

C0. Introduction

C0.1

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

Massmart is a managed portfolio of four Divisions, each focused on high-volume, low-margin, low cost distribution of mainly branded consumer goods for cash, through 423 stores in 13 countries in sub-Saharan Africa. We are a South African retailer and wholesale distributor, with 381 stores in South Africa and 42 stores in other sub-Saharan Africa. In Africa we operate in Botswana, Ghana, Kenya, Lesotho, Malawi, Mozambique, Namibia, Nigeria, Swaziland, Tanzania, Uganda and Zambia. However, for reporting purposes we disclose as per South Africa and Africa only.

Group brands include Game, DionWired, Makro, Fruitspot, Builders Warehouse, Builders Express, Builders Trade Depot, Builders Superstore, CBW, Cambridge Food, Jumbo Cash and Carry, Rhino and Shield. Massmart's merchandise proposition includes food, liquor, general merchandise, home improvement goods and building supplies.

C0.2

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

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Row 1	January 1 2017	December 31 2017	No	<Not Applicable>
Row 2	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Row 3	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Row 4	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>

C0.3

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

Botswana
 Ghana
 Kenya
 Lesotho
 Malawi
 Mozambique
 Namibia
 Nigeria
 South Africa
 Swaziland
 Uganda
 Zimbabwe

C0.4

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

ZAR

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your consolidation approach to your Scope 1 and Scope 2 greenhouse gas inventory.

Operational control

C1. Governance

C1.1

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

Yes

C1.1a

(C1.1a) Identify the position(s) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain
Board/Executive board	The Social & Ethics Committee keeps the Massmart Board apprised of the Group's climate change progress and its responsibility towards sustainability with respect to practices that are consistent with good corporate citizenship. The Risk Committee monitors climate change risks and updates relating to issues that are significant from a climate change perspective, such as energy consumption and waste reduction. These are submitted to the Risk Committee and to the extent that risks are deemed material, they are included as a priority risk on the Group risk register. Members of the board sit on both the above-mentioned committees which allow for direct interaction with other committee members and ensure that issues being considered are clearly communicated. Each Board Committee has a charter, or terms of reference, that is formally signed off by the Board and is reviewed annually by the Committees and Board to ensure relevance. At least one board member sits on each of the committees.

C1.1b

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

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – all meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding annual budgets Reviewing and guiding business plans Setting performance objectives Monitoring implementation and performance of objectives Overseeing major capital expenditures, acquisitions and divestitures Monitoring and overseeing progress against goals and targets for addressing climate-related issues	Both the Social and Ethics Committee (SEC) and the Risk Committee (RC) discuss issues of environmental responsibility (including climate change) at each sitting. The committees each sit twice per annum. The members of the SEC include the Massmart CEO (also a member of the board) and two non-executive directors. The RC comprises both the Massmart CEO, CFO (both of whom are board members) and five other members including the Group Chief Ethics and Compliance Officer. Climate change related issues are brought to the attention of the SEC and RC by the Massmart Corporate Affairs' Sustainability Unit. A report is generated by the Sustainability Unit for consideration at each committee meeting which not only brings attention to new climate change developments but also provides an update on existing issues to enable the committee and in turn, the board, to monitor Group activity progress (e.g. regarding operational energy efficiencies projects, implementation of renewable energy solutions, etc.). The committees evaluate each report based on their priorities and make separate recommendations to the board.

C1.2

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

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	Both assessing and managing climate-related risks and opportunities	Half-yearly
Risk committee	Both assessing and managing climate-related risks and opportunities	Half-yearly
Environment/ Sustainability manager	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Sustainability committee	Both assessing and managing climate-related risks and opportunities	Half-yearly

C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored.

The Environmental Sustainability Manager and Environmental Sustainability Executive are responsible for monitoring and identifying risks and opportunities across the Massmart Group which have a linkage to climate change mitigation and emissions reductions. These include, amongst others: energy efficiency projects, roll-out of renewable energy, transitioning to natural gas refrigeration, logistics efficiencies and supply chain environmental advocacy programmes, all of which fall within the ambit of environmental sustainability (the core function of the aforementioned roles). Because Massmart views issues of environmental sustainability as a key area of corporate governance, these functions are positioned within the Department of Corporate Affairs and overseen by the Corporate Affairs Executive who also then reports to the Social & Ethics and Risk Committees. The Social and Ethics Committee is governed by a charter and monitors Group performance in terms of defined Social and Ethics performance indicators that have been formulated with reference to Regulation 43(5) of the Companies Act. These indicators include, but are not limited to, the United Nations Global Compact principles and Johannesburg Stock Exchange Responsibility Index criteria. Aligned to this, the committee reviews performance in the following areas under which climate change falls: responsible sourcing, and social and environmental responsibility. The Risk Committee specifically reviews business risks and opportunities along with assessing the effectiveness of Group Risk Management processes and policy framework. Issues related to climate change, especially within legislated frameworks (e.g. carbon taxation and emissions reporting) and impacts to business operations (e.g. impacts of climate change on product supply) would be addressed by the Committee. Both the CEO and CFO of the Group sit on the above committees and the board and as such have an oversight and decision-making role on matters raised and discussed in the committees and those escalated (when urgent matters are raised) directly from Corporate Affairs.

Climate issues are assigned to the Sustainability Manager because the person who occupies this role has the expertise and specific skillset necessary to address environmental risks and opportunities, including those related to climate change.

Sustainability Manager: Is a specialist role dedicated to providing advice and identifying environmental risks and opportunities that affect the Group. This role is not isolated in its function and is supported and overseen by the combined expertise of the Group Sustainability Executive and Group Corporate Affairs Executive who also evaluate relevance to the business.

Group Sustainability Executive: Provides oversight and additional support and input on environmental issues which are relevant to the Group. The role also includes overseeing issues related to environmental compliance and social sustainability. The Group Sustainability Reports to the Group Corporate Affairs Executive.

Group Corporate Affairs Executive: Provides oversight and additional support on environmental issues relevant to the Group, in addition to providing guidance on environmental compliance, social sustainability projects and company communications. The role reports directly to the Group CEO.

Social and Ethics Committee: This committee focusses on social and environmental responsibility, sustainability and ethics. The committee is a multiparty grouping which includes the Group CEO.

Risk Committee: The risk committee's primary role is to evaluate and assess Group-wide exposure to risk, which is then entered into the Group's risk register and passed onto the Massmart Risk Team. This includes risks which are related to the environment, both operational and supply chain. The Risk Committee is made up of members across the business so as to provide for balanced views and fair evaluation.

C1.3

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

Yes

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues.

Who is entitled to benefit from these incentives?

Executive officer

Types of incentives

Recognition (non-monetary)

Activity incentivized

Emissions reduction project

Comment

Incentives for all of the following: • Emissions reduction project • Energy reduction project • Energy reduction target • Efficiency project • Efficiency target • Behavior change related indicator Formal citation award to most Socially Responsible Division within the Massmart Group. This takes into account environmental and social initiatives and performance. Environmental performance is measured based on energy efficiency, water efficiency, logistics optimization and waste reduction initiatives.

Who is entitled to benefit from these incentives?

All employees

Types of incentives

Recognition (non-monetary)

Activity incentivized

Emissions reduction project

Comment

All the following initiatives are recognised: • Emissions reduction project • Energy reduction project • Energy reduction target • Efficiency project • Efficiency target • Behavior change related indicator Key achievements in the area of environmental performance are recognised through Group media publications. These articles are made publicly available on the Massmart website and circulated to Massmart and Walmart senior management. In addition, employees are also recognised in monthly Massmart News Live meetings and quarterly in the Massmart News internal newspaper. Environmental performance is measured based on energy efficiency, water efficiency, logistics optimization and waste reduction initiatives. All employees that have shown exceptional performance in their work are awarded with a CEO's Citation Award. CEO Citation Awards have been awarded to staff for environmental performance based on; energy efficiency, water efficiency, logistics optimization, waste reduction and supplier advocacy initiatives.

Who is entitled to benefit from these incentives?

Other, please specify (Operations Manager)

Types of incentives

Recognition (non-monetary)

Activity incentivized

Emissions reduction project

Comment

All the following initiatives are recognised: • Emissions reduction project • Energy reduction project • Energy reduction target • Efficiency project • Efficiency target • Behavior change related indicator Operations managers are responsible for measuring, managing and reducing energy consumption and associated greenhouse gas emissions reduction and operations. The individuals in these functions are held accountable for progress on our greenhouse gas reduction goals and are recognised based on their performance.

Who is entitled to benefit from these incentives?

Other, please specify (Suppliers)

Types of incentives

Recognition (non-monetary)

Activity incentivized

Emissions reduction project

Comment

All the following initiatives are recognised: • Emissions reduction project • Energy reduction project • Energy reduction target • Efficiency project • Efficiency target • Behavior change related indicator In 2009, we launched a survey-based advocacy process to motivate and benchmark responsible environmental practices in our supply chain. As a result we have collected and shared comparative information about supplier environmental practices that has enabled interested suppliers to compare their performance

with that of their peers. To date we have profiled the environmental practices of over 1500 individual suppliers on up to 35 different environmental indicators. Among other environmental indicators, the survey addresses issues such as: energy and water consumption at supplier facilities, logistics efficiency, environmental attributes of product packaging, the environmental attributes of products supplied to Massmart, environmental sanctions or censures due to supplier practices or products and public disclosure of environmental indicators material to the supplier's business. In 2017 Massmart, for a fourth year running, publicly recognised the top 10 performing suppliers who demonstrated an industry leading commitment to sustainable environmental management and product development. These suppliers were recognised at Massmart's Annual Supplier Environmental Awards lunch which is attended by leading national and international NGO's and media. In addition, top performing suppliers are also recognised in press releases and a survey report which is sent out to all participating suppliers.

C2. Risks and opportunities

C2.1

(C2.1) Describe what your organization considers to be short-, medium- and long-term horizons.

	From (years)	To (years)	Comment
Short-term	0	2	This time frame is aligned to our other business practice time horizons. In terms of climate change, the time frame relates to Weather and climate-related store performance (e.g. higher energy consumption and costs to regulate ambient building temperatures in extremes). Increase in drought-related impacts to business operation and regional economic impacts. Increase in operating costs due to water continuity and mitigation projects. Increase in extreme weather conditions – potential damage to property and impact on customer numbers to stores.
Medium-term	2	5	This time frame is aligned to our other business practice time horizons. In terms of climate change, the time frame relates to Similar risks to the above over the longer term.
Long-term	5	10	This time frame is aligned to our other business practice time horizons.

C2.2

(C2.2) Select the option that best describes how your organization's processes for identifying, assessing, and managing climate-related issues are integrated into your overall risk management.

Integrated into multi-disciplinary company-wide risk identification, assessment, and management processes

C2.2a

(C2.2a) Select the options that best describe your organization's frequency and time horizon for identifying and assessing climate-related risks.

	Frequency of monitoring	How far into the future are risks considered?	Comment
Row 1	Six-monthly or more frequently	3 to 6 years	Massmart evaluates climate change risks and opportunities at a group-wide, division and facility level. A wide variety of climate change related risks and opportunities are evaluated by different groups (Risk Committee and the Social and Ethics Committee) depending on the scope of their impact, such as general regulatory risks that could impact company or market operations, specific regulatory and physical risks that could impact individual facilities or regional operations, and a variety of other risks and opportunities in the supply chain, operations, and at a customer level. Massmart continuously gathers information to identify risks and opportunities through extensive research and engaging with knowledgeable stakeholders. Our stakeholder engagement practices include participation in stakeholder organised forums, conducting one-on-one meetings, making formal submissions to Parliament, conducting stakeholder surveys, and hosting public policy and general interest discussion groups.

(C2.2b) Provide further details on your organization's process(es) for identifying and assessing climate-related risks.**i. How climate-related risks are identified and assessed at a company level**

Company level risks are seen as strategic risks: These are longer-term and more material in nature and may only be monitored and managed through longer-term strategic business responses. For example: executive talent retention and succession, transformation and supply chain. Company-level, climate change risks are identified and investigated by a sustainability unit, specifically mandated with performing this role. Risks are presented to and evaluated by different functional groups at company level (e.g. Risk Committee). Risks identified at divisional and facility levels are discussed at a divisional level before being relayed to the sustainability unit and relevant group forums and committees situated at company level. This is applicable in both the evaluation of long- and short-term climate change impacts.

ii. How climate-related risks are identified and assessed at an asset level

Asset level risks are seen as operational risks: These risks (e.g. instore health, safety and security, fire prevention and detection) can be immediately addressed by local management actions and are the direct responsibility of each Divisional Executive Committee where a Loss Prevention or Risk Officer has line-responsibility. Asset level risks are identified based on how the risk affects product availability and cost (especially relevant to staple foods which form the backbone of Massmart's food offering in many of the rural markets in which it operates) and the ability for local producers and manufacturers to operate (e.g. effect of carbon tax on supply chains).

iii. - The process for assessing the potential size and scope of identified risks:

Group-wide climate change risks are identified and assessed by a dedicated sustainability unit operating out of Corporate Affairs. Risks are evaluated on the basis of their impact to essential business operations, cost management, reputation and compliance. The Group primarily focuses on three key issues, energy, water and waste. Energy management and efficiency is the main focus of climate change assessments since this is where the majority of the Group's implicated emissions are situated. A Group-wide risk matrix is generated based on risk magnitude (e.g. potential for financial and reputational impact), period over which the risk is relevant (e.g. chronic or acute risks), risk type (direct or indirect), divisional risk exposure and compliance requirements within legislative frameworks. The Sustainability Unit also keeps track of risk exposure to our divisions and chains. Massmart views climate change as a risk that affects all subsidiaries and as such, addresses and evaluates these holistically at Group level. Massmart views climate change risks as intrinsic to other key sustainability issues including energy and water consumption, and waste generation. All three, with a focus on energy, form part of Massmart's integrated strategy to mitigate against climate change associated risks.

iv. - The process to determine the relative significance of climate-related risks in relation to other risks:

Risks are prioritised based on the probability of the risk and the potential impact to the company's operations and current business structure and the consequences of taking action versus taking no action. For example, an immediate regulatory requirement mandating a reduction in waste generated to lower emissions requires immediate action to ensure compliance. Whereas a potential regulatory change that may have impacts years into the future, but that does not currently impact our facilities, is monitored but does not necessarily drive short-term actions.

