Anglo American Water response 2017

Module: Introduction

Page: W0. Introduction

W0.1
Introduction

Please give a general description and introduction to your organization

Anglo American is a global and diversified mining business that provides raw materials essential for economic development and modern life. Our diversified portfolio of products spans the economic development cycle and, as a responsible miner, we are the custodians of precious resources. We work together with our key partners and stakeholders to unlock the long-term value that these resources represent for our shareholders, but also for the communities and countries in which we operate – creating sustainable value and making a real difference. Our portfolio of high quality mining assets and natural resources includes platinum group metals and diamonds, with significant interests in copper, iron ore and manganese, metallurgical and thermal coal, and nickel. We operate in Africa, Europe, South and North America, Australia and Asia. Our headquarters are in London, United Kingdom and we are listed on the London and Johannesburg stock exchanges.

Anglo American understands the ever-growing need to consider the environmental risk within our business strategy. Efficient use of our resources is to the benefit of all our stakeholders, and planning carefully for the whole life of a mine, right through to closure or sale, makes better use of our capital, as well as a more sustainable way of mining. Water, specifically, is a critical resource within our business given that approximately 75% of our operations occur within water-stressed areas. Our social and legal licences to operate depend on ensuring that operations' use of water, consequent impacts on water availability and quality remain within the legal limits as denoted within our permits and water use licences.

For the purposes of the WDP and other sustainable development reporting, we include only managed businesses and material joint-ventures (such as De Beers' Debswana and Namdeb Holdings 50:50 JVs with the governments of Republics of Botswana and Namibia) where Anglo American standards are applied. Data from operations that are divested during the year is included up until the point of sale.

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
Fri 01 Jan 2016 - Sat 31 Dec 2016

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 operational 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?

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	Direct: Water is a critical resource for the business. Good quality freshwater is vital for our employees, their families and the surrounding communities. This includes the provision of sufficient good quality water for drinking purposes to our workforce in under-ground operations, given high temperatures in underground mines. Good quality fresh water is also necessary in some processing activities. An unstable supply of fresh water has the potential to compromise operational continuity and is thus vital for operations. Indirect use (water use that takes place within the value chain and outside of our direct control): Many of the goods we procure for our operations rely on good quality water in their production (e.g. production of steel and timber). Sufficient amounts of freshwater are also important in the supply of largely hydro-based electricity from public utilities to our Brazilian operations. An insufficient supply of these commodities would pose a risk to operational continuity.
Sufficient amounts of recycled, brackish and/or produced water available for use	Vital for operations	Not very important	Direct: A large proportion of our operations are located in water stressed regions, emphasizing the importance of relying on recycled/secondary water. Recycled/secondary water can be used in many of our processing operations (from dust suppression to ore processing) and reduces our need for potable water. Our coal business, for example, is increasingly using lower quality water in its processing operations. Recycling and process water initiatives are vital to water security at our operations. Currently, 66% of water required is met by recycled water. Indirect use, which refers to all water use that takes place within the value chain and outside of our direct control, of recycled, brackish or produced water is not common across our value chain and is not deemed important to Anglo American currently.

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	Anglo American records consumption of water withdrawn by all of its operations (100% of facilities) on a monthly basis. The data are used to track performance against water reduction targets and form and integral part of operational water balances.
Water withdrawals- volume by sources	76-100	Anglo American records the volume of water abstracted from different sources (surface water, ground water and municipal water) at 100% of its facilities. The purpose of reporting these data is to ensure adequate supplies of water for operational use, measure our impact on water sources, reduce our dependence on potable water or stressed sources, and meet external reporting requirements.
Water discharges- total volumes	76-100	Anglo American's water management standard (GTS21) requires operations to develop a water balance model, which includes measuring and monitoring discharges. The total volume of water discharged from Anglo American facilities is monitored and measured and is used to track environmental performance. Anglo American measures this water aspect for all its sites (100%).
Water discharges- volume by destination	76-100	Anglo American's water management standard (GTS21) requires operations to develop a water balance model, which includes measuring and monitoring discharges. The total volumes of discharges per destination are therefore monitored and measured at all (100%) of our facilities.
Water discharges- volume by treatment method	76-100	Water is discharged from various sources/processes at certain Anglo American operations. As a result varying degrees of treatment are required per source of discharge. Anglo American actively measures the quantity discharged per source at the operation and, where necessary, monitors the quality of the discharged water to ensure that the composition of the water is within the treatment method’s specified limits. Anglo American measures this water aspect for all it relevant sites (100%).
Water discharge quality data- quality by standard effluent parameters	76-100	Water quality from discharges is measured at all of Anglo American sites (100%) and takes place on the occasions that water is discharged (as discharges do not happen continuously) to ensure that Anglo American is in compliance with its water use license conditions.
Water consumption- total volume	76-100	Anglo American records total volumes of consumption of water from all of its operations on a monthly basis (100% of facilities). The data are used to track performance against water reduction targets and form and integral part of operational water balances.
Facilities providing fully-functioning	76-100	Workers at all (100%) of our sites are provided with fully functioning WASH services (clean

Water aspect	% of sites/facilities/operations	Please explain
WASH services for all workers		drinking, cooking and cleaning water; solid waste management and drainage; and hygiene information and education). In alignment with ICMM requirements our WASH services will be gender appropriate by next year. In addition, a total of $5.3 million was invested in community water and sanitation projects during 2016.

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	53752	Lower	The reduction in fresh surface water can be attributed to 1) A large decrease in fresh water withdrawals at Anglo American Platinum's Mogalakwena concentrators - this was balanced by a large increase in waste water utilisation; 2) A reduction in withdrawals at Minas-Rio due to drought conditions and legally enforced reductions in allowed abstraction from the Peixe River; and 3) The divestment of Phosphate Catalao in Brazil at the end of September 2016.
Brackish surface water/seawater	26850	Lower	Seawater withdrawals decreased at De Beers Namdeb Consolidated operation in Namibia despite throughput remaining relatively constant. Namdeb has implemented a dynamic mining/back-dumping design at Sendelingsdrif mine to reduce closure liabilities that has reduced water use and operating costs substantially. The divestment of Mantoverde at the end of August 2015 also contributed to decreased seawater withdrawals.
Rainwater	23666	Higher	Our Coal operations in Australia, Platinum and Coal operations in South Africa, and Copper operations in Chile consume the largest volumes of rainwater. There was a significant increase in rainfall at the Capcoal Coal operation in Australia following below average precipitation. Los Bronces copper mine in Chile also experienced heavy snowfall and the New Vaal Coal operation in South Africa saw a large increase in rainfall relative to the previous year.

Source	Quantity (megaliters/year)	How does total water withdrawals for this source compare to the last reporting year?	Comment
Groundwater - renewable	83098	Lower	The most significant reductions in groundwater withdrawals were at the Dawson Coal operation in Australia, De Beers' Venetia Open Pit mine in South Africa, Anglo American's Niobium operation in Brazil and Foxleigh Coal mine in Australia. Production decreased significantly at Dawson and Venetia Open Pit. The reductions associated with Niobium and Foxleigh were a result of their divestment in the second half of 2016. Overall reductions were partly balanced out by increased withdrawals at Orapa and Damtshaa, where utilisation of depressurising boreholes increased. In addition, there was increased withdrawals at the Amandelbult concentrator, where a new pipeline to use Dishaba groundwater was ramped up during 2016.
Groundwater - non-renewable	0	Not applicable	Anglo American has not split its groundwater use into renewable and non-renewable sources consistently across Anglo American yet and as such is reporting this category as zero.
Produced/process water	0	Not applicable	Anglo American does not make use of produced or process water in its operations thus the quantity withdrawn is zero.
Municipal supply	17123	Lower	The decrease was due to reductions in municipal water withdrawals at the New Vaal Coal operation in South Africa and Anglo American Platinum's Mototolo concentrator in South Africa, divestment of water-intensive operations as well as efficiency measures. The reductions at New Vaal and Mototolo were balanced by increases in rainwater and wastewater utilisation respectively.
Wastewater from another organization	22020	Higher	Wastewater from another organization increased significantly at Anglo American Platinum's Mogalakwena and Mototolo concentrators, which are the largest contributors to waste water withdrawals for Anglo American. The increase replaced the use of fresh surface water in line with Anglo American's strategy to reduce fresh water withdrawals. This was partly balanced by a reduction in withdrawals at Mantos Blancos copper mine in Chile, which was divested at the end of August 2015.

Source	Quantity (megaliters/year)	How does total water withdrawals for this source compare to the last reporting year?	Comment
Total	226509	Lower	Total withdrawals decreased by 9% relative to 2015. The decrease was due to the divestment of water-intensive operations and efficiency measures. Water-saving projects, which include more effective dust suppression, dewatering of tailings and more efficient ore separation, saved approximately 23,000 megalitres of water, relative to projected levels. Note that the withdrawals totals also include offices, exploration sites, labs, De Beers Element Six facilities and Vergelegen Wine Farm, which are not included in the facility data reported in Section 5.

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	70600	Lower	Discharge to surface water from De Beers Gahcho Kue operation in Canada, which contributed the most to surface water discharge in 2015, decreased as the mine has moved into an operational phase and is not dewatering as much. Other minor adjustments have been made to the 2015 discharge numbers for several sites as a result of improvements in how discharge is measured and reported.
Brackish surface water/seawater	38680	Higher	Sea water discharge increased as a result of ramp-up and improved reporting at Minas Rio.
Groundwater	282	Much lower	Improved reporting and lower discharge from Anglo Coal operations that were divested at the end of December 2016 resulted in lower discharge to ground water values.
Municipal/industrial wastewater treatment plant	21239	Lower	Water discharged for treatment decreased from Anglo American's Kleinkopje and Landau coal operations in South Africa as these sites were divested

Destination	Quantity (megaliters/year)	How does total water discharged to this destination compare to the last reporting year?	Comment
			at the end of December 2016. Discharge also decreased from Greenside coal mine in South Africa as production decreased. This was partly balanced by a moderate increase in water discharged for treatment by Kumba Iron Ore's Kolomela site in South Africa. Other relatively minor adjustments have been made to the 2015 discharge numbers for several sites as a result of improvements in how discharge is measured and reported.
Wastewater for another organization	5238	Higher	Discharge sent from Anglo American's New Vaal coal operation in South Africa to Eskom increased significantly because the site received more rainfall in 2016 than in 2015.
Total	136039	Lower	Total discharge for 2016 relative to our restated 2015 discharge data was marginally lower (3%). Minor adjustments have been made to the 2015 discharge numbers for several sites as a result of improvements in how discharge is measured, hence the restatement.

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
190706	Lower	Total consumption decreased by about 10% relative to 2015. The decrease in water consumption was due to the divestment of water-intensive operations and efficiency measures. Water-saving projects, which include more effective dust suppression, dewatering of tailings and more efficient ore separation, saved Anglo American approximately 23,000ML of water, relative to projected levels. Note that the withdrawals totals also include offices, exploration sites, labs, De Beers Element Six facilities and Vergelegen Wine Farm, which are not included in the facility data reported in section 5.

