



Water 2016 Information Request Aspen Pharmacare Holdings

Module: Introduction

Page: W0. Introduction

W0.1

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 facilities based in South Africa, Germany and Australia have been included in the scope. The facilities based in Netherlands, France, Mexico, Kenya, Tanzania and Brazil will be included once the required information is available and verified. Water is a valuable resource and is used extensively in manufacturing processes, cleaning of equipment and facilities, employee hygiene, steam generation and to ensure that the required environmental conditions are maintained within the facilities. Aspen is committed to responsible water management and usage at all manufacturing facilities as per the stated Environmental Management Principles.

W0.2

Reporting year

Please state the start and end date of the year for which you are reporting data.

Period for which data is reported

Tue 01 Jul 2014 - Tue 30 Jun 2015

W0.3

Reporting boundary

Please indicate the category that describes the reporting boundary for companies, entities, or groups for which water-related impacts are reported.

Companies, entities or groups over which financial control is exercised

W0.4

Exclusions

Are there any geographies, facilities or types of water inputs/outputs within this boundary which are not included in your disclosure?

Yes

W0.4a

Exclusions

Please report the exclusions in the following table

Exclusion	Please explain why you have made the exclusion
Operations in Brazil, Mexico, France, Netherlands, Kenya and Tanzania.	The submission presents information for the Group's manufacturing facilities located in South Africa, Germany and Australia. Information relating to the excluded facilities will be included, using a phased approach over the next few years. Aspen intends to conduct water risk assessments and water accounting in the excluded facilities in order to allow for standardisation across all Aspen facilities. Resource conservation projects have been implemented at one of the facilities in Mexico and water consumption and usage is measured and monitored at all of the facilities.

Further Information

No further information

Module: Current State

Page: W1. Context

W1.1

Please rate the importance (current and future) of water quality and water quantity to the success of your organization

Water quality and quantity	Direct use importance rating	Indirect use importance rating	Please explain
Sufficient amounts of good quality freshwater available for use	Vital for operations	Important	Water quality and supply issues 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 growth and declining water quality will impact the groups 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. Commodity based raw materials 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 sites 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 ablutions and cooling towers. These initiatives were, aimed at reducing our exposure to increasing water tariffs and supply risk. Additionally, a number of our 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

For your total operations, please detail which of the following water aspects are regularly measured and monitored and provide an explanation as to why or why not

Water aspect	% of sites/facilities/operations	Please explain
Water withdrawals-total volumes	76-100	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-volume by sources	76-100	The facilities source water mainly from municipal sources, consequently, 100% of the facilities monitor water withdrawal by source. Harvested rainwater is used for ablutions at one of the office blocks in Port Elizabeth; however the amount is negligible and is not specifically measured.
Water discharges-total volumes	76-100	Water discharge at 100% of the facilities is monitored from municipal bills and calculations as waste water discharge represents a significant cost to the operations.
Water discharges-volume by destination	76-100	All the facilities discharge waste water into the municipal sewer system. Water discharge at 100% of the facilities is monitored from municipal bills. This discharge is monitored as waste water discharge represents a significant cost to the operations.
Water discharges-volume by treatment method	76-100	Only one of the facilities is required to treat waste water before discharge to the municipal sewer. Water quality and volumes generated by this facility are measured.
Water discharge quality data- quality by standard effluent parameters	76-100	All the facilities discharge waste water into the municipal sewer system. Water discharge at 100% of the facilities is monitored from municipal bills. This discharge is monitored as waste water discharge represents a significant cost to the operations.
Water consumption-total volume	76-100	Currently consumption is not specifically monitored, however Aspen recognises the importance of monitoring water consumption in order to strategically manage the water usage and is considering implementing systems to do so.
Facilities providing fully-functioning WASH services for all workers	Less than 1%	Ablution facilities are provided at all of the operations, however, due to the low water requirements they are not monitored separately.

W1.2a

Water withdrawals: for the reporting year, please provide total water withdrawal data by source, across your operations

Source	Quantity (megaliters/year)	How does total water withdrawals for this source compare to the last reporting year?	Comment
Fresh surface water	0	Not applicable	Not Applicable
Brackish surface water/seawater	0	Not applicable	Not Applicable
Rainwater	0	Not applicable	Rainwater is harvested for use in the ablutions and gardens at some of the facilities; however the amount is negligible and not specifically measured.

