

**Module: Introduction****Page: Introduction****CC0.1****Introduction**

Please give a general description and introduction to your organization.

Illovo is a leading sugar producer and a significant manufacturer of downstream products. The group is Africa's biggest sugar producer and has extensive agricultural and manufacturing operations in six African countries. The group produces raw and refined sugar for local, regional African, European Union (EU), United States of America (USA) and world markets from sugar cane supplied by its own agricultural operations and independent outgrowers who supply cane to Illovo's factories. High-value products manufactured downstream of the sugar production process are sold internationally into niche markets. During the year under review, 88% of the energy used by Illovo was derived from renewable resources. In terms of the 2014/15 reporting year, Illovo was listed on the JSE Limited and was a subsidiary of Associated British Foods plc which held 51.3% of the issued share capital (since the company's year end, 31 March 2016, Illovo has become a wholly-owned subsidiary of ABF and was delisted from the JSE Limited on 28 June 2016).

The group's countries of operation provide good climatic and soil conditions, which, accompanied by irrigation from secure and sustainable water sources, are ideal for the cultivation of high-yielding and high-quality sugar cane, with 5.6 million tons of sugar cane having been harvested by our own operations in the 2015/16 season. Combined with cane supplied by independent outgrowers in all six countries of operation, the group has the capacity to produce more than two million tons of sugar annually.

The group is a major supplier of sugar to the consumer and industrial markets in its own countries of operation and to neighbouring regional African markets, using an extensive network of distribution and logistics channels. It also exports sugar to the EU and USA and, through the South African sugar industry, sells sugar into the world market. Syrup and speciality sugars are produced in South Africa and Zambia mainly for domestic consumption, while speciality sugars made in Malawi and Zambia are produced for preferential markets in the EU and in the case of Malawi, also for the USA.

The majority of our downstream production is sold internationally into high-value, niche markets. Furfural and its derivatives are produced at the Sezela mill complex on the south coast of KwaZulu-Natal while high-quality ethyl alcohol, from which various grades of alcohol are made, is produced at the Glendale distillery on the north coast and at our Merebank plant in Durban, which also manufactures lactulose. In Tanzania, the newly-commissioned distillery, adjacent to our Kilombero mills, supplies potable alcohol to the local and regional beverage industry. In addition to the production of potable and denatured alcohol from molasses in South Africa, opportunities to expand Illovo's involvement in this area of operation are being explored across the group.

Illovo aims to ensure reliable cost-effective energy supply utilising bagasse and biomass generated from its operations, and where attractive, to export power into the national grids of the countries in which we operate.

As a major private investor in Africa, Illovo operates and markets its products in countries which face considerable challenges in the form of poverty, unemployment, inequality and disease. The United Nations classifies Malawi, Mozambique, Zambia and Tanzania as among the world's least developed countries. The group has a significant positive impact on the rural communities in the areas in which we operate, inter alia, by creating valuable jobs and economic opportunities, and providing accommodation, health care, educational assistance and basic services to employees. In addition, where no such facilities exist, the group provides medical care to communities, assists in education delivery, provides municipal and civic services and access to water and sanitation, and participates in community outreach programmes. Considerable training and other support is provided to local small and medium-scale growers in order to promote sustainable agriculture and economic development activities. The total cane supplies from these growers and community-based co-operative schemes amounts to approximately 3.6 million tons annually.

## GROUP STRUCTURE

Illovo Sugar Limited

Malawi: Illovo Sugar (Malawi) 76%

South Africa: Illovo Sugar SA: 100%

Tanzania: Kilombero Sugar: 55%

Zambia: Zambia Sugar: 82%

Swaziland: Ubombo Sugar: 60%

Mozambique: Maragra Açúcar: 90%

Major Shareholder: ABF Overseas Limited (51.3%)

AB Sugar, as a division of Associated British Foods plc (ABF), represents ABF in respect of all its sugar interests, including Illovo.

---

## 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**

Wed 01 Apr 2015 - Thu 31 Mar 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**

Malawi
Zambia
Mozambique
Swaziland
Tanzania
South Africa

---

**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.

ZAR (R)

---

**CC0.6****Modules**

As part of the request for information on behalf of investors, electric utilities, companies with electric utility activities or assets, companies in the automobile or auto component manufacture sub-industries, companies in the oil and gas sub-industries, companies in the information technology and telecommunications sectors and companies in the food, beverage and tobacco industry group should complete supplementary questions in addition to the main questionnaire.

If you are in these sector groupings (according to the Global Industry Classification Standard (GICS)), the corresponding sector modules will not appear below but will automatically appear in the navigation bar when you save this page. If you want to query your classification, please email [respond@cdp.net](mailto: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. If you wish to view the questions first, please see <https://www.cdp.net/en-US/Programmes/Pages/More-questionnaires.aspx>.

---

**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**

Committee: Social and Ethics Committee

Highest level of direct responsibility: Executive

The board of directors is ultimately responsible for the climate change strategy for the group and for the initiatives that are carried out at each of the Illovo group operations, which are overseen by the Executive Committee, particularly the Operations Director, as well as the management at each of the operations.