Risks are plotted and prioritised based on risk probability and estimation of impact, as per the following assessment criteria:

1. Is there a legislative /regulatory driver?
2. Is there a directly associated commercial implication?
3. Is there resonance with Government and civil society driven social discourse?
4. What is the relevance to Walmart's Global sustainability commitments?
5. What positive leverage does it present for Massmart-Walmart's reputation in Africa?
6. What practical influence is Massmart able to exert over the issue?

vi. - How your organization defines substantive financial or strategic impact on your business

These incidents are defined in the Group Risk Policy as one that:

- Directly or indirectly impacts annual EBIT or total assets by 5% or more (quantitative);
- Has significant qualitative dimensions that may include:
- A major concern to Massmart Holdings' public shareholders;
- Serious damage to the reputations of the Division and / or its executives and management;
- Affecting a major portion of the Division's customer base;
- A large fraud or theft;
- A major breakdown in the control environment;
- A legal matter that may result in major financial or reputational risk;
- Affects the Division or Group's ability to implement or execute its strategy and business objectives.

C2.2c

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

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	As a Company operating under the laws of South Africa, there are specific regulatory requirements that may pose a transitional risk to Massmart. Massmart has a dedicated Environmental Compliance Manager whose objective is to identify and mitigate against environmental risk in the retail environment. This role is also aimed at ensuring that all relevant environmental legislation are adhered to. As an example waste is prioritised due to strong waste management regulations (such as through the National Waste Act) which allows for both fines and criminal prosecution. As a retailer, we stock a variety of products, leading to a number of waste streams that need to be managed appropriately with few municipal waste management structures in place. We reduce the risk of inappropriate waste management by recycling as much material as we can based on the infrastructure available, disposal of general waste to licenced facilities, the use of only registered and credible waste service providers and maintaining records of safe destruction and disposal. The SA National Greenhouse Gas Reporting Regulation was promulgated in April 2017, and requires Entities to submit annual reports to the Department of Environmental Affairs on emissions from specific listed activities that meet a minimum threshold. Massmart has reviewed this risk and although they do not need to submit emissions data currently, they may be required to submit emissions data on all energy generation activities across its portfolio in future. The financial implications in the form of penalties of not submitting are low and therefore this is not considered a material risk. This risk has been tabled at the risk committee when the act was promulgated into regulation.
Emerging regulation	Relevant, sometimes included	As a Company registered under the laws of South Africa, there are specific emerging regulatory requirements that may pose transitional risks to Massmart. The Carbon Tax of SA has been tabled for some time, and is thus classified as an emergent regulation. Under this tax, companies may have a financial obligation that is directly linked to greenhouse gas emissions. Although it is unlikely that Massmart will have a direct tax implication (as only non diesel and petrol scope 1 fuels above a certain threshold will be taxed), it is likely that Massmart will be subject to the indirect cost increase in electricity prices which will most likely occur. These could have significant financial impact on operational costs, and have been tabled at our risk committee.
Technology	Relevant, sometimes included	Our reliance on fossil based energy sources could expose us to the transitional risk associated with the transition towards a low carbon and energy efficient economy. Should Massmart not identify and implement various technological improvements that support this transition, we may be at risk of losing our competitive advantage due to higher operational costs than competitors who may have made technological investments. We are exploring new technologies continuously and have implemented building related technologies (as described under question 4.3), which will reduce our operational cost significantly. The increasing energy prices and future carbon price is tabled as a risk in our risk assessment processes, as a driver to invest in new, more efficient technologies.
Legal	Relevant, sometimes included	Transitional risks associated with water and energy costs and supply are relevant to Massmart. As a retailer that stocks food products (Makro, Game, Cash and Carry and Cambridge Foods), quality and extensive shelf life is paramount to our food products. Should our facilities not have access to electricity for refrigeration purposes, we are at risk of food contamination; Should this occur we would be in breach of Food Standards, and would risk having to destroy stock. These risks are tabled at our risk committee as and when they arise.
Market	Relevant, sometimes included	Consumers are increasingly demanding products that are carbon efficient and locally produced, with minimal energy and transport inputs. Should Massmart not be able to provide such products on our shelves, we run the risk of losing market share to competitors in the market. Competitive advantage is a core business imperative, and is thus tabled as a risk in our processes.
Reputation	Relevant, always included	Society as a whole, including many of our customers and investors, are well aware of climate change issues. Consumers and investors alike, are starting to make choices based on company climate impacts and policies. As such, there is a risk that Massmart could suffer reputational damage, and therefore a loss in revenue, should the company be seen to be acting in a way that is not mitigating or adapting to the impacts of climate change. Reputational risk is always registered in our risk registries.
Acute physical	Relevant, sometimes included	The acute physical risk of severe and unexpected climate related events could pose a significant risk directly to our operations and indirectly to our supply chain. Directly, these could impact insurance costs, as well as our own freestanding facilities and the facilities in which we rent space. Such incidents could impact on both our capital costs and revenues. A foreseeable example of such an event may include an extreme rainfall event which may cause flooding in one of our stores. This impact has not yet been actualised, but this risk is sometimes tabled on the risk registers.
Chronic physical	Relevant, sometimes included	As a retailer, we stock food products that are wholly dependent on healthy natural ecosystems. The future climate impact on our biological systems is not fully understood, and the longer term, chronic physical implications cannot be evaluated. However, it is more than likely that agriculture will be impacted by the physical implications of climate change, and this is an indirect risk to our operations. This predominately includes potential shifts in crop growing cycles, changes in crop quality and crop climatic preferences. This would impact the availability and pricing of certain food products, and could pose a significant financial risk to our operations. This risk is sometimes included in our risk register.
Upstream	Relevant, sometimes included	As a major retailer, we are dependent on a large number of suppliers that produce various products that are stocked on our shelves. Depending on geography and product composition, certain of these suppliers will be subject to more significant climate risk than others. For example, the price of maize may increase due to wheat production shortages that are a direct result of climatic changes. This has already been impacted on some of our products in the past. This risk is sometimes included on our risk registers.
Downstream	Not relevant, explanation provided	As a retailer, we do not have any significant downstream risk. Only our customers sit downstream in the value chain, and all risks associated with customers are addressed under market and reputational risk (described above).

C2.2d

(C2.2d) Describe your process(es) for managing climate-related risks and opportunities.

Risks and opportunities are addressed in the same way. Risks that affect multiple assets are addressed at company-level, whereas single impact events that impact one or a few assets, are addressed at the asset level. However the process for managing both asset and company level risks is the same. Depending on magnitude, either a targeted approach (at asset level) or blanket approach (company level) is deployed.

Risks are prioritised based on the probability of the risk and the potential impact to the company's operations and current business structure and the consequences of taking action versus taking no action. For example, an immediate regulatory requirement mandating a reduction in waste generated (to lower scope 3 emissions) requires immediate action to ensure compliance. Whereas a potential regulatory change that may have impacts years into the future, but that does not currently impact our facilities (eg the carbo tax), is monitored but does not necessarily drive short-term actions. Risks are plotted and prioritised based on risk probability and estimation of impact, as per the following assessment criteria:

1. Is there a legislative/regulatory driver?
2. Is there a directly associated commercial implication?
3. Is there resonance with Government and civil society driven social discourse?
4. What is the relevance to Walmart's Global sustainability commitments?
5. What positive leverage does it present for Massmart-Walmart's reputation in Africa?
6. What practical influence is Massmart able to exert over the issue?

An example of how we manage physical opportunities include the water shortage risks in South Africa. After numerous meetings with the City of Cape Town and other stakeholders, Massmart designed a water-status calculator in-house to monitor dam levels in the Western and Eastern Cape and measure the extent of water availability risk in addition to close monitoring of information supplied by Government and the media. Massmart had also already started exploring alternatives and increased measures of efficiency to ensure water continuity at stores and facilities in disaster areas. After a meeting with operational and risk managers, along with Divisional CEO's and the Group CEO, a decision was made to exploit our existing infrastructure through, for example, the collection of air-conditioning water condensate which could provide a non-potable source of water to stores followed by investment in large water-from-air generators to secure a supply of potable water. Coupled with this, Makro stores sold bottled water in bulk, at cost, to the public. Massmart was of the view that any solution for business continuity needed to focus holistically on ensuring customer access to potable water and equip stores with a reliable source of potable and non-potable water.

C2.3

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

Yes

C2.3a

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

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Transition risk

Primary climate-related risk driver

Policy and legal: Increased pricing of GHG emissions

Type of financial impact driver

Policy and legal: Increased operating costs (e.g., higher compliance costs, increased insurance premiums)

Company- specific description

The South African Government intends to introduce a carbon tax in line with its commitment to reduce greenhouse gas emissions nationally as part of international agreements. The commitments directly impact on Massmart through potential taxation of Massmart's Scope 1 emissions as well as increases in electricity prices across the Group's operations as a result of increased taxation levied against Eskom, the primary energy provider across Massmart's operations. The proposed tax rate of R120 per tonne CO₂e may be reflected as an effective rate of R48 per tonne CO₂e once all allowances are allocated. Although Massmart is unlikely to be subject to the tax directly for at least the first phase (5 years), should the carbon tax be implemented, electricity cost may increase immediately, and should the exemptions be reduced in future, Massmart may be liable to pay tax on all of its scope 1 emission in the future.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Medium-high

Potential financial impact

20000000

Explanation of financial impact

Massmart's listed activities under the carbon tax, does not seem to cross the relevant thresholds, and the exclusion of petrol and diesel from this, implies that the direct cost of Scope 1 taxation of emissions is likely to be negligible. However, should government lower the threshold, Massmart may be liable to pay between R0.75 - R2 million for its South African-based operations' scope 1 emissions. Scope 2 emissions represent between 70-80% of Massmart's total carbon emissions. Eskom has already increased energy tariffs by 19% in 2017 . Should this energy cost be further increased with the advent of the Carbon tax, it could have a significant implication for energy prices and Massmart's operational costs. It is expected that this tax will be passed on in Massmart's South African operations. Should Eskom pass on the full ZAR48 per tonne CO₂e, this would translate to ZAR48 per MWh. The over 430000MWH that Massmart consumes in SA could result in over ZAR20 million additional cost

Management method

Massmart manages Scope 1 emissions primarily by targeting fugitive emissions from air-conditioning and refrigeration systems which have high global warming potentials. New Makro stores contain (and older stores are being retrofitted with) efficient CO₂ refrigeration which has a significantly lower global warming potential and is more energy efficient. In most Builders Warehouse stores and some Makro stores, evaporative cooling is used as a more sustainable alternative to typical air-conditioning, reducing Massmart's Scope 1 emissions footprint. Managing the financial implications that a carbon tax will likely have on grid energy tariffs, Massmart has implemented energy efficiency measures which include: installation of independent check meters, fitting new Makro and Builders Warehouse stores with light metering, auto-lighting systems and daylight-harvesting. These interventions ensure that new Makro stores are on average 25% more efficient than legacy stores. New Solar PV installations are also estimated to reduce store reliance on grid energy by up to 30 % annually. By setting energy reduction targets and placing greater emphasis on energy efficiency Massmart is managing the risks associated with energy instability, tariff increases and simultaneously reducing its overall carbon footprint (predominantly Scope 2 emissions).

Cost of management

5000000

Comment

The cost of installing energy efficient technologies (e.g. light metering systems / high performance refrigeration units) is incorporated into the store development costs of each store. The installation of polycarbonate light boxes in new generation Makro and Builders Warehouse stores is estimated at ZAR500000-ZAR1000000 per store.

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Supply chain

Risk type

Transition risk

Primary climate-related risk driver

Policy and legal: Other

Type of financial impact driver

Policy and legal: Increased operating costs (e.g., higher compliance costs, increased insurance premiums)

Company- specific description

South Africa has historically benefited from relatively cheap electricity. However, the price of electricity rose rapidly from an average of 17c/kWh in 2006 to 99c/kWh in 2016 (average tariff throughout the Group in SA). Escalating energy prices have the potential to significantly increase operating costs in the future. Given the increased demands for energy and the shortage of excess generation capacity in South Africa, it is likely that these increases will continue. In addition to the increases seen in 2015, the National Energy Regulator of South Africa (NERSA) has approved a 2% increase in energy tariffs effective from April 2016, 19% in 2017, and an increase is due in July 2018. Continued substantial increases in energy tariffs significantly impacts Massmart's operating costs.

Time horizon

Short-term

Likelihood

Very likely

Magnitude of impact

Medium-high

Potential financial impact

45000000

Explanation of financial impact

Electricity outages and energy price hikes are likely to impact store operations and the Group's operational costs. It is expected that energy price volatility will have further impacts on operating costs in the future. In Rand terms, an increase of 9.4 % will result in additional ZAR 40 million – 45 million in electricity costs per annum.

Management method

To address electricity price volatility Massmart is currently implementing modular photo-voltaic systems that reduce energy costs. We expect that as a result of 3 new renewable energy installations, there could be an annual estimated R 650 000 – R900 000 worth of financial benefit to the business through participation in carbon trading and consumption-related expenses based on the pilot project alone. In addition, we continue to implement a range of energy efficiency initiatives across our stores. These include lighting retrofits, the installation of efficient evaporative coolers and high-performance refrigeration units. Massmart has prioritised operational energy efficiency through the development of a Group energy guidance position which makes monitoring and recording of monthly energy consumption mandatory, programmable check meters and the development of store specific energy efficiency plans that define energy savings when benchmarked against legacy stores, indicate expected energy savings in the case of store retrofits and keep track of progress toward achieving energy targets.

Cost of management

2000000

Comment

The installation of polycarbonate light boxes in new generation Makro and Builders Warehouse stores is on-going (stores opened after 2008) is estimated at ZAR500000 - ZAR1000000 per store. Building Management Systems (BMS) which remotely monitor and manage energy consumption and energy metering costs are on-going. Such systems are available on the market from between ZAR150000 - ZAR250000. The price of energy monitoring meters range from ZAR100 - ZAR500 per site. Small scale PV installations cost between ZAR1-2 million however, establishment of large-scale, long-term power purchase agreements incur no capital costs relevant to Massmart.

