# Module: Introduction

## Page: Introduction

### CC0.1

**Introduction**
Please give a general description and introduction to your organization.

Associated British Foods is an international diversified group of food, ingredients and retail businesses with sales of £13.4bn and over 130,000 employees in 50 countries. Our range of activities is broad in product, technology and market scope. We aim to achieve strong and sustainable positions through a combination of organic growth, acquisition of complementary new businesses and achievement of high levels of operating efficiency. The group operates through five strategic business segments: Sugar, Agriculture, Retail, Grocery and Ingredients.
(1) ABF's sugar processing business, AB Sugar, is a leading multinational in the growing market for sugar and sugar derived products and co-products. In the EU, Azucarera is the major producer in Iberia, and British Sugar is the sole processor of the UK sugar beet crop and supplies half the UK's requirement for sugar. Illovo is the largest sugar processor in Africa and ABF has substantial businesses in China too with cane sugar in the south and beet sugar in the north east.
(2) AB Agri is at the heart of the UK agricultural industry and is its biggest customer. It supplies technology-based products and services to farmers, feed and food manufacturers, processors and retailers.
(3) The group's retail business Primark employs more than 61,000 people across nine EU countries. It offers customers value for money clothing in more than 300 stores and more than ten million square feet of retail selling space.
(4) ABF produces a range of both branded and private label grocery products across three continents. Some of its best known household brands include Twinings, Ovaltine, Ryvita, Kingsmill, Silver Spoon, Tip Top, Mazola and Spice Islands. George Weston Foods in Australia enjoys a 75% penetration of Australian households.
(5) The Ingredients business comprises AB Mauri and ABF Ingredients. AB Mauri has a major global presence in bakers' yeast and is a supplier of bakery ingredients operating from 49 plants in 26 countries. ABF Ingredients markets enzymes, speciality proteins and lipids worldwide, with manufacturing facilities in Europe, the US and China.

We have always had a decentralised approach to doing business. Operational decisions are made locally because, in our experience, they are most successful when made by the people who have the best understanding of their markets and who have to implement them. This culture of setting strategy and priorities locally gives our businesses an advantage over many of our large, heavily centralised competitors. The corporate centre aims to provide a framework in which our business leaders have the freedom and decision-making authority to pursue opportunities. The centre is small and uses short lines of communication to ensure prompt, incisive and unambiguous decision-making. It seeks to ensure that business activities are appropriately monitored and supported. In 2014 we took our culture of decentralised priority setting and applied it to corporate responsibility. We identified our material risks and opportunities with our businesses focusing on four or five areas of greatest importance. These sit under ABF's four CR priority areas of:

• responsible stewardship of our environment;
• being responsible for our people;
• being a responsible neighbour;
• responsible for promoting good health.

## CC0.2

**Reporting Year**
Please state the start and end date of the year for which you are reporting data.
The current reporting year is the latest/most recent 12-month period for which data is reported. Enter the dates of this year first.
We request data for more than one reporting period for some emission accounting questions. Please provide data for the three years prior to the current reporting year if you have not provided this information before, or if this is the first time you have answered a CDP information request. (This does not apply if you have been offered and selected the option of answering the shorter questionnaire). If you are going to provide additional years of data, please give the dates of those reporting periods here. Work backwards from the most recent reporting year.
Please enter dates in following format: day(DD)/month(MM)/year(YYYY) (i.e. 31/01/2001).

| Enter Periods that will be disclosed |
| --- |
| Sat 01 Aug 2015 - Sun 31 Jul 2016 |

## CC0.3

**Country list configuration**

Please select the countries for which you will be supplying data. If you are responding to the Electric Utilities module, this selection will be carried forward to assist you in completing your response.

| Select country |
| --- |
| Argentina |

| Select country |
| --- |
| Australia |
| Brazil |
| Canada |
| Chile |
| China |
| Ecuador |
| Finland |
| France |
| Germany |
| India |
| Ireland |
| Italy |
| Malawi |
| Malaysia |
| Mexico |
| Mozambique |
| Netherlands |
| New Zealand |
| Pakistan |
| Peru |
| South Africa |
| Spain |
| Sri Lanka |
| Swaziland |
| Switzerland |
| Tanzania |
| Thailand |
| Turkey |
| United Kingdom |
| United States of America |
| Uruguay |
| Vietnam |
| Zambia |

| Select country |
|---|
| Poland |
| Portugal |
| Belgium |
| Colombia |
| Venezuela |
| Nigeria |

**CC0.4**

**Currency selection**

Please select the currency in which you would like to submit your response. All financial information contained in the response should be in this currency.

GBP(£)

**CC0.6**

**Modules**

As part of the request for information on behalf of investors, companies in the electric utility sector, companies in the automobile and auto component manufacturing sector, companies in the oil and gas sector, companies in the information and communications technology sector (ICT) and companies in the food, beverage and tobacco sector (FBT) should complete supplementary questions in addition to the core questionnaire.
If you are in these sector groupings, the corresponding sector modules will not appear among the options of question CC0.6 but will automatically appear in the ORS navigation bar when you save this page. If you want to query your classification, please email respond@cdp.net.
If you have not been presented with a sector module that you consider would be appropriate for your company to answer, please select the module below in CC0.6.

**Further Information**

# Module: Management

## Page: CC1. Governance

## CC1.1

**Where is the highest level of direct responsibility for climate change within your organization?**

Board or individual/sub-set of the Board or other committee appointed by the Board

## CC1.1a

**Please identify the position of the individual or name of the committee with this responsibility**

The Group Human Resources Director who is accountable for Health, Safety and the Environment reports into the Chief Executive Officer.

## CC1.2

**Do you provide incentives for the management of climate change issues, including the attainment of targets?**

Yes

## CC1.2a

**Please provide further details on the incentives provided for the management of climate change issues**

| Who is entitled to benefit from these incentives? | The type of incentives | Incentivized performance indicator | Comment |
|---|---|---|---|
| Corporate executive team | Recognition (non-monetary) | Emissions reduction target<br>Energy reduction project<br>Efficiency project<br>Other: Behaviour | Illovo - 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 our operations. Climate change adaptation related indicators are directed at ensuring a sustainable cane supply; both within our own agricultural operations and from third party cane providers, and include water and crop resilience indicators. |

| Who is entitled to benefit from these incentives? | The type of incentives | Incentivized performance indicator | Comment |
|---|---|---|---|
| | | change related indicator | |
| All employees | Recognition (non-monetary) | Emissions reduction project<br>Energy reduction project<br>Efficiency project | At AB Sugar emissions and energy savings objectives are built into personal development plans. |
| Management group | Monetary reward | Emissions reduction project<br>Energy reduction project<br>Efficiency project | At AB Sugar emissions and energy savings objectives are built into personal development plans, which can result in financial bonuses for managers |

**Further Information**

## Page: CC2. Strategy

**CC2.1**

**Please select the option that best describes your risk management procedures with regard to climate change risks and opportunities**

Integrated into multi-disciplinary company wide risk management processes

**CC2.1a**

**Please provide further details on your risk management procedures with regard to climate change risks and opportunities**

| Frequency of monitoring | To whom are results reported? | Geographical areas considered | How far into the future are risks considered? | Comment |
|---|---|---|---|---|
| Six-monthly or more frequently | Board or individual/sub-set of the Board or committee appointed by the Board | ALL | > 6 years | All businesses provide regular reports for the Corporate Risk Management Group meetings held three times a year. Any significant risks identified outside of these reporting periods are reported through the normal reporting chain without timing limitations. All results are reported through the normal operating company structures. Individual HSE managers or other appropriate staff for each operating company report to the operating company boards. These results are then reported to the HR Director. The HR Director in turn reports the results to the Executive Board via the Corporate Risk Management Group Committee. |

**CC2.1b**

**Please describe how your risk and opportunity identification processes are applied at both company and asset level**

The scope of the process and how risks and opportunities are assessed:

ABF has a Corporate Risk Management Group which monitors all material risks throughout our global operations. This includes environmental, energy, climate, raw material & supply chain, reputational, consumer, product and customer risks and opportunities. Detailed risk and opportunity assessments are managed by individual operating companies at company level and for their main operating sites and satellite sites.

Important risks are reported to the Group CEO via the Group HR Director – who has day to day responsibility for HSE.

1. Risk Assessment at Company Level. The ABF Corporate Risk Management Group maintains regular liaison with individual operating companies. It identifies, analyses and evaluates the risks and opportunities arising from business activities and confirms the detailed measures intended to deal with major risks by averting, minimizing, transferring or retaining them.

Responsibility at operating company level is held by subsidiary company CEOs and each business has a named director and a named senior manager who are accountable for its environmental performance.

In addition, each subsidiary operating company completes a risk management form each year, signed off by their CEO and submitted to ABF, which highlights their main business risks and opportunities and includes environmental issues where appropriate.

2. Risk Assessment at Asset Level. Risk and opportunity assessments are cascaded down to asset level with each factory taking responsibility for assessing their

immediate environmental sensitivities and risks, usually related to effluent, water extraction, energy usage, emissions of dust and odours etc.

These risk assessments are reported via the named senior manager or Director to the subsidiary company CEO and to the Group CEO via the Group HR Director as per the company procedures.

## CC2.1c

**How do you prioritize the risks and opportunities identified?**

Each business is responsible for its own risk management assessment which is reported to the group's Director of Financial Control annually. Our decentralised business model empowers the boards and management of our businesses to identify, evaluate and manage the risks they face on a timely basis. Key risks and internal control procedures are reviewed at group level by the board. We require all businesses to implement appropriate levels of risk management to ensure compliance with all relevant legislation, our group health, safety and environment policies, our overriding business principles and group policies relating to them, taking into account business needs and local circumstances.

The board reviews annually the material financial and non-financial risks and opportunities facing our businesses and, on a rolling cycle, reviews the effectiveness of the risk management process and the resources that our individual businesses devote to them.

Criteria for Determining Materiality and Priorities. The criteria for materiality are judged locally and include in the following order:
a. Risk of legal non-compliance
b. Risk of physical environmental damage
c. Pollution or nuisance
d. Risk to reputation
e. Risk of offence to neighbours
f. Risk of media attention
g. Opportunity for enhanced financial return
h. Opportunity for new client acquisition
i. Opportunity for new revenue streams.

