

# Carbon Disclosure Project

## Confidential Statement

This document, and any attachments thereto, regardless of form or medium, is intended only for use by the addressee(s) and may contain legally privileged and/or confidential, copyrighted, trademarked, patented or otherwise restricted information viewable by the intended recipient only. If you are not the intended recipient of this document (or the person responsible for delivering this document to the intended recipient), you are hereby notified that any dissemination, distribution, printing or copying of this document, and any attachment thereto, is strictly prohibited and a violation of this condition may infringe upon copyright, trademark, patent, or other laws protecting proprietary and, or, intellectual property. In no event shall this document be delivered to anyone other than the intended recipient or original sender and violation may be considered a breach of lawfully punishable by various domestic and international courts. If you have received this document in error, please respond to the originator of this message or email him/her at the address below and permanently delete and/or shred the original and any copies and any electronic form this document, and any attachments thereto and do not disseminate further.

Where no notice is given, all information contained herein is Copyright 2017 of Shoprite Checkers (Pty) Ltd.

# Contents

<b>Introduction</b>	<b>3</b>
Reporting Year	3
Country List Configuration	3
Currency Selection	3
<b>Management</b>	<b>4</b>
Governance	4
Strategy	5
Targets and Initiatives	9
Communication	10
<b>Risks and Opportunities</b>	<b>12</b>
Climate Change Risks	12
Climate Change Opportunities	18
<b>GHG Emissions Accounting, Energy and Fuel Use and Trading</b>	<b>21</b>
Emissions Methodology	21
Emissions Data - (1 Jul 2015 - 30 Jun 2016)	21
Scope 1 Emissions Breakdown - (1 Jul 2015 - 30 Jun 2016)	23
Scope 2 Emissions Breakdown - (1 Jul 2015 - 30 Jun 2016)	23
Energy	24
Emissions Performance	25
Emissions Trading	27
Scope 3 Emissions	27

# 1 Introduction

Shoprite Holdings Limited (“Shoprite”), listed on the Johannesburg Stock Exchange (JSE) under the Food & Drug Retailers sector, is an investment holding company whose combined subsidiaries constitute the largest fast moving consumer goods (FMCG) retail operation on the African continent. Its various chains operate a total of 1 855 corporate outlets and 359 franchise stores, across 15 countries, under the Shoprite-, Checkers-, Checkers Hyper-, Usave-, OK Furniture-, OK Power Express-, OK Furniture Dreams-, House & Home-, Hungry Lion-, Checkers Food Services-, Transpharm- and OK Franchise brands. Shoprite’s goal is to provide consumers of all income levels with food and household items in a first-world shopping environment, at the lowest prices.

Shoprite’s total Scope 1 and 2 emissions are 1 926 071 tonnes of CO<sub>2</sub>e (i.e. 9.6% and 90.4%, respectively). Transport forms a significant part of Shoprite’s operations and Scope 1 emissions, where moving large quantities of products are a daily requirement. Shoprite’s decision to operate its own supply chain and allow suppliers to utilise its central distribution facilities rather than making inefficient direct-to-store deliveries brought forth an overall reduction in emissions (which would traditionally have been reported as Scope 3, now under Scope 1 and 2). It also means that emissions previously reported as Scope 3 emissions are now reported as Scope 1 and 2 emissions. Refrigeration also forms a significant part of Shoprite’s operations. Emissions from the loss of refrigerant gasses and electricity consumed by refrigeration systems thereby contribute significantly to Shoprite’s Scope 1 and 2 emissions. Shoprite’s decision to apply the operational control approach means that emissions associated with its franchise business are reported as Scope 3 emissions.

In the remainder of this submission Shoprite reports in terms of three business divisions or activities within South Africa, Namibia, Swaziland and Lesotho, namely Retail Outlets (comprising of all stores excluding those operating under the Hungry Lion and OK Franchise brands, because of its decision to apply the operational control approach), Distribution (which includes its warehousing- and logistics activities) and Offices. Their emissions account approximately 92.0%, 7.7% and 0.3% of Shoprite’s total measured carbon footprint, respectively.

In 2011 Shoprite embarked on a journey to capture carbon emission data and mature the way in which the information is collected, analysed and reported. Shoprite’s environmental impact disclosure (completeness of the CDP response), awareness (extent to which Shoprite has assessed its environmental risks and impacts), management (extent to which Shoprite has implemented strategies to mitigate its environmental impacts) and leadership (particular actions Shoprite has taken that represent best practice in the field of environmental management) has matured to an extent that it not only forms part of its business as usual, but enabled Shoprite to respond to CDP and submit the document publicly.

## 1.1 Reporting Year

The reporting period for the Company’s 2017 submission is: Wed 01 Jul 2015 – Thurs 30 June 2016

## 1.2 Country List Configuration

The reporting country for the Company’s 2017 submission is: South Africa, Namibia, Swaziland and Lesotho

## 1.3 Currency Selection

The reporting currency for the Company’s 2017 submission is: ZAR (R)

## 2 Management

This section documents the governance structure of the company with regards to climate change matters, including the way in which incentives are provided (monetary or non-monetary) to individuals for mitigating climate change risks and capitalising on climate change opportunities. In the context of this section the Board (the “Board of Directors” or the “Executive Board”) is the group of people appointed with joint responsibility for directing and overseeing the climate change and sustainability affairs of the company.

### 2.1 Governance

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

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

The Board is the highest level of direct responsibility for climate change matters. The Board delegates its duties with respect to climate change matters to the Social and Ethics Committee, which, during the period under review, met quarterly and comprised of several board members, namely Mr JA Louw, Mr BR Weyers and Mr M Bosman. Daily, however, the Technical Projects Team, managed by Mr W Lotz, is responsible for climate change matters and reports to the Social and Ethics Committee to this extent.

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

Yes

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
Board Chairman	Monetary Reward	Behaviour change related indicator	CH Wiese is incentivised to ensure a good corporate global reputation (behaviour change indicator) comprising of, among others, climate change issues as a result of his shareholding, which exceeds 90 million shares for the period under review, because of its potential effect on the share price.
Chief Executive Officer (CEO)	Monetary Reward	Behaviour change related indicator	JW Basson is incentivised to ensure a good corporate global reputation (behaviour change indicator) comprising of, among others, climate change issues as a result of his shareholding, which exceeds 9 million shares for the period under review, because of its potential effect on the share price. JW Basson served on the Board as an executive director during the period under review.
Chief Operating Officer (COO)	Monetary Reward	Emissions reduction project Energy reduction project Efficiency project Behaviour change related indicator Environmental criteria included in purchases	PC Engelbrecht is incentivised to ensure a good corporate global reputation (behaviour change indicator) comprising of, among others, climate change issues as a result of his participation in an executive share scheme and his shareholding, because of its potential effect on the share price. PC Engelbrecht further participates in bonus schemes based on KPIs indirectly linked to environmental criteria included in purchases (which impact sales), efficiency projects (which impact controllable expenses), energy reduction projects (which impact controllable expenses) and emissions reduction projects (which impact shrinkage). PC Engelbrecht served on the Board as an executive director during the period under review.

Chief Financial Officer (CFO)	Monetary Reward	Emissions reduction project Behaviour change related indicator	M Bosman is incentivised to ensure a good corporate global reputation (behaviour change indicator) comprising of, among others, climate change issues as a result of his participation in an executive share scheme and his shareholding, because of its potential effect on the share price. M Bosman further participates in bonus schemes based on KPIs indirectly linked to emissions reduction projects (which impact shrinkage). M Bosman served on the Board as an executive director during the period under review.
Business Unit Managers	Monetary Reward	Emissions reduction project Energy reduction project Efficiency project Environmental criteria included in purchases	Business Unit Managers participate in bonus schemes based on KPIs indirectly linked to environmental criteria included in purchases (which impact sales), efficiency projects (which impact controllable expenses), energy reduction projects (which impact controllable expenses) and emissions reduction projects (which impact shrinkage).
Buyers/Purchasers	Monetary Reward	Environmental criteria included in purchases	Buyers/purchasers participate in bonus schemes based on KPIs indirectly linked to environmental criteria included in purchases (which impact sales).
Energy Managers	Monetary Reward	Energy reduction project Efficiency project	Energy Managers participate in bonus schemes based on KPIs indirectly linked to efficiency projects (which impact controllable expenses) and energy reduction projects (which impact controllable expenses).
Environment/ Sustainability Managers	Recognition (Non-Monetary)	Behaviour change related indicator	Recognition is given to the environment/sustainability managers for a good corporate global reputation (behaviour change indicator) comprising of, among others, climate change issues and an improvement in the annual CDP score.
Public Affairs Managers	Monetary Reward	Behaviour change related indicator	Public Affairs Managers are incentivised to ensure a good corporate global reputation (behaviour change indicator) comprising of, among others, climate change issues as a result of their participation in bonus schemes based on KPIs directly linked to sales and market share.

