Aspen Pharmacare Holdings - Water 2018

W0. Introduction

W0.1

(W0.1) Give a general description of 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 and into more than 150 countries worldwide. The Aspen brand has become synonymous with high quality and affordable products. Aspen recognises that climate change has potential direct and indirect implications on its operations and is therefore relevant to Aspen's sustainability objectives. As at 30 June 2017, the Group had 25 manufacturing facilities across 17 sites. 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 Kama Industries (Ghana). Aspen divested of the manufacturing facility based in Toluca, Mexico, in May 2017 and consequently information relating to the Toluca site is only included up until March 2017.. The New Zealand New Milk facility is excluded from the reporting boundary as Aspen does not have operational control of this facility. The main contributors to Aspen's Scope 1 emissions are natural gas, refrigerants and fuel consumption while Scope 2 emissions are comprised of purchased electricity and steam.

W0.2

(W0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date
Reporting year	July 1 2016	June 30 2017

W0.3

(W0.3) Select the countries/regions for which you will be supplying data.

Australia

Brazil
France
Germany
Ghana
Kenya
Mexico
Netherlands
South Africa
United Republic of Tanzania
United States of America

W0.4

(W0.4) Select the currency used for all financial information disclosed throughout your response.

ZAR

W0.5

(W0.5) Select the option that best describes the reporting boundary for companies, entities, or groups for which water impacts on your business are being reported.

Companies, entities or groups over which operational control is exercised

W0.6

(W0.6) Within this boundary, are there any geographies, facilities, water aspects, or other exclusions from your disclosure?

Yes

W0.6a

(W0.6a) Please report the exclusions.

Exclusion	Please explain
New Zealand New Milk facility	The New Zealand New Milk facility is excluded from the reporting boundary as Aspen does not have operational control of this facility.

W1. Current state

W1.1

(W1.1) Rate the importance (current and future) of water quality and water quantity to the success of your business.

	Direct use importance rating	Indirect use importance rating	Please explain
Sufficient amounts of good quality freshwater available for use	Vital	Important	Water quality and supply have the potential to impact both Aspen's direct operations and supply chain. Aspen relies on a constant water supply, of adequate quality, to maintain manufacturing processes and compliance to quality standards. Disruptions to water supply present a risk to production, and declining water quality will impact the Group's operating costs as additional processing would be required to ensure product quality. The cost, quality and security of the supply chain are also vulnerable to water supply and quality risks. Aspen sources raw materials from various geographic locations. Intermediates and raw materials sourced from the agricultural sector are specifically vulnerable to changes in climate (changing precipitation regimes and increased frequency and intensity of extreme weather events) and overall water supply and quality.
Sufficient amounts of recycled, brackish and/or produced water available for use	Important	Important	The facilities in South Africa continue to benefit from reuse and recycling initiatives that were implemented in prior years, including the reuse of rejected Reverse Osmosis (RO) water in the ablution facilities and cooling towers. The site in Vallejo Mexico makes use of recycled water to irrigate the gardens, and donates clean recycled water from the water treatment plant to other industries. These initiatives were aimed at reducing Aspen's exposure to increasing water tariffs and supply risk. Additionally, a number of Aspen's direct and indirect operations are situated in water management areas which are reliant on the treatment and recycling of return flows to maintain a positive water balance.

W1.2

(W1.2) Across all your operations, what proportion of the following water aspects are regularly measured and monitored?

	% of sites/facilities/operations	Please explain
Water withdrawals – total volumes	100%	Water withdrawals are monitored at 100% of the facilities using a combination of municipal and internal meters. Water withdrawals are monitored as water supply is extremely important in maintaining operations, and represents a growing operational expense.
Water withdrawals – volumes from water stressed areas	1-25	The facilities in Cape Town and Port Elizabeth, South Africa, are located in water stressed areas.

	% of sites/facilities/operations	Please explain
Water withdrawals – volumes by source	100%	Municipal supply is the main source of water for the majority of the facilities, however the French facility's main source of water is groundwater. All sites monitor water withdrawal by source.
Produced water associated with your metals & mining sector activities - total volumes	<Not Applicable>	<Not Applicable>
Produced water associated with your oil & gas sector activities - total volumes	<Not Applicable>	<Not Applicable>
Water withdrawals quality	100%	The quality of the water withdrawn is monitored as the nature of our products requires that the water used meets Aspen's internal quality standards.
Water discharges – total volumes	100%	100% of the facilities monitor water discharge based on information provided from municipal accounts and calculations, as waste water discharge represents a significant cost to the operations.
Water discharges – volumes by destination	100%	All the facilities discharge wastewater into the municipal sewer system; some sites do treat the water onsite before discharge. Water discharge at 100% of the facilities is monitored from municipal accounts.
Water discharges – volumes by treatment method	100%	Nutritionals in Johannesburg South Africa and Vallejo in Mexico treat wastewater before discharge to the municipal sewer. All water quality and volumes generated by this facility are measured or calculated.
Water discharge quality – by standard effluent parameters	100%	All the facilities discharge wastewater into the municipal sewer system; some sites treat the water onsite before discharge. Water discharge at 100% of the facilities is monitored from municipal accounts.
Water discharge quality – temperature	100%	All the facilities discharge wastewater into the municipal sewer system and have to comply to the municipal temperature standards.
Water consumption – total volume	76-99	Water consumption can be calculated from the total withdrawal and water discharge volumes which Aspen measures and reports on a quarterly basis
Water recycled/reused	1-25	Grey water is used for gardening purposes at the Nutritionals facility in Clayville and the Vallejo facility in Mexico.
The provision of fully-functioning, safely managed WASH services to all workers	Less than 1%	Ablution facilities are provided at 100% of the operations; however, due to the small volume of water utilised, it is not monitored separately.

W1.2b

(W1.2b) What are the total volumes of water withdrawn, discharged, and consumed across all your operations, and how do these volumes compare to the previous reporting year?

	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Total withdrawals	1634.97	Lower	The decrease can be attributed to the closure of two buildings combined with resource conservation initiatives implemented at NDB as well as the shutdown of the back-up purified water installation at Oss.
Total discharges	1195.31	Lower	In line with water withdrawals.
Total consumption	439.66	Higher	Currently, consumption is calculated as withdrawals minus discharges, and is not specifically measured. This is an estimated value based on the assumption that all water not discharged is consumed by the sites. Water consumption has increased by 25% as a result of the change in reporting scope.

W1.2d

(W1.2d) Provide the proportion of your total withdrawals sourced from water stressed areas.

	% withdrawn from stressed areas	Comparison with previous reporting year	Identification tool	Please explain
Row 1	14.75	Higher	WWF Water Risk Filter	Cape Town and Port Elizabeth are drought stricken areas. There were no drought stricken areas during the prior year.

W1.2h

(W1.2h) Provide total water withdrawal data by source.

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Fresh surface water, including rainwater, water from wetlands, rivers, and lakes	Not relevant	<Not Applicable>	<Not Applicable>	Not applicable to Aspen Manufacturing sites.
Brackish surface water/seawater	Not relevant	<Not Applicable>	<Not Applicable>	Not applicable to Aspen Manufacturing sites.
Groundwater – renewable	Not relevant	<Not Applicable>	<Not Applicable>	Not applicable to Aspen Manufacturing sites.