## CC2.1d

**Please explain why you do not have a process in place for assessing and managing risks and opportunities from climate change, and whether you plan to introduce such a process in future**

| Main reason for not having a process | Do you plan to introduce a process? | Comment |
|---|---|---|

**CC2.2**

**Is climate change integrated into your business strategy?**

Yes

**CC2.2a**

**Please describe the process of how climate change is integrated into your business strategy and any outcomes of this process**

ABF has a well-established framework of policies and processes to support its governance objectives. They are underpinned by one of the group's guiding business principles of 'encouraging ethical business'. Within this framework our governance procedures specify that environmental management including climate change represents a principal risk and uncertainty. Our greatest direct environmental impacts are:
• Use of energy and resultant GHG emissions
• Extraction of water and discharge of effluent
• Generation and disposal of liquid and solid waste
It is ABF's explicit global policy, in place since 2003, that as a minimum we increase our energy efficiency (and hence reduce carbon emissions) and improve our general environmental impact. Our broad strategy hasn't changed in that time and is not foreseen to change in the short term.
1. How the strategy has been influenced: Our climate change strategy is not only based on energy efficiency and on producing low-carbon products but also focuses on the abstraction of water and disposal of liquid and solid wastes. It is a top down strategy with each operating company developing a strategy in line with the Group's. Each business unit has responsibility for its environmental impact and for delivering in line with the principles laid out at group level. To this purpose, climate change data is collected and reported by the operating companies and is then collated at the top level to influence the Group strategy. Climate change risks and opportunities form a core part of daily operations and regular decision making processes. This responsibility is embedded within the core principles of the business, stated in our Environmental Policy (attached) and supported by our Board. Each operating company sets its own targets and goals in line with their business strategy; for example AB Agri has an internal sustainability target of 20% reduction in GHG emissions by 2023 based on 2013 levels.
As a result, each business has its own systems to focus on cutting GHG emissions, whether through improving energy efficiency, reducing resource use, providing low-carbon goods and services or generating and using renewable energy. When acquiring new businesses, we perform strict due diligence to ensure we understand the environmental impact of the operations before we purchase them. This allows us to plan any requisite investments.

2. Example:
As part of our business strategy we are expanding into climate change-driven new products and our Hull bioethanol plant opened in July 2013. Originally a joint venture with DuPont and BP, the facility converts UK feed-wheat (grown for animal feed) into bioethanol and animal feed. It has the capacity to produce up to 420

million litres of bioethanol and up to 500,000 tonnes of high-protein, high-fibre animal feed products.
A substantial business decision was made in May 2015 for ABF to assume BP's share in Vivergo, increasing its interest to 94%. This has allowed the company to push on and thrive in its markets. Renewable fuels inclusion in transport fuels are increasingly becoming more sought after and Vivergo were recently consulted on setting the Renewable Transport Fuel Obligation level at 9.75% for 2020.

3. The key aspects of climate change that have influenced our strategy are:
a. Legislative Change. Regional availability of energy, cost, and the influence of taxation and incentives, and regulation on the use of different energy supplies. We have had to identify cheaper and more sustainable supplies that have included but are not limited to developing our own CHP programmes. In the UK legislation continues to evolve with proposals to simplify the landscape, replacing the CRC by increasing the Climate Change Levy and implementing a new reporting framework in 2019. In the EU the Energy Efficiency Directive drove a range of interventions during the reporting year.
b. Physical Climate Change. Changes in climate have also placed pressures on the supply chain and we have had to source raw materials from new regions and change our strategy around current supply. Our operations have made efficiency gains to adapt to this new environment.
c. Societal Change. Stakeholders including governments, investors, regulators, suppliers and customers have required us to keep our business strategy up to date in line with climate change.

4. The most important components of the short term strategy (defined as 5 years) that have been influenced by climate change include innovation in efficient energy generation technologies and increasing bioethanol production which displaces carbon intensive vehicle fuels (as mentioned in point 2). Our 25 sugar factories use CHP technology to provide heat and electricity. 2 factories use Combined Cycle Gas Turbine technology. As a result around 80% of the energy in the fossil fuels is extracted and put to use in our factories, compared to standard power stations, which tend to extract around 40% of the energy in the fuel, wasting some 60%. Using this cleaner technology we generated power for our factories and exported 765 GWh of electricity to other users in 2015-2016. These two components of our short-term strategy represent substantial business investments of hundreds of millions of pounds.

5. Climate change has influenced the long term business strategy by putting a focus on generating our own renewable electricity, replacing fossil fuels. The outcomes of this strategy have led to considerable success over the years. This year over 56% of ABF's Scope 1 energy came from bagasse (a form of biomass; the renewable energy is generated from burning bagasse).
AB Sugar's long-term energy reduction target is to use 40% steam on feedstock even with fluctuations in climate. Improving efficiency 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 electricity networks, displacing fossil fuel powered energy.
Climate change has also accelerated our drive to use energy efficiently in our sugar factories; since 1980 British Sugar has reduced the number of UK factories from 18 to 4 whilst still processing the same tonnage of sugar beet but in a far more efficient way. In 1980 British Sugar used 1,116 GJ/100 tonnes of sugar. Now it has fewer but more efficient factories; the average energy usage is 481 GJ/100 tonnes sugar, a reduction of 57%.

6. How this is gaining strategic advantage over competitors: The climate change agenda is focusing ABF on reducing energy and waste costs and driving increased value to our customers. It is also creating commercial opportunities supporting the growth of several operating companies who are developing products (such as bioethanol) and services to help their clients respond to the climate change agenda.

## CC2.2b

### Please explain why climate change is not integrated into your business strategy

## CC2.2c

**Does your company use an internal price on carbon?**

Yes

## CC2.2d

**Please provide details and examples of how your company uses an internal price on carbon**

Our European sugar operations factor into our investment decisions an internal price of carbon based on the European carbon markets' EUA price and taking into account likely future trends.

## CC2.3

**Do you engage in activities that could either directly or indirectly influence public policy on climate change through any of the following? (tick all that apply)**

Direct engagement with policy makers
Trade associations
Funding research organizations
Other

## CC2.3a

**On what issues have you been engaging directly with policy makers?**

| Focus of legislation | Corporate Position | Details of engagement | Proposed legislative solution |
|---|---|---|---|
| Other: Distributed | Support | We accepted an invitation from the then UK Energy Minister to join a small | Develop a bespoke UK Government policy |

| Focus of legislation | Corporate Position | Details of engagement | Proposed legislative solution |
|---|---|---|---|
| generation | | Distributed Generation Contact Group (DECG). The group is tasked with assisting the Department of Energy and Climate Change (DECC) develop policy ideas that will stimulate the increased use of localised, low carbon generation in the economy. We have been active members of this group which has led to a commitment from DECC to develop a bespoke policy for gas fired Combined Heat and Power. | for new gas fired CHP |
| Clean energy generation | Support | We accepted an invitation from UK DECC to participate in the development of the Capacity Market with particular reference to Demand Side. This has led to a successful government auction and inclusion of small electricity generators including one of British Sugar's CHP plants. | Suggest amendments to the UK EMR process via secondary legislation under the Energy Act 2013 AND development of detailed rules for the Implementation Body (National Grid) |
| Other: Reducing waste in production & consumption | Support | ABF's UK Grocery Division is a signatory to the Courtauld Commitment. The Courtauld Commitment Phase 3 targets are: • Reduce household food and drink waste by 5% - this represents a 9% reduction in real terms to counter the expected increase in food purchased. • Reduce traditional grocery ingredient, product and packaging waste in the grocery supply chain by 3% - signatories will have to make an 8% reduction in real terms to counter the expected increase in production and sales. • Improve packaging design through the supply chain to maximise recycled content as appropriate, improve recyclability and deliver product protection to reduce food waste, while ensuring there is no increase in the carbon impact of packaging - signatories will have to make a 3% reduction in real terms to counter the expected sales increase. | |

**CC2.3b**

**Are you on the Board of any trade associations or provide funding beyond membership?**

Yes

**CC2.3c**

**Please enter the details of those trade associations that are likely to take a position on climate change legislation**

| Trade association | Is your position on climate change consistent with theirs? | Please explain the trade association's position | How have you, or are you attempting to, influence the position? |
|---|---|---|---|
| Combined Heat and Power Association (CHPA), now known as ADE – Association of Decentralised Energy | Consistent | The work of the CHPA includes: Advocacy: the CHPA 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. | An ABF representative is a Director on the Board of CHPA so adds influence to Association steering its objectives. An ABF representative also holds the Chair on the Industrial Forum so has the responsibility to steer the Forum in the direction of the overall policy of CHPA |
| Combustion Engineering Association (CEA) | Consistent | The CEA seeks to promote the science of combustion engineering and to promote best practice. | An ABF representative is a member of the Executive as Past Chairman of CEA so adds influence to the Association steering its objectives. |
| Renewable Energy Association (REA) | Consistent | 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. | An ABF representative is a Director on the Board of REA so adds influence to the Association steering its objectives. |
| Low Carbon Vehicle partnership (LCVP) | Consistent | The LCVP exists to accelerate a sustainable shift to lower carbon vehicles and fuels and create opportunities for UK business. | An ABF representative is a Director on the Board of LCVP so adds influence to the Association steering its objectives. |
| ePURE (European Bioethanol T.A.) | Consistent | 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. | An ABF representative is a Director on the Board of ePURE so adds influence to the Association steering its objectives. |
| Combustion Engineering Association (CEA) | Consistent | The CEA seeks to promote the science of combustion engineering and to promote best practice. | An ABF representative holds the Chair on the Integrated Pollution Prevention and Control and the Industrial Emissions Directive Committee so has the responsibility to steer the Forum in the direction of the overall policy of CEA |
| Food and Drink Federation (FDF) | Consistent | FDF members are committed to an industry-wide absolute target to reduce CO2 emissions by 35% by 2020 against a 1990 baseline | 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 |

| Trade association | Is your position on climate change consistent with theirs? | Please explain the trade association's position | How have you, or are you attempting to, influence the position? |
|---|---|---|---|
| | | | FDF. This group has engaged with the government ahead of the proposed changes in Business Taxation and the 20 50 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. |
| Food and Drink Federation (FDF) | Consistent | 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 | 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 |

**CC2.3d**

**Do you publicly disclose a list of all the research organizations that you fund?**

Yes

**CC2.3e**

**Please provide details of the other engagement activities that you undertake**

We actively engaged 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 example 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.
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.

## CC2.3f

**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.

Therefore, the following process is used to ensure alignment:
1. Performance is regularly reported to and reviewed by the board via the HR Director who has responsibility for HSE (HSE includes climate change policy)
2. Responsibility for ensuring that our direct and indirect policy engagement activities are relevant is devolved to the Chief Executive of each operating company who nominates a Director with specific responsibility for HSE matters
3. Operating companies 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 to represent a risk or an opportunity
4. Engagement activities are reviewed at least annually, to ensure alignment with business strategy and the policy landscape.

