not require our companies to report this information to the group. However, if the data were required, ABF can obtain it from the individual company records. For Illovo, the monitoring of water discharged from industrial operations by treatment method is important as this water is either recycled back into the mill or reused for irrigation, consequently this aspect is monitored at 100% of Illovo's facilities.
Water discharge quality data- quality by standard effluent parameters	76-100	All ABF's businesses operate within and comply with a regulatory water and wastewater framework. As such, our sites regularly measure and monitor the quality of their water discharges to ensure legal compliance and minimal impact on the surrounding natural and social environments.
Water consumption- total volume	76-100	For the reporting year, ABF did not require our businesses to report to group their water consumption. However, a large proportion of our businesses collect this data to assist with their own management decisions. For example, this performance indicator is material for sugar businesses as, crop dependent, a large percentage of water entering the site comes from the sugar beet or cane itself and is removed from the raw material and used in the processes in our factories in preference to using fresh water. Therefore the majority of facilities in AB Sugar monitor their total water footprints. In Illovo these are updated monthly and have been extremely useful in the identification of water management opportunities aimed at improving the effective use of water.
Facilities providing fully-functioning WASH services for all workers	76-100	All ABF companies provide appropriate water and sanitation facilities for our workers and contractors. As part of our publicly available Supplier Code of Conduct, we have a commitment that 'workers shall...be given access to clean toilet facilities and potable water.' In Africa, all our Sugar operations supply workers with basic amenities, such as water and electricity, and also to some of the communities in which Illovo is situated. This water supply is included within the Illovo Water Strategy and is consequently monitored at all operations.

W1.2a

Water withdrawals: for the reporting year, please provide total water withdrawal data by source, across your operations

Source	Quantity (megaliters/year)	How does total water withdrawals for this source compare to the last reporting year?	Comment
Fresh surface water	777056	Lower	Overall, the group's abstracted water is lower than reported in the previous year because of the net effect of reduced river water available for Illovo to irrigate due to drought in Swaziland, Zambia and to a lesser extent Tanzania.
Brackish surface water/seawater	959	Lower	In 2014/15, ABF reported for the first time the source of water using the WWF / DEG Water Risk Filter Tool. The Tool provided us with an estimate of water sources across the group using data from our material water users. This approach continues to develop with the aim of reporting water sources more accurately.
Rainwater	0	Not applicable	In their CDP submission for 2015/16, Illovo reported the amount of rainfall supplying their agricultural operations. This approach is not yet applicable across the rest of the ABF group.
Groundwater - renewable	14152	Lower	In 2014/15, ABF reported for the first time the source of water using the WWF / DEG Water Risk Filter Tool. The Tool provided us with an estimate of water sources across the group using data from our material water users. This approach continues to develop with the aim of reporting water sources more accurately.
Groundwater - non-renewable	0	Not applicable	
Produced/process water	720	Lower	A decrease in cane processed by Illovo in southern Africa resulted in less water reclaimed from the cane plant.
Municipal supply	6636	Much lower	Overall, the group's abstracted water is lower than reported in the previous year because the extreme weather conditions across southern Africa resulting in lower crop production and less water requirements.
Wastewater from another organization	0	Not applicable	
Total	799523	Lower	The total amount abstracted decreased in 2015/16 in main due to Illovo's reduction in water abstraction for agricultural use. Crop production was lower due to the extreme weather in many parts of southern Africa; the net effect of reduced river water available for Illovo to irrigate due to drought in Swaziland, Zambia and to a lesser extent Tanzania. For the reporting year 2014/15, we overstated our abstracted water by 15% due to double-counting at a number of our significant water-using sites. Our reported figure of 1.1 billion m3 should have been 925 million m3.

W1.2b

Water discharges: for the reporting year, please provide total water discharge data by destination, across your operations

Destination	Quantity (megaliters/year)	How does total water discharged to this destination compare to the last reporting year?	Comment
Fresh surface water	26203	Lower	A decrease in the amount of water entering our factories, cane estates and mills resulted in a decrease in the volume of waste water produced.
Brackish surface water/seawater	3393	Lower	A decrease in the amount of water entering our factories, cane estates and mills resulted in a decrease in the volume of waste water produced.
Groundwater	43	About the same	
Municipal/industrial wastewater treatment plant	13316	Lower	A decrease in the amount of water entering our factories, cane estates and mills resulted in a decrease in the volume of waste water produced.
Wastewater for another organization	0	Not applicable	
Total	42955	Lower	Our businesses continue to consider and implement ways of reusing wastewater within their operations after appropriate treatment, most notably for irrigation or landspreading. This year's total wastewater figure is 10% lower than reported in the previous year.

W1.2c

Water consumption: for the reporting year, please provide total water consumption data, across your operations

Consumption (megaliters/year)	How does this consumption figure compare to the last reporting year?	Comment
0	Not applicable	We are currently unable to report a robust water consumption figure for the whole group. Illovo reports a water consumption figure in their annual CDP water submission of 1120917 megaliters for the year 01 April 2015 to 31 March 2016.

W1.3

Do you request your suppliers to report on their water use, risks and/or management?

Yes

W1.3a

Please provide the proportion of suppliers you request to report on their water use, risks and/or management and the proportion of your procurement spend this represents

Proportion of suppliers %	Total procurement spend %	Rationale for this coverage
1-25	1-25	At a group level our water management focus is to improve knowledge of our own use and impacts and then to prioritise activity to address water risks and responsibilities. Once we are comfortable with our approach to water stewardship in our direct operations, we may be in a position to develop a group approach to working with key suppliers. A number of our businesses engage with their suppliers on water as this is material for them. For example, Primark's largest water impact is in its manufacturing supply chain where efforts are focused on reducing water use and ensuring clean water discharge. Primark works closely with suppliers to manage and monitor incoming water and wastewater discharge. The business has an ambitious chemical management programme which incorporates specific objectives to ensure clean water use and discharge. A key element of this programme is monitoring and reporting of incoming water use and discharge, specifically in China where government reporting of this data is prioritised and closely managed. Across AB Sugar, the businesses work with their beet and cane growers on water. For example, Azucarera has an Agronomic Improvement Plan which aims to improve the efficient use of energy and water of their beet growers. Training, regular communications and irrigation system demonstrations are part of the activities undertaken and planned with Azucarera's beet growers.

W1.4

Has your organization experienced any detrimental impacts related to water in the reporting year?

Yes

W1.4a

Please describe the detrimental impacts experienced by your organization related to water in the reporting year

Country	River basin	Impact driver	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
South Africa	Pongola-Umzimkulu (WMA)	Phys-Drought Other: Reduced water quality and reduction in cane yields	Plant/production disruption leading to reduced output	With a second consecutive year of below average rainfall together with a substantial amount of carry-over cane harvested in 2015/16 affected by frost and sour-rot, both cane quality and yield have been negatively affected. The 2015/16 sugarcane crop closed at 4 million tons which is approximately 1 million tons less than the 10 year average of 5.179 million tons. The poorer quality cane has also resulted in a lower sugar percentage cane by 0.74% units.	2 years	R 329 million	Infrastructure investment Other: Temporary closure of facility to increase milling efficiency	To mitigate the weather-related volume fluctuation, a total of 1164 hectares of new area has been planted with a total of 1579 ha to be completed before the onset of the 2016/17 season which will in future seasons provide an additional 70,000 tons of cane per annum and improve the factory capacity utilisations particularly on the south coast. In order to optimise milling capacity the combined crop was crushed at 3 mills, with the Umzimkulu mill being temporarily closed for the season. The full Umzimkulu cane crop of 856,000 tons was crushed at the Sezela mill with the additional diversion cost being incurred by the business. In addition, 300,000 tons of cane was diverted from Eston to Noodsberg. The Umzimkulu employees that were not required at this operation were redeployed to other businesses within Illovo.
United States of America	Sabine River	Phys-Drought Reg-Mandatory	Reduction in revenue	The impact of the drought in California has resulted in a reduction in the	A State of Emergency was declared in	Profitability of our operations	Engagement with customers	Our operations in California have and continue to monitor

Country	River basin	Impact driver	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
		water efficiency, conservation, recycling or process standards		output of rice crop. Rainfall deficit has also been coupled by a 20% reduction in snowpack levels. This has had a direct and immediate impact on the availability of regional rice crop to process.	January 2014 due to California experiencing record dry conditions. The length of impact has been since mid-2013 with projections of impact reaching at least to the end of 2016.	in California has been impacted.	Engagement with suppliers	rainfall and snow cap data and resulting crop output closely to ensure operations are in line with supply of rice crop.
Argentina	Other: Sali-Dulce	Phys-Drought Other: Reduced superficial water quality and quantity	Plant/production disruption leading to reduced output	Our Tucuman site in Argentina uses river water for cooling purposes i.e. yeast fermentation and yeast cream cooling system. This river arises from a natural spring and several factors influence the output of this spring. Over the past years rainfall in the region has been consistently below average together with more severe rain events reducing the aquifer reload. There is also a constant increase in urbanised areas which in turn decreases the basin catchment area and increases polluting activities.	1 year	USD 2.2million	Infrastructure investment Other: A cooling tower CAPEX was agreed for build in the fiscal year 2016-2017	To mitigate the weather-related volume fluctuation and quality impairment, our Tucumán site will shift from the once-through cooling system to a closed circuit system in the cooling towers for fermentation cooling and yeast cream cooling requirements. This investment seeks to address production limitations due to the lack of sufficient cooling water and will substantially reduce the site's total water use.

Further Information

W1.2 - Water discharge quality data- quality by standard effluent parameters Primark has strict chemical management requirements that comply with EU and US legislation. However, it looks for opportunities to go beyond legislative requirements to reduce the environmental impact of the textile manufacturing processes. Primark actively engages with suppliers, chemical experts, other retailers and organisations to help bring about sustainable change. They do this by empowering suppliers and their factories through providing them with an assessment programme and screening methodology that supports continuous improvement. Primark provides suppliers and their factories with formal training, tools and support on standards to make improvements throughout the manufacturing process including washing, dyeing and printing, in order to ensure their high standards are met. In 2015, Primark signed up to Greenpeace's global Detox campaign and committed to phase out the use of certain chemicals by 2020. Since then, Primark has become an active member of the ZDHC Programme, a group of leading brands that are committed to working towards zero discharge of hazardous chemicals in the global textile and footwear industries. In total, 21 brands are working together to drive this industry-wide change. The group has identified the key areas and cross-cutting issues that must be addressed to improve the environment and protect the wellbeing of workers and the wider community. These cross-cutting issues support all elements of the supply chain in adopting improved chemical management practices, supporting the aim to have zero discharge of hazardous chemicals by 2020.

