Module: Introduction

Page: Introduction

CC0.1

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

Aspen is a pharmaceutical company listed on the Johannesburg Stock Exchange Limited (“JSE”). Aspen employs approximately 10 000 employees and its heritage dates back more than 160 years in South Africa. Aspen supplies branded and generic pharmaceutical products, infant milk nutritionals and consumer healthcare products in selected territories, supplying to more than 150 countries worldwide. The Aspen brand has become synonymous with high quality and affordability. Aspen recognises that climate change has potential direct and indirect implications and is therefore relevant to Aspen’s sustainability objectives. The Group has 26 manufacturing facilities across 18 sites on six continents. The manufacturing sites contribute to the bulk of Aspen’s carbon emissions and as such environmental reporting is focussed at a manufacturing site level. For this reporting period the reporting scope has been expanded to include the facilities in the Netherlands, France, Mexico, Kenya, Tanzania and Brazil. Emissions from Aspen API and Kama Industries are currently excluded due to the unavailability of verified data for the reporting period. The main contributors to Aspen’s Scope 1 emissions are natural gas, refrigerants and fuel consumption and the main contributors to Scope 2 emissions are purchased electricity and steam.

CC0.2

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

Enter Periods that will be disclosed
Tue 01 Jul 2014 - Tue 30 Jun 2015

CC0.3

Country list configuration

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

Select country
South Africa
Germany
Australia
Netherlands
France
Mexico
Kenya
Tanzania
Brazil

CC0.4

Currency selection

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

ZAR (R)

CC0.6

Modules
As part of the request for information on behalf of investors, electric utilities, companies with electric utility activities or assets, companies in the automobile or auto component manufacture sub-industries, companies in the oil and gas sub-industries, companies in the information technology and telecommunications sectors and companies in the food, beverage and tobacco industry group should complete supplementary questions in addition to the main questionnaire.
If you are in these sector groupings (according to the Global Industry Classification Standard (GICS)), the corresponding sector modules will not appear below but will automatically appear in the navigation bar when you save this page. If you want to query your classification, please email respond@cdp.net.
If you have not been presented with a sector module that you consider would be appropriate for your company to answer, please select the module below. If you wish to view the questions first, please see https://www.cdp.net/en-US/Programmes/Pages/More-questionnaires.aspx.

Further Information

Module: Management

Page: CC1. Governance

CC1.1

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

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

CC1.1a

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

Aspen's Board is responsible for ensuring that the Group is a responsible corporate citizen by considering both the financial aspects of the business, and the impact that the business operations have on the economic, physical and social environments in which Aspen operates. The Board ratifies the Group's material sustainability Key Performance Indicators (KPIs) annually. The group's sustainability management performance objectives are monitored on the basis of these

approved KPIs. Aspen's Social and Ethics Committee (a subcommittee of the Board) is responsible for monitoring the governance of the Group's social, environmental, human rights and ethics issues in accordance with the relevant regulations, guidelines and recommendations. Under the direction of Dr Morne Geyser, the Group Strategic Operations Executive, the Group SHE department develops and promotes Aspen's environmental management principles and standards and monitors the alignment of business unit environmental management systems to the Group standards.

CC1.2

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

Yes

CC1.2a

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

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator	Comment
All employees	Other non-monetary reward	Behaviour change related indicator	SA Operations employees are rewarded for active participation and innovative ideas during Environmental campaigns which include climate change and global warming. The rewards take the form of prizes and give-aways to participants in the campaigns.
All employees	Recognition (non-monetary)	Energy reduction project Energy reduction target Efficiency project Behaviour change related indicator	The Australian facilities have employee recognition programmes aimed at promoting positive behaviours and resource conservation. These include: a. Quick Win Certificates: Awarded to employees whose ideas or actions improve production, quality or safety, as well as any improvement on the company's environmental impact. For example, an employee was awarded a quick win for adding a recycling point in the packing area, thereby diverting waste to recycling more efficiently. b. Aspen Spirit Awards: Awarded to employees that have made a major impact on the sites production, quality, safety or environmental impact. For example, an employee was presented with an Aspen Spirit Award for seeking recycling contractors that would receive waste that was usually destined to landfill. Ad hoc Awards: An employee won the Aspen Global Recognition Awards for tireless efforts in reducing waste.
Other: Engineering Managers	Monetary reward	Energy reduction project Energy reduction	In the South African Operations, Energy Reduction and Efficiency projects form part of the Engineering Manager's key performance areas (KPA's), The KPA's are directly linked to the performance appraisal process and the awarding of performance based annual increases.

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator	Comment
		target Efficiency project Efficiency target	
All employees	Recognition (non-monetary)	Emissions reduction target Energy reduction project Energy reduction target Behaviour change related indicator	The Aspen Pharma Brazil facility has a program for setting targets for atmospheric emissions. The results are measured monthly against the established targets.
Energy managers	Monetary reward	Energy reduction project Energy reduction target	In Aspen France, incentives are given to energy managers and project participants when an energy reduction project is successfully implemented. The incentive is included as part of the management bonus.

Further Information

No further information

Page: CC2. Strategy

CC2.1

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

Integrated into multi-disciplinary company wide risk management processes

CC2.1a

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

Frequency of monitoring	To whom are results reported?	Geographical areas considered	How far into the future are risks considered?	Comment
Six-monthly or more frequently	Board or individual/sub-set of the Board or committee appointed by the Board	The Group's manufacturing facilities across Africa, Europe, South America and Australia.	1 to 3 years	Group-wide consideration of risks, with a formal measurement of the environmental key performance indicators for manufacturing facilities.

CC2.1b

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

Risk management is an embedded attribute of Aspen's corporate culture and is inherent in all its business decisions, activities and transactions. An integrated approach to risk management is implemented giving due considerations to economic, environmental and social indicators which impact the Company and its stakeholders. Strategic, operational, financial and compliance risk assessments are conducted annually at a business unit (asset) level and at a company level and formally reported to the Executive Risk Forum. Company- wide risks are identified by the Group Risk & Sustainability Manager and reported to the Executive Risk Forum, who report on key Group level risks to the Audit & Risk Committee and the Board quarterly. The following aspects are considered with specific reference to climate change:(i)The effectiveness of environmental management systems.(ii)Responsible management of energy and carbon footprint.(iii)Environmental risks. Top risks, coupled with the status of risk mitigation plans, are reported to the Audit & Risk Committee quarterly. The Social&Ethics Committee monitors environmental legal compliance. Management's self-assessment of the risk mitigation plan effectiveness is substantiated using the combined assurance model of internal and externally obtained assurances. Environmental legal compliance audits are conducted in accordance with an assurance plan. The material sustainability key performance indicators including environmental indicators which are reported in the Group's Sustainability Report are verified by external auditors annually. Through the Group's risk management processes and sustainability reporting, the Audit&Risk Committee and Social&Ethics Committee monitor compliance and initiatives towards responsible environmental management on behalf of the Board. In this way, sustainability objectives are integrated into the risk management process and monitored by the Board collectively.

CC2.1c

How do you prioritize the risks and opportunities identified?