## 2.2 Strategy

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

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?
Sporadically, not defined	Senior manager/officer	South Africa, Angola, Botswana, DRC, Ghana, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Nigeria, Swaziland, Uganda and Zambia which encompasses all operations.	3 to 6 years

In 2011 Shoprite embarked on a journey to mature the way in which information related to climate change risks and opportunities is collected, analysed and reported. Shoprite's environmental impact disclosure, awareness, management and leadership has matured to an extent that Shoprite is in the process of formalising the identification and prioritisation of climate change risks and opportunities and the integration thereof into multi-disciplinary company-wide risk management processes. To this extent, a committee will be

established every two years, comprising of internal resources and external subject matter experts, who will be tasked with identifying climate change risks and opportunities with a horizon of greater than 6 years. The results thereof will be communicated to the Risk Forum (a committee appointed by the Board) who will in turn be responsible with prioritising the risks and opportunities and incorporating it into multi-disciplinary company-wide risk management processes.

Please describe how your risk and opportunity identification processes are applied at both Company and asset level.

Shoprite's climate change risk and opportunity identification process is sporadic and not formally defined in line with its environmental impact disclosure maturity and its objective to mature its environmental impact awareness, management and leadership accordingly. To this extent, Shoprite is in the process of formalising the identification of climate change risks and opportunities and the integration thereof into multi-disciplinary company-wide risk management processes.

The process entails establishing a specific climate change committee every two years, comprising of internal resources across appropriate business units and external subject matter experts, who is tasked with identifying climate change risks and opportunities with a horizon of greater than 6 years. Internal resources are purposefully and strategically selected to ensure climate change effects are assessed at both company- and asset level. The external subject matter experts are responsible for identifying and documenting relevant climate change related legislation, climate change effects and the corresponding materiality (i.e. likelihood and severity) across each applicable geographical area. The information is thereafter presented to the internal resources, who are tasked with translating the climate change effects to business specific risks and opportunities across each applicable business unit.

The climate change committee then collaborates and documents all significant business specific climate change risks and opportunities before presenting it to the Risk Forum (a committee appointed by the Board) who is in turn responsible for prioritising these risks and opportunities and incorporating it into multi-disciplinary company-wide risk management processes. The Risk Forum comprises of senior management from various business units, including operations, public affairs, buying, supply chain, real estate and finance, and meet quarterly.

How do you prioritize the risks and opportunities identified?

Shoprite's climate change risk and opportunity prioritisation process is not formally defined in line with its environmental impact disclosure maturity and its objective to mature its environmental impact awareness, management and leadership accordingly. To this extent, Shoprite is in the process of formalising the prioritisation of climate change risks and opportunities.

The process entails the Risk Forum (a committee appointed by the Board) analysing, evaluating and prioritising the climate change risks and opportunities identified by the climate change committee, which is established every two years. Climate change risks and opportunities are presented by the climate change committee in the form of business cases (comprising of both quantitative and qualitative criteria). Quantitative criteria consider the severity of the upside or downside effect on sales, trading profit (controllable expenses and shrinkage), customer relations (market share) and/or corporate global reputation (e.g. JSE SRI listing). Qualitative criteria consider the likelihood of the applicable climate change risk or opportunity materialising, the associated timeframe and the response time required to implement any remedial action (if applicable).

Once the climate change risks and opportunities have been prioritised, the Risk Forum is responsible for incorporating it into multi-disciplinary company-wide risk management processes.

Is climate change integrated into your business strategy?

Yes

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

Shoprite focuses on the following strategic climate change areas, namely 1) understanding and managing its environmental impact, 2) engaging policy makers on climate change, 3) sharing its environmental impact with stakeholders, 4) formally integrating climate change into its multi-disciplinary company-wide risk management processes, 5) capitalising on opportunities and mitigating risks presented by climate change.

- i The influence of climate change on business strategy has recently intensified and is expected to continue. Historically Shoprite's business strategy was limited to the short term focussing only on

internal factors affecting its core business, where Shoprite had complete control. Later Shoprite's business strategy was extended to the medium term and to include external factors directly impacting its core business, where Shoprite had moderate control. Currently Shoprite's business strategy is expanding to the long term to include complex, multidimensional and far reaching external factors, such as climate change, which directly and indirectly impact its core business, where Shoprite in some cases may have limited or no control.

Historically, financial information was manually collected and exclusively reported upon. Later a batch information system was utilised to collect the financial information which was further complemented by non-financial information pertaining to external factors directly impacting its core business. Currently various best of breed near-real-time information systems are being utilised to collect the financial and non-financial information pertaining to external factors which directly and indirectly impact its core business, such as information related to carbon emissions.

- ii The strategy has been influenced by stakeholders' increased expectation for companies to publicly disclose and manage their impact on the environment and the effect that climate change has on them. Climate change also presents risks that must be mitigated and opportunities that should be capitalised upon. Furthermore, the strategy has been influenced by international and national efforts to address climate change, such as the recent ratification of the Paris Agreement and South Africa's Intended Nationally Determined Contributions, respectively, and the results thereof.
- iii Shoprite's short term strategy has been influenced by important components, namely to improve its carbon emission data completeness, to expand its carbon footprint boundaries and scope, to set science-based emission reduction targets, to perform third party limited verification of carbon emission data, to reduce its carbon emission intensities, to appoint a dedicated sustainability manager, to engage with policymakers regarding climate change (e.g. Carbon Tax framework), to submit its Carbon Disclosure Project (CDP) response as a public document, to publish its CDP response on its corporate website, to publish carbon footprint and climate change related information in its Annual Integrated Report, to establish a climate change committee every two years, to appoint climate change subject matter experts responsible for identifying and documenting climate change effects and related legislation, to formally define the climate change risk and opportunity identification process, to formally define the climate change risk and opportunity prioritisation process, to capitalise on opportunities presented by climate change and to mitigate risks presented by climate change.
- iv Shoprite's long term strategy has been influenced by important components, namely to target a complete carbon emission data set, to target a comprehensive carbon footprint boundary and scope, to perform third party full verification of carbon emission data, to engage with policymakers regarding climate change (e.g. define CDP sector specific reporting standards) and to utilise forward-looking scenario analyses to inform business strategy and/or financial planning (as recommended by the Task Force on climate related Financial Disclosures (TCFD)).
- v Shoprite's understanding and managing of its environmental impact, coupled with formally integrating climate change into its multi-disciplinary company-wide risk management processes, enables it to capitalise on opportunities (e.g. showcase its progress and performance in measuring and managing its environmental impact, which may positively affect its market share and share price) and mitigate risks (e.g. mitigating the effect of changes in regional precipitation extremes and droughts by planting crops across multiple climate regions) presented by climate change.
 

Engaging policy makers on climate change allows Shoprite insight into policy developments enabling it to influence and timeously align its business and compliance with such developments.

Sharing its environmental impact with stakeholders allows Shoprite to affirm its reputation as the largest and leading Fast Moving Consumer Goods (FMCG) retail operation on the African continent by showcasing its performance and progress in this regard, which positively affects its market share and share price.
- vi The most substantial business decisions Shoprite made during the reporting year include its decision to submit its Carbon Disclosure Project (CDP) response publicly, by making it available on its corporate website, and to reference aspects thereof in its Annual Integrated Report. Other decisions include its decision to continue to invest in reducing its carbon emission intensities and to improve its carbon emission data completeness.

Does your Company use an internal price of carbon?

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

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

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

Focus of Legislation	Corporate Position	Details of Engagement
Carbon tax	Oppose	Shoprite, represented by its Tax Manager, engaged in person directly with Government Department: National Treasury (Republic of South Africa) and National Business Initiative (NBI) through the Carbon Tax Stakeholder Consultation process, which formed part of the public consultation process announced by the Finance Minister in 2017. The agenda of the Carbon Tax Stakeholder Consultation process included, but was not limited to, carbon tax key design features, carbon tax thresholds and carbon tax allowances.

The Government Department: National Treasury (Republic of South Africa) first introduced, in 2010, its bid to implement a carbon tax. National Treasury only issued the carbon tax design in 2013 and subsequently published the Carbon Tax Draft Bill in 2015. The Finance Minister, during the 2017 budget speech, announced that the Carbon Tax Draft Bill will be revised and published for public consultation and thereafter tabled before the Parliament (Republic of South Africa) by mid-2017. However, uncertainty exists as to when the Carbon Tax Bill will be promulgated, since the implementation thereof has been delayed for more than two years and the final implementation date has not been confirmed.

Shoprite opposes the Carbon Tax Draft Bill based on the following.

- i Carbon emission reporting is not mandatory and as a result, the promulgation of the Carbon Tax Bill will be premature. Shoprite suggests that carbon emissions reporting is made mandatory for a period, suitable enough for companies to mature their carbon emission reporting process, prior to the promulgation of the Carbon Tax Bill.
- ii Initiatives such as the energy efficiency tax incentive (Section 12L) are favoured above tax penalties.
- iii Taxes that are promulgated with the intention of changing negative behaviour is constructive only if it
  - 1) is able to isolate the source of the negative behaviour it intends to change positively and
  - 2) cannot be passed down to another entity, who in turn does not control the source of the negative behaviour. The Sugar Tax Bill is an example thereof, since it is able to isolate (only sugary products are taxed) the negative behaviour it intends to change (consuming excess sugary products resulting in obesity) without being passed onto another entity (only the end consumer is taxed). Whereas, the Carbon Tax Bill is not an example thereof, since it is unable to isolate the source of the negative behaviour it intends to change and it passes the financial burden onto other entities. To this extent, end consumers of electricity are unable to directly influence the selection of generation technology (e.g. coal-fired power stations vs. hydroelectric power stations) utilised by the electricity public utility, Eskom, even though it has a significant tax implication which they will ultimately bear through electricity tariff increases. In addition, carbon emission reporting is not mandatory and the promulgation of the Carbon Tax Bill would, as a result, be premature.