Source	Quantity (megaliters/year)	How does total water withdrawals for this source compare to the last reporting year?	Comment
Groundwater - renewable	0	Not applicable	Not Applicable
Groundwater - non-renewable	0	Not applicable	Not Applicable
Produced/process water	0	Not applicable	Not Applicable
Municipal supply	387.65	About the same	Withdrawals remained about the same with only a 1% decrease for the reported operations. This decrease is due changes in production levels at some of the facilities, repair of conveyance infrastructure leaks and site closures. (Note: Thresholds for each category are defined under the further information section).
Wastewater from another organization	0	Not applicable	Not Applicable
Total	387.65	About the same	Withdrawals remained about the same with only a 1% decrease for the reported operations. This decrease is due changes in production levels at some of the facilities, repair of conveyance infrastructure leaks and site closures. (Note: Thresholds for each category are defined under the further information section).

W1.2b

Water discharges: for the reporting year, please provide total water discharge data by destination, across your operations

Destination	Quantity (megaliters/year)	How does total water discharged to this destination compare to the last reporting year?	Comment
Fresh surface water	0	Not applicable	Not Applicable
Brackish surface water/seawater	0	Not applicable	Not Applicable
Groundwater	0	Not applicable	Not Applicable
Municipal/industrial wastewater treatment plant	272.85	About the same	There is a slight decrease in the overall water discharges of 5% for the reported operations. The decrease was due to site closures in Australia, changes in production activity at some of the facilities, and the repair of conveyance infrastructure leaks at the Port Elizabeth warehouses.
Wastewater for another organization	0	Not applicable	Not Applicable
Total	272.85	About the same	There is a slight decrease in the overall water discharges of 5% for the reported operations. The decrease was due to site closures in Australia, changes in production activity at some of the facilities, and the repair of conveyance infrastructure leaks at the Port Elizabeth warehouses.

W1.2c

Water consumption: for the reporting year, please provide total water consumption data, across your operations

Consumption (megaliters/year)	How does this consumption figure compare to the last reporting year?	Comment
114.80	About the same	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.

W1.3

Do you request your suppliers to report on their water use, risks and/or management?

No

W1.3b

Please choose the option that best explains why you do not request your suppliers to report on their water use, risks and/or management

Primary reason	Please explain
Reporting implementation in progress	A preliminary water risk review was conducted based on a sample of raw materials (focus placed on agricultural raw materials) in Aspen's supply chain, highlighting areas of potential risk. The mechanisms to manage / mitigate these risks will be explored in the group wide water strategy, and is likely to include the commencement of supplier engagement.

W1.4

Has your organization experienced any detrimental impacts related to water in the reporting year?

No

Further Information

Thresholds for each category above are as follows: "Much lower" pertains to data of decreasing trend which has a difference in 30% or more from the preceding financial years' data. "Lower" pertains to data of decreasing trend which has a difference of more than 10% and less than 30% from the preceding financial years' data. "About the same" pertains to data which has less than 10% difference (greater or lesser) from the preceding financial years' data. "Higher" pertains to data of increasing trend which has a difference of more than 10% and less than 30% from the preceding financial years' data. "Much higher" pertains to data of increasing trend which has a difference in 30% or more from the preceding financial years' data.

Module: Risk Assessment

Page: W2. Procedures and Requirements

W2.1

Does your organization undertake a water-related risk assessment?

Water risks are assessed

W2.2

Please select the options that best describe your procedures with regard to assessing water risks

Risk assessment procedure	Coverage	Scale	Please explain
Water risk assessment undertaken independently of other risk assessments	Direct operations and supply chain	Some facilities and some suppliers	In accordance with the King III Code of Corporate Practice and Conduct, the Board of Directors of Aspen ("the Board") is responsible for the governance of risk. The Board has delegated this function to its Audit & Risk Committee. Water risk is relevant to the direct operations and supply chain. The following aspects are considered in the current risk review process: (i) The effectiveness of environmental management systems. (ii) Responsible water consumption and conservation. (iii) The environmental risks impacting operations. An independent desktop water risk assessment was done for the South African operations in 2015 and Aspen is now currently in the process of undertaking water management site audits for its South African operations (all site audits completed, reporting underway). Aspen intends to conduct desktop water risk assessments for the rest of the Group by the next reporting cycle.

W2.3

Please state how frequently you undertake water risk assessments, what geographical scale and how far into the future you consider risks for each assessment

Frequency	Geographic scale	How far into the future are risks considered?	Comment
Annually	River basin	>6 years	As risk management is essential to the effective execution of each function, risk identification is a live and on-going process at the operational and functional level.
Annually	Facility	Up to 1 year	Facilities are now being engaged to record on water disruptions and to report on performance of municipal water providers, which are also being assessed from available government audit reports (Blue Drop reports etc.).