Risks and opportunities are prioritised by the business unit management teams with reference to the impact of such risks to business sustainability, the value and opportunity cost of the applied environmental resources to the business and the Group's strategic objectives. This is done in consultation with Group executives. Based on the inherent risk levels and current levels of risk mitigation (residual risk), risks are ranked and prioritised.
SHE Risk Assessment Procedure: A qualitative risk assessment is conducted using a systematic approach for the identification and assessment of all safety, health and environmental risks, including climate change. All activities, processes, plant machinery and energy sources are taken into consideration under normal, abnormal and emergency conditions. Parameters, such as severity, occurrence and exposure are used to calculate the inherent and residual risk and then prioritised according to the determined risk levels.
Proposed solutions and resources required for mitigating significant risks and impacts are presented to Executive Management for approval. The status of the risk mitigation plans are reported on a regular basis during the site SHE performance review meetings. The Social & Ethics Committee monitors SHE legal compliance, compliance to Group SHE Standards and the status of Group SHE objectives on a quarterly basis. Example: The proposed implementation of carbon taxes in South Africa as well as the reliance on the primary electricity supplier, ESKOM, was identified as potential risks through the risk review and legal compliance process. This created awareness around the future cost of electricity as well as sustained supply of electricity at feasible prices, resulting in an increased focus on conservation initiatives which led to evaluation of alternatives sources of supply as well as internal projects to improve efficiencies. Feasible projects were approved by management teams and have been implemented as result.

CC2.1d

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

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

CC2.2

Is climate change integrated into your business strategy?

Yes

CC2.2a

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

i) Internal Process: Aspen's strategic objective, "To practise good corporate citizenship", supports the Group's objectives around climate change and responsible environmental management. To this end, Aspen's sustainability management initiatives promote the themes of "Preserving our environment" and "Managing efficient utilisation of scarce resources". These initiatives are monitored by the following material key performance indicators which are reported to the Board as per the agreed reporting timelines:

- Volume of carbon emissions (bi-annually);
- Volume of waste recycled (quarterly);
- Electricity consumed (quarterly); and
- Volume of water used (quarterly).

These indicators flag areas of risks and opportunities within the environmental management systems and programmes. Aspen's business strategy is defined at a Board level and the Board is made aware of potential climate change risks and opportunities via existing reporting channels e.g. Audit & Risk Committee, Social & Ethics Committee and the Executive Risk Forum.

Aspen's Group Environmental Management Principles formally describes the Group's commitment to the "Containment and reduction of our carbon footprint in our operations and in the broader supply chain in a technically and economically feasible manner through structured systems of environmental monitoring, reporting and management". This intent is integrated into strategies for the Group's manufacturing facilities, with formal conservation projects currently in progress at the facilities in South Africa, Australia, Mexico, Brazil, France and Germany. Resource availability, cost and changes to environmental legislation in each territory are factors applied in the approval and prioritisation of conservation projects. In addition, investment in energy efficient technology is given due consideration during the construction of new facilities and when replacing equipment and machinery. Plans are in place to extend similar projects to other sites in the Group when appropriate.

ii) How the business strategy has been influenced: Resource availability, cost and changes to environmental legislation in each territory has played a role in the business strategy with the facilities demonstrating an increased commitment to resource conservation initiatives and the reduction of the quantity of waste disposed in landfills, with the ultimate goal of reducing Scope 2 and 3 emissions. For example tax incentives offered in Germany have led to the German site's implementation of an ISO 50001 energy management system and plans to install a Combined Heat and Power Unit. The South African Operations have adopted a zero waste to landfill strategy to support the Aspen Group Environmental Management Principles.

iii) Aspects influencing the strategy - Improving Aspen's carbon footprint as a responsible corporate citizen and potential regulatory changes (e.g. Potential Carbon tax implementation in South Africa and the introduction of energy reduction targets in Germany and Australia) are the major aspects that have influenced our strategy. Sustainable access to scarce resources e.g. water, the rising cost and security of electricity supply in South Africa and business disruptions due to bad weather, have also been key drivers behind Aspen's strategy of resource optimisation and conservation.

iv) Short term strategy (1-5 years) - Although Aspen has not yet set formal targets linked to climate change, Aspen has implemented resource conservation projects. An important component of our short term strategy involves the energy efficient operation of utilities, which drive production processes and requirements for Good Manufacturing Practice, e.g. adjustment of the HVAC chiller controls, turn down of HVAC systems, and management of HVAC load demand by the addition of a pre cooling and dehumidification step prior to the main HVAC units.

v) Long term strategy (5 to 10 years): Aspen's long term strategy is to remain sustainable and to continue to deliver stakeholder value, be a good corporate citizen and ensure supply of quality, affordable medicines. Resource Conservation, in light of resource scarcity and price increases driven by climate change, and continuous improvement, are central to ensuring business sustainability.

vi) Strategic advantage - Aspen believes that resources such as energy and water will be further constrained in the future. Implementing proactive and voluntary management systems and programmes to increase resource efficiency and decrease consumption, will therefore be an advantage. These proactive systems will facilitate the management of future regulatory requirements and reduction of operational costs, resulting in a competitive edge whilst fulfilling the Group's strategic objective of sustainably supplying affordable products to customers.

vi) Substantial business decisions that have been influenced by climate change include the following:
• The adoption of an internationally recognised environmental management system (ISO 14001) to formally manage continuous improvement projects linked to resource conservation and reduced environmental pollution at most of the manufacturing facilities, with certification awarded to the South African, Mexican and German sites and the facilities in Brazil, Netherlands, Australia and France aiming towards certification by 2017.
• The German site implemented an ISO 50001 certified energy management system for Aspen Bad Oldesloe (ABO). The system will enable ABO to implement a systematic approach for achieving continual improvement with respect to energy efficiency, energy security, energy use and consumption. Consequently, the system will facilitate the continuous reduction in energy use, resulting in lower energy costs and greenhouse gas emissions.
• The expansion of the carbon footprint boundary for CDP reporting by including additional manufacturing sites within the Aspen global structure.
• The expansion of energy, water and waste reduction projects to all manufacturing sites within the Aspen global structure.
• Investment in energy efficient manufacturing technologies.

CC2.2b

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

CC2.2c

Does your company use an internal price of carbon?

No, and we currently don't anticipate doing so in the next 2 years

CC2.2d

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

CC2.3

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

Direct engagement with policy makers
Trade associations

CC2.3a

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

Focus of legislation	Corporate Position	Details of engagement	Proposed legislative solution
Mandatory carbon reporting	Support	Aspen is committed to reporting to the Carbon Disclosure Project on an annual basis through the National Business Initiative.	Industry context to be applied in interpretation of information in CDP submissions, through direct engagement with the reporting company.
Energy efficiency	Support	At COP17, Aspen Pharmacare made a commitment to participate in the Energy Efficiency Leadership Network (EELN), where an Aspen representative provides input on matters impacting climate change, particularly groups focusing on the healthcare and pharmaceutical industries.	Energy efficiency projects need to contribute to the business sustainability and must demonstrate return on investment. A national plan, which incentivises business to reduce their carbon footprint, will support the implementation of energy efficiency projects. In addition, national carbon reduction plans need to weight legislated obligations across industries appropriately with due regard of economic conditions impacting general industry sustainability in the relevant countries.
Carbon tax	Undecided	Aspen continues to consult with its external tax advisors and with relevant industry forums on this matter.	Consider the objective of carbon taxes in relation to other commercial factors which impact the sustainability of business in the relevant countries. Aspen does however support incentives that encourage a reduction in carbon emissions.
Clean energy generation	Support	The Clean Energy Regulator is the Government body responsible for administering legislation to reduce carbon emissions and increase the use of clean energy. Aspen Australia is a member of the “Australian Environment Business Network” (AEBN) AEBN’s position is to: 1.Make companies aware of climate change 2.Provide forums for government bodies to present current and future environmental policies and seek corporate feedback, often before launching these policies.	Aspen Australia participates as required to support and follow the Clean Energy Regulator guidelines.
Cap and trade	Support	The EU emissions trading system (EU ETS) is a cornerstone of the European Union's policy to combat climate change and its key tool for reducing industrial greenhouse gas emissions cost-	Aspen Oss participates in EU-ETS as required when the installed capacity exceeds > 20 MW

Focus of legislation	Corporate Position	Details of engagement	Proposed legislative solution
		effectively	
Energy efficiency	Support	Aspen Oss is a signatory to MEE (Methodology Energy Efficiency), a long-term energy efficiency agreement for ETS companies, an agreement between the Dutch government and heavy industry.	Although participation in covenant MEE is voluntary, Aspen Oss has made an obligation to target an annual energy reduction of 2%.