W1.3

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

Yes

W1.3a

Please provide the proportion of suppliers you request to report on their water use, risks and/or management and the proportion of your procurement spend this represents

Proportion of suppliers %	Total procurement spend %	Rationale for this coverage
Less than 1%	1-25	Anglo American's approach to procurement is guided by the Responsible Sourcing Standard for Suppliers, which details performance expectations across 6 pillars of value: labour & human rights; safety & health; wellness; business integrity & ethics; environmental stewardship & corporate citizenship. Based on risk ranking, suppliers are requested to complete a self-assessment questionnaire and depending on the level of risk identified, selected suppliers are requested to either provide evidence of a recently conducted 3rd party audit or undertake a new audit. We maintain a broad, inclusive approach for performance against the Standard and provide suppliers with the flexibility of using equivalent external responsibility standards, such as SA8000 or ISO26000. To date, the audit process has been conducted with over 290 suppliers prioritised by risk. The audit process and self-assessment questionnaire have been broken up into the 6 pillars. This ensures that the engaged suppliers can demonstrate compliance with legal requirements and alignment with our values and ethics. This includes water-related fines/incidents and information related to treatment of discharge. This information is used to evaluate risks. 90 suppliers were requested to complete self-assessment questionnaires, of which 6 audits were carried out during 2016. No incentive is given to suppliers to report information; however a penalty of non-compliance could result in that supplier losing their contract.

W1.4
Has your organization experienced any detrimental impacts related to water in the reporting year?

Yes

W1.4a
Please describe the detrimental impacts experienced by your organization related to water in the reporting year

Country	River basin	Impact driver	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
South Africa	Limpopo (WMA)	Phys-Increased water scarcity Phys-Increased water stress	Constraint to growth	All of our operations within the Limpopo river basin are in water stressed areas. Given the drought in South Africa in	Ongoing	The financial impact is increased costs of water provision and is significant for Anglo American. We have	Engagement with community Engagement with public policy makers Infrastructure mainten	We continually strive to manage our water use so as not to compete with other users for the same water resource, and to

Country	River basin	Impact driver	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
				the last reporting year, exacerbated by the El Niño weather effect, the water security risk was particularly relevant. In addition, there are challenging socio-economic circumstances with high poverty levels and poor infrastructure. This means that access to secure water is a significant risk. For example, water supply to the Rustenburg circle and Thabazimbi circle has been a concern for several years because of a continued increase in the demand		spent $3.4million on upgrading the Polokwane Sewage works to ensure additional water to Mogalakwena, $0.7million on improving the reservoirs in Thabazimbi, $1.3million on a Dissolved Air Flotation (DAF) system at Rustenburg, $0.5million on improving the infrastructure at the Northam Sewage Works and USD0.8million at the Amandelbult operation on a provision of water to the community.	ance Increased capital expenditure Promote best practice and awareness	maintain the environmental reserve. Our approach aims to prevent material impacts on the environment, downstream ecosystems and food security. As part of our commitment to reducing our water demands, a key feature of our water strategy is our pursuit of zero consumption of potable water in process operations, excluding our domestic use demand. As part of our water-supply strategy, we have designed water-supply scenarios for the

Country	River basin	Impact driver	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
				for potable water in the area by other users. In the reporting year the Department of Water and Sanitation issued an instruction to reduce water consumption as a result of the drought. This directly impacts our Rustenburg and Amandebult complex mines.				next 20 years based on the latest production predictions. To ensure the long-term security of water availability for our operations and surrounding communities, we have also developed a bulk-water strategy and infrastructure plan, to protect, manage and maintain the water supply. Anglo American Platinum infrastructure and operational personnel are engaging with the various municipalities offering a range of financial support and technical expertise to

Country	River basin	Impact driver	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
								optimise water supply management. These have ranged from studies to identify additional water sources at Thabazimbi to meter installation and water supply optimisation at Rustenburg. The Amandelbult complex invested in a mobile wastewater treatment plant, water-purification plant, a waste-disposal unit and water tanker to bring clean water to the community. The cost estimates were derived from direct capital expenditure (invoices).

Country	River basin	Impact driver	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
South Africa	Olifants(WMA)	Phys-Pollution of water source Reg-Mandatory water efficiency, conservation, recycling or process standards Reg-Regulation of discharge quality/volumes leading to higher compliance costs Rep-Negative media coverage	Decrease in shareholder value	Anglo American Coal South Africa's operations are located in the Olifants river catchment in Mpumalanga. This catchment is under significant water stress due to historical coal mining impacts, compounded by impacts from agriculture, industry and sewage pollution. The main water quality issue associated with many Coal operations is that mine affected water is saline. One of the risks associated with this saline rich water is	Ongoing	The financial impacts of the incidents at Landau have not been accurately quantified.	Engagement with public policy makers Greater due diligence	At Coal South Africa, long term integrated water management plans are being developed for sites to mitigate non-compliance risks and post closure water management liabilities. These will be based on the development of robust conceptual hydrogeological models, which will provide high confidence level water and salt balances and improve prediction and quantification of risks at the receptor. Several procedural and technical controls have been

Country	River basin	Impact driver	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
				water quality non-compliance when discharging to the environment. In 2016, there were two incidents at Coal South Africa's operations and both related to the overflow of mine affected water into the receiving environment (Kopseer and Schoongezight dam at Khwezela North (Landau) Colliery). The Kopseer dam incident occurred in March 2016. After heavy rainfall in the week preceding the incident the Kopseer holding				put in place to prevent repeat incidents. The Schoongezight pollution control dam has been de-silted to create an additional 60,000 litres of holding capacity to accommodate heavier precipitation. Additional volumes of water will be sent to the Emalahleni Water Reclamation Plant (EWRP) for treatment. More effective procedures to separate clean water from mine-affected water have been put in place and treatment options are being assessed to find the

Country	River basin	Impact driver	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
				dam started filling up and decanted into a small dam on Greenside property and subsequently decanted mine-affected water into the Clydesdale pan. The Schoongezight pollution control dam at Landau colliery overflowed and discharged acidic water into the Schoongezight river. The cause of the incident related to a combination of heavy rains and insufficient removal of sediment. Such overflows exceed the levels under the				most appropriate solution. Evaporators to deal with Kopseer toe-seep water in the short term have been implemented. Impacted water is sprayed onto the Blaauwkrantz co-disposal facility to reduce water make.

Country	River basin	Impact driver	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
				water use license conditions. These incidents are likely to result in increased compliance costs and reputational risk.				
Canada	Other: Mackenzie River and Attawapiskat	Phys-Declining water quality Phys-Pollution of water source Reg-Regulation of discharge quality/volumes leading to higher compliance costs Rep-Litigation Rep-Negative media coverage Other: Excess underground water	Higher operating costs	The impact of water quality from our mining operations on surface and ground water sources is an issue at three of Anglo's North American sites: 1. De Beers Snap Lake underground mine operation is located in an area of excessive water where the host rock surrounding the ore body is fractured. This has resulted in the inflow of excess	Ongoing	Cumulatively these three sites are spending approximately $100 million on water management per annum as a result of the impacts associated with water quality	Engagement with public policy makers Infrastructure investment	1. Snap Lake mine was storing large volumes of water underground due to high concentrations of dissolved solids including mineral salts, which required treatment before discharge to conform to prescribed limits. As a result of market conditions, the operation was placed under extended care and maintenance in 2016. Monitoring and

Country	River basin	Impact driver	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
				water including ancient, naturally occurring “connate” groundwater that is high in mineral salts and requires special attention so that the mine remains in compliance with water licence requirements. 2. At the Trend Coal operation, elevated concentrations of selenium in the surrounding environment pose a risk. The development of lower cost selenium (Se) mitigation measures will significantly reduce the operating and rehabilitation costs for the mine. 3.				reporting in support of the various regulatory commitments around water management will continue throughout this phase. 2. The Trend operation is also under care and maintenance. However, a program of work is underway to better manage selenium (Se) export to local creeks, which includes conducting work to improve the design of the demonstration treatment plant and exploring additional mitigation options. In November, the regulators approved the deferral of the constructi

Country	River basin	Impact driver	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
				At De Beers Victor mine (Attawapskat River Basin) the site is addressing issues associated with mercury.				on of the two additional Se treatment plants. With the mine in care and maintenance, it is anticipated that these treatment plants will only be constructed when mining resumes. 3. Victor mine carries out continuous monitoring and review to mitigate any mercury discharges. Victor's Annual Mercury Monitoring Report was completed and published in July 2016. In response to comments received from various stakeholders, the detailed report provides

Country	River basin	Impact driver	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
								additional data and analysis not included in previous annual reports, including information over and above that required by the regulator.
Brazil	Rio Doce	Phys-Declining water quality Phys-Drought Phys-Increased water stress	Plant/production disruption leading to reduced output	One of the biggest challenges faced by the Minas-Rio operation is the water scarcity that affects the South-Central region of Brazil. Since 2012, rainfall has been below the historical average. These lower rainfall rates have had an impact on the water availability in the Peixe River, which is responsib	The main impact was for a period of 2 months	In the order of $6 million was spent on modifying the chemistry of the water as well as the acquisition and installation of additional pumping capacity at the tailings dam to increase the use of process water recirculated and stored in the tailings dam reservoir.	Engagement with community Engagement with public policy makers Engagement with other stakeholders in the river basin Increased capital expenditure Increased investment in new technology	To mitigate this risk, the water resources team at Minas Rio developed an operational water balance, hydrological model and simulations to predict water abstraction stoppage periods in the Peixe River during the dry season. The current contingency plan has been implemented comprising the acquisition and

Country	River basin	Impact driver	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
				le for the supply of up to 80% of fresh water for primary activities at the Minas-Rio operation (steady state). The low levels of water also impact the quality of the water in the Peixe River. From July 16th to November 15th 2016, water abstraction from the Peixe River was halted to ensure the maintenance of residual minimum flow in the river, as an environmental control. In addition, the quality of water in the river is poor, due to the impact of unregulat				installation of additional pumping capacity at the tailings dam to increase the use of process water recirculated and stored in the tailings dam reservoir, as per its design. In addition, as risk mitigation against water security for the entire site the operation collaborated with the International Council on Mining and Metals (ICMM) on the first application of the ICMM's new water stewardship framework based on adopting a catchment-based approach that requires

Country	River basin	Impact driver	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
				ed discharge from other sources. The poor quality water impacted the processing ability of the plants and led to increased operational costs. The water shortage also led to a reduction in production capacity of the site which reduced the overall revenue of the operation.				inclusive engagement and collaboration with all relevant stakeholders on shared water challenges. The process brought together members of the local communities, municipalities, water basin committees and civil society organisations to better understand and manage shared water risks in the San Antonio water catchment. This enabled Anglo to better understand stakeholder concerns and aspirations related to the use of water in Minas-Rio;

Country	River basin	Impact driver	Impact	Description of impact	Length of impact	Overall financial impact	Response strategy	Description of response strategy
								identify major water issues and risks in the catchment and across mine life cycle; and build a response strategy to address water risks. The cost estimates were derived from incurred operational costs and invoices.

Further Information

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
Comprehensive company-wide risk assessment	Direct operations and supply chain	All facilities and suppliers	Anglo American employs a company-wide bottom-up and top-down approach to assessing and managing risk, including risks from water. Site environmental management systems, which are aligned with ISO 14001, link into our Operational Risk Management programme (ORM). This aids in the risk identification process and prioritisation in conjunction with the Anglo American Integrated Risk Management Standard. Key risks are included in the Group Risk register, which is reviewed by the Group Executive and relevant Board committees. During 2016, the top priority unwanted events continued to be audited at

Risk assessment procedure	Coverage	Scale	Please explain
			operations on a rotational basis. The results are reported to site and business unit leadership teams, and reviewed at the Sustainability Committee of the Board. Where material, these include water related risks. To assess the water risks related to our supply chain, we have engaged with suppliers through a self-assessment questionnaire.