In addition, in accordance with the South African Companies Regulations, 2011, a statutory committee of the board was introduced. The committee monitors the company's implementation of the requirements of the UN Global Compact, including Principles 7, 8 and 9 (which deal with the precautionary approach to environmental challenges, promoting greater environmental responsibility and encouraging the development and diffusion of environmentally friendly technologies).

The responsibilities of this committee, in terms of climate change, are to:

- Instil climate change into the Groups policies, strategy, culture and management plans
  - Build internal support for climate change management and reporting
  - Integrate climate change related stakeholder engagement into governance and decision-making
  - Undertake internal and external climate change reporting and communication
- 

#### 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 Energy reduction target Efficiency project	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.
Executive officer	Recognition (non-monetary)	Emissions reduction project Energy reduction project Efficiency project	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.
Management group	Monetary reward	Emissions reduction project Energy reduction project Efficiency project	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.
Energy managers	Monetary reward	Emissions reduction project Energy reduction project	Incentives are placed on decreased energy consumption and GHG emission generation and increased energy production and sales.

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator	Comment
		Efficiency project	
Environment/Sustainability managers	Monetary reward	Emissions reduction project Energy reduction project Efficiency project	Incentives are placed on waste, water, energy and GHG management, monitoring and reporting.
Process operation managers	Monetary reward	Emissions reduction project Energy reduction project Efficiency project	Incentives are placed on advancements in clean technology and reduced GHG generation.
Risk managers	Monetary reward	Emissions reduction project Energy reduction project Efficiency project	Incentives are placed on waste, water, energy and GHG management, monitoring and reporting.
Board/Executive board	Monetary reward	Emissions reduction target Energy reduction target Other: Managing risk	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.

<b>Who is entitled to benefit from these incentives?</b>	<b>The type of incentives</b>	<b>Incentivized performance indicator</b>	<b>Comment</b>

---

**Further Information**



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	Climate change related risks and opportunities are identified at the Group, subsidiary and site level.	> 6 years	Illovo has an Enterprise Risk Management (ERM) framework ensuring that the risk management process is consistently applied across all operations. The ERM biannual risk assessment is the primary vehicle for climate change risk and opportunity identification.

---

**CC2.1b****Please describe how your risk and opportunity identification processes are applied at both company and asset level****i. Application at a Company Level**

Major climate change related risks and opportunities and associated management strategies are the subject of on-going attention by the Board and are considered in the development of the annual strategic plan, thereby ensuring incorporation into company strategy. In the 2015/16 reporting year the key sustainability risk and opportunity categories receiving focus were:

- Energy and GHG management;
- Water management; and
- Developing a culture of continuous improvement and “doing more with less” in agricultural and industrial productivity.

**ii. Application at an Asset Level**

The asset level risk registers include site specific climate change related risks and opportunities ranging from those that are weather-related (such as forecasted changes to precipitation patterns) to regulatory (including the pending carbon tax in South Africa). Business continuity plans for all sites continue to be developed following the evaluation of these site specific risks and opportunities.

---

**CC2.1c****How do you prioritize the risks and opportunities identified?**

The Illovo ERM framework includes standardised impact and likelihood metrics for evaluating the priority of a risk or opportunity. These metrics describe the potential legal, health & safety, reputational, environmental, production and financial impact on the company as well as the surrounding natural and social environment. We also undertake full risk assessments on new projects.

---

**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**

At a strategic level we are concerned with the impact of our activities on the environment and equally the impact of the changing environment on our business. Environmental management at Illovo is guided by the principles espoused within the United Nations Global Compact. Over the past few years we have developed internal reporting systems and stakeholder engagement mechanisms designed to enable our business to react strategically to climate change related impacts. We have also established a risk appetite policy, which is currently being incorporated into business strategy. Potential positive and negative influences of climate change on our market share and accessibility, ability to grow, profit and cost base and continued operation have received particular focus. Key climate change related aspects considered within our business strategy fall within two categories:

- **Adaptation**

The success of our agricultural operations is intrinsically linked to climate; changes in precipitation patterns, the frequency of extreme weather events (floods and droughts) and temperature have the potential to impact our business. At a strategic level we are working on improving the resilience of our operations to projected changes and ensuring prospective opportunities are realised. In the short-term this involves identifying our operations with the greatest susceptibility to climate change and developing the means to strategically manage these impacts. In the long term we aim to gain competitive advantage through resilient and resource efficient operations.

- **Mitigation**

The opportunity exists for the sugar industry to play a significant role in global GHG mitigation. To take advantage of this opportunity we are working to decrease our consumption of non-renewable energy and increasing our generation of renewable energy (in the form of electricity and bioethanol). In the short term we are focused on improving the energy efficiency of our production processes. This includes employing better management systems, improving our staff awareness and investing in new technologies. During the reporting period 88% of the energy consumed within our operations was sourced from renewable resources, displacing fossil fuel alternatives, and we have set targets to reduce fossil fuel consumption within all our operations. In the long term, the opportunities associated with increasing market demand for renewable energy are driving Illovo's research and development activities in cogeneration and bioethanol, gaining us competitive advantage.

