Associated British Foods CDP Climate Change 2020

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

Associated British Foods is a diversified international food, ingredients and retail group with sales of £15.8bn, 138,000 employees and operations in 52 countries across Europe, southern Africa, the Americas, Asia and Australia. Our purpose is to provide safe, nutritious, affordable food and clothing that is great value for money.

The group operates through five strategic business segments: Grocery, Sugar, Agriculture, Ingredients and Retail.

Grocery comprises consumer-facing businesses that manufacture and market a variety of well-known food brands. Some of our best-known household brands include Twinings, Ovaltine, Ryvita, Kingsmill, Silver Spoon, Tip Top, Mazola and Spice Islands. George Weston Foods is one of Australia and New Zealand's largest food manufacturers. Tip Top is one of the most recognised brands in Australia with an extensive range of bread and baked goods.

AB Sugar - The heart of our business is making and selling sugar but we do much more than that. As well as 'core products' made from sugar beet and cane, we also make 'co-products', which can include anything one or two 'steps' away from the sugar-making process: animal feed, soil conditioners, electricity, bioethanol and seed enhancements.

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 one of the world's foremost low-cost producers. We operate two beet sugar factories in China, with annual sugar production capacity over 180,000 tonnes. The group operates in ten countries and has 24 factories with the capacity to produce 4.5 million tonnes of sugar. 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 as the UK's largest agri-food company and a leader in nutrition, science and technological innovation in animal feed. Our unique breadth and experience enable us to add value along the food, drink and biofuel industry supply chains. AB Agri supplies products and services to farmers, feed and food manufacturers, processors and retailers. We also buy grain from farmers and supply crop inputs through our joint venture arable operation, Frontier Agriculture.

Ingredients comprises businesses that supply a range of ingredients to food and non-food manufacturers. AB Mauri operates globally in yeast and bakery ingredients production, supplying industrial and artisanal bakers and the foodservice and wholesale channels. It is a technology leader in bread improvers, dough conditioners and bakery mixes. ABF Ingredients produces value-added products and services for food and non-food applications. It manufactures and markets enzymes, specialty lipids, yeast extracts, extruded ingredients, pharmaceutical excipients and antacids worldwide with manufacturing facilities in Europe, America and India.

Primark is an international retailer that offers high quality fashion, beauty and homeware at the best value on the high street. Primark employs more than 75,000 people across 12 countries across Europe and the US. Primark offers customers value for money clothing in more than 373 stores and 15 million square feet of retail selling space.

We have a decentralised approach to doing business. 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. Operational decisions are made locally because they are most successful when made by the people who have the best understanding of their markets. This culture of setting strategy locally gives our businesses an advantage in being able to swiftly respond to local market, environmental and people issues. The corporate centre provides a framework in which our business leaders have the freedom to pursue opportunities.
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. Our values are a common thread that ties our businesses together. We live and breathe our values through the work we do every day and reflect the way we conduct ourselves:

- Respecting everyone's dignity: We strive to protect the dignity of everyone within and beyond our operations.
- Acting with integrity: We proudly promote and protect a culture of trust, fairness and accountability that puts ethics first. From farms and factories right through to our boardroom we are committed to embedding integrity into every action.
- Progressing through collaboration: We work with others to leverage our global expertise for local good.
- Pursuing with rigour: From the products we make, to the way we preserve the resources we rely on, we are always learning and incorporating better practices.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date	Indicate if you are providing emissions data for past reporting years
Reporting year	August 1, 2018	July 31, 2019	No

C0.3

(C0.3) Select the countries/areas for which you will be supplying data.

Argentina
Australia
Austria
Belgium
Brazil
Canada
Chile
China
Colombia
Czechia
Denmark
Ecuador
Eswatini
Finland
France
Germany
India
Ireland
Italy
Malawi
Malaysia
Mexico
Mozambique
Netherlands
New Zealand
Pakistan
Peru

Philippines
Poland
Portugal
South Africa
Spain
Sri Lanka
Switzerland
Thailand
Turkey
United Kingdom of Great Britain and Northern Ireland
United Republic of Tanzania
United States of America
Uruguay
Venezuela (Bolivarian Republic of)
Viet Nam
Zambia

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

GBP

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.

Other, please specify

Operational entities where we have 40% + ownership

C-AC0.6/C-FB0.6/C-PF0.6

(C-AC0.6/C-FB0.6/C-PF0.6) Are emissions from agricultural/forestry, processing/manufacturing, distribution activities or emissions from the consumption of your products – whether in your direct operations or in other parts of your value chain – relevant to your current CDP climate change disclosure?

	Relevance
Agriculture/Forestry	Both own land and elsewhere in the value chain [Agriculture/Forestry only]
Processing/Manufacturing	Direct operations only [Processing/manufacturing/Distribution only]
Distribution	Direct operations only [Processing/manufacturing/Distribution only]
Consumption	No

C-AC0.6g/C-FB0.6g/C-PF0.6g

(C-AC0.6g/C-FB0.6g/C-PF0.6g) Why are emissions from the consumption of your products not relevant to your current CDP climate change disclosure?

Row 1

Primary reason

Analysis in progress

Please explain

We have evaluated the scope 3 categories and determined that emissions from the consumption of our products will be material. We are currently working on a strategy to start to collect source data and estimate, where needed, the data for product consumption. Due to the scale, nature and consumption patterns of our products, this is a large undertaking and will likely be implemented over a two to three-year time frame. For example, our products include ingredients which are processed by others into finished products such as sugar and yeast. Other finished products include tea, other food products, animal feed, clothes and soft furnishings and bioethanol, to name a few. This demonstrates the range of products we sell and therefore the systematic approach we need to take to determine the emissions from consumption of each product or group of products.
Our evaluation process will also include a review of existing life cycle assessments conducted by our operating companies for certain products. As these are currently limited, the data provided by these assessments is not likely to provide sufficient source data to extrapolate meaningful data for reporting at group level. We will however use this as base data to start to build a common methodology for our businesses to calculate the emissions associated with consumption and end of life treatment of their products. We will also work with our operating companies to obtain assumptions and factual data, where available, regarding consumer use of products, product lifetimes and end of life treatment methods.

Worth noting here are some of the existing life cycle assessments conducted by our businesses which will help us, when the time is appropriate, to build up the data for group-level reporting. These include:
• As signatories to Courtauld Commitment 2025, our UK Grocery group are working along the entire food chain to reduce the environmental impact of food and drink; to make food and drink production and consumption more sustainable.
• Since 2008, Allied Bakeries has measured, managed and reduced the product carbon footprint of their three biggest-selling varieties of Kingsmill bread which has included the use of the product in consumer's homes.

C-AC0.7/C-FB0.7/C-PF0.7

(C-AC0.7/C-FB0.7/C-PF0.7) Which agricultural commodity(ies) that your organization produces and/or sources are the most significant to your business by revenue? Select up to five.

Agricultural commodity

Sugar

% of revenue dependent on this agricultural commodity

10-20%

Produced or sourced

Both

Please explain

Our sugar businesses represent approximately 10% of the group's revenue in the reporting year. Sugar represents the single largest emission contributor to the group. GHG emissions (scopes 1, 2 and 3) from our sugar businesses contributed 56% to ABF's group emissions and 82% of the group's overall energy usage.

Agricultural commodity

Cotton

% of revenue dependent on this agricultural commodity

40-60%

Produced or sourced

Sourced

Please explain

Cotton is sourced by our retail business Primark for use in clothing and other goods such as soft furnishings. In the reporting year, Primark's revenue represents 48% of the group's revenue.

Agricultural commodity

Wheat

% of revenue dependent on this agricultural commodity

Less than 10%

Produced or sourced

Sourced

Please explain

Wheat is sourced primarily by our bakeries and other grocery businesses.

Agricultural commodity

Soy

% of revenue dependent on this agricultural commodity

Less than 10%

Produced or sourced

Sourced

Please explain

Soy is an ingredient used primarily by AB Agri as a key component in animal feed. AB Agri has been instrumental in the publication of the Soy Sourcing Guidelines by European Feed Compounders Association (FEFAC) as an important first step in

encouraging the use of responsibly produced soy in mainstream European supply chains. Currently 67% of soy sourced for ABN Feed Mills meets the FEFAC benchmark. AB Agri is an active member of the UK Roundtable on Sustainable Soya which compliments AB Agri's 2024 ambition to source 100% of soy from certified responsible sources.

Other business segments sourcing soy include our Ingredients and Grocery segments. For example, within Ingredients, PGP International has responded to an increased market interest in consuming plant-based protein by introducing a soy ingredient that can be used to bake high-protein snacks, cookies and energy bars. AB Mauri UK has maintained its 'BM Trada Responsibly Sourced' accreditation which means there is a direct link between the soy or soy cognate they source and place of origin, which should be an internationally certified farm dedicated to soy production.

Agricultural commodity

Other, please specify

Tea

% of revenue dependent on this agricultural commodity

Less than 10%

Produced or sourced

Sourced

Please explain

Our tea business is Twinings which sells premium teas and malted beverages in more than 100 countries. Tea is sourced from 160 tea gardens and over 100 different plants are sourced from 30 countries. Tea is grown in a mix of large plantations and smallholder farms and Twinings has full traceability for the tea they source. Over 80% of the tea gardens Twinings buys from are certified by international sustainability standards such as Fairtrade, Rainforest Alliance, UTZ Certified and Fairwind. Twinings were one of the first companies to provide a sourcing map detailing names and locations of tea providers for their customers.

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain
Board-level committee	The board as a whole is responsible for ABF's overall risk management and agreeing the group's principal risks. During the reporting year the board agreed that 'Our use of natural resources and managing our environmental impact' as a principal risk for ABF (as reported in the 2019 Annual Report and Accounts). This principal risk includes energy use and resultant greenhouse gases. The risks are mitigated by implementing efficiencies, use of technologies and adapting our operations to climate change. As climate change is integrated into group wide risk assessments, the board has ultimate responsibility for all risk related to climate change. The directors of the board have a duty to act to in a way which promotes the success of ABF with regards, amongst other matters, the impact of the Group's operations on the environment.
Chief Executive Officer (CEO)	The Group CEO receives and reviews a summary of risks, including environmental and climate risk, from each business segment at least annually. ABF's five business segments are Grocery, Agriculture, Sugar, Ingredients and Retail. Where environmental and climate risks are considered material and likely, it is the responsibility of the CEO to keep the other board of directors fully informed of how the risks are being managed. In addition, environmental risks that have a high and immediate likelihood are reported to the Group CEO via the Group Chief People and Performance Officer, and the Group Company Secretary. Otherwise, environmental and climate risks are incorporated into the group's standard risk processes.
Chief Financial Officer (CFO)	ABF has implemented an enterprise-wide risk management system for which the Group Finance Director is accountable to the board of directors. The Group Finance Director (equivalent title to Chief Risk Officer and Chief Financial Officer) is a member of the board. The CEO and Group Finance Director are accountable to the board for matters relating to risk. This includes keeping the board informed of climate-related risks through the group's risk management procedures. Climate-related issues and potential financial implications are reviewed, monitored and escalated to the board through this risk management system for which the Group Finance Director has responsibility.
Other C-Suite Officer	The Group Company Secretary is accountable at board level for matters relating to corporate responsibility including climate change management. The Company Secretary position reports into the Chief Executive Officer and therefore has the ability to review, influence and monitor changes at a group level. Any environmental risks that have a high and immediate likelihood are reported to the Group CEO via the Group Chief People and Performance Officer and the Group Company Secretary. The Company Secretary acts as a focal point for communications to the board and with shareholders on responsibility matters. During the year, the Company Secretary responded to requests for meetings, telephone meetings or written information from both existing and potential shareholders and research bodies on a broad range of environmental, social and

	governance risk matters including matters related to climate change, greenhouse gas emissions, water, supply chain management and sustainable agriculture.

C1.1b

(C1.1b) Provide further details on the board's oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – some meetings	Reviewing and guiding risk management policies Reviewing and guiding business plans Monitoring implementation and performance of objectives Other, please specify Reviewing and guiding corporate responsibility strategy	ABF's board of directors is collectively responsible to shareholders for the direction and oversight of the group to ensure its long-term success. The board met eight times throughout 2019 to approve the group's strategic objectives, to lead the group within a framework of effective controls which enable risk to be assessed and managed, and to ensure that sufficient resources are available to meet the objectives set. The board is accountable for effective risk management; for agreeing the principal risks facing the group and ensuring they are successfully managed. As climate change is integrated into group wide risk assessments, the board has ultimate responsibility for all risk related to climate change. The Group Director of Finance (equivalent title to Chief Risk Officer and Chief Financial Officer) receives from the five business segments their consolidated risk assessments twice a year and, with the Director of Financial Control, reviews and challenges them with the segment chief executives. A summary of these segment risks is discussed between the Group Finance Director and Chief Executive annually and shared with the board twice a year as part of the formal risk assessment process. The board undertakes an annual assessment of the principal risks which are believed to likely have the greatest current or near-term impact on the group's strategic and operational plans and reputation. During these meetings, the board reviews ABF's strategic objectives including climate change and other material environmental impacts. The use of natural resources and managing our environmental impact has been identified as one of the group's principal risks and

		uncertainties, as reported in the 2019 Annual Report. These risks and their impact on business performance are also considered as part of the senior management presentations from each of the group business areas delivered to the board at each meeting on a rolling basis. In 2019, the board also received a presentation from the Group Director of Health, Safety and Environment on the group's environmental performance including GHG emissions and climate change considerations relating to ABF's energy sources. Each year, the Audit Committee on behalf of the board reviews the effectiveness of the group's approach to risk management as detailed in the Annual Report. The Audit Committee comprises a minimum of three members, all of whom are independent non-executive directors of the group. The committee held four meetings in 2019 with the external auditor. The external auditor is responsible for providing assurance over the group's Annual Report and Accounts and conducted a limited assurance of the group's 2019 Responsibility Report and ESG Appendix. The Responsibility Report and Annual Report include our approach to the TCFD recommendations, approach to managing climate risk and GHG emissions performance. The committee Chairman reported the outcome of the meetings to the board.

C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Other C-Suite Officer, please specify Director of Legal Services and Company Secretary	Both assessing and managing climate-related risks and opportunities	Half-yearly
Chief Sustainability Officer (CSO)	Both assessing and managing climate-related risks and opportunities	Half-yearly

Other C-Suite Officer, please specify Director of Financial Control	Both assessing and managing climate-related risks and opportunities	Half-yearly
Other, please specify Group Safety and Environment Manager	Managing climate-related risks and opportunities	Annually
Business unit manager	Managing climate-related risks and opportunities	Less frequently than annually

C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).

Our decentralised business model empowers the management of our businesses to identify, evaluate and manage the risks they face, on a timely basis, to ensure compliance with relevant legislation, our business principles and group policies. The risk assessments consider materiality, risk controls and the likely impact against a range of criteria such as business objectives, financial performance, the environment and climate change, regulation and reputation. Climate and weather issues are integrated into the group's risk management and performance processes; risks are initially identified at site level, channelled to the business level, collated into the five business segments and then collated at group level. These risks are shared with the board at least once a year; the board is kept informed of risks, how these are being managed and the performance to minimise the risk. As climate is integrated into group wide risk assessments, the board has ultimate responsibility for all risk related to climate change.

The Group Company Secretary has overall accountability for all responsibility issues including climate change. Responsibility lies here because the Company Secretary reports to the board and into the CEO and therefore has the ability to review, influence and monitor climate activities at a group level. Any environmental risks that have a high and immediate likelihood are reported to the CEO via the Group HR Director and the Group Company Secretary. The role is supported by the Director of Group Secretariat, who also has the equivalent role of Chief Sustainability Officer.

The Chief Sustainability Officer (CSO), who reports to the Group Company Secretary, is responsible for assessing climate-related activities across the group and externally reporting these activities. The CSO works with the finance teams to help identify and quantify climate-risks and chairs the CR Leaders Group which addresses a range of responsibility issues across the businesses including climate change. The CSO has responsibility for environment, social and governance (ESG) issues including internal communication and external reporting of ABF's sustainability performance. The role facilitates positive change and supports the businesses with their ESG matters; sharing good practice, providing tools, resources and being a central point for sustainability which includes climate risks and opportunities.

The CSO is responsible for reporting ABF's climate-related disclosures; working with the CR Leaders, risk, finance and HSE to obtain performance data and activities for reporting purposes to investors, benchmarks and other external stakeholders. The businesses the CSO with

annual examples of climate-related activities and updates to strategies or policies directed at climate change.

The CSO is a member of the Committee on Climate Change, an independent, statutory body established under the Climate Change Act 2008. The Committee's purpose is to provide advice to the UK Government on adapting to climate change. The knowledge and skills required to fulfil the CSO role contribute to the expertise required for the Committee.

The Group's Director of Financial Control (equivalent title to Chief Risk Officer) receives risk assessments twice a year and, with the Group Finance Director, reviews and challenges them with the business segment CEOs. These risks and their impact on business performance are considered as part of the segment performance updates to the board presented at each board meeting. Responsibility for monitoring climate-related risk lies here as climate is integrated into the group's risk management procedures.

In addition, an aggregated summary of risks, including environment and climate, is reviewed by the Director of Financial Control, Group Finance Director, CEO and ABF's board at least annually.

The Group Safety and Environment Manager supports the businesses with their environmental performance and reporting; working with the CSO and HSE managers in the businesses. This role reports annually to the board on the group's environmental performance including GHG emissions and carbon management. Responsibility lies here as the role has direct engagement with the sites and business level Environment Managers to support the tracking of emissions and related activities as well as responsibility for the annual disclosure of environmental performance data. This role reports to the Group Chief People and Performance Officer who reports to the CEO. This role chairs the HSE Leaders Group which addresses environmental issues including sharing best practice when tracking the performance of climate adaptation and mitigation programmes.

The CR and HSE Leaders Groups have representatives from the businesses and group-level finance, procurement, risk and communications. These leadership groups meet throughout the year to discuss group wide and business- or geographic-specific issues such as climate change, water stewardship and deforestation.

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	As reported in the 2019 Annual Report and Accounts, the personal performance element of the Short Term Incentive Plan for executive remuneration will be modified to focus on in-year execution of multi-year priorities related to environmental, social and governance (ESG) measures/business health as well as to business performance. This change was welcomed by our shareholders in consultation.

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Entitled to incentive	Type of incentive	Activity inventivized	Comment
Chief Executive Officer (CEO)	Monetary reward	Other (please specify) ESG matters	It was reported in the 2019 Annual Report and Accounts that the personal performance element of the short-term incentive plan will be modified to focus on in-year execution of multi-year priorities related to environmental, social and governance (ESG) measures/business health as well as to business performance. This change was welcomed by our shareholders in consultation.
Business unit manager	Monetary reward	Other (please specify) ESG matters	Business unit managers are the equivalent role of the chief executives of each ABF business. It was reported in the 2019 Annual Report and Accounts that the personal performance element of the short-term incentive plan will be modified to focus on in-year execution of multi-year priorities related to environmental, social and governance (ESG) measures/business health as well as to business performance. This change was welcomed by our shareholders in consultation.
Management group	Non-monetary reward	Emissions reduction project Emissions reduction target Energy reduction project Energy reduction target Efficiency project Efficiency target	Due to the importance of sugar to the group, we include here the example from Illovo Sugar Africa (Pty) Ltd: Climate change mitigation related indicators are directed at initiatives and advancements in clean technology, energy efficiency, waste avoidance and overall greenhouse gas (GHG) emission reduction within their operations. Climate change adaptation related indicators are directed at ensuring a sustainable cane supply; both within own agricultural operations and from third party cane providers and include water and crop resilience indicators.