Module: Risk Assessment

Page: W2. Procedures and Requirements

W2.1

Does your organization undertake a water-related risk assessment?

Water risks are assessed

W2.2

Please select the options that best describe your procedures with regard to assessing water risks

Risk assessment procedure	Coverage	Scale	Please explain
Water risk assessment undertaken independently of other risk assessments	Direct operations and supply chain	All facilities and some suppliers	ABF conducted group wide risk assessments in 2013 and 2014. These enabled ABF to develop water reporting requirements, led to engagement with companies operating in high risk basins and generated a wider understanding of the water risks facing ABF's diverse operations. Using this analysis, we considered operational changes with a small number of sites to reduce short-medium term risk. ABF's decentralised model empowers the boards and management of our businesses to identify and manage the risks they face. Key risks are reviewed by ABF's board. Our businesses assess the exposure of their sites to water risks as well as their impact on water basins. Water use, quality and availability have been identified by a number of businesses and they are responsible for mitigating these risks. For example, Illovo assess water risk as part of their Enterprise Risk Management (ERM) framework. This means water risk management is applied across all operations. The ERM framework has been chosen as the primary

Risk assessment procedure	Coverage	Scale	Please explain
			vehicle for water risk and opportunity identification due to the importance of water across all areas of Illovo's operations. George Weston Foods includes water risk as a component of their Environment Strategic Plan with 'good to great' and 'better business plan' activities including water reduction in process improvement programmes.

W2.3

Please state how frequently you undertake water risk assessments, at what geographical scale and how far into the future you consider risks for each assessment

Frequency	Geographic scale	How far into the future are risks considered?	Comment
Annually	Facility	1 to 3 years	In 2013 and 2014, ABF conducted our first group wide water assessment with our businesses providing data and knowledge from each facility. We are using the information from this comprehensive analysis to help manage key risks in our businesses. Our businesses conduct additional assessments and determine the appropriate geographic scale at facility, country and company levels. Our sugar and agriculture operations review water risks more regularly due to close links between crop yield and water.

W2.4

Have you evaluated how water risks could affect the success (viability, constraints) of your organization's growth strategy?

Yes, evaluated over the next 1 year

W2.4a

Please explain how your organization evaluated the effects of water risks on the success (viability, constraints) of your organization's growth strategy?

ABF's decentralised business model empowers the boards and management of our businesses to identify, evaluate and manage the opportunities and risks they face. The long-term viability and growth of some of our businesses, particularly in agriculture often depend on reliable sources of water. For example, the ability to grow commodities and to manufacture certain products including sugar and yeast depend on robust sources of water. These businesses consider these water issues as part of their growth strategy. Water use, availability and quality have been identified by a number of our businesses as potential risks. They are responsible for mitigating those risks and managing water issues alongside their growth strategy. For example, Illovo's water risk approach led to the selection and incorporation of drought tolerant sugarcane varieties into the business

strategy, at operations where pressures on water supply have been identified.

At a group level, key risks and trends identified by our businesses as part of the Risk Management process and the Corporate Responsibility priority setting and management are reviewed by ABF's board. Water access is identified as a principal risk to ABF and is discussed by the ABF plc board, along with the imperative to monitor and report accurate water data. We have evaluated a number of water issues which are leading to the development of a water programme for certain businesses, and which in time will have the potential to be viewed in parallel to the group's growth strategy.

Activities include:

- Monitoring – annual analysis and reporting of the group's water key performance indicators (KPIs) including quantity of water withdrawn, quantity of water discharged and quantity of reused wastewater;
- Foot printing - building water footprints for our sugar operations and other facilities rated as material users of water;
- Water stewardship - developing a group standard approach to water evaluation to help prioritise facilities operating in high risk basins and / or having the potential to impact local water.

W2.5

Please state the methods used to assess water risks

Method	Please explain how these methods are used in your risk assessment
Internal company knowledge Regional government databases Water Footprint Network WRI Aqueduct WWF-DEG Water Risk Filter Other: IPCC Climate Change Projections, independent river basin studies, engagement with catchment management agencies.	ABF has an internal reporting platform for all our businesses to report their annual water data. These data were transferred to the WWF-DEG Water Risk Filter Tool and the WRI Aqueduct where figures and additional information was collated, analysed and tested. This data and information were supplied by each business and facility, which in turn apply a range of methods to assess their own water risks. - Employees familiar with water related aspects of operations are included within the risk assessment processes. Their inclusion ensures the process is informed by an on-the-ground operational knowledge. - A number of businesses utilise water footprints for their agricultural, facility and WASH services, with many generating monthly reports. These footprints greatly assist in assessing the significance of water risks and opportunities within the individual business's risk framework. - Climate changes projected for many regions in which we operate are evaluated periodically to assist in the identification and rating of risks. These projections have been incorporated into risk assessment processes and are re-evaluated when new information comes available. - The responsibility to keep appraised on the status of the river basins in which we operate sites with the Risk, Operations or Environment Managers in our operations. The majority of our sugar operations and some of our other businesses are members of their local catchment management agency. This forum provides the means to stay updated on potential risks within the basin and to participate in the management of the basin. Key issues raised during these meetings are included within the business level framework.

W2.6

Which of the following contextual issues are always factored into your organization's water risk assessments?

Issues	Choose option	Please explain
Current water availability and quality parameters at a local level	Relevant, included	Water is a primary resource for the majority of our businesses particularly those in the sugar, yeast, baking and pharmaceutical industries. Consequently, understanding quality and quantity risks associated with current and future water supply at the local level is critical. Water availability and quality parameters are included in ABF's assessment of water risk using GPS co-ordinates of the facility and best available peer reviewed data sets. In addition, individual businesses conduct local level availability and quality checks to help ensure supply meets demand and quality requirements.
Current water regulatory frameworks and tariffs at a local level	Relevant, included	All of our businesses operate within a water and wastewater regulatory framework and tariff system. Some of our operations are also regulated by trans-boundary water agreements. As such monitoring changes and engaging with national and local regulators is important to anticipate potential impacts to our operations. As an example, GWF's Western Australia sites are part of the mandatory Water Efficiency Management Plan (WEMP) which is contributing to the efficiency drive. The Tip Top Canningvale site has seen its water use intensity remain flat even with the introduction of 7 day trading in the previous 12 months i.e. 2 additional days a week of clean-ups, washing of machinery etc. The site's water intensity metric has stabilised at 1.44kL per tonne of production for the period This follows improvements including redirecting wash water to a holding tank for reuse. Annual progress reports on targets, actions and initiatives are a requirement under the Western Australia Water Agencies (Water Use) By-laws of 2010.
Current stakeholder conflicts concerning water resources at a local level	Relevant, included	Competition for water is an issue for a number of basins in which we operate. Where affected our businesses are represented in catchment bodies or basin management agencies and work with others to address concerns. British Sugar was involved in stakeholder workshops relating to the Water Framework Directive to identify areas for improvement to water quality and ecosystems. As a means of understanding and responding to other stakeholder needs, Illovo are members of local catchment organisations for all their operations and actively work to improve the effectiveness of water use across their operations.
Current implications of water on your key commodities/raw materials	Relevant, included	The availability of water has a direct bearing on the production of some of our key commodities such as sugar, tea, wheat and other grocery ingredients. For example, sugar beet in the UK is rain fed and therefore the crop may be affected by drought conditions. Approximately half of the sugar cane processed by Illovo is received from third party sugarcane providers. The impact of water supply issues on these operations has a significant impact on our key raw material. Illovo are undertaking more extensive engagement with their outgrowers to identify and manage this risk. Some of our other businesses also work with the most vulnerable raw material suppliers to ensure their sustainable water supply.
Current status of ecosystems and habitats at a local level	Relevant, included	ABF's water risk assessment reviews ecosystems at facility level. Some businesses rely on ecosystem services such as water purification, flood defence and pollination. The loss or degradation of these may have an impact on production efficacy and operating costs. Some businesses support ecosystem conservation eg The Jordans & Ryvita Company supports an award winning farming model which pays British farmers a premium for their crop in return for enhancing wildlife biodiversity on their land. Azucarera has an agreement with the Environment Department of the government of Andalusia for managing La Laguna de Las Quinientas near the Guadalete factory in Jerez de la Frontera, as an industrial pond and wetland. The lagoon which receives water from the factory's production process serves as the habitat for protected species of birds.
Current river basin management plans	Relevant, included	ABF does not include individual river basin management plans in our group level risk assessment. However, a large number of our facilities participate in their local basin management planning or take them into account when making operational decisions which may involve water. For example, our SPI business in the USA works