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Transition risk

Primary climate-related risk driver

Policy and legal: Enhanced emissions-reporting obligations

Type of financial impact driver

Policy and legal: Increased costs and/or reduced demand for products and services resulting from fines and judgments

Company- specific description

The National Environmental Management Act: Air Quality Act: Draft National Greenhouse Gas Reporting sets out to incorporate greenhouse gases, as priority air pollutants. Under this regulation, Companies with specific listed emission generating activities are required to report on their GHG emissions to National government, using the NAEIS reporting framework. The regulations were promulgated into law in April 2017. The only risk to Massmart with such a regulation is that the company may eventually meet the threshold in terms of the listed activity of energy generation (through generators) when taking into account the entire generating capacity of all its generators throughout South Africa. The risk of failure to report could result in penalties.

Time horizon

Short-term

Likelihood

Unlikely

Magnitude of impact

Medium

Potential financial impact

10000000

Explanation of financial impact

Under the regulation, should a company such as Massmart fail to comply, or provides false information, that company can be subject to a fine not exceeding ZAR5 Million, and potential imprisonment not exceeding 5 years. A second offence, could result in a fine not exceeding ZAR10Million and imprisonment not exceeding 10 years.

Management method

Massmart has been measuring its GHG inventory for since 2010 and has for the past 4 years been verifying these emissions, and is improving on the scope and boundaries, and on the internal carbon management systems. Massmart is also developing a registry of energy generating capacity, to ensure that thresholds are not met, and if they are met, that the company will be ready for submitting emissions data.

Cost of management

260000

Comment

The cost of measuring and verifying all scope 1 and 2 emissions amounts to about ZAR160000 per year - This figure takes into account costs related to in-house staff and third-party verification and CDP report compilation. Additional consultants may be required to develop a list of assets that include listed emissions activities, and for submitting that data to the Department of Environmental Affairs. Consultants could cost up to ZAR100000.

Identifier

Risk 4

Where in the value chain does the risk driver occur?

Supply chain

Risk type

Physical risk

Primary climate-related risk driver

Chronic: Rising mean temperatures

Type of financial impact driver

Reduced revenue from decreased production capacity (e.g., transport difficulties, supply chain interruptions)

Company- specific description

Mean temperature change influences a number of key abiotic processes including; rainfall patterns, mean precipitation, oceanic temperatures and ice cap melting. Slight changes in these abiotic factors can lead to natural disasters such as floods and droughts, which could decrease the resilience of Massmart's diverse supply chain. For example; these abiotic factors play a huge role in determining global food production and agricultural development. South Africa and the African countries in which Massmart operates are for the most part seasonally arid, therefore a change in mean temperature could have negative impacts on crop yield and production through decreased soil moisture, which undermines food production, causing potential disruption to the food supply chain and particularly the supply of staple foods such as maize, sugar, wheat products and fresh fruit and vegetables. Such disruptions are likely to lead to an increase in the price of staple foods, and price inflations negatively affecting consumers.

Time horizon

Short-term

Likelihood

About as likely as not

Magnitude of impact

Medium

Potential financial impact

320000000

Explanation of financial impact

Ultimately, the financial implications associated with this risk will likely be a loss of sales due to producers/suppliers being unable to adapt to changing and unpredictable climatic conditions. A hypothetical 25% drop in production of key commodity crops resulting from climate-induced conditions such as drought could potentially affect annual sales of a single product by as much as ZAR320 million.

Management method

As a retailer, Massmart is less likely to be affected directly by physical climate changes but we realise that there are potentially serious impacts on our suppliers. Understanding the effects of desertification and how climate cycles such as El Niño affect, especially food production assists with responding appropriately to the associated risks. Since 2012 Massmart has engaged with food producers including staples suppliers such as maize. Beyond direct investment, Massmart continues to manage risks in this area through close engagement with forums which is key to mitigate price and supply fluctuations. In addition, Massmart proactively engages with its supply chain on environmental initiatives which allows us to assess their level of resilience as a first step to identify opportunities to advocate for better practices that would insulate them from climate change risks.

Cost of management

250000

Comment

Massmart's supplier development programme (SDP) has, since its inception, invested ZAR17 million in food producers. The SDP programme is directly focussed on promoting supply chain sustainability and building resilience. During 2016, Massmart invested R1 million in, among other things, small scale commodity suppliers who had been impacted by the widespread droughts across the country. Engaging with our supply chain on climate change risks costs an estimated ZAR 250000 per annum. Massmart also, on an ongoing basis, through its Food Forum engages with vendors on key commodity lines to understand potential supply risks and mitigation measures. Topics covered include maize shortages and water shortages as a result of drought. Massmart works with vendors to identify risks and mitigation methods and where necessary, identify alternative sourcing opportunities.

Identifier

Risk 5

Where in the value chain does the risk driver occur?

Supply chain

Risk type

Physical risk

Primary climate-related risk driver

Chronic: Other

Type of financial impact driver

Reduced revenue from decreased production capacity (e.g., transport difficulties, supply chain interruptions)

Company- specific description

Changes in ocean conditions can impact the sourcing of fish and fishing activities through changes in migration patterns and this could also result in tighter limits being implemented due to stock depletion. In addition, increased carbon dioxide levels may lead to the acidification of oceans, which may lead to further losses in fish biodiversity, thus compromising food security and our ability to meet our customers' seafood demands. For example, should ocean conditions impact pilchard stock biomass this would significantly reduce an important protein source for a large number of South Africans and also result in price increases due to fishing restrictions. In recent years such climate change related disruptions have become more apparent and have the potential to impact Massmart's ability to meet customer expectations and demands.

Time horizon

Long-term

Likelihood

Likely

Magnitude of impact

Medium-high

Potential financial impact

80000000

Explanation of financial impact

The financial implications associated with this risk have not been fully calculated, however they will be dependent on the type of seafood species (whether they are part of our product offering or not) affected by the changes in oceanic conditions and the scope of change. If induced changes impacted on seafood product sourcing by 15% for example, it could potentially impact sales by between ZAR50-80 million.

Management method

Through Massmart's sustainable marine advocacy process, which includes annual seafood species assessments, supplier survey, workshops, site visits and one-on-one meetings with our suppliers, buyers and NGO's regarding sustainable marine sourcing and fish stock health. Based on these engagements we make sourcing decisions such that we source sustainable fish species from well managed fisheries. In addition to these measures we have now implemented seafood genetic identity testing which enables us to identify with greater acuity and implement more targeted risk mitigation initiatives. Through evaluating the sustainability of the fish species we source we are better able to identify each species' biomass and how we can respond to climate related impacts in these fisheries.

Cost of management

100000

Comment

The costs associated with managing this risk are covered annually and are incorporated in Massmart's stakeholder engagement and research budget and the environmental sustainability and reporting budget. Seafood workshops cost in the region of ZAR5000-ZAR10000 depending on the number of attendees and on average we have one annually. In addition, our World Wildlife Fund (WWF) annual membership is ZAR25000. The WWF engages closely with government and they are involved in policy decision making. Supplier engagement through surveys and site visits to understand climate risks, amongst others, costs approximately ZAR250000 per annum.

Identifier

Risk 6

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Physical risk

Primary climate-related risk driver

Chronic: Rising mean temperatures

Type of financial impact driver

Increased operating costs (e.g., inadequate water supply for hydroelectric plants or to cool nuclear and fossil fuel plants)

Company- specific description

South Africa experienced its hottest year on record in 2016, with indication that years are getting hotter. Higher environmental temperatures have prompted an increase in energy demand for refrigeration and ambient air temperature control in stores. As climate change continues to influence extremes in weather and temperature, it is likely to become more of a risk through increased operating costs and energy consumption.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Medium-high

Potential financial impact

5400000

Explanation of financial impact

Financial implications associated with this risk will likely involve increased energy consumption related costs. Coupled with continued increases in national energy tariffs, unavoidable grid-electricity consumption will result in considerable increases in

energy-related expenditure. Refrigeration and air conditioning consume approximately 30% of our store consumption, and if we look at an average store footprint, increased in cooling energy requirements of for example 5% would result in an increased cost of ZAR5.4 Million, if we continue in a BAU scenario.

Management method

Massmart makes use of evaporative air-cooling (along with thermal insulation) in selected stores which are less energy intensive along with high performance refrigeration systems that have been optimised for high ambient temperatures. In addition, Massmart has an active pilot photo-voltaic power generation programme which will assist with reducing costs associated with increased energy consumption via the national grid. New stores are designed to be more thermally inert and less affected by external temperature fluctuations.

Cost of management

5000000

Comment

Costs of management provided are since project inception. Massmart's energy efficiency projects are built into the energy efficiency budget. Initial costs associated with initiatives are approximately 30% more expensive than the typical alternatives however, the cost savings through improved efficiency over time outweigh the costs of the initial investment. The cost of installing energy efficient technologies (e.g. light metering systems, high performance refrigeration units) are incorporated into the store development costs of each store. The installation of polycarbonate light boxes in new generation Makro and Builders Warehouse stores are estimated at ZAR500000-ZAR1000000 per store.

Identifier

Risk 7

Where in the value chain does the risk driver occur?

Customer

Risk type

Transition risk

Primary climate-related risk driver

Reputation: Shifts in consumer preferences

Type of financial impact driver

Reputation: Reduced revenue from decreased demand for goods/services

Company- specific description

Climate change could sensitise consumers to the importance of sustainable corporate practices. This could result in greater expectations being placed on retailers to demonstrate environmental sustainability progress within both their operations and supply chains. Our perspective is that although the majority of our customers continue to make purchasing decisions based on cost and value proposition, a core group of customers who are passionate about corporate accountability have a significant voice in lobbying for sustainable practices in the retail sector and can change the shopping behaviour of others. Failure to be identified by these consumers as an environmentally responsible shopping destination may erode our consumer base, decrease our sales and affect the company's reputation going forward.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

Medium-high

Potential financial impact

3000000000

Explanation of financial impact

Climate change may lead to changes in consumer demand. Massmart runs the risk of a decrease in brand and share value if it is perceived as failing to adequately address relevant climate change risks. This risk could result in consumers defecting to competitors who are perceived to offer more environmentally responsible choices. Although difficult to estimate, a 2% decrease in sales could result in losses of approximately ZAR3billion.

Management method

In order to manage these risks, the following action has been taken: - We track customer attitudes to environmentally responsible consumerism through customer intercept surveys. -Introduced Ecowise merchandise range to increase environmentally responsible purchasing practices (all Builders Warehouse private label products introduced in 2013 carry an Ecowise panel), expertise and

supplier infrastructure. - We continue to widen the comprehensive range of energy-efficient products, increase the number of Green Stands at selected Builders Warehouse and Builders Express stores, which promote more energy and water efficient products to consumers. - We continue to run our post-consumer e-waste take-back initiative which allows customers to responsibly dispose of their electronic waste. Massmart continues to conduct environmental screening on product attributes to ensure that consumers have access to sustainable products that consider climate and the environment. We communicate in the following ways: In-store communications (notices), eco-labelling (e.g. eco-wise label), on pack messaging (private label), in-store banners (e.g. Makro Carnival). Also, through brand campaign – ads in Sawubona and Destiny magazine. Visits to suppliers with journalists (Massmart Supplier Environmental Advocacy Programme).

Cost of management

600000

Comment

The cost of Massmart's annual customer survey which includes tracking customer attitudes to environmentally responsible consumerism is built into the Group's stakeholder engagement budget. Annually, costs associated with the customer intercept survey and stakeholder engagement are between ZAR100000-200000. The Builders Warehouse Eco-wise panel and Green stands have not been calculated, however they are built into the Group's product merchandising budget. However, not all of these costs are covered directly by Massmart and its divisions. The cost associated with communicating with our customers is built into the Group's communication and marketing budget. Group updates that detail Massmart's sustainability and climate change-related initiatives cost an estimated ZAR3500 per update.

C2.4

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

Yes

C2.4a

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

Identifier

Opp1

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Energy source

Primary climate-related opportunity driver

Other

Type of financial impact driver

Returns on investment in low-emission technology

Company- specific description

New energy tariff structures and subsidies aimed at reducing electricity and fuel demands and promoting energy efficiency may present opportunities to invest in new technologies and infrastructure. Currently solar installations are limited by maximum viable generation capacity at a store level. Should a net metering scheme come into effect, the incentive to increase the size of current and future PV installations would have positive cost implications through the sale of renewable energy.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Medium

Potential financial impact

355539000

Explanation of financial impact

Solar PV installations would allow for the sale of excess generated renewable energy back into the national grid. This would hinge on the resale of electricity through our PPAs (the current model). We could double generating capacity at Makro stores and quintuple it at Builders Warehouse stores. Stores which are in lower tariff areas (2020) vs. 2020 energy goals (2010 & 2020) - Calculated cumulative year-on-year differences in consumption from projection data - Used current average electricity tariff experienced across the Group (R0.99/kWh) as a watershed, +-8% for inflation per annum - Cumulative savings (2010 and 2020) represented conservatively as ZAR355539000.

Strategy to realize opportunity

Massmart is focused on improving the energy efficiency and logistics efficiency of its operations and has aggressively implemented energy efficiency initiatives in its stores. Massmart has implemented voluntary carbon emissions reductions measures which include: the installation of independent programmable check meters and Building Management Systems in its stores and DC's and the installation of a range of energy efficiency technologies across its facilities. In addition, Massmart proactively engages with the NBI and Eskom and other policy makers to identify and prioritise opportunities to make use of energy efficiency subsidies to increase the pace of investment in green and energy efficient technologies. Massmart has engaged local renewable energy service providers and we are currently implementing a pilot photovoltaic (PV) project at our standalone stores and distribution centres. Grid-tied onsite renewable energy projects have the potential to greatly reduce our energy costs and scope 2 carbon emissions. To date we have completed 40 successful BMS's.

Cost to realize opportunity

30000000

Comment

The costs associated with managing this opportunity are associated with the collection and analysis of the Group's energy consumption data. Building Management Systems (BMS) and energy metering costs are on-going and range from between ZAR200000 - 220000 per site. To date we have completed 40 successful BMSs. Management costs associated with solar installations through a power purchase agreement are minimal. Should Massmart double PV capacity at existing stores and roll-out increased generation capacity to initially, about 30 new stores, the direct investment costs would be estimated to be ZAR40-60 million. This would however, allow for the sale of excess generated renewable energy back into the national grid.