W2.3

Please state how frequently you undertake water risk assessments, at 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
Six-monthly or more frequently	Facility	3 to 6 years	Each operation is required to conduct an integrated risk assessment using the Group's Operational Risk Management standard. Our water-related risks are assessed up to 2020 (although the long-term risk is not assessed every 6 months), and beyond where relevant. The facility-level water risk identification is aided by the Anglo American Water Management Standard (GTS21) and all operations have environmental management systems aligned with ISO 14001.
Six-monthly or more frequently	Region	3 to 6 years	Operational risks are identified at site level and then consolidated into business unit reports. Risks are assessed annually, if not more frequently, depending on the nature of the risk. Our water-related risks are assessed up to 2020, the year by which our current target must be achieved. The risk assessment process takes into account potential impacts to the river basin associated with our operations.
Six-monthly or more frequently	Country	>6 years	Business unit risk registers are analysed and incorporated into the Group Risk Register where material. The Risk Register is presented to Anglo American executive team and Board bi-annually. The Aqueduct Water Risk Atlas and WBCSD Global water tool has been used at a group level for high level risk profiles, as it provides an all-round risk profile for water management.

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 10 years

W2.4a

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

Water is fundamental to our business; it is of increasing significance given that more than 75% of our mines are in high water risk areas.
Water risk that impacts Anglo American's growth strategy: Water security is regarded as one of

the significant risks that impacts our business. Out of the six ‘high risk’ operations identified, there are two critical water scarcity areas that are currently receiving specific attention: our Platinum and De Beers operations in the Limpopo province of South Africa; and our Copper operations in the Andes in Chile.
Process by which results of the water risk assessment inform Anglo American's growth strategy: Our evaluation of the impact of water on the company’s growth strategy is embedded across our risk assessment process that includes water volume, quality and supplier risk considerations. In 2016, we developed a new water management standard and water management guidelines in alignment with global best practice and the ICMM water position statement and reporting guidelines. A cornerstone of the new standard is a more focused and structured approach to managing catchment-wide water risks, in partnership with regional stakeholders. Each business unit has developed and is implementing its own water plan and in certain high-risk regions we have developed regional water plans. In South Africa, our Platinum business has started modelling water supply scenarios for the next 20 years for each of its water stressed operations, where there are rapidly growing demands for water to support agricultural, mining, industrial and domestic consumption.

How Anglo American's growth strategy has changed as a result of water risks: Our immediate priorities involve ensuring access to adequate supplies of water for operations without compromising other local needs, and compliance with permit and legal requirements. One way in which our growth strategy has changed is that the Anglo American Investment Development Model, now integrates water-risk management more systematically in our project planning and development processes. Future projects and our associated growth strategy, now considers water in far greater detail earlier in the process. If the risk from water at that project is deemed too great, Anglo American will not proceed into feasibility.

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 WBCSD Global Water Tool WRI Aqueduct Other: ICMM Water Stewardship Framework	Anglo American uses a combination of internal knowledge and external tools to assess water risks at a global level and at each operation. Internally, our Integrated Risk Management Standard and the Operational Risk Management (ORM) programme includes the expectation that the environmental manager at site level assesses water risks. The environmental manager works with the BU level risk facilitator or representative to input environmental risks into risk registers and the ORM process. Priority unwanted events are identified – water may be considered as a feature of one of these events (for example tailings failure and the associated impacts on water). Critical controls are then identified, processes are implemented and effectiveness is monitored. Prioritisation of risks is based on an assessment of the likelihood of occurrence and potential impact. Risks are rolled up to the BU level and then up to Group level. This process is supported by Anglo American Group Water experts. This approach allows Anglo American to provide specific details of water related risks in the areas in which we operate. In 2016, we developed a new water management standard and water management guidelines in alignment with global best practice and the ICMM water position statement and reporting guidelines. A cornerstone of the new standard is a more focused and structured approach to managing catchment-wide water risks, in partnership with regional stakeholders. The standard requires that every site identify or appoint a water co-ordinator to oversee implementation of the standards and our strategy. Each business unit has developed and is implementing its own water plan and in certain high-risk regions we have developed regional water plans. This process supplements our risk management process and ensures that all water risks are adequately captured and managed. The operational scope of the risk assessment includes all of Anglo American's operations. We also use the internally developed Socio-Economic Assessment Toolbox (SEAT) to understand our water related socio-economic impacts, enhance stakeholder dialogue and the management of social issues. In addition, Anglo

Method	Please explain how these methods are used in your risk assessment
	American has also used the WBCSD Water Tool and WRI Aqueduct Risk Mapping Tool to evaluate water stress and scarcity on the overall business.

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	Anglo American conducts extensive water availability and water quality monitoring and analysis of surface water and groundwater resources at all of our sites to assess security of supply and risk. We use this data and our internal company knowledge to feed into the risk assessments we conduct on site regularly.
Current water regulatory frameworks and tariffs at a local level	Relevant, included	Anglo American's corporate water management standard requires sites to manage their water issues in compliance with applicable laws, regulations and other obligations or requirements. We use both internal company knowledge and external legal compliance audits to ensure we stay up to date with current regulatory information and tariffs at a local level. Our regulatory teams within each country also provide us with new or pending regulatory issues within the water areas to allow us to plan for future changes. Regulatory and tariff information is integrated into our on-site water risk assessment processes that are on-going.
Current stakeholder conflicts concerning water resources at a local level	Relevant, included	Stakeholder conflict over water resources is a significant risk for Anglo American, particularly in Anglo American Platinum. As part of our risk assessment we identify opportunities to work in partnership with the water utilities and stakeholders to manage the water supply. This catchment based approach is an integral component of our new Water Management Standard. For example, we recently participated in the Olifants River Catchment Management Forum established with other mining companies, comprised of various local stakeholders. The consortium assesses acid mine drainage in the Olifants river catchment in Mpumalanga, including the feasibility of applying mine-impacted water for irrigation purposes. We also piloted the ICMM water guidance at Minas Rio through a multi stakeholder workshop with particular emphasis on perceived risks. In addition, we use the Socio-Economic Assessment Toolbox (SEAT) to understand our water related socio-economic impacts, enhance stakeholder dialogue and the management of social issues. Through these internal processes stakeholder conflicts are embedded in our water risk assessment processes.
Current implications of water on your key commodities/raw materials	Relevant, included	Our key purchased commodities/raw materials include electricity, diesel, explosives, tyres and timber. We have started to assess water risks within our supply chain by the dissemination of questionnaires to suppliers. The “responsible sourcing” questionnaire includes a call for water and

Issues	Choose option	Please explain
		environmental related metrics. Certain commodities may present inherent water risks due to a combination of their importance to our processes and the importance of water in their production (e.g. the drought in South America impacts electricity provision which is sourced from hydropower). We use the feedback from our internal engagement with our suppliers (internal company knowledge) to feed into our risk management processes.
Current status of ecosystems and habitats at a local level	Relevant, included	Our corporate Biodiversity Management standard aims to protect ecosystems and habitats at the site level. Ecosystem and habitat impacts from our water use are addressed in site Biodiversity Action Plans that are the basis for formal obligations and commitments. Our on-site environmental professionals with internal company knowledge manage these issues and feed relevant information into the risk processes on site.
Current river basin management plans	Relevant, included	River basin management plans are important as they impact directly on water availability and water quality of our operations. Anglo American's new water management standard has been developed in alignment with global best practice and the ICMM water reporting guidelines. A cornerstone of the new standard is a more focused and structured approach to managing catchment-wide water risks. This will include an evaluation of river basin plans in the risk assessment process. We use our internal company knowledge and the engagement we have with stakeholders to feed this into the risk assessment process.
Current access to fully-functioning WASH services for all employees	Relevant, included	Unhygienic conditions pose a risk to public health and inherently the health and safety of our employees, resulting in disruptions to the work force. Access to safe water, adequate sanitation and proper hygiene is a basic human right. As such Anglo American incorporates access to fully-functioning WASH services at all mining operations and hostels. Internal company knowledge is used to integrate the contextual issues of WASH services into the risk assessment process.
Estimates of future changes in water availability at a local level	Relevant, included	The use of climate-change risk assessments and climate models, the WRI’s Aqueduct tool, and internal methods at operations allows us to forecast and estimate future changes in water availability in the river basins we operate in. Anglo American is using downscaled climatic models to understand the future changes in climate, including the impact on water availability. In 2016, we partnered with the UK Met Office on high-resolution modelling for one of our operations. The scenario data will be used to inform our catchment-based water model. Therefore, we are able to identify possible risks much earlier and incorporate the necessary changes into our planning processes.

Issues	Choose option	Please explain
Estimates of future potential regulatory changes at a local level	Relevant, included	Future potential regulatory changes at a local level can pose significant risks to Anglo American. For example, there is future regulation on the inclusion of water costs in closure cost estimates in South Africa that may lead to increased costs. We engage regularly with regulators and water supply entities on potential local-level regulations anticipated in the future. The Anglo American Legal department, the Chamber of Mines forums and other working groups also inform the business risks related to future regulation. Future regulatory and tariff information is gathered in this manner and this internal company knowledge is integrated into the risk management process.
Estimates of future potential stakeholder conflicts at a local level	Relevant, included	In addition to our operational risk management process, we use the Socio-Economic Assessment Toolbox (SEAT) which allows Anglo American to engage with stakeholders on future water risks and understand our socio-economic impacts from a water perspective (both positive and negative). Our new water management standard, which has a more structured approach to managing catchment-wide water risks, in partnership with regional stakeholders, also assists us manage future potential stakeholder conflicts in water. We are also heavily involved in initiating projects that can secure the supply of water for stakeholders and this allows for conflict and risks to be averted at a local level. Our ongoing stakeholder engagement allows us to integrate future water risks into the risk assessment process.
Estimates of future implications of water on your key commodities/raw materials	Relevant, included	Anglo American's key procured commodities/raw materials include steel, timber, diesel, chemicals, electricity and explosives. Delays caused by water issues that affect the production of these commodities will reduce production levels and profit margins. The issue surrounding future water implications on key commodities/raw materials are factored into the risk assessment process through engagements and the dissemination of questionnaires to suppliers requesting environmental and water related information (internal company knowledge).
Estimates of future potential changes in the status of ecosystems and habitats at a local level	Relevant, included	For new operations, Environmental Impact Assessments (EIAs) estimate potential future impacts of operations, including those from water, on ecosystems. Consequently, we are able to decide on the appropriate mitigation measures to be implemented to reduce the impact on ecosystems and habitats. For existing operations, we use the internal company knowledge of our on-site environmental specialists and the Biodiversity Action Plans we have on site to ensures future changes are integrated into the relevant risk management process. This is particularly important for our mining operations where we need to rehabilitate land back into an acceptable state aligned to what future ecosystems may look like.