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Groundwater – non-renewable	Relevant	309.92	Lower	The borehole at the Tanzanian facility was s decommissioned due to business considerations and commercial reasons. Aspen Notre Dame Bondeville in France makes use of 100% groundwater as this is the most readily abundant supply of water. The Aspen site in Mexico also makes use of ground water.
Produced water	Not relevant	<Not Applicable>	<Not Applicable>	Not Applicable
Third party sources	Relevant	1325.04	About the same	Not Applicable

W1.2i

(W1.2i) Provide total water discharge data by destination.

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Fresh surface water	Not relevant	<Not Applicable>	<Not Applicable>	Not applicable
Brackish surface water/seawater	Not relevant	<Not Applicable>	<Not Applicable>	Not applicable
Groundwater	Not relevant	<Not Applicable>	<Not Applicable>	Not applicable
Third-party destinations	Relevant	1195.31	Lower	All water is discharged into Municipal sewer.

W1.2j

(W1.2j) What proportion of your total water use do you recycle or reuse?

	% recycled and reused	Comparison with previous reporting year	Please explain
Row 1	2-10	About the same	Grey water is used for gardening at Nutritionals in Clayville, Johannesburg and Vallejo, Mexico. Rejected water from the reverse osmosis process is reused at the Port Elizabeth plant in the ablutions and cooling towers.

W1.4

(W1.4) Do you engage with your value chain on water-related issues?

No, not currently but we intend to within two years

W1.4d

(W1.4d) Why do you not engage with any stages of your value chain on water-related issues and what are your plans?

	Primary reason	Please explain
Row 1	We are planning to do so within the next two years	Aspen is at the initial stages of establishing the best way to collect information from key suppliers.

W2. Business impacts

W2.1

(W2.1) Has your organization experienced any detrimental water-related impacts?

Yes

W2.1a

(W2.1a) Describe the water-related detrimental impacts experienced by your organization, your response, and total financial impact.

Country/Region
South Africa

River basin
Berg-Olifants

Type of impact driver
Physical

Primary impact driver
Increased water scarcity

Primary impact
Reduction or disruption in production capacity

Description of impact
Water scarcity is a global risk and one that Aspen's South African operations have increasingly being exposed to due to the severe drought conditions in the Western and Eastern Cape. Two years ago, an El Niño-triggered drought affected agricultural production and economic growth throughout South Africa. Cape Town was particularly hard hit, and a lack of good subsequent rains around the city has made the water shortage worse. The day when City of Cape Town officials will be forced to cut off the normal water supply to 75% of the city's homes, i.e. more than one million households, in order to conserve water supply has been termed Day Zero. The City of Cape Town recently announced on its website that Day Zero had been "pushed out to 2019". Residents have been living with stringent consumption restrictions, currently 50 litres per person per day. Aspen's Fine Chemical Corporation (FCC) in Cape Town experienced intermittent decreased water pressure which impacted mainly on fire protection systems and to a lesser extent on production.

Primary response
Water-related capital expenditure

Total financial impact
6000000

Description of response
In 2016, FCC recognised that the low rainfall levels, experienced in Cape Town during 2015 and 2016 had significantly increased the risk to operational sustainability and management began to re-prioritise sustainability projects relating to environment and water conservation. Water conservation initiatives included the installation of process and utility water recovery and recycling systems, and reconfiguration and optimisation of the Purified Water System operation to decrease water rejection cycles. In addition the site identified the need to investigate alternative sources of water supply, such as groundwater.

Country/Region
South Africa

River basin
Mzimvubu-Tsitsikamma

Type of impact driver
Physical

Primary impact driver
Rationing of municipal water supply

Primary impact
Increased capital costs

Description of impact
Water scarcity is a global risk and one that we have increasingly been exposed to due to the severe drought conditions in the Western and Eastern Cape. Low Dam levels in the

Eastern Cape resulted in the Nelson Mandela Bay Municipality announcing water restrictions for domestic use. The manufacturing facilities were however not impacted.

Primary response
Water-related capital expenditure

Total financial impact
150000

Description of response
In line with the site's continuous improvement and resource conservation objectives, the site completed the installation of HVAC condensate recovery system and additional Reverse Osmosis Water Buffer Tanks. To further mitigate the risk of low water supply, the site is investigating long-term alternative water sources including purification of borehole water and desalination of seawater. In addition, site management has engaged with external stakeholders including the municipality and neighbouring companies with the aim of identifying mutually beneficial solutions.

W2.2

(W2.2) In the reporting year, was your organization subject to any fines, enforcement orders, and/or other penalties for water-related regulatory violations?
Yes, fines, enforcement orders or other penalties but none that are considered as significant

W2.2a

(W2.2a) Provide the total number and financial value of all water-related fines.

Row 1

Total number of fines
3

Total value of fines
37600

% of total facilities/operations associated
8

Number of fines compared to previous reporting year
Higher

Comment
Ad hoc minor non conformances at Nutritionals Johannesburg and Toluca in Mexico.

W3. Procedures

W3.3

(W3.3) Does your organization undertake a water-related risk assessment?

Yes, water-related risks are assessed

W3.3a

(W3.3a) Select the options that best describe your procedures for identifying and assessing water-related risks.

Direct operations

Coverage

Full

Risk assessment procedure

Water risks are assessed in an environmental risk assessment

Frequency of assessment

Annually

How far into the future are risks considered?

Up to 1 year

Type of tools and methods used

Tools on the market

Tools and methods used

WWF-DEG Water Risk Filter

Comment

The WWF Water Risk tool was used to assess risks at all Aspen manufactiring sites.

Supply chain

Coverage

None

Risk assessment procedure

<Not Applicable>

Frequency of assessment

<Not Applicable>

How far into the future are risks considered?

<Not Applicable>

Type of tools and methods used

<Not Applicable>

Tools and methods used

<Not Applicable>

Comment

Supply chain risks not currently included in the assessment.

Other stages of the value chain

Coverage

None

Risk assessment procedure

<Not Applicable>

Frequency of assessment

<Not Applicable>

How far into the future are risks considered?

<Not Applicable>

Type of tools and methods used

<Not Applicable>

Tools and methods used

<Not Applicable>

Comment

No other stages in the value chain are included in the assessment at this stage.

W3.3b

(W3.3b) Which of the following contextual issues are considered in your organization's water-related risk assessments?

	Relevance & inclusion	Please explain
Water availability at a basin/catchment level	Relevant, always included	Disruptions to water supply present a risk to production and growth and could impact the Group's operating cost. This risk is informed by internal monitoring, company knowledge and engagement with the water service providers
Water quality at a basin/catchment level	Relevant, always included	Declining water quality could impact the Group's operating cost as additional processing steps could be required in order to ensure that the water meets the required quality standards. This risk is informed by internal monitoring, company knowledge and engagement with the water providers.