Identifier

Opp2

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Markets

Primary climate-related opportunity driver

Access to new markets

Type of financial impact driver

Other, please specify (increase in capital availability)

Company- specific description

The proposed carbon tax by the SA Government makes an allowance for up to 10% of emissions to be offset by investment into local emission reduction projects. Companies such as Massmart could potentially register an emission reducing project as a local project that could have credits sold to the local SA market. This could be particularly viable should Massmart be exempt from the tax, as any reducing activities will not be double accounted. As South Africa's largest generator of renewable energy in the retail sector, this presents a large opportunity for Massmart.

Time horizon

Medium-term

Likelihood

About as likely as not

Magnitude of impact

Medium-low

Potential financial impact

240000

Explanation of financial impact

The proposed offset scheme implies that there will be a significant market for carbon credits at anything below the ZAR120 per ton value of the tax. Massmart may be able to register a carbon project at one or multiple locations, such as a programme of solar PV activities, and sell the resulting emission reductions. Should Massmart double the capacity of just one of its small pilot PV plants approximately 2000 tonnes of CO₂e would be available for trade annually. At the current carbon tax rate, sale of such credits could generate up to ZAR240000 per year.

Strategy to realize opportunity

Massmart manages both risks and opportunities with a phased PV roll-out approach. Implementing pilot projects before undertaking large, costly initiatives also provides for mitigation of risk while exploring the feasibility of opportunities. Pilot projects are also designed with long-term objectives and expectations in mind. Current pilot PV projects are grid-tied and are net-metering compatible in expectation of Eskom's new net-metering scheme. Projects have also been designed in such a way as to allow for expansion and integration when new regulations and energy-generation provisions are initiated.

Cost to realize opportunity

550000

Comment

The management costs of participating in carbon trading have not been fully evaluated at this stage as there are a number of changes which are expected after the Carbon Tax Bill comes into effect as well as through adjustments to regulation by industry. Massmart also considers carbon trading as currently a long-term opportunity however, management costs per site may currently include expenses relating to design document development (~ZAR150000), validation and registration (~ZA250000) as well as monitoring costs of existing sites and annual verification procedures (~ZAR150000).

Identifier

Opp3

Where in the value chain does the opportunity occur?

Customer

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Type of financial impact driver

Increased revenue through demand for lower emissions products and services

Company- specific description

New legislation in support of energy efficiency interventions and heightened media coverage regarding more environmentally friendly products and practices may assist in creating greater consumer awareness about the need for responsible environmental consumerism, which has the potential to stimulate demand for environmentally responsible products and enable Massmart to increase the size and scale of our environmentally responsible product offering.

Time horizon

Short-term

Likelihood

More likely than not

Magnitude of impact

Medium-low

Potential financial impact

112000000

Explanation of financial impact

The financial implications are based on an increase of 0.12% of revenue using the 2017 revenue as a model.

Strategy to realize opportunity

Massmart has implemented a variety of consumer orientated initiatives to support more environmentally conscious consumerism. These include; Green product aisles in Massbuild stores, the introduction of a comprehensive range of high efficiency lighting technologies and appliances offered in Builders Warehouse, Game and Makro stores. We have also installed water harvesting initiatives across 88 Builders and Makro sites. In addition, we have introduced a consumer advocacy panel on pack through our Eco-wise product range to call attention to products that are environmentally sensitive or that play a role in saving water and energy. In addition, Massmart engages its supply chain regarding energy efficiency labelling on large appliances. We also engage with government and with suppliers regarding regulations that govern product efficiency and sustainability.

Cost to realize opportunity

7200000

Comment

The costs associated with in-store customer awareness have been built into the product merchandising budget. The costs associated with improving in-store energy efficiency are incorporated in the store development budget. Water harvesting plants cost ZAR60000 - 100000 per store (for 88 stores).

Identifier

Opp4

Where in the value chain does the opportunity occur?

Supply Chain

Opportunity type

Resource efficiency

Primary climate-related opportunity driver

Use of more efficient production and distribution processes

Type of financial impact driver

Other, please specify (innovation of new products and service)

Company- specific description

Climate change-induced impacts on natural resources may require a review of the origins and manner in which Massmart sources products. Impacts may prompt a change in logistics practices, for example, because alternative food sources are obtained from further afield and require the Company to innovate and strategise to keep costs down and reduce the impact on consumers. These new innovations may be rolled out across the Group logistics operations thus providing a holistic benefit. This review could highlight opportunities to improve internal efficiencies with regards to processes, logistics and sourcing, and potentially lead to new product development and range expansion.

Time horizon

Long-term

Likelihood

Likely

Magnitude of impact

Medium-low

Potential financial impact

500000000

Explanation of financial impact

It is difficult to quantify the financial implications associated with this opportunity. However, using sales figures based on comparable product range expansions, this could potentially increase Group turnover by between 0.05-0.1% based on 2017 financial results, this can be estimated at a potential additional ZAR500 Million Rand revenue.

Strategy to realize opportunity

We manage these opportunities by proactively engaging our suppliers through environmental surveys, direct engagements with NGO's. In 2017 we engaged with nearly 400 suppliers through environmentally focused advocacy surveys. By understanding our supply chain and supplier practices we are better able to identify and act on new sourcing, logistics and manufacturing opportunities.

Cost to realize opportunity

200000

Comment

The cost associated with monitoring supplier environmental practices, NGO expectations and monitoring consumer preferences and demands are built in Massmart's stakeholder, research and marketing budget. Annually, costs associated with stakeholder engagement are between ZAR100000-ZAR200000.

Identifier

Opp5

Where in the value chain does the opportunity occur?

Supply Chain

Opportunity type

Resilience

Primary climate-related opportunity driver

Resource substitutes/diversification

Type of financial impact driver

Increased reliability of supply chain and ability to operate under various conditions

Company- specific description

Southern Africa has been identified as one of the region's most vulnerable to climate change. Changing rainfall patterns, desertification and increased temperatures have the potential to disrupt food production and supply. However, these challenges provide opportunities to re-evaluate group sourcing strategies and build resilience.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Medium-low

Potential financial impact

1000000000

Explanation of financial impact

Fresh food retail is expected to contribute a greater proportion to Massmart's approximately ZAR93.7 billion turnover. Disruptions to the fresh food supply chain have the potential to significantly affect the Groups profitability. Just 1% increase in revenue would result in almost ZAR1 billion

Strategy to realize opportunity

To date Massmart has trained over 760 farmers and included 139 small holder farmers into our supply chain. A component of this support was aimed at assisting farmers to produce food more sustainably and improve overall producer resilience. Although this programme was concluded in 2015, it provides an example of one of the many supply chain development initiatives that we have implemented to improve supplier productivity and increase supply resilience.

Cost to realize opportunity

2300000

Comment

As part of the Supplier Development Programme, established in 2011 as a result of the Walmart-Massmart merger, Massmart has to date, disbursed approximately ZAR17million since the inception of the programme, ZAR2.3 million of which was disbursed in 2015, a component of which went toward sustainable farming practices and farmer training.

Identifier

Opp6

Where in the value chain does the opportunity occur?

Customer

Opportunity type

Products and services

Primary climate-related opportunity driver

Shift in consumer preferences

Type of financial impact driver

Better competitive position to reflect shifting consumer preferences, resulting in increased revenues

Company- specific description

Media and NGO discourse regarding the impacts and causes of climate change have the potential to alter customer opinion regarding good corporate governance. The role that Massmart plays in dealing with issues like climate change provides Massmart with an opportunity to strengthen its consumer base by reacting timeously and responsibly to these issues. Reducing emissions and acting against climate change can enhance Massmart's reputation amongst customers, investors and employees.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Medium

Potential financial impact

900000000

Explanation of financial impact

The estimated financial implications associated with this opportunity are difficult to calculate. However, given that 35.9% of Massmart consumers surveyed in 2013 expressed a strong preference for environmentally sensitive products it is not unreasonable to expect that consumers shopping at our competitors share similar views. Attracting environmentally conscious consumers away from our competitors may significantly benefit sales. Should sound environmental practice arise in an increased market share of only 1% - this could result in increased revenue of over ZAR900 million. (based on 2017 revenue).

Strategy to realize opportunity

We recognize that advocacy to suppliers and customers offers significant opportunity to limit harmful effects of consumerism on the environment. We therefore continue to focus on intensifying environmental advocacy efforts with these stakeholders. This includes surveying the environmental practices of suppliers and increasing the number of Eco-wise products we offer to customers. In addition, we focus on proactively communicating our environmental priorities and initiatives in our stores, on the Massmart website and through direct communications with key stakeholders such as NGO's, industry thought leaders and Government.

Cost to realize opportunity

200000

Comment

Engagement costs are on-going and, as has already been noted, range from ZAR100000-ZAR200000, a component of which goes towards environmental surveys of suppliers, environmental workshops, supplier site visits and environmentally orientated communications. In addition, issue specific Group Updates that detail Massmart's sustainability and climate change-related initiatives cost an estimated ZAR3500 per update.

Identifier

Opp7

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Type of financial impact driver

Increased revenue through demand for lower emissions products and services

Company- specific description

Due to Massmart's size it is capable of democratising the price of environmentally responsible goods and growing its market share in this area. This could happen mainly through price negotiation as part of more affordable private label product offerings. E.g. Builders new LED light bulb range which offers LED products at reduced prices and in bulk packs.

Time horizon

Medium-term

Likelihood

More likely than not

Magnitude of impact

Medium

Potential financial impact

107000000

Explanation of financial impact

The financial implications of this opportunity have not been quantified. However, to put this opportunity in perspective, sales of energy efficient lights only in 2017 amounted to over ZAR107 Million. consumer spending on solar geysers has lead to the expansion of the range.

Strategy to realize opportunity

Massmart has implemented a variety of consumer orientated initiatives to support more environmentally conscious consumerism. These include; Green aisles in new Massbuild stores and a comprehensive range of alternative high efficiency lighting technologies offered in certain Builders Warehouse, Game and Makro stores.

Cost to realize opportunity

0

Comment

Management costs are minimal and included within the divisional product merchandising budgets. These costs will be allocated annually as part of the budgeting process.

Identifier

Opp8

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Resource efficiency

Primary climate-related opportunity driver

Use of recycling

Type of financial impact driver

Reduced operating costs (e.g., through efficiency gains and cost reductions)

Company- specific description

Waste degradation at landfill is a major source of greenhouse gas emissions. Programmes developed to reduce emissions related to waste disposal may result in additional focus being placed on waste diversion opportunities that incentivise recycling, recovery and reuse of waste. These programmes could reduce waste management and disposal costs and help lower total emissions.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

Medium

Potential financial impact

12000000

Explanation of financial impact

Massmart's waste management costs are highly variable. However, industry waste disposal costs range from ZAR1000 - ZAR1200 per collection. In addition, to ensure recyclables are recovered, onsite sorting staff are required at a cost of approximately ZAR7000 per month along with compactor costs of ZAR2400 per month. These costs are however offset through the introduction of subsidised recycling levies and tariffs. Not only would this reduce the total cost of waste management across the Group, but it could also provide an additional source of revenue. In this regard a ZAR0.5 subsidy increase per Kg of paper could potentially bring the Group an additional ZAR12m in revenue annually.

Strategy to realize opportunity

To facilitate the diversion of waste from landfill. Massmart has drafted a waste management guidance note. The guidance note requires the mandatory recycling of paper, board and plastic at all Massmart stores. Massmart conducts an annual store-level online waste management survey to quantify the amount of recyclable and non-recyclable waste currently generated at our stores as well as to ensure compliance with national and municipal standards and regulations. Based on the 2017 survey and subsequent waste data sampling we estimate that we diverted approximately an additional 22 248 tonnes of waste from landfill.

Cost to realize opportunity

500000

Comment

The cost associated with managing this opportunity is incorporated in the environmental sustainability and compliance function, and a dedicated resource whose time spent on waste management is estimated to be over ZAR200000 per annum. Onsite waste management costs can vary from ZAR1000 - 9200 per site per month. Although these costs are on-going, upfront investments in waste compactors, to assist with recycling, are also made where appropriate for new stores.

Identifier

Opp9

Where in the value chain does the opportunity occur?

Customer

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Type of financial impact driver

Increased revenue through demand for lower emissions products and services

Company- specific description

Climate change could sensitise consumers to the need to make more environmentally conscious purchasing decisions. This could result in an increase in consumer demand for more sustainable and less environmentally harmful products. Over the years, for example, we have noted an increase in sales in alternative energy products such as gas geysers, cookers, heaters, solar lights and energy saving LED lights. Consumer demand driven highlights in 2014 include increased sales in alternative energy products, Massmart can capitalise on this opportunity by expanding the range of such products, thus driving up sales, as we did in 2016 where Builders launched a new range of private label LED light bulbs which offer customers high value for money.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Medium

Potential financial impact

900000000

Explanation of financial impact

Given that consumer demands are complex, wide-ranging and highly variable, the potential financial implications are difficult to quantify. However, an increased market share of only 1% could result in increased revenue of over ZAR900 million (based on 2017 revenue).

Strategy to realize opportunity

We manage consumer expectations through sustainable sourcing initiatives for example relating to seafood and energy efficient products and proactive communication to customers regarding our sustainability efforts in store, on the Massmart and individual brand websites, and in the annual report. Massmart also communicates newsworthy achievements through journalistic publications such as Engineering News and City News. In addition, all Massbuild private label products have since 2013 an Eco-wise consumer information panel. Builders introduced a private label LED light bulb which offers high value for money.

Cost to realize opportunity

3500

Comment

The cost associated with communicating with our customers is built into the Group's communication and marketing budget. Group Updates that detail Massmart's sustainability and climate change related initiatives cost an estimated ZAR3500 per update.

C2.5

(C2.5) Describe where and how the identified risks and opportunities have impacted your business.