C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?

Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	1	3	Our businesses can make swift changes to their operations, with limited impact on operating costs, to adapt to changes in weather patterns or other climate-related issues. These are short-term horizons which can be incorporated into the annual budget and business planning processes.
Medium-term	3	10	A medium-term horizon will take into account wider value chain implications of any change to the business or operating model.
Long-term	10	30	We are a company which thinks long term, invests consistently in its assets and finances itself conservatively. Long-term horizons are harder to predict and therefore manage but nonetheless, our businesses consider the long-term future sustainability of their business model for example, availability of raw ingredients, availability of natural resources and changes in consumer behaviour so they are prepared to adapt and react to these changes if necessary.

C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

ABF defines a risk or a group of risks that would threaten our business model, future performance, the group's ability to generate profit or other financial impact which could create movements in our share price as an event that would have a substantive financial or strategic impact on the business. A substantive impact could also be one that affects our ability to continue supplying our valuable customers. ABF classifies these risks as principal risks and uncertainties. The directors have carried out an assessment of the principal risks facing ABF which we believe are likely to have the greatest current or near-term impact on our strategic and operational plans and reputation. They are grouped into external risks, which may occur in the markets or environment in which we operate, and operational risks, which are related to internal activity linked to our own operations and internal controls. "Our use of natural resources and managing our environmental impact" is one of the principal operational risks identified by ABF that could lead to a substantial financial or strategic impact on ABF.

ABF consists of five segments or divisions; a substantive risk to ABF as a whole is very rare because if something impacts one segment, the other four will continue to operate and it is unlikely to move the group's share price. However, if climate risk is not managed effectively, operating and production costs relating to the impact of carbon and of crop risk can be substantive especially in our carbon intensive operations such as sugar. As such there is a strong focus on managing energy and carbon efficiently.

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered

Direct operations
Upstream
Downstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

Our process for identifying, assessing and responding to climate-related risks and opportunities is integrated in our group-wide approach to risk management. The delivery of our strategic objectives and the sustainable growth of ABF is dependent on effective risk management. We regularly face business uncertainties and it is through a structured approach to risk management that we are able to mitigate and manage these risks and embrace opportunities when they arise. The diversified nature of our operations, geographical reach, assets and currencies are important factors in mitigating the risk of a material threat to the group's sustainable growth and long-term shareholder value.

The board is accountable for effective risk management, for agreeing the principal risks facing the group and ensuring they are successfully managed. The board undertakes an annual assessment of the principal risks, including those that would threaten the business model, future performance, solvency or liquidity. The board also monitors the group's exposure to risks as part of the business-level performance reviews conducted at each board meeting. Each year, the Audit Committee on behalf of the board reviews the effectiveness of the group's approach to risk management including the internal control procedures and resources devoted to them.

Our decentralised business model empowers the management of our businesses to

identify, evaluate and manage the risks they face to ensure compliance with relevant legislation, our business principles and group policies. Our businesses perform risk assessments which consider materiality, risk controls and specific local risks relevant to the markets in which they operate.
Risks assessments start at the asset level with each site taking responsibility for assessing their immediate environmental sensitivities and risks, often related to water extraction, energy use, all emissions and odours. These site level risks are mapped on to a risk and opportunities matrix, in a format prescribed by the board, which considers stakeholder concern, potential financial impact and assesses likely level of impact. They are classified into ‘business', ‘operational’, ‘financial’ and ‘project’ risks. It is the responsibility of the business level CEO to embed assessments into their business and implement necessary response strategies. The business CEOs are supported by senior roles which are accountable for the short and long-term environmental performance of their business. This includes creating the business case for investing in opportunities to mitigate or adapt to climate changes and maximising opportunities such as product development.
The risk registers themselves have been developed by each business so that they are relevant to the nature of their operations; either integrating up and downstream risks into one risk register or in some cases maintaining separate registers for each stage in their value chain.
ABF requires all businesses to implement appropriate levels of risk and opportunity management to ensure compliance with legislation, group policies and business principles considering business needs and local circumstances. Criteria which contributes to determining priorities include:
a. Risk of legal non-compliance/physical environmental damage/reputation;
b. Pollution or nuisance to neighbours;
c. Opportunity for enhanced financial return/client acquisition/revenue streams;
d. Ease of achievement.
As an example, one of the businesses has an environmental impacts register, aligned with ISO14001, which assesses the significance of upstream and direct operational environmental risks associated with the supply and transportation of materials, against four categories of activity. Weightings are applied based on the volume of materials. Global external data sources provide information to support the decision-making, which includes physical and transitional risks associated with climate change and GHG emissions from specific activities. The magnitude, likelihood, time frame and controls in place are used to assess the magnitude of the risk; of the environmental or climate risk on the activity as well as the impact of the business activity on the environment including emissions.

The Director of Financial Control receives the business level risk assessments twice a year and, with the Group Finance Director, reviews and challenges them with the segment chief executives, on an individual basis. These discussions are wide ranging and consider operational, environmental and other external risks. These risks and their impact on business performance are reported during the year and are considered as part of the monthly management review process.
Group functional heads including Legal, Treasury, Tax, IT, Pensions, HR, Procurement and Insurance also provide input to this process, sharing with the Director of Financial

Control their view of key risks and what activities are in place or planned to mitigate them. A combination of these perspectives with the business risk assessments creates a consolidated view of the group's risk profile. A summary of these risk assessments is shared and discussed with the Group Finance Director and Chief Executive twice a year.

The Director of Financial Control holds meetings with each ABF non-executive director seeking their feedback on the reviews performed and discussing the key risks and mitigating activities. Once all non-executive directors have been consulted, a board report is prepared summarising the full process and providing an assessment of the status of risk management across the group. The key risks, mitigating controls and relevant policies are summarised and the board confirms the group's principal risks. These are the risks which could prevent Associated British Foods from delivering its strategic objectives. This report also details when formal updates relating to the key risks will be provided to the board throughout the year.

The Internal Audit function, which reports to the board, maintains regular liaison with each business. It identifies and evaluates the risks and opportunities arising from business activities and, working with the relevant risk and environmental specialists within the businesses, confirms the detailed measures intended to deal with major risks by averting, minimising, transferring or retaining them or by maximising the potential opportunities. Major risks are those which could impair the business to continue operating in the short, medium or long-term. These include risks associated with secure supply of materials and access to markets as a result, for example, of changes to national average temperatures; risks associated with secure supply of natural resources, such as energy and water, to maintain production operations because of the impact of drought; and risk to reputation if we were not to respectfully manage and reduce our GHG emissions.

C2.2a

(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	ABF operates across numerous jurisdictions and is subject to multiple climate-related regulations including carbon price schemes. We are committed to complying with the regulations of the countries in which we operate and where possible to exceed standards. The businesses manage the processes and costs incurred to comply with climate-related regulation. Climate regulation is included in our risk assessments as the risk of non-compliance could result in unnecessary additional financial and reputational implications. By recognising the risks, our businesses ensure appropriate controls and resources are factored into business strategies to respond to climate regulation and potentially minimise associated costs, e.g trading

		allowances. Each business is responsible for monitoring changes to regulation and ensuring they remain compliant. We ensure that our local teams are knowledgeable and are able to take advantage of incentives that promote adaptation to climate change while ensuring compliance with existing regulation. Cap & Trade Schemes: We have identified climate-related risk due to increased administrative burdens and costs from these schemes. Due to the lack of a comprehensive international agreement and inconsistent climate change policies, we anticipate inconsistent schemes and market distortions may grow. This is a financial risk to ABF with impacts at business level. Carbon taxes: There are increased costs associated with carbon taxes. The UK's CRC scheme and Climate Change Levy result in payments for carbon allowances. The South African Carbon Tax Act, which came into effect in June 2019 has a financial impact on Illovo and requires resources to manage it. The EU Best Available Techniques reference documents (BREF) cover the industrial activities in the EU's Integrated Pollution Prevention and Control Directive. The Directive aims to lower emissions from industrial production and requires integrated control of the consumption of energy, water and raw materials, as well as the prevention of the pollution of water, air and soil. This control is implemented through a system of permits that include conditions requiring the use of the Best Available Techniques. British Sugar has identified compliance risks around its animal feed drying, pelleting and wastewater treatment process indirectly relating to GHG emissions. British Sugar, AB Agri and AB Mauri are currently investigating and implementing technical and market solutions to the regulatory changes.
Emerging regulation	Relevant, always included	Emerging regulation related to climate risk is always included in our risk assessment process as it may impact budgeted operating costs, financial performance or cause reputational harm in the event of non-compliance. As we operate in 52 countries, and with the introduction of national climate regulation increasing as countries implement their National Adaptation Plans, this is an area of potentially increasing financial and reputation risk if not suitably managed. In addition, there is emerging regulation relating to the disclosure of climate activities and performance which if not effectively managed through risk procedures could lead to a negative reputational impact. For country-specific regulation, our local teams are tasked with identifying and assessing the risks related to the emerging regulation and ensuring that we are aware of, and in a position to comply with the new laws. Where changes to schemes take place or there are key legislative changes which are classified as a risk, the business reports this to the group level via the senior risk manager to the business CEO and to the Group's Director of Financial Control, as per the

		company procedures. We also engage with governments, local regulators and community organisations to contribute to, and anticipate, important changes in public policy. For example, during the reporting period, Illovo submitted comments in South Africa on the Consultation Paper and Draft Licensing and Exemption Notice issued by the National Energy Regulator of South Africa. Illovo also has one member on the board of The South African Sugar Association and through SASA led discussion, Illovo participated in the carbon tax development process headed by the National Treasury. The South African Carbon Tax came into effect in June 2019. Illovo, which has six sugar cane processing sites in South Africa, uses the bagasse and biomass created from the sugar cane crushing process to generate their own-use energy and export surplus energy to the grid. However, a key development of the tax is that the non-anthropogenic component of bagasse and biomass will be taxed, and by virtue of the raw material used, Illovo will be exposed to the carbon tax even if it phases out its fossil fuel consumption. Nonetheless, Illovo has Performance Optimisation Plans to improve energy efficiencies within their South African sugar mills to reduce consumption of purchased grid electricity and coal and the associated costs of the new tax.
Technology	Relevant, sometimes included	ABF acknowledges that consumers are becoming more aware of the environmental impact of the products they purchase; this awareness is across the value chain including sourcing, packaging, use and end of life. To remain financially competitive, innovative and sustainable products are required which consider energy efficiencies and the use of renewables, reductions in emissions either during their own production or to help consumers reduce emissions and products or services which help customers adapt to climate change such as through agricultural technology. Technology is key to creating all of these innovative products which will meet the needs of our customers and changing demands on agricultural, production and retail processes. As such, technology related to climate risk is included by our businesses. If new technology supports processes becoming more efficient then there is the opportunity to reduce costs. If implementing technology leads to more costs, then this can impact our ability to deliver sound financial results. The risk here is also that as technology develops, which helps organisations transition to a low-carbon economy, and our operations do not invest or adopt the opportunities, that we do not benefit and lag behind competitors. As such, our businesses constantly investigate technological and infrastructural alternatives when considering climate-related risks, e.g. AB Sugar has a strong corporate engineering team to support the individual

		businesses and sites, especially around energy efficiency, and to horizon-scan technological developments and check applicability to operations. We have a major technical centre in the UK at The Allied Technical Centre. Facilities also exist at ACH Food Companies in the USA, AB Mauri in Australia and the Netherlands, and AB Enzymes in Germany. These centres support the technical resources of the businesses in the search for new technology and in monitoring and maintaining high standards of quality and food safety. Inputs from these facilities and from others within the businesses may lead to technological improvements which support the businesses in the transition to a lower-carbon, energy efficiency system. Each business is responsible for the identification of new and more efficient technologies. Where these are identified, each business undertakes cost benefit analysis which is reported to ABF via their senior risk manager to the business CEO and to the Group CEO.
Legal	Relevant, always included	ABF's financial control framework and board-adopted tax and treasury policies require all businesses to comply fully with relevant local laws. We adopt a similar approach to legal risks and potential litigation as we do to emerging and current regulation risk, as together they provide the structure within which our businesses operate in order to remain profitable while ensuring that we minimise our negative impact on the natural environment. ABF is committed to complying with the legislation and regulations of the countries in which we operate and as such, the climate-related legal environment is always included in our risk assessments. The businesses manage the processes and costs incurred to comply with climate-related legislation. Climate legislation is also included in our risk assessments as the risk of non-compliance and litigation could result in unnecessary additional financial and reputational implications. Each business is responsible for complying with all relevant legislation in the geographies in which they operate. Some businesses use legislation trackers to monitor any new regulation that may impact their operating environment, product stewardship and wider industry. In addition, the group runs an external audit programme which to monitor the main environmental risks and environmental legal compliance at manufacturing and store level; this rolling programme of audits and actions, which is monitored by the Group Safety and Environment Manager, ensures potential non-compliance with national climate-related legislation is identified and managed. Where risk associated with climate legal standards is identified, each business reports this to ABF via their senior risk manager or director to the business CEO and to the Group's Director of Financial Control, as per the company procedures. At the group level, it is a requirement of our listing on the London Stock Exchange to disclose our approach to material environmental issues, of which adapting to and mitigating climate change is one. As

		such, ensuring the group meets these reporting requirements is included in our approach to risk management.
Market	Relevant, always included	As ABF operates in 52 countries with sales and supply chains in many more, we are exposed to global market forces. Failure to respond could directly impact the profitability of our operations. Entering new markets is also a key risk and we conduct rigorous due diligence when entering or commencing business activities in new markets, which includes consideration of the impacts of climate change on the region's weather, temperature and rainfall patterns which may, in turn, affect yields, production and customer demand for products. For example, clothing requirements throughout the year or seasonal food choices. Our approach to risk management always includes potential short-term market volatility and evaluates longer-term socio-economic, political and environmental scenarios including climate change. Market risk can impact the income ABF receives for its products. The availability of raw materials, which may be impacted by weather changes for example, can lead to a change in price for materials such as sugar, cotton or wheat and can also include tariffs, quotas and other levies. As a principal risk to the group, fluctuations in commodity and energy prices can have a material impact on the group's operating results, asset values and cash flows. These fluctuations can occur because of climate influences ranging from national energy policies to weather impacting crop yields. The group purchases a wide range of commodities and therefore constantly monitors the markets in which we operate, including short and long-term climate implications; managing these exposures with strategies such as exchange traded contracts and hedging instruments. In 2019 it was assessed at a group level that macro, political and climate risks are likely to continue to influence world commodity prices. For example, the agri-commodity markets were influenced by the African swine fever, planting delays and improved weather, amongst others. These circumstances are likely to challenge global markets again and impact farmers' planting decisions. As a business level example, GWF used derivatives in 2019 to mitigate against the impacts of the Australian east coast drought on wheat availability and price. Each business is responsible for monitoring shifts in local and international markets. Where market risks are identified, the business reports this to ABF via their senior risk manager to the business CEO and to the Group's Director of Financial Control, as per the company procedures.
Reputation	Relevant, always included	As a global enterprise, ABF comes under increasing scrutiny from all its stakeholders including investors, shareholders, employees, customers and other parties in the supply chain in relation to climate change action and sustainability performance. In order to remain profitable and a partner of choice, ABF recognises

		the need for its brand, product offering and reputation to be highly regarded by these stakeholders. In addition to living our values, ABF's policies, internal controls and risk assessment processes ensure our operations meet the expectations of our stakeholders and therefore climate is considered in risk assessments. For example, investors such as Legal & General Investment Management review the group's consolidated climate impact using the information we communicate publicly but also engage with us on specific questions. We respond to numerous ESG ratings agencies questionnaires, benchmarks and shareholder requests to communicate our approach to climate risk management. We recognise that there may be a risk that our performance is not communicated effectively, that we do not meet our business level climate-related commitments or that our emissions performance is not valued sufficiently thereby potentially reducing demand for our goods and services and damage to our corporate reputation. As such, we consider reputational risk and how we can mitigate this risk through effective disclosures of activity related to climate-risk and opportunity through our annual reporting, CDP and other engagement with key stakeholders. For example, Primark recognised there were misconceptions in the German market towards their supply chain ethics and sustainability credentials and, in the reporting year, launched a communications campaign to demonstrate their positive activities and impacts in these areas. Each business is responsible for engaging with stakeholders and monitoring local media for activities that may impact reputation. Where potential risks to reputation are identified, each business reports this to ABF via the senior risk manager or director to the business CEO and to the Group CEO via the Group's Director of Financial Control, as per the company procedures.
Acute physical	Relevant, always included	Acute risks that are unanticipated and event-driven, including increased severity of extreme weather events such as cyclones, hurricanes or floods may impact the availability of key agricultural raw materials. For ABF, these could be sugar on our own land, cotton in our supply chain or other commodities such as wheat, rice, tea and edible oils, and as experienced over recent years, acute physical events have led to crops being damaged by floods, extreme frosts and winds. These risks have the potential to disrupt the value chain, increase operational costs and impact our ability to do business. For example, in Malawi and Mozambique our sugar operations have recently been impacted by cyclones, associated heavy rains and related flooding. The unpredictability of these events resulted in disruptions in the value chain and impacted on our ability to operate at expected levels for

		multiple reasons including lower harvests, infestations, constraints on water supply impacting hydro-power supply to the factories. Each business is responsible for understanding the risks pertinent to each location in which they operate. Each business reports this to ABF via the senior risk manager or director to the business CEO and to the Group CEO via the Group's Director of Financial Control, as per the company procedures.
Chronic physical	Relevant, always included	ABF has a substantial international agricultural footprint through our supply chain and operations on our own land. Therefore it is imperative that we respect the natural environment by managing our impacts as well as responding to changes resulting from climate change such as variability in seasons, changing weather and precipitation patterns, changing mean temperatures and the impact of these on natural resources. These physical risks could impact the availability, quality and price of key agricultural raw materials and commodities such as sugar and cotton crops. In addition, chronic physical risks could start to impact the secure supply of materials, geographical growing regions or harvest seasons. The inability to source raw materials as a result of change in climate patterns is mitigated through our risk processes and engagement with suppliers. For example, Illovo and AB Sugar China work with their sugar growers to improve resilience against climate change impacts. They are also continuously improving their irrigation methods including converting to drip irrigation to mitigate against long-term climate change impacts and to use water, and associated energy, more efficiently. As an example, through their risks assessments, Westmill identified a potential risk to their supply of rice from Pakistan due chronic water shortage within 5 years because of climate change. The business launched a multi stakeholder partnership in Pakistan to proactively improve the sustainability of the basmati rice supply, registered under the Sustainable Rice Platform. They engage with local government to help drive systemic change. Each business is responsible for understanding the risks pertinent to each location in which they operate. Where potential risks are identified, each business reports this to ABF via their senior risk manager or director to the business CEO and to the Group's Director of Financial Control, as per the company procedures.