W2.4

Have you evaluated how water risks could affect the success (viability, constraints) of your organization's growth strategy?

Yes, evaluated over the next 1 year

W2.4a

Please explain how your organization evaluated the effects of water risks on the success (viability, constraints) of your organization's growth strategy?

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/site level and significant risks are escalated to the Group level. The impact of top risks on the Group's strategies is considered by the Group Executive Risk Forum on a quarterly basis. Water risks are identified, assessed and managed at an asset/site level for example; water scarcity has the potential of disrupting or delaying production

output or could constrain production growth potential. The risks are evaluated by combining impacts (e.g. financial and reputational) as well as the likelihood of occurrence.

As a more specific example, independent water management site audits have been undertaken for the South African manufacturing operations. As part of this process, external water management specialists have engaged with the facility staff responsible for water utility management as well as other facility management staff to understand the growth plans for the next financial year, the impacts of these plans on expected total water consumption, the current level of facility engagement with local municipal water service providers regarding water supply risks, and whether the availability of water supply presents any potential constraints on these plans.

W2.5

Please state the methods used to assess water risks

Method	Please explain how these methods are used in your risk assessment
Internal company knowledge Regional government databases WRI Aqueduct Other: IPCC Climate Change Projections; Stakeholder Engagement; Independent river basin studies	Risks are identified, inter alia, through the monitoring of internal incidents, results of internal meetings/forums/discussions, interaction with identified stakeholders including suppliers; water utilities and government departments and the review of catchment relevant documentation. Water risk is area specific and consequently the mechanisms chosen are designed to ensure area specific risks are identified for assessment. The facility engineering managers at each facility have a good understanding of the level of service currently received from our water suppliers and potential quality and supply risks. Facility management teams ensure that key risks relevant to each area / department are escalated via the quarterly risk review. Supply chain risks are identified primarily using the WRI Aqueduct database.

W2.6

Which of the following contextual issues are always factored into your organization's water risk assessments?

Issues	Choose option	Please explain
Current water availability and quality parameters at a local level	Relevant, included	Disruptions to water supply presents a risk to production and growth, and declining water quality could impact the Group's operating cost. This risk is informed by internal monitoring, company knowledge and engagement with the water providers
Current water regulatory frameworks and tariffs at a local level	Relevant, included	Water and waste water tariffs represent a growing cost to operations. Current issues are informed by municipal bills, regional government databases, engagement with the local water utility providers, and monitoring national government policy in relation to water tariffs.
Current stakeholder conflicts concerning water resources at a local level	Relevant, included	A number of regions in which Aspen's operations are situated are characterised by a water deficit and consequently increasing competition between 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.
Current implications of water on your key commodities/raw materials	Relevant, 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 on the sustainable supply of certain raw materials. Current risk in this regard is informed using the WRI Aqueduct database. Stakeholder engagement with key suppliers will be implemented in the future, as practical; to further inform our exposure to water related risks.
Current status of ecosystems and habitats at a local level	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 Department of Environmental Affairs and the Department of Water and Sanitation to ensure that these ecosystems are appropriately