CC2.3b

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

Yes

CC2.3c

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

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you, or are you attempting to, influence the position?
Business Unity South Africa (BUSA)	Consistent	Business Unity in South Africa (BUSA) serves as the interface between businesses in SA and government on high level macroeconomic issues to ensure that businesses are able to play meaningful role in contributing to national objectives in a feasible manner for all stakeholders. BUSA supports the need to move to a lower carbon intensive economy, which is in the long term interest of South Africa. BUSA is in the process of engaging with the South African National Committee on Climate Change and the South African National Treasury on the following topics: • Implementation of plans in response to climate change proposals. • The impact of the carbon tax proposal BUSA believes there are a number of challenges around the implementation and administration of these proposals, which need to be taken into account in the final design if serious unintended consequences are to be avoided.	Aspen is an active member of BUSA and participates in industry initiatives to address climate change objectives in South Africa

CC2.3d

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

CC2.3e

Please provide details of the other engagement activities that you undertake

CC2.3f

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

Aspen's business activities and stakeholder engagement processes are aligned to the Group's strategic objectives. This alignment is monitored by Group Executives and the Aspen Board. The Group SHE department , under the direction of Dr Morne Geyser, the Group Strategic Operations Executive, develops and promotes Aspen's environmental management principles and standards and monitors the alignment of business unit environmental management systems to the Group standards and ensures consistency across the operations.
Aspen's climate change strategy promotes containment and reduction of the Group's carbon footprint within Aspen's operations, in a technically and economically feasible manner through systems of environmental reporting, monitoring and management. This intent is fulfilled directly across the manufacturing facilities through identification and evaluation of energy efficient technologies and implementation of energy conservation initiatives. Energy savings initiatives are monitored and reported on a six-monthly basis through the sustainability KPI Board reporting process. Site management teams monitor progress more frequently where practical. The sites in based in Port Elizabeth, East London and Johannesburg in South Africa and Mexico comply with ISO 14001. The site in Germany complies with ISO 14001 and ISO 50001, and sites in France, Netherlands, Australia and Brazil are working towards ISO 14001 certification by 2017. This demonstrates Aspen's commitment to responsible environmental management practices in accordance with international standards. A combined assurance audit plan is in place to monitor on-going alignment of environmental policies, procedures and systems to the relevant ISO standards. Identified risks are prioritised and addressed. Progress is monitored by Group SHE, site management teams; Group Executives and the Social & Ethics Committee. In addition, all direct and indirect activities are communicated as per the ISO 14001 Environmental Management Systems Communication procedure for ISO certified facilities, ensuring consistency with the overall group environmental management principles and sustainability reporting structures. A culture of continuous improvement exists across the Aspen Group.

CC2.3g

Please explain why you do not engage with policy makers

Further Information

None.

Page: CC3. Targets and Initiatives

CC3.1

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

No

CC3.1a

Please provide details of your absolute target

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

CC3.1b

Please provide details of your intensity target

ID	Scope	% of emissions in scope	% reduction from base year	Metric	Base year	Normalized base year emissions covered by target	Target year	Is this a science-based target?	Comment

CC3.1c

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

ID	Direction of change anticipated in absolute Scope 1+2 emissions at target completion?	% change anticipated in absolute Scope 1+2 emissions	Direction of change anticipated in absolute Scope 3 emissions at target completion?	% change anticipated in absolute Scope 3 emissions	Comment

CC3.1d

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

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

CC3.1e

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

ID	% complete (time)	% complete (emissions or renewable energy)	Comment

CC3.1f

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

(i) Focus is being given to implementing effective systems to measure energy usage and savings and to identify feasible conservation projects which will yield meaningful reductions within the Aspen Group. Once this is in place, consideration will be given to establishing SMART (Specific, Measurable, Attainable, Realistic and Time-based) medium term targets for energy conservation projects. This in turn, will impact the reduction of the carbon footprint. Air handling units for the maintenance of environmental controls contribute to a large portion of the sites energy consumption (approximately 70%) as such conservation on other variable consumption systems will not contribute materially to a reduction in Aspen's carbon footprint. However, commitment to efficient utilisation of scarce resources remains. The German site has implemented an ISO 50001 energy management system in order to benefit from incentives offered by the German government. In South Africa, the Department of Environmental Affairs is conducting an exercise to establish appropriate carbon budgets, Aspen is awaiting clarity with respect to this and the carbon tax process, so that meaningful targets can be set. ii) An increase in the reporting of total energy consumption for the Aspen Group is expected over the next five years, due to expansion projects currently in process.

CC3.2

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

No

CC3.2a

Please provide details of your products and/or services that you classify as low carbon products or that enable a third party to avoid GHG emissions

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

CC3.3

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

Yes

CC3.3a

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

Stage of development	Number of projects	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	0	0
To be implemented*	0	0
Implementation commenced*	5	14.19
Implemented*	6	3442.4
Not to be implemented	0	0

CC3.3b

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

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
Energy efficiency: Building services	South Africa East London Facility: HVAC load demand management by the addition of a pre-cooling and dehumidification step prior to the main HVAC units.	252.68	Scope 2 (location-based)	Voluntary	203420	450500	1-3 years	11-15 years	During the 1st 6 months after installation a 308,060 kWh reduction in consumption was recorded. The saving was, however, offset by increased production activity and the year on year reduction was 416,860 kWh.
Energy efficiency: Building services	South Africa: Port Elizabeth facility: 1. Adjustment of the HVAC chiller controls, and turn-down of HVAC systems during the December shutdown. 2. A further reduction in consumption was realised when the hazardous suite HVAC was turned off during the refurbishment of the production area.	1264.2	Scope 2 (location-based)	Voluntary	160700	0	<1 year	Ongoing	Energy conservation checklist was issued to the facilities for use during planned production shutdowns.
Energy efficiency: Building services	South Africa: Port Elizabeth Warehouses: 1. Monitoring and control of the HVAC systems. 2. An energy	202.22	Scope 2 (location-based)	Voluntary	120000	0	<1 year	Ongoing	The project was implemented and is on-going, electricity savings are currently

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Scope	Voluntary/ Mandatory	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative	Comment
	conservation awareness campaign was conducted in the USM Office; this resulted in a decrease in electricity consumption.								being realised.
Energy efficiency: Building services	Australia: 1. The replacement of all incandescent lamps/fixtures with LED alternatives. 2. Upgrade of the sites HVAC system for more efficient control.	1510.27	Scope 2 (location-based)	Voluntary	2558500	5555600	1-3 years	6-10 years	All lamps/fixtures have been replaced across the site. The new HVAC control system is installed and commissioned. Continued savings will be realised as the air conditioning systems are retuned.
Energy efficiency: Building services	Mexico: A 50 m3 chilled water storage tank, containing approximately 100 m of cooling coils, was replaced by an inline heat exchanger allowing for the production of chilled water based on the demand. This resulted in a reduction in electricity consumption.	208	Scope 2 (location-based)	Voluntary	496843	0	<1 year	Ongoing	The project was implemented and is on-going; electricity savings are currently being realised.
Energy efficiency: Processes	Mexico: Management of the electricity consumption by the water treatment plant, through switching off the aeration blower in peak periods.	5.03	Scope 2 (location-based)	Voluntary	33913	0	<1 year	3-5 years	The efficiency of the water treatment plant is dependent on the organic load in the sewer.