The most substantial business decisions, influenced by climate change, include investigating the renewable energy market, increasing the resilience of our operations to the changing climate and increasing our use of renewable energy.

---

**CC2.2b**

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

---

**CC2.2c**

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

Yes

---

**CC2.2d**

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

During project evaluation the proposed carbon tax is considered within the internal price of return assessment.

---

**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?**

<b>Focus of legislation</b>	<b>Corporate Position</b>	<b>Details of engagement</b>	<b>Proposed legislative solution</b>
Clean energy generation	Support	We have lobbied through the South African Sugar Association (SASA) regarding the Draft Position Paper on the South African Biofuels Regulatory Framework (released January 15, 2014).	The inclusion of sugar cane as a reference feed-stock in the first phase of the biofuels programme.
Carbon tax	Support with major exceptions	Illovo South Africa has engaged directly with the National Treasury with regards to carbon taxation and in May 2015 we participated, through SASA, in the review of the scope and design of the proposed carbon tax by the Davis Tax Committee. While we are in support of the principle of reducing GHGs we have concerns that the proposed system will not achieve its intended purpose. In August 2013 we provided a formal response to the National Treasury regarding the Carbon Taxation Policy Paper.	Among other aspects, we have proposed the following: (i) The tax free allowance threshold for the sugar industry is increased. (ii) Allowing direct offset by exporting renewable energy to the grid. (iii) Excluding bagasse from the carbon tax. (iv) Clearer policy objectives to 2020 to allow for long term investments (v) Proposed annual 10% increase to be aligned to CPI (Consumer Price Index).

---

**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?
The South African Sugar Association (SASA)	Consistent	(i) Support cutting edge research through SASRI (South African Sugar Research Institute) focused on empowering the sugar industry to respond to climate change impacts. (ii) Working with the mandated government departments, such as the Department of Energy and the National Treasury, to support industry diversification into renewable energy; both electrical cogeneration from bagasse and bioethanol production from molasses. (iii) Support the avoidance of GHG emissions through the promotion of electricity from bagasse based cogeneration and bioethanol, thereby supporting the South African government's biofuel industry strategy and mandatory blending regulations.	Illovo has one member on the board of SASA. We are aligned in our positions on climate change legislation. Through SASA led discussion Illovo has participated in the carbon tax process headed by National Treasury and together have provided policy submissions.
South African Sugar Technologists' Association (SASTA) Congress	Consistent	(i) Assessment of climate change impact on sugar cane production in SA (ii) Modelling the impact of climate change on yields and water use in sugarcane (iii) Evaluation and adaptation of cane growing models.	We are aligned in terms of our position to support research and development of the sugarcane sector.
Mozambique Sugar Association (APAMO)	Consistent	All matters pertaining to climate change are undertaken by APAMO on behalf of the industry. APAMO was recently involved in a pilot project for a Biofuel Sustainability Framework (MBSF) funded by the Netherlands Energy and Climate Change department.	Illovo is aligned with APAMO, who undertakes all matters pertaining to climate change on behalf of the industry in Mozambique.

---

**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**

The Illovo Group is a member of, and participates in, the activities of the National Business Initiative (NBI) which is the local partner for the CDP, World Business Council on Sustainable Development and the UN Global Compact. We attend various workshops and seminars that the NBI presents and are represented on its board. This partnership provides us with useful information and guidance on climate change issues.

---

**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?**

Strategic climate change related priorities are identified through the ERM process, which is formalised at executive level, and are approved by the Social and Ethics committee. To put these into practice specific actions are incorporated into individual performance contracts and are cascaded down the organisation hierarchy for implementation at the appropriate levels of the organisation. Accordingly our Key Performance Indicators ensure that all decisions made by our operations and the different levels of engagement undertaken are aligned to these priorities. Performance is monitored on an on-going basis at operational level and progress is fed to the executive committee and overseen by the Social and Ethics committee biannually.

---

**CC2.3g**

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

---

**Further Information**

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?

Absolute target  
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
Abs1	Other: Scope 1 + 2 (location-based): Energy consumption	75%	10.7%	2011	478682	2021	No, but we anticipate setting one in the next 2 years	We aim to reduce GHG emissions from energy consumption across the Group by 10.7% (relative to 2010/11 emissions levels) by 2020/21. Base Year refers to the financial year 2010/2011; Target Year refers to the financial year 2020/2021.



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	Other: Scope 1: Energy consumption	67%	20%	Other: Per tonne of sugar produced	2011	0.14	2019	No, but we anticipate setting one in the next 2 years	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	1	Increase	1	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
Abs1	50%	94%	Significant progress has been made and we are confident we will meet the target.
Int1	63%	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, that will facilitate us achieving our goal.