Issues	Choose option	Please explain
		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 to having a significant impact on such habitats. Furthermore, Aspen undertakes insignificant direct abstraction of water, hence, beyond implementing water efficiency measures, these issues can only be effectively managed upstream of the operations by water utilities and regulators.
Current river basin management plans	Relevant, not yet included	Water stress and quality within the basin supplying the relevant water service providers has a direct impact on Aspen's water supply. Aspen recognises the importance of staying informed of river basin plans in order to assess the risk with respect to water supply and cost. Mechanisms to include this aspect into the risk assessment process are currently being explored, primarily via engagement with local water utilities who can keep Aspen's facilities informed of river basin risks at a local level.
Current access to fully-functioning WASH services for all employees	Relevant, included	Aspen provides ablution facilities for employees at all of the sites, however the risk posed to these facilities is evaluated in terms of water supply to the operation as a whole and not separately.
Estimates of future changes in water availability at a local level	Relevant, included	Decreasing water availability will directly impact Aspen's operations. Aspen monitors this risk using regional government and municipal databases, river basin studies and climate change projections as well as via engagement with local water utilities.
Estimates of future potential regulatory changes at a local level	Relevant, included	Water and waste water tariffs represent a growing cost to Aspen's operations. Future risk is informed by regional government / municipal databases and engagement with water providers and regulatory authorities.
Estimates of future potential stakeholder conflicts at a local level	Relevant, included	Increasing water deficits have been projected for a number of water management areas in which Aspen's facilities are situated. These deficits are expected to stimulate competition between stakeholders. Aspen keeps informed of potential conflicts and possible consequences through engagement with the water provider, regional government databases and independent river basin studies.
Estimates of future implications of water on your key commodities/raw materials	Relevant, included	Aspen has a diverse supply chain incorporating numerous raw materials. Water and climate related issues experienced in the regions supplying our operations can impact operations directly. Future risk in this regard is informed using the WRI Aqueduct database. Stakeholder engagement with key suppliers will be implemented in future, as practical; to further inform the exposure to water related risks.
Estimates of future potential changes in the status of ecosystems and habitats at a local level	Not relevant, explanation provided	Although Aspen appreciates the importance of ecosystem services in maintaining a sustainable water resource, reliance is placed on water service providers and the Department of Water and Sanitation to ensure that these ecosystems are appropriately managed and risks evaluated.
Scenario analysis of availability of sufficient quantity and quality of water relevant for your operations at a local level	Relevant, not yet included	Aspen is currently developing a framework for assessing likely scenarios and their implications for adequacy of water quality and quantity at the local operations level for South African operations.
Scenario analysis of regulatory and/or tariff changes at a local level	Relevant, not yet included	Scenario analysis to inform water related regulatory and financial risk will be considered in the future.
Scenario analysis of stakeholder conflicts concerning water resources at a local level	Relevant, not yet included	Scenario analysis to inform water related stakeholder risk will be considered in the future.
Scenario analysis of implications of water on your	Relevant, not yet included	Scenario analysis to inform water related supply chain risk will be considered in the future.

Issues	Choose option	Please explain
key commodities/raw materials		
Scenario analysis of potential changes in the status of ecosystems and habitats at a local level	Not relevant, explanation provided	Although Aspen appreciates the importance of ecosystem services in maintaining a sustainable water resource, reliance is placed on water service providers, the Department of Environmental Affairs and the Department of Water and Sanitation to ensure that these ecosystems are appropriately managed and risks evaluated.
Other	Not evaluated	None.

W2.7

Which of the following stakeholders are always factored into your organization's water risk assessments?

Stakeholder	Choose option	Please explain
Customers	Relevant, included	Water related issues that impact Aspen's operations have the potential to negatively affect customers. Consequently, the impact on customers will be factored into the risk assessment process.
Employees	Relevant, 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.
Investors	Relevant, included	Risks to Aspen's production have the potential to impact the organisation's current and future investor portfolio.
Local communities	Relevant, included	Climate change and water stressors have the potential to negatively impact community health. Consequently, health implications and the possible requirements placed on Aspen's product line and production levels are considered.
NGOs	Relevant, 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 local level	Relevant, included	Other water users are considered for two reasons; 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 these water users have the potential to negatively impact the quality of the water resource.
Regulators	Relevant, 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, 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 yet 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, included	An uninterrupted supply of raw materials is imperative in maintaining production. Consequently, suppliers are factored into risk assessments.
Water utilities/suppliers at a local level	Relevant, included	The current and future performance of water utilities in managing water supply has a direct impact on Aspen's operations.
Other	Not evaluated	Not applicable.

Further Information

None

Module: Implications

Page: W3. Water Risks

W3.1

Is your organization exposed to water risks, either current and/or future, that could generate a substantive change in your business, operations, revenue or expenditure?

Yes, direct operations and supply chain

W3.2

Please provide details as to how your organization defines substantive change in your business, operations, revenue or expenditure from water risk

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.

W3.2a

Please provide the number of facilities* per river basin exposed to water risks that could generate a substantive change in your business, operations, revenue or expenditure and the proportion this represents of total operations company-wide

Country	River basin	Number of facilities exposed to water risk	Proportion of total operations (%)	Comment
South Africa	Mzimvubu-Tsitsikamma(WMA)	2	11-20	All of the operations are exposed to water related risk with varying degrees of significance.
South Africa	Limpopo (WMA)	1	6-10	All of the operations are exposed to water related risk with varying degrees of significance.
South Africa	Berg-Olifants (WMA)	1	6-10	All of the operations are exposed to water related risk with varying degrees of significance.
Germany	Other: Schlei/Trave River Basin District	1	6-10	All of the operations are exposed to water related risk with varying degrees of significance.
Australia	Other: South East Coast (Victoria) River Region	3	1-5	All of the operations are exposed to water related risk with varying degrees of significance.