CC3.3c

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

Method	Comment
Dedicated budget for energy efficiency	Investment in emission reduction activities is primarily driven by Aspen's commitment to continual improvement as a responsible corporate citizen and potential future regulatory changes, as well as sustainable access to scarce resources e.g. water, and the rising cost and security of electricity supply in South Africa. Energy efficiency is factored into all expansion and replacement projects and project teams are tasked with ensuring that equipment procured and processes installed are energy efficient and consume the least possible amount of resources.

CC3.3d

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

Further Information

No further information

Page: CC4. Communication

CC4.1

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

Publication	Status	Page/Section reference	Attach the document	Comment
In voluntary communications	Complete	48-56	https://www.cdp.net/sites/2016/69/1069/Climate Change 2016/Shared Documents/Attachments/CC4.1/Aspen-Sustainability-Report-2015.pdf	The Aspen Sustainability Report is also available on the Aspen website.
In mainstream reports (including an integrated report) but have not used the CDSB Framework	Complete	44-45	https://www.cdp.net/sites/2016/69/1069/Climate Change 2016/Shared Documents/Attachments/CC4.1/Aspen-Integrated-Report-2015.pdf	The Aspen Integrated Report is also available on the Aspen website.

Further Information

No further information

Module: Risks and Opportunities

Page: CC5. Climate Change Risks

CC5.1

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

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

CC5.1a

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

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Carbon taxes	South Africa is amongst the world's most carbon-intensive economies. Recognising the importance of reducing carbon emissions and foreseeing the benefits that a low carbon economy can bring, the South African government has committed to ambitious greenhouse gas emissions reductions of 34% by 2020 and 42% by 2025. This resulted in the formulation the Carbon Tax legislation. The Draft Carbon Tax Bill was released for comment on the 2 November 2015 and provides for the following: Tax free thresholds: • A basic 60 per cent tax-free threshold during the first phase of the carbon tax, from implementation date up to 2020; • An additional 10 per cent per cent tax-free allowance for process emissions; • Additional tax-free allowance for trade exposed sectors of up to 10 per cent; • A carbon offset tax-free allowance	Increased operational cost	Up to 1 year	Direct	Virtually certain	Low-medium	The Carbon Tax Policy Paper refers to the implementation of a carbon tax rate of R120 per ton of CO2e increasing at 10 per cent per annum during the first phase. When the 60%tax-free allowances and additional relief are taken into account, the effective tax rate will range between R6-R48 per ton of CO2e. Based on the current proposed tariff structure the potential impact is estimated to be under R300 000 for the South African Operations.	Due to the scarcity of resources, combined with the proposed regulatory changes, Aspen has proactively implemented energy conservation and optimisation projects. 1. Installation of, and repairs to existing power factor correction equipment in all PE Units substations 2. The installation of a solar geyser at one of the office blocks. 3. Installation of occupancy sensors in selected office blocks. The sensors ensure that lights and air conditioners	Variable costs depending on projects. For example, over R1 million rand of capital expenditure has been invested in electricity conservation projects from July 2010.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	of 5 to 10 per cent. The combined effect of all of the above tax-free thresholds will be capped at 95 per cent; and an initial marginal carbon tax rate of R120 per ton CO2-e will apply. However taking into account all of the above tax-free thresholds, the effective carbon tax rate will vary between R6 and R48 per ton CO2-e. Should this carbon tax be levied after the tax-free basic threshold of 60% of Scope 1 GHG emissions before allowances and offsets, Aspen Pharmacare would incur additional costs and these have been estimated, however there are still some uncertainties with regard the Draft Regulations i.e. the alignment of the Carbon tax and other regulations such mandatory GHG reporting and electricity environmental levies, cost of administration and longer term certainty on the tax liability are unclear. These							are switched off when the area is not in use. 4. Awareness projects, aimed at making the employees aware of the need to conserve electricity. Aspen will initiate consultation with its external tax advisors on this matter to maintain an understanding of the potential inherent risks to the business.	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	uncertainties make it difficult for the full impact to be calculated.								
General environmental regulations, including planning	The National Climate Change Response white paper of 2011 confirms that climate change is already a measurable reality and presents the South African Government's vision for an effective climate change response and long term plans in creating a low-carbon economy and society. Currently electricity in South Africa is generated through the use of relatively cheap non-renewable resources. Should the country move towards greener technologies, it is anticipated that the cost of electricity will increase.	Increased operational cost	1 to 3 years	Direct	Very likely	High	Electricity currently accounts for approximately 6.1% of operating costs at the South African facilities and any increases would affect this ratio.	Electricity is a critical resource utilised in Aspen's manufacturing processes. Through Aspen's Environmental Management Principles which promote the efficient use and conscious conservation of electricity and other scarce resources. Conservation initiatives include the planning and implementation of continuous improvement projects for Aspen facilities to reduce electricity consumption. The following are examples of	Variable costs depending on projects. For example, over R1 million rand of capital expenditure has been invested in electricity conservation projects from July 2010.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								the projects implemented: 1.Installation of, and repairs to, existing power factor correction equipment in all PE Units substations 2. The installation of a solar geyser at one of the office blocks. 3. Installation of occupancy sensors in selected office blocks. The sensors ensure that lights and air conditioners are switched off when the area is not in use. 4. Awareness projects, aimed at making the employees aware of the need to conserve electricity.	
Carbon taxes	The Australian Federal	Increased	1 to 3	Direct	Very likely	Medium	The project was	With regards to	Annual

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	Government signed the Kyoto Protocol in 2007 binding Australia to an emissions level of not more than 108% of the 1990 emission levels by 2012. The ensuing program called the “Clean Energy Program (CEP)” aimed at reducing GHG emissions in Australia by 5% below 2000 levels and 80% by 2050.With a change in the Federal Government in 2013 the Clean Energy Programme (CEP) has been replaced with a “Direct Action Plan (DAP)”. An election commitment, as part of the DAP, was to repeal the Carbon Tax. DAP is relatively new therefore the impact on Aspen business has yet been established.	operational cost	years				partially funded by a grant of R 2, 2 million (AUD242K) from the Australian Government’s “Clean Technology Investment Programme”.	the DAP, Aspen participated in industry lobbying efforts to analyse the impact of carbon taxes in Australia. Australia abolished the carbon pricing mechanism in July 2014. Aspen participates in the Emissions Reduction Fund which provides incentives for reduction of carbon emissions. The programme has been in place since April 2015 and benefits will be required to be calculated over the next reporting period. Aspen’s Dandenong site in Australia implemented a two-year energy	energy cost savings were R3,9 million (AUD425K)