## CC2.3g

**Please explain why you do not engage with policy makers**

## Further Information

Attached: Environment policy (CC2.2a)

## Attachments

https://www.cdp.net/sites/2017/85/1085/Climate Change 2017/Shared Documents/Attachments/ClimateChange2017/CC2.Strategy/ABF Environment Policy April 2017.pdf

## Page: CC3. Targets and Initiatives

### CC3.1

**Did you have an emissions reduction or renewable energy consumption or production target that was active (ongoing or reached completion) in the reporting year?**

Intensity target

### CC3.1a

**Please provide details of your absolute target**

| ID | Scope | % of emissions in scope | % reduction from base year | Base year | Base year emissions covered by target (metric tonnes CO2e) | Target year | Is this a science-based target? | Comment |
|---|---|---|---|---|---|---|---|---|

### CC3.1b

**Please provide details of your intensity target**

| ID | Scope | % of emissions in scope | % reduction from base year | Metric | Base year | Normalized base year emissions covered by target | Target year | Is this a science-based target? | Comment |
|---|---|---|---|---|---|---|---|---|---|
| Int1 | Scope 1+2 (location-based) | 100% | 3.65% | Other: kgCO2e per tonne of sugar produced | 2010 | 636 | 2020 | No, and we do not anticipate setting one in the next 2 years | Target for British Sugar only Base year refers to the financial year 2009/2010 |
| Int2 | Other: Scope 1: Energy consumption | 67% | 20% | Other: Metric tonnes CO2e per tonne of sugar produced | 2011 | 0.14 | 2019 | No, and we do not anticipate setting one in the next 2 years | Illovo: Base Year refers to the financial year 2010/2011; Target Year refers to the financial year 2018/2019 |

**CC3.1c**

**Please also indicate what change in absolute emissions this intensity target reflects**

| ID | Direction of change anticipated in absolute Scope 1+2 emissions at target completion? | % change anticipated in absolute Scope 1+2 emissions | Direction of change anticipated in absolute Scope 3 emissions at target completion? | % change anticipated in absolute Scope 3 emissions | Comment |
|---|---|---|---|---|---|
| Int1 | Decrease | 3.65 | No change | 0 | |
| Int2 | Decrease | 1 | Increase | 1 | Target for Illovo: Sugar production is expected to increase. This will positively impact the proportion of renewable energy used in the sugar mills which will impact Scope 1+2 emissions positively. There will however be an increase in Scope 3 emissions since increased quantities of sugar will need to be distributed from factories to customers. |

## CC3.1d

### Please provide details of your renewable energy consumption and/or production target

| ID | Energy types covered by target | Base year | Base year energy for energy type covered (MWh) | % renewable energy in base year | Target year | % renewable energy in target year | Comment |
|---|---|---|---|---|---|---|---|

## CC3.1e

### For all of your targets, please provide details on the progress made in the reporting year

| ID | % complete (time) | % complete (emissions or renewable energy) | Comment |
|---|---|---|---|
| Int1 | 60% | 0% | This is significantly above the target due to the fact we had a very small crop and suffered significant energy penalties due to the need to maximise sugar extraction. If we had not already embedded the majority of the projects which make up the 3.65% savings target we would have been higher than the intensity achieved. |
| Int2 | 75% | 0% | Although limited progress has been made against this target there are a number of energy projects currently being planned and rolled out, such as the Sezela Coal and Energy Project, which will facilitate us in achieving our goal. In the year under review, drought conditions and project trials increased the quantity of coal that was burnt by the entities. These sites are expected to return to normal performance levels once the cane crop has returned to normal levels. |

## CC3.1f

Please explain (i) why you do not have a target; and (ii) forecast how your emissions will change over the next five years

## CC3.2

**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?**

No

## CC3.2a

Please 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 | Description of product/Group of products | Are you reporting low carbon product/s or avoided emissions? | Taxonomy, project or methodology used to classify product/s as low carbon or to calculate avoided emissions | % revenue from low carbon product/s in the reporting year | % R&D in low carbon product/s in the reporting year | Comment |
|---|---|---|---|---|---|---|

## CC3.3

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

Yes

## CC3.3a

**Please identify the total number of projects at each stage of development, and for those in the implementation stages, the estimated CO2e savings**

| Stage of development | Number of projects | Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *) |
|---|---|---|
| Under investigation | | |
| To be implemented* | 0 | 0 |
| Implementation commenced* | 2 | |
| Implemented* | 11 | 10600 |
| Not to be implemented | | |

## CC3.3b

**For those initiatives implemented in the reporting year, please provide details in the table below**

| Activity type | Description of activity | Estimated annual CO2e savings (metric tonnes CO2e) | Scope | Voluntary/ Mandatory | Annual monetary savings (unit currency - as specified in CC0.4) | Investment required (unit currency - as specified in CC0.4) | Payback period | Estimated lifetime of the initiative | Comment |
|---|---|---|---|---|---|---|---|---|---|
| Energy efficiency: Processes | In 2015 Azucarera invested over £1.5m to improve the energy efficiency of their factories. Projects such as instlallation of new heat exchangers, remiodelling of existing | 7038 | Scope 1<br>Scope 2 (location-based) | Voluntary | 500000 | 1500000 | 4-10 years | 16-20 years | |

| Activity type | Description of activity | Estimated annual CO2e savings (metric tonnes CO2e) | Scope | Voluntary/ Mandatory | Annual monetary savings (unit currency - as specified in CC0.4) | Investment required (unit currency - as specified in CC0.4) | Payback period | Estimated lifetime of the initiative | Comment |
|---|---|---|---|---|---|---|---|---|---|
| | pipe layout to improve their effectiveness and the installation of vapour recovery stations have all contributed to a significant improvements in energy usage. | | | | | | | | |
| Energy efficiency: Processes | 2015 saw the introduction of the ABSugar Energy Framework. This new focus on the riguous mapping of all the uses of electricity within a factory, identifying a wide range of small incremental improvements to reduce overall electrical energy by up to 5%. Newark factory in British Sugar piloted the programme, saving £70k in Juice run energy and this same programme is not being rolled out across the 27 factories within the group. | 985 | Scope 1 Scope 2 (location-based) | Voluntary | 70000 | 0 | <1 year | 16-20 years | |
| Energy efficiency: Processes | In 2015 British Sugar invested £400k in a coal storage pad for its sugar factory in Norfolk, UK. Recognising that an improvement in storage of coal conditions would significantly reduce losses and improve overall efficiency the factory invested in a new storage pad and drainage in order to reduce the losses of coal and improve its retention of calorific value. | 1430 | Scope 1 | Voluntary | 60000 | 400000 | 4-10 years | 16-20 years | |
| Low carbon energy | British Sugar has invested £16m in a new anaerobic digestion plant at | | Scope 1 Scope 2 | Voluntary | 2400000 | 16000000 | 4-10 years | 16-20 years | |

| Activity type | Description of activity | Estimated annual CO2e savings (metric tonnes CO2e) | Scope | Voluntary/ Mandatory | Annual monetary savings (unit currency - as specified in CC0.4) | Investment required (unit currency - as specified in CC0.4) | Payback period | Estimated lifetime of the initiative | Comment |
|---|---|---|---|---|---|---|---|---|---|
| installation | Bury St Edmunds, Suffolk. Commissioned in summer 2016, the plant produces biogas from the pressed sugar beet pulp that is produced alongside the sugar-making process. The methane generated from the biogas is fed into a combined heat and power plant (CHP), generating green electricity with additional heat recovery from the exhaust. The plant is expected to use around 97,000 tonnes of pressed pulp each year and export 38GWh of electricity to the national grid, making a contribution to the UK's renewable energy targets under the Renewable Energy Directive. | | (location-based) | | | | | | |
| Energy efficiency: Processes | In 2015 we implemented 28 specific initiatives ranging from a large-scale investment in a new compressed air station at Nakambala, Zambia, to improvements in our preventive maintenance programmes across all British Sugar factories. | | Scope 1 Scope 2 (location-based) | Voluntary | | | | | |
| Energy efficiency: Building services | George Weston Food site (Australia): Upgrade in the lighting systems to LEDs and introduction of sensor controls | 100 | Scope 2 (location-based) | Voluntary | | | | | |
| Energy efficiency: | Westmill: Voltage reduction from 250V to 222V, not only reducing the | 32 | Scope 2 (location- | Voluntary | | | | | |

| Activity type | Description of activity | Estimated annual CO2e savings (metric tonnes CO2e) | Scope | Voluntary/ Mandatory | Annual monetary savings (unit currency - as specified in CC0.4) | Investment required (unit currency - as specified in CC0.4) | Payback period | Estimated lifetime of the initiative | Comment |
|---|---|---|---|---|---|---|---|---|---|
| Processes | amount of electricity but also increasing the life expectancy of equipment | | based) | | | | | | |
| Transportation: use | In Langwathby, Cumbria, we have leased a mill next to one of our major customers in order to avoid having to drive "tens of thousands" of products accross the country from our own mill in North Yorkshire. This has saved us from driving around 350000 miles | 515 | Scope 1 | Voluntary | | | | | |
| Low carbon energy installation | We have installed solar panels on the roof of our Peterborough office to provide an estimated 6% of our energy needs. | | Scope 1 | Voluntary | | | | | |
| Energy efficiency: Processes | AB Mauri: In our Palmira plant in Colombia we conducted a focused programme of energy reduction, targeting the largest uses in the plant. In the last year it achieved a 13% reduction in electricity use,most of which was achieved through optimisation of air in the fermentation stage, resulting in reduced energy use | 159 | Scope 1<br>Scope 2 (location-based) | Voluntary | | | | | |
| Energy efficiency: Building services | In a number of plants we have purchased and installed Variable Speed Drives, which have significantly reduced our energy usage. Our plant in Hull introduced VSDs on the cooling towers, | 400 | Scope 2 (location-based) | Voluntary | | | | | |

| Activity type | Description of activity | Estimated annual CO2e savings (metric tonnes CO2e) | Scope | Voluntary/ Mandatory | Annual monetary savings (unit currency - as specified in CC0.4) | Investment required (unit currency - as specified in CC0.4) | Payback period | Estimated lifetime of the initiative | Comment |
|---|---|---|---|---|---|---|---|---|---|
| | reducing the electricity used per tonne of product by 3% (equivalent to an annual reduction of 400 tonnes of CO2. | | | | | | | | |

**CC3.3c**

**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. |

**CC3.3d**

**If you do not have any emissions reduction initiatives, please explain why not**

**Further Information**

## Page: CC4. Communication

**CC4.1**

**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 | Status | Page/Section reference | Attach the document | Comment |
|---|---|---|---|---|
| In mainstream reports (including an integrated report) but have not used the CDSB Framework | Complete | 46 | https://www.cdp.net/sites/2017/85/1085/Climate Change 2017/Shared Documents/Attachments/CC4.1/2016_annual_report.pdf | |
| In voluntary communications | Complete | 19 | https://www.cdp.net/sites/2017/85/1085/Climate Change 2017/Shared Documents/Attachments/CC4.1/2016_corporate_responsibility_report.pdf | |

**Further Information**

# Module: Risks and Opportunities

## Page: CC5. Climate Change Risks

**CC5.1**

**Have you identified any inherent climate change risks that have the potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply**

Risks driven by changes in regulation
Risks driven by changes in physical climate parameters
Risks driven by changes in other climate-related developments