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Upstream

Risk type & Primary climate-related risk driver

Chronic physical

Changes in precipitation patterns and extreme variability in weather patterns

Primary potential financial impact

Increased direct costs

Company-specific description

As ABF consists of five business segments a substantive risk to the group as a whole is very rare because if something impacts one segment, the other four will continue to operate and it is unlikely to move the group's share price. There is sufficient diversity in the group, and across our supply chains, that the risk of climate-related chronic physical changes is likely to be low. These shifts in climate patterns are likely to occur over the long-term; ABF has commissioned work with climate scientists which includes climate predictions up to the mid- and end of the century and therefore we classify this risk as having a long-term horizon albeit with some impacts starting to manifest in some regions now. For example, prolonged periods of flooding and droughts have been experienced by regions where we source materials such as Bangladesh and India for cotton, Zambia for sugar cane, USA for rice and Australia for wheat.

The impact of climate shifts include changes to planting and harvest times, reduction in yields and disruptions to transport and manufacturing processes. ABF has started to consider scenarios as a result of potential 2°C and 4°C global warming and what this could mean for specific upstream activities; initial high level analysis indicates that some of our key commodities may have to be sourced from different regions in the medium-term as current locations may not be able to sustain growth levels due to changes in temperature and precipitation.

Our businesses rely on a secure supply of natural resources, some of which are vulnerable due to variability in weather patterns. We therefore work with suppliers to help build resilience to withstand the challenges of the changing climate manifest as variability in seasonal weather, increasing temperatures and precipitation patterns. As we operate across 52 countries with supply chains reaching more, there are varying degrees of impact from climate change on upstream activities. We recognise that all our business segments could be affected by varying degrees, whether they are sourcing specific ingredients to include in products or core raw materials such as sugar cane and cotton.

Ultimately chronic physical changes could impact our ability to deliver products to customers at expected times, increase the costs of purchase for our businesses, increase commodity prices, and result in increased need to continuously work and invest with our suppliers to adapt to climate change.

Time horizon

Long-term

Likelihood

Likely

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Due to ABF's decentralised structure we do not have a consolidated impact figure as each business manages this risk and related costs as part of their business as usual costs. However, as we continue to develop our approach to projecting the impact of climate change on our businesses, we will consider the inclusion of quantifying financial risks and responses into our scenario analyses and adaptation plans.

Cost of response to risk

Description of response and explanation of cost calculation

Our Supplier Code of Conduct is designed to ensure suppliers, representatives and all with whom we deal, adhere to our values and standards. ABF encourages operating practices, farming practices and agricultural production systems that are sustainable. Our expectations are for supplier and representatives to continually strive towards improving the efficiency and sustainability of their operations. Where supply chains are at risk of climate change, our businesses work directly with them to implement programmes and procedures to adapt to shifts in weather patterns. For example, Primark, Silver Spoon, Westmill, Azucarera, British Sugar and Illovo are involved in initiatives to increase the yields and incomes of smallholder farmers and improve their resilience to the impacts of climate change. For example, AB Sugar published commitments for 2030 which include building vibrant, diverse value chains and reducing the water and carbon dioxide footprints in the end-to-end supply chain by 30%. During the reporting year, AB Sugar launched the Innovate Irrigation Challenge to identify new

solutions for water efficiency and contribute towards the fight against climate change. The winning idea is being piloted; focusing on a smart irrigation system which estate managers and smallholder farmers supplying sugar cane would be able to integrate into their current processes.

Comment

For the Innovate Irrigation Challenge, AB Sugar received 29 entries from 14 countries and are currently piloting the winning idea which focused on developing a smart irrigation system that would account for water used in irrigation, detect water losses in the system, plan irrigation schedules, monitor growth of crops and determine the irrigation water requirement of the crop during different growth stages. It could be connected into current processes, managed from afar and integrated with new technologies available in remote locations; allowing estate managers and supplier smallholder farmers to understand, analyse and act on the information provided through the acquired data. The idea also prioritised the need for all parties to continually adapt behaviour around water usage given its status as a depleting resource across the globe. All data captured within the system would be available in real-time; while training needed for farmers and estate staff to build up capability of using such systems was also considered. Push notifications to users would enable action to take place as and when needed whilst ongoing water audits would monitor action taken against output provided.

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Acute physical

Increased severity and frequency of extreme weather events such as cyclones and floods

Primary potential financial impact

Decreased revenues due to reduced production capacity

Company-specific description

Although it is unlikely that one extreme weather event will result in a substantive impact to ABF, through movements to share price or affecting the group's ability generate profit, we recognise that the cumulative impacts of acute weather events could impact a number of our businesses and, at a consolidated level start to generate a group risk. The frequency of extreme weather events could increase over the long-term due to the effects of global warming but it is likely that the risk will be spread over a prolonged period of time or regions so that it is not a significant risk to the group.

From experience of recent years, ABF's businesses have managed the impact of acute physical events such as cyclones and resultant flooding and river overflows, heatwaves and extreme frosts. The effects have ranged from impacts on crop yields grown on our

own land, damage to infrastructure and disruption to manufacturing and distribution to our customers. As these have been experienced at an individual site or business level, the risks have not been considered substantive at the group level.
Nonetheless, multiple initiatives are conducted at business level to identify and mitigate acute physical risks. This approach is in line with the group management philosophy of empowering our businesses to make decisions locally. We operate in geographies already experiencing changes to their micro-climate, influencing the frequency of extreme events, with recent experiences of cyclones, flooding, drought, heatwaves and wildfires. These physical risks are making energy efficiency, water conservation, and other climate adaptation activities such as flood defences and emergency contingency planning priorities for those affected businesses.
For example, in 2019 Illovo's Nchalo site in Malawi was impacted by cyclone Idai which resulted in heavy rains and flooding which affected the crop and communities surrounding the site. Illovo's Dwangwa site in Malawi also experienced flooding of approximately 125ha of sugarcane fields with cane submerged. Concrete canals and field feeders collapsed while bridges and field culverts were also damaged. The flood protection dyke along the Dwangwa River and the dyke fields were breached in many places. This all resulted in disruption to manufacturing processes and, for a short period of time, impacted the output of product to market.

Time horizon

Long-term

Likelihood

Likely

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Primary potential financial impact: Decreased revenues due to reduced production capacity.
Our businesses, and in this example, Illovo calculate the impact of such events on their production capacity using the forecast outputs against the actual outputs.
Due to ABF’s decentralised structure we do not have a consolidated impact figure as each business manages this risk and related costs as part of their business as usual costs. However, as we continue to develop our approach to projecting the impact of

climate change on our businesses, we will consider the inclusion of quantifying financial risks and responses into our scenario analyses and adaptation plans.

Cost of response to risk

201,000

Description of response and explanation of cost calculation

Managing costs associated with such risks are devolved to our businesses as they best understand the local environment. Given the materiality of the risk, management is ongoing with costs usually embedded into business-as-usual activities. Additional costs may arise when corporate centre conducts strategic and tactical analysis to support our businesses or when remedial repairs are required following an extreme weather event.
Situation and Task: In response to the events in Malawi, Illovo implemented various measures to mitigate the risk of extreme weather. These measures also partly address chronic risks so that operations are building resilience to increased extreme events as well as adapting to shifts in weather patterns. These are applied across all Illovo operations with some regions investing more in certain activities depending on existing infrastructure.
Actions:
1. The experience and outcomes of the floods have been shared, risk assessments and the implementation of risk profiling models have been applied across Illovo.
2. Investment in new low carbon-technologies and fuel from renewable sources, e.g. the energy mix in the South African operations are dominated by renewable fuels with 90% of energy used derived from wood or bagasse. As well as reducing emissions, this helps reduce dependence on national supply and impact of disruptions.
3. Investment in water infrastructure, pumps and pump stations including delineating flood risk zones and improving flood protection mechanisms. At Dwangwa, approximately £100,000 was spent on flood mitigation. At Nchalo, the cost of dealing with floods between April - August 2019 was £53,000 and additional £149,000 was spent between September 2019 - February 2020 to repair the damage.
4. Analysis of country-level water and energy risk with local investment in water and energy efficiency programmes, e.g. the conversion to sub-surface drip irrigation in Malawi and eSwatini anticipates a 40% decrease in electricity and 25% increase in irrigation efficiency. Illovo promotes energy optimisation to reduce energy footprints and emissions through optimum combustion of fuels through technology.
Results: These measures are increasing the water and energy efficiencies of the sites, reducing dependence on fossil fuels and aiming to reduce emissions. If there should be a loss of energy or water supply, or other disruption to operations as a result of extreme weather events, the sites are prepared to respond.

Comment

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Emerging regulation
Carbon pricing mechanisms

Primary potential financial impact

Increased direct costs

Company-specific description

Changes in energy regulation, carbon and energy taxes are likely to lead to increasing costs for our businesses over the next few years, with some businesses already adjusting to new taxes. These vary by country and fuel type and will have an impact on many of our operations especially those using national grid electricity and natural gas and those with sites in multiple jurisdictions. The risk is that emerging regulation will lead to an increase in direct manufacturing costs however when consolidated at the group level, these not likely to be substantial. There could also be an increase in indirect costs as our businesses invest in technologies, renewable fuel sources and energy efficiency programmes in response to the carbon pricing schemes. However, these are generally considered business as usual costs as our businesses continuously strive for operational excellence and minimising their environmental impacts.
While not currently or in the near-future considered a substantive financial risk at the group level, ABF recognises that the pace of emerging carbon-related regulation could be a potential financial risk to certain segments in the group.
In the UK, legislation continues to evolve with the aim to simplify the landscape, replacing the CRC by increasing the Climate Change Levy (primarily impacting our UK-based sugar, agriculture and grocery businesses) and the new SECR framework in 2019 (with our corporate centre addressing these requirements). Germany's Renewable Energy Sources Act contributed to business decisions in our ingredients businesses.
The South African Carbon Tax Act was implemented in June 2019. This is at the end of our reporting year and Illovo's payment will be made after this period once emissions and allowances have been finalised. We have therefore continued to class this as emerging regulation. The tax is levied at a rate of R120/tCO2e increasing in real terms by 2% per year during the first implementation period (up to 2022). A basic tax-free threshold of 60% is proposed for the first period with further allowances for trade exposure, participation in the national GHG inventory accounting framework and good performance allowances. A key development is that the non-anthropogenic component of bagasse and biomass will be taxed so even though 84% of energy used by the South African sites in 2019 was from bagasse or wood, Illovo will still be exposed to the carbon tax even if it phases out fossil fuel consumption.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

We are exploring the opportunity to consolidate the direct costs of carbon pricing mechanisms at group level with the aim of reporting in future years. This would consider spend on energy and projections for this, the time frames of new tax schemes and price per emissions and amount of emissions for those geographies.

Cost of response to risk

Description of response and explanation of cost calculation

Costs to respond to emerging regulation are borne by our businesses and have not been consolidated at a group level.
However, as an example, Illovo has Performance Optimisation Plans to improve energy efficiencies within its South African sugar mills with the aim to reduce consumption of purchased grid electricity and coal.
In addition, Illovo has planned activities to ensure compliance with the reporting and verification requirements of the tax and has engaged with internal stakeholders, through briefing materials and workshops, to review its regional energy strategy which considers own operations, suppliers, the changing energy landscape and potential investments required. In the reporting year, Illovo has also submitted comments on the Consultation Paper and Draft Licensing and Exemption Notice issued by the National Energy Regulator of South Africa, the deadline for which was 24 May 2019.
The costs of management have been estimated based on engagement with regulators during the development phases, the management of the reporting and verification requirements as well as developing the energy efficiency opportunities.

Comment

Identifier

Risk 4

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Reputation
Increased stakeholder concern or negative stakeholder feedback

Primary potential financial impact

Decreased revenues due to reduced demand for products and services

Company-specific description

Protecting the reputation of ABF, our businesses and products helps us to operate with goodwill; building a market base of customers, maintaining and attracting investors and enabling us to operate amongst local communities. A good reputation can support revenue, investment, share price and market share and therefore it is essential for us to manage. With increased scrutiny of our climate activities, particularly from investors such as Legal & General Investment Management, we recognise there is a risk that if our performance or approach to climate change is not communicated effectively or valued sufficiently, there may be an impact on our reputation and a resultant financial impact.

We communicate our climate activities through our CDP disclosure, Annual Report and Responsibility Report, shareholder meetings including our AGM, written information provided to shareholders and research bodies and through websites, e.g. AB Sugar, AB Mauri, AB Agri and ABF.

Investors: Given that we operate across 52 countries with businesses highly dependent on agricultural and energy inputs, investor scrutiny is placed at both the group and individual business levels. For example, investors are increasingly seeking information on climate governance, policies, procedures and investment to help transition to a low-carbon economy and emission reduction activities in our direct operations.

Customers: There are increasing and varying commitments, certifications, standards, such as ISO, or frameworks such as the SDGs (13 Climate Action), which are required or favoured by different markets for different product lines. It is necessary to respond to these requirements while balancing operational demands. For example, the UK Grocery businesses are committed to The Courtauld Commitment 2025 which includes a 20% reduction in the GHG intensity of food and drink consumed in the UK. As a member of the UK's Sustainable Clothing Action Plan (SCAP), Primark is committed to reducing its emissions.

Communities: Our operations generate a range of emissions which if not controlled could pose a risk to the environment and local communities. In the event that ABF is found to be lacking in pollution-control or emission reduction methods or perceived to not be honouring our commitments to climate change, e.g. AB Sugar's 2030 commitments, negative stakeholder feedback may ensure which could impact our social license to operate amongst local communities.

Time horizon

Short-term

Likelihood

Unlikely

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Reduced revenue due to reduced demand in products and services: We do not currently quantify the potential consolidated impact of climate-related reputational damage to the group. However, this could be evaluated through a potential fall in share price or access to lending. At a business level, this could be evaluated by a potential reduction in revenue.

Consolidated at the group level, the magnitude of impact is likely to be low however, we recognise this is a growing risk that our businesses are actively managing to ensure that ABF can respond to external stakeholder disclosure expectations. Also at a business level, our businesses can determine whether climate-related reputation is a priority for their customers or local communities and, as such, quantify any impact on their revenue.

Cost of response to risk

Description of response and explanation of cost calculation

Costs associated with managing this risk are ever-increasing as we continually improve our footprints and focus resources on monitoring and reporting our progress. Responding to the increasing requests to disclose details has contributed to additional costs; the development of an internal reporting framework, investment in our annual disclosures such as our Responsibility Report and FTE costs for stakeholder engagement on climate topics. These have not been consolidated at a group level.

Climate-related reputational risk is managed in a variety of ways:

1. Compliance with ABF's Environment Policy (reducing GHG emissions; implementing mitigation plans for significant plant and process changes; efficient use of natural resources, especially energy; efficiently transporting products to minimise fuel usage and monitoring, auditing and reporting our GHG performance).
2. Investment in measuring and reporting the group's GHG emissions to meet stakeholder expectations.
3. Substantial investment to improve environmental risk management with a focus on reducing emissions.
4. Engagement to ensure the views of stakeholders are represented. E.g. Illovo developed and participates in SUSFARMS (Sustainable Sugarcane Farm Management Systems) in collaboration with WWF-SA, the Mondi Wetlands Project and the Noodsberg Canegrowers Association; one area in this initiative is climate change.
5. Specific roles within the businesses with responsibility for keeping the boards informed of developments in climate action. These roles also represent ABF and its businesses when contributing to the development of national and international policy

and thought leadership of organisational bodies. E.g. AB Sugar contributed to the OECD-FAO Guidance for Responsible Agricultural Supply Chains. AB Sugar participated in roundtables that included discussions about how to continue the uptake of the due diligence requirements of the OECD-FAO Guidance and how the sector can further the SDGs.
Our businesses manage climate-related reputational risks to ensure that ABF can respond to external stakeholder disclosure expectations. E.g. ABF introduced an internal reporting framework for all our businesses to share policies, strategies, activities and impacts across sustainability issues with climate featuring heavily to reflect investor requests for greater detail. The outcome has been the improved and more detailed disclosure on climate activities which support ABF's reputation in this area.

Comment

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Opp1

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

Our businesses have expanded into climate-change driven products which maximise commercial opportunities as well as replace GHG emissions from fossil fuel use through the generation of renewables.

The UK Government set itself a target of 10% of transport fuel to come from renewable sources by 2020. This was to comply with a legally binding EU target to source 15% of energy from renewables. British Sugar has been working to achieve the mandated E10

fuel requirements and the Wissington factory is currently producing biofuels to help meet market demand and realise this opportunity.

Bioethanol is a co-product of our sugar beet processing operations and provides an additional income stream for our sugar businesses. As one of the UK's leading agri-processors with an interest in innovative new technology, British Sugar began production of bioethanol in September 2007. At British Sugar's Wissington site, the first plant to manufacture bioethanol in the UK, the sugar biorefinery produces 55,000 tonnes of bioethanol annually from the residual sugar syrup products from sugar beet processing. The Wissington factory is managed under the AB Sugar operating company with its separate Profit and Loss and organisational governance processes.

The legislated E10 fuel requirements have resulted in an increased demand for biofuel in the UK market and accordingly, British Sugar investigates all possible opportunities to supply that demand.

Time horizon

Medium-term

Likelihood

Virtually certain

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

3,500,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

This opportunity is managed commercially and generates revenues from the sale of bioethanol subject to the prevailing market conditions. British Sugar earned approximately £3.5m during the reporting year. This figure is calculated on the revenue earned from sales.

Cost to realize opportunity

0

Strategy to realize opportunity and explanation of cost calculation

We are currently producing biofuels at the Wissington factory to meet market demand and realise this opportunity. Market trends for biofuels are monitored by analysts within AB Sugar who look for potential opportunities, for example, where operations currently

exist and where operations could exist and where required production capacity will be increased. Strategic and commercial decisions are taken at the highest level so that AB Sugar is in a position to deliver commercial and market benefits.

There are no additional costs incurred to deliver the current biofuels to the market from the Wissington factory; however, there would be additional costs to produce bioethanol at another facility. This would be costed as part of AB Sugar's capital projects approval process. Similarly, significant costs would be incurred if Vivergo fuels, which was closed for production in 2018 due to market conditions, were to re-commence operations.

Comment

Identifier

Opp2

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Resource efficiency

Primary climate-related opportunity driver

Reduced water usage and consumption

Primary potential financial impact

Reduced indirect (operating) costs

Company-specific description

In line with AB Sugar's 2030 Commitments and as part of Illovo's aim to be more energy efficient and produce more cane, sugar and downstream products per drop of water, Illovo has approved two long-term irrigation upgrade projects at its Ubombo, eSwatini and Nchalo, Malawi sites.

At Ubombo, the project will result in profit growth from additional sucrose, electricity generation from additional bagasse and improved water use efficiency. The additional electricity generated above the new drip system power requirements and available for sale to the national grid from the additional bagasse produced from additional cane milled is expected to be 822 MWh.

At Nchalo, the project will result in a more efficient use of the current quota of water and reduced electricity costs increasing average cane yield approximately from 90 to 121 t/ha. It is estimated that the proposed drip irrigation system will use 40% less electricity over the same area (90kW vs 160kW) due to the lower pressure required to operate the drip system (300kPa vs 680kPa), resulting in a smaller required maximum demand.

At Nchalo, the current drag line irrigation system has an application efficiency of only 70% as opposed to drip irrigation efficiency of 95%. The increase in efficiency will yield

an increase of 31.7 Tc/ha/an off a baseline yield of 89.3 Tc/ha/an (over the previous yield cycle) as demonstrated by the yields obtained from the Phase 1 harvested fields.