Issues	Choose option	Please explain
Scenario analysis of availability of sufficient quantity and quality of water relevant for your operations at a local level	Relevant, included	Anglo American has used tools such as the WBCSD water tool and WRI aqueduct tool to do initial screenings of which of our operations are located in water stressed areas. This is complimented by the internal knowledge of our water specialists. By way of example, our Platinum operations in South Africa, are located in critical water scarce areas. As such the Platinum business has started modelling water supply scenarios for the next 20 years for each of its water stressed operations, where there are rapidly growing demands for water to support agricultural, mining, industrial and domestic consumption. We are also building climate scenarios using the best available science. Using a number of regional climate change models, the scenarios projected climatic variables up to mine closure and beyond, with risks relating to extreme rainfall events, extended periods of drought and steadily increasing temperatures.
Scenario analysis of regulatory and/or tariff changes at a local level	Relevant, included	Given the uncertainty regarding changes in water regulation and policy (or the implementation of proposed changes), we do consider a range of potential outcomes and scenarios, especially with regard to water pricing strategies. For example, proposed regulations in South Africa require the lining of new pollution control infrastructure and mine residue dumps. In order to understand the cost implications of these regulations the business models various scenarios - these form part of our internal company knowledge. Our internal water specialists can then engage with regulators and water authorities better and we are able to consider the most relevant information. The results of scenarios developed then inform the risk assessment process on new projects.
Scenario analysis of stakeholder conflicts concerning water resources at a local level	Relevant, included	Anglo American engages with its stakeholders on a regular basis and uses this to determine potential concerns that the stakeholder has. In addition to our operational risk management process, SEAT provides sites with guidance on how to consider potential water related conflict and engage with stakeholders to mitigate conflict. Our new water management standard, which has a more structured approach to managing catchment-wide water risks, in partnership with regional stakeholders, also assists us manage potential stakeholder conflicts in water. By regular engagement with stakeholders we are able to consider the most relevant information in our future scenarios.
Scenario analysis of implications of water on your key commodities/raw materials	Not relevant, explanation provided	Although we do engage with our suppliers around water issues, the risk is not material enough to warrant scenario analyses of water on our commodities or raw materials.
Scenario analysis of potential changes in the status of ecosystems and habitats at a local level	Not relevant, explanation provided	Anglo American proactively manages the ecosystems and habitats within which it operates on a continuous basis through its legally regulated environmental management programmes and related biodiversity action plans, but the risk is not so material that it

Issues	Choose option	Please explain
		requires us to conduct scenario analyses on future habitat changes.
Other	Not evaluated	

W2.7
Which of the following stakeholders are always factored into your organization's water risk assessments?

Stakeholder	Choose option	Please explain
Customers	Not relevant, explanation provided	The nature of the commodities that Anglo American produces typically does not require water to transform it for other applications. As a result, our customers are not exposed to significant water risks. Managing the water risks within our own boundaries, including the communities that live alongside our operations, is far more significant and as such our customers are not engaged with regards to water risks.
Employees	Relevant, included	Employees are included in water risk assessment processes where relevant to their work responsibilities. Where required and where relevant, employees that have a responsibility or activity that involve water management will be included in the risk management processes that happen at an operational level. Water targets are also included in performance contracts of relevant managers. In addition, employees are made aware of water risks through communications initiatives around, for example, World Water Day and World Water Week. Engagement with our employees around water is done on a continuous basis through emails, stakeholder workshops and in the day to day running of its operations. For example, we have an Environmental Champion of the Quarter Award within Anglo American Platinum. A Water Awareness Quarter was created to increase awareness of the importance of conserving and protecting, specifically from pollution, our water resources. As part of the Water Awareness Quarter we developed a water guideline document that was distributed to all employees. Each operation was then required to submit their response and the Amandelbult operation was chosen as the winner. In addition our facilities have fully functioning “WASH” services at all mining operations and hostels. Any relevant feedback we receive from our employees will subsequently be used in the risk management process.
Investors	Relevant, included	Investor concerns related to water (and environmental issues generally) are increasingly important given the water related risks that Anglo American is exposed to. We also consider investors via our materiality panel. Investors express their view through meetings, such as the AGM, interviews and direct electronic queries which occur on a regular basis. These investor views are factored into the company’s water risk assessment.
Local communities	Relevant, included	The concerns and perspectives of local communities are central to our water risk assessments and social-impact assessments. Competition for water among users is of increasing importance, as has been shown by demonstrations by local communities about water supply outside some of our Platinum operations in South Africa. We engage with local communities regularly in a formal (e.g. community meetings) and informal (e.g. one-on-one meetings) manner and the views

Stakeholder	Choose option	Please explain
		expressed by these communities factor into our water risk assessments. For example, in Peru, the Quellaveco Copper project engages local communities, through the Quellaveco Dialogue Tables, in monitoring its water management practices, and is examining options for providing water or power from its dams. The Quellaveco Dialogue Tables are considered global industry best practice, particularly on community dialogue around water.
NGOs	Relevant, included	The concerns and perspectives of key NGOs are important considerations in our water risk assessments and social impact assessments. An example is the partnership between Iron Ore Brazil's Minas-Rio operation and BioAtlântica Institute (IBio), a non-profit organization that works to improve the environmental quality and promote integrated management of regional resources. The objective of this partnership is the development of an Environmental and Productive Zoning Plan for the Santo Antonio river sub-basins, which is the first step of the Water Availability Master Plan. We also participate in several important water-related forums, such as the Strategic Water Partners Network (SWPN) programme aimed at addressing South Africa's water shortages. These engagements are typically done face-to-face on a specific needs basis throughout the year and feed into the risk assessment process thereafter, where relevant.
Other water users at a local level	Relevant, included	Competition for scarce resources is increasing and the needs and rights of other users are central to our legal and social license to operate. Water forums are developed and often led by Anglo American operations to ensure that the requirements of all the mining companies, other water users and the municipalities are known and risks determined through these forums. We engage with the water forums in meetings and workshops on a regular basis throughout the year and this information is used in our risk assessments. For example, we recently participated in the Olifants River Catchment Management Forum established with other mining companies. Anglo American has worked with Exxaro and the Strategic Water Partners Network (SWPN) programme to develop the first draft water-loss-reduction plan for Gauteng province. This programme aims to reduce the business-interruption risks in Gauteng and earn water credits.
Regulators	Relevant, included	Engagement with regulators, such as the Department of Water and Sanitation in South Africa and the Water Department in Chile, is important as they are responsible for setting the regulations, developing water pricing reforms and reviewing and approving our water use licenses. The concerns and perspectives of regulators are critical inputs to our water risk assessments. Our engagement with the regulators is done regularly throughout the year in face-to-face meetings and workshops. We also engage with local municipalities as the water services authorities through partnerships to improve the overall water availability in the regions in which we operate. We provide assistance (financially and technical) with demand side management and water conservation programmes as well as infrastructure development.
River basin management authorities	Relevant, included	Anglo American considers the river basin management authorities as the same stakeholder as the "regulators at a local level". We engage with these stakeholders in the same

Stakeholder	Choose option	Please explain
		fashion as regulators as they are typically responsible for setting the regulations, developing water pricing reforms and reviewing and approving our water use licenses. Our engagement is done regularly throughout the year in face-to-face meetings and their concerns and perspectives are critical inputs to our water risk assessment.
Statutory special interest groups at a local level	Relevant, included	We take a lead role to co-ordinate stakeholders into interest groups that work together with regulators, including the respective municipality, water catchment agency and governments, to manage the local water issues. For example, in Anglo American Platinum we lead the Olifants River Joint Water Forum, various mining forums in the areas where we operate. In Chile, our Los Bronces Copper operation participates in the round tables as part of the Maipo Irrigation Society and Mapocho River Supervisory Board to coordinate the use of water rights in the area that we operate in. This engagement usually takes place throughout the year in the form of regular face-to-face meetings.
Suppliers	Relevant, included	We have started to facilitate more insight into the risk of supply of key commodities, we have attempted to request environmental and water information from suppliers such that it is possible to determine whether the interruption of the supply of products would result in production prices increasing. This process is new, but is likely to be considered within future water risk assessments. In addition, we hosted our first FutureSmart Mining Open Forum on water in 2015. The focus was to find more efficient ways to mine but also, crucially, to reduce our impact and create a positive legacy for the surrounding environment and local communities. The first forum had representation from more than 75 different market sectors, 30 companies, 16 countries and six continents, including some of our suppliers.
Water utilities at a local level	Relevant, included	We constantly engage with the water supply companies through face-to-face meetings on a regular basis throughout the year. In many of the less developed areas in which we operate, we look to play a leading role in supplying water to communities. This mitigates societal risks and contributes to our social license to operate. For example, Kumba Iron Ore pumps excess water from its open-cast mining pits to Sedibeng Water, the local water services. Sedibeng treats the water and supplies it to the local communities.
Other	Not evaluated	

Further Information

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 only

W3.2

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

'Substantive change' would be anything that could materially affect our ability to meet business objectives and, or, is of material importance to stakeholders. Materiality is defined as a matter that, in the view of the Board, senior management and key stakeholder groups, is of such importance that it could in the short, medium or long term:
• have a significant influence on, or is of material interest to our stakeholders
• substantively influence the company's ability to meet it strategic objectives
• has a high degree of inter-connectivity with other material issues.

From a financial perspective and with respect to water a 'substantive change' would be a disruption to our operations or supply chain caused by a water incident that results in a change in production or increase in costs. A water incident may, for example, include a community protesting around water supply and preventing usual operations or insufficient supply of potable water from a municipal supplier.

Financially Anglo American defines substantive change as a loss in revenue or increase in operating costs of more than $25 million.

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 of company-wide facilities this represents

Country	River basin	Number of facilities exposed to water risk	Proportion of company-wide facilities that this represents (%)	Comment
South Africa	Limpopo (WMA)	1	31-40	Anglo American regards all of our operating mines to be exposed to water risks that could have a substantive change. There are 26 individual sites in the Limpopo WMA - these have been grouped into a single facility.
South Africa	Vaal (WMA)	1	6-10	Anglo American regards all of our operating mines to be exposed to water risks that could have a substantive change. There are 7 individual sites in the Vaal WMA - these have been grouped into a single facility.
South Africa	Olifants(WMA)	1	11-20	Anglo American regards all of our operating mines to be exposed to water risks that could have a substantive change. There are 15 individual sites in the Olifants WMA - these have been grouped into a single facility.
Chile	Other: Aconcagua	1	1-5	Anglo American regards all of our operating mines to be exposed to water risks that could have a substantive change. There are 3 individual sites that withdraw water from the Aconcagua River - these have been grouped into a single facility.
Peru	Other: Asana River	1	1-5	Anglo American regards all of our operating mines to be exposed to

Country	River basin	Number of facilities exposed to water risk	Proportion of company-wide facilities that this represents (%)	Comment
				water risks that could have a substantive change.
Brazil	Rio Doce	1	1-5	Anglo American regards all of our operating mines to be exposed to water risks that could have a substantive change.
Brazil	Parana	1	1-5	Anglo American regards all of our operating mines to be exposed to water risks that could have a substantive change. There are 3 individual sites in the Parana Basin - these have been grouped into a single facility.
Brazil	Tocantins	1	1-5	Anglo American regards all of our operating mines to be exposed to water risks that could have a substantive change. There are 2 individual sites in the Tocantins Basin - these have been grouped into a single facility.
Australia	Fitzroy	1	6-10	Anglo American regards all of our operating mines to be exposed to water risks that could have a substantive change. There are 6 individual sites in the Fitzroy Basin - these have been grouped into a single facility.
Australia	Other: South-East Coast	1	1-5	Anglo American regards all of our operating mines to be exposed to water risks that could have a substantive change. There are 2 individual sites towards the South-East Coast of Australia - these have been grouped into a single facility.
Canada	Attawapiskat River	1	1-5	Anglo American regards all of our operating mines to be exposed to water risks that could have a substantive change.
Canada	Mackenzie River	1	1-5	Anglo American regards all of our operating mines to be exposed to water risks that could have a substantive change. There are 3 individual sites in the Mackenzie River Basin - these have been grouped into a single facility.
Zimbabwe	Save	1	1-5	Anglo American regards all of our operating mines to be exposed to water risks that could have a substantive change. There are 4 individual sites in the Save Basin - these have been grouped into a single facility.