Issues	Choose option	Please explain
		in partnership with the Utility Authority to contribute to river management plans. For some of our businesses, changes in the management of the basins on which they rely can have a significant impact on the productivity of their business. Consequently, onsite risk managers keep abreast of all proposed and planned changes to river basin management through river basin publications, studies and catchment agency engagement.
Current access to fully-functioning WASH services for all employees	Relevant, included	ABF businesses provide fully-functioning WASH services for all employees and contractors and these will be assessed by many of our businesses as part of their internal risk assessments. For example, Illovo's operations supply workers with basic amenities, such as water and electricity and also supply some of the communities in which they are situated. Blue and grey water footprints are generated by these operations in order to monitor and manage this supply.
Estimates of future changes in water availability at a local level	Relevant, included	Due to climate changes, increased local demand for water, changes in land use and increased pressure on agricultural output, water availability is expected to decline within a large number of the basins in which our facilities are situated. Our businesses regularly monitor these changes aimed at identifying and evaluating facility specific future risks. These assessments are informed by climatic projections, river basin studies and catchment management agency engagement. The facilities will also work with others to consider various future scenarios. ABF also engages with a number of high risk sites on their water supply projections over the next 5 years.
Estimates of future potential regulatory changes at a local level	Relevant, included	We anticipate that environmental regulatory controls for water availability and quality will increase and will have implications for our operations. Our businesses regularly engage with local water authorities to be informed of future changes. This is monitored at a country or regional level.
Estimates of future potential stakeholder conflicts at a local level	Relevant, included	A number of our businesses consider various scenarios for the future of their local water resource, in particular for planned acquisitions or other growth. E.g. as part of George Weston Foods' planning process for major developments in Australia or New Zealand, statements of environmental impacts are prepared. They are used during consultation with local water authorities and include a community notice period where the project and water impact statement are on display and open for comment from the community. As water availability decreases, we expect an increase in water competition among stakeholders. Our facilities engage with these stakeholders through local catchment agencies and other networks to maintain open dialogue.
Estimates of future implications of water on your key commodities/raw materials	Relevant, included	As many of our businesses rely on raw materials from others, scenario analyses are conducted to ascertain any medium to long term fluctuations in availability and overall security of sourcing. Where water is a key element of that raw material such as for cotton, tea, wheat or sugar, potential water source changes are also included in the modelling. For Illovo, as water scarcity increases they expect an increased impact on raw materials (outgrower supplied sugar cane) and the key commodity (sugar). Illovo will continue to engage with outgrowers and research groups, such as the South African Sugarcane Research Institute to manage these risks.
Estimates of future potential changes in the status of ecosystems and habitats at a local level	Relevant, included	The degradation or loss of important ecosystem services will impact production efficacy and operating costs for many of our businesses. Local ecosystem services and land management are managed in parallel. Our participation with local organisations including catchment management agencies aids in the estimation and management of this risk as well as inclusion in the due diligence for new sites. Illovo's operations located near to resources of conservation importance such as the Selous National Park in Tanzania, the Incubate Estuary in Mozambique and the Kafue River in Zambia are cognisant of their responsibility to ensure effective risk

Issues	Choose option	Please explain
		management processes and systems are in place to mitigate potential negative environment impacts on the natural environments and communities.
Scenario analysis of availability of sufficient quantity and quality of water relevant for your operations at a local level	Relevant, included	Some of our businesses review local climate change projections in terms of possible impacts on water resources and precipitation and are continuously working to improve understanding of future climate change projections. For sugar businesses, scenario analysis of future changes related to water supply is carried out at site level where it is relevant. British Sugar engages with the main potable water supplier for the majority of its sites to plan for possible future water supply projects.
Scenario analysis of regulatory and/or tariff changes at a local level	Relevant, included	Many of our businesses engage with local authorities and regulators to understand potential changes to regulations, tariff regimes and licenses. This is to plan any needed adaptations to comply with planned changes such as water efficiency programmes or local waste water management.
Scenario analysis of stakeholder conflicts concerning water resources at a local level	Relevant, included	A number of our businesses consider various scenarios for the future of their local water resource, in particular for planned acquisitions or other growth. E.g. as part of George Weston Foods' planning process for major developments in Australia or New Zealand, statements on environmental impacts are prepared. They are used during consultation with local water authorities and include a community notice period where the project and water impact statement are on display and open for comment from the community.
Scenario analysis of implications of water on your key commodities/raw materials	Relevant, included	As many of our businesses rely on raw materials from others, scenario analyses are conducted to ascertain any medium to long term fluctuations in availability and overall security of sourcing. Where water is a key element of raw material such as for cotton, tea, wheat or sugar, potential water source changes are also included in the modelling. Illovo reviews local climate change projections in terms of possible impacts on water resources and precipitation and are continuously working to improve understanding of future climate change projections. Scenario analysis of future changes related to water supply is carried out on a site by site basis where it is relevant.
Scenario analysis of potential changes in the status of ecosystems and habitats at a local level	Relevant, not yet included	Scenarios of future ecosystem changes will be incorporated into project planning processes by a number of our businesses.
Other		

W2.7

Which of the following stakeholders are always factored into your organization's water risk assessments?

Stakeholder	Choose option	Please explain
Customers	Relevant, included	Maintaining brand reputation and value for our customers are of primary importance and therefore, included in our water management, we manage water risks which may impact reputation and / or have an impact on costs. For example water conservation is a critically important issue in Australia; GWF has stretching targets to reduce the water intensity of their operations

Stakeholder	Choose option	Please explain
		and demonstrate their commitment to this key national issue. On a business to business commercial basis, a number of our businesses share information about operational water use with their customers. For certain products, customers have been consulted on their use of water with the product in order to provide us with insights into potential water reduction strategies in our value chain. For example, AB Sustain's think.water programme is designed to highlight the sourcing and effectiveness of water use within a dairy enterprise. By enabling dairy farmers to benchmark their performance against other farms, the system can help to identify areas for improvements in water efficiency. Working with Dairy Crest, AB Sustain has assessed and benchmarked 252 UK farms' water use, water sourcing and associated costs.
Employees	Relevant, included	ABF's first priority is to keep our people safe at work. Businesses using for example large volumes of water, water which requires intensive cleaning or heating incorporate employee safety into their water management. Employees are also briefed on water activities. In British Sugar, 6 monthly briefings are given which includes water use and quality discharged. George Weston Foods incorporates water saving initiatives and water scarcity in its mandatory employee training. Across Illovo, a number of operations are responsible for the supply of essential services, including potable water, to their employees and their families.
Investors	Relevant, included	Maintaining brand reputation and value for our customers are of primary importance and therefore, included in our water management, we manage water risks which may impact reputation and / or have an impact on costs. Increasingly investors and other shareholders ask for our water data and management approach at a group and individual business level and as such, investor concerns are increasingly included in water risk assessments. For example, sharing with investors how we are managing our impact on water resources and addressing their key concerns such as assessing our exposure to water stressed areas, supports our brand reputation and approach to responsible business practices.
Local communities	Relevant, included	For the majority of our businesses, we share water with others in the local community. Their needs and impacts on the water sources are vital to our long-term assessments of water availability and quality for all. We are also cognisant of social flow requirements downstream of our operations. For example, Twinings has been working with Mercy Corps in Darjeeling since 2010 to provide local communities with access to clean water, building sanitary latrines and raising awareness of water hygiene. The aim is to reduce the incidence of waterborne disease and by August 2014, the programme resulted in a 77% reduction in such disease.
NGOs	Relevant, included	We engage with NGOs on a range of environmental issues including water use and quality. We benefit from their local knowledge and networks as well as sharing with them our own water performance to help us with our continuous improvements in water activities. For example, Primark engages with Solidaridad and the International Finance Corporation (IFC) on its Partnership for Cleaner Textile initiative in Bangladesh and its Better Mills initiative in China. Both projects have delivered training to factory managers and invested in technologies to reduce water use and better manage the chemicals used in dyeing and washing. Both partnerships mean Primark can check that factories are not using restricted chemicals and are considering how to use water carefully. Primark has had an ambitious chemical programme in place since 2014, incorporating its commitment to the Greenpeace DETOX campaign and clean chemical use and discharge in collaboration with the ZDHC (Zero Discharge of Hazardous Chemicals) industry brand collaboration group. Primark is also an active member of the Sustainable Apparel Coalition (SAC) which covers water issues from an industry wide perspective.
Other water users at a local level	Relevant, included	Competition for water is an issue within a number of basins in which we operate. As a means of understanding and responding to the risks associated with water, many of our sites are represented within the local catchment organisations. We work in partnership with other local users to improve the long-term sustainability of the local water resources. For example, in Bangladesh Primark participated in the Partnership for Cleaner Textile (PaCT) programme, part of which focuses on multi-stakeholder or cluster engagement. Four textile wet processing clusters around Dhaka benefitted from the financing of new water saving and treatment technologies, water foot print assessments and initiatives to establish commonalities across all local stakeholders. In addition to this Primark is working closely with the Institute of Public and Environmental Affairs (IPE) China to target supplier violations relating to

Stakeholder	Choose option	Please explain
		environmental discharge and to improve environmental management in factories. A specific concern that is being targeted is the reporting of environmental pollution from common Effluent Treatment Plants (ETPs), as there is a lack of ownership after combination of wastewater discharge streams.
Regulators	Relevant, included	All of our businesses operate within a water and wastewater regulatory framework, including permits and licenses for water abstraction and discharge allowances, and so the concerns and plans of local regulators are critical within our water risk assessments. Certain jurisdictions where we operate require water management plans, outcomes of water use audits and monitoring data on water use and outputs. For example, George Weston Foods' Western Australian sites adhere to state based water efficiency programmes which require selected facilities to have Water Efficiency Management Plans (WEMPs) in place.
River basin management authorities	Relevant, included	Changes in the management of the basins in which we operate can have a significant impact on the productivity of our businesses. This is for upstream activity which may impact water quality and quantity and also downstream which may have repercussions for our waste water treatment. For most of our businesses, our onsite risk or operational managers kept abreast of all proposed and planned changes to river basin management through river basin studies and catchment agency engagement. The complexity of engagement with basin authorities is heightened in Illovo's operations in Swaziland and Mozambique which are regulated by trans-boundary water agreements
Statutory special interest groups at a local level	Relevant, included	The needs and concerns of local interest groups are important in terms of brand reputation and our licence to operate. For example, George Weston Foods participates in the local activities of industry bodies such as the Australian Food and Grocery Council including making submissions and presentations on site level water performance.
Suppliers	Relevant, included	Our businesses engage with their suppliers on water issues where it is fundamental for growth of raw materials or production. For example, Azucarera has been building information on the water irrigation practices of their main beet growers to ensure water is used at the right time and quantity. Primark's programme with CottonConnect has reduced the environmental impact of cotton production via reducing the amount of water, fertilisers and pesticides used. During 4 years, 5251 smallholder farmers from 31 villages in India have been trained through classroom sessions and in-field trainings to adopt more sustainable farming methods. The results have exceeded Primark's expectations and thus over the next five years an additional 4749 female farmers will be taken through the programme. The Zero Discharge of Hazardous Chemicals (ZDHC) Wastewater Guidelines set an aligned expectation on wastewater quality for the entire textile and footwear industry. This standard in wastewater discharge goes beyond regulatory compliance to ensure wastewater discharge does not adversely affect the environment and surrounding communities. As a member of ZDHC Primark has adopted the ZDHC Wastewater Guidelines and asked suppliers to use these parameters which go beyond regulatory compliance for wastewater discharge. Twinings supports the Ethical Tea Partnership to help tea farmers in Kenya adapt to climate change through water harvesting, conservation and drip irrigation. 2,500 farmers have received and installed rainwater harvesting and / or drip irrigation.
Water utilities at a local level	Relevant, included	Engagement with local water utilities and suppliers is critical for our licence to operate. Understanding their plans for short and long term water management are vital for our access to clean and sustainable water.
Other	Relevant, included	Regional and national governments - Some of our businesses engage directly with governments on water issues. E.g. British Sugar engages with UK and EU Trade Associations and directly with the UK Government. Voluntary special interest groups - British Sugar is a signatory to the voluntary Federation House Commitment which is helping UK food and drink manufacturers to improve their environmental sustainability by reducing water use by 20% by 2020 (2007 baseline). Water and industry experts - Azucarera established a 'Water Working Group' in 2014/15 to share knowledge and experience amongst water experts and others in industry with the aim of improving water efficiencies in factories. AB Sugar China has been running the Sugar Beet Academy for four years;

Stakeholder	Choose option	Please explain
		a partnership between academics, industry professionals and scientists to address sustainable beet production which includes effective use of water.