Time horizon

Short-term

Likelihood

Very likely

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

At Illovo's Ubombo and Nchalo operations, it is estimated that the proposed drip irrigation system will use 40% less electricity over the same area (90kW vs 160kW) due to the lower pressure required to operate the drip system (300kPa vs 680kPa), resulting in a smaller required maximum demand.

The cost of electricity during the 8 peak hours of the day (07h00 – 12h00 and 17h00 – 20h00) is 3.6 times more expensive than off-peak electricity. With automation included in the drip irrigation design, it is possible to only irrigate during the off-peak times for 8 months of the year resulting in large savings on electricity costs.

Cost to realize opportunity

4,300,000

Strategy to realize opportunity and explanation of cost calculation

Illovo has approved two long-term irrigation upgrade projects at its Ubombo, eSwatini and Nchalo, Malawi sites. The six-year upgrade plan for Ubombo was proposed and approved in March 2017 and Phase 1 was successfully implemented during the 2017/2018 season. During the reporting period, Phase 2 of the project was completed resulting in the conversion of 453.1ha of furrow fields into drip irrigation (total = 1,014ha) with four further phases (1,763ha) and a 499ha green field project postponed until the business can support the funding of these projects.

At Nchalo, Phase 3 of a five phased irrigation system conversion project was implemented during the reporting year. This phase of the project converted 480ha of an existing drag line irrigation system with a drip irrigation system. This takes their total

sprinkler to drip conversion up to approximately 1,300ha with 980ha remaining.

Beyond the above plans, the total existing irrigated area to be moved through the capital application system for conversion to drip irrigation over a ten-year horizon is over 15,500ha in these countries:
1. Malawi: 3,700ha
2. Zambia: 6,500ha
3. Tanzania: 5,300ha

A post-implementation review of completed projects has been positive showing a solid payback with increases in water productivity (more crop per drop) and reductions in input costs (electricity, and manpower for both irrigation operations and for other operational inputs). The drip systems have accelerated precision irrigation in Illovo through scheduling tools and software that assist the Farm Manager to supply water and agronomic inputs on time, in full, and at the right quality.

This cost includes the following capital expenditure amounts:
Nchalo: capital expenditure of R39.8m (£2.2m)
Ubombo capital expenditure of R37.7 (£2.1m)

Comment

Identifier

Opp3

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Resource efficiency

Primary climate-related opportunity driver

Use of more efficient production and distribution processes

Primary potential financial impact

Reduced indirect (operating) costs

Company-specific description

Climate change has influenced ABF's long-term strategy with a focus on, improving efficiencies in our sugar factories. In line with AB Sugar's 2030 Commitments, during the reporting year AB Sugar China upgraded the pulp press facilities at both its Qianqi and Zhangbei factories to improve the animal feed production process, and to reduce the amount of coal consumed as part of the pulp drying process .

At the Qianqi factory, the upgrade is anticipated to reduce the amount of coal required in the animal feed dryers by 2,887 tonnes per year. At £57 per tonne of coal, this equates to a saving of £165,000 per year. At the Zhangbei factory the improved press installation

will reduce the amount of coal required in the animal feed dryers by 3,015 tonnes per year.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

1,000,000

Potential financial impact figure – maximum (currency)

1,250,000

Explanation of financial impact figure

The potential financial impact figure is calculated on the amount of anticipated savings plus the anticipated additional revenue from increased production.

Cost to realize opportunity

2,010,000

Strategy to realize opportunity and explanation of cost calculation

At AB Sugar China's Qianqi factory, an investment of £1.44m is anticipated to reduce the amount of coal required in the animal feed dryers by 2,887 tonnes per year. At £57 per tonne of coal, this equates to a saving of £165,000 per year. In addition, there is an anticipated animal feed revenue improvement of £576,500 per year and an anticipated increase of 255 tonnes of sugar and £150,000 in sugar revenue.

At the Zhangbei factory, an investment of £570,000 was implemented to replace and upgrade the pulp press infrastructure to reduce the amount of water that needs to be evaporated in the animal feed dryers. The improved press installation will reduce the amount of coal required in the animal feed dryers by 3,015 tonnes per year. At £57 per tonne of coal, this equates to a saving of £172,000 per year. In addition, there is an anticipated increase of 135 tonnes of sugar and £79,000 in sugar revenue.

Comment

C3. Business Strategy

C3.1

(C3.1) Have climate-related risks and opportunities influenced your organization's strategy and/or financial planning?

Yes

C3.1a

(C3.1a) Does your organization use climate-related scenario analysis to inform its strategy?

No, but we anticipate using qualitative and/or quantitative analysis in the next two years

C3.1c

(C3.1c) Why does your organization not use climate-related scenario analysis to inform its strategy?

ABF has a decentralised model which empowers the management of our businesses to develop their business strategies relevant to their markets, operations and supply chains. Some of our businesses have considered scenario-analyses when considering the climate-related risks and opportunities as part of their business strategy. As each business operates across different geographies, sources different raw materials such as cotton, wheat and sugar, and also has different product lines, they are best placed to decide when they will implement an approach towards climate change based on scenario-analyses.

Nonetheless, in 2017/2018, at corporate centre we explored a number of the publicly available climate-related scenario analyses to build an understanding as to which approach may be suitable for our business model. Further work has been carried out since this initial analysis to help inform decisions around relevant climate-related scenario analyses for our business model. We also conducted a high-level assessment of our businesses against a 2°C and 4°C temperature increase and the potential impact on sourcing, manufacturing, packaging and distribution and customers and communities, considering physical and transition risks. This was shared with the Chief Risk Officer and other senior executives to help inform their thinking and build knowledge. It included suggestions for next steps including more work on identifying the best-fit scenario analyses, considering the decentralised structure of ABF and diversity of our business activities. In the reporting year, we commissioned a piece of work with a national body of climate scientists to help inform leadership across the group on the potential implications of global 2°C and 4°C temperature changes and likely scenarios for our operations and major supply chains. The work is still current, and outcomes are yet to be determined. We propose to continue exploring this approach more from the ABF corporate centre over the coming two years in parallel with the work being conducted by individual businesses in the group. Therefore, the use of climate-related analysis to inform business strategy is work in progress and it is recognised that given the nature of our business model, could take some time to fully develop and benefit our group.

As part AB Sugar's business planning, medium to long-term scenarios are already incorporated with specific consideration for climate-related issues such as using fewer resources, future

water availability, potential GHG emissions and availability of renewable energy sources. These scenarios are integrated into business strategy development through AB Sugar's management approach of seeking continuous improvement and implementing performance improvement plans. In 2018, AB Sugar also launched their 2030 commitments which required the segment to consider global warming scenarios over the next decade and potential impacts on their sugar businesses. With operations in multiple geographies, a number of physical risks, such as chronic water stress impacting agricultural productivity, and transition risks such as the carbon pricing, were factored into the development of the 2030 commitments.
Furthermore, Westmill has conducted a scenario analysis on rice in Pakistan, where there is a potential for chronic water shortage within 5 years. Westmill embarked upon our Sustainable Rice Programme with WAPRO in order to reduce water consumption, and consequently GHG emissions.

C3.1d

(C3.1d) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	Where climate risks and opportunities are prevalent in our businesses, such as in supply chain agricultural activities or retail market preferences, they form part of regular decision-making processes, are integrated into strategy development and are part of the group's risk management process. Climate change is also creating commercial opportunities, supporting the growth of some businesses which are developing products or co-products such as bioethanol, and sustainability services to help customers also respond to climate change such as through AB Sustain's supply chain carbon emissions services. As an example, AB Enzymes has created products which improve the effectiveness of laundry detergent, allowing consumers to save energy by washing clothes at a lower temperature while achieving even better cleaning performance compared with detergents without enzymes. AB Enzymes manufactures enzymes which, beside their technical performance, address specific environmental challenges. These challenges include cutting food waste by extending the shelf life of bread, reducing the need for chemicals for bleaching in textiles and lowering the energy consumption required for the production of paper. British Sugar has had a focus on creating value up and down its supply chain over the last decade, wasting as little

		as possible at its four manufacturing plants in the UK. It has a rigorous set of targets relating to energy, waste, water and carbon dioxide which are also providing new revenue streams. It has found new uses and markets for its co-products that come out of the sugar making process. These include electricity, renewable fuels, animal feeds and fertilisers. All of British Sugar's factories are able to generate their own heat and power through combined heat and power (CHP) plants; decarbonising electricity supply in communities through the export of power from the CHP plants; generating 640,000 MWh to power 120,000 homes. The Bury St Edmunds factory, where £15million was invested in an anaerobic digestion (AD) plant, also exports surplus renewable energy. Its bioethanol plant, the first in the UK, has the capacity to produce up to 70 million litres of bioethanol for UK and European markets. The business now generates 21% of its revenue from non-core product sales with many having climate-related market opportunities.
Supply chain and/or value chain	Yes	As each business operates across different geographies, sources different raw materials such as cotton, wheat and sugar, and also has different product lines, they are best placed to decide when they will implement an approach towards climate change. Where climate risks and opportunities are prevalent in our businesses, particularly in agricultural activities in direct operations and supply chain, they form part of regular decision-making processes, are integrated into strategy development and are part of the group's risk management process. All businesses are also responsible for annually reporting to group their environmental performance and GHG emissions using a set of KPIs determined by ABF. This data contributes to our businesses setting their objectives. Throughout ABF our supply and value chain depend on our ability to purchase and then produce goods for sale. These relationships can be, and in some places are already being, impacted by climate change such as through the supply of sugar beet and cane. For example, over recent years, Illovo's sugar cane suppliers experienced a reduction in cane production due to climate variability and drought, with Malawi and eSwatini experiencing the largest impacts. As part of their strategy planning, ABF's businesses consider various responses including sourcing raw materials from new regions and increasing focus and

		investment with suppliers to build their resilience to physical climate-related risks over the short to medium term. Our businesses are continuously adapting climate-related physical risks in their sourcing strategies and engage with key suppliers to address climate issues. As an example, Westmill recently developed a project with UNEP's Sustainable Rice Platform, International Rice Research Institute and a key basmati rice supplier in Pakistan. Due to climate change, Pakistan is predicted to be chronically short of water by 2025 and the area of cultivated rice land has reduced in recent years due to water shortages. The project aims to build supply chain resilience by improving water efficiency.
Investment in R&D	Yes	As part of their business planning cycle, our businesses consider material impacts from climate change. At the local level, each business considers which R&D programmes they should focus investment in to ensure they are reducing the impact of climate change on their operating model. ABF has a major technical centre in the UK at the Allied Technical Centre. Facilities also exist at ACH Food Companies in the US, Weston Technologies and AB Mauri in Australia and the Netherlands, and AB Enzymes in Germany. These centres support the technical resources of the divisions in the search for new technology and in monitoring and maintaining high standards. For example, AB Enzymes constantly seeks to improve its products, to find new applications where use of enzymes adds value and to discover novel molecules for the benefit of its customers' products; these include cutting food waste by extending the shelf life of bread, lowering the energy consumption required for the production of paper and for washing detergents, lowering the temperature required resulting in lower energy use by customers. Our scientists and technicians in the R&D group develop new and improved enzymes and proprietary technologies in order to maintain our competitive edge in innovative and high-quality products. The R&D comprises specialists in molecular biology, biochemistry, microbiology, food chemistry and biotechnology. We currently invest about 10% of our annual revenue in R&D and our patent portfolio consists of more than 550 active patents or patent applications.
Operations	Yes	ABF's businesses are facing the physical and transitional impacts of climate change. We allow each business the autonomy to identify and respond to the most material risks they face. This local approach allows each business to

		respond in the most appropriate manner for their operations. Where climate risks and opportunities are prevalent in our businesses, they form part of regular decision-making processes, are integrated into strategy development and are part of the group's risk management process. Our businesses are investing in energy generation technologies and increasing bioethanol production. All our sugar factories use CHP technology. Two factories use Combined Cycle Gas Turbine technology where approximately 80% of the energy in the fossil fuel is extracted for use in our factories. Climate change has also influenced our long-term strategy with a focus on generating our own renewable electricity and phasing out fossil fuels, with considerable success. This year, 52% of ABF's energy use came from renewable sources. Improving efficiencies in our sugar factories allows us to use surplus steam to generate renewable electricity, more than is required for factory operations. The surplus electricity is sold to local networks, displacing fossil fuel powered energy. Our businesses are increasingly seeing the benefit of anaerobic digestion and investing in plants on site. These include AB Mauri and AB Sugar China. At British Sugar's Bury St Edmunds' site, the AD plant enables the business to produce renewable energy from sugar beet pressed pulp, the waste after sugars are extracted. The plant was designed to take approximately 100,000 tonnes of pressed sugar beet pulp per year, some fed directly during the beet harvesting campaign and some stored as bales for future use. This provides a sustainable feed stock not taking up food producing arable land. The biogas generated feeds a CHP generating up to 5MW of electricity for export with additional heat recovery from the exhaust. Electrical generation via two gas engines is approximately 38,260 MW per year exported to grid, enough to power approximately 8000 average homes for a year. In 2019, ABF exported 933 GWh of electricity, an increase of 18% compared with 2018. Of this, our sugar factories contributed 98% of the total exported electricity.

C3.1e

(C3.1e) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Direct costs Capital expenditures Capital allocation Assets Liabilities	Revenues: Our businesses consider all material risks and opportunities in their financial planning and risk management processes. From physical to reputation, the associated risks and opportunities could have an impact on revenues which is tracked at the business level. If climate change impacts our ability to produce or source the raw materials we use, there will be a direct influence on our ability to generate revenue. However, as our group consists of five segments, a substantive risk to ABF as a whole is very rare because if something impacts one business or segment, the other four will continue and it is unlikely to lead to a move in the share price of the group. Direct Costs: When existing approaches to production and supply costs increase due to the impact of climate change, this becomes a core issue to the short to medium term sustainability of our business model. There can also be reductions in operating costs as we invest in renewable energy projects that take our sites off-grid and even supply the grid with surplus energy generated on our sites. This leads directly into cost savings for the sites as they reduce their energy requirements from the national grid and being subjected to energy price fluctuations and availability. Capital expenditures / capital allocation: During the reporting year, our businesses invested substantially in environmental risk management of which significant amounts were spent on energy improvement, reduction and innovation and to mitigate acute physical risks in certain regions where there have been recent experiences of floods, cyclones and heatwaves. Capital funding is made available to all our businesses where returns meet or exceed clearly defined criteria. Investment into the management and adaptation towards climate change is managed at the local level. For example, capital has been allocated for the conversion to sub-surface drip irrigation in Illovo and for the upgrade to pulp press infrastructure in AB Sugar China. Our factories, estates, stores and offices are part of our asset disclosure. The impact of climate change on these ranges from the need

		to build or to adapt sites so they can utilise different energy sources or minimise processes which generate emissions such as wastewater management. Our businesses are increasingly seeing the benefit of anaerobic digestion and investing in plants on site. These include AB Mauri, AB Sugar China and Illovo Kilombero. Liabilities: Each business is responsible for the management of its liabilities. They report to the Audit Committee material liabilities that may impact the financial performance of the business and therefore factor all material risks into their financial planning cycles.

C3.1f

(C3.1f) Provide any additional information on how climate-related risks and opportunities have influenced your strategy and financial planning (optional).

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?

Both absolute and intensity targets

C4.1a

(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.

Target reference number

Abs 1

Year target was set

2018

Target coverage

Business division

Scope(s) (or Scope 3 category)

Scope 1+2 (location-based) +3 (upstream & downstream)

Base year

2018

Covered emissions in base year (metric tons CO2e)

Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)

54

Target year

2030

Targeted reduction from base year (%)

30

Covered emissions in target year (metric tons CO2e) [auto-calculated]

Covered emissions in reporting year (metric tons CO2e)

% of target achieved [auto-calculated]

Target status in reporting year

Underway

Is this a science-based target?

No, but we anticipate setting one in the next 2 years

Please explain (including target coverage)

In April 2018, AB Sugar launched its commitment to creating a sustainable future through its Global Minds, Local Champions sustainability framework. Global Minds, Local Champions sets out AB Sugar's global principles and priorities for how to address the emerging challenges faced across three broad pillars; economic, social and environment. The delivery of this approach is implemented on the ground by each of the AB Sugar businesses; AB Sugar China, Azucarera, British Sugar, Germains and Illovo. This approach ensures the framework is central to everything that our businesses do and also recognises the various challenges and demands each business faces in their countries of operation.
Under the pillar of consuming resources responsibly, AB Sugar has committed to reducing its end-to-end supply chain absolute CO2 footprints by 30% (baseline 2018). In 2018, AB Sugar emitted 2.8 million tonnes of scopes 1, 2 and 3 CO2e (with scope 3 including only transportation and distribution emissions).

In this reporting year, AB Sugar completed a project to baseline each of the 2030 commitments. For CO2e AB Sugar developed a baseline for the end to end supply chain from farm to factory. The baselines have been completed by site, by business and by supply chain. The baselines are now supporting the work in articulating the levers and projects that can help AB Sugar reach their 2030 commitments. The baselines enable the group to create focus to their efforts and consider investments that materially improve CO2 and energy performance. Using a sample of data, AB Sugar note that there has been a 6% decrease of tCO2e compared with 2018. Calculations are

underway for the full end to end supply chain emissions; all data is rigorously interrogated and the programme is being monitored at an executive management level.

C4.1b

(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).

Target reference number

Int 1

Year target was set

Target coverage

Business division

Scope(s) (or Scope 3 category)

Scope 1+2 (location-based)

Intensity metric

Metric tons CO2e per metric ton of product

Base year

2010

Intensity figure in base year (metric tons CO2e per unit of activity)

% of total base year emissions in selected Scope(s) (or Scope 3 category) covered by this intensity figure

Target year

2020

Targeted reduction from base year (%)

20

Intensity figure in target year (metric tons CO2e per unit of activity) [auto-calculated]

% change anticipated in absolute Scope 1+2 emissions

% change anticipated in absolute Scope 3 emissions

Intensity figure in reporting year (metric tons CO2e per unit of activity)

% of target achieved [auto-calculated]

Target status in reporting year

Underway

Is this a science-based target?

Yes, we consider this a science-based target, but this target has not been approved as science-based by the Science Based Targets initiative

Please explain (including target coverage)

George Weston Foods emission target is derived from the Australian Food & Grocery Council's Sustainability Commitment and is to reduce (scope 1 & 2) carbon emissions per tonne of production by 20% by 2020, relative to a 2010 – 2011 baseline.
George Weston Foods reduced its GHG emissions, which it also reports under the National Greenhouse and Energy Reporting Act 2007, by more than 28% between FY 2008/09 and 2017/18 through energy efficiency, consolidation of some facilities, a move to lower-carbon fuels and the integration of renewables into its long-term energy mix.

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?

Other climate-related target(s)

C4.2b

(C4.2b) Provide details of any other climate-related targets, including methane reduction targets.

Target reference number

Oth 1

Year target was set

Target coverage

Business division

Target type: absolute or intensity

Intensity

Target type: category & Metric (target numerator if reporting an intensity target)

Energy consumption or efficiency
kWh

Target denominator (intensity targets only)

metric ton of product

Base year

2010

Figure or percentage in base year

Target year

2020

Figure or percentage in target year

10

Figure or percentage in reporting year

% of target achieved [auto-calculated]

Target status in reporting year

Underway

Is this target part of an emissions target?