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

No

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?

At present, the process is limited to the Carbon Tax Draft Bill only, which has, to date, not yet been promulgated and the date of implementation has not yet been confirmed. As a result, the process is trivial and defining a formal process would be superfluous, since activities that influence the Carbon Tax Draft Bill requires ad-hoc and infrequent interaction between the Tax Manager (Finance Department) and the Environment/Sustainability Manager (Technical Projects) only.

However, Shoprite endeavours to remain abreast of key developments on climate change regulations and policies by means of regularly reviewing relevant white paper documents compiled by its external subject matter experts who are familiar with its climate change strategy. Furthermore, Shoprite's Legal Department

regularly review and update its regulatory universe and is in the process of appointing two dedicated compliance managers. These appointments will result in current compliance and regulatory systems being deployed and managed more effectively.

## 2.3 Targets and Initiatives

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

Renewable energy consumption and/or production

Intensity target

Please provide details of your intensity target

ID	Scope	% 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?
Int1	Scope 1+2 (location-based)	99.46	25.00	Metric tonnes CO <sub>2</sub> e per square meter*	2016	0.4650	2025	No, but we anticipate setting one in the next 2 years

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	Increase	7.70	No change	0	Shoprite anticipates that its reported square meterage will increase by 43.54% by 2025 which may be attributed to its organic growth and reporting boundary expansion. If the intensity target is successfully reached, its total absolute Scope 1 and Scope 2 carbon emissions will account for approximately 2 085 781 metric tonnes CO <sub>2</sub> e in 2025, as opposed to 2 764 652 metric tonnes CO <sub>2</sub> e (i.e. 25% decrease in emissions).

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

ID	Energy types covered by targets	Base year	Base year energy for energy type covered (MWh)	% renewable energy in base year	Target year	% renewable energy in target year	Comment
RE1	Electricity consumption	2016	1 609 985	0.10	2025	1.00	

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	0.00	0.00	
RE1	0.00	10.00	

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

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

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	Estimated annual CO2e savings in metric tonnes CO2e (only required for rows marked *)
Under investigation	5	180 047
To be implemented*	1	304 250
Implementation commenced*	1	15 450
Implemented*	1	27 810
Not to be implemented	0	-

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

#### 1. Energy Efficiency Building Services

Shoprite reduced its carbon emissions by replacing more than 775,000 conventional fluorescent tubes and 80,000 control gear with more energy efficient fluorescent tubes and control gear, respectively, spanning the general sales floors, back of house areas, storage areas, preparation areas and offices across more than 1,100 of its South African retail outlets.

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
27 810	Scope 2 (location-based)	Voluntary	29 000 000	32 000 000	1-3 years	1-2 years

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

Method	Comment
Compliance with regulatory requirements/standards	Shoprite prioritise emission reduction activities by establishing a climate change committee every two years who are tasked with, among others, submitting white paper documents addressing regulatory requirements and standards, to ensure the compliance thereof.
Financial optimization calculations	Climate change risks and opportunities are presented by the climate change committee in the form of business cases. Shoprite prioritise carbon emission reduction activities when financial calculations present favourable business cases (comprising of both quantitative and qualitative criteria) that are aligned with its required rate of return. Quantitative criteria consider the severity of the upside or downside effect on sales, trading profit (controllable expenses and shrinkage), customer relations (market share) and/or corporate global reputation (e.g. JSE SRI listing). Qualitative criteria consider the likelihood of the applicable climate change risk or opportunity materialising, the associated timeframe and the response time required to implement any remedial action (if applicable).
Internal incentives/recognition programs	Employees participate in bonus schemes (internal incentives) based on KPIs indirectly linked to efficiency projects (which impact controllable expenses) and energy reduction projects (which impact controllable expenses).

## 2.4 Communication

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 documents	Comments
In mainstream reports (including an integrated report) in accordance with the CDSB Framework	Complete	24-28	Shoprite Holdings Annual Integrated Report	In Shoprite Holdings' Annual Integrated Report, it notes that it measures its carbon footprint enabling it to better understand the environmental impact of its activities. The report includes details of its emission reduction targets set for 2025 as well as various emission reduction projects, energy reduction projects and efficiency projects initiated to reach these targets.
In voluntary communications	Complete	7	Cape Argus Publication	The Cape Argus newspaper covers Shoprite's initiatives to reduce water consumption across its operations in drought-stricken areas, such as the suspension of garden irrigation, the suspension of truck washing across all its facilities as well as the usage of bricks in all toilet cisterns.
In voluntary communications	Complete	5	Athlone News Publication	The Athlone News newspaper covers Shoprite's participation in assisting local non-profit organisations with grey water systems to ensure that their food gardens are able to provide their local communities with food, despite being in a drought stricken area.
In voluntary communications	Complete	10	Volksblad Publication	The Volksblad newspaper covers Shoprite's participation in the WWF Earth Hour project and its initiatives to reduce energy consumption through the behavioural change and the use of solar energy.
In voluntary communications	Complete	3	Pretoria News Publication	The Pretoria News newspaper covers Shoprite's participation in the WWF Earth Hour project and its initiatives to reduce energy consumption through the behavioural change and the use of solar energy.
In voluntary communications	Complete	3	Weekend Argus Publication	The Weekend Argus newspaper covers Shoprite's participation in the WWF Earth Hour project and its initiatives to reduce energy consumption through the behavioural change and the use of solar energy.
In voluntary communications	Complete	8	Victoria West Messenger	The Victoria West Messenger covers the solar energy project in Kimberley.
In voluntary communications	Complete	8	Noordwester (Calvinia) Publication	The Noordwester (Calvinia) newspaper covers the solar energy project in Kimberley.
In voluntary communications	Complete	3-5	Daily News Publication	The Daily News covers Shoprite's 'Project Thirst' initiative to bring relief by delivering fresh drinking water to drought-stricken communities.
In voluntary communications	Complete	1	Boland Gazette Nuus ( <a href="http://www.netwerk24.com/ZA/Boland-gazette/Nuus/Arbor-Week-to-offset-over-500-tons-of-carbon-20150903?mobile=true">http://www.netwerk24.com/ZA/Boland-gazette/Nuus/Arbor-Week-to-offset-over-500-tons-of-carbon-20150903?mobile=true</a> )	The Boland Gazette Nuus messenger covered Shoprite's participation in Arbor Week, where it planted more than 1 500 trees, which offset in excess of 553 tonnes of CO <sub>2</sub> .
In voluntary communications	Complete	1	Media Update ( <a href="https://www.mediaupdate.co.za/publicity/80292/cheekers-to-offset-over-550-tons-of-carbon-for-arbor-week">https://www.mediaupdate.co.za/publicity/80292/cheekers-to-offset-over-550-tons-of-carbon-for-arbor-week</a> )	The Boland Gazette Nuus messenger covered Shoprite's participation in Arbor Week, where it planted more than 1 500 trees, which offset in excess of 553 tonnes of CO <sub>2</sub> .
In voluntary communications	Complete	13	Daily Nation Mail Publication	The Daily Nation Mail newspaper covers Shoprite, as the first retailer, introducing oxo-biodegradable shopping bags IN 2016, An initiative which will see up to 85 million plastic bags diverted from landfill sites annually. These plastic shopping bags degrade naturally within 12-24 months when disposed of in an environment where oxygen, UV light and heat are present.

### 3 Risks and Opportunities

This section documents the process of identifying and prioritising climate change risks and opportunities, focussing on climate change risks and opportunities which have the potential to generate a substantive change in business operations, revenue and/or expenditure.

#### 3.1 Climate Change Risks

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

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

##### 1. Emission Reporting Obligations

The South African National Climate Change Response Policy's provision for mandatory emissions data reporting, coupled with the evolving climate change regulatory environment in South Africa will require systems for collecting accurate greenhouse gas (GHG) emissions data.

Carbon emission reporting is not a mandatory practise. However, it is anticipated that emission reporting will become obligatory for Shoprite's South African-based operations, because of the South African Government's commitment to reduce its carbon emissions and report to the IPCC as a signatory of the Kyoto Protocol. Furthermore, the National Climate Change Response Paper indicated that companies emitting more than 100 000 tonnes of CO<sub>2</sub>e per year will be required to report on their GHG emissions, which is further emphasised in the Draft Air Pollutant Regulation published by the Department of Environmental Affairs.

Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications
Increased operational cost	1 to 3 years	Direct	Very likely	Low	The regulation states that the financial implications of non-compliance will not exceed ZAR 5 000 000 for the first violation.

Shoprite endeavours to remain abreast of key developments within the climate change regulatory environment by means of regularly reviewing relevant white paper documents compiled by its external subject matter experts who are familiar with its climate change strategy. Furthermore, Shoprite's Legal Department regularly review and update its regulatory universe and is in the process of appointing two dedicated compliance managers. These appointments will result in current compliance and regulatory systems being deployed and managed more effectively.