	Impact	Description
Products and services	Impacted for some suppliers, facilities, or product lines	Some of the products on our shelves are prone to both physical and transitional risk. Some of these risks have already been realised, whereas some of these risks are expected to be realised in the medium to long term. For example the price of products that are dependent on maize, increased as a result of maize shortages. Other food products may be impacted in the future. Despite there being a risk to food products, food actually makes up a small portion of sales overall to the Group. We are primarily a general merchandise orientated business (at Group level). The magnitude of this impact is therefore low-medium.
Supply chain and/or value chain	Impacted for some suppliers, facilities, or product lines	Some of our products are dependent on a resilient supply chain. For example, the upstream supply chain of our food products (our primary agricultural producers) are prone to both physical and transitional risk. Some of our products rely on the supply of a wide range of raw materials such as maize, rice, sugar, fruit etc. Changes in precipitation patterns can have a huge effect on the growth of these consumables thus affecting their supply and ultimately their price. This has happened a few years ago, affecting availability and cost of maize products. The magnitude of this impact will be medium to high
Adaptation and mitigation activities	Impacted	Our mitigation activities are related to the transitional risks and opportunities identified in 2.3 and 2.4 above, and have resulted in investment in various energy efficient and renewable energy projects, such as the installation of solar PV in five different sites. These opportunities have resulted in significant reduction in operating costs through reduction in energy consumption per unit produced. The magnitude of this impact is medium.
Investment in R&D	Impacted	Our investment in R and D activities are related to the transitional risks and opportunities identified in 2.3 and 2.4 above, and have resulted in investment in various energy efficient and renewable energy technologies. We have installed solar PV at five different locations. These opportunities have resulted in significant reduction in operating costs. The magnitude of this impact is medium.
Operations	Impacted	Energy costs (specifically electricity) make up a significant portion of our operational spend. Therefore the transitional risks from both current and emerging regulation, would result in increased operational costs. The implementation of energy efficiency and renewable energy projects have already resulted in operational savings. We are continuously investigating the potential of future projects that can significantly reduce our operational spend further. The magnitude of this impact is low-medium
Other, please specify	Please select	N/A

C2.6

(C2.6) Describe where and how the identified risks and opportunities have factored into your financial planning process.

	Relevance	Description
Revenues	Not yet impacted	Many of the risks identified above may have a significant impact on our revenues. For example, reputational risk could result in decreased sales, price increases arising from transitional (eg increased cost of embedded electricity per product stocked) and physical risk (eg product shortage due to extreme weather event), could result in decrease demand for products and/or reduced profit margins. We foresee this impact being materialised in the medium term, and the magnitude of this impact will be low-medium.
Operating costs	Impacted	As a result of some of the identified transitional risks, such as increased energy costs and future carbon taxation, we have implemented various technologies such as solar PV, that have resulted in reduced operating costs from reduced third-party, fossil based electricity. The magnitude of this impact is low-medium.
Capital expenditures / capital allocation	Impacted	As a result of some of the identified transitional risks, such as increased energy costs and water shortages, we have invested in capital intensive technologies including the installation of atmospheric water generators at some of our sites, in an attempt to reduce our reliance on potable, municipal supplied water . The magnitude of this impact is low-medium.
Acquisitions and divestments	Not yet impacted	The last acquisition that was made by Massmart was in 2012, and climate related risk were not considered as part of that decision. However, newly identified climate related risks (transitional and physical) are most likely going to influence future acquisition decisions. For example acquiring facilities in locations that are impacted by the chronic affects of climate change such as drought stricken regions. This may only be considered in the long term.
Access to capital	We have not identified any risks or opportunities	None of the climate risks identified in our risk assessment process impact on our access to capital.
Assets	Not yet impacted	Due to some of the acute physical risks identified above, such as flooding, and extreme storm damage, our assets could be negatively impacted, resulting in increased insurance costs, and capital expenditure on damage repair. Such events could occur at any time (ranging from current to long term), however the severity and frequency will increase in the medium term. The magnitude on our assets would be medium to low.
Liabilities	We have not identified any risks or opportunities	Our liabilities are not impacted by climate related events or impacts.
Other	Please select	N/A

C3. Business Strategy

C3.1

(C3.1) Are climate-related issues integrated into your business strategy?

Yes

C3.1a

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

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

C3.1c

(C3.1c) Explain how climate-related issues are integrated into your business objectives and strategy.

i. A company-specific explanation of how business objectives and strategy have been influenced by climate-related issues:

The Group's strategic priorities include:

1. To drive the growth and profitability of the core South African business over the medium-term;
2. To expand further into Food Retail and the Fresh categories through new stores and our existing formats in South Africa;
3. Sub-Saharan African expansion through opening Builders Warehouse, Game and Masscash stores. In the next two years we anticipate opening 11 new stores representing ex-SA space growth of about 26.2%; and
4. To expand, improve and refine our online/e-commerce offerings in DionWired, Makro and Massbuild.

All risk assessment procedures are thus aligned to ensure that the group will be able to effectively meet these strategic priorities. Climate Change risks (and opportunities) that impede (or enhance) our ability to meet these strategic objectives are included in to our company-wide risk assessment procedures.

We continuously evaluate supply chain risks so that we make appropriate sourcing decisions to minimise impact and where appropriate, adopt responses in the event of climate-induced impacts. This process is informed by means of the Massmart Environmental Advocacy Programme (direct engagement with Massmart's supply chain) and through the continuous monitoring of climate-related risks as presented on national and international platforms (i.e. desktop and media alerts, tracking of the political landscape changes, climate change mitigation strategies and expectations of the private sector).

As energy tariffs for grid electricity continue to rise and consumer and stakeholder awareness of climate change grows, a clear strategic advantage would be one that relates to reducing emissions, mitigating costs and being identified as a responsible retailer. Massmart's climate change strategy is primarily influenced by regulatory and reputational risks, and the need to drive down emissions. The majority of the Group's total emissions (70-80%) are implicated in purchased electricity generation. Key resulting emissions-reduction strategies include reducing our footprint through energy efficiency initiatives and increasing its reliance on clean energy generation through the implementation of a companywide renewable energy project.

ii. Explanation of whether your business strategy is linked to an emissions reductions target or energy reduction target

The majority of data collection happens on an annual basis. These data inform the GHG footprint from across the business. The results and any changes are included in reports to both the Executive Committee and the Board. It is the responsibility of Corporate Affairs at company-level to track progress against targets, which are currently aimed at reducing energy consumption on an intensity basis and are primarily where internal climate change mitigation takes place.

iii. What have been the most substantial business decisions made during the reporting year that have been influenced by the climate change driven aspects of the strategy

The most substantial decisions related to water scarcity and mitigation in response to the water crisis in the Western Cape. One of the major decisions taken was to purchase and/or lease water-from-air generators at our stores and processing facilities to secure a reliable source of potable water.

iv. What aspects of climate change have influenced the strategy (e.g. need for adaptation, regulatory changes, or opportunities to develop green business);

Massmart's climate change strategy is integrated into a holistic operational and supply chain management framework. These are influenced by changes to South Africa's national greenhouse gas regulations, reputational risks and opportunities to reduce operational costs and reliance on nationally-supplied electricity. The strategy is also influenced by supply chain risks and the challenges they present to ensuring secure supply of food products, especially staples.

Climate change forms an important part of project considerations and business strategy at Massmart. We are committed to playing a role in mitigating climate change impacts in areas where our actions can make a material difference. This may vary between companies and industries however, we have identified that we can have the greatest impact on greenhouse gas emissions through reducing our Scope 2 emissions (accounts for over 75% of our combined Scope 1, 2 and 3). We are currently embarking on projects which are primarily aimed at improving energy efficiency while reducing cost and emissions resulting from consumption of fossil-fuel generated energy. We also see opportunity to adapt to drafted national regulatory changes which seek to reduce national carbon emissions through carbon taxation and emissions reporting. Energy consumption data are currently collected across all operations and facilities which are part of the Massmart Group of companies. These data are then used to inform decisions to identify where certain carbon emissions-reducing projects should be prioritised. These data are reported quarterly to Massmart Head Office.

v. How the short-term strategy has been influenced by climate change (or if none, this is stated)

Massmart's short- to medium-term strategy is one of prioritising energy efficiency initiatives through implementation of energy saving projects (which are also necessary to achieve our long-term intensity target of 10% reduction overall). These include the use of daylight harvesting in stores and distribution centres, installation of/conversion to LED lighting and business management systems (BMS), on-going rollout of online consumption meters and CO₂ refrigeration. Additionally, we continuously evaluate supply chain risks so that we make appropriate sourcing decisions to minimise impact and where appropriate, adopt responses in the event of climate induced impacts.

vi. How the long-term strategy has been influenced by climate change (or if none, this is stated):

Longer term strategies at store and facility level involve exploration of renewable energy solutions once energy efficiency has been optimised at stores and DCs. Massmart has already implemented a photo-voltaic pilot project (a decision endorsed by the Board in 2015) as part of developing specific long-term goals in this area.

vii. How this is gaining a strategic advantage over your competitors;

Addressing climate risks assists us in reducing costs thus making us more competitive, as well as improving our reputation which assists us with gaining greater market share and improving shareholder confidence.

viii. How the Paris Agreement has influenced the business strategy

The Paris Agreement has not yet influenced the business strategy but has paved the way for the company to set more ambitious science based targets. The process of considering these type of targets is currently underway and will be aligned to a future strategy to manage our emissions performance.

C3.1g

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

Climate related scenario analysis is still a very new strategic process, and only in the last year have there been any published accepted methodologies that can be used by companies. Such scenario analysis is still a very advanced form of strategic initiative and Massmart is currently not ready for such. We use target setting to measure our current mitigation activities, and are only just starting to initiate the process to set science based targets to do so. Such Science based target setting and other strategic initiatives focus on our transitional risks and mitigation strategies. Advanced scenario analysis may be used in the medium to long term to address our physical risk and adaptation activities in the future.

C4. Targets and performance

C4.1

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

Intensity target

C4.1b

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

Target reference number

Int 1

Scope

Scope 2 (location-based)

% emissions in Scope

47

% reduction from baseline year

0

Metric

Metric tons CO2e per square meter*

Base year

2010

Start year

2012

Normalized baseline year emissions covered by target (metric tons CO2e)

0.343

Target year

2020

Is this a science-based target?

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

% achieved (emissions)

100

Target status

Underway

Please explain

This target refers specifically to scope 2 emissions of DionWired and Game stores only within the Massdiscounters division. These stores accounted for 47% of all scope 2 emissions during the base year. These targets exclude all non-store facilities and Africa stores. In 2012, Massmart set electricity reduction targets against a business as usual projection. The projections assumed that both Game would be transitioning towards a more energy intensive space of food retail, utilising more refrigeration and HVAC. The BAU projections for Game would therefore allow a significant increase in energy consumption per square meter (26%).

DionWired's location in energy intensive shopping centre environments was also expected to result in increases in intensity here but not nearly to the same degree (allow for a 12 % increase). The targets for Massdiscounters stores was to reduce this BAU scenario by 8% by 2020. When translating this into an intensity target, emissions intensity would need to be capped at the same emissions intensity as that of the base year. Note all targets were calculated based on a South African grid emission factor of 1 Tonne CO2 per MWh (at time of base year), which has not changed significantly throughout the reporting years. Our projected growth rate (in square meters) was estimated to be 73% by 2020. Based on the estimations in our BAU scenario (modelled on a transition towards higher intensity food based retail stores) our energy consumption was estimated to grow by 116%. However the 8% reduction from BAU translates to an actual MWH growth of 98%. We are already tracking much better than the targets, showing a much lower absolute emissions growth than projected. The intensity target was based on a BAU projection, estimated in 2013. Since this time Massmart has embarked on a range of energy efficient programmes (outlined below and in previous CDP responses), which has resulted in energy intensity improvements throughout all its stores. By the end of this reporting year the Massdiscounters stores achieved an energy intensity of 0.242 MWh per m2, this is an achievement of 165% of the set target (0.343).

% change anticipated in absolute Scope 1+2 emissions

98

% change anticipated in absolute Scope 3 emissions

0

Target reference number

Int 2

Scope

Scope 2 (location-based)

% emissions in Scope

27

% reduction from baseline year

0

Metric

Metric tons CO2e per square meter*

Base year

2010

Start year

2012

Normalized baseline year emissions covered by target (metric tons CO2e)

0.373

Target year

2020

Is this a science-based target?

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

% achieved (emissions)

100

Target status

Underway

Please explain

This target refers specifically to scope 2 emissions of Makro stores only within the Masswarehouse division. These stores accounted for 27% of all scope 2 emissions during the 2010 base year. These targets exclude all non-store facilities and Africa

stores. In 2012, Massmart set electricity reduction targets against a business as usual projection. The projections used assumed that Makro stores would be transitioning towards a more energy intensive space of food retail, utilising more refrigeration and HVAC. The BAU projections for would therefore allow a 26% increase in energy consumption per square meter. The targets for Makro stores was to reduce this BAU scenario by 13% by 2020. When translating this into an intensity target, emissions intensity would need to be capped at the same emissions intensity as that of the base year. Note all targets were calculated based on a South African grid emission factor of 1 Tonne CO₂ per MWh (at time of base year), which has not changed significantly throughout the reporting years. Our projected growth rate (in square meters) was estimated to be 81% by 2020. Based on the estimations in our BAU scenario our energy consumption was estimated to grow by 110%. However the 13% reduction from BAU translates to an actual MWh growth of 83%. We are already tracking much better than the targets, showing a much lower absolute emissions growth than projected. The intensity target was based on a BAU projection, estimated in 2013. Since this time Massmart has embarked on a range of energy efficient programmes (outlined below and in previous CDP responses), which has resulted in energy intensity improvements throughout all its stores. By the end of this reporting year the Makro stores achieved an energy intensity of 0.2502 MWh per m², this is an achievement of 149% of the set target.

% change anticipated in absolute Scope 1+2 emissions

83

% change anticipated in absolute Scope 3 emissions

0

Target reference number

Int 3

Scope

Scope 2 (location-based)

% emissions in Scope

11

% reduction from baseline year

10

Metric

Metric tons CO₂e per square meter*

Base year

2010

Start year

2013

Normalized baseline year emissions covered by target (metric tons CO₂e)

0.11

Target year

2020

Is this a science-based target?