Further Information

W2.6 For more examples how AB Sugar engages and consults with stakeholders see <https://www.absugar.co.uk/sustainability> For more information about Zero Discharge of Hazardous Chemicals (ZDHC) of which Primark is a member, see Primark's website for a copy of the guidelines and other resources. <https://www.primark.com/en/our-ethics/resources/environmental-sustainability-resources>

Module: Implications

Page: W3. Water Risks

W3.1

Is your organization exposed to water risks, either current and/or future, that could generate a substantive change in your business, operations, revenue or expenditure?

Yes, direct operations and supply chain

W3.2

Please provide details as to how your organization defines substantive change in your business, operations, revenue or expenditure from water risk

ABF defines substantive change in our business, operations, revenue or expenditure from water risk as change which could eventually result in a financial impact on the group e.g. affecting our group's ability to generate profit or through movements in our group share price. A material change could also be one that impacts our continued supply to our valuable customers. An event that may receive attention from national or international media may also be considered as potentially material to the group.

ABF has a Risk Assessment Policy and process whereby risks are quantified at site level, collated at business level and then raised to ABF on a quarterly basis where risk management strategies are agreed. Each business must ensure that adequate financial, management and physical resources are in place to manage any potential environmental risks. They are required to complete an annual return on environmental performance and provide evidence that all significant aspects of such performance have been reviewed at board level.

Non-financial risks are mapped on a risk impact matrix which takes into account stakeholder concern and assesses likely level of impact. They are classified into 'business', 'operational', 'financial' and 'project' risks.

It is the responsibility of the Chief Executive of each business to embed assessments into their business and implement necessary response strategies.

If water is not managed effectively, operating costs relating to volume, quality management and discharge can be substantive especially in our water intensive operations such as sugar, yeast, manufacture of other ingredients, pharmaceuticals and clothing production. As such there is a strong focus on utilizing water efficiently. This is part of our ethos that less water used equates to less wastewater to treat, lowering business costs and reducing business risk.

In parallel, our water risk also derives from potential stakeholder perceptions that we are not proactively and responsibly managing water resources. If stakeholders are not able to ascertain our approach to water stewardship or if we were not transparent about incidents, this could lead to a negative impact on our reputation. To mitigate this potential risk, we consider it important to disclose our approach to water management through CDP, ABF's annual reporting and via individual site or company communications.

W3.2a

Please provide the number of facilities* per river basin exposed to water risks that could generate a substantive change in your business, operations, revenue or expenditure; and the proportion of company-wide facilities this represents

Country	River basin	Number of facilities exposed to water risk	Proportion of company-wide facilities that this represents (%)	Comment
South Africa	Pongola-Umzimkulu (WMA)	6	Less than 1%	All of Illovo's operations are exposed to water related risk to varying degrees of significance. The term 'facility' covers all our direct operations which includes factories, offices, warehouses and retail space.
Malawi	Zambezi	2	Less than 1%	All of Illovo's operations are exposed to water related risk to varying degrees of significance. The term 'facility' covers all our direct operations which includes factories, offices, warehouses and retail space.
Zambia	Zambezi	1	Less than 1%	All of Illovo's operations are exposed to water related risk to varying degrees of significance. The term 'facility' covers all our direct operations which includes factories, offices, warehouses and retail space.
Tanzania	Rufiji	3	Less than 1%	All of Illovo's operations are exposed to water related risk to varying degrees of significance. The term 'facility' covers all our direct operations which includes factories, offices, warehouses and retail space.
Mozambique	Incomati	1	Less than 1%	All of Illovo's operations are exposed to water related risk to varying degrees of significance. The term 'facility' covers all our direct operations which includes factories, offices, warehouses and retail space.
Swaziland	Maputo	1	Less than 1%	All of Illovo's operations are exposed to water related risk to varying degrees of significance. The term 'facility' covers all our direct operations which includes factories, offices, warehouses and retail space.

W3.2b

For each river basin mentioned in W3.2a, please provide the proportion of the company's total financial value that could be affected by water risks

Country	River basin	Financial reporting metric	Proportion of chosen metric that could be affected	Comment
South Africa	Pongola-Umzimkulu (WMA)	% global production volume	6-10	
Malawi	Zambezi	% global production volume	1-5	
Zambia	Zambezi	% global production volume	1-5	
Tanzania	Rufiji	% global production volume	1-5	
Mozambique	Incomati	% global production volume	Less than 1%	
Swaziland	Maputo	% global production volume	1-5	

W3.2c

Please list the inherent water risks that could generate a substantive change in your business, operations, revenue or expenditure, the potential impact to your direct operations and the strategies to mitigate them

Country	River basin	Risk driver	Potential impact	Description of potential impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
Zambia	Other: Zambezi, Rufiji, Maputo, Incomati	Other: Increased pressure on water supply, drought, revoking of permits, poor maintenance of irrigation infrastructure	Other: Maintained, sustainable production	Water scarcity is currently not experienced within these basins however a trend of decreasing flow in the dry season has been identified. Our agricultural, milling and distillery operations situated within these basins are reliant on surface water during the dry season and decreased availability could potentially impact productivity. This impact will be long term.	4-6 years	Highly probable	High	Increased capital expenditure	R145 million over the next five years. Cost estimate incorporating irrigation updates and maintenance requirements.	1) Planned maintenance / replacement of infrastructure. 2) Irrigation scheduling and drought mitigating strategies. 3) Abstraction permits and entrenchment of water rights. 4) Water storage dams. 5) Investment in more efficient irrigation systems. 6) Engagement with stakeholders. 7) Water Footprint exercise leading to

Country	River basin	Risk driver	Potential impact	Description of potential impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										better understanding of Illovo's water use. The actions are designed to reduce Illovo's exposure by increasing water efficiency (yield per unit of water).
South Africa	Other: All river basins in which Illovo operates across southern Africa	Physical-Climate change	Other: Maintained sustainable production	There is a potential impact of abnormal weather conditions leading to lower yields which in turn results in factories being unable to reach their full capacity.	4-6 years	Probable	Medium	Other: Increased operational and capital expenditure		Activities across all Illovo operations includes upgrades to drainage systems, canals and dykes; river and dam level monitoring; use of weather forecasting and early warning system for floods; continuous evaluation and selection of cane varieties (particularly drought resistant varieties); tree planting initiative; water footprinting to better understand and manage water resources; agricultural audits to verify current controls.

W3.2d

Please list the inherent water risks that could generate a substantive change in your business operations, revenue or expenditure, the potential impact to your supply chain and the strategies to mitigate them

Country	River basin	Risk driver	Potential impact	Description of potential impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
South Africa	Other: All basins in which we operate in South Africa	Other: Increased pressure on water supply, drought, revoking of abstraction permits, poor maintenance of irrigation infrastructure	Other: Maintained productivity	Over half of the cane processed by Illovo is produced by independent outgrowers who vary in size from extensive farms to a few hectares. A drop in sugar cane supply from outgrowers due to increasing drought frequency and intensity or overall water scarcity could significantly impact Illovo's supply chain and consequently Illovo's productivity.	4-6 years	Highly probable	High	Infrastructure investment	R240 million - the cost of one year's equivalent replant by outgrowers in South Africa.	Maintaining and developing outgrower supply remains a key area of focus for Illovo. Illovo actively engages with their outgrowers on this issue. To alleviate these risks, Illovo has funded water conveyance infrastructure servicing to vulnerable outgrowers to ensure a sustainable sugarcane supply. Outgrowers also benefit from Illovo's support for drought resistant crop development and investment in new technology. A time frame of five years is planned with an expected success of return to normal cane supply.

Further Information

W4.1

Does water present strategic, operational or market opportunities that substantively benefit/have the potential to benefit your organization?

Yes

W4.1a

Please describe the opportunities water presents to your organization and your strategies to realize them

Country or region	Opportunity	Strategy to realize opportunity	Estimated timeframe	Comment
Other: Southern Africa (all Illovo operations)	Improved water efficiency	Water demand and scarcity is increasing, to varying degrees, within all basins in which our Illovo operations are situated. This is projected to impact availability as well as abstraction permit allocations. By working to improve the effective use of water within our operations Illovo aims to increase production without significantly altering overall consumption. By improving efficiency of irrigation, Illovo aims to gain competitive advantage. At each facility, water supply risk and efficiency opportunities have been identified. These have been developed into strategies specific to each facility with a focus on water monitoring and management. In 2015/16 spend on water related projects across Illovo amounted to R11.58 million.	1-3 years	At Illovo's Ubombo facility in Swaziland, a six year irrigation upgrade has been completed. The programme incorporated 4,123 ha which resulted in an estimated R124 million saving.
Other: Southern Africa (all operations)	Cost savings	Agricultural operations require significant energy to pump water from abstraction to irrigation which entails significant cost. Illovo has identified three primary opportunities to reduce this energy requirement and thus cost; 1) Improving the efficiency of conveyance systems to minimise losses, 2) Improving irrigation efficiency to reduce the quantity of water required to grow a stick of sugarcane, 3) Improving the accuracy of irrigation	Current-up to 1 year	In 2013, Illovo collaborated with WSP to analyse the water footprint of their operations. The assessment modelled the agricultural systems in terms of precipitation (green water) and irrigation (blue water) requirements. This analysis enabled Illovo to identify and quantify losses within each operation which were correlated to potential cost savings.