Aligned with George Weston Foods' emission target to reduce (scope 1 & 2) carbon emissions per tonne of production by 20% by 2020, relative to a 2010 – 2011 baseline (as reported in C4.1b). This is also derived from the Australian Food & Grocery Council's Sustainability Commitment.

Is this target part of an overarching initiative?

Other, please specify

Australian Food & Grocery Council's Sustainability Commitment.

Please explain (including target coverage)

George Weston Foods energy target is derived from the Australian Food & Grocery Council's Sustainability Commitment and is to reduce energy usage per tonne of production by 10% by 2020, relative to a 2010 – 2011 baseline.

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.

Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	0	0
To be implemented*	0	0
Implementation commenced*	1	0
Implemented*	2	46,000
Not to be implemented	0	0

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative category & Initiative type

Non-energy industrial process emissions reductions

Other, please specify

Green cane harvesting

Estimated annual CO2e savings (metric tonnes CO2e)

8,000

Scope(s)

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

0

Investment required (unit currency – as specified in C0.4)

0

Payback period

No payback

Estimated lifetime of the initiative

Ongoing

Comment

In the financial year 2018/2019, Illovo Sezela harvested green cane as opposed to harvesting following in-field burning. The extra biomass harvested was used as a renewable fuel within the boilers which resulted in 8,000 tCO2e avoided emissions.

Initiative category & Initiative type

Energy efficiency in production processes

Combined heat and power (cogeneration)

Estimated annual CO2e savings (metric tonnes CO2e)

38,000

Scope(s)

Scope 1
Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

Investment required (unit currency – as specified in C0.4)

Payback period

1-3 years

Estimated lifetime of the initiative

16-20 years

Comment

Over many years, our sugar factories have invested in combined heat and power (CHP) plants, and two sites also operate combined cycle gas turbine (CCGT) technology, to satisfy their heat and electrical demands. The on-site power plants are an efficient method of generating heat and electricity while reducing the sites' reliance on imported electricity and emit less carbon dioxide, nitrogen oxides and sulphur dioxide compared with conventional fossil fuel power plants. CHP & CCGT technologies are more efficient than a typical commercial power station; our factories use the resultant heat from these on-site power plants within their processes, whereas commercial power stations simply emit the heat to cooling towers.

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Financial optimization calculations	Emission reduction activities need to meet the usual investment criteria.

C-AC4.4/C-FB4.4/C-PF4.4

(C-AC4.4/C-FB4.4/C-PF4.4) Do you implement agriculture or forest management practices on your own land with a climate change mitigation and/or adaption benefit?

Yes

C-AC4.4a/C-FB4.4a/C-PF4.4a

(C-AC4.4a/C-FB4.4a/C-PF4.4a) Specify the agricultural or forest management practice(s) implemented on your own land with climate change mitigation and/or adaptation benefits and provide a corresponding emissions figure, if known.

Management practice reference number

MP1

Management practice

Knowledge sharing

Description of management practice

AB Sustain provides independent expert advice both nationally and internationally to growers to improve the sustainability of their agricultural operations. AB Sustain also offers proven greenhouse gas modelling to reduce environmental impacts and to make financial savings.

AB Sustain has received many awards from retailers and environmental groups for their work.

Primary climate change-related benefit

Emission reductions (mitigation)

Estimated CO2e savings (metric tons CO2e)

Please explain

Due to the nature of the work and services provided to a range of customers, we are unable to quantify CO2e savings for the work conducted by AB Sustain.

Management practice reference number

MP2

Management practice

Seed variety selection

Description of management practice

Sugar cane variety development and cultivation aimed at increasing the resilience of our operations to water stress and pest vectors.

Primary climate change-related benefit

Increasing resilience to climate change (adaptation)

Estimated CO2e savings (metric tons CO2e)

Please explain

Management practice reference number

MP3

Management practice

Other, please specify

Green sugar cane harvesting

Description of management practice

In our sugar cane operations at Illovo Sezela South Africa, a proportion of our sugar cane is harvested without burning the cane in the field to remove unwanted leaves. Instead, the cane has the leaves removed manually without burning. This is very labour intensive but reduces the in-field burning and subsequent CO2 emissions and resultant particulate emissions.

Primary climate change-related benefit

Emission reductions (mitigation)

Estimated CO2e savings (metric tons CO2e)

8,000

Please explain

Management practice reference number

MP4

Management practice

Low carbon energy use

Description of management practice

The owned sugar cane operations have their irrigation equipment powered by electricity generated from renewable resources. In addition, treated wastewater from sugar cane mills is used as irrigation water resulting in decreased river water abstraction and decreased irrigation energy requirements.

Primary climate change-related benefit

Emission reductions (mitigation)

Estimated CO2e savings (metric tons CO2e)

Please explain

Management practice reference number

MP5

Management practice

Other, please specify

Nutrient Management

Description of management practice

We recycle boiler ash and filter cake onto our own crops of sugar cane as organic sources of plant nutrients.

Primary climate change-related benefit

Emission reductions (mitigation)

Estimated CO2e savings (metric tons CO2e)

Please explain

Management practice reference number

MP6

Management practice

Biodiversity considerations

Description of management practice

In Illovo, in order to protect biodiversity and prevent environmental damage, existing cane lands and farming activities are managed according to the field conservation guidelines advocated by the South African Sugar Research Institute (SASRI) and the SUSFARMS® initiatives. SUSFARMS® which originated in South Africa is a methodology which develops better farm management practices in the cane sugar industry bringing environmental, social and economic benefits.

Maintenance of pockets of natural vegetation within our centre pivot fields act as refuges and ecological green corridors for indigenous fauna and flora resulting in increased biodiversity and minimisation of land use change. As an example, Illovo Malawi continued to maintain biodiversity corridors throughout its sugar estates. A 400-hectare reserve known as Nyala Park has been set aside within the Nchalo estate boundary and is maintained with species of the original flora and fauna of the Shire Valley.

Primary climate change-related benefit

Increasing resilience to climate change (adaptation)

Estimated CO2e savings (metric tons CO2e)

Please explain

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products or do they enable a third party to avoid GHG emissions?

Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products or that enable a third party to avoid GHG emissions.

Level of aggregation

Group of products

Description of product/Group of products

AB Enzymes constantly seeks to improve its products, to find new applications where use of enzymes adds value and to discover novel molecules for the benefit of our customers. These include cutting food waste by extending the shelf life of bread.
Our scientists and technicians in the R&D group develop new and improved enzymes and proprietary technologies in order to maintain our competitive edge in innovative and high-quality products. The R&D comprises specialists in molecular biology, biochemistry, microbiology, food chemistry and biotechnology. We currently invest about 10% of our annual revenue in R&D.
For example, we manufacture enzymes which, beside their technical performance, are able to address specific environmental challenges. These challenges include cutting food waste by extending the shelf life of bread, reducing the need for chemicals for bleaching in textiles, and lowering the energy consumption required for the production of paper.

Are these low-carbon product(s) or do they enable avoided emissions?

Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify

Internal calculations

% revenue from low carbon product(s) in the reporting year

Comment

Level of aggregation

Group of products

Description of product/Group of products

All of AB Sugar's businesses adopt a circular economy approach - to make the most out of every stick of cane and root of beet so that wherever possible, there is minimal waste by producing co-products, generating renewable energy and reusing or returning water to source. As examples:
(1) The manufacture of bioethanol from our Sugar businesses is sold as a renewable transport fuel.
(2) AB Sugar China sell co-products like molasses and animal feed as well as ash from their boilers which they use to supply factories to make bricks.
(3) Azucarera recycles 99% of waste from the sugar process and produces around 400,000 tonnes per year of co-products like animal feed and agricultural fertiliser. For the former, Azucarera can provide bespoke feed products tailored to the need of its customers. To decrease emissions in producing animal feed, they introduced a sun-drying pulp system instead of using mechanical dryers which reduces CO2 emissions by 13,000 tCO2 per year at its factories.
(4) British Sugar makes over ten different co-products from the sugar making process, including animal feed, LimeX and topsoil – the non-core sales for which deliver approximately 21% of British Sugar's revenue. In Bury St Edmunds, they use an Anaerobic Digester to turn over 100,00 tonnes of beet pressed pulp per year into enough energy to power over 18,000 homes. In our Wissington operations, we run an 18-hectare glasshouse which uses 46,000 MWh of excess heat from the factory and 250,000 tCO2 from the factory is sent to the glasshouse to support plant growth.

Are these low-carbon product(s) or do they enable avoided emissions?

Low-carbon product and avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify

Internal calculations

% revenue from low carbon product(s) in the reporting year

0.06

Comment

It is estimated that the low carbon products produced by our sugar businesses contribute approximately 0.06% of the group's total revenue. This is based on estimations only.

Level of aggregation

Product

Description of product/Group of products

Bagasse, a dry, fibrous co-product from sugar cane, provides a substantial renewable energy source for combined heat and power (CHP), replacing fossil fuel sources such as coal and reducing greenhouse gas emissions. In addition to bagasse, some of Illovo's operations, for example, Ubombo in eSwatini, Nchalo in Malawi and Noodsberg

in South Africa, are able to supplement their CHP capacity by using additional green cane biomass and wood or woodchips as boiler feedstock.

In 2011 Ubombo became the first company in eSwatini to be issued with an Independent Power Producer (IPP) licence. As part of the £104.5 million project to expand sugar milling capacity from 400 to 500 tonnes of cane per hour, Ubombo invested in a 25mW co-generation plant. In 2013, the company was issued with an IPP Generation Licence, which enabled electrical co-generation to become a longer-term contributor to Illovo's downstream business.

The Ubombo mill has proved that it is a reliable supplier of electricity. During 2018/19, the Ubombo mill, with its integrated co-generation facility, exported 64.832 GWh to the National Grid. The sale of this clean renewable energy has directly enabled the Swaziland Electricity Company (SEC) to reduce its scope 1 emissions and consequently, its customers' scope 2 emissions. Power exported to the Swaziland Electricity Company (SEC), the sole supplier of electricity to the country, has been consistently above the Power Purchase Agreement (PPA) obligations since commissioning.

In Spain, Azucarera is self-sufficient in electricity generation during production campaigns through its co-generation (CHP) plants. It generates more energy than required at its factories and sells the excess to the National Grid. During the rest of the year, the energy required by its factories is obtained from the National Grid, generated entirely from renewable energy sources.

Are these low-carbon product(s) or do they enable avoided emissions?

Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify

Internal calculations

% revenue from low carbon product(s) in the reporting year

Comment

Level of aggregation

Product

Description of product/Group of products

Three years ago, AB Agri invested £17m to build its first Anaerobic Digestion (AD) plant. Anaerobic digestion (AD) is the breakdown of organic matter without oxygen to produce flammable gases. These gasses can be burnt in an engine to produce heat and electricity, or cleaned up and used in the same way as natural gas, to heat our homes and cook our food. The plant has been designed to take 60,000t of blended food and

green waste, per annum. It is a gas to grid plant, enabling methane to be injected directly into the gas network for maximum carbon efficiency. If the plant were CHP, however, it would be equivalent to a 3MW facility.

In addition, in September 2018, the anaerobic digestion plant in North Yorkshire became certified to the PAS110 Specification for Digestate. Digestate is the waste material remaining after the completion of the anaerobic digestion process. This means the digestate from the plant can now be treated as a bio-fertiliser product, rather than waste. It can be spread on fields in exactly the same way as any normal fertiliser. The PAS110 certification applies rigorous testing to the digestate to ensure there is no contamination of heavy metals, plastics, metals or stones and that it is free of biological agents such as E'coli and Salmonella.
As well as reducing our waste significantly, we are also helping to reduce the use of fossil based fertilisers by helping farmers to switch to more sustainable bio-fertilisers.

Approximately 80% of the energy generated by the AD plant is used directly on-site with the remainder exported to the national grid, displacing the use of fossil fuels.

Are these low-carbon product(s) or do they enable avoided emissions?

Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify

Internal calculations

% revenue from low carbon product(s) in the reporting year

Comment

C5. Emissions methodology

C5.1

(C5.1) Provide your base year and base year emissions (Scopes 1 and 2).

Scope 1

Base year start

September 1, 2010

Base year end

August 31, 2011

Base year emissions (metric tons CO2e)

2,694,910

Comment

Scope 2 (location-based)

Base year start
September 1, 2010

Base year end
August 31, 2011

Base year emissions (metric tons CO2e)
911,386

Comment

Scope 2 (market-based)

Base year start
September 1, 2017

Base year end
August 31, 2018

Base year emissions (metric tons CO2e)
942,354

Comment
2018 was our first year of calculating our scope 2 market-based emissions and so we have presented them here as our base year emissions. However, as we continue to embed our approach to obtaining the data and evidence required to calculate our scope 2 market-based emissions, we may determine an alternative base year. In 2018, we obtained supplier figures for 64% of our businesses and are working to expand the quantity and, moreover the quality of this data over the coming years.

C5.2

(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

Defra Voluntary 2017 Reporting Guidelines
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)

3,162,449

Comment

Associated British Foods' total scope 1 emissions are 3,087,676 tCO2e for the combustion of fuel and operation of facilities and 74,773 tCO2e for the generation and use of renewables.

C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We are reporting a Scope 2, market-based figure

Comment

This is our second year reporting our market-based scope 2 emissions and we are working with our businesses to develop a structured approach which can be evidenced. The first step has been to ascertain what information we can gather from the various energy suppliers across our global operations. This has had different levels of success depending on geography and the ability of suppliers to provide the requested information. We were able to map 49% of our market-based emissions from supplier sources this year and we are hopeful that as we continue to work with our energy suppliers we will be able to increase this figure and therefore the accuracy of our scope 2 market-based disclosure. AIB and GreenE residual mix emission factors were used where supplier factors were not available. Outside of Europe and the USA, national or regional grid averages were applied where supplier factors were not available.

C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?

Reporting year

Scope 2, location-based

830,562

Scope 2, market-based (if applicable)

844,405

Comment

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?

No

C6.5

(C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status

Relevant, not yet calculated

Please explain

We recognise that this source of emissions is material for Associated British Foods. However, we are a diverse business with many operating companies and we do not centrally control their procurement processes or centrally manage their data. As such, we do not have the granular data to calculate the emissions in this category. Nonetheless, in the reporting year we undertook an assessment of scope 3 reporting categories and throughout late 2020 and 2021 will start to identify source data from our businesses and central procurement that can be used to support the methodologies outlined by The GHG Protocol for this category.

Capital goods

Evaluation status

Relevant, not yet calculated

Please explain

The processing of sugar beet and sugar cane (which accounts for the majority of our total energy usage) requires very large plant and equipment and hence is capital intensive. Our other businesses also invest regularly in capital goods to maintain and upgrade their factories and stores. We recognise that this source of emissions is material for our business. However, we are a diverse business with many operating companies and we do not centrally control their operations. Therefore, we do not have the granular data to calculate the emissions in this category. Nonetheless, in the reporting year we undertook an assessment of scope 3 reporting categories and throughout late 2020 and 2021 will start to identify source data from our businesses and central Procurement and Finance that can be used to support the methodologies outlined by The GHG Protocol for this category.

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status

Relevant, calculated

Metric tonnes CO2e

508,517

Emissions calculation methodology

Emissions in this category were calculated from three distinct activities:
(1) Upstream emissions (well to tank - WTT) of purchased fuels;
(2) Upstream emissions from purchased electricity and district heating;
(3) Transmission & Distribution (T&D) losses and associated WTT from purchased electricity.

The source for emission factors for T&D losses and upstream emissions are 2018 Guidelines to DEFRA / GHG Conversion Factors for Company Reporting.
- CO2e factors for fuels represent indirect emissions associated with the extraction and transport of primary fuels as well as the refining, distribution, storage and retail of finished fuels.
- CO2e factors for imported energy for each country reflect indirect emissions of CO2, CH4 and N2O associated with the extraction and transport of primary fuels as well as the refining, distribution, storage and retail of finished fuels used in the generation of electricity and heat.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

All emissions calculated were from the fuels used data supplied by ABF businesses for scope 1 and scope 2 in their annual data submission, assured by EY.

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Metric tonnes CO2e

752,761

Emissions calculation methodology

We use DEFRA Voluntary 2018 Reporting Guidelines to calculate our upstream transportation and distribution emissions. We used standard factors from DEFRA's carbon emission factors list 2018 for all fuel.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

Our transport emissions are calculated from the data supplied by ABF businesses in their annual environment data submission for scope 3 transport activities. This data is

issued by EY and publicly reported in our Annual Report and Accounts. Our transport emissions include those resulting from any transport movement that is dedicated to move something for us (raw materials, ingredients, packaging, processing aids, waste, part processed materials or finished product) and; the means of transport is either owned or leased by us; or we are invoiced directly by the sub-contractor for that transport movement. Our reported emissions include the movement of goods via ships and aeroplanes. At the moment, we are reporting all transport movements within Upstream transportation and distribution but, as part of developing scope 3 inventory, we will start to split our upstream and downstream transportation with the aim of reporting these separately.

Waste generated in operations

Evaluation status

Relevant, calculated

Metric tonnes CO2e

23,188

Emissions calculation methodology

Waste generated in our operations includes hazardous and non-hazardous wastes and waste material which is reused, recycled or recovered. The tonnage of waste generated is assured by EY.

DEFRA's GHG Conversion Factors for Company 2018 waste disposal emission factors have been applied.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

All wastes generated by our businesses are monitored and reported on an annual basis to ABF via our annual environmental data collection and reporting process. This data is verified by ABF's HSE team and is also independently assured by EY. The coverage of primary data is 100% and the quality of this data is very high. The emission factors are secondary data, supplied by DEFRA, and are not geographically representative. Therefore, the quality of the calculated and reported information here is deemed to be intermediate.

Business travel

Evaluation status

Relevant, not yet calculated

Please explain

As a global business with activities in over 52 countries, our employees undertake international and national travel by various means. We are a diverse business with many operating companies and currently we do not centrally hold the granular data to calculate the emissions in this category. Nonetheless, in the reporting year we

undertook an assessment of scope 3 reporting categories and throughout late 2020 and 2021 will start to identify source data from our businesses and central functions that can be used to support the methodologies outlined by The GHG Protocol for this category.

Employee commuting

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

38,852

Emissions calculation methodology

Emissions from employee commuting are based on an estimation of the average distance travelled per number of employees per country multiplied by DEFRA 2018 emissions factors for private and public transport.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

The relevance or materiality of emissions from employee commuting is insignificant for our group and when estimated, account for less than 1% of ABF's total emissions. However, we recognise that with over 100,000 employees worldwide there is still a considerable amount of employee commuting. Nonetheless, given the varied locations of our sites, the nature of employee commuting will also be varied including most forms of private and public transport and the distances covered will also vary greatly.
As we have the raw data to calculate an estimate (using employee figures, national average commuting time and country emission factors from DEFRA 2018), we have reported this data. We have factored in assumptions on the type of transport used. As such, the coverage of this data is high using employee figures but the calculations used are based on assumptions and therefore the overall quality of this data is considered to be below average.