	Relevance & inclusion	Please explain
Stakeholder conflicts concerning water resources at a basin/catchment level	Relevant, always included	A number of regions in which Aspen's operations are situated are characterised by a water deficit, and consequently, increasing competition between river basin stakeholders. Aspen is kept informed of any conflicts and possible consequences through engagement with the water provider, regional government databases and independent river basin studies.
Implications of water on your key commodities/raw materials	Relevant, always included	Aspen has a diverse supply chain incorporating numerous raw materials, including agricultural products. Water and climate-related issues experienced in the geographic locations supplying the facilities can impact operations by impacting the sustainable supply of certain raw materials. Stakeholder engagement with Aspen's key suppliers will be implemented in the future, as practical, to further inform our exposure to water-related risks. The risk assessment made use of existing datasets not direct engagement with Aspen suppliers.
Water-related regulatory frameworks	Relevant, always included	Water and wastewater tariffs represent a growing cost to operations. Current issues are informed by municipal accounts, regional government databases, engagement with the local water utility providers, and monitoring national government policy in relation to water tariffs.
Status of ecosystems and habitats	Not relevant, explanation provided	Although Aspen appreciates the importance of ecosystem services in maintaining a sustainable water resource, and vice versa, reliance is placed on water utilities, the water services authorities and Governments to ensure that these ecosystems are appropriately managed and risks evaluated. All of Aspen's facilities are situated in highly modified and built-up areas (i.e. industrial parks); none are located in critical habitat areas or are sufficiently close so as to have a significant impact on such habitats. Furthermore, Aspen undertakes direct abstraction of water at facilities located in France, Netherlands, Tanzania and Kenya. As per our environmental management principles, Aspen is committed to resource conservation initiatives, however, Aspen relies on the water utilities and regulators to manage any ecosystem impacts.
Access to fully-functioning, safely managed WASH services for all employees	Relevant, always included	Aspen provides ablution facilities for employees at all of the sites; risks associated with water supply to the ablution facilities are included in the overall operational water supply risk evaluation.
Other contextual issues, please specify	Not considered	Not applicable.

W3.3c

(W3.3c) Which of the following stakeholders are considered in your organization's water-related risk assessments?

	Relevance & inclusion	Please explain
Customers	Relevant, not included	Water related issues that impact Aspen's operations have the potential to negatively affect customers. Aspen will consider including the impact on customers into the risk assessment process.
Employees	Relevant, not included	Ensuring the highest quality in hygiene standards at Aspen's facilities is imperative. Consequently, water issues with the potential to impact employee hygiene will be considered within the risk assessment process.

	Relevance & inclusion	Please explain
Investors	Relevant, not included	Risks to Aspen's production have the potential to impact the organisation's current and future investor portfolio.
Local communities	Relevant, always included	Climate change and water stressors have the potential to negatively impact community health. Consequently, health implications and the possible requirements placed upon Aspen's product line and production levels are considered.
NGOs	Relevant, always included	Certain NGO's, such as the WWF, play an important role in managing and assessing various countries' water resources, and, consequently, their initiatives are considered in Aspen's water risk assessment process.
Other water users at a basin/catchment level	Relevant, always included	Other water users are considered for two reasons: (i) the declining water resource will need to be shared between all water users; the characteristics and projected growth of this sector is therefore important; and (ii) these water users have the potential to negatively impact the quality of the water resource.
Regulators	Relevant, always included	Changes in regulations and tariffs implemented by regulators with the objective of managing water resources will directly impact Aspen's operations, and consequently regulators are an important stakeholder group in the risk assessment process.
River basin management authorities	Relevant, always included	The effectiveness of water basin management to adequately manage the resource will directly impact on water availability and quality.
Statutory special interest groups at a local level	Relevant, not included	Not currently included in the assessment. Statutory special interest groups will be factored into the risk assessment process, where relevant, in future submissions.
Suppliers	Relevant, always included	An uninterrupted supply of raw materials is imperative in maintaining production. Consequently, suppliers are factored into risk assessments.
Water utilities at a local level	Relevant, always included	The current and future performance of water utilities in managing water supply has a direct impact on Aspen's operations.
Other stakeholder, please specify	Not considered	No other stakeholders included.

W3.3d

(W3.3d) Describe your organization's process for identifying, assessing, and responding to water-related risks within your direct operations and other stages of your value chain.

A detailed risk assessment was conducted for all the Aspen manufacturing facilities within the Group. The Water Risk Filter, developed by World Wildlife Fund for Nature (WWF) assesses both company risk and basin risk. The process involved uploading all site information into the Tool, including the facility location coordinates. Each facility then completed the facility specific questionnaire and provided information relating to water quality data, water consumption and the country's legal framework. The Tool utilized online data sets from WWF to map the basin risks. The process assisted in the identification of company and basin risks for each facility.

W4. Risks and opportunities

W4.1

(W4.1) Have you identified any inherent water-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes, only within our direct operations

W4.1a

(W4.1a) How does your organization define substantive financial or strategic impact on your business?

A substantive change is defined as any material loss in the ability to operate and manufacture products, including loss of revenue in any of the regions. Aspen considers material issues to be those that have the potential to substantially impact Aspen's ability to create and sustain value for our stakeholders. Both quantitative and qualitative factors are taken into account in determining materiality.

W4.1b

(W4.1b) What is the total number of facilities exposed to water risks with the potential to have a substantive financial or strategic impact on your business, and what proportion of your company-wide facilities does this represent?

	Total number of facilities exposed to water risk	% company-wide facilities this represents	Comment
Row 1	2	1-25	FCC in Cape Town and the Aspen Port Elizabeth sites are situated in drought stricken areas. Resource conservation initiatives and the identification of potential alternative sources of water supply are in progress.

W4.1c

(W4.1c) By river basin, what is the number and proportion of facilities exposed to water risks that could have a substantive impact on your business, and what is the potential business impact associated with those facilities?

Country/Region
South Africa

River basin
Berg-Olifants

Number of facilities exposed to water risk
1

% company-wide facilities this represents
1-25

Production value for the metals & mining activities associated with these facilities
<Not Applicable>

% company's annual electricity generation that could be affected by these facilities
<Not Applicable>

% company's global oil & gas production volume that could be affected by these facilities
<Not Applicable>

% company's total global revenue that could be affected
1-25

Comment
Water scarcity is a global risk and one that Aspen's South African operations have increasingly being exposed to due to the severe drought conditions in the Western and Eastern Cape. Two years ago, an El Niño-triggered drought affected agricultural production and economic growth throughout South Africa. Cape Town was particularly hard hit, and a lack of good subsequent rains around the city has made the water shortage worse. The day when City of Cape Town officials will be forced to cut off the normal water supply to 75% of the city's homes, i.e. more than one million households, in order to conserve water supply has been termed Day Zero. The City of Cape Town recently announced on its website that Day Zero had been "pushed out to 2019". Residents have been living with stringent consumption restrictions, currently 50 litres per person per day. Aspen's Fine Chemical Corporation (FCC) in Cape Town experienced intermittent decreased water pressure which impacted mainly on fire protection systems and to a lesser extent on production. In 2016, FCC recognised that the low rainfall levels, experienced in Cape Town during 2015 and 2016 had significantly increased the risk to operational sustainability and management began to re-prioritise sustainability projects relating to environment and water conservation. Water conservation initiatives included the installation of process and utility water recovery and recycling systems, and reconfiguration and optimisation of the Purified Water System operation to decrease water rejection cycles. In addition the site identified the need to investigate alternative sources of water supply, such as groundwater.