Carbon emission reporting is at this stage not mandatory, however Shoprite continuously aligns itself with regulatory requirements to alleviate any disruption on business when the regulation is promulgated. Shoprite make use of a utility consumption information system, which enables it to reduce manual capturing of electricity usage data, and as a result increases its data accuracy. The annual spend, for the period under review, to install new electricity meters at various retail outlets to support the utility consumption information system and to conduct maintenance and repairs on existing electricity meters at various retail outlets amounts to approximately ZAR 1 250 000. Furthermore, Shoprite intends to remain abreast of key developments on climate change regulations, compile its carbon footprint and report the results thereof. To this extent, it utilises the services of both external subject matter consultants and internal resources, which costs approximately ZAR 350 000 and ZAR 500 000, respectively.

##### 2. Carbon Taxes

The Government Department: National Treasury (Republic of South Africa) first introduced, in 2010, its bid to implement a carbon tax. National Treasury only issued the carbon tax design in 2013 and subsequently published the Carbon Tax Draft Bill in 2015. The Finance Minister, during the 2017 budget speech, announced that the Carbon Tax Draft Bill will be revised and published for public consultation and thereafter tabled before the Parliament (Republic of South Africa) by mid-2017. However, uncertainty exists as to when the Carbon Tax Bill will be promulgated, since the implementation thereof has been delayed for more than two years and the final implementation date has not been confirmed. To date, it is expected that tax free

allowances (i.e. emissions not subject to the tax) include up to 60% of annual Scope 1 emissions (accruing until 2020, after which the threshold will be gradually reduced), up to 10% fugitive emissions allowance, up to 5% for participating in the carbon budget process, up to 5% reduction based on a company's carbon efficiency performance against its peers, up to 10% trade exposure allowance and the potential to purchase up to 10% offsets depending on the sector.

As a result of the South African Government's commitment to reduce its emissions and report to the IPCC as a signatory of the Kyoto Protocol, it is expected that Government Department: National Treasury (Republic of South Africa) intention is to align the Carbon Tax with mandatory reporting of GHG emissions. Based on the Carbon Tax Draft Bill, it is anticipated that companies with Scope 1 emissions greater than 100,000 tonnes CO<sub>2</sub>e per annum will be directly liable and as a result, Shoprite's South African operations' Scope 1 and 2 emissions are likely to be directly and indirectly liable, respectively, for Carbon Tax.

Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications
Increased operational cost	1 to 3 years	Direct	Very likely	Low	It is expected, but not certain, that the financial implications of the Carbon Tax will not exceed ZAR 9 000 000 in terms of direct tax (i.e. Scope 1) and ZAR 65 000 000 in terms of indirect tax (i.e. Scope 2).

At present, the process to ensure that all direct and indirect activities that influence policy is limited to the Carbon Tax Draft Bill only, which has, to date, not yet been promulgated and the date of implementation has not yet been confirmed. As a result, the process is trivial and defining a formal management method would be superfluous, since activities that influence the Carbon Tax Draft Bill requires ad-hoc and infrequent interaction between the Tax Manager (Finance Department) and the Environment/Sustainability Manager (Technical Projects) only. However, Shoprite endeavours to remain abreast of key developments on climate change regulations and policies by means of regularly reviewing relevant white paper documents compiled by its external subject matter experts who are familiar with its climate change strategy. Shoprite's Legal Department also regularly review and update its regulatory universe and is in the process of appointing two dedicated compliance managers. These appointments will result in current compliance and regulatory systems being deployed and managed more effectively.

The annual spend, for the period under review, is approximately ZAR 850 000 for the services of external subject matter consultants and internal resources, who are tasked with ensuring that Shoprite is well informed on any key developments within the climate change regulatory environment and are responsible for compiling its carbon footprint and reporting the results thereof. Furthermore, Shoprite intends to invest approximately ZAR 700 000 000 for the development and implementation of numerous carbon emission reduction initiatives with the intention of reducing its annual Scope 1 and Scope 2 carbon emissions by 527 557 metric tonnes CO<sub>2</sub>e, which will in turn reduce its annual tax obligation.

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

##### 1. Uncertainty of Physical Risks

Climate change and the associated potential impacts are inherently uncertain. However, changes in temperature may call for the installation of varying-sized HVAC systems in Shoprite's retail outlets, which will consume more electricity. Furthermore, changes in precipitation may impact on Shoprite's procurement strategy, for example, droughts, floods, and changes in average precipitation, may cause harvest losses resulting in supply shortfalls forcing Shoprite to change its sourcing strategy.

Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications
Increased operational cost	>6 years	Direct	Likely	High	The financial implications brought forth by physical impacts pertaining to climate change are not clear. However, it is estimated that a 2.5°C increase in the average global temperature would increase Shoprite's annual electricity expenditure by ZAR 130 000 000 and increase the average building cost associated with erecting a new outlet by ZAR 250 000. Shoprite's complex procurement practices, coupled with the current inability to accurately ringfence the impact of changes in precipitation, makes financial implication estimations challenging and any estimate at this stage will be futile.

Shoprite continuously grows its multinational procurement base, which currently extends across the African

and South American continents, thereby diversifying the risk associated with the impacts of climate change (such as floods, droughts and changes in precipitation). Shoprite is also the only retailer in Africa to both export and import from/into Africa. Shoprite endeavours to remain up-to-date with climate change matters with the assistance of external consultants.

To accurately isolate the management cost of growing its multinational procurement strategy is, at this stage, not possible. However, Shoprite endeavours to remain abreast of key developments on climate change matters by means of regularly reviewing relevant white paper documents compiled by its external subject matter experts. The services of the external subject matter experts cost approximately ZAR 350 000 annually and is expected to continue indefinitely.

## 2. Change in Precipitation Extremes and Droughts

The recent droughts in South Africa have, to varying degrees, negatively impacted Shoprite suppliers' fresh produce production. Shoprite, with its core promise of low prices guaranteed, will reputationally be affected in the event that fresh produce supply is scarce for certain primary produce lines, which may result in significant price increases of fresh produce becoming unavoidable.

Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications
Increased operational cost	1 to 3 years	Direct	Likely	High	The financial impact of such significant national variations in terms of uncertain precipitation extremes and droughts, coupled with the implications thereof, make financial estimations complex and unreliable.

Food security is of the utmost importance for Shoprite, since it is a fundamental component of its offering. Shoprite mitigates the effect of changes in regional precipitation extremes and droughts by planting crops in conjunction with numerous farmers across multiple climate regions, within multiple microclimates. It is also the largest retailer in Africa utilising a storage facility for fresh produce, instead of the industry-standard flow centre, utilising advanced technologies (e.g. atmosphere control and humidifiers), which enables it to store fresh produce for extended periods in optimal conditions. Planting crops in various climatic regions, coupled with Shoprite's fresh produce storage facility, enables it to procure fresh produce in advance, to reduce the risk of out of stock lines when supplies are unavailable.

Furthermore, Shoprite focusses on the development of long-term relationships with suppliers, resulting in cost savings and increased food security. Shoprite's Freshmark division deals with 472 growers in South Africa. Working with smaller suppliers not only diversifies climactic associated risks, but allows Shoprite to source locally produced goods while supporting the development of small enterprises (e.g. local partners have, with Shoprite's assistance, converted their farms to covered hydroponics, which significantly reduces weather-related risks, water requirements and electricity demand, whilst increasing production yields, ensuring food security).

To accurately isolate the various costs pertaining to the risks and subsequent mitigation measures associated with precipitation extremes and droughts is, at this stage, not reliable and will not provide accurate data against which key decisions can be taken. The annual cost, during the period under review, associated to procure the services of the external subject matter expert consultants, tasked with providing Shoprite with data pertaining to climate change, amounted to ZAR 350 000 and is expected to continue in the foreseeable future.

## 3. Change in Precipitation Extremes and Droughts

An increased frequency of drought to the livestock industry within South Africa will negatively impact the availability of certain meats and related products. Recently, due to the droughts, South African farmers were unable to adequately feed their livestock, resulting in farmers being forced to slaughter livestock driving the average meat price downward, due to an oversupply in the market (i.e. demand for meat is less than the supply thereof). However, when water scarcity reduces and livestock feed becomes more readily available, the average price of meat will increase again due to an undersupply in the market (i.e. demand for meat is more than the supply thereof). This is further complicated by the nature of varying types of livestock. An increased and unpredictable frequency in droughts in various regions nationally may reputationally affect Shoprite negatively, because the pricing may not always coincide with Shoprite's core promise of low prices.

Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications
Reduction / disruption in production capacity	1 to 3 years	Indirect (Supply Chain)	Likely	High	The financial impact of such significant national variations in terms of uncertain precipitation extremes and droughts, coupled with the implications thereof, make financial implication estimation extremely complex and unreliable.