Country	River basin	Number of facilities exposed to water risk	Proportion of company-wide facilities that this represents (%)	Comment
Namibia	Other: South Atlantic Coast	1	1-5	Anglo American regards all of our operating mines to be exposed to water risks that could have a substantive change. There are 3 individual sites towards the South Atlantic Coast of Namibia - these have been grouped into a single facility.
Botswana	Okavango	1	1-5	Anglo American regards all of our operating mines to be exposed to water risks that could have a substantive change. There are 4 individual sites in the Okavango Basin - these have been grouped into a single facility.

W3.2b

For each river basin mentioned in W3.2a, please provide the proportion of the company's total financial value that could be affected by water risks

Country	River basin	Financial reporting metric	Proportion of chosen metric that could be affected	Comment
South Africa	Limpopo (WMA)	% global revenue	11-20	
South Africa	Vaal (WMA)	% global revenue	11-20	
South Africa	Olifants(WMA)	% global revenue	6-10	
Chile	Other: Aconcagua	% global revenue	6-10	
Peru	Other: Asana River	% global revenue	Less than 1%	
Brazil	Rio Doce	% global revenue	1-5	
Brazil	Parana	% global revenue	1-5	
Brazil	Tocantins	% global revenue	1-5	
Australia	Fitzroy	% global revenue	6-10	
Australia	Other: South-East Coast	% global revenue	Less than 1%	
Canada	Attawapiskat River	% global revenue	1-5	
Canada	Mackenzie River	% global revenue	Less than 1%	
Zimbabwe	Save	% global revenue	Less than 1%	
Namibia	Other: South Atlantic Coast	% global revenue	1-5	
Botswana	Okavango	% global revenue	1-5	

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 potential impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
Chile	Other: Aconcagua	Physical- Drought Physical- Increased water scarcity Physical- Increased water stress	Constraint to growth	Water scarcity and stress is considered one of Anglo American's most significant water risks considering 75% of operations are located in water scarce areas. For example, Los Bronces which is Anglo American's largest operation in Chile and one of the largest copper deposits in the world is particularly exposed to water stress. The water constraints have resulted in production	Current-up to 1 year	Highly probable	High	Engagement with public policy makers Infrastructure investment Increased investment in new technology	Recent water project expenditure at Los Bronces was US$74 million and is considered significant in relation to the overall operating costs of the operation.	Los Bronces continues to mitigate water supply challenges by implementing technical solutions that promote water efficiency and water resilience. Water is transported to the operation via a 56-kilometre pipeline from the Las Tórtolas tailings dam using a special water-recycling system. The water recycling system at the Los

Country	River basin	Risk driver	Potential impact	Description of potential impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				constraints. This has forced the team to develop and implement a series of water-efficiency measures and seek alternative, non-competing sources of water to ensure the continuity of adequate water supply for the operation. This is resulting in an increase in costs associated with purchasing and transporting water						Bronces operation was a significant investment and allows the site to recycle more than 66% of available water. Other reduction initiatives include reducing the evaporation in tailing dams as well as improving tailings deposition. The site designed an evaporation cover trial for implementation in 2017 in conjunction with a feasibilit

Country	River basin	Risk driver	Potential impact	Description of potential impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										y study for expanding the use of thickeners, and investigating other technology to recover water from tailings dams as part of its long-term efficiency plan. The efficiency strategy will be reviewed and optimised in 2017. The operation is also expanding its engagement with regional stakeholders and potential water partners and evaluati

Country	River basin	Risk driver	Potential impact	Description of potential impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										ng new water sources, ranging from water transfer schemes, to regional desalination. In the long-term, more stringent environmental conditions, competing demand and continued dry conditions will continue to challenge security. The costs incurred are direct capital expenditure and derived from invoices.
South	Olifants(WMA)	Physical-	Decrease in	Anglo American	Current-up	Probable	High	Engagement	Costs have	At Coal South

Country	River basin	Risk driver	Potential impact	Description of potential impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
Africa		Declining water quality Regulatory-Mandatory water efficiency, conservation, recycling or process standards Regulatory-Regulation of discharge quality/volumes leading to higher compliance costs Reputational-Litigation Reputational-Negative media coverage	share holder value	Coal South Africa's operations are located in the Olifants river catchment in Mpumalanga. This catchment is under significant water stress because of historical coal mining impacts, compounded by impacts from agriculture, industry and sewage pollution. The main water quality issue associated with many Coal operations is that mine affected water is saline. One of the risks	to 1 year			with public policy makers Increased capital expenditure Increased investment in new technology	not been quantified.	Africa, long term integrated water management plans are being developed for sites to mitigate non-compliance risks and post closure water management liabilities. These will be based on the development of robust conceptual hydrogeological models, which will provide high confidence level water and salt balances and

Country	River basin	Risk driver	Potential impact	Description of potential impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				associated with this saline rich water is possible water quality non-compliance when discharging to the environment. For example, in the reporting year there were two incidents for Coal South Africa's operations and both related to the overflow of mine affected water into the receiving environment. More stringent discharge requirements are likely to result in increased compliance costs and reputational risk.						improve prediction and quantification of risks at the receptor. At Coal South Africa, water-treatment plants are used extensively to treat mine-affected water. The flagship eMalahleni water-reclamation plant, built in 2007, treats around 50 million litres of mine-affected water every day and supplies water to the eMalahleni Municip

Country	River basin	Risk driver	Potential impact	Description of potential impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				The potential impacts may involve an increase in operational costs and long-term reduction in shareholder value. New draft legislation in South Africa, which incorporates water liability in closure costs, has been published and may result in significant increases in current closure liabilities across the industry. Active treatment of this saline water with available technology is likely to result in significant						ality. Coal South Africa is now piloting passive water-treatment technologies at three of its sites. Passive technologies are more sustainable because they do not require active human intervention in the long term, or power. In all cases, the treated effluent is suitable for irrigation of crops in local communities. This will reduce our potentia

Country	River basin	Risk driver	Potential impact	Description of potential impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				cost to operations.						l closure liability estimate. Mafubemine has been selected by the Department of Water and Sanitation as the first trial site to demonstrate varying aspects of mine-water irrigation for crop production. Anglo American's new water management standard has been developed in alignment with global best practice and the ICMM water reportin

Country	River basin	Risk driver	Potential impact	Description of potential impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										g guidelines. A cornerstone of the new standard is a more focused and structured approach to managing catchment-wide water risks. Effective regional or catchment management is important in addressing the long-term impacts of mine affected water. Anglo American participates in the Olifants River Catchment

Country	River basin	Risk driver	Potential impact	Description of potential impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										Management Forum established with other mining companies. This is a neutral participation platform where members can actively contribute to water management in the Olifants River Catchment through collaboration on research, development and implementation of joint projects to improve the water quality and quantity in the catchment.

Country	River basin	Risk driver	Potential impact	Description of potential impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
South Africa	Limpopo (WMA)	Physical-Increased water scarcity Physical-Increased water stress Reputational-Inadequate access to water, sanitation and hygiene	Constraint to growth	Expansion of the Mogalakwena mine is potentially hindered by limited water access and on-going drought conditions. The mine is located in an area where there are rapidly growing demands for water to support agricultural, mining, industrial and domestic consumption in order to support on-going economic development and growth. Although we have been re-using pit water in our concentrators, this source is	Current-up to 1 year	Probable	High	Engagement with community Engagement with suppliers Infrastructure investment Increased capital expenditure	A US$6 million investment by Anglo American Platinum, considered significant, will be made to support the upgrade the Polokwane's sewage works for quality improvement and to secure an additional 6 ML. Of the US$6 million we have spent US$4 million to date with US$1.5 million	We have implemented a long-term bulk water strategy and infrastructure plan, to protect, manage and maintain water supply to our operations. Anglo Platinum is a representative member and chairperson of the Executive Committee of the Olifants River Joint Water Forum which represents 22 mining companies with potentially 40

Country	River basin	Risk driver	Potential impact	Description of potential impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				beginning to deplete. The impact is an increase in costs (in order to find and purchase alternative water supplies) and a potential reduction in the output of the mine if water supplies are not found which would result in reduced revenue. We expect this impact to be on-going until such time as the Flag Boshielo Dam pipeline is completed.					being incurred in the reporting year. We have also provided significant time and technical input, which cannot be quantified, into the Olifants River Water Resources Development Project.	mining projects in the area. The forum is part of the Olifants River Water Resources Development Project (ORWRDP) which has constructed the De Hoop Dam and associated distribution infrastructure to provide water to the Olifants and Mogalakwena/ Sand Catchments. The next phase of this project involves the constru

Country	River basin	Risk driver	Potential impact	Description of potential impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										ction of a pipeline from the Flag Boshielo Dam into the Limpopo province. This pipeline is still in planning phase and is expected to be completed in 2025. We hope to source water from this to supplement our Mogalakwena operation. In order to further mitigate the risk of current water supply to Mogalakwena, we have 1. Invested R50

Country	River basin	Risk driver	Potential impact	Description of potential impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										million ($3.4 million) into upgrading the Polokwane Sewage Works which will provide an additional 6ML of water to the mine by late 2017; 2. We initiated studies in 2015 to evaluate the suitability of the ground water as a source of additional water; 3. We are evaluating the utilisation of wastewater effluent from the 2 larger Municip

Country	River basin	Risk driver	Potential impact	Description of potential impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										al Wastewater treatment plants of Mokopane; and 4. Identifying water savings opportunities in line with our water-efficiency target tool (WETT). The cost estimates were derived from invoices.
South Africa	SOUTH AFRICAN WATER MANAGEMENT AREAS (WMAs)	Regulatory-Regulation of discharge quality/volumes leading to higher compliance costs Regulatory-Regulatory uncertai	Higher operating costs	The regulatory environment for water is developing in South Africa and poses potential risks to Anglo American. Three important draft and recently	1-3 years	Highly probable	Medium	Engagement with public policy makers	The cost for responding to this risk is limited to employee remuneration for tasks carried out during normal operati	Anglo American engages regularly with the regulators, directly and through the Chamber of Mines. The Chamb

Country	River basin	Risk driver	Potential impact	Description of potential impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
		nty Regulatory-Statutory water withdrawal limits/changes to water allocation		promulgated regulations include: 1. The regulations requiring the lining of pollution control infrastructure and mine residue dumps has a potential cost impact on the business. 2. New draft legislation incorporating water liability in closure costs, currently under review, which may result in significant increases in closure liabilities as water was previously not requested/required to be included by the					ng procedures.	er of Mines is an industry organisation which, amongst other initiatives, examines policy issues in the South African mining sector. In this way, Anglo American ensures that issues that might arise due to this new regulatory environment are addressed. Long term integrated water management plans will be develop

Country	River basin	Risk driver	Potential impact	Description of potential impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				Department of Mineral Resources (DMR) in the closure provision submitted to the regulator. It is however premature to speculate on the impact this may have on our operations as these gazetted documents are only setting the scene in terms of the structures, principles and objectives through which the water services will be governed. 3. The Waste Discharge Charge System (WDCS) will require						ed for sites to mitigate non-compliance risks and post closure water management liabilities and will be based on the development of robust conceptual hydrogeological models once these have been finalised for all sites.