**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?

Yes

---

**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
Product	Electricity and steam generated via bagasse-based cogeneration	Avoided emissions	Other: WRI GHG Protocol	0.5%	Less than or equal to 10%	

---

**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	1	
To be implemented*	0	
Implementation commenced*	2	42055
Implemented*	0	
Not to be implemented	1	

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	Sezela Coal and Energy Savings Project -	41815	Scope 1 Scope 2 (location-based)	Voluntary					Phase 1 of the Sezela Coal and Energy Savings Project was implemented during the reporting period. The impact of this project is expected to be realized once Phase 2 of the project is implemented.

CC3.3c

What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Lower return on investment (ROI) specification	

---

CC3.3d

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

---

**Further Information**

In previous years we have reported the Illovo South Africa broad scale Performance Optimisation Plan under the target section (previously Abs1). The decision was taken this year to consolidate target reporting to the Group level and consequently only the two Group targets are reported on.

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	Underway - previous year attached	2015 Climate Change Report	<a href="https://www.cdp.net/sites/2016/68/8868/Climate%20Change%202016/Shared%20Documents/Attachments/CC4.1/Illovo%202015%20CC%20Report.pdf">https://www.cdp.net/sites/2016/68/8868/Climate Change 2016/Shared Documents/Attachments/CC4.1/Illovo 2015 CC Report.pdf</a>	

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	A South African carbon tax has been proposed. The National Treasury's current plan is to initiate the first carbon-tax phase, proposed to commence in 2017, at a rate of R120/tCO <sub>2e</sub> , increasing by 10% a year during the first implementation period. A basic tax-free	Increased operational cost	1 to 3 years	Direct	Virtually certain	High	R14.8 million per annum	A broad scale Performance Optimisation Plan has been employed to improve energy efficiencies within the South African mills, with the aim to reduce consumption of purchased grid electricity and coal. One example of this is the Sezela Coal and Energy Savings	R12 million per annum



Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	threshold of 60% is proposed for the first period.							Project which has been implemented during the present reporting period and is expected to deliver savings of 10,000 tons of coal and reduce purchased electricity by 21GWh per annum in the upcoming reporting period. Illovo SA has set a target to reduce its GHG emissions from coal consumption by 25% by 2017/18, thereby reducing the company's future carbon tax liability. Illovo has also lobbied through the SASA and provided a formal response to the Carbon Tax Policy Paper.	

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	Increased flooding resulting in potential damage to infrastructure and a decrease in cane yield	Reduction/disruption in production capacity	3 to 6 years	Direct	Virtually certain	Medium	R5 million (previous year spend on crop replanting and infrastructure repair)	Certain of our operations have historically been prone to flooding. This can result in damage to infrastructure and loss in productivity. At these operations we are working on re-delineating flood risk zones and implementing and improving flood protection mechanisms. Further, we are evaluating the projected future flood risk at all our operations. Our flood mitigation measures at our operations in both Malawi and Mozambique have yielded excellent results with only 2.5% and 1.7% of cane affected respectively.	R1.7 million (the calculated cost of dyke upgrades over the next couple of seasons).

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
Uncertainty in social drivers	Increasing and varying certification required / favoured by different markets for different product lines. impacting the demand for our goods.	Reduced demand for goods/services	1 to 3 years	Direct	More likely than not	Medium	Financial risk of up to R 25 million per annum in three years' time anticipated at this point.	A proactive stakeholder engagement process has been implemented comprising stakeholders from across the value chain (Growers, Illovo Mills, Customers, NGO's, the sugar industry and environmental support services) to develop an aligned sustainability management system that complies with international best practices in ingredient management systems.	Overall stakeholder engagement estimated at R 3 million per annum

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 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
Other regulatory drivers	The Tax Act of South Africa makes allowance for a Section 12L tax deduction equivalent to 95c/kWh of energy saved, as determined by a Certified Measurement and Verification Professional (CMVP).	Reduced capital costs	Up to 1 year	Direct	Likely	Medium	95c/kWh of energy saved, as a tax deduction.	Ilovo is exploring opportunities for claiming the tax rebate and reviewing the potential offered by this tax rebate.	Estimated at R 100,000

CC6.1b

Please describe the 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 pattern	During the milling season less rain induced milling interruptions, due to cane supply stops, will enable a higher sugar production.	Increased production capacity	>6 years	Direct	Likely	Low-medium	R 20 to R 50 million per event	Change in crush strategy to optimise seasonal sucrose availability and a revised sugar cane planting strategy in rain fed areas to ensure planting is completed before the onset of the dry season.	The change in strategy is not expected to result in an increase in management cost.

CC6.1c

Please describe the 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
Changing consumer behaviour	Increased market for products produced from renewable resources, such as biofuel.	Increased demand for existing products/services	1 to 3 years	Direct	Likely	Medium	R 12 million	Engage with local authorities to develop mutually beneficial renewable based energy tariffs. In South Africa we have lobbied through the South African Sugar Association (SASA) regarding the Draft Position Paper on the South African Biofuels Regulatory Framework (released January 15, 2014) regarding the inclusion of sugar cane as a reference feed-stock in the first phase of the biofuels programme.	Estimated at R 2 million.