Food security is of the utmost importance to Shoprite, since food is a fundamental component of its offering and, thus, it continuously endeavours to grow its multinational procurement base. This currently extends across the African and South American continents, thereby mitigating the risk associated with the impacts of climate change. Shoprite is also the only retailer in Africa to both export and import into/from Africa. Furthermore, it is considering the option of diversifying the source of meat produce in order to reduce the Group-wide impact of droughts by working closely with the industry, studying the effects of climate change on meat market supplies and supporting local businesses by enabling their growth to supply Shoprite.

To accurately isolate the management cost of diversifying the source of meat production is, at this stage, not reliable. The annual cost, during the period under review, associated with the procurement of the services of the external specialist consultants tasked with providing data to Shoprite apropos climate change amounted to ZAR 350 000 and is expected to continue into the foreseeable future.

#### 4. Tropical Cyclones

Extreme winds cause delays in delivery times, since ships are unable to dock during wind-bound conditions. Each ship has a weekly docking schedule which specifies the arrival date (i.e. docking date) for each port and the corresponding departure date. In the event that a ship is unable to dock prior to the scheduled departure date, due to wind-bound conditions, it will continue with its scheduled route, despite not meeting its scheduled delivery. This results in an undersupply of products for that week (i.e. demand for that product line is more than the supply thereof), however when the ship returns the following week to meet its delivery, there will be an oversupply of products (demand for that product line is less than the supply thereof) because the ship scheduled for arrival that week also docks and meets its delivery. This phenomenon causes an out of stock for these product lines and associated lost sales, because the consumer will purchase the product from an alternative retail outlet.

Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications
Reduction / disruption in production capacity	1 to 3 years	Indirect (Supply Chain)	Likely	High	The financial impact of such significant national variations in terms of uncertain and extreme weather patterns forming over tropical oceans, and the implications thereof, make financial implication estimation extremely complex and unreliable.

The consistent availability of products in-store is core to the Shoprite brand, notwithstanding any challenges that may arise as a consequence of adverse and extreme weather conditions. In order to mitigate the risk of wind-bound conditions, Shoprite utilises multiple carriers. Each carrier has a different weekly docking schedule, so when one carrier is unable to dock prior to its departure date and is required to continue with its scheduled route, a different carrier whose arrival date is more suitable is tasked with delivering its product line as well as the product line that was on the other ship (ships make use of on-board cranes to move containers from one ship to another). Furthermore, Shoprite utilise multiple modes of transport, including road and rail, which enables variations in transport modes when required. Floods also cause damage to infrastructure, which affects road freight by disrupting the flow of transport and consequently delaying delivery- and lead times. In order to mitigate the effect thereof, Shoprite actively service multiple ports and border posts to keep abreast of transport requirements at these different entry points. It is also in the process of considering the viability of expanding its centralised distribution centre footprint outside of South African borders. Centrally located distribution centres may be a means of endeavouring to secure on time product delivery, despite localised extreme weather conditions.

To accurately isolate the various costs pertaining to the risks and subsequent mitigation measures associated tropical cyclones is, at this stage, not reliable and will not provide accurate data against which key decisions

can be taken. The annual cost, during the period under review, associated to procure the services of the external specialist consultants tasked with providing Shoprite with data pertaining to climate change amounted to ZAR 350 000 and is expected to continue in the foreseeable future.

#### 5. Change in Precipitation Extremes and Droughts

An increased frequency of drought to the livestock industry within South Africa will to varying degrees negatively impact suppliers' production of primary lines (e.g. milk, sugar and wheat). An increased and unpredictable frequency in droughts in various regions nationally may reputationally affect Shoprite negatively, because the pricing may not always coincide with its core promise of low prices when an increase in the price becomes unavoidable.

Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications
Increased operational cost	1 to 3 years	Direct	Likely	High	The financial impact of such significant national variations in terms of uncertain precipitation extremes and droughts, coupled with the implications thereof, make financial implication estimation extremely complex and unreliable.

Food security is of the utmost importance to Shoprite, since food is a fundamental component of its offering and, thus, it continuously endeavours to grow its multinational procurement base. Shoprite mitigates the effect of changes in precipitation extremes and droughts by procuring primary lines from 32 countries internationally, which enables it to align procurement strategies with consumers ever-changing buying patterns. Furthermore, suppliers are reliant on Shoprite's business, as the largest retailer in Africa, for growth and development and as a result Shoprite engage with strategic suppliers, who are able to store supplies during times when the supply is greater than the demand, in order to adequately supply when the demand is greater than the supply. Shoprite focusses on the development of long-term relationships with suppliers, resulting in cost savings and increased food security.

Furthermore, lean decision making is another leveraging tool used, which includes actively managing its private label brand and the procurement of products nationally and internationally to grow and develop the brand. The private label brand allows Shoprite to strategically and actively practice product substitution (i.e. procure products that may substitute preferred brands).

To accurately isolate the various costs pertaining to the risks and subsequent mitigation measures associated with precipitation extremes and droughts is, at this stage, not reliable and will not provide accurate data against which key decisions can be taken. The annual cost, during the period under review, associated to procure the services of the external specialist consultants tasked with providing Shoprite with data pertaining to climate change amounted to ZAR 350 000 and is expected to continue in the foreseeable future.

#### 6. Change in Precipitation Extremes and Droughts

Erratic weather patterns have made forecasting challenging, since historic data is unreliable. Consumers buying patterns are continuously changing, for example recent trends show that consumers purchase more fish than chicken, which is the opposite of historic data. A change in precipitation extremes and droughts may reputationally affect Shoprite negatively, because pricing may not always coincide with its core promise of low prices when an increase in the price becomes unavoidable when the supply of fish is scarce.

Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications
Increased operational cost	1 to 3 years	Direct	Likely	High	The financial impact of such significant national variations in terms of uncertain precipitation extremes and droughts, coupled with the implications thereof, make financial implication estimation extremely complex and unreliable.

Food security is of the utmost importance to Shoprite, since food is a fundamental component of its offering and, thus, it continuously endeavours to grow its multinational procurement base. Shoprite mitigates the effect of changes in precipitation extremes and droughts by exploring various sustainable fish farming methods.

Furthermore, suppliers are reliant on Shoprite's business, as the largest retailer in Africa, for growth and development and as a result Shoprite engage with strategic suppliers, who are able to store supplies during

times when the supply is greater than the demand, in order to adequately supply when the demand is greater than the supply. Shoprite focusses on the development of long-term relationships with suppliers, resulting in cost savings and increased food security.

To accurately isolate the various costs pertaining to the risks and subsequent mitigation measures associated with precipitation extremes and droughts is, at this stage, not reliable and will not provide accurate data against which key decisions can be taken. The annual cost, during the period under review, associated to procure the services of the external specialist consultants tasked with providing Shoprite with data pertaining to climate change amounted to ZAR 350 000 and is expected to continue in the foreseeable future.

## 7. Change in Precipitation Extremes and Droughts

The recent droughts in South Africa have, to varying degrees, negatively impacted Shoprite LiquorShop suppliers' production of wines, among others. When harvests do not produce the expected quantities of wine, the price of wine increases and Shoprite, with its core promise of low prices, will reputationally be affected to this extent. Furthermore, changes in precipitation extremes and droughts affect the quality of the grapes and in turn the quality of the wine produced, which also poses a reputational risk to Shoprite's LiquorShop brand.

Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications
Increased operational cost	1 to 3 years	Direct	Likely	High	The financial impact of such significant national variations in terms of uncertain precipitation extremes and droughts, coupled with the implications thereof, make financial implication estimation extremely complex and unreliable.

The consistent availability of products is important to the Shoprite brand, notwithstanding any challenges that may arise as a consequence of adverse and extreme weather conditions. To mitigate the risk of precipitation extremes and droughts, Shoprite procures LiquorShop lines internationally from Wines of the World, whereby suppliers harvest in different climate regions within different microclimates. National and international suppliers are reliant on Shoprite's business, as the largest retailer in Africa, for growth and development and as a result Shoprite engage with strategic suppliers, who are able to store supplies during times when the supply is greater than the demand, in order to adequately supply when the demand is greater than the supply. Shoprite focusses on the development of long-term relationships with suppliers, resulting in cost savings and increased food security. LiquorShop suppliers create a buffer on the production line by blending wines, which may reduce the quality of the wine sold but ensures that the required quantity is available in stores.

Furthermore, lean decision making is another leveraging tool used, which includes actively managing its private label brand and the procurement thereof nationally and internationally to grow and develop the brand. The private label brand allows Shoprite to strategically and actively practice product substitution (i.e. procure products that may substitute preferred brands).

To accurately isolate the various costs pertaining to the risks and subsequent mitigation measures associated with precipitation extremes and droughts is, at this stage, not reliable and will not provide accurate data against which key decisions can be taken. The annual cost, during the period under review, associated to procure the services of the external specialist consultants tasked with providing Shoprite with data pertaining to climate change amounted to ZAR 350 000 and is expected to continue in the foreseeable future.

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

### 1. Reputation

Investors are increasingly integrating sustainability as investment criteria, expecting the companies in which they invest to disclose information on their sustainability commitments, performance and progress. Transparent disclosure of sustainability performance may have a positive impact on Shoprite's reputation and share price. Some of Shoprite's customer base are well informed on climate change, sustainability and environmental related matters. Successfully addressing these customers' needs may improve the chances of retaining such customers and provide an opportunity to attract and grow this customer base.

Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications
Reduced demand for goods/services	1 to 3 years	Direct	More likely than not	Low	Financial implications are challenging to estimate at this stage due to the complexity of external variables on investor and customer behaviour. However, it is estimated

					that at worst 10% (ZAR 7 500 000 000) of Shoprite's annual turnover may be at risk.
--	--	--	--	--	---

Shoprite's environmental impact disclosure, awareness, management and leadership has matured to an extent that Shoprite is in the process of formalising the identification and prioritisation of climate change risks and opportunities and the integration thereof into multi-disciplinary company-wide risk management processes. To this extent, a committee will be established every two years, comprising of internal resources and external subject matter experts, who will be tasked with identifying climate change risks and opportunities with a horizon of greater than 6 years. The results thereof will be communicated to the Risk Forum (a committee appointed by the Board) who will in turn be responsible with prioritising the risks and opportunities and incorporating it into multi-disciplinary company-wide risk management processes.

The annual cost for the external subject matter experts, during the period under review, tasked with calculating Shoprite's carbon footprint, compiling its CDP response and submitted white paper documents addressing various climate change related matters amounts to ZAR 350 000 and is expected to continue indefinitely.

## 3.2 Climate Change Opportunities

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

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

### 1. Carbon Taxes

The Government Department: National Treasury (Republic of South Africa) first introduced, in 2010, its bid to implement a carbon tax. National Treasury only issued the carbon tax design in 2013 and subsequently published the Carbon Tax Draft Bill in 2015. The Finance Minister, during the 2017 budget speech, announced that the Carbon Tax Draft Bill will be revised and published for public consultation and thereafter tabled before the Parliament (Republic of South Africa) by mid-2017. However, uncertainty exists as to when the Carbon Tax Bill will be promulgated, since the implementation thereof has been delayed for more than two years and the final implementation date has not been confirmed. To date, it is expected that tax free allowances (i.e. emissions not subject to the tax) include up to 60% of annual Scope 1 emissions (accruing until 2020, after which the threshold will be gradually reduced), up to 10% fugitive emissions allowance, up to 5% for participating in the carbon budget process, up to 5% reduction based on a company's carbon efficiency performance against its peers, up to 10% trade exposure allowance and the potential to purchase up to 10% offsets depending on the sector.

As a result of the South African Government's commitment to reduce its emissions and report to the IPCC as a signatory of the Kyoto Protocol, it is expected that Government Department: National Treasury (Republic of South Africa) intention is to align the Carbon Tax with mandatory reporting of GHG emissions. Based on the Carbon Tax Draft Bill, it is anticipated that companies with Scope 1 emissions greater than 100,000 tonnes CO<sub>2</sub>e per annum will be directly liable and as a result, Shoprite's South African operations' Scope 1 and 2 emissions are likely to be directly and indirectly liable, respectively, for Carbon Tax.

Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications
Reduced operational costs	1 to 3 years	Direct	Very likely	Low	Projects aimed at reducing Shoprite's annual Scope 1 and 2 will in turn lessen its direct and indirect annual tax obligation by more than ZAR 51 000 000.

At present, the process to ensure that all direct and indirect activities that influence policy is limited to the Carbon Tax Draft Bill only, which has, to date, not yet been promulgated and the date of implementation has not yet been confirmed. As a result, the process is trivial and defining a formal management method would be superfluous, since activities that influence the Carbon Tax Draft Bill requires ad-hoc and infrequent interaction between the Tax Manager (Finance Department) and the Environment/Sustainability Manager (Technical Projects) only. However, Shoprite endeavours to remain abreast of key developments on climate change

regulations and policies by means of regularly reviewing relevant white paper documents compiled by its external subject matter experts who are familiar with its climate change strategy. Furthermore, Shoprite's Legal Department regularly review and update its regulatory universe and is in the process of appointing two dedicated compliance managers. These appointments will result in current compliance and regulatory systems being deployed and managed more effectively.

The annual spend, for the period under review, is approximately ZAR 850 000 for the services of external subject matter consultants and internal resources, who are tasked with ensuring that Shoprite is well informed on any key developments pertaining to climate change regulations and are responsible for compiling its carbon footprint and reporting the results thereof. Furthermore, Shoprite intends to invest approximately ZAR 700 000 000 for the development and implementation of numerous carbon emission reduction initiatives with the intention of reducing its annual Scope 1 and Scope 2 carbon emissions by 527 557 metric tonnes CO<sub>2</sub>e, which will in turn reduce its annual tax obligation.

#### Please describe the inherent opportunities that are driven by changes in physical climate parameters

##### 1. Other physical climate opportunities

First opportunity driver is other physical climate opportunities. Climate change and the potential impacts are inherently uncertain. Thus, the inherent opportunities are equally uncertain. However, it would be unwise to ignore the potential opportunities associated with climate change. Changes in precipitation may impact on Shoprite's procurement strategy, for example, droughts and floods may cause harvest losses resulting in supply shortfalls. Another example would change in the average precipitation resulting in inferior quality produce being sold which may as a subsequent consequence have a negative impact on Shoprite's reputation. An opportunity exists through further growing Shoprite's multinational procurement base and in doing so reduce any negative effect that climate change may have on its procurement. For example, whilst some of these countries might experience the negative impacts of climate change, Shoprite's risk is spread due to its broad procurement base. This strategy leaves Shoprite's operations less vulnerable to these changes, thus potentially turning some climate impacts into a competitive advantage and enabling growth in market share.

Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications
Reduced operational costs	>6 years	Direct	Very likely	High	Financial gains from changes in temperature and precipitation are not clear as yet. Shoprite's complex procurement practices, coupled with the current inability to accurately model the impact changes in temperature and precipitation will have on its business creates challenges in estimating the financial implication. As a result, any estimate at this stage will be futile.

Shoprite continuously grows its multinational procurement base, which currently extends across the African and South American continents, thereby diversifying the risk associated with the impacts of climate change (such as floods, droughts and changes in precipitation). Shoprite is also the only retailer in Africa to both export and import from/into Africa. Shoprite endeavours to remain up-to-date with climate change matters with the assistance of external consultants.

To accurately isolate the management cost of growing its multinational procurement strategy is, at this stage, not possible. However, Shoprite endeavours to remain abreast of key developments on climate change matters by means of regularly reviewing relevant white paper documents compiled by its external subject matter experts. The services of the external subject matter experts cost approximately ZAR 350 000 annually and is expected to continue indefinitely.

#### Please describe the inherent opportunities that are driven by changes in other climate-related developments

##### 1. Reputation

Investors are increasingly integrating sustainability as investment criteria, expecting the companies in which they invest to disclose information on their sustainability commitments, performance and progress. Transparent disclosure of sustainability performance may have a positive impact on Shoprite's reputation and share price. Some of Shoprite's customer base are well informed on climate change, sustainability and environmental related matters. Successfully addressing these customers' needs may improve the chances of retaining such customers and provide an opportunity to attract and grow this customer base.

Potential impact	Timeframe	Direct / Indirect	Likelihood	Magnitude of impact	Estimated financial implications
Increased demand for goods/services	1 to 3 years	Direct	More likely than not	Low	Financial gains are challenging to estimate at this stage due to the complexity of external variables on investor and customer behaviour. However, it is estimated that 10% (i.e. ZAR 7 500 000 000) of Shoprite's annual turnover would be less at risk

Shoprite's environmental impact disclosure, awareness, management and leadership has matured to an extent that Shoprite is in the process of formalising the identification and prioritisation of climate change risks and opportunities and the integration thereof into multi-disciplinary company-wide risk management processes. To this extent, a committee will be established every two years, comprising of internal resources and external subject matter experts, who will be tasked with identifying climate change risks and opportunities with a horizon of greater than 6 years. The results thereof will be communicated to the Risk Forum (a committee appointed by the Board) who will in turn be responsible with prioritising the risks and opportunities and incorporating it into multi-disciplinary company-wide risk management processes.

The annual cost for the external subject matter experts, during the period under review, tasked with calculating Shoprite's carbon footprint, compiling its CDP response and submitted white paper documents addressing various climate change related matters amounts to ZAR 350 000 and is expected to continue indefinitely.

## 4 GHG Emissions Accounting, Energy and Fuel Use and Trading

This section aims to describe the methodology utilised to capture emissions data as well as to identify the breakdown of Scope 1, 2 and 3 emissions. The abbreviation “CO2e” refers to “Carbon Dioxide Equivalent”, a common unit used to describe any quantity and type of greenhouse gas (GHG) in terms of the amount of CO2 that would have the same global warming effect. To express a quantity of GHG in terms of CO2e, one may multiply the amount of GHG by its global warming potential.