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

% achieved (emissions)

100

Target status

Underway

Please explain

This target refers specifically to scope 2 emissions of Masscash Cash and Carry and Jumbo stores only within the Masscash division. These stores accounted for 11% of all scope 2 emissions during the 2010 base year. These targets exclude all non-store facilities and Africa stores. In 2013, Massmart set electricity reduction targets against a business as usual projection. The emission reduction target of 10% was set against the BAU projection, The projections used for these Masscash stores assumed no fundamental change in the business model, and therefore when translating this into an intensity target, this is represented as an intensity target of 10%. Note all targets were calculated based on a South African grid emission factor of 1 Tonne CO₂ per MWh (at time of base year), which has not changed significantly throughout the reporting years. Our projected growth rate (in square meters) was estimated to be 31% by 2020. Based on the estimations in our BAU scenario our energy consumption was estimated to grow by 30%. However the 10% reduction from BAU translates to an actual MWh growth of 17%. We are already tracking much better than the targets, showing a much lower absolute emissions growth than projected. The intensity target was based on a BAU projection, estimated in 2013. Since this time Massmart has embarked on a range of energy efficient programmes (outlined below

and in previous CDP responses), which has resulted in energy intensity improvements throughout all its stores. By the end of this reporting year the Masscash stores achieved an energy intensity of 0.103 MWh per m², this is an achievement of 106% of the set target.

% change anticipated in absolute Scope 1+2 emissions

17

% change anticipated in absolute Scope 3 emissions

0

Target reference number

Int 4

Scope

Scope 2 (location-based)

% emissions in Scope

14

% reduction from baseline year

0

Metric

Metric tons CO₂e per square meter*

Base year

2010

Start year

2013

Normalized baseline year emissions covered by target (metric tons CO₂e)

0.09

Target year

2020

Is this a science-based target?

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

% achieved (emissions)

100

Target status

Underway

Please explain

This target refers specifically to scope 2 emissions of Builders Warehouse, Builders Express and Builders Trade Depot of the Massbuild division only. These stores accounted for 14% of all scope 2 emissions during the 2010 base year. These targets exclude all non-store facilities and Africa stores. In 2013, Massmart set electricity reduction targets against a business as usual projection. The projections assumed that Builders Express stores specifically would be transitioning towards a smaller, more energy intensive store sizes, utilising more HVAC. The BAU projections would therefore allow a significant increase in energy consumption per square meter (an increase of 33%), Builders warehouse projections also allowed for an energy intensity increase of 12%. The targets for Massbuild stores was to reduce this BAU scenario by 11% by 2020. When translating this into an intensity target, emissions intensity would need to be capped at the same emissions intensity as that of the base year. Note all targets were calculated based on a South African grid emission factor of 1 Tonne CO₂ per MWh (at time of base year), which has not changed significantly throughout the reporting years. Our projected growth rate (in square meters) was estimated to be 120% by 2020. Based on the estimations in our BAU scenario our energy consumption was estimated to grow by 191%. However the 11% reduction from BAU translates to an actual MWh growth of 158%. We are already tracking much better than the targets, showing a much lower absolute emissions growth than projected. The intensity target was based on a BAU projection, estimated in 2013. Since this time Massmart has embarked on a range of energy efficient programmes (outlined below and in previous CDP responses), which has resulted in energy intensity improvements throughout all its stores. By the end of this reporting year the Massdiscounters stores achieved an energy intensity of 0.073 MWh per m², this is an achievement of 124% of the set target.

% change anticipated in absolute Scope 1+2 emissions

158

% change anticipated in absolute Scope 3 emissions

0

C4.2

(C4.2) Provide details of other key climate-related targets not already reported in question C4.1/a/b.

Target

Other, please specify (NO OTHER TARGET)

KPI – Metric numerator

N/A - All data included in C4.2 is not accurate but is completed for completeness sake.

KPI – Metric denominator (intensity targets only)

N/A -All data included in C4.2 is not accurate but is completed for completeness sake.

Base year

1900

Start year

1900

Target year

2000

KPI in baseline year

0

KPI in target year

0

% achieved in reporting year

0

Target Status

Replaced

Please explain

Another flaw in the CDP process this year. This question is not scored, but has to be completed, even if respondents have no other targets. All data included in C4.2 is not accurate but is completed for completeness sake.

Part of emissions target

Another flaw in the CDP process this year. This question is not scored, but has to be completed, even if respondents have no other targets. All data included in C4.2 is not accurate but is completed for completeness sake.

Is this target part of an overarching initiative?

Other, please specify (NONE)

C4.3

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

Yes

C4.3a

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

	Number of projects	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	0	0
To be implemented*	0	0
Implementation commenced*	1	57
Implemented*	9	27516
Not to be implemented	0	0

C4.3b

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

Activity type

Low-carbon energy installation

Description of activity

Solar PV

Estimated annual CO2e savings (metric tonnes CO2e)

2860

Scope

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)

640000

Investment required (unit currency – as specified in CC0.4)

0

Payback period

<1 year

Estimated lifetime of the initiative

16-20 years

Comment

This project is part of an ongoing programme that started in 2016, and will go on indefinitely. Massmart has 4 active solar PV plants at stores (with combined estimated output of 2.9 GWh/p.a. under optimum operating conditions). During the reporting period, we installed more PV's. The cumulative savings during the period from all installed PV plants during the period. Another 3 plants are planned for 2018 which will add approximately 2.4 GWh/p.a. to current renewable energy generation (not included in the estimated figures alongside). Savings are based on local area tariffs per kWh while CO₂ savings are based on avoided Massmart scope 2 emissions implicated in electricity consumption from the national grid (EMF 0.98, Eskom 2017)

Activity type

Energy efficiency: Building services

Description of activity

Building controls

Estimated annual CO2e savings (metric tonnes CO2e)

13332

Scope

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)

21768000

Investment required (unit currency – as specified in CC0.4)

5775000

Payback period

1-3 years

Estimated lifetime of the initiative

16-20 years

Comment

This project is part of an ongoing programme that started a few years ago, and will continue on indefinitely. A further eight building management system installations took place over 2017 at Makro, Game and Builders Warehouse (bringing total to 33 stores Groupwide). Efficiencies improvement post BMS installation is estimated at 35%. Emissions and monetary savings are calculated based on store energy consumption, average national energy tariffs and emissions from generated electricity by the national energy supplier. The cumulative savings during the reporting period from all installed BMS's is indicated.

Activity type

Energy efficiency: Building services

Description of activity

Lighting

Estimated annual CO2e savings (metric tonnes CO2e)

935

Scope

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)

1500000

Investment required (unit currency – as specified in CC0.4)

2660000

Payback period

1-3 years

Estimated lifetime of the initiative

6-10 years

Comment

this project is part of an ongoing lighting retrofitting programme that started a few years ago, and will continue on indefinitely. Increase of 8 stores in 2017 (incl. other divisions). High bay lighting installations. Saving of 187W per light fitting (213W high bay LED vs. 400W halogen). Total of 35 stores with high bay LED. Investment is estimated once-off total from initiative inception for 35 stores. Tariff used to calculate annual savings is the average store cost per kWh based on cost-per-unit data provided by a third-party energy tracking company. The cumulative savings during the reporting period from all installed retrofitted lights is indicated

Activity type

Energy efficiency: Building services

Description of activity

Lighting

Estimated annual CO2e savings (metric tonnes CO2e)

5400

Scope

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)

9000000

Investment required (unit currency – as specified in CC0.4)

56000000

Payback period

4 - 10 years

Estimated lifetime of the initiative

16-20 years

Comment

Daylight Harvesting Panel Installations and Retrofits. Saving of 100 000 kWh per store, per annum. 56 stores (18 Makro, 38 Massbuild) with daylight harvesting. Up to R 1 million investment per store. Total investment required is the estimated once-off total since project inception for 56 stores. Tariff used to calculate annual savings is the average store cost per kWh based on cost-per-unit data provided by a third-party energy tracking company. All new stores are now using daylight harvesting, and this is no longer part of old store retrofitting.

Activity type

Energy efficiency: Building services

Description of activity

Building controls

Estimated annual CO2e savings (metric tonnes CO2e)

0

Scope

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)

0

Investment required (unit currency – as specified in CC0.4)

6000

Payback period

1-3 years

Estimated lifetime of the initiative

16-20 years

Comment

Implementation of Independently-Monitored Energy Meters. The savings are difficult to determine because of the number of variables at play and lack of data. Estimated savings attributed to accuracy and behaviour changes may be between 10-40% per store.

Activity type

Energy efficiency: Building services

Description of activity

Other, please specify (Rainwater & Condensate Harvesting)

Estimated annual CO2e savings (metric tonnes CO2e)

19

Scope

Scope 3

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)

515000

Investment required (unit currency – as specified in CC0.4)

2750000

Payback period

4 - 10 years

Estimated lifetime of the initiative

16-20 years

Comment

Rainwater & Condensate Harvesting Programme. An estimated R 20 000 capital investment per rainwater installation and R 90 000 investment for condensate harvesting systems per store. Savings are calculated as total avoided municipal water use multiplied by an average national water tariff. Currently implemented at 88 stores. Only new stores were designed with this spec in 2017. however the savings are shown for the cumulative 88 stores during the reporting period.

Activity type

Fugitive emissions reductions

Description of activity

Refrigerant leakage reduction

Estimated annual CO2e savings (metric tonnes CO2e)

5500

Scope

Scope 1

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)

0

Investment required (unit currency – as specified in CC0.4)

100000000

Payback period

4 - 10 years

Estimated lifetime of the initiative

16-20 years

Comment

Natural Gas Refrigeration Installations and Retrofits. Annual savings are difficult to determine as gas replenishment maintenance fluctuates drastically year-on-year. Currently 13/21 Makro stores make use of CO₂ refrigeration. Makro typically makes use of R22 (predominant), R507 and R134a synthetic refrigerants. Annual estimated savings of 5 500 tCO₂e are calculated based on the the average use of R22 at similar stores using synthetic gases and then extrapolated across 13 Makro stores minus CO₂ gas replenishment p.a. Investment required is cumulative across 13 stores. The natural gas replaces these other HFC gases. Started a few years back,. We increased tis by one store only during th reporting period. Savings are cumulative for all stores during the period.

Activity type

Fugitive emissions reductions

Description of activity

Refrigerant leakage reduction

Estimated annual CO2e savings (metric tonnes CO2e)

0

Scope

Scope 1

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)

0

Investment required (unit currency – as specified in CC0.4)

0

Payback period

4 - 10 years

Estimated lifetime of the initiative

16-20 years

Comment

Evaporative Cooling - New Store Implementation. The cost and savings are difficult to determine. This initiative is predominantly being rolled out at inland Builders stores. All new inland stores have evaporative cooling instead of conventional air-conditioning.

Activity type

Energy efficiency: Processes

Description of activity

Cooling technology

Estimated annual CO2e savings (metric tonnes CO2e)

0

Scope

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)

0

Investment required (unit currency – as specified in CC0.4)

0

Payback period

4 - 10 years

Estimated lifetime of the initiative

16-20 years

Comment

Countercurrent Heat Exchange Integration. This saving is difficult to determine. Currently 11 Makro stores make use of this technology to heat domestic water and improve refrigeration efficiencies.

Activity type

Energy efficiency: Processes

Description of activity

Refrigeration

Estimated annual CO2e savings (metric tonnes CO2e)

57

Scope

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)

95000

Investment required (unit currency – as specified in CC0.4)

0

Payback period

1-3 years

Estimated lifetime of the initiative

16-20 years

Comment

Refrigerator Acrylic Door Retrofits. This is a new retrofit roll-out at Makro stores. Two stores completed the retrofit during 2017 which aim to reduce energy consumption of, typically open-air, refrigerators by 45%.

Activity type

Other, please specify (Emission reductions from waste reduction)

Description of activity

<Not Applicable>

Estimated annual CO2e savings (metric tonnes CO2e)

470

Scope

Scope 3

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)

13000000

Investment required (unit currency – as specified in CC0.4)

0

Payback period

<1 year

Estimated lifetime of the initiative

16-20 years

Comment

Zero Waste to Landfill Project. Waste management still results in a net cost to the business however, rebates from recyclables provide a level of subsidy which can be viewed as a cost saving (rebates vary but conservatively are in the region of R600/tonne).

C4.3c

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

Method	Comment
Compliance with regulatory requirements/standards	Regulatory requirements drive investment in emissions reductions initiatives across Massmart operations because we align our business to be in continued compliance with state, provincial and municipal requirements. For example, the waste management act drives investment in more efficient waste management processes and has resulted in greater emphasis being placed on the rationalisation of secondary packaging.
Dedicated budget for energy efficiency	Although the size of the budget for energy efficiency varies between Massmart divisions, budget is allocated on a divisional basis for both new stores retrofits, which enables the installation of more energy efficient technology and a more energy efficiency logistics system.
Dedicated budget for other emissions reduction activities	Massmart sets aside budget for the reduction of other emission sources. Examples include a shift towards the use of natural gases in Massmart's refrigeration units (new Makro stores) and the installation of photo-voltaic power plants.
Financial optimization calculations	Massmart invests in energy efficiency projects to reduce business operating costs. This has led to the roll out of programmable check meters across all Massmart divisions and retrofitting of existing stores with more energy-efficient technology. This is on-going. In addition, Massmart is implementing business management systems (BMS) which remotely monitor and manage energy consumption in Cambridge Food, Game and Builders Warehouse stores. In 2016 we have completed the introduction of another 10 BMS systems, bringing the total to 40 since roll-out began in 2014.
Lower return on investment (ROI) specification	Massmart calculates the profitability and plausibility of energy efficiency and renewable energy projects on a store-by-store basis. In cases where stores can still optimise energy efficiency, projects that improve efficiencies usually have a payback period of maximum 4 years while renewable energy projects are designed to ensure a payback period of between 5 - 7 years. Projects are designed to ensure that energy efficiency investments are targeted at optimising energy reductions and return on investment.

C4.5

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

Yes

C4.5a

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

Level of aggregation

Group of products

Description of product/Group of products

Energy efficient products which allow our customers to avoid emissions associated with nationally-supplied grid electricity. Products include energy efficient lighting products (CFL and LED products), solar products (water heating and lighting), natural gas products (cookers and heaters) and thermal insulation products. In addition, indirect emissions avoidance is facilitated through water-saving products such as low-flow/aerated showerheads and regulators. Other products in the range which assist consumers to avoid emissions include rechargeable batteries, low VOC paints and increased recyclability of products and packaging. Over 1 million LED light bulbs were sold in FY2017 (1 070 000 individual light bulbs) representing a potential saving of 96.4 million kWh for our customers. (98000 tonnes CO2e avoided emissions).