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								conservation project over the period July 2013 to June 2015, after having established an annual baseline energy consumption of 53 588GJ during the preceding 12-month period. The project consisted of two phases which projected a total annual energy saving of 10 387GJ for the site, and a 19% reduction from the baseline consumption. All 2 900 incandescent and halogen light fittings were replaced with LED lamps and/or fixtures. The HVAC control was upgraded to a	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								Supervisory Control and Data Acquisition (SCADA) system which allowed for more efficient control over HVAC temperatures, on/off timings and control parameters.	
Emission reporting obligations	Increased reporting requirements in terms of SRI, GRI, CDP and submissions to government authorities. For example, in future, the South African Department of Environmental Affairs plans to implement mandatory emission reporting. There are no published mandatory GHG reporting requirements in South Africa currently. However, the Minister of Environmental Affairs, published the Draft National Greenhouse Gas Emission Reporting	Increased operational cost	1 to 3 years	Direct	Very likely	Medium	Not currently established.	The individual business units are responsible for providing the information to the Group Risk and Sustainability Department for collation into the various reports required. Aspen's Sustainability data is verified and assured according to the AA1000AS Assurance Standard by an	Not currently established.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	Regulations in June 2015. The Regulations outline the requirements for mandatory reporting of emissions data for companies. The purpose of the regulations is to introduce a single national greenhouse gas reporting system, which will be used to inform policy formulation and help South Africa to meet its international obligations such as targets set under the United Nations Framework Convention on Climate Change. In addition, the regulations are intended to facilitate the establishment and maintenance of a National Greenhouse Gas Inventory. In order to assess the carbon tax accurately, reporting of GHG emissions will be required together with verification of the reported emissions. The draft regulations require proper record keeping of emissions data, the verification of information collected and supplied, and for on-site verification							external consultant on an annual basis.	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	of emissions by a competent authority once every two years. This will place additional compliance liability to Aspen Pharmacare coupled with related additional costs for reporting and verification while non-compliance could be met with penalties. Emission reporting could lead to more stringent licence to operate criteria, e.g. for inclusion in the JSE Sustainability Index. The German site is required to report on the sites emissions.								
International agreements	Aspen makes use of HVAC and associated refrigerants in order to maintain the required environment for manufacture. As per the requirements of the Montreal Protocol, Aspen will be required to seek alternative “ozone friendly” refrigerants as per the mandatory timelines. The Montreal Protocol on Substances that Deplete the Ozone	Increased operational cost	>6 years	Direct	Very likely	Medium-high	The exact financial impact has not been quantified. Capital expenditure will be required for the replacement and refurbishment of HVAC units. In addition a change to alternative	The Aspen facilities have completed an inventory of all ozone depleting substances and a phase out plan will be developed with respect to the use of Ozone depleting substances. Possible solutions	The total cost has not between been established but the average HVAC unit cost is between R1 million to R2 Million.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	Layer is widely regarded as the world's most successful environment protection agreement. It is the only treaty with universal ratification, with all 197 member countries of the United Nations having accepted legally-binding obligations to phase out the production and consumption of ozone-depleting substances. The Protocol sets out a mandatory timetable for the phase out of ozone-depleting substances hydrochlorofluorocarbons (HCFC), such as R22 for developed and developing countries. R-22 has come under the spot light because of its harmful impact on the ozone layer but also because it is classified as a greenhouse gas (GHG) which contributes to climate change. The deadline for developed countries for complete phase out is 2020 and 90% reduction in usage of R22 by 2015. In Europe, all HCFC top ups were						refrigerants could increase the operational costs of the HVAC units,	include: 1. The replacement of existing units with new unit that use alternatives to R-22 such as R407c, R404a or Ammonia This is the most expensive but simplest option. 2.Conversion of existing units to enable them to utilise alternatives to R22 substitutes. While both options will incur costs, it is anticipated that the price of R-22 will increase once the ban and import prohibition is in place.	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	prohibited from 1 January 2015. In developing countries such as South Africa and Brazil, the deadline for the total ban of R22 is 2030.								

CC5.1b

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

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Change in mean (average) precipitation	Climate change may result in water scarcity in some areas in which Aspen operates. Changes in global precipitation patterns may impact on the crops used in the synthesis of raw materials. For example: The	Reduction/disruption in production capacity	Unknown	Direct	Likely	Medium	The financial implications cannot be quantified as the impact will be determined by the severity of the water shortage or flood. It is anticipated that costs could increase, and depending on the severity of	In response to energy and water scarcity, continuous improvement projects are put in place to recycle water and increase energy efficiency. Water conservation projects undertaken to date include the	Variable costs depending on the project. From 2010 to 2015 the South African Operations has invested approximately R200,000 in water conservation projects.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	supply of raw materials which are manufactured using maize as a key intermediate, e.g. starch maize, was affected by drought in various parts of South Africa. The drought severely affected crops and raised maize prices. South Africa, the largest maize producer in Africa, may harvest 39% less of the grain in the 2015 to 2016 season than a year earlier after the country suffered the lowest rainfall since records began because of the global El Nino weather pattern.						the shortage, there could be lost production.	re-use of water from the reverse osmosis (RO process) and the installation of storage/buffer tanks to allow for the use of recycled water in the ablution blocks. The Procurement Department source from more than one geographical region, where possible. In the event of water scarcity, Aspen might have to consider alternative water sources and technologies.	
Change in mean (average)	Global temperature increases	Reduction/disruption in production capacity	Unknown	Indirect (Supply chain)	About as likely as not	Low	The financial implications cannot be	The Procurement department	The average cost of an HVAC chiller

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
temperature	caused by climate change could impact on agricultural crops utilised in the synthesis of raw materials. In addition, elevated temperatures may result in higher energy usage in order to maintain optimum temperature and humidity levels in the production facilities. Extreme temperatures and droughts in various parts of the country severely affected sugar crops and the by-product of sugar production, molasses. Molasses is used in the synthesis of alcohol and solvents. Sugar, molasses and solvents are key						quantified as the impact will be determined by the severity of the temperature extremes. It is anticipated that costs could increase, and depending on the severity of the shortage, there could be lost production. In the event of extreme high temperatures, there would be increased demand on the sites HVAC systems and this would result in increased operational costs.	manage relationships with key suppliers and sufficient interaction takes place to keep abreast of any risks facing suppliers which could indirectly impact Aspen. In addition, alternative suppliers for key active pharmaceutical ingredients are registered in order to diversify the risk of reliance on a single supplier of material. Commodity trends are monitored to identify and mitigate foreseeable risks impacting sustainability of raw material supply. To mitigate the impact temperature	control is approximately R60,000.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	ingredients used in the production of pharmaceutical products. The supplier was forced to obtain supply from an alternative source and this led to an increase in alcohol and solvent pricing.							extremes and the potential of running the chillers at full loading at all times in case of such extremes, Aspen continues to focus on resource conservation projects aimed at improving HVAC efficiency, including the installation of Automatic Chiller load control units which facilitate management of the load demand in South Africa. The Australian facility upgraded their HVAC control to a Supervisory Control and Data Acquisition (SCADA) system for more efficient control over HVAC temperatures, on/off timings and control parameters.	

CC5.1c

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

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Other drivers	Electricity and water supply interruption. Power and water supply interruptions either planned (i.e. load-shedding) or adhoc, due to ageing power and water supply infrastructure and increased demand.	Reduction/disruption in production capacity	Up to 1 year	Direct	Very likely	Medium	Investigations have been conducted with respect to the installation of back-up/alternative power supply for the Port Elizabeth manufacturing facilities; however the costs have been prohibitive.	Nutritionals was exposed to load-shedding, and reached an agreement with the Ekurhuleni municipality whereby they will be given advanced notice with respect to load-shedding in order to minimise production losses. The Aspen Nutritionals steam supplier is on another grid, however the risk of double load shedding has been mitigated as the steam supplier has agreed to purchase and install a generator. The Port Elizabeth, East London and Johannesburg facilities have standby generators	Minimal for Port Elizabeth, East London and Nutritionals as they did not experience load-shedding. The Cape Town facility incurred annual costs of approximately R 232 300 in 2014/2015. The cost of purchasing and installing an additional generator is estimated to range from R3.5 million (1 MVA) to R6.7 million (1.8 MVA).

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								installed which will ensure that key areas and critical services remain operation during load shedding events for a period of time to minimise the impact of such an event. The Cape Town facility was exposed to load-shedding, and 15 events were experienced from July 2014 to date. The impact of the load shedding at the Cape Town facility was minimal as the site has a generator that is able to maintain the current electrical requirements for the site. Aspen appointed a consultant to conduct a water risk assessment for the South African operations. The objective of the assessment was to evaluate which sites are most	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								exposed and to perform the basis for the water risk strategy for the South African Operations. The intent is to conduct the same assessment at other international operations in 2017.	