Country or region	Opportunity	Strategy to realize opportunity	Estimated timeframe	Comment
		scheduling to ensure the crop is irrigated effectively. A 5% decrease in irrigation energy requirements is projected to result in annual savings of R11 million.		
Other: Southern Africa (all operations)	Increased brand value	Customers, funders and potential investors are increasingly interested in the environmental impact of products and services. Illovo places emphasis not only on operating in a sustainable manner but also maintaining an open and continuous dialogue with stakeholders. Within own direct operations, Illovo is committed to the effective use of water and have undertaken to significantly increase the number of farms which comply with best practice outlined in the Sustainable Sugarcane Farm Management System (SUSFARMS). The main objective of SUSFARMS is to focus on the three main sustainability principles of prosperity (including finance), social and environment. The avoided losses of sales from not implementing SUSFARMS is estimated to equate to R90 million per annum.	Current-up to 1 year	Illovo's Midlands region, led by the Noodsberg Canegrowers in conjunction with UCL Company (Pty) Ltd are leaders in sustainability practices in the South Africa sugar industry and initiated the development of SUSFARMS over a decade ago in partnership with WWF. SUSFARMS is a farming system designed to encourage sustainable sugarcane production through the implementation of better management practices (BMPs). These BMPs are designed to reduce negative impacts on the environment, comply with legislation, maintain a high level of social responsibility and assist in ensuring financial sustainability. Illovo is planning to complete baseline self-audits with the SUSFARMS tool by the end of 2015 on all own and managed farming operations.
Company-wide	Improved water efficiency	Following our group wide risk assessments, we are better able to identify efficiency opportunities. Data for water use and wastewater enables a comparison across sites and businesses to help share best practice. Increased monitoring such as total water abstracted, volume of water for agricultural use, water intensities and treatment of process effluents for water reuse has the medium term aim to help us work with sites potentially requiring investments in water use. This will in turn lead to lower production costs.	1-3 years	Our decentralised business model enables us to share best practice and our businesses decide whether certain activities meet their needs. We operate in many different countries and sectors so activity has to be adapted to meet local need and business plans. E.g. British Sugar is sharing their approach to providing customers with water management advice and partnering with others to consider synergies. Others encouraged to review this approach and see if it can be adapted for their operations
Company-wide		Reducing water use often results in a reduction in energy use as energy is required to drive water off final product and in other operational processes. Reducing water use will have a positive impact in the amount of water that requires treatment prior to discharge.	Current-up to 1 year	Water and energy costs can be closely linked for some of our businesses. A reduction in water use throughout the manufacturing process, can lead to a reduction in the cost of energy which can often have quite an immediate effect.
United States of America	Cost savings Improved water efficiency Regulatory changes Social licence to operate	California is in the midst of a five-year drought. Our PGP site reviewed all water use resulting in a 50% saving in water and waste costs.	1-3 years	The three main water uses on site are for rice washing, sanitation and irrigation. Simply reducing the pressure of water flow had a significant impact on washing and sanitation processes with no impact on product quality. In addition, the site's green areas were changed to 'manicured dessert' areas reducing the need for irrigation, timers were

Country or region	Opportunity	Strategy to realize opportunity	Estimated timeframe	Comment
				placed on water systems and pressure was reduced on the water coolers.
China	Collective Action Other: Reduced environmental impact	Primark is working with others to reduce environmental impacts in their supply chain and across the textile industry. It is working with suppliers to make environmental improvements to the wet processes; washing, dyeing and finishing methods. As well as improving water consumption and treatment, and the reuse of processed water (as well as energy and waste management), this approach provides opportunities to share international and national best practices from the textile and dyeing sector.	4-6 years	Textile factories can use large amounts of energy and water in the manufacturing process. To address this, Primark is engaged in Cleaner Production programmes in partnership with suppliers, other retailers and environmental experts, in order to reduce the environmental impact of textile production. These Cleaner Production programmes, which started in 2011, provide training to suppliers on how to make improvements to their washing, dyeing and printing operations known as 'wet processes'. The training helps them reduce water, chemicals and energy they use and ensure waste water is treated properly. In China, Primark is participating in the Better Mills Initiative (BMI) in conjunction with Dutch NGO Solidaridad and other brand partners. The programme is focused on improving wet processing practices in 75 textile mills in the Yangtze River and Pearl River Deltas. The programme, which runs over the course of 15 months for each participating mill, includes individual mill assessments as well as group training sessions to facilitate sharing of best practices amongst mills and other stakeholders. It is enabling improvements related to water and energy efficiency, chemical management, air emissions and waste. Importantly, the training programme aligns with other industry initiatives such as the Sustainable Apparel Coalition (SAC) and the Zero Discharge of Hazardous Chemicals (ZDHC) Working Group, both of which Primark is a member.
China	Collective Action Ensuring supply chain resilience	As part of Primark's approach to Ethical Trading, it is a key participant in the International Finance Corporation's (IFC) China Water Programme, focused primarily on the textile industry. Primark has supported a key garment supplier to join the IFC Water Programme.	1-3 years	Since 2013, Primark has supported a key supplier to help implement water and energy efficiency projects aimed at reducing water, energy and chemical consumption and reducing the pollution load in wastewater. A return on investment is expected within 5 years. It is anticipated that the benefits will include: a 30% reduction in water consumption, increased capacity of wastewater treatment plant from 1,000 to 3,000 tonnes per day, significant COD improvement and the reuse of 35% water, resulting in a reduction of 336,000 metric tonnes of fresh water usage per annum.

Country or region	Opportunity	Strategy to realize opportunity	Estimated timeframe	Comment
Bangladesh	Other: Enhanced supplier relationships	Primark worked with suppliers on a cleaner production programme in Bangladesh between 2013 and 2016. The programme, which aimed to engage 200 factories, was managed by the Dutch NGO Solidaridad and the International Finance Corporation (IFC). This programme follows the completion in 2012 of successful pilot projects with key suppliers in Bangladesh.	4-6 years	In Bangladesh, Primark participated in the Partnership for Cleaner Textile (PaCT). PaCT is a multi-stakeholder programme that supports Bangladeshi textile factories to reduce their water and energy consumption and improve water quality and chemical management practices, from implementing basic changes to investing in technologies to improve the resource efficiency of their production sites. This also includes WASH (Water, Sanitation and Hygiene) components. The aim is to strengthen the long-term competitiveness and environmental sustainability of the sector.
New Zealand	Cost savings	A new plant location provided George Weston Foods (GWF) with the opportunity to maximise water efficiencies and reduce the risk of pollution. A Recirculated Water System was implemented which included a system on the caustic and sulphuric plants so that cooling water is reused back into the site. This has resulted in the elimination of discharge trade waste from these systems.	Current-up to 1 year	Efficiencies and cost savings are already being realised with each site saving approximately NZ\$20,000 of water and electricity costs per year.
Australia	Improved water efficiency	The Smarter Cleaning regime implemented in one large George Weston Foods' site in Australia is estimated to achieve a 15% reduction in water use through satellite cleaning stations, adjustments to Clean in Place systems, automatic bin washers and water saving fittings.	1-3 years	In addition to the current water efficiencies, the site also retains 800KL of rainwater harvesting capacity which saves approximately 8ML of potable water a year used in the cooling towers, amenities and vehicle washing.
Spain	Collective Action Ensuring supply chain resilience	Working with suppliers, a not-for profit research organisation and others Azucarera is taking an active role in supporting beet farming activity in Spain with the aim of making it more competitive and sustainable.	4-6 years	Azucarera is a member of the Association for Research and Improvement of Sugar Beet (AIMCRA), the only beet research institute. The mission of AIMCRA is to support the improvement and modernisation of beet growing. Activity includes informing growers on the optimal water requirements for crop based on growth stage and weather conditions. This is relayed via a weekly text message so the farmers know how much water their plot requires thus reducing overuse of water and fertilisers.
India	Cost savings Improved community relations Improved water efficiency	Our AB Mauri site in Chiplun, India undertook a focused approach to water and discharge efficiencies. This effluent is now used to produce 7,000 tonnes of bio-fertiliser per annum. This is sold / distributed to local farmers which has led to a reduction in their use of chemical fertilizer.	Current-up to 1 year	The AB Mauri Chiplun site reduced water use through various efficiency initiatives resulting in an annual saving of \$11,000. Water recycling has resulted in circa 40% of total water requirement being met in-house, up from last year's 35%. This has reduced the site's dependency on water sources also used by local communities. Effluent generation also decreased by 10%, again with resulting financial savings. This effluent is now used to produce 7,000 tonnes

Country or region	Opportunity	Strategy to realize opportunity	Estimated timeframe	Comment
				of bio-fertiliser per annum. This is sold and distributed to local farmers which has led to a reduction in their use of chemical fertilizer.
China	Ensuring supply chain resilience	In Northeast China, the springtime rainfall can be unreliable in quantity and timing. AB Sugar China is working with farmers in their supply chain to re-establish direct drilling techniques as a reliable and cost effective method for watering sugar beet crops.	1-3 years	Water trials in Yi'an County have been running for 2 years with solutions benefitting the growers and the environment. Longer term benefits are likely after the initial trial phase.
Canada	Cost savings Improved community relations Improved water efficiency Innovation	Our AB Mauri Calgary site is implementing a three-year Sustainability Action Plan to significantly reduce water inefficiencies and avoid an increase in municipal sewerage costs.	1-3 years	A multi-stage project working with the city and provincial governments. Stage one (now complete) is to divert clean cooling water from the sewer and return to the local river; this accounts for 40% of water consumed on site. Stage two includes increasing the treatment of waste waters. Stage three is to use the biogas generated by the waste water digester. The project will lead to significant water efficiencies and cost savings.

Further Information

Module: Accounting

Page: W5. Facility Level Water Accounting (I)

W5.1

Water withdrawals: for the reporting year, please complete the table below with water accounting data for all facilities included in your answer to W3.2a

Facility reference number	Country	River basin	Facility name	Total water withdrawals (megaliters/year) at this facility	How does the total water withdrawals at this facility compare to the last reporting year?	Please explain
Facility 1	Zambia	Zambezi	Zambia Sugar	363386	Lower	The 10% decrease was due to less reliable hydro power supply for irrigation.