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

Avoided emissions

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

Other, please specify (Internally calculated energy efficiency)

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

0.4

Comment

This is an internally calculated methodology and we do not generate any credit for the initiative. There has also been noticeable growth in the sale of water-saving products. For example, sales of rainwater harvesting tanks at Builders increased by 110% on last year's sales (2016 v. 2017)

Level of aggregation

Product

Description of product/Group of products

Post-consumer e-waste recycling service. All Makro stores now assist consumers in reducing emissions through an e-waste return and recycling programme in association with Samsung and Desco. In 2017, 103 tonnes of e-waste was recycled and over 948 tonnes has been recycled since the programme's inception.

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

Avoided emissions

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

Other, please specify (Recycling programme)

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

0

Comment

This is a service we offer to customers free of charge, and we get no financial incentive for it.

C5. Emissions methodology

C5.1

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

Scope 1

Base year start

January 1 2010

Base year end

December 31 2010

Base year emissions (metric tons CO2e)

15522

Comment

Scope 2 (location-based)

Base year start

January 1 2010

Base year end

December 31 2010

Base year emissions (metric tons CO2e)

297134

Comment

Scope 2 (market-based)

Base year start

January 1 2010

Base year end

December 31 2010

Base year emissions (metric tons CO2e)

278912

Comment

C5.2

(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions.

Defra Voluntary 2017 Reporting Guidelines

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

C6. Emissions data

C6.1

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

Row 1

Gross global Scope 1 emissions (metric tons CO2e)

76215.78

End-year of reporting period

<Not Applicable>

Comment

Massmart also includes additional direct emissions in our GHG inventory. These include fugitive emissions from non-Kyoto gases used in our refrigeration system. To keep in line with GHG Accounting Protocol, we do not include these as scope 1 emissions. However these are significant and accounted for 19018 tonnes CO2e during the reporting period.

C6.2

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

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We are reporting a Scope 2, market-based figure

Comment

Although we are reporting on both location and market based emissions, we did not purchase any electricity from suppliers other than the national grids. We are therefore reporting the same figure for both our location and market based scope 2 emissions.

C6.3

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

Row 1

Scope 2, location-based

490402.94

Scope 2, market-based (if applicable)

490402.94

End-year of reporting period

<Not Applicable>

Comment

Although we are reporting on both location and market based emissions, we did not purchase any electricity from suppliers other than the national grids. We are therefore reporting the same figure for both our location and market based scope 2 emissions.

C6.4

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

Yes

C6.4a

(C6.4a) Provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure.

Source

Stationary fuels and fugitive emissions from refrigeration gases in our Rhino stores

Relevance of Scope 1 emissions from this source

Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source

No emissions excluded

Relevance of market-based Scope 2 emissions from this source (if applicable)

No emissions excluded

Explain why the source is excluded

Stationary fuels and fugitive emissions from refrigeration gases in our Rhino stores are excluded due to data availability. However these sources are immaterial compared to the rest of our scope 1 and 2 emissions.

C6.5

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

Purchased goods and services

Evaluation status

Relevant, calculated

Metric tonnes CO2e

2910.48

Emissions calculation methodology

Although the emission sources under this category include packaging materials, water consumption, and embedded emissions in all products from suppliers; Given the inherent complexity of calculating these emissions for the purposes of these calculation only standard A4 and A3 paper and water consumption was included in this assessment. Emission factors for paper were from Environmental Paper Network figures for South Africa. It was assumed that one ream of A4 paper weighs 2.5 kg. Water consumption data was provided in Rands spent and was thus estimated according to the Rand Water tariffs (average for the year and region-specific). The Corporate Value Chain (Scope 3) Accounting and Reporting Standard was also used to guide calculations. Emissions from paper consumption accounts for 1554.05 tonnes CO2e, and emissions associated with water consumption account for 1356.42 tonnes CO2e. Emission factor from water consumption was based on a study by Friedrich, E. & Trois, C. (2013) - (0.925 kgCO2e/kL)

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

100

Explanation

Purchased goods and services have been classified as Massmart's water consumption and paper usage.

Capital goods

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

0

Emissions calculation methodology

N/A

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

0

Explanation

Massmart does not manufacture any products directly, and capital goods are therefore not considered to be a material scope 3 emission source.

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

Evaluation status

Relevant, not yet calculated

Metric tonnes CO2e

0

Emissions calculation methodology

N/A

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

0

Explanation

Massmart does use a significant amount of energy, specifically electricity (scope 2). Currently, no accepted emission factors are available for transmission and distribution losses in South Africa, and Massmart does not include these in the emissions inventory. These emissions may be included in future inventories.

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Metric tonnes CO2e

4927.62

Emissions calculation methodology

Data was disaggregated into Road Freight, Air Freight and Sea Freight. For all sea freight consignments the average container vessel size was 4000 TEU, and so the emission factor for container vessel between 3000 4999 TEU was used. For all local land (road) freight it was stated that the emission factor for a 3.5 33 tonne articulated truck was used for all estimations. The tonne.km method of emissions estimation was used for all three freight modes of travel. The Corporate Value Chain (Scope 3) Accounting and Reporting Standard was also used to guide calculations. DEFRA 2017 emission factors were used

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

100

Explanation

Upstream transportation and distribution has been classified as Massmart's road, air and sea freight.

Waste generated in operations

Evaluation status

Relevant, calculated

Metric tonnes CO2e

2155.15

Emissions calculation methodology

Waste was reported under Recyclable waste and non-recyclable waste (waste to landfill). All density values were calculated using a tool developed by Victoria State of Australia. The Corporate Value Chain (Scope 3) Accounting and Reporting Standard was also used to guide calculations. used the DEFRA waste stream delineation to apportion the relevant EF to waste streams. This year we used a representative sample from our waste service providers to extrapolate separation values across the Group. This is why our emissions from waste appear to have decreased dramatically.

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

100

Explanation

Waste generated is primarily split into two categories recyclable waste and waste to landfill. Further separation of recyclable waste is made according to the following (when no such data exists): paper/cardboard (80%), mixed plastics (18%), metal (1%) and glass (1%).

Business travel

Evaluation status

Relevant, calculated

Metric tonnes CO2e

7547.51

Emissions calculation methodology

Only flights and car hire were included. Car Hire: Data was provided by Bidvest, Europcar and Avis. Avis, Bidvest and Europcar provided the actual emissions in grams per kilometer travelled per car type. This data was used instead of the various Defra (2017) emission factors, as it is more accurate. A radiative forcing index (RFI) was applied to the emission factors of flights. This means overall effects, such as contrails, are included in the emission factors. Included was both the 8% distance uplift and a 90% increase in the CO2 factor to account for radiative forcing (the influence of the other climate change effects of aviation (water vapour, contrails) were included in the emission factor. It is important to note that radiative forcing was not included in any previous reporting periods, and this many account for a significant increase in flight emissions. All flights with a distance of up to 463 km were classified as Domestic flights. Those between 464 km and 3700 km were classified as International Short Haul, and all flights with a distance greater than 3700 km were classified as International Long Haul, in accordance with DEFRA. Flights were further grouped according to class travel where available. The Corporate Value Chain (Scope 3) Accounting and Reporting Standard was also used to guide calculations. DEFRA 2017 emissions factors.

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

100

Explanation

Business travel has been classified as Massmart staff car hire and flight travel.

Employee commuting

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

0

Emissions calculation methodology

N/A

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

0

Explanation

This has been excluded from our total emissions, due to both the complexity inherent in calculating employee commuting emissions and given that it has not been deemed material in the context of Massmart's carbon footprint. Additionally, all company owned vehicles used for staff commuting have been included in our Scope 1 emissions.

Upstream leased assets

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

0

Emissions calculation methodology

N/A

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

0

Explanation

Upstream leased assets, e.g. Office space has been accounted for and reported under Scope 1 and Scope 2 emissions.

Downstream transportation and distribution

Evaluation status

Not evaluated

Metric tonnes CO2e

0

Emissions calculation methodology

N/A

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

0

Explanation

Emissions from leased vehicles utilized for the delivery of sold products to customers was reported under Scope 1 and Scope 3 "Downstream leased assets" depending on the type of lease agreement stores have with fleet management agencies. Due the complexity of separating this data it has not been calculated to customer specific deliveries.

Processing of sold products

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

0

Emissions calculation methodology

N/A

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

0

Explanation

Massmart is a business to consumer retail outlet, and although there may be emissions associated with the use of some of our products, our products are not deemed for any additional processing, and so this category of emissions is not relevant to us.

Use of sold products

Evaluation status

Relevant, not yet calculated

Metric tonnes CO2e

0

Emissions calculation methodology

N/A

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

0

Explanation

Emissions from the use of electricity consumed by appliances purchased and utilised by our customers has not been included in our calculation, as the accuracy of such a calculation would be questionable.

End of life treatment of sold products

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

0

Emissions calculation methodology

N/A

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

0

Explanation

End of life treatment of sold products has been classified as electronic waste (e-waste). For example: the following items, among others, would be classified as e- waste; television sets, washing machines and fridges. These emissions are included in our waste calculations.

Downstream leased assets

Evaluation status

Relevant, calculated

Metric tonnes CO2e

37076.54

Emissions calculation methodology

Where data was provided in kilometres driven the tonne.km method was used (tonnes of freight multiplied by distance covered in kilometres) for a medium sized rigid truck. Distance-based emission factor from DEFRA, assuming 50% load, were used. Where data was provided in litres of diesel consumed the volume method was used to calculate emissions. Where litres were of diesel was provided the volume method was used to calculate emissions. The Corporate Value Chain (Scope 3) Accounting and Reporting Standard was also used to guide calculations.

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

100

Explanation

Downstream leased assets were classified as delivery vehicles used by but not owned or controlled by Massmart.

Franchises

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

0

Emissions calculation methodology

N/A

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

0

Explanation

Massmart does not have any franchisees

Investments

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

0

Emissions calculation methodology

N/A

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

0

Explanation

Although Massmart has some additional investments, these were not quantified as they were deemed not material in the context of Massmart's overall carbon footprint.

Other (upstream)

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

0

Emissions calculation methodology

N/A

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

0

Explanation

N/A

Other (downstream)

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

0

Emissions calculation methodology

N/A

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

0

Explanation

N/A

C6.7

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

No

C6.10

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

Intensity figure

0.00000605

Metric numerator (Gross global combined Scope 1 and 2 emissions)

566618.73

Metric denominator

unit total revenue

Metric denominator: Unit total

93700000000

Scope 2 figure used

Location-based

% change from previous year

1

Direction of change

Increased

Reason for change

Although revenue increased 3 %, scope 1 and scope 2 emissions increased 3.87%, resulting in an overall increase in emissions intensity of 1%. The main reason for the increase in emissions intensity is due to the fact that Massmart is transitioning many of its traditional retailers into a more energy intensive food retail space. Emissions from refrigerant gases increased by an additional 4% (after taking organic growth into account).

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization have greenhouse gas emissions other than carbon dioxide?

Yes

C7.1a

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

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	30819.26	IPCC Fourth Assessment Report (AR4 - 100 year)
HFCS	45396.52	IPCC Fourth Assessment Report (AR4 - 100 year)

C7.2

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

Country/Region	Scope 1 emissions (metric tons CO2e)
South Africa	71175.49
Other, please specify (Africa)	5040.3

C7.3

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

By business division

By activity

C7.3a

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

Business division	Scope 1 emissions (metric ton CO2e)
Massbuild	4927.48
Masscash	29404.99
Massdiscounters	25675.24
Masswarehouses	14968.78
Massmart Services	1239.29

C7.3c

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

Activity	Scope 1 emissions (metric tons CO2e)
Mobile Fuel usage	24772.72
Stationary fuel usage	6046.54
Product use: Refrigerant gas	45396.52

C7.5

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

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
South Africa	451491.46	451491.46	460705574.13	0
Other, please specify (Africa) <i>Africa - this includes all African operations outside of South Africa</i>	38911.48	38911.48	39705590.94	0

C7.6

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

By business division

By activity

C7.6a

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

Business division	Scope 2, location-based emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
Massbuild	47835.74	47835.74
Masscash	140656.43	140656.43
Massdiscounters	196532.07	196532.07
Masswarehouse	91107.51	91107.51
Massmart Services	14271.19	14271.19

C7.6c

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

Activity	Scope 2, location-based emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
Electricity Consumption	490402.94	490402.94

C7.9

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

Increased

C7.9a

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

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	1311	Decreased	0.25	Massmart generate 1900 MWh compared to 589 MWh in 2016. Should this energy have come from the grid, it would have resulted in 1311 tonnes CO2e, which equates to 0.25% of total scope 1 and 2.
Other emissions reduction activities	20709	Decreased	4.4	Massmart has the strategy imperative of increasing its operating efficiency. As per this objective, Massmart is driving to reduce its electricity consumption, and has embarked on a range of energy efficiency and renewable energy programmes (as outlined in question 4.3) to achieve this objective. the 20709 tonnes CO2e reductions equates to 4.4% of total scope 1 and 2.
Divestment	0	No change	0	There have been no divestments during the reporting period.
Acquisitions	0	No change	0	There have been no acquisitions during the reporting period.
Mergers	0	No change	0	There have been no mergers during the reporting period.
Change in output	38184.24	Increased	7	Organic growth resulted in an overall increase of 7% in total GLA across all Massmart operations. the 7% growth was applied to the 2016 emissions.
Change in methodology	0	No change	0	No change in methodology occurred
Change in boundary	0	No change	0	No change in boundary occurred (other than normal organic growth)
Change in physical operating conditions	0	No change	0	Operating conditions remained the same as in previous year.
Unidentified	0	No change	0	no unidentified changes.
Other	0	No change	0	no other changes.