Country/Region
South Africa

River basin
Mzimvubu-Tsitsikamma

Number of facilities exposed to water risk
1

% company-wide facilities this represents
1-25

Production value for the metals & mining activities associated with these facilities
<Not Applicable>

% company's annual electricity generation that could be affected by these facilities
<Not Applicable>

% company's global oil & gas production volume that could be affected by these facilities
<Not Applicable>

% company's total global revenue that could be affected
1-25

Comment
Water scarcity is a global risk and one that we have increasingly been exposed to due to the severe drought conditions in the Western and Eastern Cape. Low Dam levels in the Eastern Cape resulted in the Nelson Mandela Bay Municipality announcing water restrictions for domestic use. The manufacturing facilities were however not impacted. In line with the site's continuous improvement and resource conservation objectives, the site completed the installation of HVAC condensate recovery system and additional Reverse Osmosis Water Buffer Tanks. To further mitigate the risk of low water supply. The site is investigating long-term alternative water sources including purification of borehole water and desalination of seawater. In addition, site management has engaged with external stakeholders including the municipality and neighbouring companies with the aim of identifying mutually beneficial solutions.

W4.2

(W4.2) Provide details of identified risks in your direct operations with the potential to have a substantive financial or strategic impact on your business, and your response to those risks.

Country/Region
South Africa

River basin
Berg-Olifants

Type of risk
Physical

Primary risk driver
Increased water scarcity

Primary potential impact
Increased operating costs

Company-specific description
Water scarcity is a global risk and one that Aspen's South African operations have increasingly being exposed to due to the severe drought conditions in the Western and Eastern Cape. Two years ago, an El Niño-triggered drought affected agricultural production and economic growth throughout South Africa. Cape Town was particularly hard hit, and a lack of good subsequent rains around the city has made the water shortage worse. The day when City of Cape Town officials will be forced to cut off the normal water supply to 75% of the city's homes, i.e. more than one million households, in order to conserve water supply has been termed Day Zero. The City of Cape Town recently announced on its website that Day Zero had been "pushed out to 2019". Residents have been living with stringent consumption restrictions, currently 50 litres per person per day. Aspen's Fine Chemical Corporation (FCC) in Cape Town experienced intermittent decreased water pressure which impacted mainly on fire protection systems and to a lesser extent on production.

Timeframe
Current up to 1 year

Magnitude of potential impact
Medium-high

Likelihood
Likely

Potential financial impact
6000000

Explanation of financial impact
The financial impact is mainly the through the water conservation projects.

Primary response to risk
Adopt water efficiency, water re-use, recycling and conservation practices (Water conservation projects)

Description of response
Starting in 2016, FCC recognised that the low rainfall levels, experienced in Cape Town during 2015 and 2016 had significantly increased the risk to operational sustainability and management began to re-prioritise sustainability projects relating to environment and water conservation. Water conservation initiatives included the installation of process and utility water recovery and recycling systems, and reconfiguration and optimisation of the Purified Water System operation to decrease water rejection cycles. In addition the site identified the need to investigate alternative sources of water supply, such as groundwater.

Cost of response
6000000

Explanation of cost of response
The financial impact is mainly the through the water conservation projects.

W4.2c

(W4.2c) Why does your organization not consider itself exposed to water risks in its value chain (beyond direct operations) with the potential to have a substantive financial or strategic impact?

	Primary reason	Please explain
Row 1	Not yet evaluated	Water risks in the value chain have not been fully assessed at this stage.

W4.3

(W4.3) Have you identified any water-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes, we have identified opportunities, and some/all are being realized

W4.3a

(W4.3a) Provide details of opportunities currently being realized that could have a substantive financial or strategic impact on your business.

Type of opportunity
Efficiency

Primary water-related opportunity
Improved water efficiency in operations

Company-specific description & strategy to realize opportunity
Continuous improvement projects are put in place to recycle water and improve water efficiency. Water conservation projects undertaken to date include installation of HVAC condensate recovery system and installation of additional Reverse Osmosis Water Buffer Tanks at the Port Elizabeth site in South Africa, Recovery of reject water discharged during water purification through reverse osmosis at the Brazilian site and installation of boreholes at various sites.

Estimated timeframe for realization
Current - up to 1 year

Magnitude of potential financial impact
Medium

Potential financial impact
900000

Explanation of financial impact

The financial impact for water efficiency varies significantly but an estimated amount of R900,000 was spent in the 2017 Financial year.

W5. Facility-level water accounting

W5.1

(W5.1) For each facility referenced in W4.1c, provide coordinates, total water accounting data and comparisons with the previous reporting year.

Facility reference number

Facility 1

Facility name (optional)

Port Elizabeth

Country/Region

South Africa

River basin

Mzimvubu-Tsitsikamma

Latitude

-33.9167

Longitude

25.5667

Primary power generation source for your electricity generation at this facility

<Not Applicable>

Oil & gas sector business division

<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

187.72

Comparison of withdrawals with previous reporting year

Higher

Total water discharges at this facility (megaliters/year)

141.66

Comparison of discharges with previous reporting year

Higher

Total water consumption at this facility (megaliters/year)

46.06

Comparison of consumption with previous reporting year
Higher

Please explain
Two new additional facilities commissioned at the Port Elizabeth site contributed to the increase in water withdrawal, discharge and consumption.

Facility reference number
Facility 2

Facility name (optional)
East London

Country/Region
South Africa

River basin
Mzimvubu-Tsitsikamma

Latitude
-32.981

Longitude
27.8282

Primary power generation source for your electricity generation at this facility
<Not Applicable>

Oil & gas sector business division
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)
26.96

Comparison of withdrawals with previous reporting year
Higher

Total water discharges at this facility (megaliters/year)
25.03

Comparison of discharges with previous reporting year
Higher

Total water consumption at this facility (megaliters/year)
1.93

Comparison of consumption with previous reporting year
Lower

Please explain
Increased production volumes resulted in higher HVAC requirements which increased water withdrawals.

Facility reference number
Facility 3

Facility name (optional)
Johannesburg

Country/Region
South Africa

River basin
Limpopo

Latitude
-25.9874

Longitude
28.8282

Primary power generation source for your electricity generation at this facility
<Not Applicable>

Oil & gas sector business division
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)
83.58

Comparison of withdrawals with previous reporting year
Lower

Total water discharges at this facility (megaliters/year)
47.77

Comparison of discharges with previous reporting year
Lower

Total water consumption at this facility (megaliters/year)
35.81

Comparison of consumption with previous reporting year
Higher

Please explain
The withdrawal and the discharge were lower due to a decrease in production volumes at this facility.

Facility reference number
Facility 4

Facility name (optional)
Cape Town

Country/Region
South Africa

River basin
Berg-Olifants

Latitude
-33.9157

Longitude
18.577

Primary power generation source for your electricity generation at this facility
<Not Applicable>

Oil & gas sector business division
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)
53.39

Comparison of withdrawals with previous reporting year
About the same

Total water discharges at this facility (megaliters/year)
27.36

Comparison of discharges with previous reporting year
Lower

Total water consumption at this facility (megaliters/year)
26.03

Comparison of consumption with previous reporting year
Higher

Please explain
Water is now reused as far as possible. No measuring mechanism is currently in place to determine the amount of water recycled.