Facility reference number	Country	River basin	Facility name	Total water withdrawals (megaliters/year) at this facility	How does the total water withdrawals at this facility compare to the last reporting year?	Please explain
Facility 2	Mozambique	Incomati	Maragra	78568	Lower	The 4% decrease was due to lower river flow (drought) causing tidal return flow of saline water from the sea (30km downstream) and less rainfall.
Facility 3	Swaziland	Maputo	Ubombo	198031	Much lower	The 26% decrease was due to very low river flow (drought) reducing water availability for irrigation.
Facility 4	Tanzania	Rufiji	Kilombero	146679	Much lower	The 12% decrease was due to low rainfall and low river flow reducing water availability for irrigation during the dry season.
Facility 5	Malawi	Zambezi	Dwangwa	150859	Lower	The 5% decrease was due to lower than normal rainfall.
Facility 6	Malawi	Zambezi	Nchalo	297199	Lower	The 4% decrease was due to lower than normal rainfall.
Facility 7	South Africa	Pongola-Umzimkulu (WMA)	Umzimkulu	23585	Much higher	The 45% increase was due to higher than normal rainfall.
Facility 8	South Africa	Pongola-Umzimkulu (WMA)	Sezela	27141	About the same	The 2% decrease was due to lower than normal rainfall.
Facility 9	South Africa	Pongola-Umzimkulu (WMA)	Noodsberg	1153	Much lower	The 18% decrease was due to a smaller crop.
Facility 10	South Africa	Pongola-Umzimkulu (WMA)	Eston	6710	Lower	The 7% decrease was due to lower than normal rainfall.
Facility 11	South Africa	Pongola-Umzimkulu (WMA)	Glendale	200	About the same	No significant change.
Facility 12	South Africa	Pongola-Umzimkulu (WMA)	Merebank	746	Lower	The 3% decrease was due to improved water efficiency in the distillery.

Further Information

W5.1a

Water withdrawals: for the reporting year, please provide withdrawal data, in megaliters per year, for the water sources used for all facilities reported in W5.1

Facility reference number	Fresh surface water	Brackish surface water/seawater	Rainwater	Groundwater (renewable)	Groundwater (non-renewable)	Produced/process water	Municipal water	Wastewater from another organization	Comment
Facility 1	272853	0	90533	0	0	0	0	0	
Facility 2	48339	0	30170	59	0	0	0	0	
Facility 3	155256	0	42775	0	0	0	0	0	
Facility 4	97423	0	47814	1441	0	0	0	0	
Facility 5	119681	0	31178	0	0	0	0	0	
Facility 6	257091	0	40108	0	0	0	0	0	
Facility 7	38	0	23523	0	0	0	24	0	
Facility 8	1657	0	25313	0	0	0	171	0	
Facility 9	0	0	0	395	0	758	0	0	
Facility 10	170	0	6507	33	0	0	0	0	
Facility 11	200	0	0	0	0	0	0	0	
Facility 12	0	0	0	0	0	0	746	0	

W5.2

Water discharge: for the reporting year, please complete the table below with water accounting data for all facilities included in your answer to W3.2a

Facility reference number	Total water discharged (megaliters/year) at this facility	How does the total water discharged at this facility compare to the last reporting year?	Please explain
Facility 1	3914	Higher	Discharge increased by 31% compared to the previous year. A decrease in water entering our mills and estates resulted in a decrease in the volume of waste water produced.

Facility reference number	Total water discharged (megaliters/year) at this facility	How does the total water discharged at this facility compare to the last reporting year?	Please explain
Facility 2	5739	About the same	
Facility 3	480	About the same	
Facility 4	3448	Higher	Discharge increased by 26% compared to the previous year. A decrease in water entering our mills and estates resulted in a decrease in the volume of waste water produced.
Facility 5	926	About the same	
Facility 6	6213	Lower	Discharge decreased by 18% compared to the previous year. A decrease in water entering our mills and estates resulted in a decrease in the volume of waste water produced.
Facility 7	18	Much lower	Discharge decreased by 39% compared to the previous year. A decrease in water entering our mills and estates resulted in a decrease in the volume of waste water produced.
Facility 8	930	About the same	
Facility 9	69	Much lower	Discharge decreased by 51% compared to the previous year. A decrease in water entering our mills and estates resulted in a decrease in the volume of waste water produced.
Facility 10	2	Lower	Discharge decreased by 37% compared to the previous year. A decrease in water entering our mills and estates resulted in a decrease in the volume of waste water produced.
Facility 11	0	About the same	
Facility 12	482	About the same	

W5.2a

Water discharge: for the reporting year, please provide water discharge data, in megaliters per year, by destination for all facilities reported in W5.2

Facility reference number	Fresh surface water	Municipal/industrial wastewater treatment plant	Seawater	Groundwater	Wastewater for another organization	Comment
Facility 1	3914	0	0	0	0	
Facility 2	5739	0	0	0	0	
Facility 3	480	0	0	0	0	
Facility 4	3448	0	0	0	0	
Facility 5	926	0	0	0	0	
Facility 6	6213	0	0	0	0	

Facility reference number	Fresh surface water	Municipal/industrial wastewater treatment plant	Seawater	Groundwater	Wastewater for another organization	Comment
Facility 7	18	0	0	0	0	
Facility 8	0	0	930	0	0	
Facility 9	3	66	0	0	0	
Facility 10	2	0	0	0	0	
Facility 11	0	0	0	0	0	
Facility 12	0	0	482	0	0	

W5.3

Water consumption: for the reporting year, please provide water consumption data for all facilities reported in W3.2a

Facility reference number	Consumption (megaliters/year)	How does this compare to the last reporting year?	Please explain
Facility 1	307859	Lower	The 6% decrease was primarily due to less reliable hydro power supply for irrigation.
Facility 2	81831	Lower	The 6% decrease was primarily due to lower river flow (drought) causing tidal return flow of saline water from the sea (30 km downstream) and less rainfall.
Facility 3	178988	Lower	The 3% decrease was primarily due to very low river flow (drought) reducing water availability for irrigation.
Facility 4	95344	Much lower	The 26% decrease was primarily due to low rainfall and low river flow reducing water availability for irrigation during the dry season.
Facility 5	125073	Lower	The 8% decrease was primarily due to lower than normal rainfall.
Facility 6	269090	Lower	The 2% decrease was primarily due to lower than normal rainfall.
Facility 7	23567	Much higher	The 45% increase was primarily due to higher than normal rainfall.
Facility 8	30188	Higher	Increased by 10% compared to the previous year.
Facility 9	300	Much lower	The 15% decrease was primarily due to the smaller crop.
Facility 10	8368	Higher	Increased by 16% compared to the previous year.
Facility 11	45	About the same	No significant change.
Facility 12	265	Lower	4% decrease resulting from improved efficiency.

W5.4

For all facilities reported in W3.2a what proportion of their water accounting data has been externally verified?

Water aspect	% verification	What standard and methodology was used?
Water withdrawals- total volumes	76-100	Ilovo's total volume of water withdrawn has been verified in alignment with AA1000AS Type II (Moderate) assurance standard.
Water withdrawals- volume by sources	76-100	Ilovo's total volume of water withdrawn has been verified in alignment with AA1000AS Type II (Moderate) assurance standard.
Water discharges- total volumes	76-100	Ilovo's total volume of water discharged has been verified in alignment with AA1000AS Type II (Moderate) assurance standard.
Water discharges- volume by destination	Not verified	
Water discharges- volume by treatment method	Not verified	
Water discharge quality data- quality by standard effluent parameters	Not verified	
Water consumption- total volume	76-100	Ilovo's total volume of water consumed has been verified in alignment with AA1000AS Type II (Moderate) assurance standard.

Further Information

W5.1 This is the second year that precipitation supplying Ilovo's agricultural operations has been included within reported withdrawal figures. This only applies to Ilovo as other businesses in ABF are not yet measuring rainfall (where relevant). Therefore ABF group figures provided in 1.2a and 1.2b exclude rainfall data.

Module: Response

Page: W6. Governance and Strategy

W6.1

Who has the highest level of direct responsibility for water within your organization and how frequently are they briefed?

Highest level of direct responsibility for water issues	Frequency of briefings on water issues	Comment
Board of individuals/Sub-set of the Board or other committee appointed by the Board	Scheduled- quarterly	The ABF Group Human Resources (HR) Director is accountable for health, safety and environmental performance of ABF which includes water use and other water issues in our operations. Upstream and downstream supply issues are included in this accountability although the management and performance of these issues lie with the individual businesses. The Group HR Director reports into the CEO, who in turn, reports to the board. The Group

Highest level of direct responsibility for water issues	Frequency of briefings on water issues	Comment
		HR Director is briefed as high risk issues arise and quarterly on environmental performance by the group's Safety and Environment Manager. They frequently visit sites to monitor performance of water use and quality and to support requests for capital investments where appropriate.

W6.2

Is water management integrated into your business strategy?

Yes

W6.2a

Please choose the option(s) below that best explains how water has positively influenced your business strategy

Influence of water on business strategy	Please explain
Introduction of water management KPIs	To provide stakeholders with information on ABF's water risks, responsibilities and opportunities, we have built water management KPIs. Each business has spent effort in reporting accurate water data to ABF annually. With the individual business risk assessments, collation of water management approaches and initial identification of potential stress sites, we are building a more holistic picture and approach to water management which may be used to further influence strategy. The KPIs in development are in line with the CEO Water Mandate to ensure we are collecting data useful for our needs as well as being cognisant of external good practice.
Publicly demonstrated our commitment to water	Water data has been reported in our annual HSE and Corporate Responsibility reports for over 10 years. Some of our businesses publicly report their own water performance such as Illovo in their annual integrated report. Our public commitments and disclosure of performance help us to drive activities to meet these commitments.
Greater supplier engagement	As some of our businesses have evaluated water as a material risk they are starting to make step changes in their water management, and will be in a better position to start improving their understanding of their suppliers' operations and water management. For example, Illovo is working towards improving understanding of their suppliers (outgrowers) who provide over half of their sugarcane supply across southern Africa. The business has partnered with the Climate Resilient Infrastructure Development Facility (CRIDF) and the UK Department for International Development (DFID) to investigate the wider impact of climate change in smallholder communities. The principal physical risk is erratic rainfall causing a shorter, later and heavier rainy season, leading to flooding, followed by a prolonged dry season. Water shortages affect the ability to irrigate crops as well as causing power issues in regions reliant on hydroelectricity. Illovo is working with smallholders to develop strategies to minimise the risks and identify partner organisations that can assist in providing opportunities to improve climate resilience.