Country	River basin	Risk driver	Potential impact	Description of potential impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				polluters to internalise costs associated with waste and encourage the reduction in waste. There is a risk of a change in discharge regulations. Failure to comply will result in fines. In addition, the frequently changing regulatory environment and delays in processing applications makes it difficult to always obtain licenses on time. This can delay projects and can result in negative financial impacts						
Brazil	Rio Doce	Physical-Increas	Constraint to	One of the biggest	Current-up	Probable	High	Increased capital	In the order of	To mitigate this risk,

Country	River basin	Risk driver	Potential impact	Description of potential impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
		ed water scarcity Physical- Increased water stress	growth	challenges faced by the Minas-Rio operation is the water scarcity that affects the South-Central region of Brazil. Since 2012, rainfall has been below the historical average. These lower rainfall rates have had an impact on the water availability in the Peixe River, which is responsible for the supply of up to 80% of fresh water for primary activities at the Minas-Rio operation (steady	to 1 year			expenditure	US$6 million was spent on modifying the chemistry of the water as well as the acquisition and installation of additional pumping capacity at the tailings dam to increase the use of process water recirculated and stored in the tailings dam reservoir. These costs in relation to the operating costs of the busine	the water resources team at Minas Rio developed an operational water balance, hydrological model and simulations to predict water abstraction stoppage periods in the Peixe River during the dry season. The current contingency plan has been implemented comprising the acquisition and installation of additional

Country	River basin	Risk driver	Potential impact	Description of potential impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				state). The low levels of water also impact the quality of the water in the Peixe River. From July 16th to November 15th 2016, water abstraction from the Peixe River was restricted to ensure the maintenance of residual minimum flow in the river, as an environmental control. In addition, the quality of water in the river is poor, due to the impact of unregulated discharge from other sources. The poor					ss are considered significant.	pumping capacity at the tailings dam to increase the use of process water recirculated and stored in the tailings dam reservoir, as per its design. In addition, as risk mitigation against water security for the entire site the operation collaborated with the International Council on Mining and Metals (ICMM) on the first application of

Country	River basin	Risk driver	Potential impact	Description of potential impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				quality water impacted the processing ability of the plants and led to increased operational costs. The water shortage also led to a reduction in production capacity of the site which reduced the overall revenue of the operation.						the ICMM's new water stewardship framework based on adopting a catchment-based approach that requires inclusive engagement and collaboration with all relevant stakeholders on shared water challenges. The process brought together members of the local communities, municipalities, water basin committees and civil society organis

Country	River basin	Risk driver	Potential impact	Description of potential impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										ations to better understand and and manage shared water risks in the San Antonio water catchment. This enabled Anglo to better understand stakeholder concerns and aspirations related to the use of water in Minas-Rio; identify major water issues and risks in the catchment and across mine life cycle; and build a response strategy to address

Country	River basin	Risk driver	Potential impact	Description of potential impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
										water risks. The cost estimates were derived from incurred operational costs and invoices.
Chile	Other: Aconcagua	Physical-Declining water quality Physical-Pollution of water source Regulatory-Regulation of discharge quality/volumes leading to higher compliance costs	Higher operating costs	At Copper's El Soldado operation, sulphate seepage from the El Torito tailings dam has the potential to impact downstream water bodies and groundwater wells used by the local community. Sulphate concentration limits in the monitoring wells and the dam lagoon have exceeded	1-3 years	Probable	Medium	Engagement with public policy makers Increased capital expenditure	The installation of the underground drains to capture seepage in 2016 cost approximately US$1 million.	Superficial drains were complemented by the installation of underground drains to capture the seepage. These drains were installed during 2016 and the seepage water is pumped back to the tailings dam. Additional studies

Country	River basin	Risk driver	Potential impact	Description of potential impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				the permit conditions and the Chilean regulations for potable and irrigation water. The impacts are being mitigated by way of the installation of drains and further studies are being undertaken.						to identify solutions and technologies to mitigate sulphate in the tailings dam water are underway. The current mitigation cost US$1 million and was derived from invoices.
Chile	Other: Aconcagua	Physical-Declining water quality Physical-Pollution of water source Regulatory-Regulation of discharge quality/volumes leading to higher compliance costs	Higher operating costs	At Copper's Los Bronces operation, acidic water is generated in the inactive Donoso waste rock dump. The operation manages the discharge of acid mine drainage into the environment using	1-3 years	Probable	Medium-high	Engagement with public policy makers Increased capital expenditure	The total cost of addressing this risk is estimated at approximately US$90 million.	The first phase in addressing this risk was carried out in 2016 and involved the installation of a sophisticated collection system to collect and recycle the acid mine

Country	River basin	Risk driver	Potential impact	Description of potential impact	Timeframe	Likelihood	Magnitude of potential financial impact	Response strategy	Costs of response strategy	Details of strategy and costs
				an engineering design to contain, manage and treat melting ice on the waste rock dump, and is currently developing a permanent solution to the issue. In November 2016, an overflow of contact water from the containment pond at the Donoso waste rock dump occurred. The project was in commissioning stage at the time of the incident (when snow melt occurred).						water through the tailings facility, at a cost of approximately US$30 million. The second phase will involve building a water treatment plant which will cost approximately US$60 million. However, this is expected to only commence between 2020 and 2022 due to the environmental authorisations required.

W3.2f

Please choose the option that best explains why you do not consider your organization to be exposed to water risks in your supply chain that could generate a substantive change in your business, operations, revenue or expenditure

Primary reason	Please explain
Risks exist, but no substantive impact anticipated	Anglo American recognises that there are water risks in the supply chain, primarily linked to some of the main commodities that we use such as timber, electricity and fuel. E.g. approximately 65% of national electricity comes from hydropower in Brazil where drought conditions have put pressure on hydro-electricity generation capacity. This has caused electricity price increases and supply outages (although this has not resulted in any production stoppages at Anglo American operations). During the last reporting year, we re-looked and updated the definition of 'substantive change'. In doing this we reviewed the water risks in the supply chain and determined that the impacts will not be substantive. The reason is that the impact would need to trigger a US$25 million threshold to be substantive. The commodities that we procure that may be impacted by water are generally supplied by large companies that are addressing their own water risks internally. Our procurement policies also ensure that we consider alternative suppliers of our main commodities in order to manage the supply risk. In analysing these commodities we believe that should one of the suppliers be impacted by water risks, we would be able to source an alternative. In this way, the impact on the business would be less than US$25 million. We anticipate repeating this exercise again in 2017 and will request additional information from suppliers who we consider to be potentially exposed to water risks.

Further Information

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	Comment
Rest of world	Cost savings	Driving operational excellence is one of the corner-stones of our water programme. Reducing water consumption and associated cost is a vital component of this. The strategy we employed to take advantage of this was to set operational water targets through the implementation of our water efficiency target tool (WETT). The tool forecasts the projected business-as-usual (BAU) water demand of individual operations and establishes a register of	Current-up to 1 year	Operations employ a combination of technology, behaviour and process-change initiatives in order to save water. Apart from using less water, many of our operations are also experimenting in the use of different qualities and sources of water. More emphasis is on understanding the direct and indirect water costs at operational level across the Group through several water cost parameters managed in our S&SD

Country or region	Opportunity	Strategy to realize opportunity	Estimated timeframe	Comment
		water-saving projects, linking the two in order to deliver future performance targets. Each water target is expressed as an absolute reduction in total water consumption to be achieved by 2020 against the projected BAU water demand for that operation. Progress against these targets is being tracked year-on-year since 2011 and reviewed annually at each operation. The outcome of this process is a reduction in potable water use and an overall cost saving in using less water. By the end of 2016 we had achieved an estimated 19% water saving against our projected water usage target. Water-saving projects, which included more effective dust suppression, dewatering of tailings and more efficient ore separation, saved the Group approximately 22865ML of water, equating to savings of approximately US$15million.		Database. An example of new technologies being used are bitumen based dust suppressants. A FutureSmart Mining Forum on water was held in 2015 by Anglo American and will drive a process to develop and implement step change technologies in the business.
Rest of world	Increased brand value Social licence to operate	Water is of increasing significance to our business, given that around 75% of our current portfolio is located in high-water-risk regions. To maintain our licence to operate, we cannot degrade water quality or compromise the access rights of other users. Progress in implementing our water strategy is driven through our water management programme, which has three areas of focus: driving operational excellence; investing in technology; and engaging and partnering with our stakeholders. This last element of the strategy can be demonstrated by building resilience in the communities through provision of water and assisting in infrastructure delivery. Examples include:	Current-up to 1 year	

Country or region	Opportunity	Strategy to realize opportunity	Estimated timeframe	Comment
		1. Kumba Iron Ore operations of Kolomela and Sishen pumped groundwater, in excess of operational needs, to Sedibeng Water to supply it to the communities. 2. Anglo American Platinum's Amandelbult operation invested $900,000 in restoring groundwater supplies at 12 boreholes in the local community, supplying potable water in trucks for 2 months when the drought was at its worst and funding a Reverse Osmosis Plant in the community. The provision of water-related infrastructure that directly benefits communities around our operations is a priority at several of our operations where water scarcity is a prevalent challenge, as well as a key opportunity for development. Our Corporate Social Investment (CSI) programme spent $5.3 million on water and sanitation projects in 2016.		

Further Information

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	Limpopo (WMA)	Kumba Iron Ore: Thabazimbi mine Platinum: Paardekraal	34260	Lower	Water withdrawals decreased at 19 of the

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
			Shaft, Waterval Shaft, Khuseleka Mine, Turffontein Shaft, Siphumelele lease area, School of mines, Tumela mine, Amandelbult services, Dishaba mine, Union mine, Union services, Mogalakwena mine, Khomanani Mine, Rustenburg concentrator, Amandelbult concentrator, Union concentrators, Mogalakwena concentrators, WLTR, Mortimer smelter, ACP, Waterval smelter, RBMR, PMR De Beers: Morupule, Venetia open pit			26 sites in the Limpopo WMA. Nine of these sites were divested at the end of October 2016 and one was divested at the end of August 2016. The largest reduction was at Venetia Open Pit, where production decreased by over 30%. This was partly balanced out by the increase in withdrawals at the Amandelbult concentrator, where tonnes processed increased and the new pipeline to use Dishaba groundwater was ramped up during 2016.
Facility 2	South Africa	Vaal (WMA)	Kumba: Sishen mine, Kolomela mine Coal: New Vaal, New	29891	About the same	Withdrawals decreased from three of the seven

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
			Denmark, De Beers: Kimberley mine, Voorspoed mine, Ecology			sites in the Vaal WMA. The largest reductions were at Sishen and Voorspoed, where production decreased. This was balanced out by increases from the other sites - particularly Kolomela where production increased - and hence water use was about the same.
Facility 3	South Africa	Olifants(WMA)	Coal: Kleinkopje, Landau, Isibonelo, Goedehooop, Greenside, Kriel underground, Zibulo underground, Zibulo opencast, Shared services, Highveld Hospital, Central Workshops, Rapid Loading Terminal,Twickenham mine Platinum: Polokwane Metallurgical Complex, Mototolo concentrator	13751	Lower	Withdrawals decreased at nine of the 15 sites in the Olifants WMA. The main reasons were the reduction in overall throughput at the Khwezela operations and Twickenham mine (which is in care and

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
						maintenance).
Facility 4	Chile	Other: Aconcagua River	Copper: Los Bronces, El Soldado, Charges	36374	Higher	Heavy snowfall resulted in increased water on site at Los Bronces and thus higher withdrawals.
Facility 5	Peru	Other: Asana River	Copper: Quellaveco	160	Higher	Quellaveco is a project site where construction activities (for infrastructure) are underway.
Facility 6	Brazil	Rio Doce	IOB: CMD Mine (previously Minas-Rio)	17251	Lower	Withdrawals at the Minas-Rio reduced due to drought conditions and legally enforced reductions in allowed abstraction from the Peixe River.
Facility 7	Brazil	Parana	Niobium, Phosphate Catalao, Phosphate Cubatao	6761	Lower	The Niobium and Phosphate operations were divested at the end of September 2016.
Facility 8	Brazil	Tocantins	Nickel: Codemin, Barro Alto	5196	Higher	Withdrawals have increased at Barro Alto because the

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
						No. 2 Electric Furnace was being rebuilt in 2015 and the site was not running at full production. The furnace was recommissioned in 2016 and the site returned to full production.
Facility 9	Australia	Fitzroy	Coal: Dawson, Capcoal Open Cut, Grosvenor, Moranbah North, Foxleigh, Callide	20702	Lower	The Foxleigh and Callide sites were divested at the end of August 2016 and the end of October 2016 respectively. Withdrawals decreased significantly at Dawson as throughput decreased and there was less rainfall than in the previous year. This was partly balanced out by an increase in withdrawals

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
						at Capcoal Open Cut, which received more rainfall than in 2015.
Facility 10	Australia	Other: South-East Coast	Coal: Drayton, Dartbrook	2467	About the same	A small increase in withdrawals at Drayton was partly offset by a relatively small reduction in withdrawals at Dartbrook.
Facility 11	Canada	Attawapiskat River	De Beers: Victor mine	3020	Lower	Water withdrawals decreased at De Beers Victor mine as a result of a production decrease in the second half of 2016 in response to oversupply and improvements in water efficiency.
Facility 12	Canada	Mackenzie River	Coal: Trend Mine De Beers: Gahcho Kue, Snap Lake	279	Much higher	Withdrawals increased because the Gahcho Kue site ramped up from a project to an operation in 2016.