Facility reference number
Facility 5

Facility name (optional)
Bad Oldesloe

Country/Region
Germany

River basin
Other, please specify (Schlei/Trave River Basin District)

Latitude
53.8009

Longitude
10.3983

Primary power generation source for your electricity generation at this facility
<Not Applicable>

Oil & gas sector business division
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)
39.43

Comparison of withdrawals with previous reporting year
Lower

Total water discharges at this facility (megaliters/year)
26.31

Comparison of discharges with previous reporting year
About the same

Total water consumption at this facility (megaliters/year)
13.11

Comparison of consumption with previous reporting year
Higher

Please explain
Consumption is influenced by the operation of the CHP.

Facility reference number
Facility 6

Facility name (optional)
Dandenong

Country/Region
Australia

River basin
Other, please specify (South East Coast (Victoria) River Region)

Latitude
-37.981

Longitude
145.215

Primary power generation source for your electricity generation at this facility
<Not Applicable>

Oil & gas sector business division
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)
42.5

Comparison of withdrawals with previous reporting year

Lower

Total water discharges at this facility (megaliters/year)
24.92

Comparison of discharges with previous reporting year
About the same

Total water consumption at this facility (megaliters/year)
17.58

Comparison of consumption with previous reporting year
Lower

Please explain
Previous year was higher due to 2 major leaks which were detected and subsequently fixed.

Facility reference number
Facility 7

Facility name (optional)
Notre Dame Bondeville

Country/Region
France

River basin
Seine

Latitude
49.4431

Longitude
1.0993

Primary power generation source for your electricity generation at this facility
<Not Applicable>

Oil & gas sector business division
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)
128.51

Comparison of withdrawals with previous reporting year
Much lower

Total water discharges at this facility (megaliters/year)
78.92

Comparison of discharges with previous reporting year
Much lower

Total water consumption at this facility (megaliters/year)

49.59

Comparison of consumption with previous reporting year
Lower

Please explain
Closure of two buildings at this site lead to a decrease in water consumption.

Facility reference number
Facility 8

Facility name (optional)
Oss

Country/Region
Netherlands

River basin
Rhine

Latitude
51.6225

Longitude
5.1

Primary power generation source for your electricity generation at this facility
<Not Applicable>

Oil & gas sector business division
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)
679.86

Comparison of withdrawals with previous reporting year
Lower

Total water discharges at this facility (megaliters/year)
1018.38

Comparison of discharges with previous reporting year
Lower

Total water consumption at this facility (megaliters/year)
0

Comparison of consumption with previous reporting year
About the same

Please explain
The temporary shutdown of the back-up purified water installation at Oss resulted in reduced water consumption.

Facility reference number
Facility 9

Facility name (optional)
Vitória

Country/Region
Brazil

River basin
Other, please specify (Sao Mateus)

Latitude
-20.3222

Longitude
-40.3381

Primary power generation source for your electricity generation at this facility
<Not Applicable>

Oil & gas sector business division
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)
3.71

Comparison of withdrawals with previous reporting year
Lower

Total water discharges at this facility (megaliters/year)
0.26

Comparison of discharges with previous reporting year
Lower

Total water consumption at this facility (megaliters/year)
3.45

Comparison of consumption with previous reporting year
Lower

Please explain
Reduction due to decreased manufacturing of liquid products during the period.

Facility reference number
Facility 10

Facility name (optional)
Vallejo

Country/Region
Mexico

River basin

Panuco

Latitude
19.5018

Longitude
-99.1674

Primary power generation source for your electricity generation at this facility
<Not Applicable>

Oil & gas sector business division
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)
151.74

Comparison of withdrawals with previous reporting year
About the same

Total water discharges at this facility (megaliters/year)
47.69

Comparison of discharges with previous reporting year
Lower

Total water consumption at this facility (megaliters/year)
104.05

Comparison of consumption with previous reporting year
Higher

Please explain
Closure of the Toluca site.

Facility reference number
Facility 11

Facility name (optional)
Beta

Country/Region
Kenya

River basin
Galana

Latitude
-1.2833

Longitude
36.8167

Primary power generation source for your electricity generation at this facility
<Not Applicable>

Oil & gas sector business division
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)
23.76

Comparison of withdrawals with previous reporting year
About the same

Total water discharges at this facility (megaliters/year)
0.77

Comparison of discharges with previous reporting year
About the same

Total water consumption at this facility (megaliters/year)
22.99

Comparison of consumption with previous reporting year
About the same

Please explain
The company responded to water rationing measures by The Nairobi Water and Sewerage company by reducing consumption for gardening and vehicle cleaning.

Facility reference number
Facility 12

Facility name (optional)
Shelys

Country/Region
Other, please specify (Tanzania)

River basin
Other, please specify (Msimbazi)

Latitude
-6.8235

Longitude
39.2695

Primary power generation source for your electricity generation at this facility
<Not Applicable>

Oil & gas sector business division
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)
29.47

Comparison of withdrawals with previous reporting year
About the same

Total water discharges at this facility (megaliters/year)
3.42

Comparison of discharges with previous reporting year
About the same

Total water consumption at this facility (megaliters/year)
26.05

Comparison of consumption with previous reporting year
About the same

Please explain
Not applicable.

Facility reference number
Facility 13

Facility name (optional)
Sioux City

Country/Region
United States of America

River basin
Mississippi River

Latitude
43.5499

Longitude
-96.7003

Primary power generation source for your electricity generation at this facility
<Not Applicable>

Oil & gas sector business division
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)
95.07

Comparison of withdrawals with previous reporting year
About the same

Total water discharges at this facility (megaliters/year)
91.33

Comparison of discharges with previous reporting year
About the same

Total water consumption at this facility (megaliters/year)
3.74

Comparison of consumption with previous reporting year

About the same

Please explain
Quantity almost the same as the last report.

Facility reference number
Facility 14

Facility name (optional)
Kama

Country/Region
Ghana

River basin
Other, please specify (Densu River Basin)

Latitude
5.556

Longitude
-0.1969

Primary power generation source for your electricity generation at this facility
<Not Applicable>

Oil & gas sector business division
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)
89.27

Comparison of withdrawals with previous reporting year
This is our first year of measurement

Total water discharges at this facility (megaliters/year)
0

Comparison of discharges with previous reporting year
This is our first year of measurement

Total water consumption at this facility (megaliters/year)
89.27

Comparison of consumption with previous reporting year
This is our first year of measurement

Please explain
First year of reporting.

W5.1a

(W5.1a) For each facility referenced in W5.1, provide withdrawal data by water source.