CC5.1d

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

CC5.1e

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

CC5.1f

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

Further Information

No further information

Page: CC6. Climate Change Opportunities

CC6.1

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

Opportunities driven by changes in regulation
Opportunities driven by changes in physical climate parameters

CC6.1a

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

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Fuel/energy taxes and regulations	The German government is incentivising businesses to implement	Reduced operational costs	1 to 3 years	Direct	Virtually certain	Medium-high	Aspen Bad Oldesloe, the German site, received tax refunds of	The German site successfully implemented ISO 50001 energy	A total investment of approximately € 65 000 (R945 000) to

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	energy management systems by providing tax refunds.						approximately R2, 852,900 (€193.417) in the 2013 /2014 financial year and approximately R1, 868, 176 (€125.656, 21) in the 2014-2015 financial year.	management system to accurately monitor and report energy conservation projects and the corresponding decrease in emissions. This means that the German facility qualifies for a tax refund.	implement the ISO 50001 system at the German facility and the on-going expenses linked to maintenance and auditing.
Fuel/energy taxes and regulations	Aspen Pharmacare is making considerable advances in improving electricity efficiency at all manufacturing sites within the Group. Regulations could thus offer beneficial opportunities from energy efficiency investments and new technology. Government incentives could provide	Reduced operational costs	1 to 3 years	Direct	Virtually certain	Low	For example, under the Federal Government's CEP (Clean Energy Programme), a "Clean Technology Investment Program (CTIP)" enabled the Dandenong site to successfully secure a Government Grant. An annual electrical energy saving of R1.9 million AUS$215k is expected. The	Aspen Australia implemented the following projects: 1. Replacement of all 2 900 incandescent and halogen light fittings with LED lamps and/or fixtures 2. Upgrade of the HVAC control to a Supervisory Control and Data Acquisition (SCADA) system for more efficient control over HVAC temperatures, on/off timings	The capital expenditure on energy efficient projects In Australia was R5.5 million (AUD 608k) and the site received a grant of R2.2 million (AUD 242K)towards the projects. Other variable costs dependent on the projects.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	motivation to invest more in energy and fuel efficiency and new technology In line with the Australian Federal Government's CEP (Clean Energy Programme). Through a "Clean Technology Investment Program (CTIP)" the Aspen Australia facility was able to apply for a grant for the installation of energy efficient technology aimed at reducing energy consumption. In addition the Brazilian government has approved incentives and lower taxes to companies that generate their own electricity						financial benefit from the Brazilian government's incentive plan still needs to be determined.	and control parameters. The project was partially funded by a grant. Across the Group, Aspen is focussing on effective metering, energy consumption trend analysis and the setting of sound objectives and targets aimed at reducing consumption by targeting high consumers e.g. HVAC systems (Heat, Ventilation Air conditioning) and tracking the reductions. Aspen also conducts on-going awareness training to all employees on energy, water and waste reduction.	

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	internally.								
Renewable energy regulation	Carbon emission reduction through the usage of zero carbon electricity.	Other: Reduced carbon emissions	Up to 1 year	Direct	Virtually certain	High	Not yet established	Utilization of greener zero carbon energy.	None

CC6.1b

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

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Change in precipitation pattern	Aspen has the opportunity to develop supply chains in different geographic areas, due to its international footprint, and more regional and local supply chains can be considered.	Other: Increased negotiation power. Decreased reliance on one geographical region as a source of supply.	Unknown	Direct	More likely than not	Low-medium	Reduced production disruption due to dual sourcing strategy mitigating the risk of a change in precipitation patterns in a specific region, Potential cost reduction through the identification of new suppliers which may offer	Aspen sources raw materials from multiple geographic regions, where possible, to eliminate climate change risks, e.g. monsoon and drought areas.	Not currently established.

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
							reduced costs.		
Induced changes in natural resources	Opportunities to investigate and install alternative sources of energy, as more suppliers offer wider product offerings and costs are reduced.	Other: Decreased reliance on fossil fuel based resources e.g. coal.	Unknown	Direct	More likely than not	Low-medium	Not currently established.	Aspen to continue to evaluate cost effective alternative energy sources. As part of the PE site Sustainability initiatives, the site is investigating the use of alternative power sources, e.g. solar power, for the supply of power to administrative/office areas.	An investment of R 1,800,000 is require to save 175,200 kWh per year (R 140,160 per year)

CC6.1c

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

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management

CC6.1d

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

CC6.1e

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

CC6.1f

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

a. No opportunities related to other climate-related developments have been identified. The high level of uncertainty pertaining to climate change makes it difficult to predict actual opportunities and subsequently manage impacts.
b. Costs associated with climate change opportunities have not been established yet.
c. Geographical areas considered - South Africa, France, Netherlands, Brazil, Mexico, Tanzania, Kenya, Australia and Germany.
d. In the next 1-5 years.

Further Information

No further information.

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

Page: CC7. Emissions Methodology

CC7.1

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

Scope	Base year	Base year emissions (metric tonnes CO2e)
Scope 1	Fri 01 Jul 2011 - Sat 30 Jun 2012	6774
Scope 2 (location-based)	Fri 01 Jul 2011 - Sat 30 Jun 2012	88008
Scope 2 (market-based)		0

CC7.2

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

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

CC7.2a

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

Not Applicable

CC7.3

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

Gas	Reference
CO2	IPCC Second Assessment Report (SAR - 100 year)
HFCs	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	IPCC Fourth Assessment Report (AR4 - 100 year)

CC7.4

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

Fuel/Material/Energy	Emission Factor	Unit	Reference
Diesel/Gas oil	2.6691	kg CO2e per liter	DEFRA, 2014
Motor gasoline	2.2999	kg CO2e per liter	DEFRA, 2014
Other: Heavy Fuel Oil	3242.68	Other: kg CO2 per tonne	DEFRA, 2014
Kerosene	2.5421	kg CO2e per liter	DEFRA, 2014
Natural gas	205	Other: g CO2e per kWh	German Local Municipality
Natural gas	51.2	Other: CO2e per GJ	Australian Government: Department of Climate Change
Steam	0.05	Other: kg CO2e per kWh	DEFRA, 2012
Electricity	1.03	Other: kg CO2e per	ESKOM, South Africa

Fuel/Material/Energy	Emission Factor	Unit	Reference
		kWh	
Electricity	1.18	Other: kg CO2e per kWh	Australian Government: Department of Climate Change
Electricity	0.86	Other: kg CO2e per kWh	Australian Government: Department of Climate Change
Electricity	0.060	Other: kg CO2e per kWh	French Agency for Environment and Energy Management
Electricity	0.678	Other: kg CO2e per kWh	List Of Grid Emission Factor : Institute for Global Environmental Strategies (IGES)
Electricity	0.529	Other: kg CO2e per kWh	List Of Grid Emission Factor : Institute for Global Environmental Strategies (IGES)
Electricity	0.087	Other: kg CO2e per kWh	2015 Statistical Yearbook of electricity of Ministry of Mines and Energy
Electricity	74.6	Other: ton CO2 per TJ	Netherlands Enterprise Agency (RVO)
Electricity	0.499	Other: kg CO2e per kWh	GEI Program Mexico

Further Information

Supporting documentation for emission factor sources is attached.

Attachments

https://www.cdp.net/sites/2016/69/1069/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC7.EmissionsMethodology/IGES List of Grid Emission Factors.xls
https://www.cdp.net/sites/2016/69/1069/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC7.EmissionsMethodology/Australia national greenhouse accounts factors2014_2015.pdf
https://www.cdp.net/sites/2016/69/1069/Climate Change 2016/Shared Documents/Attachments/ClimateChange2016/CC7.EmissionsMethodology/DEFRA 2014 Emission Factors.xls

Page: CC8. Emissions Data - (1 Jul 2014 - 30 Jun 2015)

CC8.1

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

Operational control

CC8.2

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

38036

CC8.3

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

Yes

CC8.3a

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

Scope 2, location-based	Scope 2, market-based (if applicable)	Comment
151183	0	All our Scope emission are location based and we make use of the local emission

Scope 2, location-based	Scope 2, market-based (if applicable)	Comment
		factors, where available.