**CC5.1a**

**Please describe your inherent risks that are driven by changes in regulation**

| Risk driver | Description | Potential impact | Timeframe | Direct/ Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| Carbon taxes | Increased direct and indirect costs associated with existing and new carbon taxes impacting ABF‘s operations. One example of a carbon tax is the UK’s CRC scheme. We anticipate other countries adopting similar schemes in the near future. | Increased operational cost | 1 to 3 years | Direct | Virtually certain | Low | There are an increased number of carbon tax schemes implemented by governments around the globe to combat climate change and increase national tax revenue. Financial implications of the current UK based CRC 2016/17 compliance period can be calculated based on a forecast allowance cost of £17.20 subject to the window in which a purchase is made. It is estimated to be around £2m. The allowance costs are projected to rise year on year in line with inflation, and in line with changes in the scope of the scheme that may | To manage the compliance risks and increased costs arising from carbon taxation, ABF is currently undertaking the following actions: 1. Actively engages with policy makers through trade associations, direct engagement and other activities to monitor the policy landscape in countries where ABF is active and has operations 2. Improve energy performance and reduce GHG emissions by investing in energy efficiency and carbon reduction programmes (e.g. a £10m investment at the UK Cantley sugar factory that reduced heavy fuel oil use by 40%) 3. Retains expert | In addition to increased internal administrative costs which are integrated into the existing budget, ABF spends approximately £20,000 per annum on consultancy and advisory services in the UK alone. |

| Risk driver | Description | Potential impact | Timeframe | Direct/ Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | result in operations previously excluded coming into the scope of the scheme in the future. | consultants at country level to ensure compliance and drive effective administration. 4. Purchased forecasted allowances to the end of the phase to reduce the impact of year on year increases in allowance costs. | |
| Cap and trade schemes | Increased administrative burdens and costs associated with existing and new cap and trade schemes where ABF has large manufacturing facilities or operations. In addition, without a comprehensive international agreement, inconsistent climate change policies may result in inconsistent schemes and market distortions. | Increased operational cost | 3 to 6 years | Direct | About as likely as not | Low | Scope 1 emissions impacted by cap and trade schemes would incur direct costs from the procurement of allowances subject to the prevailing scheme rate. There would also be an indirect impact on costs of Scope 2 energy. | ABF is active in managing all regulatory risk by engaging with governments and NGOs to ensure the views of our stakeholders are represented and we try to anticipate, and contribute to, important changes in all policy matters. We manage this through our corporate staff, membership of relevant trade organisations and with input from expert consultants. | Whilst some of these costs are absorbed into existing budgets we estimate that the costs associated with monitoring the policy universe and potential developments that may impact on our business are approximately £100,000 per annum |

**CC5.1b**

**Please describe your inherent risks that are driven by changes in physical climate parameters**

| Risk driver | Description | Potential impact | Timeframe | Direct/ Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| Change in precipitation extremes and droughts | Changes in precipitation and temperatures may impact on availability of key agricultural raw materials and commodities in the supply chain. This risk has the potential to increase operational cost, disrupt the value chain and impact on our ability to do business. | Reduction/disruption in production capacity | >6 years | Indirect (Supply chain) | More likely than not | High | Potential increase in costs arising from lack of access to raw materials of sufficient quality could impact revenues significantly depending on the severity and the location of the change in climate. | Measures used to manage the risk include: - Conducting risk assessments - Devising procurement strategies to spread risk - Analysing water risk at country level - Investing in water efficiency programmes at local level - Investing in programmes to help farmers respond to climate change (e.g. Twinings support the Ethical Tea Programme's initiative). As demonstrated with these examples, multiple initiatives are run | Managing these costs is best devolved to operating companies that are closest to their supply chains. Given the materiality of the risk, management is an ongoing requirement with costs embedded into business as usual activities. Additional costs do arise as and when the corporate centre conducts strategic and tactical analysis to support the operating companies. |

| Risk driver | Description | Potential impact | Timeframe | Direct/ Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | at operating company level to identify and mitigate these risks. This approach is in line with the group management philosophy of operating companies making decisions locally. We recognise that we operate in a number of severely water-stressed geographies, making water conservation a priority. We acknowledge that our operations may impact on surrounding communities, and take full responsibility for our water use. Ensuring access to a reliable supply of water is a critical strategic priority | |

| Risk driver | Description | Potential impact | Timeframe | Direct/ Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | for our business, both to meet our needs and to ensure surrounding communities can meet theirs. We undertake water abstraction operations in compliance with existing water-use licences, which are issued by the relevant authorities within the countries of operation. | |

**CC5.1c**

**Please describe your inherent risks that are driven by changes in other climate-related developments**

| Risk driver | Description | Potential impact | Timeframe | Direct/ Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| Reputation | With increased scrutiny of climate change and sustainability performance by | Reduced demand for goods/services | Up to 1 year | Direct | Unlikely | Low | The costs associated with reputational damage are likely to vary | This risk is managed using a variety of methods. (1) Compliance with | The costs associated with managing this risk are currently low but increasing. |

| Risk driver | Description | Potential impact | Timeframe | Direct/ Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| | investors, NGOs and across the value chain we recognise that there is a risk that our performance is not communicated effectively or valued sufficiently thereby reducing demand for our goods and services. | | | | | | subject to the nature of the issue and the number of operating companies impacted. We note that reputational damage, in particular in business to consumer markets, could impact revenues in single digit percentage terms i.e. between 1% and 9%. | the group's Environment Policy and annual reporting of environmental impact. (2) farmer assistance and support programmes and driving ethical and sustainable procurement practices through the value chain (3) Ongoing investment in measuring and reporting the group's Scope 1,2 and 3 greenhouse gas emissions ahead of regulation and in line with industry practice (4) Substantial investment is made to improve environmental risk management, with a focus on reducing CO2e emissions (5) We engage with governments and NGOs to ensure the views of our | Costs are typically attributed to the corporate centre. For example, to manage our climate change and GHG reporting activities, up to 6 employees are involved part time. Additional investment amounting to approximately £100,000 for the reporting period has been required to deliver the data collection and reporting infrastructure required to report our climate change data. |

| Risk driver | Description | Potential impact | Timeframe | Direct/ Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | stakeholders are represented and we try to anticipate and be ahead of reporting trends for information relating to climate change. | |

CC5.1d

Please explain why you do not consider your company to be exposed to inherent risks driven by changes in regulation that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC5.1e

Please explain why you do not consider your company to be exposed to inherent risks driven by changes in physical climate parameters that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC5.1f

Please explain why you do not consider your company to be exposed to inherent risks driven by changes in other climate-related developments that have the potential to generate a substantive change in your business operations, revenue or expenditure

**Further Information**

## Page: CC6. Climate Change Opportunities

### CC6.1

**Have you identified any inherent climate change opportunities that have the potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply**

Opportunities driven by changes in regulation
Opportunities driven by changes in physical climate parameters
Opportunities driven by changes in other climate-related developments

### CC6.1a

**Please describe your inherent opportunities that are driven by changes in regulation**

| Opportunity driver | Description | Potential impact | Timeframe | Direct/Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| Fuel/energy taxes and regulations | Increasing the demand for the bioethanol which we manufacture generates an additional | Increased demand for existing products/services | >6 years | Direct | Virtually certain | Low-medium | The Wissington sugar factory creates 55,000 tonnes (70 million litres) of | As one of the UK's leading agriprocessors with an interest in innovative new technology, British Sugar | Costs of management are integrated into existing budgets for ongoing projects. The |

| Opportunity driver | Description | Potential impact | Timeframe | Direct/Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| | income stream for our business. The UK has set itself a target of 10% of transport fuel to come from renewable sources by 2020. This is in response to comply with a legally binding EU target to source 15% of energy from renewables. | | | | | | bioethanol each year from the residual sugar syrup products from sugar beet processing. This opportunity is managed commercially and generates revenues from the sale of bioethanol subject to the prevailing market conditions. | began production of bioethanol in September 2007 making it the first company to manufacture bioethanol in the UK. The Wissington factory is managed under the AB Sugar operating company with its separate p&l and organisational governance processes. | Vivergo joint venture required an initial investment of £350million. |
| Carbon taxes | Carbon taxation schemes create additional financial incentives to reduce energy consumption and cut greenhouse gas emissions. In the UK, for example, the | Reduced operational costs | 1 to 3 years | Direct | Very likely | Low-medium | The estimated financial implications of the opportunity to pay less 'carbon tax' for one of ABF's operating companies is over £100,000, This is calculated | Rigorous analysis of energy efficiency activities in operations covered by the CRC. Only a subset of ABF operations report to the CRC (offices and retail operations) and the scheme | The costs for managing and implementing the emissions reduction strategy in 3.3.b is around £1.3m. |

| Opportunity driver | Description | Potential impact | Timeframe | Direct/Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| | Climate Change Levy and the Carbon Reduction Commitment increase the cost of energy providing further incentive for energy efficiency and hence CO2 reduction investments. | | | | | | based on the annual energy savings achieved in the facilities and the carbon allowance price under the UK's CRC scheme. | requires reporting of emissions arising from electricity and natural gas. | |

**CC6.1b**

**Please describe your inherent opportunities that are driven by changes in physical climate parameters**

| Opportunity driver | Description | Potential impact | Timeframe | Direct/ Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| Change in precipitation extremes and droughts | Climate change is already impacting on precipitation patterns which has an impact on the | Reduced operational costs | >6 years | Direct | Very likely | Medium | By managing scarce resources ahead of our competitors ABF's operating companies will | Our companies have or are creating programmes of activity such as water recycling to address their | In line with our approach of making decisions locally, costs associated with this opportunity are mainly borne at operating company |

| Opportunity driver | Description | Potential impact | Timeframe | Direct/ Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| | availability and cost of water in our supply chain and to our operations. By managing our water use and identifying effective mitigation and adaptation activities, we may be able to reduce costs and create competitive advantage in comparison to our competitors. | | | | | | be better placed to manage supply and access to key raw materials, and also reduce water related costs. Either of the above will enable ABF to manage operational costs and may provide a competitive advantage. | particular water issues and increase water efficiency. Recent and current activities include: • developing our understanding of global water stress through the use of a water risk management tool; • publicly disclosing information on our water use and how we are addressing water scarcity; • maintaining our focus on sugar production, our largest user of water, and developing more efficient ways to reduce water consumption; • completing water footprints on all sugar processing facilities in Africa, China, the UK and Spain; • improving how we collect data on water usage and increasing our | level and embedded as business as usual costs. At group level, management costs are also embedded into business as usual costs. However, additional costs arise when conducting strategic/tactical analysis to support the operating companies. |

| Opportunity driver | Description | Potential impact | Timeframe | Direct/ Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | knowledge of water throughout a product lifecycle; and • engaging with external stakeholders within the river catchments where we operate. For example, Illovo Sugar is working with regional catchment councils in Africa. | |