Facility reference number
Facility 1

Facility name
Port Elizabeth

Fresh surface water, including rainwater, water from wetlands, rivers and lakes
0

Brackish surface water/seawater
0

Groundwater - renewable
0

Groundwater - non-renewable
0

Produced water
0

Third party sources
187.72

Comment
Water sourced from the Municipal supply

Facility reference number
Facility 2

Facility name
East London

Fresh surface water, including rainwater, water from wetlands, rivers and lakes
0

Brackish surface water/seawater
0

Groundwater - renewable
0

Groundwater - non-renewable
0

Produced water
0

Third party sources
26.96

Comment

Water sourced from the Municipal supply

Facility reference number
Facility 3

Facility name
Johannesburg

Fresh surface water, including rainwater, water from wetlands, rivers and lakes
0

Brackish surface water/seawater
0

Groundwater - renewable
0

Groundwater - non-renewable
0

Produced water
0

Third party sources
83.58

Comment
Water sourced from the Municipal supply

Facility reference number
Facility 4

Facility name
Cape Town

Fresh surface water, including rainwater, water from wetlands, rivers and lakes
0

Brackish surface water/seawater
0

Groundwater - renewable
0

Groundwater - non-renewable
0

Produced water
0

Third party sources
53.39

Comment

Water sourced from the Municipal supply

Facility reference number
Facility 5

Facility name
Bad Oldesloe

Fresh surface water, including rainwater, water from wetlands, rivers and lakes
0

Brackish surface water/seawater
0

Groundwater - renewable
0

Groundwater - non-renewable
0

Produced water
0

Third party sources
39.43

Comment
Water sourced from the Municipal supply

Facility reference number
Facility 6

Facility name
Dandenong

Fresh surface water, including rainwater, water from wetlands, rivers and lakes
0

Brackish surface water/seawater
0

Groundwater - renewable
0

Groundwater - non-renewable
0

Produced water
0

Third party sources
42.5

Comment

Water sourced from the Municipal supply

Facility reference number
Facility 7

Facility name
Notre Dame Bondeville

Fresh surface water, including rainwater, water from wetlands, rivers and lakes
0

Brackish surface water/seawater
0

Groundwater - renewable
0

Groundwater - non-renewable
128.51

Produced water
0

Third party sources
0

Comment
Water source is groundwater

Facility reference number
Facility 8

Facility name
Oss

Fresh surface water, including rainwater, water from wetlands, rivers and lakes
0

Brackish surface water/seawater
0

Groundwater - renewable
0

Groundwater - non-renewable
70.55

Produced water
0

Third party sources
609.31

Comment

Water sourced from the Municipal supply and ground water

Facility reference number
Facility 9

Facility name
Vitória

Fresh surface water, including rainwater, water from wetlands, rivers and lakes
0

Brackish surface water/seawater
0

Groundwater - renewable
0

Groundwater - non-renewable
0

Produced water
0

Third party sources
3.71

Comment
Water sourced from the Municipal supply

Facility reference number
Facility 10

Facility name
Vallejo

Fresh surface water, including rainwater, water from wetlands, rivers and lakes
0

Brackish surface water/seawater
0

Groundwater - renewable
0

Groundwater - non-renewable
95.37

Produced water
0

Third party sources
56.37

Comment

Water sourced from the Municipal supply and groundwater

Facility reference number
Facility 11

Facility name
Beta

Fresh surface water, including rainwater, water from wetlands, rivers and lakes
0

Brackish surface water/seawater
0

Groundwater - renewable
0

Groundwater - non-renewable
0

Produced water
0

Third party sources
23.76

Comment
Water sourced from the Municipal supply

Facility reference number
Facility 12

Facility name
Shelys

Fresh surface water, including rainwater, water from wetlands, rivers and lakes
0

Brackish surface water/seawater
0

Groundwater - renewable
0

Groundwater - non-renewable
15.5

Produced water
0

Third party sources
13.97

Comment

Water sourced from the Municipal supply and groundwater

Facility reference number
Facility 13

Facility name
Sioux City

Fresh surface water, including rainwater, water from wetlands, rivers and lakes
0

Brackish surface water/seawater
0

Groundwater - renewable
0

Groundwater - non-renewable
0

Produced water
0

Third party sources
95.07

Comment
Water sourced from the Municipal supply

Facility reference number
Facility 14

Facility name
Kama

Fresh surface water, including rainwater, water from wetlands, rivers and lakes
0

Brackish surface water/seawater
0

Groundwater - renewable
0

Groundwater - non-renewable
0

Produced water
0

Third party sources
89.27

Comment

Water sourced from the Municipal supply

W5.1b

(W5.1b) For each facility referenced in W5.1, provide discharge data by destination.

Facility reference number
Facility 1

Facility name
Port Elizabeth

Fresh surface water
0

Brackish surface water/Seawater
0

Groundwater
0

Third party destinations
63.85

Comment
Water discharged into Municipal systems.

Facility reference number
Facility 2

Facility name
East London

Fresh surface water
0

Brackish surface water/Seawater
0

Groundwater
0

Third party destinations
14.79

Comment
Water discharged into Municipal systems.

Facility reference number
Facility 3

Facility name
Nutritionals

Fresh surface water
0

Brackish surface water/Seawater
0

Groundwater
0

Third party destinations
47.57

Comment
Water discharged into Municipal systems.

Facility reference number
Facility 4

Facility name
Fine Chemicals Corporation

Fresh surface water
0

Brackish surface water/Seawater
0

Groundwater
0

Third party destinations
27.36

Comment
Water discharged into Municipal systems.

Facility reference number
Facility 5

Facility name
Bad Oldesloe

Fresh surface water
0

Brackish surface water/Seawater
0

Groundwater
0

Third party destinations
26.31

Comment
Water discharged into Municipal systems.

Facility reference number
Facility 6

Facility name
Dandenong

Fresh surface water
0

Brackish surface water/Seawater
0

Groundwater
0

Third party destinations
24.92

Comment
Water discharged into Municipal systems.

Facility reference number
Facility 7

Facility name
Notre Dame Bondeville

Fresh surface water
0

Brackish surface water/Seawater
0

Groundwater
0

Third party destinations
78.92

Comment
Water discharged into Municipal systems.

Facility reference number
Facility 8

Facility name
Oss

Fresh surface water
0

Brackish surface water/Seawater
0

Groundwater
0

Third party destinations
1018.38

Comment
Water discharged into Municipal systems.

Facility reference number
Facility 9

Facility name
Vitória

Fresh surface water
0

Brackish surface water/Seawater
0

Groundwater
0

Third party destinations
0.26

Comment
Water discharged into Municipal systems.

Facility reference number
Facility 10

Facility name
Vallejo

Fresh surface water
0

Brackish surface water/Seawater
0

Groundwater
0

Third party destinations
47.69

Comment
Water discharged into Municipal systems and donated for reuse.

Facility reference number
Facility 11

Facility name
Beta

Fresh surface water
0

Brackish surface water/Seawater
0

Groundwater
0

Third party destinations
0.77

Comment
Water discharged into Municipal systems.

Facility reference number
Facility 12

Facility name
Shelys

Fresh surface water
0

Brackish surface water/Seawater
0

Groundwater
0

Third party destinations
3.42

Comment
Water discharged into Municipal systems.

Facility reference number
Facility 13

Facility name
Sioux City

Fresh surface water
0

Brackish surface water/Seawater
0

Groundwater
0

Third party destinations
91.33

Comment
Water discharged into Municipal systems.

Facility reference number
Facility 14

Facility name
Kama

Fresh surface water
0

Brackish surface water/Seawater
0

Groundwater
0

Third party destinations
0

Comment
Data not available at this stage.

W5.1c

(W5.1c) For each facility referenced in W5.1, provide the proportion of your total water use that is recycled or reused, and give the comparison with the previous reporting year.