W3.2b

Please provide the proportion of financial value that could be affected at river basin level associated with the facilities listed in W3.2a

Country	River basin	Financial reporting metric	Proportion of chosen metric that could be affected within the river basin	Comment
South Africa	Mzimvubu-Tsitsikamma(WMA)	% cost of goods sold	21-30	Estimated based on cost of sales of the operations based in this river basin as a percentage of the Group cost of sales
South Africa	Limpopo (WMA)	% cost of goods sold	1-5	Estimated based on cost of sales of the operations based in this river basin as a percentage of the Group cost of sales
South Africa	Berg-Olifants (WMA)	% cost of goods sold	1-5	Estimated based on cost of sales of the operations based in this river basin as a percentage of the Group cost of sales
Germany	Other: Schlei/Trave River Basin District	% cost of goods sold	1-5	Estimated based on cost of sales of the operations based in this river basin as a percentage of the Group cost of sales
Australia	Other: South East Coast (Victoria) River Region	% cost of goods sold	1-5	Estimated based on cost of sales of the operations based in this river basin as a percentage of the Group cost of sales

W3.2c

Please list the inherent water risks that could generate a substantive change in your business, operations, revenue or expenditure, the potential impact to your direct operations and the strategies to mitigate them

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
South Africa	Other: Mzimvubu - Tsitsikamma, Berg and Olifants and Limpopo WMA's	Physical- Increased water stress	Other: Higher operating costs / price increases ahead of inflation	The water management areas in which the facilities are situated are characterised by water balance deficits, with the Berg and Olifants WMA water	1-3 years	Highly probable	Medium	Other: Development of a facility-specific water management plans	ZAR 500 000	Aspen is considering developing water management plans for each of its South African manufacturing facilities which will identify and prioritise management,

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				<p>deficit projected to increase significantly by 2025. The opportunity to augment water supply in these WMA's is limited. Current government plans propose investment in desalination, catchment transfers, and effluent treatment and reuse. These augmentation strategies are costly and consequently it is anticipated that there will be a significant impact on water tariffs within the respective regions. The Draft National Pricing Strategy gazetted</p>						<p>monitoring, reporting and engagement initiatives at each operation. Aspen has entered into discussions with respect to the appointment of a consultant to develop the plans and the estimated total cost for developing the plans (covering all the risks listed in this table) is approximately ZAR 500 000.</p>

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				by the Department of Water and Sanitation on the 13 Nov 2015 is noted in this regard and the implications of this strategy on the business will be assessed and monitored.						
South Africa	Other: Mzimvubu - Tsitsikamma, Berg and Olifants and Limpopo WMA's	Physical-Increased water stress	Other: Reduced water allocations / Imposition of periodic water restrictions	As above. Depending on annual variability in rainfall affecting the catchment water supply, and given that the catchments are already under stress, restrictions may be imposed on business operations.	1-3 years	Unlikely	High	Other: Development of a facility-specific water management plans	ZAR 500 000	Aspen is considering developing water management plans for each of its South African manufacturing facilities which will identify and prioritise management, monitoring, reporting and engagement initiatives at each operation. Aspen has entered into discussions with

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										respect to the appointment of a consultant to develop the plans and the estimated total cost for developing the plans (covering all the risks listed in this table) is approximately ZAR 500 000.
South Africa	Other: Mzimvubu - Tsitsikamma, Berg and Olifants and Limpopo WMA's	Physical-Increased water stress	Other: Periodic disruption to water supply resulting from poor water service provider infrastructure and maintenance	In South Africa, certain water service providers are associated with poor infrastructure maintenance performance, resulting in periodic water supply disruptions. The facilities are serviced by the following water utilities: City of Cape Town, City of	1-3 years	Unlikely	Medium	Other: Development of a facility-specific water management plans	ZAR 500 000	In South Africa, certain water service providers are associated with poor infrastructure maintenance performance, resulting in periodic water supply disruptions. The facilities are serviced by the following water utilities: City of Cape Town, City of

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				Ekurhuleni, Buffalo City, and NMBM Municipality. Generally, this risk is well-managed via engagement with the water service providers as part of the industrial zone forums in which Aspen facility engineering staff actively participate. Nevertheless, Aspen is cognisant of this risk and actively seeks to monitor and manage it across all sites.						Ekurhuleni, Buffalo City, and NMBM Municipality. Generally, this risk is well-managed via engagement with the water service providers as part of the industrial zone forums in which Aspen facility engineering staff actively participate. Nevertheless, Aspen is cognisant of this risk and actively seeks to monitor and manage it across all sites.