**CC6.1c**

**Please describe your inherent opportunities that are driven by changes in other climate-related developments**

| Opportunity driver | Description | Potential impact | Timeframe | Direct/ Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| | With increasing demand for low carbon products and taking advantage of the requirement for home grown renewable energy to | Increased demand for existing products/services | 3 to 6 years | Direct | Virtually certain | High | This opportunity generates revenues from the sale of bioethanol. Running at full capacity of 420 million litres a | This opportunity is run as a joint venture with Dupont. The opportunity is managed as a stand alone entity (Vivergo Fuels is a UK registered | The total investment required in the facility is in the region of £350million. |

| Opportunity driver | Description | Potential impact | Timeframe | Direct/ Indirect | Likelihood | Magnitude of impact | Estimated financial implications | Management method | Cost of management |
|---|---|---|---|---|---|---|---|---|---|
| | support the UK economy, ABF operates a Bioethanol facility in Hull. The highly efficient new plant was officially opened in July 2013 and converts UK feed-wheat (wheat grown for animal feed) into bioethanol and animal feed. | | | | | | year, Vivergo generated over £40 million in revenue in the previous reporting year. | company) complete with its own governance structure. This entity produces high quality bioethanol which it sells into the market with the objective of delivering a commercial return. Financial performance is managed through its own internal governance and reporting structures, which is then reported to its key investor stakeholders, including ABF, in line with their reporting cycles. | |

## CC6.1d

**Please explain why you do not consider your company to be exposed to inherent opportunities driven by changes in regulation that have the potential to generate a substantive change in your business operations, revenue or expenditure**

CC6.1e

Please explain why you do not consider your company to be exposed to inherent opportunities driven by changes in physical climate parameters that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC6.1f

Please explain why you do not consider your company to be exposed to inherent opportunities driven by changes in other climate-related developments that have the potential to generate a substantive change in your business operations, revenue or expenditure

**Further Information**

# Module: GHG Emissions Accounting, Energy and Fuel Use, and Trading

## Page: CC7. Emissions Methodology

**CC7.1**

**Please provide your base year and base year emissions (Scopes 1 and 2)**

| Scope | Base year | Base year emissions (metric tonnes CO2e) |
|---|---|---|
| Scope 1 | Wed 01 Sep 2010 - Wed 31 Aug 2011 | 2694910 |

| Scope | Base year | Base year emissions (metric tonnes CO2e) |
|---|---|---|
| | | |
| Scope 2 (location-based) | Wed 01 Sep 2010 - Wed 31 Aug 2011 | 911386 |
| Scope 2 (market-based) | Fri 28 Apr 2017 - Fri 28 Apr 2017 | |

**CC7.2**

**Please give the name of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions**

| Please select the published methodologies that you use |
|---|
| Defra Voluntary Reporting Guidelines |
| The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition) |

**CC7.2a**

**If you have selected "Other" in CC7.2 please provide details of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions**

**CC7.3**

**Please give the source for the global warming potentials you have used**

| Gas | Reference |
|---|---|
| CO2 | IPCC Fourth Assessment Report (AR4 - 100 year) |
| CH4 | IPCC Fourth Assessment Report (AR4 - 100 year) |
| N2O | IPCC Fourth Assessment Report (AR4 - 100 year) |

**CC7.4**

**Please give the emissions factors you have applied and their origin; alternatively, please attach an Excel spreadsheet with this data at the bottom of this page**

| Fuel/Material/Energy | Emission Factor | Unit | Reference |
|---|---|---|---|
| Other: | | | |

**Further Information**

**Attachments**

https://www.cdp.net/sites/2017/85/1085/Climate Change 2017/Shared Documents/Attachments/ClimateChange2017/CC7.EmissionsMethodology/ABF emission factors 2016.xlsx

## Page: CC8. Emissions Data - (1 Aug 2015 - 31 Jul 2016)

**CC8.1**

**Please select the boundary you are using for your Scope 1 and 2 greenhouse gas inventory**

Other: Operational control of those entities where we have more 50% ownership

## CC8.2

**Please provide your gross global Scope 1 emissions figures in metric tonnes CO2e**

2433205

## CC8.3

**Please describe your approach to reporting Scope 2 emissions**

| Scope 2, location-based | Scope 2, market-based | Comment |
|---|---|---|
| We are reporting a Scope 2, location-based figure | We have operations where we are able to access electricity supplier emissions factors or residual emissions factors, but are unable to report a Scope 2, market-based figure | |

## CC8.3a

**Please provide your gross global Scope 2 emissions figures in metric tonnes CO2e**

| Scope 2, location-based | Scope 2, market-based (if applicable) | Comment |
|---|---|---|
| 1019034 | | We hold contractual instruments for our electricity supply in some countries including the UK. We do not consider the benefits of calculating market - as well as location-based Scope 2 emissions to outweigh the costs given the nature of our decentralised business means that calculating Scope 2 emissions from all our operating companies and collecting their individual supplier-specific emissions factors would be a complex task. |

**CC8.4**

**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?**

Yes

**CC8.4a**

**Please provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure**

| Source | Relevance of Scope 1 emissions from this source | Relevance of location-based Scope 2 emissions from this source | Relevance of market-based Scope 2 emissions from this source (if applicable) | Explain why the source is excluded |
|---|---|---|---|---|
| Landlord - controlled office emissions | Emissions are not relevant | Emissions are not relevant | | The ABF property estate contains a small number of small offices where accurate data are difficult to collect. As these sources are not material we have excluded them from our calculations. Their likely scale is not a significant part of our global emissions. |

## CC8.5

**Please estimate the level of uncertainty of the total gross global Scope 1 and 2 emissions figures that you have supplied and specify the sources of uncertainty in your data gathering, handling and calculations**

| Scope | Uncertainty range | Main sources of uncertainty | Please expand on the uncertainty in your data |
|---|---|---|---|
| Scope 1 | More than 2% but less than or equal to 5% | Assumptions<br>Extrapolation<br>Metering/ Measurement Constraints | Over 80% of our emissions come from the direct combustion of fuels within our factory boilers to raise steam and electricity. As can be seen there is a large range of fuels and countries so we have used our best endeavours to use apppropriate calorific values. The accuracy of our data has been reviewed by Ernst&Young who are happy to provide limited assurance on their accuracy to a 5% level. |
| Scope 2 (location-based) | More than 2% but less than or equal to 5% | Assumptions<br>Metering/ Measurement Constraints | There is some uncertainty in consumption data owing to inaccuracy in meter readings and measurements. However, we do have a high level of confidence in these data and they have been reviewed by Ernst&Young who are happy to provide limited assurance to a 5% level. |
| Scope 2 (market-based) | | | |

## CC8.6

**Please indicate the verification/assurance status that applies to your reported Scope 1 emissions**

Third party verification or assurance process in place

## CC8.6a

**Please provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements**

| Verification or assurance cycle in place | Status in the current reporting year | Type of verification or assurance | Attach the statement | Page/section reference | Relevant standard | Proportion of reported Scope 1 emissions verified (%) |
|---|---|---|---|---|---|---|
| Annual process | Complete | Limited assurance | https://www.cdp.net/sites/2017/85/1085/Climate Change 2017/Shared Documents/Attachments/CC8.6a/2016-corporate-responsibility-report.pdf | Page 90 | ISAE3000 | 100 |

## CC8.6b

**Please provide further details of the regulatory regime to which you are complying that specifies the use of Continuous Emission Monitoring Systems (CEMS)**

| Regulation | % of emissions covered by the system | Compliance period | Evidence of submission |
|---|---|---|---|

## CC8.7

**Please indicate the verification/assurance status that applies to at least one of your reported Scope 2 emissions figures**

Third party verification or assurance process in place

## CC8.7a

Please provide further details of the verification/assurance undertaken for your location-based and/or market-based Scope 2 emissions, and attach the relevant statements

| Location-based or market-based figure? | Verification or assurance cycle in place | Status in the current reporting year | Type of verification or assurance | Attach the statement | Page/Section reference | Relevant standard | Proportion of reported Scope 2 emissions verified (%) |
|---|---|---|---|---|---|---|---|
| Location-based | Annual process | Complete | Limited assurance | https://www.cdp.net/sites/2017/85/1085/Climate Change 2017/Shared Documents/Attachments/CC8.7a/2016_corporate_responsibility_report.pdf | Page 90 | ISAE3000 | 100 |

**CC8.8**

**Please identify if any data points have been verified as part of the third party verification work undertaken, other than the verification of emissions figures reported in CC8.6, CC8.7 and CC14.2**

| Additional data points verified | Comment |
|---|---|
| No additional data verified | |

**CC8.9**

**Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?**

Yes

**CC8.9a**

**Please provide the emissions from biologically sequestered carbon relevant to your organization in metric tonnes CO2**

4321128

**Further Information**

## Page: CC9. Scope 1 Emissions Breakdown - (1 Aug 2015 - 31 Jul 2016)

### CC9.1

**Do you have Scope 1 emissions sources in more than one country?**

Yes

### CC9.1a

**Please break down your total gross global Scope 1 emissions by country/region**

| Country/Region | Scope 1 metric tonnes CO2e |
|---|---|
| Africa | 336766 |
| Australasia | 84160 |
| China | 358758 |
| North America | 56121 |
| Rest of world | 376666 |
| South America | 42489 |
| United Kingdom | 1178244 |

## CC9.2

**Please indicate which other Scope 1 emissions breakdowns you are able to provide (tick all that apply)**

By business division

## CC9.2a

**Please break down your total gross global Scope 1 emissions by business division**

| Business division | Scope 1 emissions (metric tonnes CO2e) |
|---|---|
| Agriculture | 41082 |
| Grocery | 235840 |
| Ingredients | 269578 |
| Retail | 18167 |
| Sugar | 1868537 |

## CC9.2b

**Please break down your total gross global Scope 1 emissions by facility**

| Facility | Scope 1 emissions (metric tonnes CO2e) | Latitude | Longitude |
|---|---|---|---|

CC9.2c

Please break down your total gross global Scope 1 emissions by GHG type

| GHG type | Scope 1 emissions (metric tonnes CO2e) |
|---|---|
| | |

CC9.2d

Please break down your total gross global Scope 1 emissions by activity

| Activity | Scope 1 emissions (metric tonnes CO2e) |
|---|---|
| | |

**Further Information**

## Page: CC10. Scope 2 Emissions Breakdown - (1 Aug 2015 - 31 Jul 2016)

**CC10.1**

**Do you have Scope 2 emissions sources in more than one country?**

Yes

## CC10.1a

**Please break down your total gross global Scope 2 emissions and energy consumption by country/region**

| Country/Region | Scope 2, location-based (metric tonnes CO2e) | Scope 2, market-based (metric tonnes CO2e) | Purchased and consumed electricity, heat, steam or cooling (MWh) | Purchased and consumed low carbon electricity, heat, steam or cooling accounted in market-based approach (MWh) |
|---|---|---|---|---|
| Africa | 151496 | | 233330 | |
| Australasia | 141936 | | 184063 | |
| China | 148446 | | 228531 | |
| North America | 58410 | | 140031 | |
| Rest of world | 137783 | | 462594 | |
| South America | 52598 | | 174668 | |
| United Kingdom | 328364 | | 1119081 | |