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 13	Zimbabwe	Save	Platinum: Unki mine, Unki infrastructure, Unki concentrator, Unki housing infrastructure	1667	Higher	Withdrawals increased at the Unki Concentrator, despite a reduction in tonnes processed, because less water was recycled in processes.
Facility 14	Namibia	Other: South Atlantic Coast	De Beers: Namdeb – Consolidated, De Beers Marine Namibia, Namaqualand Mines	33151	Lower	Withdrawals decreased by about 14% at Namdeb Consolidated despite production remaining relatively constant. Namdeb has implemented a dynamic mining/back-dumping design at Sendelingsdrif mine to reduce closure liabilities that has reduced operating costs substantially.
Facility 15	Botswana	Okavango	De Beers: Orapa, Letlhakane,	21410	Higher	Withdrawals increased at Orapa and Damtshaa

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
			Damtshaa, Jwaneng			because uitilsation of depressurising boreholes improved. This was partly balanced out by a reduction in withdrawals at Jwaneng, which was mainly attributable to the automation of thickeners and the maximisation of thickener underflow densities.

Further Information

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	4053	0	5	9664	0	0	12009	8529	
Facility 2	1068	0	3021	23507	0	0	1223	1072	

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 3	83	0	1	5178	0	0	3631	4858	
Facility 4	20228	0	3946	9877	0	0	0	2323	
Facility 5	80	0	0	0	0	0	2	78	
Facility 6	16578	0	0	671	0	0	2	0	
Facility 7	3026	0	0	3629	0	0	106	0	
Facility 8	3430	0	1674	92	0	0	0	0	
Facility 9	949	0	11278	3296	0	0	34	5145	
Facility 10	0	0	2215	240	0	0	12	0	
Facility 11	1685	0	1275	60	0	0	0	0	
Facility 12	71	0	0	208	0	0	0	0	
Facility 13	1531	0	0	135	0	0	1	0	
Facility 14	961	26844	0	5343	0	0	3	0	
Facility 15	0	0	252	21158	0	0	0	0	

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	0	Lower	Discharge decreased to zero due to reduced production and the divestment of selected Anglo Coal operations.
Facility 2	25278	Higher	Discharge from Kolomela mine increased because the Beeshoek Pump Station was not operating properly in 2015 and Kolomela had to spill a large amount of water. The Pump Station has since been upgraded. This was partly balanced out by an increase at New Vaal, which received more rainfall in 2016 than in 2015.

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 3	6080	Lower	Discharge decreased from Kleinkopje and Landau as these sites were divested at the end of December 2016. Discharge also decreased from Greenside coal mine as production decreased.
Facility 4	248	Lower	There was a relatively small decrease in discharge from Chagres.
Facility 5	801	Much higher	Discharge increased significantly from the Quellaveco project in Peru because water was discharged from a Water Storage Pond for maintenance with approval from the Peruvian water authority. After the pond was repaired, the same quantity of water that had been discharged was again recovered from the Asana River in the beginning of 2017.
Facility 6	13900	Much higher	Discharge from Minas-Rio increased because throughput increased and water was discharged to the sea in 2016 as a result of ore being piped down to the port and removed via a filter press.
Facility 7	2056	Lower	Discharge decreased because Phosphate Cubatao was divested at the end of September 2016.
Facility 8	1	Higher	Discharge from Barro Alto increased because throughput increased slightly.
Facility 9	2094	Lower	Discharge decreased from Callide, which was divested at the end of October 2016, and from Dawson, which received less rainfall than in 2015. This was partly offset by an increase in discharge from Capcoal Open Cut, which received more rainfall in 2016.
Facility 10	7	About the same	Discharge from Dartbrook mine was about the same as last year.
Facility 11	33703	About the same	Discharge from De Beers Victor mine was about the same as last year.
Facility 12	22951	Lower	Discharge has decreased at Gahcho Kue relative to 2015 as the lake was dewatered in 2015 in order to move from a project and start operating.
Facility 13	76	Lower	Discharge decreased from Unki concentrator because production decreased.
Facility 14	28845	About the same	Discharge from Namdeb Consolidated is about the same as last year. Discharge is not measured but is estimated based on the volume of sea water abstracted.
Facility 15	0	About the same	No water is discharged from the Botswana operations.

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	0	0	0	0	Discharge decreased to zero due to reduced production and the divestment of selected Anglo Coal operations.
Facility 2	2491	17834	0	251	4702	
Facility 3	2683	3397	0	0	0	
Facility 4	248	0	0	0	0	
Facility 5	801	0	0	0	0	
Facility 6	3520	6	9835	3	536	
Facility 7	2056	0	0	0	0	
Facility 8	0	1	0	0	0	
Facility 9	2093	1	0	0	0	
Facility 10	7	0	0	0	0	
Facility 11	33703	0	0	0	0	
Facility 12	22923	0	0	28	0	
Facility 13	76	0	0	0	0	
Facility 14	0	0	28845	0	0	
Facility 15	0	0	0	0	0	No water is discharged from the Botswana operations.

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	34804	Lower	Water consumption increased significantly at the Amandelbult concentrator as production increased and less recycled water was used in the process. This was outweighed by consumption reductions at 20 of the Limpopo sites, with the largest absolute reductions at Venetia Open Pit (where production decreased significantly) and Thabazimbi mine (which went into closure phase).
Facility 2	13001	Lower	Consumption decreased at five of the seven sites in the Vaal WMA. The biggest drop was at the Kimberly mine, which was divested at the end of January 2016.
Facility 3	9478	Lower	Water consumption decreased at nine sites in the Olifants WMA. The main reasons were the reduction in overall throughput at the Khwezela operations and Twickenham mine (which is in care and maintenance).
Facility 4	36374	Higher	Water consumption increased at Los Bronces as less water was recycled in processes relative to 2015. Water consumption (including process water recycled) has decreased overall though as a result of efficiency improvements.
Facility 5	160	Higher	Quellaveco is a project site where construction activities (for infrastructure) are underway.
Facility 6	17251	Lower	Water consumption has decreased despite production ramping up at Minas-Rio because water recycling efficiency is improving.
Facility 7	6830	Lower	Consumption has decreased because the Niobium and Phosphate operations were divested at the end of September 2016.
Facility 8	5311	About the same	Withdrawals have increased at Barro Alto because the site returned to full production following the recommissioning of the No. 2 Electric Furnace. This was partly balanced out by a small reduction in consumption at Codemin.
Facility 9	13944	About the same	Water use at Grosvenor has increased as it has been ramping up to a full operation from a project. This was offset by reductions in use at Foxleigh and Callide, which were divested at the end of August 2016 and the end of October 2016 respectively.
Facility 10	801	Lower	Water consumption decreased at Drayton because there was a reduction in production.
Facility 11	88	Lower	Water consumption decreased at De Beers Victor mine as a result of a production decrease in the second half of 2016 in response to oversupply and improvements in water efficiency.

Facility reference number	Consumption (megaliters/year)	How does this compare to the last reporting year?	Please explain
Facility 12	105	Higher	Consumption increased because Gahcho Kue site ramped up from a project to an operation in 2016.
Facility 13	1669	Higher	Surface water consumption has increased at the Unki concentrator because the use of recycled process water has decreased.
Facility 14	32773	Lower	Consumption decreased at Namdeb Consolidated despite thoughput remaining relatively constant. Namdeb has implemented a dynamic mining/back-dumping design at Sendelingsdrif mine to reduce closure liabilities that has reduced operating costs substantially.
Facility 15	17462	Lower	Reduced water consumption at Jwaneng was mainly attributable to the automation of thickeners and the maximisation of thickener underflow densities. Damtshaa mine is under care and maintenance and production has decreased at Letlhakane mine.

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	International Standard on Assurance Engagements (ISAE) 3000. Scope - Assurance Engagements other than audits or reviews of historical financial information.
Water withdrawals- volume by sources	76-100	International Standard on Assurance Engagements (ISAE) 3000. Scope - Assurance Engagements other than audits or reviews of historical financial information.
Water discharges- total volumes	Not verified	
Water discharges- volume by destination	Not verified	
Water discharges- volume by treatment method	Not verified	
Water discharge quality data- quality by standard effluent parameters	Not verified	
Water consumption- total volume	76-100	International Standard on Assurance Engagements (ISAE) 3000. Scope - Assurance Engagements other than audits or reviews of historical financial information.

Further Information

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	The Sustainability Committee of the Board is provided with a quarterly report on water management and an annual detailed review. Material operational issues or incidents are reported to the executive and Board on a risk basis.

W6.2
Is water management integrated into your business strategy?

Yes

W6.2a
Please choose the option(s) below that best explains how water has positively influenced your business strategy

Influence of water on business strategy	Please explain
Tighter operational performance standards	Progress in implementing our strategy is driven through our water management programme, which has three areas of focus: driving operational excellence; investing in technology; and engaging and partnering with our stakeholders. The programme is supported by mandatory Group water standards and delivered via operation-specific water-action plans. With regards to operational excellence, the impact of this on the business has resulted in particular attention being paid to water risks and costs. For example, every site has set quantifiable water usage targets. Operational targets are aggregated at business unit level where they are included in business unit CEO performance contracts. The outcome of this is that in 2016, Anglo American's total new-water consumption decreased by 14% from 222 900 ML in 2015 to 190 700 ML in 2016. The decrease was due to the divestment of water-intensive operations but also as a result of efficiency measures. Of our total operational water requirements, 66% was met by recycling/re-using water (2015: 64%). Water saving projects, which include more effective dust suppression, dewatering of tailings and more efficient ore separation, saved the Group approximately 23 000 ML of water (2015: 25 000 ML), relative to projected levels. Our operations also seek to reduce their dependency on high quality water through water switching and the use of lower quality water where practicable.
Other: Investing in technology	Investing in new integrated water-technology solutions is one of our most important focus areas and fundamental to achieving a step-change in water efficient mining. The implementation of many good-practice 'now' technologies – relating in particular to fine-tailings management and haul-road dust suppression – is standard at most operations. Evaporation control is also becoming a major focus for water scarce operations. The outcome is that during 2016, we continued to make good progress in introducing newer technologies. These include, for example: separating water streams that do not contact wastewater; discharging less water to tailings; bitumen-based dust suppressants; remote monitoring of water flows and levels in dams and tailings; and piloting passive water treatment technologies. Designing and operating water efficient mineral residue and processing facilities is another priority for us. Our Los Bronces and Mogalakwena operations, for example, are adopting evaporation covers, expanding the use of thickeners, and investigating other technology to recover water from slimes dams. Similar opportunities are being explored at other mines.