CC8.4

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

Yes

CC8.4a

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

Source	Relevance of Scope 1 emissions from this source	Relevance of location-based Scope 2 emissions from this source	Relevance of market-based Scope 2 emissions from this source (if applicable)	Explain why the source is excluded
Aspen facility in the United States (Sioux City)	Emissions are relevant and calculated, but not disclosed	Emissions are relevant and calculated, but not disclosed	No emissions from this source	The emissions from the Sioux City facility were not included due to the unavailability of verified data.
Corporate offices in South Africa i.e. Durban and Woodmead, Mexico City and Sydney Australia were excluded from the calculation.	Emissions are not relevant	Emissions are not relevant	No emissions from this source	As per a study that was conducted in 2010, the emissions generated by the South African corporate offices were found to be negligible. In addition, energy consumption in the corporate offices is low in comparison to the consumption in operations.

CC8.5

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

Scope	Uncertainty range	Main sources of uncertainty	Please expand on the uncertainty in your data
Scope 1	More than 2% but less than or equal to 5%	Other: Published emission factors	Uncertainty surrounding the calculation of Global warming Potentials and calculation of published emission factors, which take into account certain assumptions and have varying levels of certainty.
Scope 2 (location-based)	Less than or equal to 2%	Other: Published emission factors	Uncertainty surrounding the calculation of Global warming Potentials and calculation of published emission factors, which take into account certain assumptions and have varying levels of certainty.
Scope 2 (market-based)			Not applicable at this stage.

CC8.6

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

Third party verification or assurance process in place

CC8.6a

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

Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/section reference	Relevant standard	Proportion of reported Scope 1 emissions verified (%)
Annual process	Complete	Limited assurance	https://www.cdp.net/sites/2016/69/1069/Climate Change 2016/Shared Documents/Attachments/CC8.6a/ERM-Assurance-Statement-2015.pdf	Page 1	AA1000AS	100

CC8.6b

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

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

CC8.7

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

Third party verification or assurance process in place

CC8.7a

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

Location-based or market-based figure?	Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of reported Scope 2 emissions verified (%)
Location-based	Annual process	Complete	Limited assurance	https://www.cdp.net/sites/2016/69/1069/Climate Change 2016/Shared Documents/Attachments/CC8.7a/ERM-Assurance-Statement-2015.pdf	Page 1	AA1000AS	100

CC8.8

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

Additional data points verified	Comment
Other: Environmental KPIs	Environmental KPIs such as Electricity Consumption and Volumes of waste produced were also verified.

CC8.9

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

No

CC8.9a

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

Further Information

On Question 8.3, Aspen Pharmacare has some operations located in markets which provide contractual instruments but, at this stage, Aspen Pharmacare has not subscribed to any of the mechanisms.

Page: CC9. Scope 1 Emissions Breakdown - (1 Jul 2014 - 30 Jun 2015)

CC9.1

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

Yes

CC9.1a

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

Country/Region	Scope 1 metric tonnes CO2e
South Africa	4672.18
Germany	2990.51
Australia	2906.94
Brazil	704.41
France	3898.00
Netherlands	14393.34
Mexico	6039.61
Kenya	930.59

Country/Region	Scope 1 metric tonnes CO2e
Tanzania	1500.55

CC9.2

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

By facility
By activity

CC9.2a

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

Business division	Scope 1 emissions (metric tonnes CO2e)

CC9.2b

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

Facility	Scope 1 emissions (metric tonnes CO2e)	Latitude	Longitude
Port Elizabeth (SA)	995.12	-33.9167	25.5667
East London (SA)	1323.77	-32.9810	27.8282
Johannesburg (SA - Nutritionals)	147.02	-25.9874	28.2418
Cape Town (SA - Fine Chemicals)	2206.26	-33.9157	18.5770
Aspen Bad Oldesloe (Germany)	2990.51	53.8009	10.3983
Dandenong (Australia)	2069.30	-37.9810	145.2150
Baulkham Hills (Australia)	136.86	-33.7629	150.9921
Noble Park (Australia)	700.78	-37.9670	145.1760
Brazil	704.41	-20.3222	40.3381
France	3898.00	49.4431	1.0993
Molenaind (Netherlands)	11239.54	51.6225	5.1000
De Geer (Netherlands)	2876.88	51.7650	5.5180
Boxtel (Netherlands)	276.92	51.5908	5.3291
Toluca (Mexico)	111.85	19.2877	-99.6468
Vallejo(Mexico)	5927.76	19.5018	-99.1674
Kenya	930.59	-1.2833	36.8167
Tanzania	1500.55	-6.8235	39.2695

CC9.2c

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

GHG type	Scope 1 emissions (metric tonnes CO2e)

CC9.2d

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

Activity	Scope 1 emissions (metric tonnes CO2e)
Company owned Mobile transport	878.86
Stationery fuel combustion	3494.40
Fugitive emissions	5055.18
Natural Gas	28607.68

Further Information

Coordinates sourced from http://www.findlatitudeandlongitude.com and http://dateandtime.info/citycoordinates Carbon calculator attached.

Page: CC10. Scope 2 Emissions Breakdown - (1 Jul 2014 - 30 Jun 2015)

CC10.1

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

Yes

CC10.1a

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

Country/Region	Scope 2, location-based (metric tonnes CO2e)	Scope 2, market-based (metric tonnes CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
South Africa	95451.66		113943.92	
Germany	0	0		8745.22
Australia	22090.40		19327.03	
Brazil	182.81		2101.22	
France	1050.27		17365.61	
Netherlands	24028.42		37577.96	
Mexico	6078.68		12159.79	
Kenya	634.19		935.38	
Tanzania	1666.17		3149.66	

CC10.2

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

By facility
By activity

CC10.2a

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

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

CC10.2b

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

Facility	Scope 2 emissions, location based (metric tonnes CO2e)	Scope 2 emissions, market-based (metric tonnes CO2e)
Port Elizabeth (South Africa)	60755.96	0
East London (South Africa)	16133.26	0
Johannesburg (Nutritionals)	7865.91	0
Fine Chemicals Corporation (Cape Town)	10696.53	0
Bad Oldesloe (Germany)	0	0
Dangenong (Australia)	16417.35	0
Noble Park (Australia)	3750.13	0
Baulkham Hills (Australia)	1922.92	0
Brazil	182.81	0
France	1050.27	0
Moleneind (Netherlands)	14946.99	0
De Geer (Netherlands)	8505.42	0
Boxtel (Netherlands)	576.01	0
Toluca (Mexico)	355.32	0
Vallejo (Mexico)	5723.36	0
Kenya	634.19	0
Tanzania	1666.17	0

CC10.2c

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

Activity	Scope 2 emissions, location based (metric tonnes CO2e)	Scope 2 emissions, market-based (metric tonnes CO2e)
Electricity	149959.19	0
Steam	1223.41	0

Further Information

We currently do not calculate market-based Scope 2 emissions.

Page: CC11. Energy

CC11.1

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

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

CC11.2

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

Energy type	Energy purchased and consumed (MWh)
Heat	0
Steam	22460.17
Cooling	0

CC11.3

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

145256.09

CC11.3a

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

Fuels	MWh
Diesel/Gas oil	2552.09
Motor gasoline	1989.64
Kerosene	206.47
Natural gas	129380.98
Other: Heavy Fuel Oil	11126.90

CC11.4

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

Basis for applying a low carbon emission factor	MWh consumed associated with low carbon electricity, heat, steam or cooling	Comment
Contract with suppliers or utilities, with a supplier-specific emission rate, not backed by electricity attribute certificates	8745.22	From December 2013 to date the German facility changed over to the use of zero-carbon energy based electricity and for the reporting period the energy consumption was 8745.22MWh.