## CC10.2

**Please indicate which other Scope 2 emissions breakdowns you are able to provide (tick all that apply)**

By business division

## CC10.2a

**Please break down your total gross global Scope 2 emissions by business division**

| Business division | Scope 2, location-based (metric tonnes CO2e) | Scope 2, market-based (metric tonnes CO2e) |
|---|---|---|
| Agriculture | 32391 | |
| Grocery | 257122 | |
| Ingredients | 274240 | |
| Retail | 152248 | |
| Sugar | 303033 | |

## CC10.2b

**Please break down your total gross global Scope 2 emissions by facility**

| Facility | Scope 2, location-based (metric tonnes CO2e) | Scope 2, market-based (metric tonnes CO2e) |
|---|---|---|

## CC10.2c

**Please break down your total gross global Scope 2 emissions by activity**

| Activity | Scope 2, location-based (metric tonnes CO2e) | Scope 2, market-based (metric tonnes CO2e) |
|---|---|---|

**Further Information**

## Page: CC11. Energy

### CC11.1

**What percentage of your total operational spend in the reporting year was on energy?**

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

### CC11.2

**Please state how much heat, steam, and cooling in MWh your organization has purchased and consumed during the reporting year**

| Energy type | MWh |
|---|---|
| Heat | 0 |
| Steam | 699598 |
| Cooling | 0 |

### CC11.3

**Please state how much fuel in MWh your organization has consumed (for energy purposes) during the reporting year**

20008057

### CC11.3a

**Please complete the table by breaking down the total "Fuel" figure entered above by fuel type**

| Fuels | MWh |
|---|---|
| Natural gas | 6265583 |
| Diesel/Gas oil | 43519 |
| Distillate fuel oil No 2 | 62273 |
| Distillate fuel oil No 5 | 153807 |
| Kerosene | 501 |
| Motor gasoline | 425 |
| Bituminous coal | 2139299 |
| Liquefied petroleum gas (LPG) | 137060 |
| Biogas | 161429 |
| Other: Bagasse and other biomas | 11044159 |

## CC11.4

**Please provide details of the electricity, heat, steam or cooling amounts that were accounted at a low carbon emission factor in the market-based Scope 2 figure reported in CC8.3a**

| Basis for applying a low carbon emission factor | MWh consumed associated with low carbon electricity, heat, steam or cooling | Emissions factor (in units of metric tonnes CO2e per MWh) | Comment |
|---|---|---|---|
| No purchases or generation of low carbon electricity, heat, steam or cooling accounted with a low carbon emissions factor | 0 | | |

## CC11.5

**Please report how much electricity you produce in MWh, and how much electricity you consume in MWh**

| Total electricity consumed (MWh) | Consumed electricity that is purchased (MWh) | Total electricity produced (MWh) | Total renewable electricity produced (MWh) | Consumed renewable electricity that is produced by company (MWh) | Comment |
|---|---|---|---|---|---|
| | 1842699 | | | | We do not have the information corporately to allow completion of the other data fields. |

**Further Information**

## Page: CC12. Emissions Performance

**CC12.1**

**How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to the previous year?**

Increased

**CC12.1a**

**Please 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**

| Reason | Emissions value (percentage) | Direction of change | Please explain and include calculation |
|---|---|---|---|
| Emissions reduction activities | 0.3 | Decrease | Emissions reduction activities described in 3.3a and 3.3b. Total emissions reductions from initiatives equalled 10,660 tCO2e, while last year's total emissions were 3,529,339. 10,660/3,529,339 = 0.3% |
| Divestment | | | |
| Acquisitions | | | |

| Reason | Emissions value (percentage) | Direction of change | Please explain and include calculation |
|---|---|---|---|
| Mergers | | | |
| Change in output | | Decrease | It is our explicit global policy, which has been in place for over a decade, to improve our energy efficiency and reduce our overall environmental impact. We have a 5% decrease in our scope 1 emissions. The emission reductions are achieved by a mixture of new technologies and factors outside our control. The majority of our energy usage is in our sugar activities. Due to the reduction in crops as a result of the shorter season and drier weather, we noticed a decrease in scope 1 emissions. |
| Change in methodology | | | |
| Change in boundary | 11 | | ABF assumed majority share of Vivergo and it is therefore now accounted for in our Scope 1 and 2 emissions. |
| Change in physical operating conditions | | | |
| Unidentified | | | |
| Other | | | |

**CC12.1b**

**Is your emissions performance calculations in CC12.1 and CC12.1a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?**

Location-based

**CC12.2**

**Please describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tonnes CO2e per unit currency total revenue**

| Intensity figure = | Metric numerator (Gross global combined Scope 1 and 2 emissions) | Metric denominator: Unit total revenue | Scope 2 figure used | % change from previous year | Direction of change from previous year | Reason for change |
|---|---|---|---|---|---|---|
| 0.0002576 | metric tonnes CO2e | 13399000000 | Location-based | 6.19 | Decrease | The decrease in emissions per unit is attributable to a 5% increase in revenue and a 1.8% decrease in carbon emissions. |

**CC12.3**

**Please provide any additional intensity (normalized) metrics that are appropriate to your business operations**

| Intensity figure = | Metric numerator (Gross global combined Scope 1 and 2 emissions) | Metric denominator | Metric denominator: Unit total | Scope 2 figure used | % change from previous year | Direction of change from previous year | Reason for change |
|---|---|---|---|---|---|---|---|
| 26.57 | metric tonnes CO2e | full time equivalent (FTE) employee | 129916 | Location-based | 6.24 | Decrease | The decrease in emissions per unit is attributable to a 5% increase in our number of employees and a 1.8% decrease in carbon emissions. |

**Further Information**

## Page: CC13. Emissions Trading

**CC13.1**

**Do you participate in any emissions trading schemes?**

Yes

## CC13.1a

**Please complete the following table for each of the emission trading schemes in which you participate**

| Scheme name | Period for which data is supplied | Allowances allocated | Allowances purchased | Verified emissions in metric tonnes CO2e | Details of ownership |
|---|---|---|---|---|---|
| European Union ETS | Fri 01 Jan 2016 - Sat 31 Dec 2016 | 396424 | 322888 | 719312 | Facilities we own and operate |

## CC13.1b

**What is your strategy for complying with the schemes in which you participate or anticipate participating?**

We seek to:-

1 - Meet compliance levels for all appropriate environmental legislation and other requirements relating to our activities

2 - Continually improve our environmental performance through a process of monitoring, measuring and reviewing our environmental impacts

3 - Maximise the efficient use of our raw materials

4 - Minimise waste generation through promotion of re-use and recycling

5 - Utilise energy more efficiently to reduce the use of fossil fuels and the production of associated greenhouse gas emissions

## CC13.2

**Has your organization originated any project-based carbon credits or purchased any within the reporting period?**

No

## CC13.2a

**Please provide details on the project-based carbon credits originated or purchased by your organization in the reporting period**

| Credit origination or credit purchase | Project type | Project identification | Verified to which standard | Number of credits (metric tonnes CO2e) | Number of credits (metric tonnes CO2e): Risk adjusted volume | Credits canceled | Purpose, e.g. compliance |
|---|---|---|---|---|---|---|---|

## Further Information

# Page: CC14. Scope 3 Emissions

## CC14.1

**Please account for your organization’s Scope 3 emissions, disclosing and explaining any exclusions**

| Sources of Scope 3 emissions | Evaluation status | metric tonnes CO2e | Emissions calculation methodology | Percentage of emissions calculated using data obtained from suppliers or value chain partners | Explanation |
|---|---|---|---|---|---|
| Purchased goods and services | Relevant, not yet calculated | | | | 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. |
| Capital goods | Relevant, not yet calculated | | | | The processing of sugar beet and sugar cane (which accounts for the majority of our total energy usage) requires very large plants and equipment and hence is capital intensive. 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. |
| Fuel-and-energy-related activities (not included in Scope 1 or 2) | Relevant, calculated | 644382 | 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 is DEFRA (2016), using country-specific or regional average emission factors for electricity. | 100.00% | All emissions calculated were from ABF's own data |
| Upstream transportation and | Relevant, calculated | 617216 | We used: - standard factors from the UK's DEFRA carbon emission factors list 2016 | 100.00% | Our transport emissions include those resulting from any transport movement that is dedicated |

| Sources of Scope 3 emissions | Evaluation status | metric tonnes CO2e | Emissions calculation methodology | Percentage of emissions calculated using data obtained from suppliers or value chain partners | Explanation |
|---|---|---|---|---|---|
| distribution | | | regarding litres of diesel burnt. - standard factors from UK's DEFRA for typical lorry/truck movements of differing sizes of vehicles - standard factors from UK's DEFRA for typical shipping rates. | | 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 includes the movement of goods via ships and aeroplanes. |
| Waste generated in operations | Relevant, not yet calculated | | | | We have a few onsite waste disposal facilities, although most waste is processed by third parties offsite and we are working on better quantifying these to be able to report Scope 3 waste. |
| Business travel | Relevant, not yet calculated | | | | Being a global business with activities in 47 countries there is a certain amount of international and national travelling, by car, train and plane, etc. 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. |
| Employee commuting | Not relevant, calculated | 44586 | Emissions from employee commuting were based on an estimation of the average distance travelled per FTE per country multiplied by DEFRA 2016 emissions factors for private and public transport. | 0.00% | With over 124,000 employees worldwide there is a considerable amount of employee commuting. As a percentage of our total emissions, emissions from commuting accounts for less than 1%. |
| Upstream leased assets | Not relevant, calculated | 4559 | Emissions from upstream leased assets was estimated based on CIBSE benchmark gas and electricity consumption per FTE at these sites and multiplied by DEFRA 2016 emissions factors for gas and electricity | 0.00% | The scale of emissions from upstream leased assets as a percentage of our total emissions is less than 1%. |

| Sources of Scope 3 emissions | Evaluation status | metric tonnes CO2e | Emissions calculation methodology | Percentage of emissions calculated using data obtained from suppliers or value chain partners | Explanation |
|---|---|---|---|---|---|
| Downstream transportation and distribution | Relevant, not yet calculated | | | | With over 14 million tonnes of products sold to our customers and many millions of items of clothing sold from our 300 Primark stores there will be significant emissions from the transportation and distribution of our products. We have not yet calculated this due to the complexity and diversity of our business entities. |
| Processing of sold products | Relevant, not yet calculated | | | | A proportion of our products, e.g. sugar, yeast, edible oils, bakery ingredients, are sold to other companies to be further processed and incorporated into their (mainly food) products. As we do not directly control our operating companies, we are unable to obtain the granular data on the destination of their products. |
| Use of sold products | Relevant, not yet calculated | | | | A proportion of our products, e.g. bread, tea, ethnic foods, animal feed, clothes, soft furnishings, bioethanol, etc. is consumed directly without any further processing. As we do not directly control our operating companies, we are currently unable to obtain the granular data needed to calculate this category. |
| End of life treatment of sold products | Relevant, not yet calculated | | | | The final food products are consumed by millions of people. The clothes and soft furnishings sold by Primark are eventually discarded by the consumers. As we do not directly control our operating companies, we are currently unable to obtain the granular data needed to calculate this category. |

| Sources of Scope 3 emissions | Evaluation status | metric tonnes CO2e | Emissions calculation methodology | Percentage of emissions calculated using data obtained from suppliers or value chain partners | Explanation |
|---|---|---|---|---|---|
| Downstream leased assets | Not relevant, explanation provided | | | | Any emissions from downstream leased assets are certain to be extremely small and not material when compared to our main emission sources as we do not lease out a significant amount of our assets. |
| Franchises | Not relevant, explanation provided | | | | We do not have franchises. |
| Investments | Relevant, calculated | 308282 | Emissions for our larger joint ventures were calculated using consumption data provided by the companies themselves and using the emissions factors in the emissions factors spreadsheet attached above. | 100.00% | ABF has a number of investments and joint ventures. Emissions have been quantified for our larger JVs but not quantified for our minor JVs. |
| Other (upstream) | Not relevant, explanation provided | | | | We are not aware of other upstream scope 3 emissions |
| Other (downstream) | Not relevant, explanation provided | | | | We are not aware of other downstream scope 3 emissions |