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 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	Thu 01 Apr 2010 - Thu 31 Mar 2011	229270
Scope 2 (location-based)	Thu 01 Apr 2010 - Thu 31 Mar 2011	249411
Scope 2 (market-based)	Thu 01 Apr 2010 - Thu 31 Mar 2011	249411

#### 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

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

The Greenhouse Gas Protocol Agricultural Guidance: Interpreting the Corporate Accounting and Reporting Standard for the Agricultural Sector

---

**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 Second Assessment Report (SAR - 100 year)
CH4	IPCC Second Assessment Report (SAR - 100 year)
N2O	IPCC Second Assessment Report (SAR - 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
Motor gasoline	2.3	kg CO2e per liter	Defra 2015
Diesel/Gas oil	2.68	kg CO2e per liter	Defra 2015
Bituminous coal	2466	Other: kgCO2e / tonne	Defra 2015

Fuel/Material/Energy	Emission Factor	Unit	Reference
Other: Heavy Fuel Oil	3223	Other: kgCO <sub>2</sub> e / tonne	Defra 2015
Other: Acetylene	75.55	Other: kgCO <sub>2</sub> e / tonne	The Climate Registry 2014
Liquefied petroleum gas (LPG)	2943	Other: kgCO <sub>2</sub> e / tonne	Defra 2015
Wood or wood waste	48.34	Other: kgCO <sub>2</sub> e / tonne	Defra 2015
Other: Bagasse	10.36	Other: kgCO <sub>2</sub> e / tonne	DIICCS RTE 2014
Other: Biomass	55.9	Other: kgCO <sub>2</sub> e / tonne	Defra 2015
Other: SNG	53	Other: kgCO <sub>2</sub> e / GJ	Calculated
Jet gasoline	2.54	kg CO <sub>2</sub> e per liter	Defra 2015

---

**Further Information**

**CC8.1**

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

Operational control

---

**CC8.2**

**Please provide your gross global Scope 1 emissions figures in metric tonnes CO<sub>2</sub>e**

378521

---

**CC8.3**

**Does your company have any operations in markets providing product or supplier specific data in the form of contractual instruments?**

No

---

**CC8.3a**

Please provide your gross global Scope 2 emissions figures in metric tonnes CO<sub>2</sub>e

Scope 2, location-based	Scope 2, market-based (if applicable)	Comment
165104	165104	

---

**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?

No

---

**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
--------	---	--	--	------------------------------------

---

**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 5% but less than or equal to 10%	Metering/ Measurement Constraints	Illovo Sugar is currently developing a custom data collection and management system. Fuel measurements may be imprecise as they are primarily based on delivery / purchasing records and not fuel meters. Boiler efficiency was not considered when determining emissions from fuel combustion.
Scope 2 (location-based)	More than 5% but less than or equal to 10%	Other: Malawi grid emission factor reference	A reliable grid electricity emission factor for Malawi is yet to be identified.
Scope 2 (market-based)	More than 5% but less than or equal to 10%	Other: Malawi grid emission factor reference	A reliable grid electricity emission factor for Malawi is yet to be identified.

---

**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	Moderate assurance	<a href="https://www.cdp.net/sites/2016/68/8868/Climate%20Change%202016/Shared%20Documents/Attachments/CC8.6a/Illovo%20-%202016%20CDP%20Climate%20Change%20Assurance%20Statement%20-%2027%20June%20-%20MHR%20-%20v1.doc">https://www.cdp.net/sites/2016/68/8868/Climate Change 2016/Shared Documents/Attachments/CC8.6a/Illovo - 2016 CDP Climate Change Assurance Statement - 27 June - MHR - v1.doc</a>	pg 1 & 2	AA1000AS	100

---

**CC8.6b**

Please provide further details of the regulatory regime to which you are complying that specifies the use of Continuous Emissions 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	Moderate assurance	<a href="https://www.cdp.net/sites/2016/68/8868/Climate%20Change%202016/Shared%20Documents/Attachments/CC8.7a/Illovo%202016%20CDP%20Climate%20Change%20Assurance%20Statement%20-%2027%20June%20-%20MHR%20-%20v1.doc">https://www.cdp.net/sites/2016/68/8868/Climate Change 2016/Shared Documents/Attachments/CC8.7a/Illovo - 2016 CDP Climate Change Assurance Statement - 27 June - MHR - v1.doc</a>	pg 1 & 2	AA1000AS	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**

5680412

---

**Further Information**

**Page: CC9. Scope 1 Emissions Breakdown - (1 Apr 2015 - 31 Mar 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
South Africa	204360
Mozambique	12484
Malawi	58212
Zambia	50746
Tanzania	16815
Swaziland	35903