CC11.5

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

Total electricity consumed (MWh)	Consumed electricity that is purchased (MWh)	Total electricity produced (MWh)	Total renewable electricity produced (MWh)	Consumed renewable electricity that is produced by company (MWh)	Comment
192845.62	192845.62	0	0	0	Approximately 4.5% (8745.22 MWh) of Aspen's total electricity consumption is from 100% renewable energy sources.

Further Information

Germany plant only makes use of green energy made from renewable sources energy such as biomass, photovoltaic systems and wind.

Page: CC12. Emissions Performance

CC12.1

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

Increased

CC12.1a

Please identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined) and for each of them specify how your emissions compare to the previous year

Reason	Emissions value (percentage)	Direction of change	Please explain and include calculation
Emissions reduction activities	0		Not applicable
Divestment	0		Not applicable
Acquisitions	0		Not applicable
Mergers	0		Not applicable
Change in output	0		Not applicable
Change in methodology	0		Not applicable
Change in boundary	50.7	Increase	Aspen manufacturing sites in France, Netherlands, Brazil, Mexico, Kenya, and Tanzania were included in the 2016 CDP response therefore resulting in a 50% increase in our total emissions.
Change in physical operating conditions	0		Not applicable
Unidentified	0		Not applicable
Other	0		Not applicable

CC12.1b

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

Location-based

CC12.2

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

Intensity figure =	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator: Unit total revenue	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
0.0000052377	metric tonnes CO2e	36126632668	Location-based	31	Decrease	Acquisitive revenue growth in Europe CIS and Spanish Latin America were the major contributors to the increase in revenue.

CC12.3

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

Intensity figure =	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator	Metric denominator: Unit total	Scope 2 figure used	% change from previous year	Direction of change from previous year	Reason for change
31.0908642787	metric tonnes CO2e	full time equivalent (FTE) employee	6086	Location-based	16	Decrease	There was an increase in the employee base which is due to the expanded reporting scope which now includes facilities at all manufacturing facilities excluding API in the USA – reporting for prior years was limited to the Australian, South African and Aspen Bad Oldesloe facilities only.

Further Information

No further information

Page: CC13. Emissions Trading

CC13.1

Do you participate in any emissions trading schemes?

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

CC13.1a

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

Scheme name	Period for which data is supplied	Allowances allocated	Allowances purchased	Verified emissions in metric tonnes CO2e	Details of ownership

CC13.1b

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

CC13.2

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

No

CC13.2a

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

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

Further Information

No further information

Page: CC14. Scope 3 Emissions

CC14.1

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

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Purchased goods and services	Relevant, calculated	3352.30	Data is provided by our service providers and the following activities are included: 1)Paper usage: Emission Factor 1.09 kg CO2e per kg, Emission factor source - Mondi Paper, 2009. 2)Glass recycled: Emission factor - 1.09 kg CO2e per kg. Emission Factor source - Consol through the South African Fruit & Wine Industry Carbon Calculator	100.00%	

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
			3)Cardboard recycled: Emission factor 1.31 kg CO2e per kg – Emission factor source: Carbon Trust (2010) through The South African Fruit & Wine Industry Carbon Calculator. 4)Water Consumption: Emission factor 0.925 lt CO2e per litre -Emission factor Source Friedrich, Pillay & Buckley 2007 - The use of LCA in water industry. Methodology used is based on GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard.		
Capital goods	Not relevant, explanation provided	0	None	0.00%	This category in accordance to the guidance by world resources institute has been excluded due to lack of available data and the insignificance in size of emissions relative to the other categories.
Fuel-and-energy-related activities (not included in Scope 1 or 2)	Not relevant, explanation provided	0	None	0.00%	Fuel used in the production of steam is excluded because it is utilised by service providers. The purchased steam Aspen uses is included in Scope 2 calculation.
Upstream transportation and distribution	Not relevant, explanation provided	0	None	0.00%	This category in accordance to the guidance by world resources institute has been excluded due to lack of available data and the insignificance in size of emissions relative to the other categories.
Waste generated in operations	Relevant, calculated	3525.97	Data is provided by our service providers and the following activity is included: 1.Waste generation: Emission factor: 1.20 t CO2 e – Emission factor source: Australian Government Department of Climate Change and Energy, National Greenhouse Account factors, July 2011.	100.00%	

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
			Methodology used is based on GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard.		
Business travel	Relevant, calculated	6150.52	Business Travel data reported is only for South African Operations, and is provided by Aspen's Travel service providers i.e. Car Hire and Air Travel.	100.00%	
Employee commuting	Relevant, not yet calculated	0	None	0.00%	Not calculated due to the lack of available data.
Upstream leased assets	Not relevant, explanation provided	0	None	0.00%	Low volume of leased assets – emissions would be negligible.
Downstream transportation and distribution	Relevant, not yet calculated	0	None	0.00%	We have engaged with some of our service providers - currently there are no systems in place to calculate emissions exclusively for Aspen Pharmacare
Processing of sold products	Not relevant, explanation provided	0	None	0.00%	The complexity and extent of the value chain prohibits accurate calculation.
Use of sold products	Not relevant, explanation provided	0	None	0.00%	The complexity and extent of the value chain prohibits accurate calculation.
End of life treatment of sold products	Not relevant, explanation provided	0	None	0.00%	The complexity and extent of the value chain prohibits accurate calculation.
Downstream leased assets	Not relevant, explanation provided	0	None	0.00%	Not calculated due to the lack of available data.
Franchises	Not relevant, explanation	0	None	0.00%	Aspen has no franchises.

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
	provided				
Investments	Not relevant, explanation provided	0	None	0.00%	Not relevant in our business currently
Other (upstream)	Not evaluated	0	None	0.00%	None
Other (downstream)	Not evaluated	0	None	0.00%	None

CC14.2

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

No third party verification or assurance

CC14.2a

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

Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of reported Scope 3 emissions verified (%)

CC14.3

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

Yes

CC14.3a

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

Sources of Scope 3 emissions	Reason for change	Emissions value (percentage)	Direction of change	Comment
Purchased goods & services	Change in boundary	100.00	Increase	Aspen manufacturing sites in France, Netherlands, Brazil, Mexico, Kenya, and Tanzania were included in the 2016 CDP response therefore resulting in a significant increase in our Scope 3 emissions.
Waste generated in operations	Change in boundary	144.26	Increase	Aspen manufacturing sites in France, Netherlands, Brazil, Mexico, Kenya, and Tanzania were included in the 2016 CDP response therefore resulting in a significant increase in our Scope 3 emissions.
Business travel	Acquisitions	133.13	Increase	Air travel increased by 133% due to the expanded global footprint resulting in increased long haul flights.

CC14.4

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

Yes, our suppliers

CC14.4a

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

Aspen has prioritised engagement with key service suppliers who are able to supply the required level of data and where the frequency or volume of transactions is significant. In some cases, e.g. downstream transport and distribution, the service providers have not been able to isolate emissions generated due to Aspen products specifically. Aspen has been successful in obtaining statistics relating to travel (for the South African facilities) and waste (for all facilities). In both cases the data is supplied by the service provider to Aspen in the form of reports. Travel and car rental service providers supply Aspen South Africa with monthly reports advising on the emissions from Business Travel related to activities for Aspen.

CC14.4b

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

Number of suppliers	% of total spend (direct and indirect)	Comment
10	0%	Proportion of total spent not calculated at this stage.

CC14.4c

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

How you make use of the data	Please give details
Other	Data is collected and reported for reporting purposes.

CC14.4d

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

Further Information

None

Module: Sign Off

Page: CC15. Sign Off

CC15.1

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

Name	Job title	Corresponding job category
Dr Morne Geyser	Executive: Group Strategic Operations	Board/Executive board

Further Information

No further information.