**CC14.2**

**Please indicate the verification/assurance status that applies to your reported Scope 3 emissions**

Third party verification or assurance process in place

## CC14.2a

**Please provide further details of the verification/assurance undertaken, and attach the relevant statements**

| Verification or assurance cycle in place | Status in the current reporting year | Type of verification or assurance | Attach the statement | Page/Section reference | Relevant standard | Proportion of reported Scope 3 emissions verified (%) |
|---|---|---|---|---|---|---|
| Annual process | Complete | Limited assurance | | 90 | ISAE3000 | 97 |

## CC14.3

**Are you able to compare your Scope 3 emissions for the reporting year with those for the previous year for any sources?**

Yes

## CC14.3a

**Please identify the reasons for any change in your Scope 3 emissions and for each of them specify how your emissions compare to the previous year**

| Sources of Scope 3 emissions | Reason for change | Emissions value (percentage) | Direction of change | Comment |
|---|---|---|---|---|
| Fuel- and energy-related activities (not included in Scopes 1 or 2) | Change in boundary | 43 | Increase | Increase in emissions due to decreased use of bagasse compared with the previous year and due to ABF assuming the |

| Sources of Scope 3 emissions | Reason for change | Emissions value (percentage) | Direction of change | Comment |
|---|---|---|---|---|
| | | | | majority share of Vivergo. |
| Upstream transportation & distribution | | 3 | Decrease | Change not significant |
| Employee commuting | | 2 | Decrease | Change not significant |
| Upstream leased assets | | 0 | No change | Change not significant |
| Investments | Change in boundary | 58 | Decrease | ABF assumed the majority share of Vivergo and therefore its emissions are now included in Scope 1 and 2 |

**CC14.4**

**Do you engage with any of the elements of your value chain on GHG emissions and climate change strategies? (Tick all that apply)**

Yes, our customers

**CC14.4a**

**Please give details of methods of engagement, your strategy for prioritizing engagements and measures of success**

1. Methods of Engagement
ABF and its operating companies engage using a variety of channels
- Online and printed content available to the general public via our website and sustainability reports.
- Direct to key customers - who we keep up to date with our progress on sustainability and climate change matters. For those products for which we have calculated a life cycle assessment to PAS 2050 we have published the CO2e values widely within the relevant parts of the supply chains.
- Via campaigns and targeted materials to suppliers and value chain partners. For example, Jordans Ryvita works with 45 accredited farmers who supply all the oats, wheat and barley we need to make the Jordans Ryvita products we sell in the UK and France using the Conservation GradeTM farm management standard.

- All UK Beet sugar growers supplying to British Sugar are required to deliver Red Tractor Assured beet – which includes environmental criteria. British Sugar also uses EcoVadis CSR scorecards to monitor suppliers.

2. Prioritizing Engagement

- All suppliers are required to sign a code of conduct which confirms the aspects of environmental management that will be included in supplier/representative assessments
- Operating companies will be responsible for determining their own engagement criteria related to sales, customer retention and brand awareness.

3. Measures of Success
- We measure success by monitoring our performance against sustainability trends and reputational impact
- Individual campaigns will be monitored and measured by the relevant operating company subject to criteria drawn up for that campaign.

### CC14.4b

**To give a sense of scale of this engagement, please give the number of suppliers with whom you are engaging and the proportion of your total spend that they represent**

| Type of engagement | Number of suppliers | % of total spend (direct and indirect) | Impact of engagement |
|---|---|---|---|

### CC14.4c

**Please explain why you do not engage with any elements of your value chain on GHG emissions and climate change strategies, and any plans you have to develop an engagement strategy in the future**

**Further Information**

## Module: Sign Off

## Page: CC15. Sign Off

### CC15.1

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

| Name | Job title | Corresponding job category |
|---|---|---|
| Steve Bradley | Group safety and environment manager | Environment/Sustainability manager |

**Further Information**

## Module: FBT

### Page: FBT1. Agriculture

**FBT1.1**

**Are agricultural activities, whether in your direct operations or elsewhere in your value chain, relevant to your climate change disclosure?**

Yes

**FBT1.1a**

**Please explain why agricultural activities are not relevant to your climate change disclosure**

**FBT1.2**

**Are the agricultural activities that you have identified as relevant undertaken on your own farm(s), elsewhere in your value chain, or both?**

Both own farm(s) and elsewhere in value chain

**FBT1.2a**

**Please explain why agricultural emissions from your own farms are not relevant**

**FBT1.3**

**Do you account for greenhouse gas emissions from agricultural activities undertaken on your own farm(s) as part of the global gross Scope 1 emissions figure reported in CC8.2, and/or the Scope 2 figure reported in CC8.3a of the core climate change questionnaire?**

Yes

**FBT1.3a**

**Please select the form(s) in which you wish to report the greenhouse gas emissions produced by agricultural activities (agricultural emissions) undertaken on your own farm(s)**

Total agricultural emissions separated by Scope 1 and 2

**FBT1.3b**

**Please report your total agricultural emissions produced on your own farm(s) and identify any exclusions in the table below**

| Scope | Agricultural emissions (metric tonnes CO2e) | Methodology | Exclusions | Explanation | Comment |
|---|---|---|---|---|---|
| Scope 1 | 166367 | Default emissions factors | None | 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. The remainder is from the rearing of pigs and the growing of other crops destined for feeding those pigs. The emissions from agricultural machinery, e.g. harvesters, are included in the Scope 1 emissions reported in sections CC8 & CC9. | These data have been published in our Annual Report and Accounts and in our Corporate Responsibility Report 2016 |
| Scope 2 | 0 | | | There is a very minor use of purchased electricity on our pig farms but this is reported under Scope 2 emissions in section CC10. | |

FBT1.3c

Please report your agricultural emissions produced on your own farm(s), disaggregated by category, and identify any exclusions in the table below

| Emissions category | Agricultural emissions (metric tonnes CO2e) | Methodology | Exclusions | Explanation | Comment |
|---|---|---|---|---|---|

FBT1.3d

Please explain why you do not account for greenhouse gas emissions from agricultural activities undertaken on your own farm(s), and describe any plans for the collection of this data in the future

**FBT1.4**

**Do you implement agricultural management practices on your own farm(s) with a climate change mitigation and/or adaptation benefit?**

Yes

**FBT1.4a**

**Please identify agricultural management practices undertaken on your own farm(s) with a climate change mitigation and/or adaptation benefit. Complete the table**

| Activity ID | Agricultural management practice | Description of agricultural management practice | Climate change related benefit | Comment |
|---|---|---|---|---|
| 1 | Knowledge sharing | AB Sustain, a subsidiary company of ABF provides independent expert advice both nationally and internationally to growers to improve the | Emissions reductions | AB Sustain has received many awards from retailers |

| Activity ID | Agricultural management practice | Description of agricultural management practice | Climate change related benefit | Comment |
|---|---|---|---|---|
| | | sustainability of the agricultural operations. We also offer proven greenhouse gas modelling to reduce environmental impacts and to make financial savings. | (mitigation) Increasing resilience to climate change (adaptation) | and environmental groups for their work. |
| 2 | Seed variety selection | Sugar cane variety development and cultivation aimed at increasing the resilience of our operations to water stress and pest vectors. | Increasing resilience to climate change (adaptation) | |
| 3 | Other: Green sugar cane harvesting | In our sugar cane operations in Swaziland, Malawi and 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. | Emissions reductions (mitigation) | |
| 4 | Other: Manual harvesting | The majority of our sugar cane is harvested manually rather than by machine thereby reducing the consumption of fossil fuels and supporting employment and social cohesion. In addition manual harvesting results in less damage to the sugar cane root system and reduces replanting. | Emissions reductions (mitigation) | |
| 5 | Low carbon energy use | The owned sugar cane operations have their irrigation equipment powered by electricity generated from renewable resources. | Emissions reductions (mitigation) | We use bagasse-based combined heat and power cogeneration to derive our irrigation energy. |
| 6 | Nutrient management | We recycle boiler ash and filter cake onto our own crops of sugar cane as organic sources of plant nutrients. | Emissions reductions (mitigation) | The use of these waste products as a source of nutrients offsets our inorganic fertiliser requirements. |
| 7 | Water Management | We are increasingly using treated wastewater from our sugar cane mills as irrigation water resulting in decreased river water abstraction and decreased irrigation energy requirements. | Emissions reductions (mitigation) | |
| 8 | Biodiversity considerations | We maintain natural vegetation surrounding our sugar cane fields which are irrigated using water pivot technology. | Emissions reductions (mitigation) | This minimises land use change. |

| Activity ID | Agricultural management practice | Description of agricultural management practice | Climate change related benefit | Comment |
|---|---|---|---|---|
| | | | | |
| 9 | Pest, disease and weed management practices | Where feasible we try to use biological control agents to control agricultural pests to offset our use of inorganic pesticides. | Emissions reductions (mitigation) | |
| 10 | Other: Sub-surface fertiliser application | At our Zambian operations synthetic fertiliser is applied to the sub-surface of the soil for sugar cane growing. This reduces fertiliser evaporation losses and improves fertiliser input efficiency which in turn reduces the emissions from the manufacture of fertiliser. | Emissions reductions (mitigation) | |