Facility reference number
Facility 1

Facility name
Port Elizabeth

% recycled or reused
2-10%

Comparison with previous reporting year
About the same

Please explain
Quantity is almost the same as previous report.

Facility reference number
Facility 2

Facility name
East London

% recycled or reused
None

Comparison with previous reporting year
About the same

Please explain
No measurable water recycled at this facility.

Facility reference number
Facility 3

Facility name
Johannesburg

% recycled or reused
11-25%

Comparison with previous reporting year
About the same

Please explain
Water recycling projects in place at this facility

Facility reference number
Facility 4

Facility name
Cape Town

% recycled or reused
None

Comparison with previous reporting year
About the same

Please explain
The site is currently putting structures in place for water recycling and water conservation.

Facility reference number
Facility 5

Facility name
Bad Oldesloe

% recycled or reused
None

Comparison with previous reporting year
About the same

Please explain
No measurable water recycled at this facility.

Facility reference number
Facility 6

Facility name
Dandenong

% recycled or reused
None

Comparison with previous reporting year
About the same

Please explain
No measurable water recycled at this facility.

Facility reference number
Facility 7

Facility name
Notre Dame Bondeville

% recycled or reused
None

Comparison with previous reporting year
About the same

Please explain
The site is currently putting structures in place for water recycling and water conservation.

Facility reference number
Facility 8

Facility name
Aspen Oss (Netherlands)

% recycled or reused
None

Comparison with previous reporting year

About the same

Please explain
The site is currently putting structures in place for water recycling and water conservation.

Facility reference number
Facility 9

Facility name
Vitória

% recycled or reused
None

Comparison with previous reporting year
About the same

Please explain
The site is currently putting structures in place for water recycling and water conservation.

Facility reference number
Facility 10

Facility name
Vallejo

% recycled or reused
11-25%

Comparison with previous reporting year
About the same

Please explain
The site recycles water for use internally and also donates clean treated water to other nearby industries for reuse.

Facility reference number
Facility 11

Facility name
Beta

% recycled or reused
None

Comparison with previous reporting year
About the same

Please explain

The site is currently putting structures in place for water recycling and water conservation.

Facility reference number
Facility 12

Facility name
Shelys

% recycled or reused
None

Comparison with previous reporting year
About the same

Please explain
No measurable water recycled at this facility.

Facility reference number
Facility 13

Facility name
Sioux City

% recycled or reused
None

Comparison with previous reporting year
About the same

Please explain
No measurable water recycled at this facility.

Facility reference number
Facility 14

Facility name
Kama

% recycled or reused
None

Comparison with previous reporting year
This is our first year of measurement

Please explain
No measurable water recycled at this facility.

W5.1d

(W5.1d) For the facilities referenced in W5.1, what proportion of water accounting data has been externally verified?

Water withdrawals – total volumes

% verified
76-100

What standard and methodology was used?
AA1000AS

Water withdrawals – volume by source

% verified
76-100

What standard and methodology was used?
AA1000AS

Water withdrawals – quality

% verified
Not verified

What standard and methodology was used?
N/A

Water discharges – total volumes

% verified
51-75

What standard and methodology was used?
Water discharged is either estimated from calculations obtained from the service providers, or some sites have water meters to measure the quantities discharged.

Water discharges – volume by destination

% verified
Not verified

What standard and methodology was used?
N/A

Water discharges – volume by treatment method

% verified
Not verified

What standard and methodology was used?
N/A

Water discharge quality – quality by standard effluent parameters

% verified
Not verified

What standard and methodology was used?
N/A

Water discharge quality – temperature

% verified
Not verified

What standard and methodology was used?
N/A

Water consumption – total volume

% verified
51-75

What standard and methodology was used?
Consumption is calculated as withdrawals less discharges, however discharges are not specifically measured.

Water recycled/reused

% verified
76-100

What standard and methodology was used?
AA1000AS

W6. Governance

W6.1

(W6.1) Does your organization have a water policy?
No, but we plan to develop one within the next 2 years

W6.2

(W6.2) Is there board level oversight of water-related issues within your organization?
Yes

W6.2a

(W6.2a) Identify the position(s) of the individual(s) on the board with responsibility for water-related issues.

Position of individual	Please explain
Other, please specify (Board/Executive board)	One of the five strategic objectives, approved by Aspen's Board, is "To practice good corporate citizenship". The Board is responsible for performance against this objective 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. Aligned to the Group's strategic objectives, the Board ratifies the Group's material sustainability Key Performance Indicators (KPIs) annually, which includes, inter alia "Preserving the environment" and "Managing the efficient utilisation of scarce resources". Achievement of the Group's strategic and related sustainability objectives are monitored on the basis of these approved KPIs. Aspen's Social and Ethics Committee (a subcommittee of the Board) is responsible for the governance of the Group's social, environmental, human rights and ethics responsibilities in accordance with the relevant regulations, guidelines, and recommendations.

W6.2b

(W6.2b) Provide further details on the board's oversight of water-related issues.

	Frequency that water-related issues are a scheduled agenda item	Governance mechanisms into which water-related issues are integrated	Please explain
Row 1	Scheduled - some meetings	Monitoring implementation and performance Overseeing major capital expenditures Reviewing and guiding annual budgets Reviewing and guiding business plans Reviewing and guiding major plans of action Reviewing and guiding risk management policies	As per W6.2a) above, the Group's sustainability objectives and related KPI's are ratified by the Board on an annual basis. The Deputy Group CEO presents the Group's performance against these objectives and KPI's to the Board at each of its scheduled quarterly meetings. The Group's Executive Risk Forum (which comprises the Deputy Group CEO, the Group Chief Operating Officer and the Group Finance Officer) presents the top enterprise-wide risks to the Group Audit and Risk Committee at the scheduled quarterly meetings, after which the risk profile is included in this Committee's report to the Board. Should a significant climate-related risk be identified, the Board would review how the proposed risk mitigation has been considered in the business plan of the impacted business unit, and any major capital expenditure needed to implement the proposed mitigation would be included in the review and approval processes, as needed.

W6.3

(W6.3) Below board level, provide the highest-level management position(s) or committee(s) with responsibility for water-related issues.

Name of the position(s) and/or committee(s)
Chief Executive Officer (CEO)

Responsibility
Both assessing and managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues
As important matters arise

Please explain
The Group Chief Executive and the Deputy Group Chief Executive are responsible for developing and implementing a sustainable growth strategy aligned to the strategic objectives set by the Board. They are accountable to the Board and report on a quarterly basis on the implementation of the strategy and the performance against the Board KPI's. They are also responsible for ensuring effective risk management and reporting processes are maintained across the Group. While "water used" is a Board KPI that is routinely reported on a quarterly basis, material water risks are included in Board reports as they arise. Should a significant climate or water-related risk be identified, the Board would review how the proposed risk mitigation has been considered in the business plan of the impacted business unit, and any major capital expenditure needed to implement the proposed mitigation would be included in the review and approval processes, as needed.