Upstream leased assets

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

1,648

Emissions calculation methodology

Emissions from upstream leased assets are estimated based on CIBSE benchmark gas and electricity consumption per FTE at these sites and multiplied by DEFRA 2018 emissions factors for gas and IEA 2018 emissions factors for electricity. The calculation used is the asset-specific method using the FTE to determine floor space and therefore estimated fuel and electricity used in the year.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

The relevance or materiality of emissions from upstream leased assets is insignificant and account for less than 1% of ABF's total emissions. However, we have the raw data to estimate a figure and therefore report the data. The calculation used is the asset specific method using the FTE to determine floor space and therefore estimated fuel and electricity used in the year. The primary data uses information captured according to the number of employees and is therefore of good quality. Coverage of leased assets may not be highly accurate, based on available information, and the resultant calculations are based on estimates, therefore the final reported data is of below average quality.

Downstream transportation and distribution

Evaluation status

Relevant, not yet calculated

Please explain

Our transport emissions are calculated from the data supplied by ABF businesses in their annual environment data submission for scope 3 transport activities. This data is issued by EY and publicly reported in our Annual Report and Accounts. Our transport emissions include those resulting from any transport movement that is dedicated to move something for us (raw materials, ingredients, packaging, processing aids, waste, part processed materials or finished product) and; the means of transport is either owned or leased by us; or we are invoiced directly by the sub-contractor for that transport movement. Our reported emissions include the movement of goods via ships and aeroplanes. At the moment, we are reporting all transport movements within Upstream transportation and distribution but, as part of developing scope 3 inventory, we will start to split our upstream and downstream transportation with the aim of reporting these separately.

Processing of sold products

Evaluation status

Relevant, not yet calculated

Please explain

In the reporting year we undertook an assessment of scope 3 reporting categories and throughout late 2020 and 2021 will start to identify source data from our businesses and central functions that may be used to support the methodologies outlined by The GHG Protocol for this category. Initial work will most likely start at the product category level and be based on existing LCA work.

A proportion of our products such as sugar, yeast, edible oils and bakery ingredients are sold to other companies to be further processed and incorporated into their (mainly food) products.

Use of sold products

Evaluation status

Relevant, not yet calculated

Please explain

In the reporting year we undertook an assessment of scope 3 reporting categories and throughout late 2020 and 2021 will start to identify source data from our businesses and central functions that may be used to support the methodologies outlined by The GHG Protocol for this category. Initial work will most likely start at the product category level. A proportion of our products such as bread, tea, ethnic foods, animal feed, clothes, soft furnishings and bioethanol are consumed directly without any further processing.

End of life treatment of sold products

Evaluation status

Relevant, not yet calculated

Please explain

In the reporting year we undertook an assessment of scope 3 reporting categories and throughout late 2020 and 2021 will start to identify source data from our businesses and central functions that may be used to support the methodologies outlined by The GHG Protocol for this category. Initial work will most likely start at the product category level and will be highly dependent on secondary data.

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

Any emissions from downstream leased assets are certain to be extremely small and not material when compared with our main emission sources, particularly as we do not lease out a significant amount of our assets.

Franchises

Evaluation status

Not relevant, explanation provided

Please explain

We do not have franchises.

Investments

Evaluation status

Relevant, not yet calculated

Please explain

In the reporting year we undertook an assessment of scope 3 reporting categories and have started to identify source data from our central functions that may be used to

support the methodologies outlined by The GHG Protocol for this category. Emissions from our joint ventures where we have 40% investment or financial control are already included in the scope of our group's emissions and therefore we are determining the boundary of the scope 3 Investments category for other associate companies or subsidiaries where there is a level of influence.

Other (upstream)

Evaluation status

Not relevant, explanation provided

Please explain

We are not aware of other upstream scope 3 emissions.

Other (downstream)

Evaluation status

Not relevant, explanation provided

Please explain

We are not aware of any other downstream scope 3 emissions.

C-AC6.6/C-FB6.6/C-PF6.6

(C-AC6.6/C-FB6.6/C-PF6.6) Can you break down your Scope 3 emissions by relevant business activity area?

No

C-AC6.6b/C-FB6.6b/C-PF6.6b

(C-AC6.6b/C-FB6.6b/C-PF6.6b) Why can you not report your Scope 3 emissions by business activity area?

Row 1

Primary reason

Analysis in progress

Please explain

We are in the early stages of developing our scope 3 emissions inventory for the group. As with our scope 1 and scope 2 monitoring and reporting, we will incorporate monitoring scope 3 emissions from the different business activities to help us identify where climate-related impacts, risks and opportunities exist across our entire value chain.

C6.7

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?

Yes

C6.7a

(C6.7a) Provide the emissions from biogenic carbon relevant to your organization in metric tons CO2.

	CO2 emissions from biogenic carbon (metric tons CO2)	Comment
Row 1	3,962,365	

C-AC6.8/C-FB6.8/C-PF6.8

(C-AC6.8/C-FB6.8/C-PF6.8) Is biogenic carbon pertaining to your direct operations relevant to your current CDP climate change disclosure?

Yes

C-AC6.8a/C-FB6.8a/C-PF6.8a

(C-AC6.8a/C-FB6.8a/C-PF6.8a) Account for biogenic carbon data pertaining to your direct operations and identify any exclusions.

CO2 emissions from land use management

Emissions (metric tons CO2)

65,067

Methodology

Default emissions factors

Please explain

Clearing the land of sugar cane on our own land in preparation for new crop rotation.

CO2 removals from land use management

Emissions (metric tons CO2)

0

Methodology

Other, please specify

Managed and not measured

Please explain

We apply best management practices to manage the soil and CO2 emissions on our own land, as required under relevant certification schemes. This does not involve the measurement and reporting of CO2 removals.

Sequestration during land use change

Emissions (metric tons CO2)

0

Methodology

Other, please specify

Managed and not measured

Please explain

We apply best management practices to manage the soil, CO2 emissions and sequestration on our own land, as required under relevant certification schemes.

CO2 emissions from biofuel combustion (land machinery)

Emissions (metric tons CO2)

0

Methodology

Other, please specify

Managed and reported centrally but breakdown of fuels for specific land machinery is not collected

Please explain

We collect data for fuels used in our own transport which includes land machinery and are reported in our aggregated scope 1 emissions. We do have data at the granular level for different fuel sources used in land machinery across our operations.

CO2 emissions from biofuel combustion (processing/manufacturing machinery)

Emissions (metric tons CO2)

0

Methodology

Default emissions factors

Please explain

These emissions relate to biogenic fuels such as biomass, wood/wood waste, fuel crops and biogas used as fuels within our manufacturing operations. CO2 emissions from biofuel combustion in our processing and manufacturing are included in scope 1 emissions.

CO2 emissions from biofuel combustion (other)

Emissions (metric tons CO2)

0

Methodology

Other, please specify

Not measured separately

Please explain

The emissions from biofuel combustion are captured and reported in our group figures.

C-AC6.9/C-FB6.9/C-PF6.9

(C-AC6.9/C-FB6.9/C-PF6.9) Do you collect or calculate greenhouse gas emissions for each commodity reported as significant to your business in C-AC0.7/FB0.7/PF0.7?

Agricultural commodities

Sugar

Do you collect or calculate GHG emissions for this commodity?

Yes

Please explain

In April 2018, AB Sugar publicly shared its commitment to growing a sustainable future through its Global Minds, Local Champions sustainability framework. One element of this commitment is to reduce end-to-end greenhouse gas emissions by 30% by 2030. AB Sugar works with its 5 sugar businesses (British Sugar, AB Sugar China, Azucarera, Germains and Illovo) to collect CO2e data from suppliers, collate own operations data and build a clear understanding of end-to-end emissions. The data reported here comes from our own-produced sugar cane and sugar beet which is processed by AB Sugar.

Our Sugar businesses report their GHG emissions data once a year to ABF using the group's CloudApps system. From each site, data is collected from several inputs across agricultural activities (own land), transport, manufacturing process and energy use. The site SHERQ (safety, health, environment, risk and quality) Manager is responsible for analysing, challenging and signing off the data. The SHERQ Manager also engages with the business level Finance team who conduct a review across business aggregated data before it is submitted to AB Sugar's Finance team. Additional checks are conducted for the data across AB Sugar before it is submitted into ABF's environment data system.

Agricultural commodities

Cotton

Do you collect or calculate GHG emissions for this commodity?

No, not currently but intend to collect or calculate this data within the next two years

Please explain

GHG emissions for sourced cotton are not currently calculated but work is expected to be conducted in the coming years to start calculating this data.

Agricultural commodities

Soy

Do you collect or calculate GHG emissions for this commodity?

No

Please explain

Priorities for soy do not currently include calculating the GHG emissions from this commodity.

Agricultural commodities

Wheat

Do you collect or calculate GHG emissions for this commodity?

No

Please explain

Priorities for wheat do not currently include calculating the GHG emissions from this commodity.

Agricultural commodities

Other

Tea

Do you collect or calculate GHG emissions for this commodity?

No

Please explain

Priorities for tea do not currently include calculating the GHG emissions from this commodity.

C-AC6.9a/C-FB6.9a/C-PF6.9a

(C-AC6.9a/C-FB6.9a/C-PF6.9a) Report your greenhouse gas emissions figure(s) for your disclosing commodity(ies), explain your methodology, and include any exclusions.

Cotton

Reporting emissions by

Emissions (metric tons CO2e)

Change from last reporting year

Please explain

GHG emissions for sourced cotton are not currently calculated but work is expected to be conducted in the coming years to start calculating this data.

Soy

Reporting emissions by

Emissions (metric tons CO2e)

Change from last reporting year

Please explain

Priorities for soy do not currently include calculating the GHG emissions from this commodity.

Sugar

Reporting emissions by

Unit of production

Emissions (metric tons CO2e)

0.35

Denominator: unit of production

Metric tons

Change from last reporting year

About the same

Please explain

While there were variances between beet and cane production on our land between the two years, the overall the emissions from unit of production for our sugar producing sites remained relatively the same with a 2.7% decrease compared with 2018.

To calculate this figure, we accounted for all the agricultural emissions related to sugar production on our own land, including emissions from the manufacturing facilities. The metric tonnes of product includes co- and by-products in addition to sugar tonnage.

Our Sugar businesses report their GHG emissions data once a year to ABF using the group's environment data reporting system. From each site, data is collected from several inputs across agricultural activities (own land), transport, manufacturing process, and energy use. The site SHERQ (safety, health, environment, risk and quality) Manager is responsible for analysing, challenging and signing off the data. The SHERQ Manager also engages with the business level Finance team who conduct a review across business aggregated data before it is submitted to AB Sugar's Finance team. Additional checks are conducted for the data across AB Sugar before it is inputted to ABF's environment data system. The data provided and output emissions are assured by EY.

Wheat

Reporting emissions by

Emissions (metric tons CO2e)

Change from last reporting year

Please explain

Priorities for wheat do not currently include calculating the GHG emissions from this commodity.

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure

0.0002523

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

3,993,010

Metric denominator

unit total revenue

Metric denominator: Unit total

15,824,000,000

Scope 2 figure used

Location-based

% change from previous year

5

Direction of change

Decreased

Reason for change

The 5% decrease in tCO2e against annual revenue is driven by a 5% decrease in scopes 1 and 2 and a 1% increase in the total revenue between 2018 and 2019. The reduction in scopes 1 and 2 emissions are largely driven by the energy performance of our sugar segment, which accounts for 82% of the group's total energy use. Sugar's scope 2 emissions reduced by 39% in the year; maximising the on-site use of bagasse

(a renewable fuel) as an energy source across its southern African operations and the continued use of combined heat and power plants and combined cycle gas turbine technologies across their UK operations.

Overall, the group's use of energy from renewable sources increased from 50% to 52% in the reporting year.

Other reasons for this reduction in the group's scopes 1 and 2 emissions can be attributed to the outcomes of energy efficiencies in stores and factories. An example is, as reported in C4.3b, our AB Sugar China sites' upgrades in pulp press facilities and reduction in coal consumed for the drying process. Additionally, the use of green cane harvesting at our Illovo Sezela site resulted in 8,000 tCO2e avoided emissions.

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?

Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	2,019,862	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	26,945	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	58,285	IPCC Fifth Assessment Report (AR5 – 100 year)
SF6	0	IPCC Fifth Assessment Report (AR5 – 100 year)

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/region.

Country/Region	Scope 1 emissions (metric tons CO2e)
Argentina	30,651
Australia	82,419
Austria	6

Belgium	307
Brazil	32,354
Canada	35,020
Chile	3,321
China	487,594
Colombia	3,985
Czechia	612
Denmark	31
Ecuador	6
Finland	32
France	4,562
Germany	103,264
India	16,361
Ireland	1,854
Italy	65,948
Malawi	66,130
Malaysia	1,155
Mexico	36,493
Mozambique	16,996
Netherlands	1,528
New Zealand	7,790
Pakistan	2,273
Peru	4,104
Philippines	19
Poland	2,404
Portugal	6
Singapore	0
South Africa	303,680
Spain	177,340
Eswatini	69,346
Switzerland	0
United Republic of Tanzania	36,985
Thailand	2,849
Turkey	14,691
United Kingdom of Great Britain and Northern Ireland	1,375,749

Uruguay	185
United States of America	95,202
Venezuela (Bolivarian Republic of)	0
Viet Nam	7,475
Zambia	71,722
Sri Lanka	0

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By business division
By activity

C7.3a

(C7.3a) Break down your total gross global Scope 1 emissions by business division.

Business division	Scope 1 emissions (metric ton CO2e)
Agriculture	56,366
Grocery	282,891
Ingredients	548,007
Retail	20,602
Sugar	2,254,584

C7.3c

(C7.3c) Break down your total gross global Scope 1 emissions by business activity.

Activity	Scope 1 emissions (metric tons CO2e)
Agricultural activities on our own land	200,673
Processing and manufacturing in our direct operations	2,862,996
Transport and distribution in our control	98,780

C-AC7.4/C-FB7.4/C-PF7.4

(C-AC7.4/C-FB7.4/C-PF7.4) Do you include emissions pertaining to your business activity(ies) in your direct operations as part of your global gross Scope 1 figure?

Yes

C-AC7.4a/C-FB7.4a/C-PF7.4a

(C-AC7.4a/C-FB7.4a/C-PF7.4a) Select the form(s) in which you are reporting your agricultural/forestry emissions.

Total emissions

C-AC7.4b/C-FB7.4b/C-PF7.4b

(C-AC7.4b/C-FB7.4b/C-PF7.4b) Report the Scope 1 emissions pertaining to your business activity(ies) and explain any exclusions. If applicable, disaggregate your agricultural/forestry by GHG emissions category.

Activity

Agriculture/Forestry

Emissions (metric tons CO2e)

200,673

Methodology

Other, please specify

We use a mix of sources for the factors for our agricultural emissions reflecting the variety of activities in this category.

Please explain

Over 98% of our agricultural emissions are those from growing our own sugar cane and sugar beet crops and harvesting them including the burning of the cane crops to remove cane leaves just before they are harvested. We also include data for GHG emissions from intensive livestock farming activities which are due to enteric fermentation and the production on site of crops such as peas and corn for pig feed. Methodology is a mixture between IPCC Guidelines for National Greenhouse Gas Inventories – Volume 4, British Sugar carbon footprint methodology certified by The Carbon Trust, Department for Transport RTFO Guidance, Ecoinvent Emissions Factor Database.

Activity

Processing/Manufacturing

Emissions (metric tons CO2e)

2,862,996

Methodology

Other, please specify

For the majority of manufacturing emissions we use international / national sources for factors such as DEFRA. For a minority of emissions from processing and manufacturing, we use activity specific factors which take into account local conditions.

Please explain

For a minority of emissions from processing and manufacturing, we use production activity-specific factors that take into account local conditions. These include ethanol and yeast manufacture and bread baking.

Activity

Distribution

Emissions (metric tons CO2e)

98,780

Methodology

Default emissions factor

Please explain

We use DEFRA 2019 emission factors for our transport and distribution activities.

C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/region.

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted for in Scope 2 market-based approach (MWh)
Argentina	11,612	11,612	31,550	0
Australia	138,556	135,526	164,482	0
Austria	4,825	3,885	51,820	6,193
Belgium	1,710	1,551	9,811	0
Brazil	16,493	16,493	54,032	0
Canada	5,524	5,524	38,491	0
Chile	1,761	1,761	3,959	0
China	134,496	134,496	217,731	0
Colombia	1,507	1,507	6,811	0
Czechia	1,404	1,569	2,637	0
Denmark	80	180	386	0
Ecuador	114	114	407	0
Finland	7,738	10,562	51,363	0
France	1,708	1,690	32,468	0
Germany	33,941	29,790	84,411	0
India	13,424	13,424	18,373	0
Ireland	14,734	17,579	35,503	0
Italy	5,649	7,927	17,014	0
Malawi	29,052	29,052	77,929	0
Malaysia	1,571	1,571	2,390	0

Mexico	18,793	18,793	40,346	0
Mozambique	593	593	8,823	0
Netherlands	14,648	17,410	32,828	0
New Zealand	2,924	3,320	27,897	0
Pakistan	852	852	2,168	0
Peru	1,486	1,486	5,617	0
Philippines	13	13	21	0
Poland	9,515	10,247	13,157	0
Portugal	3,978	4,214	13,789	0
Singapore	15	15	39	0
South Africa	51,686	51,142	54,406	0
Spain	23,930	36,253	96,842	0
Sri Lanka	185	185	304	0
Eswatini	5,195	5,195	13,934	0
Switzerland	190	0	6,699	6,699
United Republic of Tanzania	6,306	6,306	24,985	0
Thailand	9,262	8,450	19,192	0
Turkey	7,442	7,442	15,967	0
United Kingdom of Great Britain and Northern Ireland	136,831	141,266	647,540	0
Uruguay	15	15	555	0
United States of America	78,704	73,308	170,623	0
Venezuela (Bolivarian Republic of)	13	13	44	0
Viet Nam	26,369	26,369	15,125	0
Zambia	5,705	5,705	107,432	0

C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

By business division

By activity

C7.6a

(C7.6a) Break down your total gross global Scope 2 emissions by business division.

Business division	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Grocery	260,514	259,190
Sugar	142,217	144,033
Agriculture	34,798	35,673
Ingredients	253,192	257,523
Retail	139,841	147,987

C7.6c

(C7.6c) Break down your total gross global Scope 2 emissions by business activity.