### 4.1 Emissions Methodology

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 Jul 2015 - Thu 30 Jun 2016	184 638
Scope 2 (location-based)	Wed 01 Jul 2015 - Thu 30 Jun 2016	1 741 379
Scope 2 (market-based)	Wed 01 Jul 2015 - Thu 30 Jun 2016	

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
IPCC Guidelines for National Greenhouse Gas Inventories, 2006
Defra Voluntary Reporting Guidelines
Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

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

Gas	Reference
CO2	IPCC Third Assessment Report (TAR – 100 year)
HFCs	IPCC Third Assessment Report (TAR - 100 year)
N2O	IPCC Third Assessment Report (TAR – 100 year)
CH4	IPCC Third Assessment Report (TAR – 100 year)
Other: R410a	IPCC Third Assessment Report (TAR – 100 year)
Other: R507	IPCC Third Assessment Report (TAR – 100 year)
Other: R 404a	IPCC Second Assessment Report (SAR - 100 year)
Other: R408A	2016 Guidelines to DEFRA/DECC's GHG Conversion Factors for Company Reporting
Other: R407A	2016 Guidelines to DEFRA/DECC's GHG Conversion Factors for Company Reporting

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
Electricity	1.03000	metric tonnes CO2e per MWh	Eskom fact sheet, 2015 for electricity
Diesel/Gas oil	0.00271	metric tonnes CO2e per litre	IPCC Third Assessment Report values

### 4.2 Emissions Data - (1 Jul 2015 - 30 Jun 2016)

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

Operational control

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

184 638

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

No

Please describe your approach to reporting Scope 2 emissions.

	Scope 2, market-based	Comment
We are reporting a Scope 2, location-based figure	Shoprite have no operations where it is able to access electricity supplier emissions factors or residual emissions factors and are therefore unable to report a Scope 2, market-based figure.	

Scope 2, location-based

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

Scope 2, location-based	Scope 2, market-based (if applicable)	Comment
1 741 379	0	Electricity is only purchased from the grid. Shoprite does not have any market-based Scope 2 contracts – this source is therefore not applicable, but is reported as “0” here as a proxy.

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

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 10% but less than or equal to 20%	Data Gaps Assumptions Extrapolation Metering/Measurement Constraints Sampling Data Management	Shoprite has been working to improve its emissions measurements and reporting scope, despite challenges such as internal reporting structures not always aligning with carbon footprint reporting structures. As a result, gaps are filled by extrapolating available data as far as possible, but sometimes data samples are too small to allow for extrapolation. The organisational structure is large and complex with many entities, including subcontracted facilities management, and it is not always possible to verify or check all data for accuracy. The uncertainty range cannot accurately be quantified as we did not verify the emissions inventory. Shoprite intends to get accurate internal accounting systems in place before seeking third-party verification.
Scope 2 (location-based)	More than 10% but less than or equal to 20%	Data Gaps Extrapolation	Not all data is recorded. As a result, gaps are filled by extrapolating available data, but Shoprite is making an effort to rely less on extrapolation. For the reporting period, only 17% of electricity consumption was estimated. The uncertainty range cannot be accurately quantified as we did not verify the emissions inventory. Shoprite intends to get accurate internal accounting systems in place and is considering limited third-party verification.

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

No third party verification or assurance

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

No third party verification or assurance

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	Shoprite intends to get accurate internal accounting systems in place and is considering limited third-party verification.

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

No

### 4.3 Scope 1 Emissions Breakdown - (1 Jul 2015 - 30 Jun 2016)

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

Yes

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

South Africa: 174 976 metric tonnes CO<sub>2</sub>e

Southern Africa Region (incl. Namibia, Swaziland and Lesotho): 9 662 metric tonnes CO<sub>2</sub>e

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

By GHG type

By activity

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

GHG type	Scope 1 emissions (metric tonnes CO <sub>2</sub> e)
CO <sub>2</sub>	84 931
CH <sub>4</sub>	110
N <sub>2</sub> O	1 301
HFCs	98 296

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

Activity	Scope 1 emissions (metric tonnes CO <sub>2</sub> e)
Retail	106 841
Distribution	77 787
Offices	11

#### Further Information

Note that in line with last year's response, various subcategories have been consolidated in order to closer match Shoprite's internal reporting structures. To this extent Shoprite is reporting on aggregated 'Retail' subcategory which includes all of the retail brands operational in South Africa, Namibia, Swaziland and Lesotho while all logistics services supporting its retail brands are reported under the 'Distribution' subcategory. Further note that fugitive emissions are underestimated by an approximate 65%. This is due to the fact that the only available data source is from a 3rd party supplier who services only 35% of total scope. In order to promote transparency, it was decided not to extrapolate data based on such a small sample. Also, note that Shoprite has Scope 1 emissions in more than one Country, but for the purpose of this CDP response and as per the disclosed boundaries consolidated under the organizational control approach, it is explicitly reporting on South African, Namibian, Swaziland and Lesotho based activities only.

## 4.4 Scope 2 Emissions Breakdown - (1 Jul 2015 - 30 Jun 2016)

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

Yes

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

Country	Scope 2 location based emissions (metric tonnes CO2e)	Scope 2 market based emissions (metric tonnes CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low carbon electricity, heat, steam or cooling (MWh)
South Africa	1 741 379	n/a	1 609 985	n/a
Southern Region excluding South Africa (Namibia, Swaziland & Lesotho)	83 093	n/a	80 673	n/a

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

By activity

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)
Retail	1 664 998	0
Distribution	70 364	0
Offices	6 017	0

### Further Information

Note that in line with last year's response, various subcategories have been consolidated in order to closer match the Company's internal reporting structures. To this extent we are reporting on aggregated 'Retail' subcategory which includes all our retail brands operational in South Africa, Namibia, Swaziland and Lesotho (e.g. Checkers, Shoprite, OK Furniture) while all logistics services supporting our retail brands are reported under the 'Distribution' subcategory. Also, note that Shoprite has Scope 2 emissions in more than one Country, but for the purpose of this CDP response and as per its disclosed boundaries consolidated under the organizational control approach, it is explicitly reporting on South African, Namibian, Swaziland and Lesotho based activities only.

## 4.5 Energy

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

More than 10% but less than or equal to 15%

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
Heat	0
Steam	0
Cooling	0

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

12 221

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

Fuels	MWh
Diesel/Gas oil	12 221

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	Shoprite does not have any market-based Scope 2 emissions.

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
1 609 985	1 609 985	12 221	1 102	1 102	During the reporting period, Shoprite produced 12 221MWh of electricity from diesel generators during general power failure events. 1 102MWh renewable electricity was generated and consumed from solar photo voltaic panels installed at Shoprite's Kathu and Kimberley retail outlets.

## 4.6 Emissions Performance

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

Increased

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	1.4	Decrease	Shoprite's estimate emission reduction of 27 810 metric tonnes CO <sub>2</sub> e may be attributed to replacing more than 775,000 conventional fluorescent tubes and 80,000 control gear with more energy efficient fluorescent tubes and control gear, respectively, spanning the general sales floors, back of house areas, storage areas, preparation areas and offices across more than 1,100 of its South African retail outlets. These initiatives have been outlined in question 3.3 above. Had these initiatives not been implemented, it's total Scope 1 and Scope 2 emissions would have been 1 964 325 tonnes CO <sub>2</sub> e, resulting in 1.4% decrease in emissions.
Divestment	0.0	No change	There were no divestments during this reporting period.
Acquisitions	0.0	No change	There were no acquisitions during this reporting period.
Mergers	0.0	No change	There were no mergers during this reporting period.
Change in output	4.94	Increase	Shoprite grew its number of outlets organically by 4.94% during the period under review. The calculation has been based on the increase in number of outlets year on year. Due to data collection constraints, not all emissions sources can be attributed at an individual outlet level. It is therefore not possible to calculate the precise contribution percentage of the new outlets. This figure is however considered to be reasonably accurate within a few percentage points in both directions.

Change in methodology	1.98	Increase	Emission factors change year on year. The emission factors associated with electricity which accounts for 84.9% of Shoprite's total Scope 1 and 2 emissions, increased from 1.01kg CO <sub>2</sub> e per kWh to 1.03kg CO <sub>2</sub> e per kWh to reflect Eskom electricity sold as opposed to generated. As consumption varies year on year, it is not possible to derive the precise contribution percentage for the increase in emission factor. The contribution percentage is thus, rather calculated based on the actual emission factor increase which amounts to 1.98%.
Change in boundary	5	Increase	In this year's submission, Shoprite is reporting on its operations in Namibia, Lesotho, and Swaziland in addition to South Africa. This reflects its commitment to continuously improve its reporting to track the climate impacts across its entire business. The addition of these countries to its carbon footprint has contributed to 5% of the increase in its reported emissions in comparison to the previous year.
Change in physical operating conditions	0	No change	Due to higher temperatures experienced throughout the reporting period, it is highly likely that energy consumption increased through intensified air conditioning and refrigeration requirements. As per CDP definitions, this is however not considered to be "significant" in terms Shoprite's overall Scope 2 emissions and is neither quantifiable as data sets lack the granularity and necessary information to perform this level of assessment. Due to these complexities, Shoprite has noted this as "no change".
Unidentified			n/a
Other			n/a

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

Please describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tonnes CO<sub>2</sub>e 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
0.0000172 830	metric tonnes CO <sub>2</sub> e	111 439 712 000	Location-based	4.89	Decrease

The primary reason for the change in direction of the intensity figure is that Shoprite increased its revenue by 16.70% during the reporting period whilst its reported total emissions increased by 11.50%. This resulted in a decrease of 4.50% in the metric tonnes CO<sub>2</sub>e per unit currency total revenue intensity figure. The higher revenue growth rate may also be attributed to, among others, the 4.94% increase in retail outlets.