---

**CC9.2**

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

By facility  
By activity

---

**CC9.2a**

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

Business division	Scope 1 emissions (metric tonnes CO2e)
-------------------	--

---

**CC9.2b**

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

Facility	Scope 1 emissions (metric tonnes CO2e)	Latitude	Longitude
Noodsberg Mill	60935		
Sezela Mill	76957		
Eston Mill	12969		
Umzimkulu Mill	1983		
Merebank Distillery	31471		
Glendale Distillery	19422		
Nchalo Mill	41939		
Dwangwa Mill	16273		
Kilombero Mill	16815		
Nakambala	50746		
Maragra Mill	12484		
Ubombo Mill	35903		
Illovo Sugar Head Office	624		

---

**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

<b>Activity</b>	<b>Scope 1 emissions (metric tonnes CO2e)</b>
Fuel Consumption	265236
Waste Water Treatment	18577
Fertiliser Application	57770
Cane Burning	36894
Enteric Fermentation	43

---

**Further Information**

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)
South Africa	65772	65772	65121	0
Mozambique	11365	11365	15807	0
Malawi	62824	62824	105058	0
Zambia	213	213	80839	0
Tanzania	10135	10135	19159	0
Swaziland	14794	14794	21661	0

---

**CC10.2**

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

By facility

---

**CC10.2a**

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

Business division	Scope 2 emissions, location based (metric tonnes CO2e)	Scope 2 emissions, market-based (metric tonnes CO2e)
-------------------	---	---

---

**CC10.2b**

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

Facility	Scope 2 emissions, location based (metric tonnes CO2e)	Scope 2 emissions, market-based (metric tonnes CO2e)
Noodsberg Mill	4055	4055
Sezela Mill	32473	32473
Eston Mill	3380	3380
Umzimkulu Mill	3854	3854
Merebank Distillery	13462	13462

Facility	Scope 2 emissions, location based (metric tonnes CO2e)	Scope 2 emissions, market-based (metric tonnes CO2e)
Glendale Distillery	3321	3321
Nchalo Mill	54800	54800
Dwangwa Mill	8024	8024
Kilombero Mill	10135	10135
Nakambala Mill	213	213
Maragra Mill	11365	11365
Ubombo Mill	14794	14794
Illovo Head Office	5228	5228

---

**CC10.2c**

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

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

---

**Further Information**

**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	Energy purchased and consumed (MWh)
Heat	0
Steam	0
Cooling	0

---

**CC11.3**

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

9134787



---

**CC11.3a**

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

Fuels	MWh
Motor gasoline	11134
Diesel/Gas oil	72759
Bituminous coal	508431
Other: HFO	2585
Other: Acetylene	265
Wood or wood waste	437910
Other: SNG	165073
Other: Bagasse	7491445
Other: Biomass	102800
Other: Polyfuel	7673
Liquefied petroleum gas (LPG)	81

---

**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	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
791658	307644	550895	518999	454087	

---

**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			
Divestment			
Acquisitions			
Mergers			
Change in output			
Change in methodology	4.11	Increase	Updated grid emission factors for South Africa, Tanzania and Malawi resulted in a significant change in GHG emissions from grid electricity consumption compared to the previous year.
Change in boundary	0.05	Increase	This year GHG emissions emitted by the company plane and enteric fermentation from our cattle farm in Zambia were included.
Change in physical operating conditions	6.44	Increase	Due to the drought and shorter crushing season, additional electricity imports were required to irrigate the crop over an extended offcrop period. Additional coal and woodchips were also required at Noodsberg Mill due to market demand for refined sugar necessitating increased quantities of raw sugar being imported for refining.
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
0.000041	metric tonnes CO2e		Location-based	9.9	Increase	Due to the drought and shorter crushing season, additional electricity imports were required to irrigate the crop over an extended offcrop period. Additional coal and woodchips were also required at Noodsberg Mill due to market demand for refined sugar necessitating increased quantities of raw sugar being imported for refining. Please refer to our Annual Report for revenue figures.

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
0.3593	metric tonnes CO2e	Other: Sugar produced	1512433	Location-based	26.21	Increase	Due to the drought and shorter crushing season, additional electricity imports were required to irrigate the crop over an extended offcrop period. Additional coal and woodchips were also required at Noodsberg Mill due to market demand for refined sugar necessitating increased quantities of raw sugar being imported for refining. Further to this our sugar production decreased by 14%.
298	metric tonnes CO2e	Other: Person Work Hours	1824	Location-based		N/A	First year of calculation

Further Information

---

**CC13.1**

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

No, and we do not currently anticipate doing so in the next 2 years

---

**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

---

**CC13.1b**

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

---

**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 of CO2e)	Number of credits (metric tonnes CO2e): Risk adjusted volume	Credits cancelled	Purpose, e.g. compliance
---------------------------------------	--------------	------------------------	----------------------------	---	--	-------------------	--------------------------

---

**Further Information**

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				
Capital goods	Not evaluated				
Fuel-and-energy-related activities (not included in Scope 1 or 2)	Not evaluated				
Upstream transportation and distribution	Not evaluated				
Waste generated in operations	Not evaluated				
Business travel	Not relevant, explanation provided				Business travel accounts for less than 1% of our annual GHG emissions.
Employee commuting	Not evaluated				
Upstream leased assets	Not evaluated				
Downstream transportation and distribution	Relevant, calculated	44864	Calculated from fuel records supplied by the service providers.		Illovo requests fuel data from our service providers who transport our products.
Processing of sold products	Not evaluated				
Use of sold products	Not evaluated				
End of life treatment of sold products	Not evaluated				
Downstream leased assets	Not evaluated				
Franchises	Not relevant,				Illovo does not have any franchises.