Name of the position(s) and/or committee(s)
Other committee, please specify (Executive Risk Forum)

Responsibility
Both assessing and managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues
As important matters arise

Please explain
The responsibility for climate and water-related issues in the first instance lies with the Site Head, who is responsible for developing and executing the business unit strategy in alignment with the overall Group strategy. The Site Head is responsible for conducting a site risk assessment, including climate and water-related risks and for driving performance aligned to the Group's KPI's. Site Heads report operational aspects through the Group Executives to the Group Chief Executive and Deputy Group Chief Executive, who ensure strategic alignment across the Group's operations. In respect of enterprise risk management, significant and material risks are reported by the Site Heads to the Executive Risk Forum (comprised of the Deputy Chief Executive, the Group Operating Officer and the Group Finance Officer) who then present the top enterprise-wide risks to

the Group Audit and Risk Committee at the scheduled quarterly meetings, after which the risk profile is included in the Board pack.

Name of the position(s) and/or committee(s)
Other C-Suite Officer, please specify (Executive Group Strategic Operations)

Responsibility
Both assessing and managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues
As important matters arise

Please explain
The Executive Group Strategic Operations is responsible for Group SHE and the related environmental policies. This Executive provides technical input in respect of environmental KPI's of the Group and risk mitigation strategies, where appropriate. Group SHE reports to the Social and Ethics Committee on a quarterly basis on the Group's regulatory compliance in respect of SHE and adherence to the Group's own SHE standards.

W6.5

(W6.5) Do you engage in activities that could either directly or indirectly influence public policy on water through any of the following?
Yes, other

W6.5a

(W6.5a) What processes do you have in place to ensure that all of your direct and indirect activities seeking to influence policy are consistent with your water policy/water commitments?

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 material key performance indicators, including water consumption, which are reported to the Board. 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 "Promoting the efficient use of resources such as energy, water, paper and production materials with due regard to the

scarcity of natural resources and the environmental impact resulting from the utilisation and application of such resources in conducting our business activities".

W7. Business strategy

W7.1

(W7.1) Are water-related issues integrated into any aspects of your long-term strategic business plan, and if so how?

	Are water-related issues integrated?	Long-term time horizon (years)	Please explain
Long-term business objectives	Yes, water-related issues are integrated	5-10	The Group's strategic objective "To practice good corporate citizenship" incorporates the sustainability objectives of "preserving the environment" and "managing the efficient utilisation of scarce resources". Water and water related risks are an integral part of these stated business objectives.
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	5-10	The sustainability of our manufacturing plants to support the Group's business objectives are considered in the longer term capacity planning and the related capital investment planning which is required to achieve the required capacity. For example, the availability of water to support the planned expansion of manufacturing operations at our Port Elizabeth site is an important factor integrated into the longer-term capacity planning for this site.
Financial planning	Yes, water-related issues are integrated	5-10	While the Group's formal financial planning tends not to extend beyond 5 years, the required investment to support manufacturing capacity (some of which will be related to sustainability of required water supply) are considered and will influence capital allocations.

W7.2

(W7.2) What is the trend in your organization's water-related capital expenditure (CAPEX) and operating expenditure (OPEX) for the reporting year, and the anticipated trend for the next reporting year?

	Water-related CAPEX (+/- % change)	Anticipated forward trend for CAPEX (+/- % change)	Water-related OPEX (+/- % change)	Anticipated forward trend for OPEX (+/- % change)	Please explain
Row 1	0	0	0	0	Note: The data is not readily available as Aspen currently does not have the mechanism in place to record spend related specifically to water.

W7.3

(W7.3) Does your organization use climate-related scenario analysis to inform its business strategy?

	Use of climate-related scenario analysis	Comment
Row 1	No, but we anticipate doing so within the next two years	We are still exploring the most relevant approach for our business.

W7.4

(W7.4) Does your company use an internal price on water?

Row 1

Does your company use an internal price on water?

No, but we are currently exploring water valuation practices

Please explain

Not in place at this stage.

W8. Targets

W8.1

(W8.1) Describe your approach to setting and monitoring water-related targets and/or goals.

	Levels for targets and/or goals	Monitoring at corporate level	Approach to setting and monitoring targets and/or goals
Row 1	Site/facility specific targets and/or goals	Targets are monitored at the corporate level	Water is a vital resource in our manufacturing processes. Water scarcity is a global risk and one that we have increasingly being exposed to. As a scarce resources, and in line with our Environmental Management Principles, we are committed to using water responsibly by implementing feasible water conservation and recycling projects. All Aspen sites are responsible for measuring and reporting all the water consumed and water discharged from the site. This creates a practical base for setting effective SMART (Specific, Measureable, Achievable, Relevant and Time bound) projects to reduce water consumption.

W8.1a

(W8.1a) Provide details of your water targets that are monitored at the corporate level, and the progress made.

Target reference number
Target 1

Category of target
Water use efficiency

Level
Site/facility

Primary motivation
Cost savings

Description of target
Port Elizabeth: Water conservation through the installation of additional RO Water Buffer Tank on the Multitron Multi-effect still

Quantitative metric
Please select

Baseline year
2013

Start year
2016

Target year
2017

% achieved
100

Please explain
Project completed

Target reference number
Target 2

Category of target
Water recycling/reuse

Level
Site/facility

Primary motivation
Reduced environmental impact

Description of target

Johannesburg Nutritionals facility: Recyling of UHT cooling water

Quantitative metric
Other, please specify (Reduction of monthly consumption in KL)

Baseline year
2015

Start year
2016

Target year
2017

% achieved
100

Please explain
Project completed.

Target reference number
Target 3

Category of target
Water recycling/reuse

Level
Site/facility

Primary motivation
Reduced environmental impact

Description of target
Recovery of rejected water from the reverse osmosis process during water purification.

Quantitative metric
Other, please specify (Reduction of monthly consumption in KL)

Baseline year
2016

Start year
2016

Target year
2018

% achieved
50

Please explain
Project implementation is still in progress and has passed all the quality assuarance tests.

Target reference number
Target 4

Category of target
Water use efficiency

Level
Site/facility

Primary motivation
Reduced environmental impact

Description of target
Water conservation through the installation of HVAC condensate recovery system.

Quantitative metric
% reduction of water withdrawals from municipal supply

Baseline year
2013

Start year
2014

Target year
2017

% achieved
100

Please explain
Project completed.

W9. Linkages and trade-offs

W9.1

(W9.1) Has your organization identified any linkages or tradeoffs between water and other environmental issues in its direct operations and/or other parts of its value chain?
No

W9.1b

(W9.1b) Why has your organization not identified any linkages or tradeoffs between water and other environmental issues?

	Primary reason	Please explain
Row 1	Not considered, and we have no plans to do so	Not considered at this stage

W10. Verification

W10.1

(W10.1) Do you verify any other water information reported in your CDP disclosure (not already covered by W5.1d)?

No, we do not currently verify any other water information reported in our CDP disclosure

W11. Sign off

W-FI

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

No additional information.

W11.1

(W11.1) Provide details for the person that has signed off (approved) your CDP water response.

	Job title	Corresponding job category
Row 1	Group Risk and Sustainability Manager	Other, please specify (Group Risk and Sustainability Manager)

W11.2

(W11.2) Please indicate whether your organization agrees for CDP to transfer your publicly disclosed data on your impact and risk response strategies to the CEO Water Mandate's Water Action Hub [applies only to W2.1a (response to impacts), W4.2 and W4.2a (response to risks)].

Yes