Influence of water on business strategy	Please explain
Water resource considerations are factored into location planning for new operations	For example, for our yeast business AB Mauri, the re-use and disposal of waste water is a material issue. As such, availability of water sources, treatment facilities and appropriate disposal are considered when planning new operations and making decisions about which countries and regions in which we invest. Localities differ in the grade of receiving water and certain locations have especially high requirements due to religious or significant community requirements such as for the Ganges in India. As we respect these local considerations, we factor them into our due diligence and assessment when planning new operations.
Tighter operational performance standards	A five-year Illovo Water Strategy has been developed with the intent to improve operational water efficiency through tighter operational performance standards. Illovo has invested heavily in improving irrigation systems with the aim of improving the journey of water from point of abstraction to the field and into the crop. Others in the Sugar business are also addressing water issues in parallel with operational efficiencies. For example, British Sugar purchases around 7.5 million tonnes of UK sugar beet annually, which means their factories receive over 5.5 million tonnes of embedded water in beet. British Sugar extracts that water and puts it to work in the factories to maximise efficiency of resources. The water from the beet is used for cleaning, heating, cooling and transportation with over 60% of water used in the premises coming from the beet. Each factory has its own water treatment facilities, where water is held in a number of 'lagoons' before it is treated and returned to source. All of the water receive by British Sugar is either reused within the manufacturing process, returned to its immediate source or evaporated to air as steam.
Establishment of sustainability goals	Over recent years Illovo has gained a far more in-depth understanding of operations across southern Africa culminating in the development of a Water Management Strategy. Through this, Illovo has set a vision to 1) reduce unnecessary losses 2) improve efficiency of water delivery and 3) implement better monitoring and reporting. The intention is to implement water reduction or efficiency targets once monitoring and reporting systems are in place and fully tested.
Other: Changes to fundamental operational practices	AB Sugar's manufacturing sites use water for various activities throughout their supply chain and operations such as cleaning sugar beet, irrigating crops and cooling machinery. Over recent years, AB Sugar has developed they we monitor and measure the volume of waste water that is reused. Instead of discharging water after one use, operations are now able to reuse water that has been used within the factory for irrigation. In 2016 over 27% of the water our sugar businesses abstracted has been reused for a beneficial purpose before final discharge.
Accelerating vital research and development	Illovo relies on rainfall and other water sources such as rivers, lakes, dams and municipal service providers. Water is required for all agricultural, milling and downstream operations. In the reporting year, Illovo's operations across southern Africa responded to the impact of widespread drought or delayed summer rains. Along with investment in water infrastructure, technology to improve water efficiencies and strategies to mitigate water-related risks, Illovo has also invested heavily in improving irrigation systems. The aim is to make the journey of water from point of abstraction, such as a river, to the field and into the crop more efficient. There are varying losses due to evaporation, surface run-off and drainage which can be minimised depending on the choice of irrigation system. Other factors determine which system is best for which estate such as suitability to soil type, water and power availability and financial returns. Centre pivot and drip irrigation systems are increasingly being used over the less efficient furrow and portable pipe sprinkler technology. A remote sensing project is being developed which will combine satellite imagery and weather data to help improve the timing of water application.

W6.2b

Please choose the option(s) below that best explains how water has negatively influenced your business strategy

Influence of water on business strategy	Please explain
Increased capital expenditure	For some businesses there has been increased capital expenditure in water and effluent management. However, each investment will require a strong business case with a justified return on investment and alignment to the strategic plans of the organisation. Therefore capital investment is usually only viewed as a negative impact in the short term before the benefits are realised.
Delays in business expansion	As greater due diligence is required for water matters due to short term and local impacts of climate change and other uncertainties linked to changes in regulation, water / crop output or water / availability for operational use or water / quality of waste water, there have been impacts on the development of new facilities and growth plans.
Other: Increased operational costs	Ensuring an adequate water supply, in terms of quality and quantity, for our agricultural and processing operations has ongoing cost implications.

W6.3

Does your organization have a water policy that sets out clear goals and guidelines for action?

Yes

W6.3a

Please select the content that best describes your water policy (tick all that apply)

Content	Please explain why this content is included
Publicly available Company-wide Performance standards for direct operations Performance standards for supplier, procurement and contracting best practice Acknowledges the human right to water, sanitation and hygiene Other: Incorporated within group environmental, sustainability or HSE policy	ABF's environment policy states that "...as a minimum, we comply with current applicable legislation in the countries in which we operate and our operations are conducted with a view to ensuring that...releases to water...do not have an unacceptable environmental impact and do not offend the surrounding community...and that natural resources are used efficiently." The responsibility for compliance with our Environment Policy is devolved to the chief executive or managing director of our businesses. Read the full policy at http://www.abf.co.uk/responsibility/our_policies_and_appendices . For Illovo, this content is included to demonstrate their public commitment to water stewardship; minimise their water footprint by increasing the efficient use of water, maximise the recycling of water, improve efficiency of water delivery and reduce unnecessary water loss. Illovo is committed to complying with laws, regulations and permits and using water resources in a manner that benefits them without undermining the interests of stakeholders, particularly communities located around their operations and those who depend on the same water resources. ABF's Supplier Code of Conduct stipulates sound environmental management should be followed by suppliers; this includes "improving efficiency and sustainability of...operations which will include water conservation programmes." Suppliers are also expected to provide their workers with "access to clean toilet facilities and to potable water...".

W6.4

How does your organization's water-related capital expenditure (CAPEX) and operating expenditure (OPEX) during the most recent reporting year compare to the previous reporting year?

Water CAPEX (+/- % change)	Water OPEX (+/- % change)	Motivation for these changes
+10	-10	The CAPEX increase is largely in part due to the implementation of water related initiatives in Illovo's Water Strategy including water and wastewater treatment, irrigation upgrade / replacement and new monitoring projects. Other sites in different businesses are investing in effluent treatment plants and technologies to improve the reuse of water.

Further Information

Page: W7. Compliance

W7.1

Was your organization subject to any penalties, fines and/or enforcement orders for breaches of abstraction licenses, discharge consents or other water and wastewater related regulations in the reporting year?

Yes, not significant

W7.1a

Please describe the penalties, fines and/or enforcement orders for breaches of abstraction licenses, discharge consents or other water and wastewater related regulations and your plans for resolving them

Facility name	Incident	Incident description	Frequency of occurrence in reporting year	Financial impact	Currency	Incident resolution
AB Mauri Kalyani	Enforcement order	Non-compliance with biochemical oxygen demand (BOD) of the final outlet.	1			Show Cause notices were submitted to the Pollution Board. Appearance before the Board to agree the replacement of the Reverse Osmosis membrane, completion of the Zero Liquid Discharge (ZLD) project and upgrade of biological treatment system once ZLD project successfully completed. ABF engages a third party to conduct site compliance audits including water discharge permit compliance. The findings and closure of the audits are monitored by senior management within the businesses and by ABF's HSE Team to ensure closure of findings. ABF's board is also presented with an annual summary of the audit findings and close-out activities.
AB Mauri Chiplun	Enforcement order	Total suspended solids measured above accepted limit.	1			A failed sludge pump was replaced and standby pump purchased. Increased the monitoring frequency of the final effluent. ABF engages a third party to conduct site compliance audits including water discharge permit compliance. The findings and closure of the audits are monitored by senior management within the businesses and by ABF's HSE Team to ensure closure of findings. ABF's board is also presented with an annual summary of the audit findings and close-out activities.
AB Mauri Chiplun	Enforcement order	Rain water coming out of the bottom valve of a non-operational cooling tower.	2			During repair of the valve, it had mistakenly been left open. A bund wall has been constructed in the cooling tower area. ABF engages a third party to conduct site compliance audits including water discharge permit compliance. The findings and closure of the audits are monitored by senior management within the businesses and by ABF's HSE Team to ensure closure of findings. ABF's board is also presented with an annual summary of the audit findings and close-out activities.
AB Mauri Callao	Penalty	Local authority conducted a random sample which indicated site had exceeded local parameters for municipal sewage. A surcharge was applied to the regular payment.	1	59000	USD(\$)	The sample point was re-sampled and proved the effluent was within compliance limits. The original sample had been contaminated with industrial waste from a broken pipeline. The broken pipeline was repaired. ABF engages a third party to conduct site compliance audits including water discharge permit compliance. The findings and closure of the audits are monitored by senior management within the businesses and by ABF's HSE Team to ensure closure of findings. ABF's

Facility name	Incident	Incident description	Frequency of occurrence in reporting year	Financial impact	Currency	Incident resolution
						board is also presented with an annual summary of the audit findings and close-out activities.
AB Mauri Duran	Enforcement order	Regulatory agent assessed the effluent disposal process and volumes.	1			All industrial effluent now sent for external treatment. ABF engages a third party to conduct site compliance audits including water discharge permit compliance. The findings and closure of the audits are monitored by senior management within the businesses and by ABF's HSE Team to ensure closure of findings. ABF's board is also presented with an annual summary of the audit findings and close-out activities.
AB Mauri Tucuman	Enforcement order	Non-compliance with effluent requirements.	1			Appeal presented to the local authorities and extension of the Industrial Reconversion Agreement to extend the period for achievement of compliance.
AB Mauri Valdivia	Fine	A spill within the factory and a complaint received about an effluent discharge pipe located outside the site perimeter.	2	3837	GBP(£)	The Valdivia plant has improved its system to avoid spillages through the renovation of pump and effluent lines. It has also modified the location of discharge pipe accordingly the request of the authority. Due to the space restrictions on site, a CAPEX is under evaluation to construct a bund wall surrounding the site to prevent any further spill.
Speedibake Wakefield	Enforcement order	Caution issued by water authority with regards to breaches of consent.	1			
AB Sugar Qianqi	Enforcement order	Waste water discharge above consent levels.	12	5000	GBP(£)	The site undertook a range of improvements including seven individual projects, all of which were designed to improve the operational performance of the ETP. In addition, the site recruited a new Environmental Manager to oversee the operation of the ETP plant. These improvements were accepted by the Environmental Protection Bureau as evidence of meeting the requirements of the enforcement notice.