Activity	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Processing and manufacturing. This includes manufacturing sites and associated distribution centres, warehouses and offices.	690,721	696,419
Retail stores and associated distribution centres, warehouses and offices.	139,841	147,987

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Remained the same overall

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	5,674	Decreased	0.14	Last year 5,674 tCO2e were reduced by our renewable energy emission reduction activities explained above Our total scope 1 and scope 2

				emissions in the previous year were 4,152,915 tCO2e. Therefore we arrived at a 0.14% decrease through 5,674 / 4,152,915 * 100. This takes into account the non-carbon dioxide emissions from the use of wood and bagasse on-site to generate electricity for consumption on-site.
Other emissions reduction activities	8,000	Decreased	0.2	Last year 8,000 tCO2e were reduced by our agricultural emission reduction activities explained above. Our total scope 1 and scope 2 emissions in the previous year were 4,152,915 tCO2e. Therefore we arrived at a 0.2% decrease through 8,000 / 4,152,915 * 100.
Divestment				
Acquisitions				
Mergers				
Change in output				
Change in methodology				
Change in boundary				
Change in physical operating conditions				
Unidentified				
Other				

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Location-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 5% but less than or equal to 10%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	Yes
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	12,197,818	9,148,300	21,346,118
Consumption of purchased or acquired electricity		12,893	1,879,134	1,892,027
Consumption of purchased or acquired steam		0	327,873	327,873

Consumption of self-generated non-fuel renewable energy		0		0
Total energy consumption		12,210,711	11,355,307	23,566,018

C8.2b

(C8.2b) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	No
Consumption of fuel for the generation of heat	No
Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	Yes

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Fuels (excluding feedstocks)

Bagasse

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

11,244,455

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-cogeneration or self-trigeneration

11,244,455

Emission factor

0.33245

Unit

metric tons CO2e per MWh

Emissions factor source

This is an average taken from site-specific emission factors for different input materials. Calculations are conducted each year to confirm or amend the emission factors which depend on inputs such as percentage of fibre, ash and moisture in the bagasse.

Comment

All energy from bagasse is consumed on our site for on-site energy needs.

Fuels (excluding feedstocks)

Biogas

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

232,729

MWh fuel consumed for self-generation of heat

194,729

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

0.00021

Unit

metric tons CO2e per MWh

Emissions factor source

2019 UK Government GHG conversion factors.
DEFRA 2019 - Biogas

Comment

We capture the consumption of biogas at a total group level.

Fuels (excluding feedstocks)

Coal

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

2,181,169

MWh fuel consumed for self-generation of heat

107,423

MWh fuel consumed for self-cogeneration or self-trigeneration

2,073,746

Emission factor

2,464.95

Unit

metric tons CO2e per MWh

Emissions factor source

2019 UK Government GHG conversion factors.
DEFRA 2019 - Fuel-Coal

Comment

We capture the consumption of coal at a total group level.
Our yeast and sugar businesses consume coal for self-generation or heat and/or self-generation.

Fuels (excluding feedstocks)

Coke

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

67,417

MWh fuel consumed for self-generation of heat

67,417

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

0.34999

Unit

metric tons CO2e per MWh

Emissions factor source

2019 UK Government GHG conversion factors.
DEFRA-Fuel-CokingCoal

Comment

We capture the consumption of coke at a group level.

Fuels (excluding feedstocks)

Diesel

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

44,950

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

0.25267

Unit

metric tons CO2e per MWh

Emissions factor source

2019 UK Government GHG conversion factors.
DEFRA-Fuel-Diesel.

Comment

We capture the consumption of diesel at a total group level.

Fuels (excluding feedstocks)

Kerosene

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

557

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

0.24675

Unit

metric tons CO2e per MWh

Emissions factor source

2019 UK Government GHG conversion factors.
DEFRA-Fuel-BurningOil

Comment

We capture the consumption of kerosene at a total group level.

Fuels (excluding feedstocks)

Liquefied Petroleum Gas (LPG)

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

148,460

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

0.21447

Unit

metric tons CO2e per MWh

Emissions factor source

2019 UK Government GHG conversion factors.
DEFRA-Fuel-LPG

Comment

We capture the consumption of LPG at a total group level.

Fuels (excluding feedstocks)

Petrol

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

438

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

0.24099

Unit

metric tons CO2e per MWh

Emissions factor source

2019 UK Government GHG conversion factors.
DEFRA-Fuel-Petrol

Comment

We capture the consumption of petrol at a total group level.

Fuels (excluding feedstocks)

Natural Gas

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

6,574,639

MWh fuel consumed for self-generation of heat

231,234

MWh fuel consumed for self-cogeneration or self-trigeneration

4,399,372

Emission factor

0.18385

Unit

metric tons CO2e per MWh

Emissions factor source

2019 UK Government GHG conversion factors.
DEFRA-Fuel-NaturalGas

Comment

Our fuel consumption for self-generation refers to our bakeries businesses and fuel consumed for self-cogeneration or self-trigeneration refers to our sugar sites.

Fuels (excluding feedstocks)

Wood

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

667,363

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-cogeneration or self-trigeneration

666,806

Emission factor

1,864.824

Unit

metric tons CO2e per MWh

Emissions factor source

Intergovernmental Panel for Climate Change 2006 GHG conversion factors.

Comment

We capture the consumption of wood at a total group level.

Fuels (excluding feedstocks)

Gas Oil

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

72,904

MWh fuel consumed for self-generation of heat

72,904

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

0.25676

Unit

metric tons CO2e per MWh

Emissions factor source

2019 UK Government GHG conversion factors.
DEFRA-Fuel-GasOil

Comment

We capture the consumption of gas oil at a total group level.

Fuels (excluding feedstocks)

Heavy Gas Oil

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

44,874

MWh fuel consumed for self-generation of heat

44,874

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

0

Unit

metric tons CO2e per MWh

Emissions factor source

2019 UK Government GHG conversion factors.
DEFRA-Fuel-HeavyGasOil

Comment

We capture the consumption of heavy fuel oil at a total group level.

Fuels (excluding feedstocks)

Other, please specify

Waste materials from sugar cane fibre

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

66,163

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

0.3822

Unit

metric tons CO2e per MWh

Emissions factor source

A customised default emission factor.

Comment

We capture the consumption of waste materials from sugar cane fibre at a total group level.

C8.2d

(C8.2d) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	12,210,710	11,239,710	12,210,710	11,239,710
Heat	0	0	0	0
Steam	0	0	0	0
Cooling	0	0	0	0

C8.2e

(C8.2e) Provide details on the electricity, heat, steam, and/or cooling amounts that were accounted for at a zero emission factor in the market-based Scope 2 figure reported in C6.3.

Sourcing method

Green electricity products (e.g. green tariffs) from an energy supplier, supported by energy attribute certificates

Low-carbon technology type

Hydropower

Country/region of consumption of low-carbon electricity, heat, steam or cooling

Europe

MWh consumed accounted for at a zero emission factor

6,699

Comment

Sourcing method

Power purchase agreement (PPA) with a grid-connected generator without energy attribute certificates

Low-carbon technology type

Low-carbon energy mix

Country/region of consumption of low-carbon electricity, heat, steam or cooling

Europe

MWh consumed accounted for at a zero emission factor

6,193

Comment

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

Description

Waste

Metric value

123,442

Metric numerator

Tonnes of hazardous and non-hazardous waste.

Metric denominator (intensity metric only)

N/A

% change from previous year

12

Direction of change

Decreased

Please explain

We generated 631,835 tonnes of waste in the year; this figure includes hazardous and non-hazardous waste as well as waste which was recycled, recovered or had another beneficial use. As a proportion of the total amount, recycled waste material accounted for 80%. We remain focused on minimising waste production and maximising the opportunities to reuse and recycle the materials. As well as the environmental impacts of waste, managing and safely disposing of it is a cost to the businesses. Therefore the first priority is to minimise it by extracting as much value as possible from all our raw

materials.
When we do have unavoidable waste materials, we look at how these can be of benefit to our operations. This includes implementing processes to turn waste into energy sources such as using the biogas from wastewater treatment processes to feed our combined heat and power (CHP) plants or the generation of renewable energy from anaerobic digestion plants.
We consider alternative uses for waste materials including making compost, replenishing soil and as building or packaging materials. Where appropriate we donate surplus food products to charities and community groups.
Again this year, all our business segments have recycled far more waste than they have sent to landfill; the figures range from 95% in our retail business to 81% in our agriculture segment. These are substantial amounts of waste materials which have been segregated to fulfil a beneficial purpose when reused or recovered.

Description

Energy usage

Metric value

235,660,171

Metric numerator

MWh

Metric denominator (intensity metric only)

% change from previous year

2

Direction of change

Increased

Please explain

As energy use is one of our main environmental impacts and is a significant cost coupled with fluctuations in the price of fuels, it remains a key focus for the effective management of our businesses. They explore changes to their energy mix and ways of generating their own energy, and a number have invested in combined heat and power plants (CHP) and cycle gas turbines.

Our Sugar businesses consumed 82% of the group’s energy this year and the 2% increase in the group's total energy is mainly driven by these businesses, particularly Illovo's operations in southern Africa. In addition, our Retail business continued to expand its operations resulting in increased use of electricity and natural gas.

Some of sugar sites are deemed ‘energy positive’ which means that they have the ability to generate energy on-site which is surplus to their needs. When this happens, they export it to the national grid or other organisations. ABF renewable energy use

increased by 6% when compared with 2018. As the group's renewable energy is dominated by bagasse (48% of the group's total energy or 92% of the group's renewable energy) changes in the volume used impacts the group's data. Bagasse use increased by 6%. Bagasse is the residual fibre once the sugar has been extracted from sugar cane. Sugar increased renewable energy use by 6% influenced by the 6% increases in bagasse. Bagasse accounted for 91% of the segment's renewable use in 2019. Illovo contributed 98.5% of the segment's renewable energy in 2019. Illovo Nakambala's bagasse and wood use contribute 20% to the segment's total renewable energy. Bagasse use at this site increased by 13% in 2019.

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

ABF 2019 Responsibility Report.pdf

Page/ section reference

Please see pages 53-54 of ABF's annual Responsibility Report (2019) for Ernst & Young's Assurance Statement.
EY's assurance includes greenhouse gas emissions (scope 1, 2 and 3) (tCO2e)

consisting of energy consumption inputs, process emissions, transport emissions and agricultural emissions.

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

100

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

Scope 2 approach

Scope 2 location-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

ABF 2019 Responsibility Report.pdf

Page/ section reference

Please see pages 53-54 of ABF's annual CR Report (2019) for Ernst & Young's Assurance Statement.
EY's assurance includes greenhouse gas emissions (Scope 1, 2 and 3) (tCO2e) consisting of energy consumption inputs, process emissions, transport emissions and agricultural emissions.

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

100

C10.1c

(C10.1c) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Scope 3 category

Scope 3: Upstream transportation and distribution

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

ABF 2019 Responsibility Report.pdf

Page/section reference

Please see pages 53-54 of ABF's annual CR Report (2019) for Ernst & Young's Assurance Statement.
EY's assurance includes greenhouse gas emissions (Scope 1, 2 and 3) (tCO2e) consisting of energy consumption inputs, process emissions, transport emissions and agricultural emissions.
For the purposes of CDP, additional scope 3 categories are reported but are not included in the annual assurance conducted by EY. EY currently assures only scope 3 third party transportation.

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

58

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?

No, we do not verify any other climate-related information reported in our CDP disclosure

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

Yes

C11.1a

(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.

EU ETS
Poland carbon tax
South Africa carbon tax

C11.1b

(C11.1b) Complete the following table for each of the emissions trading schemes you are regulated by.

EU ETS

% of Scope 1 emissions covered by the ETS
29

% of Scope 2 emissions covered by the ETS
0

Period start date
January 1, 2018

Period end date
December 31, 2019

Allowances allocated
489,163

Allowances purchased
429,171

Verified Scope 1 emissions in metric tons CO2e
918,334

Verified Scope 2 emissions in metric tons CO2e
0

Details of ownership
Facilities we own and operate

Comment

C11.1c

(C11.1c) Complete the following table for each of the tax systems you are regulated by.

Poland carbon tax

Period start date

January 1, 2019

Period end date

December 31, 2019

% of total Scope 1 emissions covered by tax

0.06

Total cost of tax paid

112

Comment

This covers the tax paid by one of our sites in Poland.

South Africa carbon tax

Period start date

June 1, 2019

Period end date

December 31, 2019

% of total Scope 1 emissions covered by tax

9.6

Total cost of tax paid

0

Comment

The first payment in respect of the period 1 June 2019 to 31 Dec 2019 was delayed due to the COVID-19 pandemic. First payment is not likely until October 2020. The final amount to be paid is under review, taking into account relevant allowances. It is likely to be a payment of approximately R3m to R4m.

C11.1d

(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

Our strategy for compliance is to:

1 - Meet compliance levels for all appropriate environmental legislation and other requirements relating to our activities. Our site-level environmental managers and finance teams collaborate to ensure compliance with national or regional tax price schemes.

2 - Continually improve our environmental performance through a process of monitoring, measuring and reviewing our environmental impacts. For energy, we utilise energy more efficiently to reduce the use of fossil fuels and the production of associated greenhouse gas emissions. Where financially or operationally viable, our businesses will change to less carbon-intensive fuels for manufacturing and transportation.

3 - Maximise the efficient use of our raw materials and minimise waste generation through promotion of re-use and recycling.

4 - Include environmental regulation tracking as part of the group-wide environmental compliance and risk management audit programme. This is a rolling site-level audit programme conducted by an independent third-party provider. Where there is a risk of regulatory non-compliance, the finding is reported to ABF's HSE team and progress towards closure of the finding is monitored.

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?

No

C11.3

(C11.3) Does your organization use an internal price on carbon?

Yes

C11.3a

(C11.3a) Provide details of how your organization uses an internal price on carbon.

Objective for implementing an internal carbon price

Navigate GHG regulations

Drive energy efficiency

GHG Scope

Scope 1

Application

A number of our businesses use carbon pricing as a tool to manage risks and opportunities to operations participating in the EU ETS and in anticipation of new carbon regulations. For the majority, our businesses internalise the current EU ETS market price so that there is consistency across our European businesses. The analysis is based at a business and country level to ensure effectiveness in driving reduction behaviour.

Actual price(s) used (Currency /metric ton)

12

Variance of price(s) used

Across our businesses, we use a differentiated price, depending on the geography and therefore most applicable carbon scheme or market to each business. Using the EU ETS price for those businesses in scope means that the price used may vary linked to market demand.

Over recent years, reforms to the EU ETS means that the price of carbon allowances has moved. At the high end, this has reached approximately £14.00 per tonne from lows of £5.00 per tonne. Several of our businesses have used this approach to support their

efforts to plan their medium and long-term work in carbon management.
We will continue to track carbon prices and their movement to ensure that our approach is the most effective to support the sustainability of our businesses and in alignment with the 2 degree transition pathway.

Type of internal carbon price

Other, please specify

A price reflecting the relevant market

Impact & implication

We use the internal carbon price to support medium and long-term planning within our businesses.
A number of our businesses are now participating in carbon taxes or preparing for the introduction of national carbon tax schemes. For example, whilst the UK is moving from the CRC to an integrated approach, South Africa, in 2019, introduced a carbon tax. Our South African business Illovo has worked to incorporate the price into project finance justification models. It is anticipated that the carbon tax will increase the cost of Scope 1 energy for Illovo by approximately 7%. As part of the business's response to the national GHG regulation, further focus has been placed on maximising the energy efficiency programmes and effectively manage the allowances.
The use of an internal carbon price drives both our emission reduction strategies and, aligned with this, reduced operating costs.

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?

Yes, our suppliers
Yes, our customers

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement

Innovation & collaboration (changing markets)

Details of engagement

Run a campaign to encourage innovation to reduce climate impacts on products and services

% of suppliers by number

% total procurement spend (direct and indirect)

% of supplier-related Scope 3 emissions as reported in C6.5

Rationale for the coverage of your engagement

AB Sugar China faces key environmental challenges relating to meeting product demand while dealing with limited resources such as land, water and energy, and responding to risks associated with climate change. For example:
►Both the Hebei and Inner Mongolia provinces in which AB Sugar China operates are classified as water scarce regions by the World Wildlife Fund (WWF).
► The growing season in Northern China is relatively short in comparison with other parts of the world due to cooler temperatures in winter and spring. This requires harvesting of sugar beet over a 6-week period in October, which is vulnerable to extreme weather events such as frost.
► Soil and water quality, for example higher sodium from groundwater and nitrogen content from nitrogen fertiliser use, is known to increase impurities in the sugar product because of challenges in sugar beet processing.

These environmental challenges are linked to the commercial strategy of increasing the sugar content of the beet crop and commanding a higher price for premium sugar products, and directly impact key stakeholders such as AB Sugar China's 4,500 sugar beet growers. AB Sugar China recognises the importance in engaging with these sugar beet growers to ensure a sustainable supply of sugar beet.

Accordingly, AB Sugar China has started to use new channels to communicate with their growers including the launch of a bespoke mobile phone application. The communications have provided growers with advice on agronomy to help achieve strong productivity and to provide them with solutions to overcome specific challenges such as those related to weather or localised soil quality.

Impact of engagement, including measures of success

Since 2007/08, AB Sugar China has made a concerted effort to modernise growers' agricultural businesses. AB Sugar China has worked extensively with growers to educate them on how to best grow their crop sustainably, through its Sustainable Agriculture Programme. AB Sugar China offers a multi-channel, targeted approach focused on delivering simplified content supported by comprehensive research and development to growers over various channels, including social media.

AB Sugar China's Sustainable Agriculture Programme was launched in March 2014 to increase productivity, embrace conservation and improve lives. The company's agricultural strategy is focused on sugar beet crop optimisation and driving efficiencies to increase yield and sugar content, while reducing water and fertiliser use.

Since 2007/08, beet volume at AB Sugar China's two factories has increased two-fold in part due to grower's beet yields rising by 212% (26t/ha to 55t/ha), due to knowledge sharing and AB Sugar China's investment in mechanisation and helping to implement best farming practices.

AB Sugar China is measuring the success of this program by the number of growers who take part in the program as well as the increase in sugar beet yield.

Comment

C12.1b

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Type of engagement

Collaboration & innovation

Details of engagement

Run a campaign to encourage innovation to reduce climate change impacts

% of customers by number

% of customer - related Scope 3 emissions as reported in C6.5

Please explain the rationale for selecting this group of customers and scope of engagement

ABF's decentralised approach to doing business allows each business to engage with its customers as it considers best. Engagement decisions are made locally because they are most successful when made by the people who have the best understanding of the prevailing conditions in those markets.

As part of AB Sugar's 2030 Commitments, British Sugar evaluated its GHG emissions across its value chain and identified transportation as an opportunity to reduce its own emissions, as well as an opportunity for its customers to reduce their emissions, through engagement with customers and distributors.

In 2018, British Sugar reviewed its payload process, namely the amount of product being sold per delivery and identified an opportunity to improve the quantity of sugar being delivered on every load to customers. The aim was to reduce the number of deliveries and in turn reduce the business's impact on the environment.

The environmental benefits include reduced time on the road, reduced use of fuels and resultant emissions ultimately aiming to reduce British Sugar's carbon footprint. In order to maximise the quantity of sugar to be delivered, collaboration is required across all elements of the supply chain, starting with the order being placed, through to the loading of the delivery vehicles and finally, delivery to the customer.

Impact of engagement, including measures of success

British Sugar's aim was to reduce the number of deliveries and in turn reduce the business's impact on the environment in three key areas:

(1) Customer Orders: increase the order size or combine multiple orders to increase loadfill by implementing a Service Level Agreement that incentivises the customer to order the most environmentally-beneficial payload;
(2) Palletised Loads: develop new packaging that enhances loadfill and reduces overhangs allowing more pallets to be loaded and reducing the amount of returns from customers due to the overhanging bags being damaged;
(3) Bulk Loads: Use lightweight vehicles from specialised logistics providers and enhance awareness of payload for bulk loaders so that they load more.