W3.2d

Please list the inherent water risks that could generate a substantive change in your business operations, revenue or expenditure, the potential impact to your supply chain and the strategies to mitigate them

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
South Africa	Pongola-Umzimkulu (WMA)	Physical-Drought	Other: Production disruption leading to reduced output and higher operating costs.	Aspen's operations rely on a number of agricultural raw materials, for example sugar, maize starch, palm oil and lactose. Sugar is sourced from the east coast of KwaZulu-Natal which is projected to become severely water stressed in the near future. Disruption in supply could impact production and supply chain costs. Example: Droughts in various parts of the country severely affected sugar crops and the by-product of sugar production, molasses, Molasses is used in the	1-3 years	Highly probable	Medium	Other: Development of a group-wide water strategy.	To be established.	Aspen is considering developing a group wide water strategy which will prioritise raw materials in the supply chain for strategic management.

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				<p>synthesis of alcohol and solvents. Sugar, molasses and solvents are key 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. The Draft National Pricing Strategy gazetted by the Department of Water and Sanitation on the 13 November 2015 is also noted in this regard and the implications of this strategy on the business will be assessed and</p>						

Country	River basin	Risk driver	Potential impact	Description of impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				monitored.						

Further Information

None

Page: W4. Water Opportunities

W4.1

Does water present strategic, operational or market opportunities that substantively benefit/have the potential to benefit your organization?

Yes

W4.1a

Please describe the opportunities water presents to your organization and your strategies to realize them

Country or region	Opportunity	Strategy to realize opportunity	Estimated timeframe	Please explain
South Africa	Improved water efficiency	Continuous improvement projects are put in place to recycle water and improve water efficiency. Water conservation projects undertaken to date include the 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 block From 2010 to 2015 the South African Operations invested approximately R200,000 in water conservation projects.	1-3 years	Aspen continues to investigate water conservation and efficiency opportunities, and is considering developing a group wide water strategy which will prioritise water efficiency initiatives at the operations most exposed to water risk.
South Africa	Cost savings	Improved water efficiency and increased water recycling will reduce exposure to water tariffs by decreasing abstraction and discharge.	1-3 years	Aspen continues to investigate water conservation and efficiency opportunities, and is considering developing a group wide water strategy which will prioritise water efficiency initiatives at the operations most exposed to water risk.

Further Information

None

Module: Accounting

Page: W5. Facility Level Water Accounting (I)

W5.1

Water withdrawals: for the reporting year, please complete the table below with water accounting data for all facilities included in your answer to W3.2a

Facility reference number	Country	River basin	Facility name	Total water withdrawals (megaliters/year) at this facility	How does the total water withdrawals at this facility compare to the last reporting year?	Please explain
Facility 1	South Africa	Mzimvubu-Tsitsikamma(WMA)	Port Elizabeth	161.80	About the same	No major changes in water withdrawals quantities.
Facility 2	South Africa	Mzimvubu-Tsitsikamma(WMA)	East London	17.85	About the same	No major changes in water withdrawals quantities.
Facility 3	South Africa	Limpopo (WMA)	Johannesburg	85.37	Higher	Increase in production activity
Facility 4	South Africa	Berg-Olifants (WMA)	Cape Town	45.11	Higher	Expansion and operationalization of new production blocks at the Cape Town facility.
Facility 5	Germany	Other: Schlei/Trave River Basin District	Germany	33.20	Lower	A temporary decline in volumes for a water intensive product resulted in decreased water use.
Facility 6	Australia	Other: South East Coast (Victoria) River Region	Australia	44.32	Much lower	Divestment of facilities in Australia.

Further Information

None

Page: W5. Facility Level Water Accounting (II)

W5.1a

Water withdrawals: for the reporting year, please provide withdrawal data, in megaliters per year, for the water sources used for all facilities reported in W5.1

Facility reference number	Fresh surface water	Brackish surface water/sea water	Rainwater	Groundwater (renewable)	Groundwater (non-renewable)	Produced/process water	Municipal water	Wastewater from another organization	Comment
Facility 1	0	0	0	0	0	0	161.80	0	Harvested rainwater is used for ablutions at one of the office blocks in Port Elizabeth. Volume is not currently measured. Water used in processes is withdrawn from the Municipal water supplies.
Facility 2	0	0	0	0	0	0	17.85	0	All water utilised is withdrawn from Municipal water supplies.
Facility 3	0	0	0	0	0	0	85.37	0	Almost all water utilised is withdrawn from Municipal water supplies. An