Influence of water on business strategy	Please explain
Other: Engagement and partnerships	We believe that, increasingly, water insecurity is a major driver of social inequality and that collaborative efforts are critical to effectively address water challenges and enable access to water for everyone. Our engagements with host governments, industry associations, local authorities, communities, NGOs, businesses, suppliers and other stakeholders on water related issues is an integral part of our water journey. We participate in several important water-related forums, such as the Strategic Water Partners Network (SWPN) programme aimed at addressing South Africa's water shortages. In South Africa, we participate in a consortium that assesses acid mine drainage in the Olifants river catchment in Mpumalanga, including the feasibility of applying mine-impacted water for irrigation purposes. We recently participated in the Olifants River Catchment Management Forum established with other mining companies. Anglo American has worked with Exxaro and SWPN to develop the first draft water-loss-reduction plan for Gauteng province. This programme aims to reduce the business-interruption risks in Gauteng and earn water credits. In Peru, the Quellaveco Copper project engages local communities in monitoring its water management practices, and is examining options for providing water or power from its dams.

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
Increased capital expenditure	The cost of implementing projects to optimise water usage and improve supply to our operations does increase capital expenditure. Examples of increased capital expenditure include the water recycling system at the Los Bronces operation which was a significant investment of US$74 million and US$3.4 million on upgrading the Polokwane Sewage works to ensure additional water to Mogalakwena. Other examples of capital projects include Kumba Iron Ore's Kolomela's initiative to artificially recharge the underground aquifers and the pumping of excess groundwater by the Kolomela and Sishen mines to Sedibeng. The outcome of this capital expenditure is improved access to water, however improving municipal water infrastructure in the current economic environment does require funding that could have been used to expand the business in other ways.

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
Publicly available Company-wide Performance standards for direct operations Performance standards for supplier, procurement and contracting best	Anglo American has developed a stand-alone, company-wide and publicly available Group Water Policy, to showcase our awareness and commitment to safe and sustainable mining along with sustainable use of water within its organisation. The policy requires us to develop and invest in technology, optimise efficiency and prevent environmental degradation in its operations which demonstrates commitment to performance standards, including the commitment to monitor

Content	Please explain why this content is included
practice Commitment to customer education Acknowledges the human right to water, sanitation and hygiene Other: Link between water and climate change	performance regularly. The policy includes a commitment to understand and respond to the water risks and opportunities within our supply chain which Anglo American implements through supplier evaluation and performance standards. The water policy includes a commitment to customer education as it requires us to share knowledge, build capacity and establish common outcomes. Anglo American achieves this through engagement with its suppliers and regulators and partnerships with water utilities. One of the five principles in the policy is that Anglo American recognises water as an environmental and human right. Anglo American recognises that there is a clear link between water impacts and climate change. As such, the policy commits us to understanding and internalising the water implications of climate change.

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
24	27	The main reason for the increase in CAPEX was the construction of the sedimentation pond and relocation of the main barge as planned at IOB's Minas-Rio operation in Brazil. Capital expenditure by Anglo American Platinum on the Polokwane Sewage works as well as the Thabazimbi water supply project also contributed to the increase. The increase in water-related OPEX is mainly attributable to 1) the operation of water monitoring systems, water supply to communities and water treatment at Minas-Rio, 2) the increase in potable water use at Anglo American Platinum's Waterval Smelter in South Africa following a reduction in grey water received and 3) the increase in potable water use at Anglo American Platinum's Polokwane Smelter in South Africa, where less rainfall was received and production increased.

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
Minas-Rio operation	Fine	There was a landslide on the western face of the Sapo Ridge as a result of heavy	1	32375	USD($)	A rehabilitation action plan was submitted to the Environmental Agency after the

Facility name	Incident	Incident description	Frequency of occurrence in reporting year	Financial impact	Currency	Incident resolution
		rainfall in January 2016. Sediment from the landslide caused siltation in the creek downstream as well as in a neighbouring property. A small dam in the neighbouring property contained some of the sediment and prevented further downstream impacts. A fine was issued for the assumed environmental degradation caused by the sediment.				incident has been successfully addressed. Rehabilitation of the neighbouring property has not started yet as the owner has not allowed IOB to access the site.
Minas-Rio operation	Fine	In September 2016 a Legal Notice of Violation was issued related to pollution caused by the discharge of effluents outside the established standards.	1	274445	USD($)	An action plan to enhance the efficiency of the waste water treatment stations has been put in place since the incident. So far this has resulted in significant improvements and the discharge has almost reached 100% conformity with legal standards.

W7.1b

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

2%

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	Higher

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	Water stewardship	Anglo American adjusted its target in 2016 and refocused the WETT (water efficiency target tool) target on its material operations. The target aims to reduce water consumption by 19%, which equates to 20 595 ML, against a business-as-usual (BAU) forecast consumption in of 108 393 ML. The target was set in 2016 with a forecast BAU calculation using a 2015 baseline. Anglo American tracks its progress against this target through what has now been termed as WETT light. The list of the material sites for which the WETT savings were reported are: • Mogalakwena • Amandebult • Los Bronces • Venetia • Jwaneng • Orapa • Minas Rio. The savings achieved for these sites was avoided water use of 22 865ML, which exceeded the target set for 2016. Anglo	Other: Absolute	2015	2016	100%

Category of target	Motivation	Description of target	Quantitative unit of measurement	Base-line year	Target year	Proportion of target achieved, % value
		American has been rolling out a more comprehensive and rigorous set of performance indicators across the Group and aim to start reporting against the new indicators by the end of 2017. The new approach, in line with ICMM practice, measures cubic metres of water usage per tonne of production.				

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: Increase use of recycled / re-used water	Water stewardship	A key feature of our water strategy is to reduce our dependency on high quality water through water switching and the use of lower quality water. This will reduce costs and allow more water to be available in the communities in which we operate. Our long-term goal is for 75% of our total operational water requirements to be met by recycling/re-using water by 2020, and if this is achieved this will be regarded as the measure of success. This will be achieved through the application of advanced technology. Linked to this is the goal to reduce absolute freshwater intake by 20% by 2020.	This goal has not been achieved yet as it is long term in nature, but Anglo American has made significant progress towards achieving the goal by 2020. In 2016, of the total operational water requirements, 66% was met by recycling/re-using water (2015: 64%). Operations also seek to reduce their dependency on high quality water through water switching and the use of lower quality water where practicable. Potable water usage across the Group remained level at 8% of total new water used.
Other: Improve water intensity	Water stewardship	At Anglo American, efficient use of resources is to the benefit of all stakeholders, and planning carefully for the whole life of a mine, right through to closure or sale, makes better use of capital. As part of this, our FutureSmart™ mining innovation programme is embracing a host of new and existing technologies to ensure that operations are at the frontier of productivity and are less water-dependent. Therefore, Anglo American has set a goal to improve water intensity to greater	The process of rolling out this target is still at an early stage, therefore there is no significant progress to report at this stage. However, Anglo American will be tracking progress going forward and will be able to report the progress made in the next reporting cycle with the aim of achieving the goal by 2020.

Goal	Motivation	Description of goal	Progress
		than 1 (i.e. sufficient water to meet mine plan) at all operations by 2020, and if this is achieved this will be regarded as the measure of success. The goal measures cubic metres of water usage per tonne of production.	
Other: Record no Level 3 (or above) incidents	Risk mitigation	Anglo American seeks to minimise the adverse effects of mining activities on surrounding surface and ground water to avoid affecting the water security of stakeholders. Poor quality water is harmful to the environment and human health, can affect mining and processing equipment, and present closure liabilities. Reporting, investigating and sharing lessons learnt from environmental incidents (actual and potential) forms an essential part of improving controls to prevent repeats and of integrating environmental consciousness into core business processes. Anglo American reports five levels of environmental incident severity. Level 3-5 incidents (ranging from moderate to high impact) are featured in the chief executive's report to the Board. Anglo American has set a goal of no Level 3-5 incidents by 2020, and if this is achieved this will be regarded as the measure of success.	Anglo American has made significant progress towards the goal with a steady decline over the past three years in the number of environmental incidents in all categories. In 2016, there were no Level 4 or Level 5 incidents reported for the second consecutive year. The Group reported four Level 3 environmental incidents during 2016, compared with six in 2015 and 14 in 2014. Based on the progress made, it is expected that the goal will be achieved by 2020.

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?

Yes

W9.1a

Please describe the linkages or trade-offs and the related management policy or action

Environmental issues	Linkage or trade-off	Policy or action
Biodiversity and water quality	Linkage	During the open-cast coal mining process at Anglo American'c Coal operations, the lack of vegetation on mining sites causes the infiltration of excess rainwater and surface water into the soil profile. The action that has contributed to causing this is insufficient concurrent rehabilitation of surface areas. The impact of this is additional contaminated water that may need to be

Environmental issues	Linkage or trade-off	Policy or action
		treated at end of life of mine. This saline water in our Coal mines in South Africa is a potential future risk. It has been shown that a free-draining model will allow for more water to run-off and thereby reduce the amount of water that needs to dewatered in future operations. This can be achieved by undertaking concurrent rehabilitation of the site. By reducing our rehabilitation backlog, we will be able to ensure that infiltration is reduced and free-draining water (surface run-off) occurs on our mining sites. This in turn will improve the quality of water that may need to be treated at the end of life of mine and potentially improve the biodiversity of the catchment as less contaminated water will be produced. In order to ensure this happens, our Coal operations have included concurrent rehabilitation targets in the performance contracts of the General Managers.
Waste caused by desalination of water	Trade-off	Our Anglo American Coal operations are using desalination to treat water. One of the most significant issues associated with desalination processes utilising membrane technology is the generation of a highly concentrated salt stream (brine). Brine management requires long term handling and storage in brine ponds which impacts considerably on life cycle costs whilst remaining an environmental liability with a substantial footprint which is not sustainable into the future. A number of brine treatment or minimisation technologies, such as Eutectic Freeze Crystallisation, HybridIce and Ion Exchange technologies have been developed and tested on a laboratory/pilot scale under the auspices of Coaltech in South Africa. The action or policy taken to minimise this impact is that the New Vaal Colliery in South Africa has implemented a full scale (approx. 2 ML/d) brine treatment plant using the Eutectic Freeze principle to address brine storage/disposal constraints on site.

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
Tony O'Neill	Director: Technical & Sustainability	Chief Operating Officer (COO)

W10.2

Please indicate that your organization agrees for CDP to transfer your publicly disclosed data regarding your response strategies to the CEO Water Mandate Water Action Hub.

Note: Only your responses to W1.4a (response to impacts) and W3.2c&d (response to risks) will be shared and then reviewed as a potential collective action project for inclusion on the WAH website.

By selecting Yes, you agree that CDP may also share the email address of your registered CDP user with the CEO Water Mandate. This will allow the Hub administrator to alert your company if its response data includes a project of potential interest to other parties using water resources in the geographies in which you operate. The Hub will publish the project with the associated contact details. Your company will be provided with a secure log-in allowing it to amend the project profile and contact details.

Yes

Further Information