The Service Level Agreements with customers went live in 2019 and has seen a positive impact on the average order and delivery size.
There have been significant payload improvements for both bulk and bag payloads which has resulted in fewer deliveries for the same overall amount of product, and therefore a subsequent reduction in British Sugar's carbon footprint. For bulk deliveries, customers are now charged for returns, leading to a further improvement in bulk order size. Due to the improved bag specification on the palletised load, in the last twelve months damages have reduced by 45%, which has a direct correlation with fewer returns and increases the average delivery size.

British Sugar's logistics service providers, Abbey Logistics worked with the Newark factory bulk loading team and were able to increase payload by 860 kg for a 29,500 kg load by allocating the lightweight vehicles to the highest payload opportunity customers with the result being an average payload increase of 440 kg. This benefit will increase as further new lightweight vehicles will be added to the fleet in 2020 and 2021.

C-AC12.2/C-FB12.2/C-PF12.2

(C-AC12.2/C-FB12.2/C-PF12.2) Do you encourage your suppliers to undertake any agricultural or forest management practices with climate change mitigation and/or adaptation benefits?

Yes

C-AC12.2a/C-FB12.2a/C-PF12.2a

(C-AC12.2a/C-FB12.2a/C-PF12.2a) Specify which agricultural or forest management practices with climate change mitigation and/or adaptation benefits you encourage your suppliers to undertake and describe your role in the implementation of each practice.

Management practice reference number

MP1

Management practice

Knowledge sharing

Description of management practice

Jordans Dorset Ryvita works with accredited farmers who supply all the oats, wheat and barley required to make the products sold in the UK and France using the Conservation GradeTM farm management standard. All habitats are managed to make sure quality is maintained and some may need re-establishing every year. The farmers are also required to cut hedges only once every two years to protect nesting habitats, essential shelter and food sources, such as wild berries. Farmers who operate under this scheme are required to dedicate 10% of their land to wildlife preservation. This is prioritised in the following way: Pollen and Nectar Habitats (4%), Wild bird food crops (2% or 1.5% if annually cultivated natural regeneration is adopted), Tussocky and/or fine grass mixtures (2%), Annually cultivated natural regeneration (0.5% or 0% if not appropriate and wild bird food is increased to 2%) and Other habitats (2%).

Your role in the implementation

Knowledge sharing

Explanation of how you encourage implementation

We have directly raised awareness of these environmental practices among our network of selected farmers.

Climate change related benefit

Increasing resilience to climate change (adaptation)

Comment

The founders of Jordans Dorset Ryvita helped launch the nature-friendly Conservation GradeTM farming protocol.

Management practice reference number

MP2

Management practice

Knowledge sharing

Description of management practice

The South African-based World Wildlife Fund (WWF), in partnership with the Noodsberg Cane Growers Association, and supported by Illovo's South Africa Noodsberg sugar factory and refinery, was instrumental in the development of a Sustainable Sugar Cane Farm Management system for growers, termed SUSFARMS®.

SUSFARMS® is a methodology which develops better farm management practices in the cane sugar industry bringing environmental, social and economic benefits. The use of SUSFARMS® sustainability methodology for evaluating agronomic practices is encouraged.

Your role in the implementation

Knowledge sharing

Explanation of how you encourage implementation

Illovo engages with sugarcane growers on sustainable farming practices based on the SUSFARMS® methodology.

Climate change related benefit

Emissions reductions (mitigation)
Increasing resilience to climate change (adaptation)

Comment

Management practice reference number

MP3

Management practice

Knowledge sharing

Description of management practice

AB Sugar China is using a range of channels to communicate with their growers including the launch of a bespoke mobile phone application. The communications have provided growers with advice on agronomy to help achieve strong productivity and to provide them with solutions to overcome specific challenges such as those related to weather or localised soil quality.

Your role in the implementation

Financial
Knowledge sharing

Explanation of how you encourage implementation

Since 2007/08, AB Sugar China has made a concerted effort to modernise growers' agricultural businesses. The business has worked extensively with growers to educate them on how to best grow their crop sustainably, through its Sustainable Agriculture Programme. AB Sugar China offers a multi-channel, targeted approach which focuses on delivering simplified content supported by comprehensive research and development to growers over various channels, including social media.

Climate change related benefit

Increasing resilience to climate change (adaptation)

Comment

Since 2007/08, growers have doubled their beet volume to 1.2 million tonnes and have improved their average yield by 67%, in part due to this knowledge sharing and also due to AB Sugar China's investment in mechanisation and helping to implement best farming practices.

Management practice reference number

MP4

Management practice

Knowledge sharing

Description of management practice

At the end of 2016, AB Sugar became a member of the Sustainable Agriculture Initiative (SAI) Platform.

Your role in the implementation

Explanation of how you encourage implementation

Within the SAI, AB Sugar has joined the Sugar Beet Working Group and Farm Assessment Group.

Climate change related benefit

Other, please specify

Increase communication consistency

Comment

The SAI Platform aims to increase the consistency of communication within the food and beverage supply chains about sustainability expectations.

C-AC12.2b/C-FB12.2b/C-PF12.2b

(C-AC12.2b/C-FB12.2b/C-PF12.2b) Do you collect information from your suppliers about the outcomes of any implemented agricultural/forest management practices you have encouraged?

Yes

C12.3

(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?

Direct engagement with policy makers
Trade associations
Funding research organizations
Other

C12.3a

(C12.3a) On what issues have you been engaging directly with policy makers?

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Other, please specify	Support	ABF's UK Grocery Group is a signatory to the Courtauld Commitment 2025 which aims to	Waste management across industries

Reducing waste and associated GHG emissions		reduce food waste and associated GHG emissions in the food and drinks industry. The collective ambition is to reduce the resources needed to provide food and drink by one fifth by 2025.	
Adaptation or resilience	Support	ABF's CSO is a member of the Committee on Climate Change's Adaptation Committee, an independent, statutory body established under the Climate Change Act 2008. The Adaptation Committee's purpose is to provide advice to the UK Government and Devolved Administrations on preparing for and adapting to climate change. The knowledge and skills required to fulfil the CSO role contribute to the expertise required for the Adaptation Committee.	Adaptation to Climate Change across industries
Other, please specify Sustainability issues	Neutral	Primark's head of ethical trade and environmental sustainability responded to the request to submit evidence to the UK's Environmental Audit Committee's inquiry into the sustainability of the fashion industry. The Committee's remit is to consider the extent to which the policies and programmes of government departments and non-departmental public bodies contribute to environmental protection and sustainable development, and to audit their performance against sustainable development and environmental protection targets.	The inquiry examined the carbon, resource use and water footprint of clothing throughout its lifecycle.

C12.3b

(C12.3b) Are you on the board of any trade associations or do you provide funding beyond membership?

Yes

C12.3c

(C12.3c) Enter the details of those trade associations that are likely to take a position on climate change legislation.

Trade association

ADE – Association of Decentralised Energy

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The work of the ADE includes: Advocacy: the ADE is at the forefront of influencing; energy, planning and procurement policy; Raising awareness: building understanding through communications, events, training and the production of relevant policy and market research; Promoting best practice and collaboration; Working with our members and a wide range of relevant stakeholders to help drive improvement and innovation across the sector Enhancing and maintaining the reputation of the sector: through advocacy, promotion and adoption of best practice.

How have you influenced, or are you attempting to influence their position?

We are members of the working groups. We add influence and give 'real-life' examples as the Association works towards its objectives.

Trade association

Renewable Energy Association (REA)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The REA represents British renewable energy producers and promotes the use of renewable energy in the UK. The REA endeavours to achieve the right regulatory framework for renewables to deliver an increasing contribution to the UK's electricity, heat and transport needs.

How have you influenced, or are you attempting to influence their position?

An ABF representative is a Director on the Board of REA, and adds influence as the Association works towards its objectives.

Trade association

ePURE (European Bioethanol T.A.)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

ePURE represents and supports companies that produce renewable ethanol in the EU for all end-uses, i.e. fuel, potable and industrial uses. ePURE also represents companies that have an interest in ethanol production.

How have you influenced, or are you attempting to influence their position?

An ABF representative is a Director on the Board of ePURE, and adds influence as the Association works towards its objectives.

Trade association

Combustion Engineering Association (CEA)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The CEA seeks to promote the science of combustion engineering and to promote best practice.

How have you influenced, or are you attempting to influence their position?

An ABF representative is a member of the Executive as Past Chairman of CEA, and adds influence as the Association works towards its objectives.
Sharing of good practice and own experiences.

Trade association

Food and Drink Federation (FDF)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

Members are committed to FDF's 'Ambition 2025'; leading on collaborative transformations within the food and drink supply chain that enhance productivity and deliver environmental and social benefits to ensure safe, nutritious, affordable and sustainable food for all. The climate change ambition is to achieve a 55% absolute reduction in CO2 emissions by 2025 against the 1990 baseline.

FDF members are committed to the Sustainability: Ambition 2025 which launched recently as a guide for members to sustainably manage their footprint and supply chain.

How have you influenced, or are you attempting to influence their position?

An ABF representative attends the Climate Change and Energy Working Group so has the responsibility to engage with the Group in the direction of the overall policy of the FDF. This group has engaged with the government ahead of the proposed changes in the replacement of the 2050 Decarbonisation Roadmap for example, as well as providing UK industry position input into the EU Commission in its revision of the Best Available Techniques Reference Document (BREF) covering the Food, Drink & Milk Industries.

An ABF representative attends the Sustainability Group so has the responsibility to steer the Group in the direction of the overall policy of the FDF.

Trade association

The South African Sugar Association (SASA)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

Support research through SASRI (South African Sugar Research Institute) focused on empowering the sugar industry to respond to climate change impacts.
Working with the mandated government departments, such as the Department of Energy and the National Treasury, to support industry diversification into renewable energy; both electrical co-generation from bagasse and bioethanol production from molasses.
Support the avoidance of GHG emissions through the promotion of electricity from bagasse-based cogeneration and bioethanol, thereby supporting the South African government's biofuel industry strategy and mandatory blending requirements.

How have you influenced, or are you attempting to influence their position?

Illovo has one member on the board of SASA. Illovo and SASA are aligned in their positions on climate change legislation. Through SASA led discussion, Illovo has participated in the carbon tax process headed by the National Treasury and together have provided policy submissions.

Trade association

The Sustainable Clothing Action Plan (SCAP), launched by WRAP in 2012 to provide a collaborative voluntary framework for fashion companies to reduce their carbon, water, and waste impacts.

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

Members of SCAP have agreed voluntary targets to reduce the carbon and water footprints of clothing by 15% compared with 2012.

How have you influenced, or are you attempting to influence their position?

As a signatory of SCAP and the 2020 Commitment, Primark has agreed to a set of principles that work towards reaching the SCAP 2020 Targets.

C12.3d

(C12.3d) Do you publicly disclose a list of all research organizations that you fund?

Yes

C12.3e

(C12.3e) Provide details of the other engagement activities that you undertake.

We actively engage in a number of meetings and events aimed at understanding and influencing public policy in the area of climate change including but not limited to the examples noted below:
ABF's Spanish sugar business, Azucarera engages with the sugar beet growers in the region through AIMCRA, the Association for Research and Improvement of Sugar Beet, a private, non-profit, interprofessional association with joint management and financing in equal proportions by beet growers and Azucarera. AIMCRA aims to make beet-growing more competitive through research, development and innovation initiatives, establishing a number of lines of action to support growers' work based on the conclusions of those initiatives. Azucarera engages with the growers to disseminate information about innovation and improved crop growing techniques.

Illovo is a member of, and participates in, the activities of the National Business Initiative (NBI) which is the local partner for CDP, World Business Council on Sustainable Development and the UN Global Compact. Illovo attend workshops and seminars that the NBI presents and are represented on its board.
Primark is a member of the Sustainable Apparel Coalition, made up of more than 150 global brands, retailers and manufacturers as well as government, non-profit environmental organisations, and academic institutions, that are collectively committed to improving supply chain sustainability in the apparel and footwear industries. Primark is also a member of the Ellen MacArthur Make Fashion Circular initiative, which is driving collaboration across and between industry leaders and other key stakeholders to create a textiles economy fit for the 21st century. The initiative's ambition is to develop and adopt new business models that move the textiles industry from a linear to a circular economy, maximising the use of renewable fibres, keeping products in use for as long as possible and giving a second life to old clothes. Primark attends working meetings and is collaborating with member brands towards the goal of circularity. Primark supports the UK Sustainable Clothing Action Plan (SCAP) 2020 commitments to:
· reduce carbon by 15%;
· reduce waste to landfill by 15% (UK);
· reduce waste arising over the whole product life cycle by 3.5%; and
· reduce water in product manufacturing by 15%.

C12.3f

(C12.3f) What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?

Associated British Foods is both diversified and decentralised. We are successful because we trust the people who run our businesses. Close to their markets, they use their knowledge, skills and judgement to serve their customers and so our businesses thrive. The centre engages enthusiastically and deeply with leaders across our portfolio of businesses, but it doesn't dictate what operating companies' agendas or methods should be. Across Associated British Foods, we take an active approach to managing and reducing our environmental impact. We have invested in environmental improvement activities. These investments have primarily been targeted at areas where we have the greatest environmental impact including the use of energy and the resultant greenhouse gas emissions.

Our Group Company Secretary acts as a focal point for communications on matters of corporate governance and corporate responsibility. This role regularly liaises with Corporate Responsibility, Public Relations and other advocacy-related roles within the businesses to ensure alignment. This is carried out on an ad-hoc basis when required and through a formal annual reporting process whereby the businesses provide information on their internal activities, work with their value chain and any public policy activities related to a range of corporate responsibility issues including climate change. Any public policy engagement conducted by the businesses must be approved at a senior level.

The businesses also review engagement activities to ensure they are aware of current and future legislation that will impact their value chains. Accordingly, policy engagement will cover energy, waste, reporting, supply chain and other activities that each business, and the group as a whole, consider represent a risk or an opportunity. Engagement activities are reviewed at least annually, to ensure alignment with business strategy and the policy landscape.

C12.4

(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication

In mainstream reports, incorporating the TCFD recommendations

Status

Complete

Attach the document

ABF 2019 Annual Report and Accounts.pdf

Page/Section reference

ABF's Annual Report and Accounts 2019 discloses our climate-related emissions figures, activities and support for the TCFD's recommendations. See pages 60-61. Reference to climate change as an identified and managed risk is reported on page 66 of the Annual Report and Accounts 2019.

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures

Comment

Publication

In voluntary sustainability report

Status

Complete

Attach the document

ABF 2019 ESG Appendix.pdf

ABF 2019 Responsibility Report.pdf

Page/Section reference

ABF's Responsibility Report 2019, pages 39-43 for group-level climate-related information and data. There are additional references to climate-related activities throughout the report from our five business segments.
ABF's ESG Appendix 2019, page 10 for GHG emissions data. There are additional references to climate-related activities throughout the ESG Appendix.

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures

Comment

C13. Other land management impacts

C-AC13.1/C-FB13.1/C-PF13.1

(C-AC13.1/C-FB13.1/C-PF13.1) Do you know if any of the management practices implemented on your own land disclosed in C-AC4.4a/C-FB4.4a/C-PF4.4a have other impacts besides climate change mitigation/adaptation?

Yes

C-AC13.1a/C-FB13.1a/C-PF13.1a

(C-AC13.1a/C-FB13.1a/C-PF13.1a) Provide details on those management practices that have other impacts besides climate change mitigation/adaptation and on your management response.

Management practice reference number

MP1

Overall effect

Positive

Which of the following has been impacted?

Biodiversity
Soil
Yield
Other, please specify
Cost

Description of impact

Reduced cost, improved yields with more sustainable operations and usually with benefits to local habitats and ecosystems.

Have you implemented any response(s) to these impacts?

Yes

Description of the response(s)

AB Sustain operates in more than sixty countries and manages diverse supply-chain projects offering clients an understanding of their agricultural supply-chains through utilisation of effective tools to measure and monitor continuous improvement.

Management practice reference number

MP2

Overall effect

Positive

Which of the following has been impacted?

Water
Yield
Other, please specify
Cost

Description of impact

Less risk to crop productivity if resilient or water efficient crop varieties can be developed.

Have you implemented any response(s) to these impacts?

Yes

Description of the response(s)

Yield improvement projects for example at Illovo Nchalo and Nakambala sites and the adoption of Better Management Practices to improve cane yield.

Management practice reference number

MP3

Overall effect

Mixed

Which of the following has been impacted?

Biodiversity

Other, please specify

Cost / Improved air quality in area

Description of impact

Additional biomass is available for combustion in the boilers resulting in increased cogeneration and consequently more renewable energy is fed into the national electricity grid.

Have you implemented any response(s) to these impacts?

Yes

Description of the response(s)

At Illovo's eSwatini site, this renewable energy is exported to the national grid.

Management practice reference number

MP4

Overall effect

Mixed

Which of the following has been impacted?

Biodiversity

Soil

Other, please specify

Significant Job Creation

Description of impact

Manual harvesting results in conserved soil and soil quality in areas suitable for manual harvesting.

Have you implemented any response(s) to these impacts?

Yes

Description of the response(s)

Conservation of soil and soil quality in areas greater than 12% slope (Land Use Plan). Improved surface water structures (grassed waterways) on a number of Illovo's irrigated estates. Minimum tillage practices are ongoing in South Africa and are in trial in Zambia and Tanzania.

Management practice reference number

MP5

Overall effect

Positive

Which of the following has been impacted?

Other, please specify

Cost

Description of impact

Generating our own renewable energy within our mills for operating both the milling and agricultural operations, where feasible, greatly reduces our cost base.

Have you implemented any response(s) to these impacts?

Yes

Description of the response(s)

C-AC13.2/C-FB13.2/C-PF13.2

(C-AC13.2/C-FB13.2/C-PF13.2) Do you know if any of the management practices mentioned in C-AC12.2a/C-FB12.2a/C-PF12.2a that were implemented by your suppliers have other impacts besides climate change mitigation/adaptation?

Yes

C-AC13.2a/C-FB13.2a/C-PF13.2a

(C-AC13.2a/C-FB13.2a/C-PF13.2a) Provide details of those management practices implemented by your suppliers that have other impacts besides climate change mitigation/adaptation.

Management practice reference number

MP1

Overall effect

Positive

Which of the following has been impacted?

Biodiversity

Yield

Other, please specify

Cost

Description of impacts

As a result of this, over the past five years alone, we have increased the ‘Yield in Field’ (the amount of finished Ryvita products we can make per acre of crop grown in the farmer’s field.) by around 20%. We have set ourselves the challenge of working towards having a ‘Net Positive’ impact on the British countryside. Through this ‘Net Positive’

standard we commit to have a restorative impact on all aspects of our rural British supply chain.

Have any response to these impacts been implemented?

Description of the response(s)

Management practice reference number

MP2

Overall effect

Positive

Which of the following has been impacted?

Biodiversity
Soil
Water

Description of impacts

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.

Have any response to these impacts been implemented?

Yes

Description of the response(s)

More than 400 commercial farmers have committed to the implementation of SUSFARMS® and the programme has received widespread industry and government support.

C15. Signoff

C-FI

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

ABF operates in 52 different countries which include the locations of various subsidiaries or branches. The data provided in CDP Climate aligns with our scope of reporting ABF's GHG emissions. This is for 43 countries where ABF has operational entities, where we have over 40% ownership.

C15.1

(C15.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Director of Company Secretariat	Chief Sustainability Officer (CSO)