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
16.06	metric tonnes CO <sub>2</sub> e	full time equivalent (FTE) employee	19 975	Location-based	20.08	Increase

The above increase in intensity figure may be attributed to the number of Full-Time Equivalent (FTE) employees which reduced by 7.6% during the reporting period whilst Shoprite's total emissions increased by 11.50%. This resulted in an increase of 20.62% in the metric tonnes CO<sub>2</sub>e per FTE employee intensity figure. The adjustment in FTEs is based on an improved understanding of boundaries and tracking of employee hours.

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
0.46	metric tonnes CO <sub>2</sub> e	square meter	4 142 335	Location-based	5.7	Decrease

The primary reason for the change in direction of the intensity figure is that the Gross Leased Area (GLA) decreased slightly by 0.4% during the reporting period whilst Shoprite's total emissions increased by 11.50%. This resulted in an increase in the metric tonnes CO<sub>2</sub>e per GLA intensity figure. The slight decrease in GLA can be linked to an initiative in the reporting period to improve the quality and accuracy of branch and distribution centre master data, including GLA, which indicated a slight overstatement in previous years tied to the Company's distribution centres. Going forward, this improved data will enable us to better track our progress against this indicator.

The disproportionate increase in emissions is almost entirely attributed to an improvement of data collection and adjustment in the emission factor applied to electricity to reflect the emissions tied to Eskom electricity sold rather than actual increase in emissions. The addition of data for Namibia, Lesotho and Swaziland to its carbon footprint has contributed to 5.00% of the increase in its reported emissions in comparison to the previous year. The rest of the increases relate to our South African operations and can be explained as follows: Fugitive emissions (Scope 1) increased by 23.00%, accounting for 9% of the 11.00% increase in Shoprite's total emissions. This increase is mitigated by a reduction in emissions from mobile fuels (Scope 1) of about 5.00%. Electricity consumption (Scope 2) accounts for 93.00% of the 11.50% increase in Shoprite's total emissions. The emissions related to electricity increased because of a change in the electricity emission factor used to reflect electricity sold by Eskom and not electricity generated which is more accurate – without this change the increase in Scope 2 emissions year on year would have been approximately 9% (vs. a reported increase of 11.7% in Scope 2 emissions).

## 4.7 Emissions Trading

Do you participate in any emissions trading schemes?

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

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

No

## 4.8 Scope 3 Emissions

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

### 1. Purchased goods and services:

Evaluation status	Metric tonnes CO <sub>2</sub> e	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Relevant, not yet calculated		0.00%	Shoprite purchases a wide range of goods and services which it resells in its stores. The emissions related to these activities are largely due to its suppliers' practices. Shoprite focus is on improved reporting of its Scope 1 and 2 emissions. In the long term, however, it anticipates the need to have active and robust engagement with its value chain.

### 2. Capital goods:

Evaluation status	Metric tonnes CO <sub>2</sub> e	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Not relevant, explanation provided		0.00%	Shoprite's business model focuses on FMCG. Capital goods acquired by way of business expansion are not feasible for emissions calculations.

### 3. Fuel-and-energy-related activities (not included in Scope 1 or 2):

Evaluation status	Metric tonnes CO <sub>2</sub> e	Percentage of emissions calculated using data	Explanation
-------------------	---------------------------------	---	-------------

		obtained from suppliers or value chain partners	
Relevant, not yet calculated		0.00%	A lack of available emission factors for the associated Scope 3 fuel and energy usage, in addition to an inability to collect accurate data for this source, renders this emission source infeasible for inclusion.

## 4. Upstream transportation and distribution:

Evaluation status	Metric tonnes CO2e	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Not relevant, explanation provided		0.00%	Given the extensive product range and a vast number of suppliers from which Shoprite procures, in addition to an inability to collect accurate data for this source renders this emission source unfeasible for inclusion. The complexity of analysing this data outweighs the ability of Shoprite to influence this emission source and therefore it is not relevant.

## 5. Waste generated in operations:

Evaluation status	Metric tonnes CO2e	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Relevant, not yet calculated		0.00%	Packaging, food waste, and paper are significant sources of waste generated in operations. Due to complexities in collating data for its outlets, distribution facilities, and offices, this source is not yet included.

## 6. Business travel:

Business travel includes emissions from flights and car rental. Flights were grouped by length and class before applying the appropriate DEFRA 2015 emission factor. Note that flights shorter than 463km were classified as domestic, flights further than 463km but shorter than 3 700km were classified as short haul and flights further than 3700km were classified as long haul. Car rentals were grouped by fuel type (diesel/petrol) and DEFRA 2015 emission factors for average car size per fuel type are applied to total kilometers travelled.

Evaluation status	Metric tonnes CO2e	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Relevant, calculated	24 725	100.00%	Travel data, from the data source, is aggregated and the DEFRA 2016 emission factors for air travel are applied (excluding radiative forcing).

## 7. Employee commuting:

Evaluation status	Metric tonnes CO2e	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Relevant, calculated	5 773.16	0.00%	This year Shoprite has reported the emissions related to the use of its owned cars by employees using the DEFRA 2016 emission factors per category of car. It should be noted that not all kilometres travelled will relate to employee commuting as employees with company cars can use the cars for their own personal use, but in the absence of detailed survey to track actual use for work related purposes, all emissions from company owned cars have been reported.

## 8. Upstream leased:

Evaluation status	Metric tonnes CO2e	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Relevant, not yet calculated		0.00%	Shoprite has upstream leased assets, but due to complexities in collating data for the diverse assets, this emission source is currently not included. Additionally, these assets are not associated with the direct operations of Shoprite and have therefore been omitted from the current assessment. Shoprite aims to include these emission sources in the future.

## 9. Downstream transportation and distribution:

Evaluation status	Metric tonnes CO2e	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Not relevant, explanation provided		0.00%	The majority of outbound transportation forms part of Shoprite's operations as reported on in Question 8 (Scope 1). The balance of outsourced emissions is negligible in terms of overall Scope 3 emissions and therefore not relevant.

## 10. Processing of sold products:

Evaluation status	Metric tonnes CO2e	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Not relevant, explanation provided		0.00%	Shoprite's core business is not to purchase intermediary goods for further processing before resale, therefore this emission source is not relevant.

## 11. Use of sold products:

Evaluation status	Metric tonnes CO2e	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Relevant, not yet calculated		0.00%	Given the lack of LCA emissions available for the vast number of products sold by Shoprite, and the complexities involved with product carbon footprint assessments, it is not possible to calculate emissions over expected life time of said products. Shoprite aims to include this emission source in the future once it is able to more accurately measure and report on its direct Scope 1 and 2 emissions.

## 12. End of life treatment of sold products:

Evaluation status	Metric tonnes CO2e	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Relevant, not yet calculated		0.00%	Although many products that Shoprite sells is consumed (as food), there remain a significant amount of consumer waste generated. Understanding the flows of this waste, including consumer behaviour involves detailed consumer research. Shoprite has not yet conducted this research, and the data is not yet available.

## 13. Downstream leased assets:

Evaluation status	Metric tonnes CO2e	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Relevant, not yet calculated		0.00%	Shoprite does lease its own assets to 3rd parties. However, these assets are not associated with its core business and have therefore been omitted from the current assessment. Additionally, a challenge in collection of data renders this source difficult to include with a sufficient degree of accuracy. Once data systems improve Shoprite aims to include it in its future assessments.

## 14. Franchises:

Evaluation status	Metric tonnes CO2e	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Relevant, not yet calculated		0.00%	Shoprite has a franchise business comprising of 321 outlets. Given the challenges associated with collecting data for its corporate outlets it has decided to first understand and gain accurate data for its corporate outlets before, in future, expanding its reporting scope.

## 15. Investments:

Evaluation status	Metric tonnes CO2e	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Not relevant, explanation provided		0.00%	The complexity of calculating the emissions in investments (including debt and equity instruments) outweigh the ability of Shoprite to influence this emission source therefore it is not relevant.

## 16. Other (upstream):

Evaluation status	Metric tonnes CO2e	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
		0.00%	n/a

## 17. Other (downstream):

Evaluation status	Metric tonnes CO2e	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
		0.00%	n/a

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

No third party verification or assurance

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

Yes

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
Business travel	Other:	89	Increase	Shoprite has been implementing better reporting and measurement systems to track its emissions. All the flights taken by South African, Namibian, Swaziland and Lesotho based employees are now incorporated into our analysis. Due to Shoprite's complex and global supply chain there is a high requirement for business travel, though a strict guideline in terms of business travel has been implemented to prevent unnecessary business travel.

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

No, we do not engage

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

Shoprite has an enormous and complex value chain which spans continents, economies, and sectors. Some entities of the value chain are in turn big and complex while carbon disclosure maturity levels differ significantly between entities. As a result, any engagement with the value chain in the short term will prove cumbersome. Shoprite decided to rather focus its efforts on improving its own Scope 1 and 2 emissions disclosure. In the long term, however, it anticipates the need for active and robust engagement with its value chain.