Facility reference number	Fresh surface water	Brackish surface water/sea water	Rainwater	Groundwater (renewable)	Groundwater (non-renewable)	Produced/process water	Municipal water	Wastewater from another organization	Comment
									unmetered but small volume (estimated at circa 1% of annual usage) is withdrawn from an on-site borehole for use in garden irrigation.
Facility 4	0	0	0	0	0	0	45.11	0	All water utilised is withdrawn from Municipal water supplies.
Facility 5	0	0	0	0	0	0	33.20	0	All water utilised is withdrawn from Municipal water supplies.
Facility 6	0	0	0	0	0	0	44.32	0	All water utilised is withdrawn from Municipal water supplies.

W5.2

Water discharge: for the reporting year, please complete the table below with water accounting data for all facilities included in your answer to W3.2a

Facility reference number	Total water discharged (megaliters/year) at this facility	How does the total water discharged at this facility compare to the last reporting year?	Please explain
Facility 1	139.09	About the same	No major changes in water discharged quantities.
Facility 2	15.48	About the same	No major changes in water discharged quantities.
Facility 3	59.76	Lower	Effective and efficient use of water in production.
Facility 4	23.14	Higher	Expansion and operationalization of new production blocks at the Cape Town facility.
Facility 5	22.13	Higher	Estimated values are used for discharge.
Facility 6	13.25	About the same	Only discharge from one facility was recorded from the previous year and discharge is estimated to be just about the same

W5.2a

Water discharge: for the reporting year, please provide water discharge data, in megaliters per year, by destination for all facilities reported in W5.2

Facility reference number	Fresh surface water	Municipal/industrial wastewater treatment plant	Seawater	Groundwater	Wastewater for another organization	Comment
Facility 1	0	139.09	0	0	0	All waste water is discharged into municipal treatment plants.
Facility 2	0	15.48	0	0	0	All waste water is discharged into municipal treatment plants.
Facility 3	0	59.76	0	0	0	All waste water is discharged into municipal treatment plants.
Facility 4	0	23.14	0	0	0	All waste water is discharged into municipal treatment plants.
Facility 5	0	22.13	0	0	0	All waste water is discharged into municipal treatment plants.
Facility 6	0	13.25	0	0	0	All waste water is discharged into municipal

Facility reference number	Fresh surface water	Municipal/industrial wastewater treatment plant	Seawater	Groundwater	Wastewater for another organization	Comment
						treatment plants.

W5.3

Water consumption: for the reporting year, please provide water consumption data for all facilities reported in W3.2a

Facility reference number	Consumption (megaliters/year)	How does this compare to the last reporting year?	Please explain
Facility 1	22.70	About the same	No major changes in water consumption.
Facility 2	2.37	Lower	Increase in production efficiencies resulting in less water demand for production
Facility 3	25.61	Higher	Increase in production activity
Facility 4	21.97	Much higher	Variation in production mix
Facility 5	11.08	Lower	A temporary decline in volumes for a water intensive product
Facility 6	31.07	Much lower	Divestment of facilities in Australia.

W5.4

For all facilities reported in W3.2a what proportion of their water accounting data has been externally verified?

Water aspect	% verification	What standard and methodology was used?
Water withdrawals- total volumes	76-100	AA1000AS
Water withdrawals- volume by sources	76-100	AA1000AS
Water discharges- total volumes	Not verified	Water discharge is estimated from calculations attained from the service providers.
Water discharges- volume by destination	Not verified	Water discharge is estimated from calculations attained from the service providers.
Water discharges- volume by treatment method	Not verified	Water discharge is estimated from calculations attained from the service providers.
Water discharge quality data- quality by standard effluent parameters	Not verified	Water discharge is estimated from calculations attained from the service providers.
Water consumption- total volume	51-75	Only water withdrawal is verified in the calculation. Consumption is calculated as withdrawals minus discharges and discharge is not specifically measured.

Further Information

None

Module: Response

Page: W6. Governance and Strategy

W6.1

Who has the highest level of direct responsibility for water within your organization and how frequently are they briefed?