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
	explanation provided				
Investments	Not evaluated				
Other (upstream)	Not evaluated				
Other (downstream)	Not evaluated				

**CC14.2**

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

No third party verification or assurance

**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 (%)

---

**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
Downstream transportation and distribution	Change in output	26	Decrease	

---

**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 suppliers

**CC14.4a**

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

We require new suppliers to align with our Code of Conduct and Business Ethics, which together with the Standard Trading Conditions require our suppliers to observe the precautionary approach to environmental management, improve sustainability through, inter alia, water conservation programmes, promoting greater environmental responsibility and developing environmentally friendly technologies. In their environmental management they must include compliance with environmental legislation and conducting environmental reviews of their products and services in order to advance sustainability. Following on the supplier assessment conducted in 2014/15 on the top 50% by value of non-cane procurement in 2013/14, as a start to assessing the extent to which suppliers comply with our Code of Conduct and Business Ethics, during 2015/16 we extended the sample to 500 of the top suppliers by non-cane procurement value. There were 142 responses. There was a high compliance rate noted, with two cases identified for follow up. Furthermore, as part of educating Buyers and Cane Procurement personnel on the need for suppliers and sugar cane growers to comply with the Code of Conduct and Business Ethics the Code was included in the 2015/16 Compliance Road Shows. Sessions were held with senior management, including Procurement personnel in Zambia, Malawi, Tanzania and South Africa. We continue to engage with 3rd party sugar cane growers with the current main focus being on adopting sustainable farming practices. Sugar cane growers are considered critical because they provide us with our main raw material and their operations have the potential to impact on the environment and natural resources.

**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**

<b>Number of suppliers</b>	<b>% of total spend (direct and indirect)</b>	<b>Comment</b>
142	22%	The proportion of total non-cane procurement that the 142 respondents constitute is 22%, with the suppliers being the smaller and thus typically more vulnerable.

**CC14.4c**

**If you have data on your suppliers' GHG emissions and climate change strategies, please explain how you make use of that data**

<b>How you make use of the data</b>	<b>Please give details</b>
Managing physical risks in the supply chain	2015 / 16 was the second year in which we requested GHG emissions and climate change strategy related information from our key non-cane suppliers. This data is used to determine the climate change related risk relevant to our supply chain with the potential to impact our business.

How you make use of the data	Please give details
Managing the impact of regulation in the supply chain	2015 / 16 was the second year in which we requested GHG emissions and climate change strategy related information from our key non-cane suppliers. This data is used to determine the climate change related risk relevant to our supply chain with the potential to impact our business.

---

CC14.4d

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
John Hulley	Group Operations Director	Director on board

---

**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)**

Agricultural emissions disaggregated by category (advised by the GHG protocol)

---

**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
-------	---	-------------	------------	-------------	---------

---

**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
Non-mechanical (Scope 1)	94708	Empirical models			
Land use change (Scope 1)					
Mechanical (Scope 1)					
Purchased energy (Scope 2)					

---

**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	Seed variety selection	Cane variety development and cultivation aimed at increasing the resilience of our operations to drought and pest vectors.	Increasing resilience to climate change (adaptation)	
2	Other: Green cane harvesting	Cane is harvested green opposed to harvest following infield burning. The extra biomass harvested is used as a renewable fuel within boilers.	Emissions reductions (mitigation)	During the reporting year 3 654 ha of cane was 'green harvested' at our Ubombo (Swaziland), Nchalo (Malawi), Sezela (South Africa) and Umzimkulu (South Africa) operations. This reduction in infield cane burning resulted in 2,182 tCO <sub>2</sub> e being avoided.
3	Other: Manual cane harvesting	The majority of our cane plantations are manually harvested reducing the consumption of fossil fuels. Manual harvesting also results in decreased ratoon loss, and therefore reduces the frequency of re-planting.	Emissions reductions (mitigation)	
4	Other: Use of electricity cogenerated from renewable sources to operate irrigation equipment	During the milling season the majority of our irrigation systems are powered by electricity generated via bagasse based cogeneration.	Emissions reductions (mitigation)	
5	Other: Recycling of boiler ash and filter cake as organic sources of nutrients	The use of these by-products as a source of nutrients offsets our inorganic fertiliser requirements.	Emissions reductions (mitigation)	
6	Other: Irrigation of treated effluent	The reuse of treated mill waste water for irrigation is practiced by a number of our operations resulting in increased water efficiency and decreased water abstraction energy requirements.	Emissions reductions (mitigation)	
7	Other: Maintenance of natural vegetation	Minimisation of land use change.	Emissions reductions	