W7.1b

What proportion of your total facilities/operations are associated with the incidents listed in W7.1a?

1%

W7.1c

Please indicate the total financial impacts of all incidents reported in W7.1a as a proportion of total operating expenditure (OPEX) for the reporting year. Please also provide a comparison of this proportion compared to the previous reporting year

Impact as % of OPEX	Comparison to last year
.5	No change

Further Information

Page: W8. Targets and Initiatives

W8.1

Do you have any company wide targets (quantitative) or goals (qualitative) related to water?

Yes, goals only

W8.1b

Please describe any company wide qualitative goals (ongoing or reached completion during the reporting period) and your progress in achieving these

Goal	Motivation	Description of goal	Progress
Other: Accurately report annual water data for the group	Other: To contribute towards management decisions on resource consumption, associated risks and potential efficiencies. To ensure ABF reports complete and accurate data for our material environmental impacts	All our businesses monitor and measure their water withdrawn and discharged and report this information to ABF and other stakeholders. It is important to ABF that we disclose accurate and complete environmental data so that external stakeholders can make decisions about our business based on true information. Due to the varied nature of our group, range in water use and management and the different monitoring technologies available in each country, it	In our 2016 annual Corporate Responsibility Report and our Annual Report, we reported the total amount of water abstracted for use within our premises and for agricultural use. We believe the data provided was a fair representation while recognising that more can be done to improve accuracy of data which we continue to address. Our aim is to continue to report our water data and provide operational context to the numbers.

Goal	Motivation	Description of goal	Progress
		is difficult to set standard water related targets. Therefore our focus is to better understand water management approaches across the group, identify where efficiencies can be made and ensure good water stewardship. Reporting water withdrawn data in which we have confidence is a fundamental requirement for ABF to then be able to progress our group approach to water.	
Engagement with public policy makers to advance sustainable water policies and management	Water stewardship	George Weston Foods' water efficiency goals include reducing water consumption per tonne of production by 20% by 2020 (2010/11 baseline). This target is consistent with industry commitments under the Australian Food and Grocery Council's (AFGC's) Sustainability Commitment.	As a result of ongoing investigations and process improvements GWF has been able to reduce water intensity by 21.4% since FY11, putting the business on track to achieving their water reduction target well before 2020. GWF publicly reports information about their water performance via the AFGC, their own GWF website and through mandatory Government requirements such as Water Efficiency Management Plans.
Sustainable agriculture	Other: Long-term business and environment protection	As part of Illovo's Water Strategy they have undertaken a water mass-balance assessment of all operations to provide water consumption data aiming at improved water management. Subsequently they are implementing a five year strategy plan for individual operations.	Implementation of water management strategy resulting in improvements in water consumption. Investments in irrigation methods across a number of sites.
Other: Reduction in water use	Water stewardship	British Sugar has a commitment to reduce water through water improvement initiatives.	Since 2010/11 they have reduced direct water intake from 1.563 to 1.234 million cubic metres a year with a target to further reduce to 1.200 million m3 by 2020. This is over a third of a million cubic metres (330,000,000 litres) over that period.
Other: Elimination of hazardous chemicals from water discharge	Water stewardship	In 2014, as part of Primark's Detox programme, the company made a commitment to eliminate the discharge of hazardous chemicals from its manufacturing processes by 2020. 11 chemical groups have been prioritised for phase-out from Primark's supply chain. Part of Primark's commitment is to disclose information relating to chemical use and discharge, and will report annually on its progress.	In 2015 Primark expanded the scope of the original DETOX commitment to provide a more holistic approach. Product and manufacturing restricted substances lists have been updated and go beyond the scope of EU and US legislation. Implementation activities now cover chemical compliance of inventory and upstream value chains.
Other: Reduction in water use	Water stewardship	The Jordans & Ryvita Company has assessed water usage as part of their manufacturing process and delivered reduction measures to make a significant positive impact on this.	The Jordans & Ryvita Company have assessed water usage as part of their manufacturing process and delivered reduction measures to make a significant positive impact on this. Jordans Ryvita are undertaking further assessments of water use and setting

Goal	Motivation	Description of goal	Progress
			measurable targets for reduction in the amount used and improvements in effluent treatment.
Sustainable agriculture	Cost savings	Azucarera established Plan 2020 in 2014/15 with three pillars of increasing yield, lowering crop-related costs and improving technical quality. The Plan includes goals to secure sustainable sources of water.	Training days delivered to 350 beet growers and irrigation guidance given through workshops. Irrigation Advice Plan in progress with growers informed of water consumption requirements through a weekly app. Regular communications of the Plan's progress is shared with stakeholders.
Engagement with suppliers to help them improve water stewardship	Shared value	AB Sugar China has an aim to support farmers in improved management practices that make the most efficient use of land, water and energy. By using tools and technologies, and testing approaches through field trials, AB Sugar's programme will continue until 2020.	The programme is resulting in increased productivity, supporting conservation and supporting farmers lives through a new grower-centric model.

Further Information

Module: Linkages/Tradeoff

Page: W9. Managing trade-offs between water and other environmental issues

W9.1

Has your organization identified any linkages or trade-offs between water and other environmental issues in its value chain?

Yes

W9.1a

Please describe the linkages or trade-offs and the related management policy or action

Environmental issues	Linkage or trade-off	Policy or action
Improved water efficiency and efficacy within Illovo's agricultural operations not only results in decreased operational cost due to water savings but also in energy.	Linkage	Agricultural operations require significant energy to pump water from abstraction to irrigation, which entails significant cost. Illovo has identified three primary opportunities to reduce this energy requirement and thus cost: 1) Improving the efficiency of conveyance systems to minimise losses, 2) Improving irrigation system efficiency to reduce the quantity of water required to grow a stick of sugarcane; 3) Improving the accuracy of irrigation scheduling to ensure the crop is irrigated effectively.
There is a trade-off between withdrawn water use and managing the volume and treating the quality of waste water.	Trade-off	For some of our businesses, and in particular AB Mauri there is a significant cost associated with the appropriate treatment of waste water. In our yeast sites, for every 1m ³ of water used, there is approximately 0.7m ³ of waste water to treat. For many sites, the cost of water abstraction is low compared to the high cost of waste water treatment. If the effluent is treated on site, there are operational costs to consider. If the effluent is discharged externally to the municipality, costs are based on volume and concentration of organic and suspended matter. If a site uses less water, this can lead to increased discharge costs due to increased concentrations of organic matter.
Careful scheduled irrigation helps us to move towards reducing the risk of abstracting more water than is required from river catchments as it reduces over application of water.	Linkage	Our sugar operations are using a scheduled approach to irrigation water application which has the benefit of reducing waste of water and consequently energy. It also reduces leaching of fertilisers and will result in improved yields.
Development and implementation of an innovative approach to solar irrigation.	Trade-off	In Southern Spain, Azucarera has developed and implemented an innovative approach to solar irrigation. The initial financial investment has been high but the calculated return will bring reduced operating costs through the use of a sustainable and renewable source of energy. It is expected that Azucarera will also experience a reduction in their greenhouse gas emissions through this approach to powering irrigation. The irrigation systems are working at lower pressures, thus requiring less energy to move the same quantity of water. In addition, Azucarera has joined the European project Maslowaten to spread solar irrigation techniques among beet growers and therefore are taking this approach to their supply chain.
Financial investments in operational infrastructure with the aim of reducing water consumption and costs.	Trade-off	Azucarera in Spain has invested in a range of water and effluent related projects include improving storage ponds for process water to prevent any leakage into groundwater. Across their factories they have also modernised plants and improved the internal circuits to reduce water consumption and withdrawal of fresh water from municipal sources.
Energy efficiency through the on-site generation of biogas from waste water treatment.	Linkage	A significant number of our sugar and yeast operations have enhanced their treatment of waste water using a process called anaerobic digestion. The resultant biogas is recovered from the treatment plants which is used as a fuel within the factory with less energy required from the national grid. The quality of the waste water is also improved.
Reducing water use in cotton farming provides environmentally sustainable cotton fibre production	Linkage	Through the Primark Sustainable Cotton Programme, the business has produced an alternative fibre source and has committed to the expansion of the programme to 10,000 farmers and direction of the raw fibre into our cotton based production.
Process optimisation in AB Mauri's yeast factories.	Linkage	Our AB Mauri site in Mexico, reduced water and energy consumption by operating two separators instead of three. The site has improved and adjusted process conditions in the yeast separation areas, cooling towers and osmosis system resulting in a saving of 17% of water. Using less wash water in the

Environmental issues	Linkage or trade-off	Policy or action
		washing and separation of yeast has resulted in a reduction in the drying times which has also contributed to a reduction in energy use.
Creating and selling a co-product from wastewater.	Linkage	As part of its plan to achieve compliance, our AB Mauri site in Argentina is trialling the transformation of a stream of wastewater into a valuable co-product. The site is using a trial evaporator to concentrate vinasse to create co-products to be sold to the plant, animal nutrition and mining industries. If this is successful, the site will be able to reduce substantially the amount of organic material discharged into the environment.
Reducing water usage in yeast production.	Linkage	Our AB Mauri site in Palmira, Colombia, has reduced water consumption by improving yeast separation and washing and CIP cleaning resulting in a saving of 18% of water.

Further Information

More information about the aims of Primark's Sustainable Cotton Programme can be found at: <http://www.primark.com/en-ie/our-ethics/environment/raw-materials>

Module: Sign Off

Page: Sign Off

W10.1

Please provide the following information for the person that has signed off (approved) your CDP water response

Name	Job title	Corresponding job category
Steve Bradley	Group Safety & Environment Manager	Other: Head of Safety and Environment

W10.2

Please indicate that your organization agrees for CDP to transfer your publicly disclosed data regarding your response strategies to the CEO Water Mandate Water Action Hub.

Note: Only your responses to W1.4a (response to impacts) and W3.2c&d (response to risks) will be shared and then reviewed as a potential collective action project for inclusion on the WAH website.

By selecting Yes, you agree that CDP may also share the email address of your registered CDP user with the CEO Water Mandate. This will allow the Hub administrator to alert your company if its response data includes a project of potential interest to other parties using water resources in the geographies in which you operate. The Hub will publish the project with the associated contact details. Your company will be provided with a secure log-in allowing it to amend the project profile and contact details.

No

Further Information