**FBT1.4b**

**Does your implementation of these agricultural management practices have other impacts? Complete the table**

| Activity ID | Impact on yield | Impact on cost | Impact on soil quality | Impact on biodiversity | Impact on water | Other impact | Description of impacts | Comment |
|---|---|---|---|---|---|---|---|---|
| 1 | Evaluated - beneficial impact | Evaluated - beneficial impact | Evaluated - beneficial impact | Evaluated - beneficial impact | | | Reduced cost, improved yields with more sustainable operations and usually with benefits to local habitats and ecosystems. | |
| 2 | Evaluated - beneficial impact | Evaluated - beneficial impact | Evaluated - no impact | Evaluated - no impact | Evaluated - beneficial impact | | Less risk to crop productivity if resilient or water efficient crop varieties can be developed. | |
| 3 | Evaluated - no impact | Evaluated - detrimental impact | Evaluated - no impact | Evaluated - beneficial impact | Evaluated - no impact | Improved ambient air quality in the locality | 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. | |
| 4 | Evaluated - no impact | Evaluated - detrimental impact | Evaluated - beneficial impact | Evaluated - beneficial impact | Evaluated - no impact | Significant job creation. | Manual harvesting results in conserved soil and soil quality in areas suitable for manual harvesting. | |
| 5 | Evaluated - | Evaluated - | Evaluated - | Evaluated - no | Evaluated - | | Generating our own renewable energy | |

| Activity ID | Impact on yield | Impact on cost | Impact on soil quality | Impact on biodiversity | Impact on water | Other impact | Description of impacts | Comment |
|---|---|---|---|---|---|---|---|---|
| | no impact | beneficial impact | no impact | impact | no impact | | within our mill for operating both the milling and agricultural operations, where feasible, greatly reduces our cost base. | |
| 6 | Evaluated - beneficial impact | Evaluated - beneficial impact | Evaluated - beneficial impact | Evaluated - no impact | Evaluated - beneficial impact | Decreased synthetic fertiliser runoff into surrounding water bodies | This improves soil organic matter, water retention, soil structure and overall soil health. | |
| 7 | Evaluated - no impact | Evaluated - beneficial impact | Evaluated - no impact | Evaluated - no impact | Evaluated - beneficial impact | | The reuse of treated wastewater decreases abstraction water energy requirements and consequently the cost of irrigation. The reuse of wastewater also positively impacts our agricultural blue water footprint. | |
| 8 | Evaluated - no impact | Evaluated - no impact | Evaluated - no impact | Evaluated - beneficial impact | Evaluated - no impact | | The pockets of natural vegetation within our centre-pivot fields act as refuges and ecological stepping stones for indigenous fauna while conserving indigenous flora at the same time. | |
| 9 | Evaluated - no impact | Evaluated - beneficial impact | Evaluated - no impact | Evaluated - beneficial impact | Evaluated - no impact | | This practice offsets our use of inorganic pesticides and the associated greenhouse gas emissions generated during their manufacture and distribution. | |
| 10 | Evaluated - no impact | Evaluated - beneficial impact | Evaluated - no impact | Evaluated - beneficial impact | Evaluated - no impact | | Reduced synthetic fertiliser application and therefore reduced operational costs. | |

**FBT1.4c**

**Do you have any plans to implement agricultural management practices in the future?**

Yes

**FBT1.4d**

**Please detail your plans to implement agricultural management practices in the future**

We will continue with the above as identified in FBT1.4a. As most of our involvement with agricultural management practices is in growing our own sugar beet and sugar cane crops and supporting our beet & cane suppliers we will seek innovations which enhance the sustainability of the crops and reduce their overall environmental impact.

**FBT1.5**

**Is biogenic carbon pertaining to your own farm(s) relevant to your climate change disclosure?**

Yes

**FBT1.5a**

**Please report biogenic carbon data pertaining to your own farm(s) in the table below**

| CO2 flux | Emissions/ Removals (metric tonnes CO2e) | Methodology | Exclusions | Explanation | Comment |
|---|---|---|---|---|---|
| CO2 emissions from land use management | 0 | | | | |
| CO2 removals from land use management | 0 | | | | |
| Sequestration during land use change | 0 | | | | |
| CO2 emissions from biofuel combustion | 163822 | Default emissions factors | | | |

**FBT1.6**

**Do you account for greenhouse gas emissions from agricultural activities in your value chain as part of the Scope 3 category "Purchased goods and services" reported in CC14.1 of the core climate change questionnaire?**

No

**FBT1.6a**

**Please report these agricultural emissions from your value chain and identify any exclusions in the table below**

| Scope | Agricultural emissions (% of the emissions reported in the category “Purchased goods and services”) | Exclusions | Explanation | Comment |
|---|---|---|---|---|

**FBT1.6b**

**Please explain why you do not account for greenhouse gas emissions from agricultural activities in your value chain as part of the Scope 3 category “Purchased goods and services” reported in CC14.1 of the core climate change questionnaire**

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.

**FBT1.7**

**Do you encourage your agricultural suppliers to undertake any agricultural management practices with a climate change mitigation and/or adaptation benefit?**

Yes

**FBT1.7a**

**Please identify agricultural management practices with a climate change mitigation and/or adaptation benefit that you encourage your suppliers to implement. Complete the table**

| Activity ID | Agricultural management practice | Description of agricultural management practice | Your role in the implementation of this practice | Explanation of how you encourage implementation | Climate change related benefit | Comment |
|---|---|---|---|---|---|---|
| 1 | Knowledge sharing | Jordans Ryvita works with 45 accredited farmers who supply all the oats, wheat and barley we need to make the Jordans products we sell in the UK and France using the Conservation GradeTM farm management standard. All habitats are managed to make sure the quality is maintained and some may need re-establishing every year. The farmers are also required to cut hedges only once every two years in order 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%) Other habitats (2%) | Knowledge sharing | We have directly raised awareness of these environmental practices among our network of selected farmers. | Increasing resilience to climate change (adaptation) | The founders of Jordans helped launch the nature-friendly Conservation GradeTM farming protocol. |
| 2 | Knowledge sharing | Use of the holistic 'SUSFARMS' sustainability methodology for evaluating agronomic practices. | Knowledge sharing | Working with key growers/farmers. | Increasing resilience to climate change (adaptation) | SUSFARMS is a South African methodology for better farm management practices in the cane sugar industry bringing environmental, social and economic benefits. |

**FBT1.7b**

**Does the implementation of these agricultural management practices in your value chain have other impacts? Complete the table**

| Activity ID | Impact on yield | Impact on cost | Impact on soil quality | Impact on biodiversity | Impact on water | Other impact | Description of impacts | Comment |
|---|---|---|---|---|---|---|---|---|
| 1 | Evaluated - beneficial impact | Evaluated - beneficial impact | Evaluated - no impact | Evaluated - beneficial impact | Evaluated - no impact | | 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. | |
| 2 | Evaluated - no impact | Evaluated - no impact | Evaluated - beneficial impact | Evaluated - beneficial impact | Evaluated - beneficial impact | | 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. | |

**FBT1.7c**

**Do you have any plans to engage with your suppliers on their implementation of agricultural management practices?**

Yes

**FBT1.7d**

**Please detail these plans to engage with your suppliers on their implementation of agricultural management practices**

We will continue with the activities described in FBT1.7a

**Further Information**

Our agricultural GHG emissions for this reporting year are 163,822 tonnes CO2e from burning biomass (mainly sugar cane fibre and the sugar has been extracted) and 2,546 tonnes CO2e from our pig farms.

## Page: FBT2. Processing

**FBT2.1**

**Are processing activities, whether in your direct operations or elsewhere in your value chain, relevant to your climate change disclosure?**

Yes

**FBT2.1a**

**Please explain why processing activities are not relevant to your climate change disclosure**

**FBT2.2**

**Are the processing activities that you have identified as relevant undertaken in your direct operations, elsewhere in your value chain, or both?**

Direct operations

**FBT2.2a**

**Please explain why emissions from processing activities in your direct operations are not relevant**

**FBT2.3**

**Do you account for emissions from processing activities in your direct operations as part of the global gross Scope 1 emissions figure reported in CC8.2 and/or the Scope 2 figure reported in CC8.3a of the core climate change questionnaire?**

Yes

## FBT2.3a

**Please report these emissions from processing activities in your direct operations and identify any exclusions in the table below**

| Scope | Emissions from processing activities (metric tonnes CO2e) | Exclusions | Explanation | Comment |
|---|---|---|---|---|
| Scope 1 | 729651 | None | These relate to emissions from the following activities within our operations: manufacture of yeast, bread, ethanol and enzymes, use of CO2, emissions of SF6 from electrical equipment, emissions of fluorinated gases from fire extinguishers and air conditioning units, and emissions from on-site waste disposal and coal-handling. | |
| Scope 2 | 0 | None | The Scope 2 emissions have been included in the total Scope 2 emissions data in section CC10. | |

## FBT2.3b

**Please explain why you do not account for emissions from processing activities in your direct operations, and describe any plans for the collection of this data in the future**

## FBT2.4

**Do you account for emissions from processing activities in your value chain as part of the Scope 3 category "Purchased goods and services" and/or "Processing of sold products" reported in CC14.1 of the core climate change questionnaire?**

## Further Information

## Page: FBT3. Distribution

### FBT3.1

**Are distribution activities, whether in your direct operations or elsewhere in your value chain, relevant to your climate change disclosure?**

Yes

### FBT3.1a

**Please explain why distribution activities are not relevant to your climate change disclosure**

### FBT3.2

**Are the distribution activities that you have identified as relevant undertaken in your direct operations, elsewhere in your value chain, or both?**

Both direct operations and elsewhere in value chain

### FBT3.2a

**Please explain why emissions from distribution activities in your direct operations are not relevant**

### FBT3.3

**Do you account for emissions from distribution activities in your direct operations as part of the global gross Scope 1 emissions figure reported in CC8.2 and/or the Scope 2 figure reported in CC8.3a of the core climate change questionnaire?**

Yes

### FBT3.3a

**Please report these emissions from distribution activities in your direct operations and identify any exclusions in the table below**

| Scope | Emissions from distribution activities (metric tonnes CO2e) | Exclusions | Explanation | Comment |
|---|---|---|---|---|
| Scope 1 | 89209 | | | |
| Scope 2 | 0 | | Any minimal Scope 2 emissions have been included in the total Scope 2 emissions reported in section 10. | |

FBT3.3b

**Please explain why you do not account for emissions from distribution activities in your direct operations, and describe any plans for the collection of this data in the future**

**FBT3.4**

**Do you account for emissions from distribution activities in your value chain as part of the Scope 3 category "Upstream transportation and distribution" and/or "Downstream transportation and distribution" in CC14.1 of the core climate change questionnaire?**

Yes

**Further Information**

## Page: FBT4. Consumption

**FBT4.1**

**Are emissions from the consumption of your products relevant to your climate change disclosure?**

No

**FBT4.1b**

**Please explain why emissions from the consumption of your products are not relevant to your climate change disclosure**

A proportion of our products, e.g. bread, tea, ethnic foods, animal feed, clothes, soft furnishings, bioethanol, etc. is consumed directly without any further processing. As we do not directly control our operating companies, we are currently unable to obtain the granular data needed to assess this category.

## FBT4.1a

**Do you account for emissions from the consumption of your products as part of the Scope 3 category "Use of sold products" and/or "End of life treatment of sold products" in CC14.1 of the core climate change questionnaire?**

## Further Information

**CDP 2017 Climate Change 2017 Information Request**