Activity ID	Agricultural management practice	Description of agricultural management practice	Climate change related benefit	Comment
	surrounding centre pivot fields		(mitigation)	
8	Pest, disease and weed management practices	Habitat management and or the use of biological control agents to control agricultural pests. Where feasible our operations make use of biological control agents to control agricultural pests. This practice offsets our use of inorganic pesticides and the associated GHG emissions generated during their manufacture and distribution.	Emissions reductions (mitigation)	
9	Other: Subsurface fertiliser application	At our Zambian operations, synthetic fertiliser is applied to the sub-surface of the soil. This reduces fertiliser volatilisation losses and improves fertiliser input efficiency which in turn reduces the emissions from manufacture of the 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		Less risk to crop productivity if resilient or water efficient crop varieties can be developed.	
2						Improved ambient air quality conditions experienced by surrounding communities (cane is no longer burnt infield).	Additional biomass feedstock available for combustion in the boiler resulting in increased cogeneration and consequently renewable energy generation. At our Swaziland operation this renewable energy is fed into the national grid.	
3			Evaluated - beneficial impact			Job creation	Conservation of soil and soil quality in areas unsuitable for manual harvesting. This has also resulted in significant job creation.	
4		Evaluated - beneficial impact					Generating renewable energy within our mill for operating both the milling and agricultural operations, where feasible, greatly reduces our cost base.	
5			Evaluated - beneficial impact		Evaluated - beneficial impact		Decreased synthetic fertiliser runoff into surrounding water bodies. Improved soil organic matter content, water retention, soil structure and overall soil health.	
6		Evaluated - beneficial impact			Evaluated - beneficial impact		The reuse of treated waste water from our mills decreases abstraction energy requirements and consequently the cost of irrigation. The reuse of waste water also positively impacts our agricultural blue water footprint.	
7				Evaluated - beneficial impact			The pockets of natural vegetation within our centre pivot fields act as refuges and ecological green corridors for indigenous fauna and flora resulting in increased biodiversity.	

Activity ID	Impact on yield	Impact on cost	Impact on soil quality	Impact on biodiversity	Impact on water	Other impact	Description of impacts	Comment
8		Evaluated - beneficial impact		Not evaluated			This practice offsets our use of inorganic pesticides and the associated GHG emissions generated during their manufacture and distribution. Reduced inorganic pesticide application rates and consequently reduced operational cost. Reduced impact of inorganic pesticides on indigenous fauna.	
9		Evaluated - beneficial impact					Reduced synthetic fertiliser application rates and therefore reduced operational spend.	

---

#### 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**

At the majority of our operations we have developed a strategy for increasing the quantity of waste water irrigated, the area of cane green harvested (under rain fed conditions or where biomass is required for cogeneration) and improving irrigation efficiencies through better water monitoring, improved irrigation scheduling and the commissioning of more efficient irrigation systems (refer to the Illovo 2016 CDP Water Response for further details regarding Illovo's water management strategy).

---

#### 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					
CO2 removals from land use management					
Sequestration during land use change					
CO2 emissions from biofuel combustion	5680412	Default emissions factors	None		

---

**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

**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	The South African-based World Wildlife Fund (WWF), in partnership with the Noodsberg Cane Growers Association, and supported by Illovo Sugar -South Africa Noodsberg sugar factory and refinery, was instrumental in the development of a Sustainable Sugar Cane Farm Management system for growers, termed SUSFARMS®.	Knowledge sharing	We engage with sugarcane growers on sustainable farming practices based on the SUSFARMS® methodology which now forms the basis for our extension services.	Emissions reductions (mitigation) Increasing resilience to climate change (adaptation)	

---

**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			Not evaluated	Not evaluated	Not evaluated		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 to engage with suppliers through the implementation of the SUSFARMS® Methodology. This concept is based on three fundamental environmental principles for sustainable sugarcane production - natural assets are conserved, critical ecosystems services are maintained and agricultural resources are used sustainably, all in conjunction with social and economic drivers. Performance relative to these principles is judged according to verifiers, making for a potentially creditable certification system. We are currently helping to develop the validation and verification method for the programme. Through our membership of the South African sugar industry, we will continue to contribute to the pursuit and practice of the SUSFARMS® ideology.

---

**Further Information**

**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 CC8.2a 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	273458		Included are GHG emissions generated from fuel combustion in our mills and process emissions from waste water treatment.	
Scope 2	165104		Emissions from grid electricity by our industrial and agricultural operations.	

---

**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**



**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?**

Direct operations

---

**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	19061	None	This includes mobile GHG emissions generated by Illovo's vehicle and machinery fleet.	
Scope 2				

---

**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?

---

**Further Information**

**FBT4.1**

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

Yes

---

**FBT4.1b**

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

---

**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?**

No

---

**Further Information**

**CDP**