C7.9b

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

Location-based

C8. Energy

C8.1

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

More than 0% but less than or equal to 5%

C8.2

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

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

C8.2a

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

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	0	117898	117898
Consumption of purchased or acquired electricity	<Not Applicable>	1900	500411.17	502311.17
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Total energy consumption	<Not Applicable>	1900	618309.18	620209.17

C8.2b

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

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

C8.2c

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

Fuels (excluding feedstocks)

Diesel

Note: the majority of Diesel is used in vehicles, and is not accounted for as heat, electricity or steam generation.

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

93962

MWh fuel consumed for the self-generation of electricity

21635

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Fuels (excluding feedstocks)

Petrol

Note: the majority of Petrol is used in vehicles, and is not accounted for as heat, electricity or steam generation.

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

22751

MWh fuel consumed for the self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Fuels (excluding feedstocks)

Liquefied Petroleum Gas (LPG)

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

1185

MWh fuel consumed for the self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

(C8.2d) List the average emission factors of the fuels reported in C8.2c.

Diesel

Emission factor

2.6719

Unit

kg CO2e per liter

Emission factor source

UK Government GHG Conversion Factors for Company Reporting 2017

Comment

Liquefied Petroleum Gas (LPG)

Emission factor

2.94043

Unit

metric tons CO2e per metric ton

Emission factor source

UK Government GHG Conversion Factors for Company Reporting 2017

Comment

Petrol

Emission factor

2.30074

Unit

kg CO2e per liter

Emission factor source

UK Government GHG Conversion Factors for Company Reporting 2017

Comment

C8.2f

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

Basis for applying a low-carbon emission factor

Off-grid energy consumption from an on-site installation or through a direct line to an off-site generator owned by another company

Low-carbon technology type

Solar PV

MWh consumed associated with low-carbon electricity, heat, steam or cooling

2860

Emission factor (in units of metric tons CO2e per MWh)

0

Comment

C9. Additional metrics

C9.1

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

Description

Other, please specify (water consumption)

Metric value

1516690.51

Metric numerator

1 516 690.51 kilolitres

Metric denominator (intensity metric only)

1

% change from previous year

8

Direction of change

Increased

Please explain

Water consumption is a metric that Massmart measures continuously in an effort to reduce water consumption. Consumption increased by 8%, closely correlating to the increase in GLA of 7% (from all new stores that were opened during the reporting period)

C10. Verification

C10.1

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

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	No third-party verification or assurance

C10.1a

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

Scope

Scope 1

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

1

GCX_Massmart_FY2017 Verification Statement_20180615.pdf

Page/ section reference

All sections relevant.

Relevant standard

ISO14064-3

Only a statement has been attached. A much more detailed verification report is available, but Massmart do not make this public.

Proportion of reported emissions verified (%)

100

Scope

Scope 2 location-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

1

GCX_Massmart_FY2017 Verification Statement_20180615.pdf

Page/ section reference

All pages relevant

Relevant standard

ISO14064-3

This is only a short statement attached. A much more detailed verification report is available, but Massmart do not make this public.

Proportion of reported emissions verified (%)

100

C10.2

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

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

C11. Carbon pricing

C11.1

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

No, and we do not anticipate being regulated in the next three years

C11.2

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

No

C11.3

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

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

C12. Engagement

C12.1

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

Yes, our suppliers

C12.1a

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

Type of engagement

Engagement & incentivization (changing supplier behavior)

This includes information gathering and engagement to improve behaviour.

Details of engagement

Run an engagement campaign to educate suppliers about climate change

% of suppliers by number

6

% total procurement spend (direct and indirect)

70

% Scope 3 emissions as reported in C6.5

0

Rationale for the coverage of your engagement

Massmart engages with suppliers as a risk management tool, but also as an advocacy tool to be able to motivate best environmental practice amongst our supplier. Best practice within the supply chain will inherently benefit Massmart in the long term. Massmart conducts an annual Supplier Environmental Survey to track supplier environmental performance. Among other environmental indicators, the survey addresses issues such as; climate change, energy and water consumption at manufacturing facilities, logistics efficiency, environmental attributes of product packaging and the environmental attributes of products supplied to Massmart. . Climate change performance is featured in the feedback report that goes back to responding suppliers and is integrated into the annual Massmart Supplier Environmental Awards decision-making process. A total of almost 400 suppliers were contacted as part of the last assessment that was circulated. Results from the 2017 survey indicated that 10% more suppliers were focused on improving on-pack environmental disclosure and 60% were working to improve logistics efficiencies in their businesses.

Impact of engagement, including measures of success

Massmart tracks all reels year on year. Results from the 2016 survey indicate for example, that of those suppliers who responded to the survey, over 58% indicate that they actively consider energy efficiency in their operations and 33.7% have invested in energy saving practices and technologies. A total of almost 400 suppliers were contacted as part of the last assessment that was circulated. Results from the 2017 survey indicated that 10% more suppliers were focused on improving on-pack environmental disclosure and 60% were working to improve logistics efficiencies in their businesses. Massmart has three priority areas of focus - Seafood, timber, and poultry welfare. For those particular category of suppliers, we ensure that we continually engage with them beyond the questionnaire, so as to ensure that better practices are embedded, so as to ensure better environmental practices are embedded by our suppliers. Non-Conformity of our guidelines could result in suppliers being de-listed as a supplier. High risk suppliers are further engaged via direct contact such as supplier specific workshops and activities. The survey tracks the continuous improvement in our supplier behaviour, and provides us with insight as to which suppliers need further attention. As a tool to track both ourselves and our suppliers progress in the various questionnaire categories (climate change, water usage, packaging etc)

Comment

This is both an information gathering process and supplier engagement programme. Massmart has thousands of suppliers, however we choose to engage (at least initially) with our major suppliers. The 6% of the suppliers we engage with represent 70% of the total spend on procurement, as this represents all the major brands that are stocked on our shelves. We do not account for the embedded emissions from the goods housed on our shelves as a scope 3 emission source due to the complexity of this (therefore we account for 0% of the scope 3 sources that we have calculated).

C12.3

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

- Direct engagement with policy makers
- Trade associations
- Other

C12.3a

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

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Energy efficiency	Support	Massmart supports government's drive to improve energy efficiency and reduce carbon emissions. Massmart also attends discussions with government and key stakeholders related to the introduction of new regulations around energy efficiency labelling on white goods. Makro has engaged with Eskom (a government parastatal) regarding their demand side management programmes and has contributed to Eskom energy awareness campaigns.	Massmart continues to identify opportunities to install more energy efficient technology in its stores and distribution centres and help empower its consumers to make more environmentally responsible choices by promoting energy efficient products where available and ensuring compliance with national energy efficiency regulations.
Clean energy generation	Support	Through the implementation of Massmart's pilot PV project, engagement with local government has centred on permission to install power generation facilities on site, investigating the benefits of renewable energy and how to accommodate renewables in with the current national strategy for energy generation. Discussions have also included topics around low and medium voltage net-metering (not currently available) for grid-tied systems. The legalities of entering into power purchase agreements with entities other than Eskom have also been discussed.	Massmart supports regulation which promotes clean energy. We would like to see regulations that allow for widespread participation from any interested party and that stipulate a subsidies framework to assist with migration to a more diverse energy mix. Regulations should also aim to reduce or remove barriers and provide incentives to promote increased adoption of clean energy.

C12.3b

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

Yes

C12.3c

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

Trade association

National Business Initiative (We are an advisory board member of the NBI)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The NBI's position on climate change is that; climate change and energy are no longer purely of environmental concern but are becoming an important issue in economics and sustainable business. The adverse changes to climate and the depletion of energy resources have a direct impact on the "business as usual" approach. NBI, therefore, aims to mobilise business as a whole towards the formulation of a business climate change response strategy through: increased awareness, voluntary collective action, policy engagement, mitigation activities, adaptation, and promotion of capacity building initiatives through partnerships.

How have you, or are you attempting to, influence the position?

Massmart supports energy efficiency initiatives and engages with the National Business Initiative (NBI) on an on-going basis. As member of the sustainable retail forum and with respect to a request from Greenpeace, Massmart requested the NBI to approach government on its behalf around issues, relating to renewable energy policy. Massmart has previously worked closely with the NBI's Private Sector Energy Efficiency (PSEE) programme where we identified suppliers through our supplier advocacy process who had the potential to benefit from the completion of free and/or partially subsidised energy audits. Further to that Massmart actively engaged with these suppliers and asked them to make contact with the NBI and also provided their contact details to the NBI. Massmart has also stated the importance of moving toward a renewable energy future and has reiterated the importance of engaging with government to form a clear climate change strategy which fundamentally incorporates renewable energy.

Trade association

World Wildlife Fund

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The World Wildlife Fund (WWF) has set a goal for the world to develop an equitable low carbon economy by 2050, which is resilient to the level of climate change that is now unavoidable. To this end, the WWF is advocating for a new international climate

agreement, promoting energy efficiency, renewable energy sources, preventing greenhouse gas emissions from deforestation and developing and promoting climate change adaptation strategies.

How have you, or are you attempting to, influence the position?

Massmart proactively supports energy efficiency initiatives and engages with the WWF on an on-going basis.

Trade association

Consumer Goods Council of SA

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The CGCSA facilitates stakeholders' engagement on risk, safety, compliance and sustainable issues across the consumer goods value chain; as well as championing advocacy projects transparently to all members since 2002. The CGCSA is partnering with the DTI and DoE in their introduction of energy efficiency standards and labelling appliances in South Africa.

How have you, or are you attempting to, influence the position?

Massmart is in support of labelling and products, and supplying energy efficient products. Massmart attended a meeting hosted by the CGCSA on energy efficiency labels and minimum energy performance standards (MEPS) for white goods.

Trade association

Greenpeace

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

Greenpeace's mission is to work with others to foster environmental consciousness whereby Africa's people seek social and economic prosperity in ways that protect the environment for the benefit of humans, the planet, and the future. Greenpeace is driving a campaign with the major retailers in South Africa to switch to renewable energy. As per this campaign, Greenpeace is interacting with all retailers with a push to transform the retailers into 100% renewable energy. As part of this drive, the organisation produces reports and ranks each of the retailers.

How have you, or are you attempting to, influence the position?

Massmart supports Greenpeace's drive for greater widespread adoption of renewables access in South Africa, and is providing as much data as is required. Massmart attended and was a panel participant at the launch of Greenpeace's "Retailers and Renewable Energy Report". Other panel participants included representatives from Woolworths, the CSIR, Eskom and the South African Photovoltaic Industry Association (SAPVIA). The debate touched on issues including renewable energy implementation, legalities, Eskom-specific views and implications of a renewable energy future in South Africa. Massmart met with Greenpeace Africa and the National Business Initiative to discuss challenges and obstacles to renewable energy installations and implementation within the retail sector. These concerns were to be raised at an appropriate time with Government per the NBI's liaison function.

Trade association

South African Plastic Recycling Organisation (SAPRO)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The South African Plastics Recycling Organisation (SAPRO) represents the plastics re-processors in South Africa. Its members procure sorted, baled end-of-life plastics and re-process it into raw material. The recycled material can be used to manufacture new plastics products. Recyclate can be used as a percentage of the final material mix and in some cases can even solely be used to produce new products. The Organisation is funded by its members and contracts the services of a part-time general manager to assist with the day to day running. The purpose of SAPRO is to assist recyclers in: Building a recycling industry that is respected and acknowledged by government, industry and the general public. Addressing the collective challenges in a constructive way. Growing the industry and respective recycling initiatives and businesses in volume, technology and profitability. Presenting a united voice that influences external decision-making positively. Continuing to have a positive impact on the environment to preserve and protect resources.

How have you, or are you attempting to, influence the position?

We regularly engage with SAPRO on packaging efficiencies and rationalising our own private label packaging, including utilising recyclable material and improving recyclability.

C12.3e

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

Massmart maintains an open-door-policy with our stakeholders and whilst we utilise more formalised mechanisms of engagement such as workshops and surveys to track our stakeholders' perceptions and feedback, throughout the year stakeholder engagement also takes the form of informal dialogues and discussions as well as regular correspondence. For example, Massmart conducts an annual supplier environmental survey with our suppliers. The survey tracks our suppliers' environmental performance and perceptions. Among other environmental indicators, the survey addresses issues such as; energy consumption at manufacturing facilities, operational water consumption, logistics efficiency, and environmental attributes of both products and packaging supplied to Massmart. In addition to this, Massmart conducts site visits, media reviews and engages with a number of environmental NGO's to verify responses provided in the supplier environmental survey, and when needed we conduct workshops with suppliers to address key environmental issues within the supply chain. In addition, we participated in the Department of Environmental Affairs (DEA) steering committee on e-waste and we've engaged heavily with Greenpeace Africa with regards to their renewable energy advocacy initiative. As a part of this we also participated in an interactive Greenpeace-hosted panel on renewable energy in the retail space. We have also arranged and facilitated a joint session between other retailers, NBI and Greenpeace to discuss challenges, etc. in the retail sector with regards to renewable energy.

C12.3f

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

Direct and indirect communication activities are overseen by the Group's Sustainability Manager who is also responsible for defining the Group's climate change strategy.

Core to Massmart's corporate accountability approach is the Group's commitment to integrate commerciality and accountability. This commitment has given rise to Massmart's three sustainability themes:

1. Minimise the group environmental footprint,
2. To enable sustainable supply to end consumers and,
3. Champion social equality initiatives.

The focus of Massmart's climate change strategy is related to minimising the Group's environmental footprint by improving operational energy efficiency and minimising water use and waste generation. As such, Massmart's corporate accountability model and objectives compliment the Group's climate change strategy and goals.

C12.4

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

Publication

In mainstream reports

Status

Complete

Attach the document

1

MMIAR_Final.pdf

Content elements

Governance

Strategy

Risks & opportunities

Emissions figures

Emission targets

Other metrics

Publication

In voluntary communications

Online

Status

Complete

Attach the document

Content elements

Governance

Risks & opportunities

Emissions figures

C14. Signoff

C-FI

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

More information about Massmart's achievements in environmental sustainability and related topics can be found in our integrated annual report and via our website (www.massmart.co.za).

C14.1

(C14.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Group Corporate Affairs Executive	Board/Executive board

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	Public or Non-Public Submission	I am submitting to
I am submitting my response	Public	Investors

Please confirm below

I have read and accept the applicable Terms