Highest level of direct responsibility for water issues	Frequency of briefings on water issues	Comment
Board of individuals/Sub-set of the Board or other committee appointed by the Board	Scheduled-quarterly	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 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&Ethics Committee (subcommittee of the Board) is responsible for monitoring the governance of the Group's social, environmental and human rights issues in accordance with the relevant regulations, guidelines and recommendations. Under the direction of Dr Morne Geysler, Group Strategic Operations Executive, the Group SHE department develops and promotes Aspen's environmental management principles, standards and monitors the alignment of business unit environmental management systems to the Group standards.

W6.2

Is water management integrated into your business strategy?

Yes

W6.2a

Please choose the option(s) below that best explain how water has positively influenced your business strategy

Influence of water on business strategy	Please explain
Introduction of water management KPIs	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."

W6.2b

Please choose the option(s) below that best explains how water has negatively influenced your business strategy

Influence of water on business strategy	Please explain
No measurable influence	To date water risk has had no measurable influence on the business strategy. However, in future increased capital and operational costs may be incurred should the business be required to explore or adopt alternative water supply options. In addition cost could be incurred if the water quality levels deteriorate to a level where additional processing is required prior to use.

W6.3

Does your organization have a water policy that sets out clear goals and guidelines for action?

Yes

W6.3a

Please select the content that best describes your water policy (tick all that apply)

Content	Please explain why this content is included
Incorporated within group environmental, sustainability or EHS policy	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."

W6.4

How does your organization's water-related capital expenditure (CAPEX) and operating expenditure (OPEX) during the most recent reporting year compare to the previous reporting year?

Water CAPEX (+/- % change)	Water OPEX (+/- % change)	Motivation for these changes
0	0	Note: The data is not readily available as Aspen currently does not have a mechanism in place to record spend related specifically to water.

Further Information

No further information

Page: W7. Compliance

W7.1

Was your organization subject to any penalties, fines and/or enforcement orders for breaches of abstraction licenses, discharge consents or other water and wastewater related regulations in the reporting year?

Yes, not significant

W7.1a

Please describe the penalties, fines and/or enforcement orders for breaches of abstraction licenses, discharge consents or other water and wastewater related regulations and your plans for resolving them

Facility name	Incident	Incident description	Frequency of occurrence in reporting year	Financial impact	Currency	Incident resolution
Johannesburg	Penalty	Minor non-compliances were experienced in April 2015 with respect to Chemical Oxygen Demand (COD) and suspended solids and therefore an additional tariff was imposed by the Municipality.	1	13600	ZAR (R)	The incident was as a result of problems with aeration which led to an increase in the amount of solids that were discharged to the sewers. The aeration pumps were repaired and this resolved the problem.

W7.1b

What proportion of your total facilities/operations are associated with the incidents listed in W7.1a

4%

W7.1c

Please indicate the total financial impacts of all incidents reported in W7.1a as a proportion of total operating expenditure (OPEX) for the reporting year. Please also provide a comparison of this proportion compared to the previous reporting year

Impact as % of OPEX	Comparison to last year
0.01	Lower

Further Information

No further information.

Page: W8. Targets and Initiatives

W8.1

Do you have any company wide targets (quantitative) or goals (qualitative) related to water?

Yes, targets and goals

W8.1a

Please complete the following table with information on company wide quantitative targets (ongoing or reached completion during the reporting period) and an indication of progress made

Category of target	Motivation	Description of target	Quantitative unit of measurement	Base-line year	Target year	Proportion of target achieved, % value
Reduction in consumptive volumes	Other: Resource conservation	PE Aspen Off Site Warehouse: Identification and repair of water leaks on site, and the monitoring of water meter readings specific to Aspen water consumption.	% reduction of water sourced from municipal supply	2014	2015	100%

W8.1b

Please describe any company wide qualitative goals (ongoing or reached completion during the reporting period) and your progress in achieving these

Goal	Motivation	Description of goal	Progress
Other: Promote water conservation and water recycling	Other: Promote water conservation and water recycling	To identify and implement feasible water recycling projects at the manufacturing facilities, to review and set water conservation targets, and to remain aware of developments in water efficient technology suitable for the pharmaceutical industry.	On going

Further Information

No further information.

Module: Linkages/Tradeoff

Page: W9. Managing trade-offs between water and other environmental issues

W9.1

Has your organization identified any linkages or trade-offs between water and other environmental issues in its value chain?

No

Further Information

No further information

Module: Sign Off

Page: Sign Off

W10.1

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

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

W10.2

Please select if your organization would like CDP to transfer your publicly disclosed response strategy from questions W1.4a, W3.2c and W3.2d to the CEO Water Mandate Water Action Hub.

Yes

Further Information

None

CDP: [D][-,][D2]